# PRELIMINARY ECONOMIC ANALYSIS – EL CUBO/EL PINGUICO SILVER GOLD COMPLEX PROJECT

# State of Guanajuato, Mexico

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The technical report titled "Preliminary Economic Analysis - El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" with an effective date of 31 January 2021 for VanGold Mining Corp. (the "Technical Report") with an amended date of 1 April 2021 was prepared on behalf of VanGold Mining Corp. The report is compliant with National Instrument NI 43-101 - Standards of Disclosure for Mineral Projects and Form 43-101F1 - Technical Report. The issue date of this report is 12 February 2021, signed on 16 February 2021, and amended on 1 April 2021.

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	1

Southport, North Carolina, USA 1 April 2021

Black Hawk, Colorado, USA 1 April 2021

Edgefield, South Carolina, USA 1 April 2021

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# LIST OF ABBREVIATIONS

3DThree DimensionalBWiBond Work IndexcmcentimetersCOACédula De Operación AnnualCRMConsejo de Recursos MineralesEMBSAExloraciones Mineras Del Bajio S.A. de C.V.ft³cubic feetg/tgrams per tonneIDinverse distancekgkilogramskg/tkilograms per tonneKMkilograms per tonnekmkilometerskWkilowattLAULicencia Ambiental ÚnicaLHDload haul dumpLIMSLaboratory Information Management SystemLOILetter of IntentLOMlife-of-minemmetersm³cubic metersmmmillimetersNPINet Profit InterestNPVNet Present ValueNSRNet Smelter ReturnOPMSAObras Mineras El Pinguico, S.A de C.V.PEAPreliminary Economic AssessmentQA/QCQualified PersonRQDRock Quality DesignationSGMServicio Geológico MexicanoSRMStandard Reference Materialt/m³tonnes per cubic metersVLPVertical Longitudinal Projection	2D	Two Dimensional
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	VLP	Vertical Longitudinal Projection

# 1.0 EXECUTIVE SUMMARY

Behre Dolbear & Company (USA), Inc. (Behre Dolbear) has prepared this Preliminary Economic Assessment (PEA) on the El Cubo/El Pinguico Silver Gold Complex Project, located near the City of Guanajuato, in the state of Guanajuato, Mexico at the request of VanGold Mining Corp. (VanGold). The El Pinguico property is owned by VanGold. VanGold has signed a Letter of Intent (LOI) to acquire the El Cubo surface properties, mining claims, mine, and mill from Endeavour Silver Corp.

VanGold is listed in Canada on the TSX Venture with the stock symbol "VGLD". Endeavour Silver is listed in Canada on the Toronto Stock Exchange with the stock symbol "EDR" and on the New York Stock Exchange with the stock symbol "EXK".

The purpose of this PEA is to provide the reader with information relevant to the Mineral Resources currently present at El Pinguico and El Cubo. Upon completion of VanGold's acquisition of El Cubo, the resources at the El Cubo will constitute the majority of the Mineral Resources at the combined El Cubo/El Pinguico project at approximately 1.7 million tonnes compared to 0.2 million tonnes at El Pinguico.

The El Cubo and El Pinguico properties are within the major epithermal mineral vein system common to the Guanajuato area and share many of the same geological, mineralogical, metallurgical characteristics, and mining methods. El Cubo is approximately 5 kilometers (km) (8 km by gravel road) from El Pinguico. It is anticipated that both properties would utilize El Cubo's existing mill infrastructure and administration facilities, with mineralized material from El Cubo and El Pinguico likely comingled during processing.

While it is anticipated that the majority of the estimated capital and operating costs during the first 18 months of operations would be incurred at El Cubo, the Qualified Persons (QPs) have grouped El Cubo and El Pinguico as VanGold's "Principal Property" for the purposes of the NI 43-101 (as defined below) given their close proximity and shared geological and metallurgical characteristics and mining methods.

This report has prepared this report and the estimates provided herein in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP and Form 43-101F1, as well as with the Canadian Institute of Mining Metallurgy and Petroleum's "CIM Definition Standards – For Mineral Resources and Reserves, Definitions and Guidelines" (CIM Standards) adopted by the CIM Council on May 10, 2014.

The effective date of the Mineral Resource estimate in this report is 31 January 2021. The issue date of this report is 12 February 2021 with an amended date of 1 April 2021.

The QPs would caution that the results of this PEA are preliminary in nature. This PEA includes Inferred Resources that are too speculative geologically to have economic consideration applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the results of this PEA will be realized.

Note that some of the tables in this report may not appear to add properly; however, this is due to rounding and the totals in the tables are correct.

# 1.1 **PROPERTY DESCRIPTION AND OWNERSHIP**

# 1.1.1 Property Description

The El Cubo property is located in central Mexico, in the State of Guanajuato, approximately 11 km east of the City of Guanajuato. The elevation of the property is approximately 2,200 meters (m) above mean sea level.

The El Pinguico property is located approximately 8 km southeast of the City of Guanajuato and 5 km southwest of the El Cubo property. The El Cubo and El Pinguico properties are approximately 8 km apart by road.

The climate of the Project area is temperate with an average annual temperature of 18°C, with summer month high temperatures typically around 30°C and winter month temperatures as low as 5°C. The properties are located in gentle rolling terrain with some abrupt volcanic intrusions. Precipitation is approximately 650 millimeters (mm) per year, the majority of which occurs between June and August. Vegetation is limited to scrub brush and grasslands.

# 1.1.2 Ownership

VanGold signed a binding LOI to acquire the El Cubo property on December 18, 2020, being in aggregate, a 100% interest in the El Cubo property. The purchase, upon completion, would include 49 mining concessions covering 6,995 hectares, surface lands totaling 1,196 hectares, the El Cubo Mill, and all buildings and other improvements.

VanGold's consulting law firm in Mexico, VHG Servicios Legales, S.C., has verified that all the claims listed in the transaction, as owned by Endeavour Silver, are valid and are in good standing.

The El Pinguico property consists of two claims that have a combined 72 hectares of surface area. VanGold has title to the mining rights for the El Pinguico property through October 2029 for one of the claims and the mining rights through July 2030 for the other claim.

The validity and good standing of the El Pinguico claims was verified during their acquisition by VanGold in 2017 by VHG Servicios Legales, S.C. The validity and good standing was reverified by VHG Servicios Legales, S.C. in January 2021.

# **1.2 GEOLOGY AND MINERALIZATION**

# 1.2.1 Geology

The Guanajuato Mining District lies along the southern edge of the Mexican Central Plateau (Sierra Madre Occidental Geologic Province). Rock units within the district consist of flow and tuffs of principally basaltic to rhyolitic composition with related intrusive units and sedimentary and volcanoclastic units. The Guanajuato Mining District is located on the northeast flank of a poorly defined northwest-trending anticline. The district is cut by many faults, many of which host silver and gold mineralization. The oldest fault set includes pre-mineral deformation during the Laramide orogeny (80-40 Ma) and resulted in west-northwest trending folds and thrust faults. The intermediate set includes an early post-Laramide extension (±30 Ma) set of faults that are both pre-mineralization and mineralization stage. This intermediate set consists of three major systems: the Veta Madre, La Luz, and the Sierra set of faults and fault zones. The major fault and vein direction is north-northwest accompanied by early-stage intermediate-sulfidation style mineralization, but somewhat younger movement created faults trending east-northeast to west-northwest in a basin and range and block faulting style perhaps accompanied by higher gold values. The youngest fault set includes northeast striking faults which are post mineralization.

The Guanajuato Mining District is a world-class, high-grade, silver-gold, epithermal vein system with low sulfidation and adularia-sericite alteration. It is historically a well-known, studied, and documented mining district. The Guanajuato veins are typical of most epithermal silver-gold vein deposits in Mexico with respect to volcanic activity, volcanic and sedimentary host rock affinities, mineral paragenesis, silver-gold grades and ratios, vein mineralogy, and alteration styles. The hydrothermal solutions are driven by heat from volcanic activity. The hot, circulating, hydrothermal waters rise up through fissures with pressures building up until the hydrostatic pressure is released (sometimes explosively) allowing solutions to boil and precipitate the metallic minerals. Typically, this is a cyclical or recurring event, as the fissures repeatedly get plugged and pressure builds up until fracturing once again releases the hydrostatic pressure. The typical banding nature of the veins represents the cyclical pressure build-up, released by fracturing, boiling, and precipitation of minerals multiples of time until the system is finally exhausted. These multiple events allow the range of economic mineralization to expand to a broader vertical range. Low sulfidation epithermal veins in the region typically have a well-developed, sub-horizontal ore horizon about 300 to 500 m in vertical extent where high grade vertical ore shoots develop during hydrothermal fluid boiling and mineral precipitation.

# 1.2.2 Mineralization

The El Cubo and El Pinguico Resources are similar mineralogically and typical of the Guanajuato Mining District. Mineralization at El Cubo occurs as open-space fillings in fracture/fault zones or impregnations in locally porous wall rock. Mineralization at El Cubo occurs in several stratigraphic formations with the principal hosts being the Guanajuato Formation conglomerate and the Bufa Formation rhyolite. The major veins are northwest striking but several transverse, northeast striking veins with high grade gold mineralization also occur. Mineralization is open-ended due to a lack of exploration drilling and development. Vein mineralization is normally 1 to 2 m wide, with mineralized breccia zones up to 10 m wide. Some high-grade veins are only 10 to 20 centimeters (cm) wide. Most of the important veins dip steeply at 70° to 90°, but some of the northwest striking veins have a shallower dip, ranging from 50° to 60°.

Typical of this style of mineralization, economic concentrations of silver and gold occur in ore shoots distributed vertically and laterally between barren or weakly mineralized portions of the veins. Bonanza grades may occur at the site of vein intersections, such as the nearly perpendicular San Nicolas-Villalpando vein intersection. Other vein intersections of various named splays along the principal Villalpando vein also host bonanza grade silver-gold mineralization. Movement along the strike or dip direction of veins during the hydrothermal episodes causes wide sigmoidal breccia zones typified by pinch and swell mineralization.

El Cubo and El Pinguico mineralization is typical of the classic high-grade silver-gold, banded epithermal vein deposits with low sulfidation mineralization characterized by adularia-sericite-silica alteration. Silver occurs in dark sulfide and sulfosalt-rich bands within the veins with little mineralization but significant alteration minerals in the surrounding wall rocks. Native silver occurs primarily in the near surface oxidized zones while at depth, the ores contain lead, zinc, and copper sulfides.

# **1.3 EXPLORATION AND MINING HISTORY**

# 1.3.1 Exploration

The Guanajuato Mining District has been active for hundreds of years and is one of the great silver-gold districts in Mexico. Extensions to known ore bodies and new discoveries, along with increased metal prices, has allowed for continued production at many mines. Based upon the number of veins already exposed at El Cubo and El Pinguico, it is likely that further exploration efforts will result in extensions of known mineralization along strike and down-dip. Exploration procedures include surface and underground rock sampling and diamond drilling along with geophysical surveys and geologic mapping.

At El Cubo, surface and/or adit sampling in the Purisima, Cabrestantes II, and San Juan areas suggest that these areas are quite high in the mineralized system with potential at depth. In 2016, diamond drilling at San Juan de Dios intersected strong mineralization. In 2018, 75 diamond core holes were drilled and in 2019, another 40 holes were drilled. In all, there were 44 intercepts in 33 holes and an additional 42 intercepts in 25 holes, some of which are greater than the minimum mining width, intersected in the 2018 and 2019 campaigns, respectively.

At El Pinguico, recent sampling by VanGold has identified several areas where high-grade mineralization is exposed in drifts and crosscuts. Mine rehabilitation, followed by additional sampling and exploration drilling, is planned along the El Pinguico vein at the Don Ricardo, Don Ernesto, and Don Felipe targets. Several veins and structures on other claims in the El Pinguico Project area have been sampled by VanGold, with favorable results suggesting strong potential at depth, particularly at El Pinguico, La Joya, La Joyita, El Carmen, El Pirul, and El Pino. The La Joya vein appears to be the strike extension of the El Pinguico vein and dips eastward toward the west dipping Veta Madre structure, the major ore producing structure in the Guanajuato Mining District. The postulated intersection is an intriguing bonanza style target.

# 1.3.2 Mining History

The mining history of Guanajuato dates back to when the Spanish began exploration for minerals in the region and discovered silver in 1548. Guanajuato soon became one of the premier mining districts of Nueva España (New Spain).

In 1558, the first mine shafts were sunk that led to the discovery of the Veta Madre Vein (Mother Vein). Today, this vein runs along the hills that border the glen of Guanajuato in the north and the northwest, marked by mines and shafts along its way.

Mining on the El Cubo property has occurred since the 17<sup>th</sup> Century. In the 19<sup>th</sup> and 20<sup>th</sup> Centuries, mining at El Cubo focused on northwest striking veins known as the Villalpando, Dolores, La Loca, and La Fortuna.

In the early 1900s, construction began on the Túnel Aventurero de San Felipe (now El Cubo Level 4) in order to connect the Pastora-Fortuna, Villalpando, and La Loca veins. At the time, significant grades and widths were encountered on the Villalpando vein, including shoots up to 4 m wide and intercepts that assayed close to 1,000 grams of silver per tonne.

The El Cubo Mine changed ownership in the 1970s, when it was purchased by a private company owned by Messrs. Villagomez and Chommie. By 1979, there was little developed ore remaining above the 13<sup>th</sup> level on the Villalpando vein, and production from other related veins was low-grade and sporadic. After 1980, new high-grade gold and silver mineralization was discovered and developed along the San Nicolas vein. In 1995, production was expanded from 350 to 800 tonnes per day, and then to 1,400 tonnes per day in 2001. The mills saw a decrease in head grade after each expansion, likely due to the use of low-grade material from old stope fill, as supply for the increased tonnage.

El Cubo was purchased by Mexgold Resources Inc. (Mexgold) in March 2004. In 2006, Mexgold became a wholly owned subsidiary of Gammon Lake Resources Inc., later known as Gammon Gold Inc. On August 26, 2011, Gammon Gold Inc. changed its name to AuRico Gold Inc.

In 2012, Endeavour Silver acquired the El Cubo property. Saleable silver and gold production through 2019 totaled 12,112,892 ounces of silver and 144,100 ounces of gold. Endeavour Silver ceased production at El Cubo in late 2019.

On December 21, 2020, VanGold signed a LOI to purchase the property for a mixture of cash, shares, and contingent payments.

At El Pinguico, the first rich deposits on the property began to be exploited in 1904, a year after the former owner of the mine, Mr. Amado Delgado, transferred the mine to the Guanajuato Development Company, directed by Mr. C.W. Bryant. The company changed its name to the Pinguico Mining and Milling Company. The mine was in production from the late 1800s to 1913 and produced over 200,000 ounces of gold equivalent during this time (EMBSA, Proyecto El Pinguico, 2014). A metallurgical plant was installed for the concentration and cyanidation systems with a capacity of 250 tonnes per day (report with unknown signature, 1945). This plant no longer exists. The mine and plant were operated until 1913 when the owners left the region due to violence associated with the Mexican Revolution.

Since 1913, very little work has been done at El Pinguico. The only information available on the property has been the repeated sampling programs of a surface and an underground stockpile, which was recently sampled again by the Dorado Family, the Mexican Geological Survey, and Findore S.A. de C.V. a geological consulting company.

VanGold announced the closing of its acquisition of the El Pinguico property from Exploraciones Mineras Del Bajio, S.A. de C.V. (EMBSA) on April 27, 2017 for a combination of cash and shares. The company's press releases cited the above ground and underground stockpiles and the historic high silver and gold grades present at the mine.

As of this writing, VanGold has opened the El Pinguico shaft in order to access Level 7 of the mine. VanGold is currently sampling the lower levels of the underground stockpile and channel sampling exposed mineralization on Level 7.

# 1.3.3 Adjacent Properties

The Guanajuato region is widely recognized as a major center for silver mining with multiple veins and operations. The El Cubo and El Pinguico properties are only two of the multiple operations in the area. Major operators are Endeavour Silver, Fresnillo, Great Panther, and Peñoles.

The properties are geologically similar. All host low sulfidation, epithermal silver-gold deposits. The major variance being the gold versus silver ratio, which is dependent on their location in the hydrothermal column.

#### 1.4 DRILLING AND SAMPLING

#### 1.4.1 Drilling

Endeavour Silver has conducted a surface and underground drilling program since acquiring El Cubo.

From 2012 through 2014, approximately 73,000 m in 277 diamond drill holes from the surface were completed at El Cubo. During 2015, a total of approximately 7,200 m in 25 surface diamond drill holes were drilled.

Underground drilling completed in 2016 was conducted to evaluate mineralization along the Villalpando, Dolores, Soledad, and La Loca veins in areas near existing mine workings. All underground drilling was performed with Endeavour Silver's VERSA Kmb-4 drill rig. A total of 4,018 m were drilled in 22 underground holes in 2015. In 2016, another 3,800 m were drilled in 13 surface diamond drill holes along with 1,710 m in underground drilling. An underground diamond core drilling campaign was undertaken in 2018 and 2019. In 2018, 75 holes were drilled in the La Loca, Vein 274, San Juan de Dios, La Paz, and San Nicolas vein exploration target areas. In 2019, the underground drilling campaign continued with another 40 holes drilled in these same areas.

At El Pinguico, VanGold drilled four core holes through the uppermost sections of the underground stockpile.

#### 1.4.2 Sampling

At El Cubo, underground channel samples were handled by the Endeavour Silver production staff and samples were shipped to the Bolañitos Mine laboratory.

Diamond drill hole core samples from El Cubo were handled by the Endeavour Silver exploration group and the samples shipped to a commercial certified laboratory.

At El Pinguico, the top of the underground stockpile was sampled in early 2017 by Findore S.A. de C.V. via a series of shallow hand-dug trenches. This sampling would only be applicable to the very top portion of the stockpile. The

underground stockpile fills an old open stope area from Level 4 to Level 7 of the El Pinguico property and ranges from 25 to 100 m thick.

### 1.4.3 Core Samples

Core from diamond drilling follows a standard general procedure, during which depth markers are checked and confirmed; the outside of the boxes is labeled with interval information; core is washed and photographed; and the recovery and modified rock quality designation (RQD) is logged for each drill hole. Core is split using a diamond saw and intervals are based upon geology, separating out vein, breccia, and wall rock.

Standards and blanks are inserted into the sample stream at appropriate intervals. All core samples are held securely until delivered to a certified laboratory where the samples are logged into the laboratory's tracking system and prepped.

#### 1.4.4 Underground Channel Samples

Endeavour Silver employed standardized procedures at El Cubo for collecting underground grade control chip samples, and these procedures are documented in a detailed, illustrated manual. Chip channel sampling was carried out daily in accessible stopes and development headings by mine sampling technicians. Chip samples were collected on all vein faces in drifts, crosscuts, raises, and stopes.

# 1.4.5 Quality Assurance/Quality Control (QA/QC)

Standards, blanks, duplicate samples, and check assaying was standard procedure for all diamond drill core at El Cubo. All QA/QC results show no bias in the sampling or assaying of diamond drill core, whether from underground or from surface drill holes. Standard reference materials and blank sample assays returned values within industry standards as did the duplicate and check sample results. The assay results for gold and silver from the surface and underground diamond drilling are acceptable to industry standards and appropriate for use for the purposes of this report.

There was an issue with the QA/QC on the production assaying results. Production assaying was undertaken at the Bolañitos Mine laboratory of Endeavour Silver. There was poor correlation on check results for both gold and silver. A portion of the failure rate in reject duplicates and mine duplicates can be expected considering the normal erratic nature of silver and gold grades in vein systems. The same type of assay failure was not seen from the samples from the diamond drill hole core. However, for the purposes of this report, particularly concerning Resources and Reserves, the production channel assays are acceptable.

At El Pinguico, QA/QC analysis is concerned only with sampling of a surface and an underground stockpile. The use of standards, blanks, and duplicate samples was standard procedure for stockpile sample. All QA/QC results show no bias. Standard reference materials and blank sample assays returned values within industry standards as did the duplicate sample results.

The assay results for gold and silver from the surface and underground stockpile are acceptable to industry standards and appropriate for use for the purposes of this report.

# **1.5 METALLURGICAL TESTING**

At El Cubo, the mill has been operating since 2014 and mining has occurred from a number of different areas and depths. Hence, recoveries, media consumption, and reagent consumptions for future Resources are estimated based on historical information. In 2019, silver recoveries varied by grade by month from a low of 86.4% to a high of 90.7%. During the same period, gold recoveries varied by grade by month from a low of 84.6% to 88.6%. Recoveries are

calculated based on anticipated grades and range from 87.6% to 89.5% for silver and between 85.0% to 89.9% for gold.

At El Pinguico, a 1,000 tonne bulk sample from the above ground stockpile was campaigned through the neighboring Planta Bolanitios Mill, owned by Endeavour Silver. For the test, silver recovery averaged 60.4% and gold recovery averaged 75.2%, which are used for the recoveries and reagent consumptions for this study.

The El Pinguico underground stockpile has not been tested. However, the vein structure is similar in mineralogy and origin to the El Cubo property and is likely interconnected. Based on these similarities, the silver recoveries were estimated at 80% and gold recoveries were estimated at 80%.

# 1.6 MINERAL RESOURCE ESTIMATION

The Mineral Resource estimate used as the basis for this PEA was developed using the Endeavour Silver 31 December 2016 Mineral Resource estimate and computer models for the El Cubo property and the VanGold 28 February 2017 resource estimate for the El Pinguico property.<sup>1,2</sup> The QP has extensively reviewed and audited the primary drilling data, computer models, wireframes, estimation methods, and the previous estimates to help develop the QP's estimate of the current Mineral Resources at the properties. The QP is of the opinion that the estimates in this section are reasonable and can be utilized for this PEA. Although the following Mineral Resources estimated in this report are used for the economic analysis, the QP would caution that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The remaining Mineral Resources, in 2021 at El Cubo, are shown in Table 1.1 and total approximately 0.5 million tonnes of Indicated Resources and 1.45 million tonnes of Inferred Resources. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves. Mineral Reserves have not been identified for El Cubo.

Table 1.1           Estimate of the Remaining El Cubo Mineral Resources as of 31 January 2021								
Clearification	<b>T</b>	Silver		(	Gold	Silver Eq		
Classification	Tonnes	g/t	OZ	g/t	OZ	g/t		
Measured	None							
Indicated	508,055	194	3,169,000	2.44	39,860	389		
Inferred	1,453,000	214	10,004,000	2.78	129,900	435		
Notes:			11. 1. 00	a 11		_		

1. Silver Equivalent calculated using 1 ounce of gold is equal to 80 ounces of silver, on the basis of the average 5-year historic silver and gold prices.

2. Numbers have been rounded.

3. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

The QP's estimate of 508,055 tonnes of Indicated Resources matches well with Endeavour's various 2019 and 2020 resource disclosures at El Cubo ranging from about 509,000 to 514,000 tonnes. The QP recognizes that Endeavour's

<sup>&</sup>lt;sup>1</sup>National 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017. Downloaded from SEDAR.

<sup>&</sup>lt;sup>2</sup>NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017. Downloaded from SEDAR.

most recently published resource estimates do not include the 1.4 million tonnes of Inferred Resources documented in the 3 March 2017 El Cubo Technical Report (Effective Date of 31 December 2016). The QP opines that the Inferred Resource of 1.45 million tonnes shown in Table 1.1 is a reasonable estimate of the remaining Inferred Resources at El Cubo.

The El Pinguico Mineral Resources as of 31 January 2021, are shown in Table 1.2 and total approximately 210,000 tonnes. Mineral Reserves have not been identified for El Pinguico.

TABLE 1.2EL PINGUICO MINERAL RESOURCES AS OF 31 JANUARY 2021							
Classification	Towner	S	Silver		Gold		
Classification	Tonnes	g/t	OZ	g/t	0Z	g/t	
Measured	None						
Indicated							
Surface Stockpile	185,000	67	398,500	0.45	2,680	103	
Underground Stockpile	25,600	166	136,600	1.67	1,375	300	
			· ·				
Total	210,600	79	535,100	0.60	4,055	127	

1. Silver Equivalent calculated using 1 ounce of gold is equal to 80 ounces of silver, on the basis of the average 5-year historic silver and gold prices.

2. Numbers have been rounded.

3. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

At the processing rate of 277,000 tonnes per year, these Mineral Resources represent approximately 7 years of mine life after adjusting for mine loss and dilution.

To the best of the QP's knowledge, information, and belief, there is no new material scientific or technical information that would make the disclosure of the mineral resources shown in of this PEA inaccurate or misleading.

# 1.7 ESTIMATED MINERAL RESERVES

There are no Mineral Reserves reported in the document.

# **1.8 MINING METHOD**

Mining method(s) proposed in this PEA have been used throughout Mexico and are well understood in the Guanajuato area. Mechanized cut-and-fill stoping using small load-haul-dump (LHD) machines and handheld jackleg drills would be the proposed method for the initial production from the underground operation. Other methods, such as long hole stoping or stull stoping, may be considered in the future; but for this PEA, only mechanized cut-and-fill, with some amount of resuing, would be considered. Resuing, combined with mechanized cut-and-fill, would allow selective mining in specific stopes amenable to specialized stoping techniques.

Proposed development methods for both El Pinguico and El Cubo would be conventional drill-blast-muck using jumbos for drilling and LHDs and trucks for haulage. Ground support would be installed, as required.

VanGold has provided a conceptual plan for production at El Cubo based on information supplied by Endeavour Silver when operations ceased in November 2019. Currently, El Cubo has approximately 60,000 tonnes of material prepped and ready for production. This material is in the form of stope reserves that were left uncompleted on closure and material that is broken in place and ready to be hauled to the concentrator.

Endeavour Silver also identified for VanGold other stopes that have remaining Resources. These stopes would have been targeted for near term production and require access ramps and crosscuts, to develop the stopes.

At El Pinguico, VanGold proposes to haul the surface stockpile to the concentrator at El Cubo for processing. Following this, VanGold will begin the removal of material from a historic shrinkage stope underground stockpile. Observation of the stockpile during the site visit and drill holes within the material would indicate that it contains a mixture of barren wall rock and old stope material that at current commodity prices would be considered to be economic.

# **1.9 RECOVERY METHODS**

The El Cubo Mill was constructed as a conventional crushing, grinding, and flotation plant in 2013 and was operated by Endeavour Silver from 2014 to November 2019. Operating records from 2018 showed that the plant processed an average of 1,400 tonnes per day and that in 2019, the plant processed an average of 730 tonnes per day.

VanGold envisions that the El Cubo Mill would be operated at 750 tonnes per day to produce approximately 12 tonnes of gold/silver concentrate. The rate of 750 tonnes per day will be achieved by a combination of feed from the combined El Pinguico and El Cubo Project.

The plant is constructed with a two-stage crushing circuit, ball mill grinding, reagent storage, flotation, and flotation concentrate filtration for product shipment. Tailings disposal would be in a conventional tailings pond facility. A simplified flow diagram is shown in Figure 1.1.

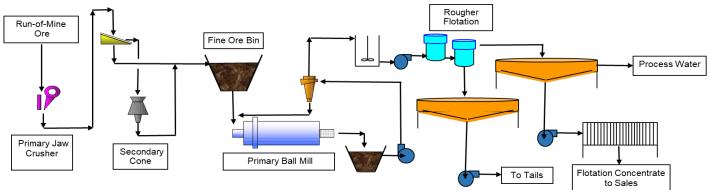


Figure 1.1. El Cubo Mill simplified process flow diagram

# 1.10 INFRASTRUCTURE

The El Cubo Mine was shut down in November 2019 with much of the infrastructure intact. Roads, power supply, water supply, buildings, and tailings facilities are still in place. Underground crushing and electrical equipment was removed by Endeavour Silver and was identified as one of the few infrastructure items that would need to be replaced.

El Cubo currently has tailing storage for the next 3 years at the proposed 750 tonnes per day throughput rate. A diversion structure for run-off would be constructed to ensure this storage capacity. An additional 2 years of tailings

storage would be possible at another existing storage facility with an upstream dam raise. Additional tailings storage could be available at these two facilities with new dam raises.

Tailings Basin 3B was the basin in use when El Cubo closed in November 2019. It and the related process water and other related infrastructure is properly secured and in a reasonable operating condition. The dam itself appears to have adequate monitoring instrumentation to detect any adverse conditions that may develop once operations resume.

The El Pinguico Mine has not operated since 1913 and infrastructure, such as roads, power supply, water supply, and buildings would need to be constructed depending on the type and complexity of the mining that will take place at the property. Contractors would likely be used to provide temporary power and facilities with more permanent facilities being constructed, should additional Resources be identified and developed.

# 1.11 ENVIRONMENTAL PERMITTING

The QP has reviewed all relevant documents in Endeavour Silver's El Cubo data room as well as other information from their Environmental Department regarding environmental permitting and societal obligations. Based upon this analysis, the property is compliant with all environmental permits and obligations. There are no apparent significant legal, environmental, or political considerations that would have an adverse effect on the extraction and processing of the Mineral Resources located at the El Cubo property.

At El Pinguico, mining has not occurred since 1913 and no permits are in place regarding mining, milling, waster rock disposal, or other associated activities. No specific permits are required for the work ongoing on the site including VanGold's desire to ship the surface stockpile of low-grade material or the underground stockpile material to the El Cubo Mill for processing. This was verified by VHG Servicios Legales, S.C. Currently, no on site mining is planned at El Pinguico.

There are no significant or material pre-existing conditions or environmental liabilities at the El Pinguico Project site.

# 1.12 CAPITAL AND OPERATING COSTS

# 1.12.1 Capital Cost Summary

The El Cubo Mine was idled in November 2019. When operations ceased, all crushing equipment, mining equipment, electrical equipment, and pumps were removed. The lower levels of the mine were allowed to flood.

At El Pinguico, surface facilities will need to be constructed, including fans, compressors, and electrical equipment. Due to the relatively small amount of tonnes that will be recovered from the underground, a contractor will be used to mine both the above ground stockpile and the underground stockpile. A contractor would be used to open the Sangria Adit on Level 7.

The estimated mine capital cost considers the purchase of new mining equipment, installation of crushing and electrical equipment, and the pumping for the El Cubo property. Surface facilities will need to be installed at both properties, including sub-stations, compressors, and fans. Project capital for the first year of operation is estimated at \$11.0 million for the two operations.

Additional mine capital of \$4.1 million is required in Year 2 at El Cubo to increase the mine production rate from 350 tonnes per day to 750 tonnes per day.

After Year 2, an estimated sustaining capital cost of 10% per year for the mine equipment is added to the capital cost. An estimate of the equipment required and corresponding costs is detailed in Appendix 3.0.

The mine development costs are capitalized in the cash flow model and are based on independent benchmarking and comparison against Endeavour Silver's cost of mining. The number of development meters and Resource tonnes for the first two years of underground mining were taken from preliminary mine plans that Endeavour Silver had proposed for the El Cubo Mine. Definition Drilling is costed as an allowance of \$60,000 per month.

VanGold contacted Minas Carrillo S.A. de C.V. (Minas Carrillo) to provide an estimate of the replacement cost of equipment and materials and the maintenance required to bring the El Cubo Mill back into operation. Representatives toured the plant in late November 2019 to view firsthand the status of the plant and equipment. Minas Carrillo estimated that approximately \$1.5 million and 4 to 5 months of work would be required to bring the plant back into operation. The cost of operational spares is estimated at \$200,000 for a total of \$1.7 million.

Prior to start of operations, a diversion drainage ditch for rainwater would be constructed on the north side of Tailings Storage Facility 3B at an estimated capital cost of \$750,000.

Construction of additional capacity in Tailings Storage Facility 6 would take place in the third year of operation of the El Cubo Mill and would cost approximately \$350,000.

Surface and underground exploration drilling will be necessary to identify additional Resources and to possibly extend the life-of-mine. These costs have been capitalized as development costs for the purpose of this PEA. These costs have been estimated at \$630,000 per year for underground exploration using VanGold's equipment and between \$300,000 and \$600,000 per year for surface exploration using a contractor. The exploration drilling costs are in addition to the definition drilling included in the operating costs. The purpose of the definition drilling is the conversion of Inferred Resources to mineable reserves.

TABLE 1.3         Summary of Capital and Development Costs								
Category	Year 1 (\$ million)	Year 2 (\$ million)	Year 3 (\$ million)	Years 4-6 (\$ million)	Total (\$ million)			
Mine Equipment	11.0	4.1			15.1			
Mine Development	1.2	2.8	6.0	6.0	28.1			
Definition Drilling	0.5	0.7	0.7	0.7	4.0			
Mill	1.7				1.7			
Tailings Storage	0.8		0.4		1.1			
Other/Sustaining Capital	0.4		1.1	1.1	4.7			
Exploration	0.3	0.9	1.2	1.2 – Year 4 0.9 – Years 5 and 6	5.6			
Contingency (15%)	2.4	1.3	1.4	1.3	9.1			
Total 18.2 9.9 10.8 10.0 69.4								

The capital cost for the operation of the El Pinguico and El Cubo properties is summarized in Table 1.3.

# **1.12.2** Contractor Alternative

An alternative to the initial capital cost expenditure for mine equipment would be the use of a contract miner. In this instance, only the surface facilities would be constructed. All mine equipment and underground facilities would be furnished by a contractor. This alternative mode of operation would only be relevant to El Cubo. Contractor services at El Pinguico are already part of the operating plan.

The estimated mine capital cost for this alternative considers only the purchase of surface facilities, including substations, compressors, and fans. Mine capital for the first year of operation is estimated at \$3.0 million for the two operations and \$1.3 million for the increase in tonnage at El Cubo in the second year of operation.

# 1.12.3 Operating Cost

sum total is not noted in the table.

The operating cost estimate is summarized in Table 1.4 and represents an average cost for seven years of operation.

TABLE 1.4       Summary of Operating Costs								
Category	El Pinguico – Above Ground Stockpile (\$/tonne)	El Pinguico – Under Ground Stockpile (\$/tonne)	El Cubo (\$/tonne)					
Ore Haulage	5.44	5.44	3.78					
Mine Development <sup>1</sup>	N/A	N/A	15.88					
Definition Drilling <sup>1</sup>	N/A	N/A	2.30					
Mine Direct	N/A	15.00	43.40					
Mill	14.29	14.29	14.29					
General and Administration	13.31	13.31	13.31					
Total	33.04	48.04	N/A					
<sup>1</sup> Mine Development and Definition Drilling have been capitalized in the cash flow model but have been included here to show their effect on the estimated overall operating cost if the costs were treated as operating costs rather than being capitalized. Since these costs are accounted for in the capital cost, a								

Ore Haulage costs for El Pinguico were based on contractor quotes received through VanGold. Ore haulage costs for El Cubo were based on Endeavour Silver's costs of \$0.47 per tonne per kilometer of haul.

Mine Direct costs are based on Endeavour Silver's cost of mining from November 2019 escalated to November 2020. These costs have been compared to costs incurred by other mining costs in the region and appear reasonable.

Mill costs are based on Endeavour Silver's process plant costs from November 2019 escalated to November 2020. These costs have been compared to costs for similar sized mines in the same region.

General and Administration costs have been taken from Endeavour Silver's costs from November 2019 escalated to November 2020. Salary administration costs have been reduced to account for a smaller senior management team.

Refining and freight charges are estimated at \$138 per ounce for gold and \$3.75 per ounce for silver based on a budget quotation from a single refiner in Matehuala, San Louis Potosi.

# 1.13 ECONOMIC ANALYSIS

#### 1.13.1 Base Case – Owner Mining

A discounted cash flow model for the combined El Pinguico and El Cubo Project was prepared to determine the Net Present Value (NPV), Internal Rate of Return (IRR), and payback period. The technical cash flow was prepared on an after-tax basis and was prepared in accordance with NI 43-101 Standards of Disclosure for PEA studies. This economic analysis is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Preliminary Economic Assessment will be realized.

The results of the economic analysis are summarized in Table 1.5.

TABLE 1.5							
SUMMARY OF PRELIMINARY ECONOMIC A	SSESSMENT FOR THE	COMBINED					
EL PINGUICO AND EL CUBO PROJECT							
Metal Prices <sup>1</sup>							
Silver	\$US/oz Silver	19.49					
Gold	\$US/oz Gold	1,527					
Net Present Value (5%)	\$US million	32.9					
Net Present Value (8%)	\$US million	28.5					
Internal Rate of Return	%	105					
Net Smelter Return	\$US million	221.0					
Total Operating Costs	\$US million	124.4					
Other Costs and Depreciation	\$US million	54.8					
NPI Royalty	\$US million	0.5					
Taxes	\$US million	12.5					
Life of Mine Capital and Development Costs	\$US million	69.4					
Net Cash Flow	\$US million	42.2					
Payback Period	Years	1.87					
Tonnes Processed	Mtonnes	1.78					
Life of Mine Recovered Silver Equivalent <sup>2</sup>	Moz	13.21					
Initial Capital and Development <sup>3</sup>	\$US million	28.1					
Sustaining Capital and Development	\$US million	41.3					
Total Capital and Development	\$US million	69.4					
Mine Life	Years	7					
<sup>1</sup> Source: Consensus Economics, Inc.©, Energy & Metals							
<sup>2</sup> Silver Equivalents are based on a 1:80 gold:silver ratio as	s per the average 5-year	historic silver price of					
\$17.36/oz and gold price of \$1,387/oz.							
<sup>3</sup> Includes 15% contingency.							

A sensitivity analysis was performed to determine the effect of changes in commodity price, operating cost, and capital costs. Of these parameters, the Project was most sensitive to the changes in commodity price. The sensitivity to changes

in commodity prices was determined on the basis of a constant gold-to-silver price ratio of 1:80. This is consistent with a 5-year historical average. The results of the sensitivity analysis are shown in Figure 1.2.

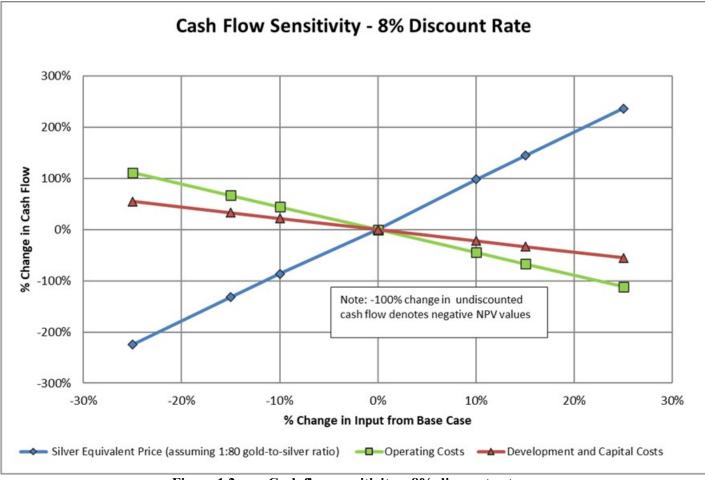


Figure 1.2. Cash flow sensitivity – 8% discount rate

Figure 1.2 shows that at a 25% increase in the silver price, the resulting silver and gold prices are comparable to the average spot price in January 2021 (\$25.90/oz silver and \$1,867/oz gold). At a 10% decrease in silver price, the Project demonstrates a positive NPV(5), NPV(8), and an IRR of 22%. The resulting silver and gold prices are comparable to the 3-year historical average prices (\$17.55/oz silver and \$1,477/oz gold).

Based on the results of the sensitivity analysis, the average breakeven price is approximately \$17.25/oz of silver and \$1,371/oz of gold (assuming a constant gold-to-silver ratio of 1:80) There is minimal difference in the breakeven price at a 5% or 8% discount rate (Table 1.6).

TABLE 1.6 Commodity Price Sensitivity – Base Case Assuming a Constant Gold-to-Silver Price Ratio of 1:80								
Change in Commodity Price (%)Silver Price (\$/oz)Gold Price (\$/oz)IRR (%)NPV5% (US\$ millions)NPV8% 								
-25	14.62	1,169	N/A	-38.8	-35.5			
-15	16.56	1,325	-25	-9.4	-9.2			
-10	17.54	1,375	22	5.4	3.9			
0	19.49	1,527	105	32.9	28.5			
10	21.44	1,680	243	64.3	56.5			
15	22.41	1,756	344	79.0	69.6			
25	24.36	1,909	750	108.5	95.9			

#### **1.13.2** Contract Mining Alternative

A preliminary assessment was prepared of an alternative operation scenario where both mines would be mined using a contract miner. The advantage is the significant reduction of the initial equipment costs; however, based on the single preliminary contractor quote received at the time of this PEA, the life-of-mine (LOM) operating and underground development costs are higher for this scenario than the base case. Additional quotations are needed to confirm the operating costs. The resulting NPV(8) is lower than the base case at \$20.3 million, but the reduction in the initial capital cost is significant (nearly \$12 million).

#### 1.14 CONCLUSIONS AND RECOMMENDATIONS

The El Cubo and El Pinguico properties and the supporting facilities represent an economic opportunity for a smallscale mining operation. This historic district has been successfully mined for centuries, but now that the major veins have been identified and extracted, there is potential for mining smaller vein systems at a reduced rate of 750 tonnes per day that appears to have favorable economics.

#### 1.14.1 Exploration

At El Cubo, surface and/or adit sampling in the Purisima, Cabrestantes II, and San Juan areas suggest that these areas are quite high in the mineralized system with potential at depth.

At El Pinguico, recent sampling by VanGold has identified several areas where high-grade mineralization is exposed in drifts and crosscuts. The La Joya vein appears to be the strike extension of the El Pinguico vein and dips eastward toward the west dipping Veta Madre structure, the major ore producing structure in the Guanajuato Mining District. The postulated intersection is an intriguing bonanza style target.

It is recommended that an exploration program and a revised Mineral Resource estimate be completed at El Pinguico, as it appears to have excellent but unknown potential.

#### 1.14.2 Mining

Mining costs and especially the cost of development work drive the economic success of El Cubo. Development of a three-year mine plan with identified methods for mining narrow stopes could enhance the economics of the Project.

Similarly, the use of contract mining to reduce the initial capital cost could be beneficial to the Project economics, provided similar operating rates for development and ore extraction could be realized.

Mining the above ground stockpile at El Pinguico could yield a reasonable economic return pending the development of additional Resources. The mining and processing of this material appears feasible.

Mining the underground stockpile at El Pinguico depends on the amount of resource that can be developed. Currently, only the top 5 m of the stockpile, approximately 25,000 tonnes, have been identified as Resource. Additional Resources from the stockpile would be dependent on determining the make-up of the remaining material. Diamond drilling has shown that there are a number of pieces of large barren wall rock in the stockpile. The make-up of the stockpile should be tested by gaining access to different areas by mining and clearing Level 7.

The use of contract mining as an alternative indicates it may be advantageous during the first few years of operation and then moving to an owner-operator scenario in later years. The advantage would be a significant decrease in the initial capital costs (nearly \$12 million, as determined in this PEA) while additional exploration work and definition drilling is completed at El Cubo and the underground El Pinguico stockpile. Conversion of Inferred Resources to Indicated and Measured Resources and the identification of additional Resources would increase the life of mine and may justify further capital expenditures to move to an owner-operator scenario.

# 1.14.3 Metallurgy

The El Cubo Mill appears to be ready to operate with some repair and refurbishing at a design rate of 750 tonnes per day. Due to the long mining history in the area, contractors, laborers, and supervisory personnel should be available to operate the mine and process plant.

Average metallurgical recoveries have been estimated at 87% for silver and 88% for gold are based on historical operating records and appear achievable for the El Cubo Mill facility. Operating costs of approximately \$14 per tonne, which are based on historical cost records at El Cubo, appear reasonable.

The above ground stockpile at El Pinguico represents a low grade, readily accessible resource that has economic value. Average metallurgical recoveries have been estimated at 60% for silver and 75% for gold. Operating costs are estimated at approximately \$14 per tonne.

Metallurgical test work for the El Pinguico underground stockpile has not been completed. Precious metal recovery rates have been assumed at 80% for silver and 80% for gold. A program for sampling and testing the stockpile material and any new Resources identified at El Cubo or El Pinguico should be undertaken.

# 1.14.4 Infrastructure

Infrastructure, such as power supply, water supply, and roads, are also functional with some minor modifications.

Alternatives to conventional tailings pond storage should be investigated for implementation after the near-term storage in Tailing Ponds 3B and 6 are exhausted in Year 6 of the plan of operation.

With the construction of a diversion ditch around Tailings Pond 3B, there will be an additional requirement for water supply from water generated in the mine.

# 1.14.5 Environmental

Environmental and social issues at El Cubo and El Pinguico appear to be administered under reasonable standards with corresponding cooperation from the local community of El Cubo.

It is recommended that close and proactive relationships be maintained with the communities of El Cubo and Calderones (El Pinguico) to ensure a smooth ramp up and development of both projects.

VanGold should engage or hire its own environmental professionals to ensure continued environmental compliance and to proactively work to apply for and obtain any necessary approvals for future planned operations.

#### 1.14.6 Economics

Based on the inputs used in this PEA and the average consensus silver and gold prices of \$19.49/oz silver and \$1,527/oz gold, the current Indicated and Inferred Resources at the combined El Cubo and El Pinguico Project will result in a positive NPV(8) of \$28.5 million and an IRR of 105%. The Project shows the greatest sensitivity to metal prices with an average breakeven price of approximately \$17.25/oz of silver and \$1,371/oz of gold (assuming a constant gold-to-silver ratio of 1:80). These prices are comparable to the 3-year historical average prices (\$17.55/oz silver and \$1,477/oz gold).

It is recommended that a pre-feasibility study (PFS) be undertaken to further define the recommendations for the exploration of the project, mine development, infrastructure development, and mill facilities. The PFS would incorporate the results of the exploration efforts to enable the conversion of Inferred Resources to Indicated and Measured Resources. The results would be incorporated into the cash flow model to provide a greater degree of accuracy and operational definition going forward.

**Note:** This Preliminary Economic Assessment is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Preliminary Economic Assessment will be realized.

# 1.14.7 Project Risk

The QPs are unaware of any significant or material technical, legal, environmental, or political considerations or liabilities that would have an adverse effect on the extraction and processing of the Resources located at the El Cubo Project.

There are no significant or material pre-existing environmental conditions or liabilities at the El Pinguico Project.

A review of the environmental regulations and discussions with local officials indicates that no specific permits are required for removing the surface and underground stockpiles and transporting them to the El Cubo Mill for processing.

As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement.

Any risks identified are typical of any advanced stage exploration project and or operating metals mine, such as tailings basin management, environmental regulatory compliance, maintaining and developing a comprehensive safety program, and ground control monitoring. None of these have been identified as significant risk.

# 1.14.8 Next Project Phases

It is recommended to perform a two-phase work program for the combined El Cubo/El Pinguico project culminating in a pre-feasibility study (PFS) to further define recommendations for the exploration of the project, mine development, infrastructure development and refurbishment of the mill facilities.

Phase 1 activities would include additional exploration and definition drilling at both El Cubo and El Pinguico, refurbishment of the El Cubo Mill facilities, and administrative and security staff to support these activities at the Project for the initial 6-month period at an estimated \$3.35 million as set out in Table 1.7. Refurbishment of the mill would include the repair and replacement of existing mechanical equipment, reinstallation of the mill distributed control system (DCS), refurbishment of the mill office control room, the purchase of operational spares, and commissioning services.

TABLE 1.7           Estimated Costs for the Completion of the Phase 1 Work Program							
Item	Apr-21 (US\$×000)	May-21 (US\$×000)	Jun-21 (US\$×000)	Jul-21 (US\$×000)	Aug-21 (US\$×000)	Sep-21 (US\$×000)	Total (US\$×000)
Mine Administrative Costs	71	74	116	122	168	171	722
Exploration Costs – El Pinguico	55	55	55	55	55	55	330
Exploration Costs – El Cubo			150	150	150	150	600
Mill Refurbishment	200	500	500	250	150	100	1,700
Total							3,352

Phase 2 work would consist of the activities to complete the PFS. Estimated costs for the PFS would range from approximately \$400,000 to \$600,000, which would include geologic modeling and interpretation of drill results, a new resource model, a mine plan, mine equipment specifications, mine infrastructure, and other engineering tasks and would likely take 4 to 6 months to complete. It is anticipated that exploration drilling and mine administrative costs of approximately \$400,000 per month would continue during this same time period. Mineralogical and metallurgical testing costs would be minimal since the process is known and there is a data base of historical recoveries for El Cubo, where the bulk of the mining is currently planned.

Phase 2 is not contingent upon positive results from Phase 1.

Additional phases of the Project would be subject to the resultant findings from the PFS.

# 2.0 INTRODUCTION

Behre Dolbear & Company (USA), Inc. (Behre Dolbear) has prepared this Preliminary Economic Assessment (PEA) on the El Cubo/El Pinguico Silver Gold Complex Project, located near the City of Guanajuato, in the state of Guanajuato, Mexico at the request of VanGold Mining Corp. (VanGold). The El Pinguico property is owned by VanGold. VanGold has signed a Letter of Intent (LOI) to acquire the El Cubo surface properties, mining claims, mine, and mill from Endeavour Silver Corp.

The purpose of this PEA is to provide the reader with information relevant to the Mineral Resources currently present at El Pinguico and El Cubo. Upon completion of VanGold's acquisition of El Cubo, the resources at El Cubo will constitute the majority of the Mineral Resources at the combined El Cubo/El Pinguico project at approximately 1.7 million tonnes compared to 0.2 million tonnes at El Pinguico.

The El Cubo and El Pinguico properties are within the major epithermal mineral vein system common to the Guanajuato area and share many of the same geological and metallurgical characteristics and mining methods. In addition, given their close proximity, El Cubo is approximately 5 km (8 km by gravel road) from El Pinguico, it is anticipated that both properties would utilize El Cubo's existing mill, infrastructure, and administration facilities with mineralized material from El Cubo and El Pinguico likely comingled during processing.

While it is anticipated that the majority of the estimated capital and operating costs during the first 18 months of operations would be incurred at El Cubo, we consider the grouping of El Cubo and El Pinguico as VanGold's "Principal Property" for the purposes of the NI 43-101 (as defined below) given their close proximity and shared geological and metallurgical characteristics and mining methods.

This report and the estimates provided herein have been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP and Form 43-101F1, as well as with the Canadian Institute of Mining Metallurgy and Petroleum's "CIM Definition Standards – For Mineral Resources and Reserves, Definitions and Guidelines" (CIM Standards) adopted by the CIM Council on May 10, 2014. This Preliminary Economic Assessment is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Preliminary Economic Assessment will be realized.

#### 2.1 PRIMARY REFERENCES

The QPs used the following primary references throughout this PEA.

- National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver, authored by Z.J. Black, J.J. Brown, and J. Choquette of Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017. Downloaded from SEDAR.
- 2) National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver, authored by Z.J. Black, J.J. Brown, and J. Choquette of Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018. Downloaded from SEDAR.
- NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017. Downloaded from SEDAR.

4) NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date August 1, 2017 (unpublished).

Where these reports have been used in this report has been noted either by reference or footnote.

Additional references used throughout this report are listed in Section 27.0.

#### 2.2 SITE VISIT

Behre Dolbear personnel visited the El Pinguico and El Cubo properties from November 21 through November 24, 2020. The first two days of the visit were of the surface stockpile, infrastructure, and underground workings at El Pinguico. The last two days were spent at the El Cubo property with Endeavour personnel providing access to the surface infrastructure facilities, El Cubo Mill, tailings facilities and underground workings.

Mr. Bernard (Barney) Guarnera, QP Geology, Ore Reserves and Valuations toured the surface stockpile at El Pinguico and the underground workings at El Pinguico and El Cubo. Mr. Guarnera assessed the history, site geology, and exploration potential of both projects.

Mr. Mark Jorgensen, QP Metallurgy, toured the surface stockpile at El Pinguico, the underground workings at El Pinguico, the El Cubo Mill, and the infrastructure at both El Pinguico and El Cubo. Mr. Jorgensen assessed the minerology associated with the ore, the condition of the El Cubo Mill, and the infrastructure of both properties.

Mr. Reinis Sipols, QP Environmental, toured the surface stockpile at El Pinguico, the underground workings at El Pinguico, the El Cubo Mill, and the infrastructure at both El Pinguico and El Cubo. Mr. Sipols assessed the tailings facilities, the permit status that was available at site, the infrastructure at both facilities, and transportation issues associated with ore and concentrate movement.

Mr. Joseph (Joe) Kantor, QP Geology; Mr. John Thompson, QP Mining; Ms. Amy Jacobsen, QP Metallurgy; and Dr. Robert Cameron, QP Ore Reserves and Valuations, did not attend the site visit due to Covid-19 concerns.

#### 2.3 UNITS OF MEASUREMENT AND CURRENCY

Measurement units used in this report are in the metric system. The currency used is U.S. dollars (US\$) unless specifically stated otherwise.

# 3.0 **RELIANCE ON OTHER EXPERTS**

The QPs are not experts in legal matters, such as the assessment of the legal validity of mining claims, private lands, mineral rights, and property agreements.

The QPs have fully relied on VanGold's legal experts to provide all information concerning the legal status of the El Cubo and El Pinguico mining concessions, as well as current legal title, material terms of all agreements, existing applicable royalty obligations, and material environmental and permitting information that pertain to the properties, as contained in Section 4.0 – Property Description and Location. This legal information was provided by VHG Servicios, Legales, S.C. located in Mexico City, Mexico and the last update was received on March 3, 2021. The legal information provided by them is a title opinion (Appendix 1.0).

# 4.0 PROPERTY DESCRIPTION AND LOCATION

# 4.1 LOCATION

The El Cubo and El Pinguico properties are located in central Mexico, in the State of Guanajuato, approximately 11 km east of the City of Guanajuato.

The principal property, El Cubo, is located roughly 21°00'17" N Latitude and 101°12'25" W Longitude, at an elevation 2,265 m above mean sea level. Figure 4.1 shows the location of the El Cubo and El Pinguico properties.



\*SEIP, Gobierno del Estado de Guanajuato: http://seip.guanajuato.gob.mx/mapagto/ Figure 4.1. General location of the El Cubo and El Pinguico properties

# 4.2 MINERAL TENURE, AGREEMENTS, AND ENCUMBRANCES

## 4.2.1 El Cubo

VanGold has entered into a Letter of Intent (LOI) dated December 15, 2020 to acquire, by way of an asset purchase (the "Asset Purchase Agreement"), 100% of the El Cubo Project, including among other things, the surface rights owned/hold by CMDC to El Cubo Project, El Tajo Plant, all buildings, equipment, machinery, tools, and improvements located therein and thereon for a purchase price of US\$15,000,000 payable as follows:

- a) US\$7,500,000 cash on closing (of which a US\$500,000 non-refundable deposit has been paid to date);
- b) 21,331,058 common shares of the Company on closing having an aggregate deemed issue price of US\$5,000,000 (US\$0.2344 per share); and
- c) An unsecured, non-interest-bearing promissory note in the principal amount of US\$2,500,000 payable 12 months after the closing.

The Asset Purchase Agreement provides for an asset acquisition only, and no corporate acquisition of CMDC or any other entity is included in the LOI.

The purchase, upon completion, would include 49 mining concessions covering 6,995 hectares, surface lands totaling 1,196 hectares, the El Cubo Mill, and all buildings and other improvements. Figure 4.2 shows a map of the surface mining concession that would be purchased pending a successful completion of terms.

A list of the mining claims and a letter from the legal firm VHG Servicios Legales, S.C. confirming the titles is found in **Error! Reference source not found.** This letter details the names of the claims, their size, type, their expiration, and their status and it is a title opinion.

Additionally, the binding letter of intent contains a provision for bonus payments to Endeavour Silver should the following conditions be met:

- US\$1 million when VanGold has produced an aggregate of 3 million ounces of silver or gold-equivalent silver;
- US\$1 million, if within 2 years of the Closing Date, the closing spot price of gold in New York, as published by Bloomberg, equals or exceeds US\$2,000 per ounce for a period of 20 consecutive trading days; and
- US\$1 million, if within 3 years of the Closing Date, the closing spot price of gold in New York, as published by Bloomberg, equals or exceeds US\$2,200 per ounce for a period of 20 consecutive trading days.

The El Cubo Mine, Mill, and other operations are fully permitted for a resumption of operations, exploration work, and all other mine and mill operational support activities. No additional permits are required to complete VanGold's proposed work program at El Cubo. The QP of this section is unaware of any significant or material technical, legal, environmental, or political considerations or liabilities, which would have an adverse effect on the extraction and processing of the Resources located at the El Cubo Project.

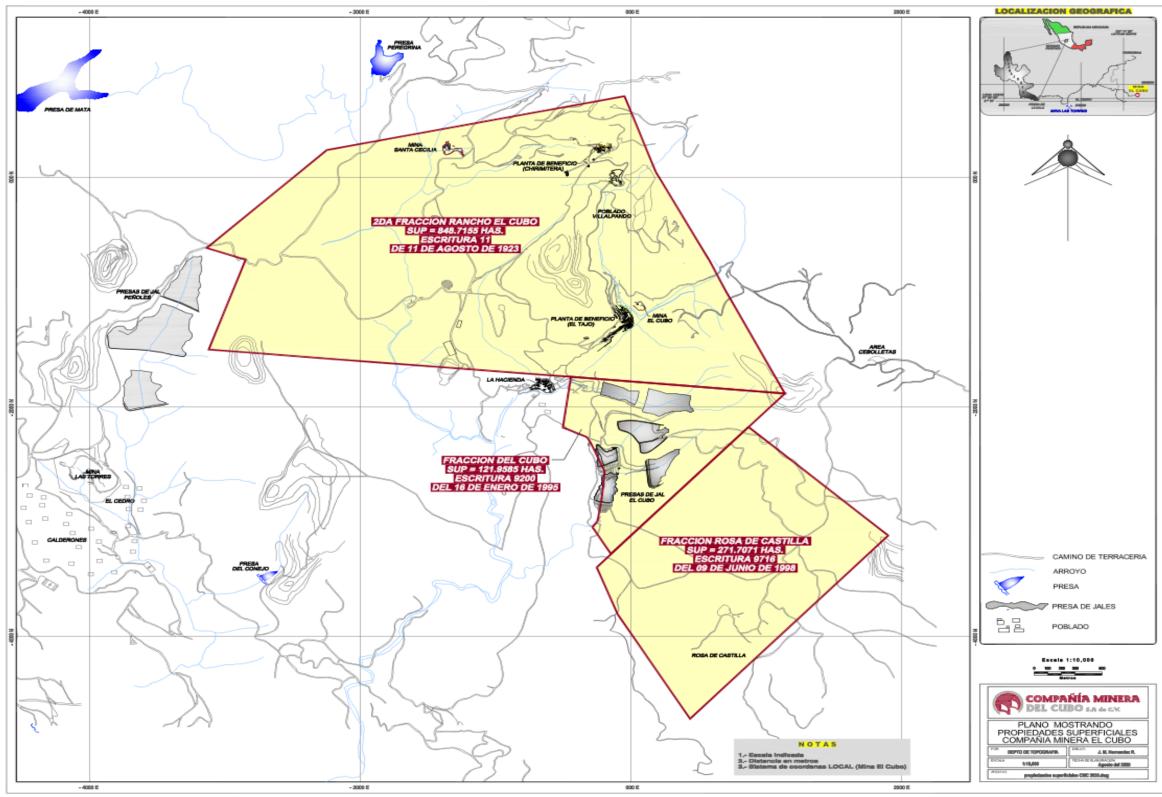


Figure 4.2.El Cubo Surface Mining ConcessionsSource: Endeavour Silver Corp., November 2020

# 4.2.2 El Pinguico

There are two mining claims that make up the El Pinguico property, El Pinguico, and Ampl de El Pinguico. VanGold recently, through its wholly owned Mexican subsidiary, Obras Minera S.A de C.V., owns a 100% working interest in the El Pinguico property, and has recently signed an option to repurchase underlying royalties on the property from EMBSA.

Under these terms, the Option shall be exercisable by VanGold making cash and share option payments to EMBSA as follows:

- 1) \$200,000 cash and 3,750,000 Units on or before November 20, 2020 (Paid);
- 2) \$325,000 cash on or before February 22, 2021;
- 3) \$525,000 cash on or before February 22, 2022; and
- 4) \$625,000 cash on or before February 22, 2023.

Upon exercise of the Option, VanGold's Mexican subsidiary, Obras Mineras El Pinguico, S.A de C.V. ("OPMSA"), will own an undivided 100% interest in the El Pinguico silver and gold project free and clear from the royalties purchased in this agreement. A 15% net profits interest royalty will remain, in favor of EMBSA, solely on the existing above ground and underground stockpiles of mineralized material. Other than the remaining 15% NPI, there will be no other royalties, net smelter returns, or otherwise, on the El Pinguico Project, including the existing stockpiled material.

The El Pinguico claim has an area of 48 hectares and the mineral lease from the state has an expiration date of 10 July 2030.

The Ampl de El Pinguico has an area of 23.7 hectares and the mineral lease from the state has an expiration date of 29 October 2029.

Figure 4.3 is a map showing the mining concessions that make up the El Pinguico Project.

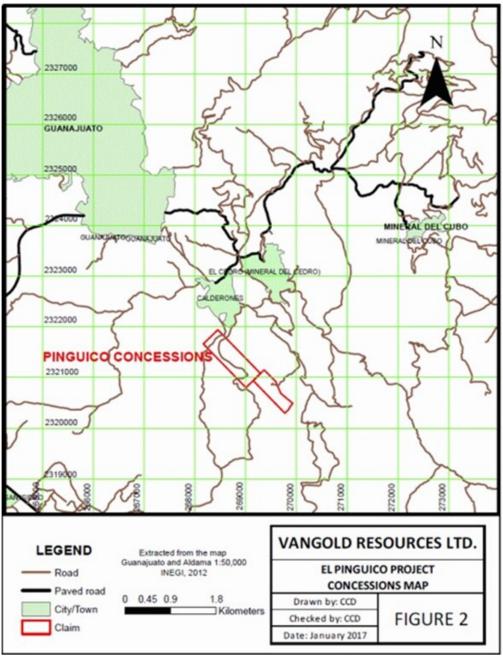


Figure 4.3. Mining concessions that make up the El Pinguico Project Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

There are no significant or material pre-existing environmental conditions or liabilities at the El Pinguico project.

A review of the environmental regulations and discussions with local officials indicates that no specific permits are required for removing the surface and underground stockpiles and transporting them to the El Cubo Mill for processing.

As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement.

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

The State of Guanajuato is situated along the southern edge of the Central Mexican Plateau. The properties are located in the west-central portion of the state, among a series of low, gentle mountains, which are part of the Sierra Madre Occidental. The terrain consists of gentle slopes with some abrupt volcanic intrusions.

The climate in the Project area is temperate with an average annual temperature of 18°C, with summer months typically around 30°C and as low as 5°C in the winter. The rainy season is between the months of June and September with annual precipitation typically 650 mm. The classification of the regional climate would be warm-sub humid.

The El Cubo Mine offices are located at an elevation of 2,265 m above mean sea level, and the mine workings range in elevation from 2,646 m to 1,905 m. The mine property is accessed by a local unpaved roadway, which also connects the villages of El Cubo and Calderones with Guanajuato and other surrounding communities.

The El Cubo property was put on care and maintenance at the end of November 2019 and all of the mine, mill and support infrastructure is largely in place. This includes electricity, water, tailings basins, plant security, offices, and shop facilities. A detailed discussion of the El Cubo site infrastructure can be found in Section 18.0 of this report. The company owned properties have adequate surface areas to support planned current and future operations.

The El Pinguico property is approximately 2,200 m above sea level and is accessed by an unpaved local road. The village of Calderones is located adjacent to the Project site. As the El Pinguico Mine has been dormant since 1913, most operating infrastructure has been removed. VanGold has erected a small hoist and headframe to facilitate the rehabilitation of an access shaft to support their exploration and rehabilitation activities. Additional rehabilitation work has been completed on several adits, which access the Level 4 and Level 7 of the mine.

The surface land area at El Pinguico is adequate to support currently planned operations, such as the loading and shipment of the surface and underground stockpiles to the El Cubo Mill. No milling is planned at the El Pinguico site; therefore, there is no need for tailings storage areas or basins at the site. Most mine waste can be disposed of underground and additional surface area will be made available for storage of materials once the surface stockpile is hauled away.

# 5.1 LOCAL RESOURCES

The capital city of Guanajuato has a population of approximately 190,000 and hosts several universities and postsecondary schools, including a mining college. Tourism is a principal industry. Due to the long history of mining in the state, there are multiple suppliers of mining equipment and supplies, experienced laborers, and other vendors required to support mines in the area.

### 6.0 HISTORY OF THE GUANAJUATO MINING AREA AND THE EL PINGUICO AND EL CUBO MINES<sup>3</sup>

The mining history of Guanajuato dates back to 1520 when the Spanish conquistadors began exploration for minerals in the region discovering silver in 1548. The discovery led to the settling of people in the area and the City of Guanajuato as a population center. Guanajuato became one of the premier mining districts of Nueva España (New Spain).

In 1558, the first mine shafts were sunk leading to the discovery of the Veta Madre Vein (Mother Vein). Today, this vein runs along the hills that border the glen of Guanajuato in the north and northwest, marked by mines and shafts along its way. This discovery triggered an exploration rush that saw the discovery of multiple silver occurrences. During the period of 1781 to 1800, the Guanajuato mines accounted for 64% of the entire world's output of silver (Minerals of Mexico, 2011, page 57).

Production stopped as a result of the War of Independence from Spain in the year 1810; but in 1868, the Valenciana Mine was reopened by British investment capital. The principal or "mother vein" has yielded the sum of \$1 billion, as Indicated by the mint and government records.

The Mexican Revolution occurred between 1910 and 1920 and all mining was stopped or slowed during this time.

## 6.1 HISTORY OF THE EL CUBO MINE

The italicized portion of this section is copied from National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018. Minor edits that have not altered factual information have been made by the QP for clarification purposes.

*Mining on the El Cubo property has occurred since the 17<sup>th</sup> Century. The Sierra structure, which includes the El Cubo Mine and the adjacent Peregrina Mine (part of the Las Torres complex), accounts for much of the gold produced in the Guanajuato district – on the order of 2,000,000 ounces of gold and 80,000,000 ounces of silver.* 

In the 19<sup>th</sup> and 20<sup>th</sup> Centuries, mining at El Cubo focused on northwest striking veins known as the Villalpando, Dolores, La Loca, and La Fortuna and production was divided between many operators. In the early 1900s, construction began on the Túnel Aventurero de San Felipe (now El Cubo Level 4) in order to connect the Pastora-Fortuna, Villalpando, and La Loca veins. At the time, significant grades and widths were encountered on the Villalpando vein, including shoots up to 4 m wide and intercepts which assayed close to 1,000 grams of silver per tonne. The Villalpando vein, located in the central portion of the modern day El Cubo claim block, was the main source of production through the 1970s.

The El Cubo Mine changed ownership multiple times since the 1970s and in 1995, production was expanded from 350 to 800 tonnes per day, and then in 2001 to 1,400 tonnes per day. Each expansion showed a decrease in head grade, likely due to the use of low-grade material from old stope fill, as supply for the increased tonnage.

<sup>&</sup>lt;sup>3</sup>Much of this section is based upon or copied from the following: (1) National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018 and (2) NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

El Cubo was purchased by Mexgold Resources Inc. (Mexgold) in March 2004. In 2006, Mexgold became a wholly owned subsidiary of Gammon Lake Resources Inc., later known as Gammon Gold Inc. On August 26, 2011, Gammon Gold changed its name to AuRico Gold Inc.

In 2012, Endeavour Silver acquired the El Cubo property. Saleable silver and gold production through 2019 totaled 12,112,892 ounces of silver and 144,100 ounces of gold. Endeavour Silver ceased production in late 2019.

On December 18, 2020, VanGold signed a LOI to purchase the property for a mixture of cash, shares, and contingent future payments.

# 6.1.1 Historical Exploration

Historical exploration at El Cubo was largely conducted by drifting along known veins, with little drilling. Drilling exploration, prior to 2000, was sporadic, and the associated information poorly organized. While some pre-2000 drilling data is available within the historic files, it is generally poor quality and often related to small diameter drill holes. Such historic information is not considered suitable for use in modern Resource estimates and is relied on only as supplemental or secondary guidance during exploration.

Drilling activity at the El Cubo Project increased significantly between 2000 and 2009, in conjunction with the acquisition of El Cubo by Mexgold, and later by AuRico, producing credible data for 844 drill holes (approximately 180,019 m). The drill hole data applies to both surface and underground drilling, at a variety of drill hole diameters, which occurred mainly over the Villalpando, Dolores, La Loca, San Nicolas, San Eusebio, Pastora, Puertecito, and La Cruz structures.

Between 2004 and 2006, exploration activities at El Cubo located vein extensions and outlined an area of immediate interest, the La Loca zone, which has since been mined. In 2008, exploration drifting was completed on several veins, including the La Loca Level 12 (98 m), La Loca Level 6 (115 m), and Villalpando Level 5 (118 m). On the Peñoles concessions, exploration drifting occurred principally on San Alberto Level 600 (74 m), and throughout the El Cubo Mine and leased Las Torres property, including state-of-the-art remote sensing interpretation, geology, and geochemistry. Historical exploration activities conducted at El Cubo through mid-2009 are described in greater detail by Clark (2009).

In 2009, AuRico began the year with a dedicated 6-month program of data compilation followed by extensive field mapping over the Sierra Vein system. The work generated a practical empirical exploration model that was then used to identify other substantial exploration targets. The geology showed that the majority of the ore production on the Sierra Vein system came from two formations; the La Bufa Formation rhyolite and the Guanajuato Formation conglomerate. It also found that extensive portions of the Villalpando vein system, and other veins, had not yet been prospected in their projections down dip or across faults where they might intersect these formations. Using these criteria, El Cubo geologists identified 16 new exploration targets with a cumulative strike length of 15 km within the El Cubo land package. Nine primary exploration targets were identified and subsequently ranked, and a drill program was designed to test the best targets. A 44,000 m drilling program was launched in September 2009 with one core rig.

The first target drilled, the Dolores SE vein extension, led to the discovery of gold-silver mineralization above underground cut-off grades. Drilling was immediately focused on this area to determine if an economic deposit might exist. At year end, AuRico had completed 16 core holes for 3,361 m in the Dolores SE target. Surface mapping in the area of the Dolores SE showed that there was altered and mineralized breccia in the Capulin Fault, an east-west structure similar in geologic setting to the San Nicolas vein. Three drill holes were proposed to test this zone, and the second hole cut an anomalously thick intercept of gold-silver mineralization. Based on the positive implications of that intercept, another drill rig was put to work on this target zone as well as the Dolores. In mid-2009, geologic mapping and compilation efforts by El Cubo's geologists revealed that there is a major fault structure in the north part of the Villalpando vein system that was previously not considered a major target. This fault, called the Puertecito Fault, may actually be the northward continuation of the Villalpando vein.

Exploration carried out in 2010 consisted of drilling in the Dolores, Capulin, Villalpando Sur, Villalpando Gap, Puertecito, and La Cruz target areas. A workers' strike in June 2010 interrupted all exploration activities through the end of the year.

On February 23, 2011, AuRico announced that it had successfully resolved the labor disruption at the El Cubo Mine. Exploration activities resumed with the focus of drilling on the step-out and in-fill on the 2009 Dolores vein discovery. Drilling from the surface in the Villalpando Gap target area also intersected mineralization that exceeded the then current cut-off grades.

In early 2012, AuRico drilled 16 drill holes on the Dolores SE target, but all surface exploration drilling was put on hold subject to AuRico completing the purchase and sale agreement for the El Cubo Mine. At that time, the El Cubo exploration geologists were in the process of geologically mapping and surface sampling the Cebolletas, Villalpando Sur, Cabrestantes, and San Nicolás areas.

Exploration by Endeavour Silver is detailed in Section 9.0 of this report.

# 6.1.2 Historical Mineral Resource and Reserve Estimates

The historical Mineral Resource and Reserve estimates presented in the following paragraphs are not considered current, were not relied upon during preparation of (and are superseded by) the Mineral Resource and Reserve estimates presented in Sections 14.0 and 15.0 of this report are presented here for historical completeness only.

Mineral Resource and Reserve estimates for El Cubo, reported prior to 2009, are not compliant with current NI 43-101 standards, are not considered reliable or therefore informative, and are not discussed here. The Mineral Resource and Reserve estimates, reported by AuRico in 2009, were compliant with CIM standards and definitions, as required by NI 43-101 at that time and superseded any previous historical estimates. The technical report issued by AuRico was prepared by Glenn R. Clark & Associates Limited (Clark). Clark (2009) estimated Mineral Resources and Mineral Reserves for the El Cubo Mine based on data and information available as of January 1, 2009 (Table 6.1). The Mineral Resources reported by Clark were estimated using polygonal methods in spreadsheet and CAD software.

TABLE 6.1 Historic El Cubo Mineral Resource Estimate – January 1, 2009								
<b>Resource</b> Category	Tonnes (000s)	Au g/t	Ag g/t					
Measured	160	2.38	94					
Indicated (Underground)	215	2.61	95					
Indicated (Open Pit)	2,100	2.72	49					
Total Measured and Indicated	2,475	2.69	56					
Inferred	2,343	4.84	220					

Table 6.1 excludes Resources reported by Clark that were associated with Las Torres (Peñoles) lease. Clark also reported Proven and Probable Mineral Reserves for the El Cubo Mine, as summarized in Table 6.2.

TABLE 6.2 Historic El Cubo Mineral Reserve Estimate – January 1, 2009								
Reserve CategoryTonnes (000s)Au g/tAg g/t								
Proven	1,326	3.34	189					
Probable	1,696	3.35	157					
Total Proven and Probable	3,022	3.34	171					

Between 2009 and 2011, AuRico conducted additional diamond drilling and underground development, and estimated new Mineral Resources and Reserves within the El Cubo claim block. AuRico reported Mineral Resources for the El Cubo Mine effective December 31, 2011, as summarized in Table 6.3.

TABLE 6.3 Historical El Cubo Mineral Resource Estimate – December 31, 2011							
Resource Category	Tonnes (000s)	Au g/t	Ag g/t				
Measured	337	1.10	65				
Indicated	3,874	2.07	61				
Total Measured and Indicated	4,211	1.99	61				
Inferred	7,198	2.37	115				
Source: AuRico, 2011							

The AuRico totals include 2,132,000 tonnes of 2.69 g/t Au and 49 g/t Ag in Measured and Indicated Resources and 663,000 tonnes of 3.80 g/t Au and 181 g/t Ag in Inferred Resources within properties leased from Peñoles. AuRico also reported Mineral Reserves for the El Cubo Mine (Table 6.4), which include 663,000 tonnes of 1.38 g/t Au and 120 g/t Ag from the Peñoles lease.

TABLE 6.4 Historical El Cubo Mineral Reserve Estimate – December 31, 2011								
Reserve CategoryTonnes (000s)Au g/tAg g/t								
Proven	2,238	1.84	114					
Probable	3,152	1.88	102					
Total Proven and Probable	5,390	1.86	107					
Source: AuRico, 2011								

# 6.1.3 Historic Production

Previous owners and operators, prior to AuRico, did not keep reliable production records for the El Cubo Mine. Production achieved at the El Cubo Mine between 2007 and 2011, as reported in AuRico's annual reports, is summarized in Table 6.5.

	TABLE 6.5EL CUBO HISTORIC PRODUCTION STATISTICS									
Year	Tonnes	Gra (g/		Produ (oun						
		Au	Ag	Au	Ag					
2007	689,753	1.77	83	33,740	1,582,316					
2008	658,105	1.98	94	38,772	1,783,148					
2009	505,388	1.92	83	27,842	1,183,339					
2010	233,006	1.63	83	10,844	536,457					
2011	256,150	1.24	80	8,670	556,379					

In 2011, the El Cubo Mine produced 556,379 ounces of silver and 8,670 ounces of gold from 256,150 tonnes of ore grading 80 g/t Ag and 1.24 g/t Au. Silver and gold recoveries averaged 82% and 86%, respectively. Production in 2011 was affected by a labor strike that was settled during the year.

# 6.2 EL PINGUICO MINE

The italicized portion of this section has been copied from the NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017. Minor edits that have not altered factual information have been made by the QP for clarification purposes.

The mining history of the El Carmen and El Pinguico Mines are intimately related. Initially, these mines belonged to different owners and their major mining works included: the Humboldt shaft, Fortuna shaft, El Centro shaft, Carmencitas shaft, and the Pinguico shaft. All the shafts were started in waste and were sunk to conduct underground exploration and mining of the mineral deposits within the Carmen-Pinguico Fault system. This early work is thought to have commenced around 1890.

The first rich deposits on the property began to be exploited in 1904, a year after the former owner of the El Pinguico Mine, Mr. Amado Delgado, transferred the mine to the Guanajuato Development Company, directed by Mr. C.W. Bryant and renamed it the Pinguico Mining and Milling Company. The mine was in production from the late 1800s to 1913 and produced over 200,000 ounces of gold equivalent during this time (EMBSA, Proyecto El Pinguico, 2014). A metallurgical plant was installed for the concentration and cyanidation systems with a capacity of 250 tonnes per day (report with unknown signature, 1945). This plant no longer exists and was operated until the year 1913 when the owners left the region due to the Revolution.

Between 1932 and 1933, the engineer, Luis Frausto, carried out a feasibility study to exploit headings and stopes at the El Carmen and El Pinguico Mines. According to his calculations, an inventory of 75,000 tonnes of mineralization was estimated with grades between 300 to 400 g/t Ag and 4 to 5 g/t of Au, in addition to some mineral shoots below Level 8 (Meave, 1959). As this is a historical estimate, the reader is cautioned that it may not be representative of current Mineral Resources or Reserves. The results of this study are presented in this report to indicate the whole of the historical work completed on the Project.

In 1944, Mr. Fernando Cueto Fernández reactivated the El Carmen-El Pinguico Mines, briefly, but was not successful. In that same year and early 1945, contractor Tomas Colmenero tried to mine the "Dos Estrellas" stope, but the vein was very hard and difficult. Mr. Colmenero extracted some mineralized material from the "Dos Estrellas" stope and the resulting samples returned obtained the results presented in Table 6.6 (report with Unknown signature, 1945).

	LOT	ST. "REEAJE I	L EXTRAIDO I DOG ESTRELLAS L FINCUICO.	DE LOE MACT. Sª DE LA ME	2 CHG . 1191
LOTES No.	LEY Au. Group.	<u>x 0</u> Ag. Kate	. LOTINS <u>No.</u>	L & Y AU. Grme.	ES Ag. Egg.
3011207113445607805123	4.5 10.30 10.70 13.20 14.00 11.00 10.5 10.5 10.5 10.5 17.5	0.460 1.039 2.585 1.082 0.704 1.053 1.488 1.389 1.069 1.519 1.690 0.639 0.639 0.745 0.403 1.617	5567800123345567990112	15.0 10.0 17.5 18.5 10.5 10.5 10.0 10.0 10.0 10.0 10.0 11.0 5.5	1.995 $1.060$ $1.297$ $1.247$ $0.300$ $1.039$ $1.244$ $0.396$ $0.446$ $0.565$ $2.904$ $0.664$ $1.100$ $0.395$

TABLE 6.6Results of Mineralization Extracted from the Dos Estrellas Stope

# 6.2.1 1959 CRM Historical Estimate Study of the El Pinguico Mine Area

In 1959, the governmental organization, "Consejo de Recursos Minerales" (CRM, the Mexican Geological survey agency in 1959), wrote a report titled "Geological Survey of the Area El Pinguico," where it reported "reserves" of an underground stockpile and a Resource estimation of "in situ" mineralization from the El Pinguico vein. The historical estimate was made by the polygonal method, based on 160 channel samples taken in situ. There is insufficient information available on the methodology used in the estimate to form an opinion as to the quality of the estimate.

VanGold is treating the Mineral Resources and Reserves from the CRM report as historical estimates. The QP has not done sufficient work to classify the historical estimates as current Mineral Resources or Reserves and VanGold is not treating the historical estimates as current. VanGold is, as of this writing, undertaking work to assess the potential in these areas.

# 6.2.1.1 Dos Estrellas Stope

The "Dos Estrellas stope" is located northwest of the Pinguico shaft and is an area worked by Pinguico Mines Company. The CRM made a long section map showing elevated gold and silver values and appeared to demonstrate linear continuity of these values. The CRM took 17 channel samples from the Dos Estrellas stope and reported an average vein width of 1.52 m, 1.8 g/t Au, and 91 g/t Ag. In another area of this same stope, CRM reported a vein width of 0.8 m, 6.0 g/t Au, and 733 g/t Ag.

# 6.2.1.2 Carson Stope

The Carson stope is located 50 m further north and in the same orientation as the Dos Estrellas stope and consists of a series of small mine workings, where CRM found gold and silver mineralization. The average of 11 samples taken in different parts of the workings gave the width of the vein as 1.05 m, grading 5.7 g/t Au, and 457 g/t Ag.

## 6.2.1.3 El Carmen Adit

CRM took 12 samples from a muck pile at the El Carmen adit, which averaged 1.0 g/t Au and 128 g/t Ag. CRM also estimated the tonnages of the in situ veins using polygonal blocks but did not report the ranges of confidence for the blocks. The grades used in the estimate were obtained through channel sampling in stopes of the vein material. Table 6.7 presents CRM's findings. CRM reported a historical estimate of 4,921 tonnes with grades of 5.4 g/t Au and 424 g/t Ag. Note that while CRM classified the mineralization as a Probable Reserve, these should be considered as a historical estimation based upon limited information. VanGold is not treating the historical estimates as current Mineral Resources or Reserves.

I ABLE 0.7
HISTORICAL ESTIMATE FOR THE "IN SITU" VEIN MINERALIZATION
FROM BLOCKS 1, 2, AND 3
(CRM, 1959)

TADLE 67

Por lo tanto, el volúmen de reservas de mineral "in situ" clasificado como probable, es el siguiente:

	Volumen		Toneladas métricas	Ense Grae			Valor setual teóric M.N.		0.
Block	Etro. Cub.	Densidad.	86048.	An.	Åg.	Clase de Mineral.	ka.	4g.	Total.
1	1546.0	2,5	3865.0	5.7	457	Probable.	\$ 313,100.00	\$ 641,589.00 <b>\$</b>	954,689.00
2	350.0	2,5	876.0	4.9	347	Probable.	\$ 60,672.00	\$ 110,448.00 \$	171,120.00
3	72.0	2.5	180.0	1,2	101	Probable.	\$ 3,001.00	\$ 6,596.00	9,597.00
SUMAS	1968.0	2,5	4921.0	5.4	424		\$ 376,773.00	\$ 758,633.00 \$	1135,406.00

Note: Shown in Mexican Currency

### 6.2.1.4 Historical Mineral Resource and Reserve Estimation of the Underground Stockpile

An underground stockpile of broken mineralization is located in the northwest part of the mine and partially occupies the block from Level 4 to Level 7; this stockpile extends for 300 m longitudinally; unfortunately, a part of this material is covered by falls of the waste rock that hosts the Pinguico vein (Figure 7).

*CRM* only considered material up to Level 7 of the mine in the stockpile inventory, but the report mentions the possibility of additional material continuing in Levels 8 and 9.

CRM dug 20 trenches along the top of the stockpile to sample it. The average results of all their samples is 3.2 g/t Au and 288 g/t Ag. CRM's effort in estimating the volume of the stockpile consisted of:

- Topographic survey of the stockpile surface and measurement from the surface of the stockpile to *Level 7.*
- Digging 20 trenches along the top of the stockpile at intervals approximating 14.4 m.
- *Approximating the boundaries of the Pinguico vein.*
- Determining the density factor of the stockpile to be  $1.4 \text{ t/m}^3$  (including rock material and air spaces). The method of the determination was not provided.
- Calculation of averages for the trench samples and review of their distribution in the mass of the stockpile.
- Calculation of individual volumes (the report does not mention how individual volumes were determined).

The historical estimate of the main stockpile, as reported by CRM (1959), is 103,415 metric tonnes grading 3.2 g/t Au and 288 g/t Ag as Probable Reserves, as presented in Table 6.8. The reports by CRM are not detailed and there is little information available regarding the key assumptions, parameters, and methods used for the estimates. The volume of the stockpile was estimated using a topographic survey of the top of the pile and the volume of the workings from historical mine plans. The grade was determined through trench sampling of the top of the stockpile. Since only the top of the stockpile could be accessed for sampling, these grades may not reflect the grades of material throughout the stockpile. CRM classified the historical estimates as Probable Mineral Reserves, but in addition to being historical, the fact that only the top 1.5 m was sampled, leads to significant uncertainty being present regarding grade distributions through the stockpile.

	Volúmen		Toneladas nétricas	Factor	Toneladas M.S.	Ensey Orms		_	Valo	M.N.	ico.
Block.	Mtrs. Cub.	Densidad.	secas.	dilución.	Ajustedas.	Au.	Ag.		Au.	Ад.	Total.
A	17,747.0	1.4	24,845.0	0.650	16,149.0	2,0	193	\$	455,818.00	\$1132,039.00	\$ 1587,857.00
в	14,238.0	1.4	19,933.0	0.650	12,956.0	6.8	790	:	1234,217.00	\$3716,845.00	\$ 4951,062.00
c	95, 293.0	1.4	133,411.0	0.557	74,310.0	2.8	221	\$	2936,360.00	\$5964,656.00	\$ 8901,016.00
SUMAS	127,278.0		178,189.0		103,415.0	3.2	288	\$	4626,395.00	\$10813,540.00	\$15439,935.00
		-		-							
ya proj		a fué de 3	.5 metros, z	azonablenen	nte y en rela	ación con	el dec	oli	ve general qu		dio de zanjas, perfil del exp
ya prot sado mi	fundidad medi	a fué de 3 ede asigns	5.5 metros, z ar un factor	azonablemen de segurida	nte y en rela ad de 30% al	ación con	el dec	oli	ve general qu		
ya proj sedo si Re	fundidad medi	a fué de 3 ede asigns s sotuales	5.5 metros, z ar un factor	de segurida la mina, e	nte y en rela ad de 30% al	walor to	el dec	oli	ve general qu		
ya proj sado mi Ra Mineral	fundidad medi ineral, se pu syumiendo, la	a fué de 3 mede asigna a sotuales n situ"	5.5 metros, z ur un factor 5 reservas de 4,921.0 Tor	de segurida b segurida b la mina, s	nte y en rel. ad de 30% al son:	walor to ,406,00 M	el dec tal de	oli	ve general qu		

 TABLE 6.8

 HISTORICAL ESTIMATE OF THE UNDERGROUND STOCKPILE INCLUDING BLOCKS A, B, AND C (CRM 1959)

Note: Shown in Mexican Currency

The CRM report mentions there may be additional mineralized zones below Level 7 called Sangria del Carmen and there may be further mineralization deeper in other areas such as near the Tatalayo fault.

### 6.2.2 Underground Stockpile Resource Estimate – SGM Study 2012

In 2012, EMBSA engaged the "Servicio Geológico Mexicano" (SGM – the Mexican Geological Survey agency) to perform a "reserve certification" on the same underground stockpile that CRM had estimated in 1959.

SGM took 56 samples in 19 trenches distributed over 300 m on the stockpile. Each trench was dug to a depth of 1.5 m. SGM could not sample, vertically, deeper because Level 7 was inaccessible.

SGM tried to replicate the sample locations and results found in the CRM report (1959). SGM sampling returned an average width of the trenches of 6.95 m (with areas over 10 m wide) and an average grade of 1.662 g/t of Au and 167 g/t of Ag.

The samples taken by SGM were sent to their own laboratory in Chihuahua, Mexico. They used standard fire assay followed by atomic absorption (AA) to determine gold and silver values.

SGM assigned 25,600 tonnes to their certified class for the underground stockpile with averaged grades (diluted) of 1.66 g/t Au and 167 g/t Ag. The tonnage would be confined to the 5 m to 6.5 m of the top of the stockpile.

### 7.0 GEOLOGICAL SETTING AND MINERALIZATION AT THE EL PINGUICO AND EL CUBO PROPERTIES

Much of the following description for regional geology and mineralization is excerpted from the following.

- NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date August 1, 2017 (unpublished).
- 2) National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

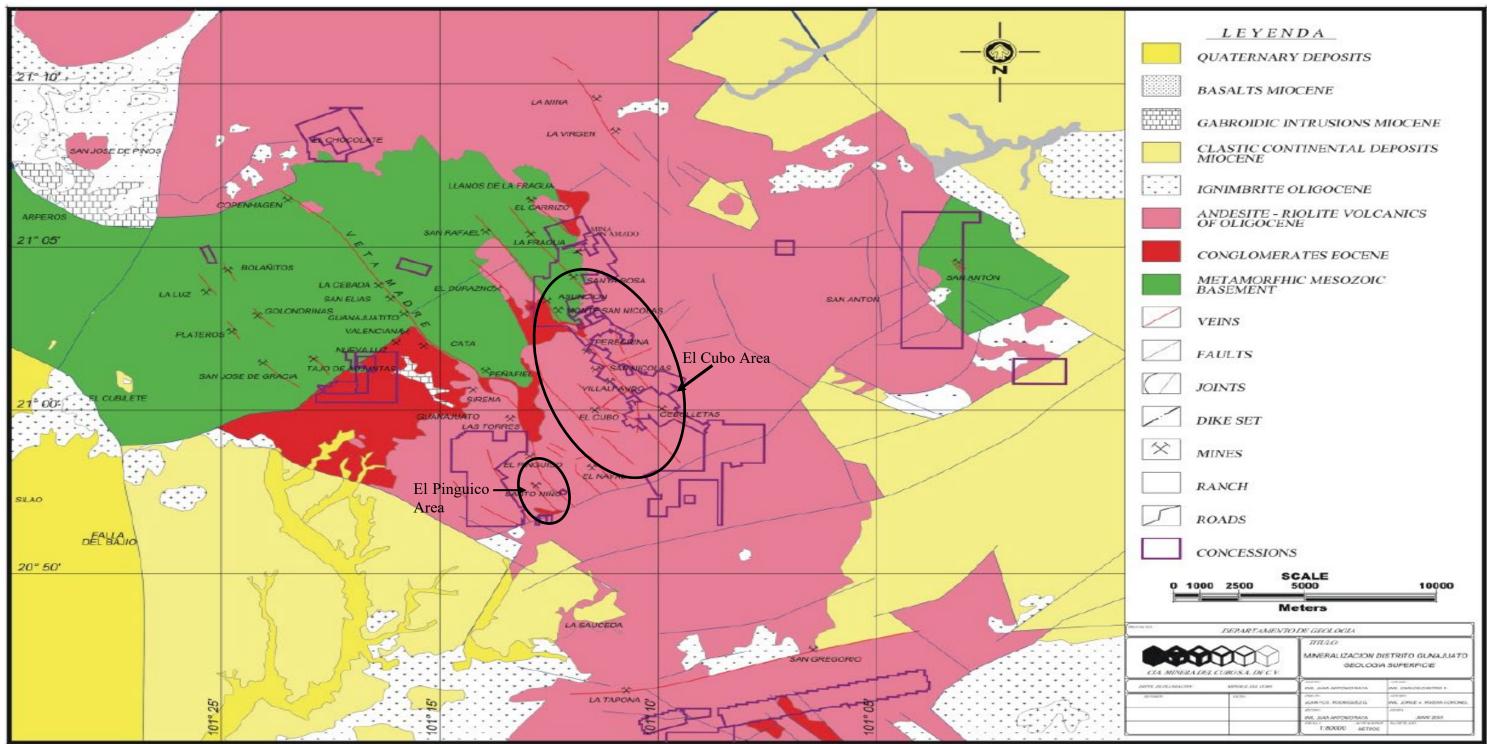
All descriptions quoted from either the El Cubo 2018 Technical Report or the El Pinguico 2017 Technical Report are italicized. Changes to tables, figure numbers, section numbers, and standardization have been made to suit the format of this report.

# 7.1 **REGIONAL GEOLOGY**

The entirety of the regional geology and regional structure sections is excerpted from the above mentioned NI 43-101 Technical Report on the Updated Mineral Resource and Reserve Estimates for the El Cubo Deposit, Guanajuato State, Mexico for Endeavour Silver.

The Guanajuato Mining District lies along the southern edge of the Mexican Central Plateau (Sierra Madre Occidental Geologic Province), where a north-northwesterly trending linear volcanic belt of Tertiary age is abruptly cut by the easterly trend of the Transverse Volcanic Belt. The Sierra Madre Occidental Geologic Province is approximately 1,200 km long and 200 to 300 km wide. Rock units within the belt consist of flows and tuffs of principally basaltic to rhyolitic composition with related intrusive units. The volcanic activity that produced the upper volcanic group ended by the late Oligocene, though there was some eruptive activity as recently as 23 Ma (early Miocene). The youngest volcanic units lie on older volcanoclastic, volcanic rocks, and sedimentary units. The oldest rocks of the Guanajuato District are marine organic and calcareous black shales deposits in the Triassic through Cretaceous Jaliscoan Sea.

The Guanajuato Mining District is located on the northeast flank of a poorly defined northwest-trending anticline (Wandke and Martinez, 1928). Normal faults parallel to the anticlinal axial trace have dropped the central portions of the anticline downward, and a younger, second set of normal faults formed a series of horsts and grabens trending nearly perpendicular to the axial trace. A regional geologic map centered is shown in Figure 7.1.



#### Figure 7.1. Regional geology of the El Cubo project area Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

Note: Arrows point to the El Cubo Mine area and the El Pinguico Mine area. El Pinguico Concessions outline are shown in Figure 4.3.

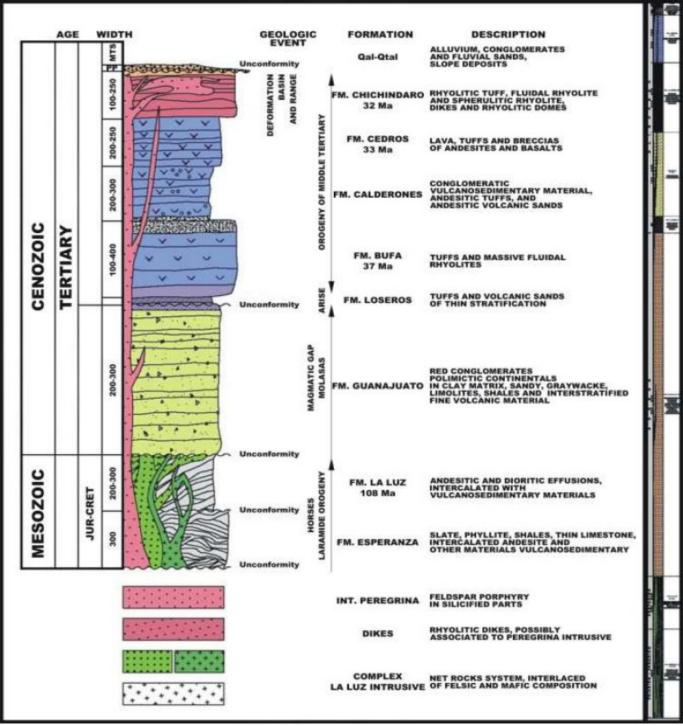


Figure 7.2. Stratigraphic column, Eastern Guanajuato Mining District Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

# 7.1.1 Stratigraphy

The stratigraphy of the Guanajuato District can be divided into a Mesozoic basement (Chiodi, et al, 1988; Davila and Martinez, 1987; Martinez-Reyes, 1992) and overlying Cenozoic units shown in Figure 7.2.

# 7.1.2 Esperanza Formation

The oldest non-igneous rocks in the district are black and gray carbonaceous and calcareous shale, interbedded with arenite, limestone and andesitic to basaltic lava flows, all metamorphosed to phyllites, slates and marble. The unit exceeds 600 m in thickness.

# 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 pillowed tholeiitic basalts dated at  $108.4 \pm 2$  Ma. Locally, rhyolitic tuffs and agglomerates are present and some volcanogenic massive sulfide occurrences have been reported.

# 7.1.4 Guanajuato Formation

The Guanajuato Formation consists of a characteristic red conglomerate and lies unconformably on the Esperanza Formation and less commonly on the La Luz Formation volcanic rocks. The conglomerate consists of pebbles to boulders of quartz, limestone, granite, and andesite derived from older rock types and is cemented by a clay matrix with interlayers of sandstone. Near the base of the unit are volcanic arenites and andesitic lavas. The Guanajuato Formation is estimated to be from 1,500 m to 2,000 m thick. The distribution of the formation is restricted to the hanging wall of the Veta Madre at Guanajuato and is covered on the east by younger volcanism, in fault contact to the west with the Esperanza Formation, and covered by younger basin gravels to the south.

# 7.1.5 Loseros Formation

Overlying the Guanajuato Formation is the mid-Tertiary Loseros Formation, which is interpreted to be within, and adjacent to a caldera. The Loseros tuff is a well-bedded, green to cream-red volcanic arenite ranging from 10 m to 52 m thick. It has been interpreted to be a surge deposit at the base of the Cubo Caldera filling and Oligocene in age.

# 7.1.6 Bufa Formation

The Bufa Formation is a felsic ignimbrite and averages approximately 360 m thick. It is a sanidine-bearing rhyoliteignimbrite with biotite as a mafic phase; is often massive but locally bedded. Because it is moderately welded with extensive and pervasive silicification, it is hard and forms prominent cliffs east of the city of Guanajuato. It is the principal host rock at El Cubo where it has been divided into three mappable units: a lower breccia overlain by dense, red rhyolite porphyry, and in turn overlain by a massive to bedded ignimbrite. It is also a host unit at the El Pinguico Mine.

# 7.1.7 Calderones Formation

The Calderones Formation contains a wide variety of volcanic rocks, including low- to medium-grade ignimbrites, pyroclastic flows and surge layers, air-fall ash-rich tuffs, pumice layers, lahars, debris flows, re-worked tuffaceous layers deposited in water, tuff-breccias, and mega-breccias. There is ubiquitous and characteristic chlorite alteration that imparts a green to greenish blue color to almost all outcrops of the Calderones Formation. Propylitic alteration adjacent to veins and dikes is locally important in many outcrops.

The Calderones Formation ranges from 200 m to 250 m and overlies the Bufa Formation at El Cubo with a megabreccia composed of large fragments (up to 5 m to 10 m) of the Esperanza Formation. An uppermost zone up to 5 m thick of thinly bedded to laminated grey to black crystal air fall andesite tuff occurs at the top of the unit where it imperceptibly grades into the overlying Cedros Formation.

# 7.1.8 Cedros Formation

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

## 7.1.9 Chichindaro Formation

The Chichindaro Formation is white and pink, poorly sorted massive bedded, crystal, vitric, and welded ash, containing irregular lenses of flow breccia. It is about 100 m to 250 m thick and the youngest rock type known in the district, so pre-erosion thickness is unknown. Gross reported K-Ar ages of about 24.4 Ma (C.C. Dominguez, 2017) but other dates place the unit at 32 Ma to 30.1 Ma. Mineralization age by Rb-Sr isochron in illite is placed at 28.47  $\pm$  0.55 Ma for the Villalpando and San Juan de Dios low sulfidation veins and a 40 Ar/39Ar age from the La Valenciana ore shoot of the Veta Madre veins of 30.2  $\pm$  0.17 Ma. Thus, the Chichindaro Formation may be very late to post mineralization.

# 7.1.10 El Capulin Formation

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

### 7.1.11 Intrusive Rocks

The Peregrina intrusive is a laccolith at the contact of the Bufa Formation rhyolite and the Guanajuato Formation conglomerate. The uppermost portion of the Peregrina intrusive extends into the Chichindaro Formation rhyolite. The Comanja granite is not observed at El Cubo but is a unit of batholitic size, apparently emplaced along the axis of the Sierra de Guanajuato. It is Eocene in age and has been radiometrically dated at  $53 \pm 3$  Ma and  $51 \pm 1$  Ma by K-Ar in biotite. These dates establish the youngest relative age for the Bufa Formation, the youngest unit cut by the granite.

### 7.2 **REGIONAL STRUCTURE**

Faults in the region belong to three sets:

- 1) oldest,
- 2) *intermediate, and*
- 3) *youngest.*

The oldest set includes pre-mineral deformation during the Laramide orogeny (80-40 Ma) and resulted in westnorthwest trending folds and thrust faults. The intermediate set includes early post-Laramide extension  $(\pm 30 \text{ Ma})$  set of faults that are both pre-mineralization and mineralization stage. This intermediate set consists of three major systems: Veta Madre, La Luz, and the Sierra set of faults and fault zones. The major fault and vein direction is northnorthwest accompanied by early stage intermediate-sulfidation style mineralization, but somewhat younger movement created faults trending east-northeast to west-northwest in a basin and range and block faulting style perhaps accompanied by higher gold values. The youngest fault set includes northeast striking faults which are post mineralization.

# 7.2.1 Sierra Fault System

The Sierra Fault System is the northeasterly trending of the three and contains many sub parallel faults striking northwesterly with dips primarily 40° to 80° southwest. A few northwest striking faults in this system dip northeasterly. The northwest striking structures host the very important Villalpando, La Loca, Dolores, and Pastora-Fortuna veins. A second group of faults are east-west striking with dips to the north and south. Veins following these structures include the Alto de Villalpando, a splay of the Villalpando vein; the San Nicolas vein (north dipping); and the San Eusebio (south dipping) vein. The latter two veins have relatively high gold content. Northeast striking, southerly dipping veins, such La Reina and Marmajas tend to have higher gold content than the other veins. The youngest set of faults strike north-south and dip east or west. These faults host veins with short strike lengths and have locally enriched gold and silver values, particularly where they intersect the northwest striking veins.

# 7.2.2 Veta Madre System

The Veta Madre System is located about 4 km to the southwest of the Sierra System and is the longest of the three fault systems. The Veta Madre dips consistently 35° to 55° southwest and has been traced along strike well over 25 km. Parallel faults are common, especially in the hanging wall, but these are shorter than the Veta Madre. Hanging wall and footwall faults, which are splits and sigmoidal loops joining the Veta Madre at low angles, are common in areas of rapid changes of strike direction. The Veta Madre System has hosted most of the world-class veins and stockwork deposits in the Guanajuato District.

# 7.2.3 La Luz System

The La Luz System is the most variable in attitude of the three north-northwesterly fault systems. Many of the La Luz System faults dip  $40^{\circ}$  to  $80^{\circ}$  northeast, whereas others dip  $40^{\circ}$  to  $80^{\circ}$  southwest. Strike directions in general are northwesterly on the northwest end of the system, but curve more to the east-southeast at the southeast end where considerable horse-tailing and bifurcation occurs.

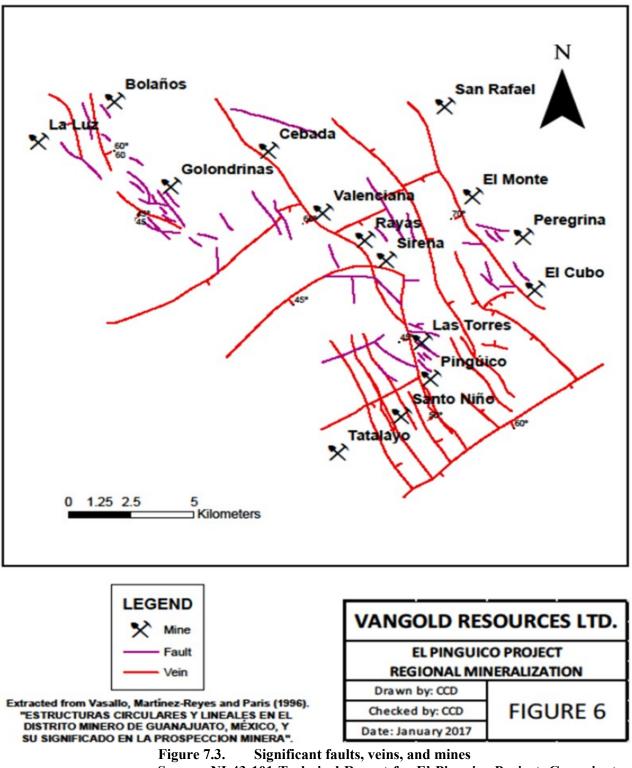
The youngest sets of faults strike northeast and are rare, with movement less than 20 m. No faults of this set are known to be mineralized so all are assumed to be post mineral.

# 7.3 GEOLOGY OF THE EL CUBO AND EL PINGUICO PROPERTIES

Detailed geologic maps of the El Cubo and El Pinguico properties are not available; however, the regional geology is shown in Figure 7.1.

The mines in the area are situated along the significant fault zones as mineralization occurs within the faults and associated splays as well as veins filling local fractures. All of the units mentioned in Section 7.1.1 occur in the El Cubo area with the exceptions of the Esperanza Formation and the Comanja granite. The stratigraphic section at El Cubo is cut by the Peregrina intrusive laccolith.

The El Pinguico property exhibits different types and ages of lithologies including the Esperanza Formation, Red Conglomerate, La Luz Formation, and a sequence of volcanic rocks (Loseros Formation, Bufa Rhyolite tuff, Calderones Formation, Cedros andesite, and Chichindaro Formations). Figure 7.3 displays the locations of the two properties, the regional structure and major vein locations.



Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

# 7.3.1 El Cubo

Historically, there have been at least 37 veins within the El Cubo area with mineralization occurring from an elevation of 2,650 m down to an elevation of 1,825 m. The Villalpando and the Dolores veins have been actively mined since the early days of mining at El Cubo.

The most productive veins are sub-parallel to the Veta Madre system as north-northwest striking veins and local stockwork style mineralization. Mineralization at El Cubo occurs as open-space fillings in fracture/fault zones or impregnations in locally porous wall rock. Weak stockwork style mineralization occurs in an historic open pit on the Dolores vein in the vicinity of the El Tajo Mill. Mineralization at El Cubo occurs in several stratigraphic formations with the principal hosts being the Guanajuato Formation conglomerate and the Bufa Formation rhyolite. During the 2009-2011 exploration drilling program, drilling tested a possible offset of the Dolores ore body on the east-west striking Capulin Fault. The Dolores 2 vein was discovered on the south (downthrown) side of the fault. In the Dolores 2 zone, the major host rocks are the Calderones Formation and the underlying Bufa Formation in fault contact along the Dolores fault-vein structure.

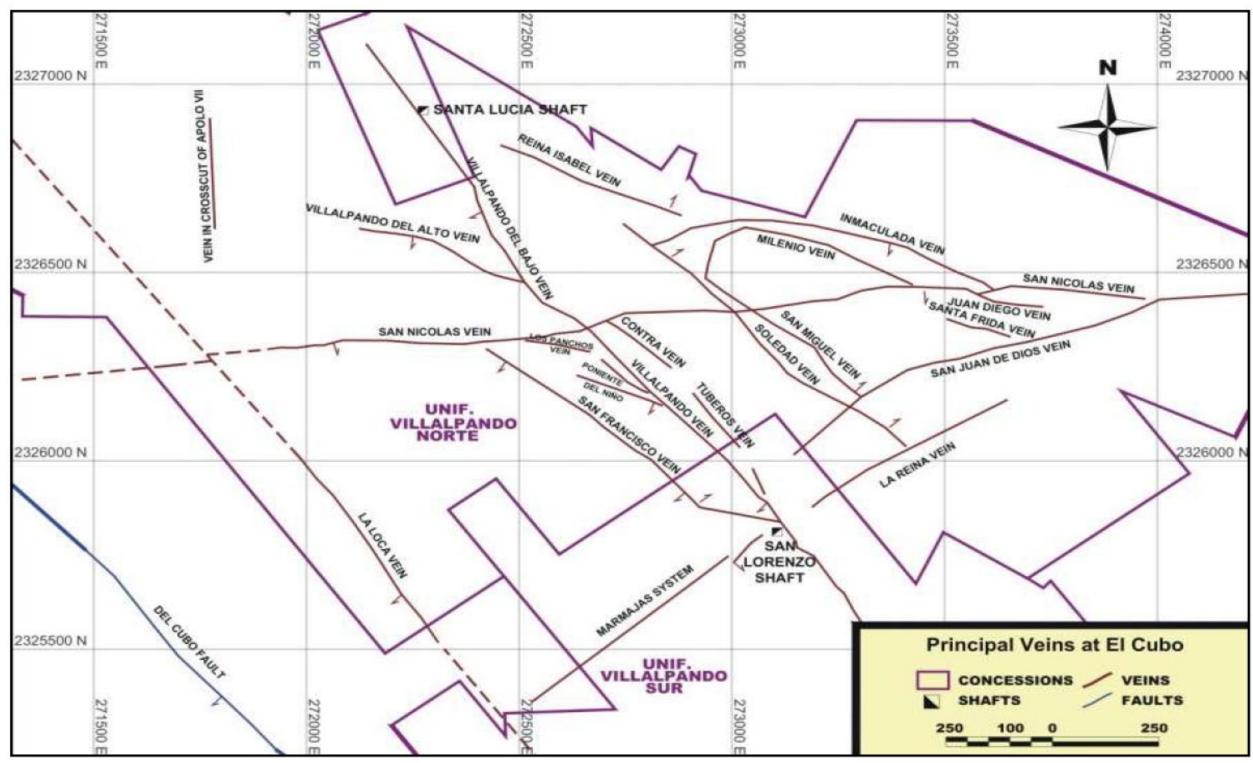
Several transverse, northeast striking veins with high grade gold mineralization also occur. Examples include Marmajas, La Reina, and the San Juan de Dios. Mineralization is open-ended due to a lack of exploration drilling and development. Vein mineralization is normally 1 m to 2 m wide, with mineralized breccia zones up to 10 m wide. Some high-grade veins are only 10 to 20 cm wide.

Most of the important veins dip steeply at 70° to 90°, but some of the northwest striking veins have a shallower dip, ranging from  $50^{\circ}$  to  $60^{\circ}$ .

Figure 7.4 is a more detailed view of the vein locations in the northern portion of the El Cubo property.

# 7.3.2 El Pinguico

The El Carmen-El Pinguico vein (El Pinguico) is similar genetically and mineralogically to the El Cubo veins and to the other vein systems in the Guanajuato Mining District. It is located a short distance west of the Veta Madre Fault structure and has been postulated to be the hanging wall of the Veta Madre vein. The El Pinguico vein trends north-northwesterly, dips about 80° northeast, is hosted in the Bufa Formation, and lies in the hanging wall of the Veta Madre vein system. The El Pinguico vein has a known strike length of 1,600 m and may continue southeastward as the La Joya vein, another north-northwest striking, steeply northeast dipping vein, which has been traced along strike for about 820 m. The El Pinguico-La Joya veins are sub-parallel to the Veta Madre and may be a split off the Veta Madre or may intersect the Veta Madre at depth. Based upon historical records, the El Pinguico vein averaged about 6.95 m wide and had a maximum width of 12 m.



Principal veins in the northern portion of the El Cubo project area Figure 7.4. Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

# 7.4 ALTERATION

The silver-gold deposits in the Guanajuato area are considered to be low-sulfidation epithermal deposits and demonstrate the characteristics typical of such. Alteration will vary based upon the depth of the individual mine and will vary within individual mines based upon the nature of the hydrothermal solution that penetrated the specific lithology.

## 7.4.1 El Cubo Alteration

Silicification is ubiquitous in and within several meters of all the major mineralized veins at El Cubo. This is the norm at all low sulfidation epithermal silver-gold vein systems worldwide. Argillic (clay alteration) is generally peripheral to highly silicified zones. Abundant hydrothermal clay in the upper levels of El Cubo is consistent with acid sulfate alteration due to boiling. The boiling event is accompanied by precipitation of large amounts of silver and/or gold contained within the hydrothermal waters. Grey sericite alteration is typical of the deeper alteration zones. Sericitic alteration is especially noticeable in the Villalpando vein near its contact with the conglomerate of the Guanajuato Formation. Adularia feldspar is present in the El Cubo veins and is more common in the northwest striking veins. Amethyst is an important gangue mineral at the Dolores, San Francisco, and Villalpando veins over a vertical range of 450 m. As typical of all low sulfidation epithermal silver-gold vein systems, wall rock alteration is a key component of the hydrothermal system and mineralization and is an extremely important tool during exploration targeting. Alteration mapping of small structures high in the hydrothermal system is a strategic tool in locating new high-grade veins at depth below barren or minimally mineralized structures, particularly where outcropping but relatively unreactive rocks are stratigraphically above much more receptive units.

## 7.4.2 El Pinguico Alteration

Alteration at El Pinguico is typical of low sulfidation epithermal vein systems with widespread peripheral propylitic alteration, which intensifies near fractures. The degree of propylitic alteration is dependent upon composition of the affected rocks. It is most apparent in rocks with higher ferromagnesium minerals, which are altered to greenish chlorite and least apparent in felsic-rhyolitic rocks. Inward from the propylitic zones are argillic, phyllic, and potassic alteration in and adjacent to veins. As at El Cubo, quartz + adularia are key components of the inner potassic alteration related to the deposition of the silver, gold, and minor base metal sulfide minerals.

# 7.5 MINERALIZATION

# The following is excerpted from NI 43-101 Technical Report on the Updated Mineral Resource and Reserve Estimates for the El Cubo Deposit, Guanajuato State, Mexico for Endeavour Silver, effective date December 31, 2016, amended date – March 27, 2018 and shown as italicized, unless otherwise indicated.

El Cubo mineralization is typical of the classic high-grade silver-gold, banded epithermal vein deposits with low sulfidation mineralization characterized by adularia-sericite-silica alteration. Silver occurs in dark sulfide-rich bands within the veins with little mineralization but significant alteration minerals in the surrounding wall rocks. Significant silver and gold bearing metallic minerals include argentite or acanthite (Ag<sub>2</sub>S), electrum (native Au/Ag), ruby silver sulfosalt minerals, such as pyrargyrite (Ag<sub>3</sub>SbS<sub>3</sub>) and polybasite [(Ag/Cu)<sub>6</sub>(Sb,As)<sub>2</sub>S<sub>7</sub>][Ag<sub>9</sub>CuS<sub>4</sub>]), naumannite (Ag<sub>2</sub>S), native silver (Ag), native gold (Au), and aguilarite (Ag<sub>4</sub>SeS). Other metallic minerals include pyrite (FeS<sub>2</sub>), galena (PbS), sphalerite (ZnS), and chalcopyrite (CuFeS<sub>2</sub>). The silver sulfosalts are commonly found at depth while native silver is generally supergene and found in oxidized areas. As typical of these type systems, galena, sphalerite, and chalcopyrite are found deeper in the vein zones.

The silver rich veins, such as Villalpando, contain quartz, adularia, pyrite, argentite (acanthite), naumannite, and native gold. Gold rich veins, such as San Nicolas, contain quartz, pyrite, minor chalcopyrite and sphalerite, electrum, and aguilarite.

There is significant mineralogical zonation in the vein system. The upper levels are argentite (acanthite) + adularia + pyrite + electrum + calcite + quartz and the lower levels are chalcopyrite + galena + sphalerite + adularia + quartz + argentite (acanthite).

The gold:silver ratio in the more gold-rich veins typically ranges from 1:15 to 1:30. The gold:silver ratio in the silver rich veins typically ranges from 1:60 to 1:150, and sometimes higher. The overall gold:silver ratio to date is 1:64. Metal zoning appears to be related, at least in part, to elevation. Ranges for gold:silver ratios at El Cubo vary from 1:10 to 1:20 in the upper mine levels, from 1:40 to 1:50 in the middle mine levels, and 1:100 to 1:150 at depth. These ratios could be of some importance in evaluating outcropping vein occurrences.

Low-sulfidation epithermal deposits in Mexico, such as El Cubo and El Pinguico, commonly have a well-defined, subhorizontal zone where the hydrothermal fluids deposited gold and silver mineralization. Regionally, ore horizon thickness ranges from at least 300 m to greater than 500 m. High-grade ore occurs where the hydrothermal fluids boiled. Below the higher-grade silver gold mineralization, silver and gold values decrease but base metal values increase.

Above the boiling zone, veins sometimes disappear or can be reflected into something as simple as a calcite vein with barely anomalous silver values or a fracture with argillic to phyllic alteration. This commonly occurs when the geologic unit above the "boiling zone" host rock is unreactive due to its chemical or structural characteristics.

Phyllic alteration, as sericite and silicification, forms as haloes surrounding and adjacent to the silver-gold veins. Banding is due to periodic boiling events related to pressure releases during faulting of the brittle silicified host rocks. Amethyst is locally common, and calcite is commonly a late stage mineral.

Typical of this style of mineralization, economic concentrations of silver and gold occur in ore shoots distributed vertically and laterally between barren or weakly mineralized portions of the veins. Bonanza grades may occur at the site of vein intersections, such as the nearly perpendicular San Nicolas-Villalpando vein intersection. Other vein intersections of various named splays along the principal Villalpando vein also host bonanza silver-gold mineralization. Movement along the strike or dip direction of veins during the hydrothermal episodes causes wide sigmoidal breccia zones typified by pinch and swell mineralization.

At the Pinguico Mine the major vein consists of both silver and gold in crumbling sugary to white crystalline quartz and calcite veins, within brecciated rhyolitic rock, and as a replacement in the altered rhyolite. Mineralization consists of native gold and silver, polybasite, pyrargyrite, tetrahedrite, marcasite, sphalerite, galena, pyrite, and chalcopyrite (El Pinguico 2017 Technical Report).

# 8.0 **DEPOSIT TYPES**

The Guanajuato Mining District is a world-class, high-grade, silver-gold, epithermal vein system with low sulfidation and adularia-sericite alteration. It is historically a well-known, studied, and documented mining district. The Guanajuato veins are typical of most epithermal silver-gold vein deposits in Mexico with respect to volcanic activity, volcanic and sedimentary host rock affinities, mineral paragenesis, silver-gold grades and ratios, vein mineralogy, and alteration styles.

Epithermal systems form relatively near the surface, ranging from hot spring style gold and gold-silver mineralization developed in sinter terraces and shallow bedrock with deeper hydrothermal feeder zones to vein deposits and hanging wall splits at depths of several hundred meters. The hydrothermal solutions are driven by heat from volcanic activity. The hot circulating hydrothermal waters rise up through fissures with pressures building up until the hydrostatic pressure is released (sometimes explosively) allowing solutions to boil and precipitate the metallic minerals. Typically, this is a cyclical or recurring event as the fissures repeatedly get plugged and pressures build up until fracturing once again releases the hydrostatic pressure. The typical banding nature of the veins represents the cyclical pressure build-up, release by fracturing, boiling, and precipitation of minerals multiples of times until the system is finally exhausted. These multiple events allow the range of economic mineralization to expand to a broader vertical range.

As the mineralizing process is driven by filling of void spaces and fissure, mineralization geometry is affected by the permeability and orientation of the host structures. Competent host rock or rocks made competent by silicification are brittle and subject to fracturing and produce long through going faults and veins (both along strike and down dip). Movement along strike and or dip directions during the hydrothermal event develops dilatant zones or sigmoidal zones where widths of mineralization may significantly increase. Commonly, a main fault or vein zone hosts hanging wall splits allowing for wider mineralized zones.

Low sulfidation epithermal veins in the region typically have a well-developed, sub-horizontal ore horizon about 300 m to 500 meters in vertical extent where high grade vertical ore shoots develop during hydrothermal fluid boiling and mineral precipitation. In some districts, multiple sub-horizontal horizons develop. The minimum and maximum elevations of mineralized horizons at El Cubo have not yet been precisely defined, but historic production spans an elevation range from 1,850 meters to 2,650 meters, with known mineralization down to the 1,825 m elevation.

Silver and gold are commonly zoned in epithermal systems and mineralization at El Cubo is no exception. The gold to silver ratios range from 1:15-1:30 in the upper reaches of mineralization (typified by San Nicolas, Area 1) to 1:100-1:150 at depths (typified by Peregrina, Area 4, and Dolores 2, Area 2).

Low sulfidation deposits are formed by the circulation of hydrothermal solutions that are near neutral in pH; thus, there is very little acidic alteration within the host rocks and no widespread pyritic haloes. The characteristic alteration assemblages include illite clay, sericite, and adularia along with silicification that are hosted within the veins or in the adjacent wall rocks. Adularia is a particularly important alteration mineral as it is a guide to economic mineralization. Amethyst is locally associated with gold and silver mineralization and calcite is a late stage mineral. The hydrothermal fluids travel along fissure/faults or other openings or can also travel through very porous rock types such as poorly welded ignimbrites or ash fall tuffs. Fluids that travel along fissure and faults develop into veins or vein breccia zones while fluids traveling along porous rock units tend to form disseminated deposits.

# 9.0 EXPLORATION

At El Cubo and at El Pinguico, exploration included soil and rock sampling, prospecting, and drilling and some historic geophysical surveys.

The Guanajuato Mining District has been active for hundreds of years and is one of the great silver-gold districts in Mexico. Extensions to known ore bodies and new discoveries, along with increased metal prices, has allowed for continued production at many mines. Based upon the number of veins already exposed at El Cubo and El Pinguico, it is likely that further exploration efforts will result in extensions of known mineralization along strike and down-dip.

Previously mined vein material occurred in the La Bufa rhyolite and underlying conglomerates in the Guanajuato Formation. Some surface rocks in the project area are from the Calderones Formation; not known as a favorable host. Thus, detailed exploration might discover upper level alteration (*i.e.*, calcite veins or argillic alteration along fractures) in the Calderones Formation that might reflect potential mineralization at depth in the Bufa Rhyolite.

Gold to silver mineralization is commonly zoned in epithermal silver-gold districts. At El Cubo, the gold:silver ratio varies from 1:30 in the upper reaches of the deposit (typified by San Nicolas, Area 1) to 1:100 in the deeper parts of mines, such as Peregrina – Area 4 and Dolores 2 – Area 2.

Some of the exploration results suggest good potential for extending commercial mineralization along strike and downdip. Surface sampling in 2016 (Endeavour) suggests that some areas are quite high in the system based on gold:silver ratios. Some surface holes in 2016 encountered encouraging mineralization; and underground drilling in 2018 and 2019 (Endeavour) encountered values greater than 160 equivalent grams of silver per tonne and thicknesses in several holes. At El Pinguico the amount of silver versus gold is higher and shows a similar change with depth.

There has been no new exploration by VanGold at El Cubo. At El Pinguico, VanGold is rehabilitating some underground mine workings, conducting a channel sampling campaign, and started a drilling program. Initial channel sampling results have been announced but final drill results have not been announced.

# 9.1 EL CUBO EXPLORATION

All 2016 exploration efforts were undertaken by Endeavour.

In the Purisima and Cabrestantes II vein area, select rock sampling resulted in multiple samples returning encouraging assay results. All 13 selected samples, collected in the San Juan Adit, returned strongly anomalous values, and based on gold:silver ratios, may represent the upper zoning of mineralization.

Surface sampling in the Las Palomas area appears discouraging as selected samples reported low silver and gold values and the presence of anglesite, the oxide equivalent of galena (PbS), a base metal mineral suggestive of the lower reaches of the mineralized system. Sampling in the El Bosque and Georgina (Nayal) area returned generally discouraging values, although some moderately anomalous gold values were received. Regional rock sampling appears to return some strongly anomalous gold and silver values, but specific assay values are not discussed in the 2018 El Cubo Technical Report.

Surface sampling target and sampling areas are shown in Figure 9.1, Figure 9.2, and Figure 9.3. Site specific sample location maps are not available.

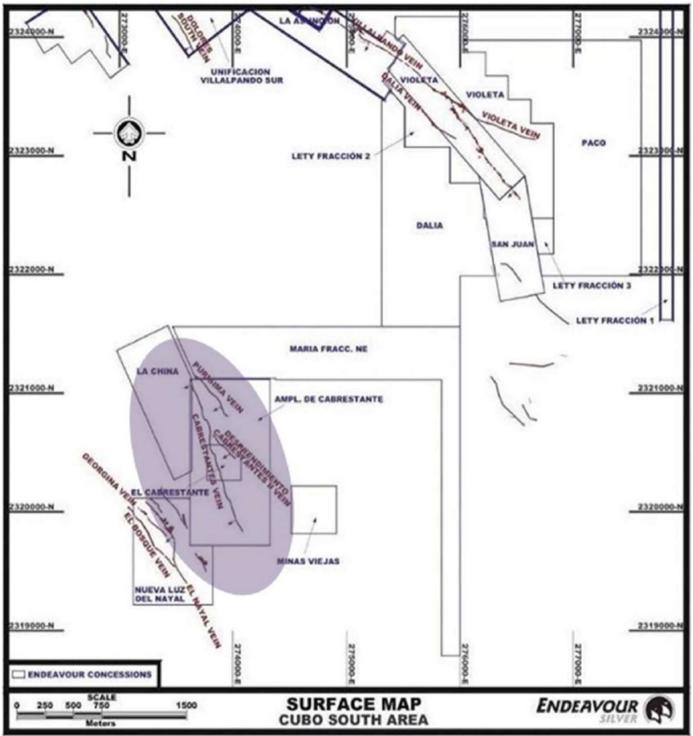


Figure 9.1. Surface targets in the El Cubo south area Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

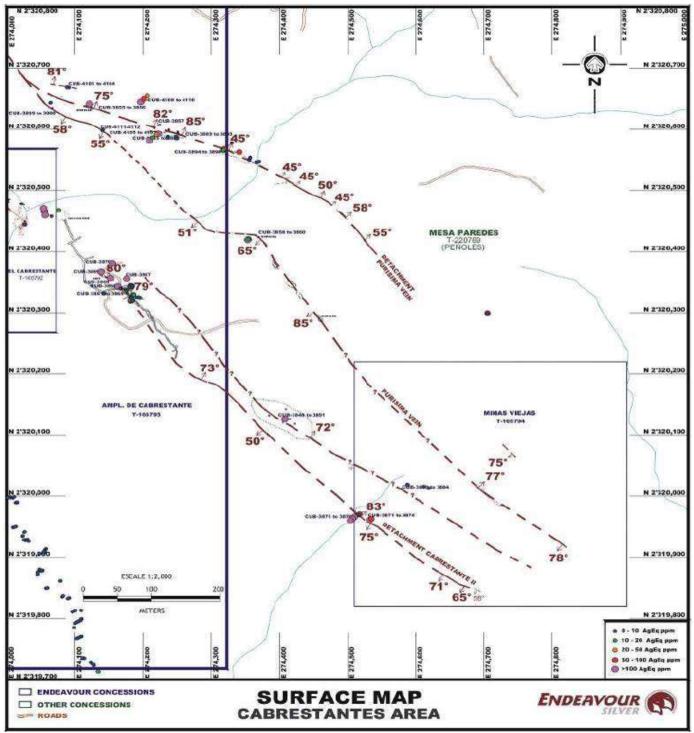


Figure 9.2. Surface targets in the Purisma-Cabrestantos area Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

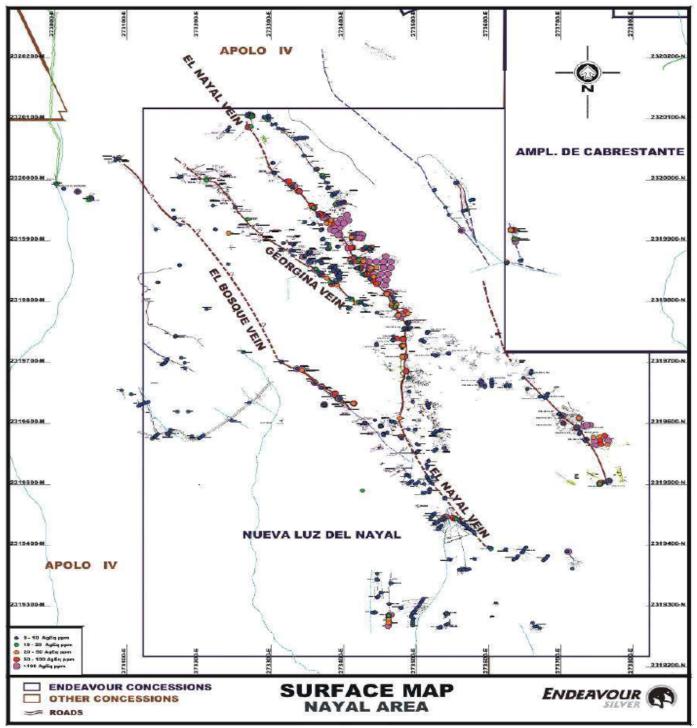


Figure 9.3. 2016 surface exploration in the Nayal area Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

Highlights of the anomalous rock chip values are shown in Table 9.1. It should be noted that rock chip sampling is from select samples on narrow veins or structures that may not be representative of larger areas. Sample width may not be true width. Strongly anomalous samples may represent significant underlying mineralization.

Table 9.1           Highlights of the Anomalous Rock Chip Samples from 2016 Surface Sampling Campaign							
Area	Sample ID	Sample Width (m)	Au (g/t)	Silver (g/t)			
PURISMA	CUB-3860	0.35	3.99	43			
PURISMA	CUB-3858	0.20	6.11	56			
PURISMA	CUB-3856	0.20	0.72	118			
PURISMA	CUB-3857	0.30	2.68	377			
PURISMA	CUB-4108	0.20	1.80	42			
CABRESTANTES II	CUB-3874	0.60	0.98	19			
CABRESTANTES II	CUB-4152	0.45	3.48	91			
CABRESTANTES II	CUB-4184	0.60	1.56	33			
SAN JUAN ADIT AREA	CUB-3866	0.20	1.15	52			
SAN JUAN ADIT AREA	CUB-3867	0.20	1.52	145			
SAN JUAN ADIT AREA	CUB-3868	0.20	4.90	152			
SAN JUAN ADIT AREA	CUB-3869	0.20	0.99	36			
SAN JUAN ADIT AREA	CUB-3870	0.20	3.17	76			
SAN JUAN ADIT AREA	CUB-3875	0.20	0.89	86			
SAN JUAN ADIT AREA	CUB-3876	0.20	2.40	150			
SAN JUAN ADIT AREA	CUB-3877	0.20	3.55	106			
SAN JUAN ADIT AREA	CUB-3878	0.20	0.99	49			
SAN JUAN ADIT AREA	CUB-3879	0.20	0.75	44			
SAN JUAN ADIT AREA	CUB-4138	0.20	3.46	132			
SAN JUAN ADIT AREA	CUB-4139	0.20	4.21	153			
SAN JUAN ADIT AREA	CUB-4140	0.20	1.50	102			
EL BOSEQUE AREA	CUB-4030	0.40	1.06	12			
EL BOSEQUE AREA	CUB-4032	0.75	1.04	16			

# 9.2 EL PINGUICO EXPLORATION

El Pinguico had been a successful mine developing high-grade ores when it shut down in 1913 due to violence related to the Mexican Revolution. From the late 1800s to 1913, the mine produced over 200,000 ounces of equivalent gold (VanGold Website, 2020). Except for sampling campaigns on the surface and underground stockpiles, the mine has been dormant for over 100 years. Recent sampling by VanGold has identified several areas where high grade mineralization is exposed in drifts and crosscuts. Mine rehabilitation, follow by additional sampling and exploration drilling, is underway along the El Pinguico vein at the Don Ricardo, Don Ernesto, and Don Felipe targets. Other veins on the property will likely see exploration drilling in the near future. Drill results are not yet available.

On December 1, 2020, VanGold announced assay results from underground channel sampling at El Pinguico. Sample widths averaging 1.1 m were taken from vein exposures of the El Pinguico vein along adit level 4 and from the San Jose vein along crosscuts parallel to adit level 4. Table 9.2 summarizes the results from Adit Level 4. Table 9.3 summarizes the results from the San Jose vein, which is 60 m to the east and roughly parallel with the El Pinguico vein, before the two veins merge further north. Although the material sampled from the San Jose vein appears to have more erratic values, some of the assays have strong gold and silver values. Based upon historic records, the San Jose vein runs

parallel to the El Pinguico vein for approximately 700 m in strike length. A detailed sample location map is not available. Sample widths are as collected underground and may not be true widths.

Table 9.2     El Pinguico Adit Level 4 Channel Sampling Results									
'Pillar' Target Area	Strike Length (m)	Vein Name	Grade Weighted Average Silver (gpt)	Grade Weighted Average Gold (gpt)	Grade Weighted Average AgEq (gpt)				
Pinguico North	47	Pinguico	256	1.7	394				
Pinguico Shaft	15	Pinguico	733	5.0	1,136				
Pinguico South A	13	Pinguico	209	1.35	230				
Pinguico South B	30	Pinguico	98	1.37	207				
Pinguico South C	18	Pinguico	100	1.84	268				
Pinguico South D	37	Pinguico	66	0.83	132				
Pinguico South E	13	Pinguico	131	1.22	215				

TABLE 9.3           San Jose #1 Parallel Drift – North to South Channel Sampling Results								
'Pillar' Target AreaStrike Length (m)Grade Weighted Vein NameGrade Weighted Average Silver (gpt)Grade Weighted Average GoldGrade Average Gold Average Gold								
San Jose NW Pillar	25	San Jose	154	1.9	303			
San Jose Pillar	30	San Jose	86	1.0	163			
San Jose East Pillar	13	San Jose	131	1.2	216			

Several veins and structures on other claims in the El Pinguico Project area have been sampled by VanGold with favorable results suggesting strong potential at depth, particularly at El Pinguico, La Joya, La Joyita, El Carmen, El Pirul, and El Pino.

To the south, the La Joya vein appears to be the strike extension of the El Pinguico vein. Both veins dip toward the Veta Madre and lie in the hanging wall of the 45° west dipping Veta Madre, the major ore producing structure in the Guanajuato Mining District. The El Pinguico-La Joya veins are sub-parallel to the Veta Madre and may, in fact, be splits off the Veta Madre. Down-dip on the Veta Madre structure, where it is postulated to intersect the El Pinguico-La Joya veins, is a prime exploration target for bonanza style mineralization.

Current work has been to open the El Pinguico Mine shaft to the Level 7 of the mine. Level 7 is an important haulage way which will provide access to undeveloped parts of the El Pinguico vein and also allow access to the underground pile of what was considered by the original miners as waste, but based upon tests by the Mexican Geological Survey, was shown to have potentially economic grades of silver and gold. Exploitation of pillars in abandoned areas would also be possible.

VanGold also controls lands to the south which demonstrate the possible presence of a significant fault. This remains a potential target for exploration after the surface and underground stockpiles are exhausted.

# 9.2.1 El Pinguico Underground Stockpile

Aside from the potential of future underground mining of in-place vein mineralization, El Pinguico also contains a surface and an underground stockpile. The stockpiles date back to 1913 when the mine shut down during the Mexican Revolution. Data from VanGold's website and database describes in minimal detail sampling of the surface stockpile and in greater detail sampling of the underground stockpile.

The underground stockpile has been sampled multiple times by hand dug trenches and more recently by a five-hole diamond drill program designed to cut across the stockpile at various locations.

In 1959, the Mexican Geological Survey or "Consejo de Recursos Minerales" (CRM) hand dug trenches, collected representative samples, and completed a topographic survey. This sampling campaign resulted in an average gold grade of 2.72 g/t and an average silver grade of 251 g/t. In 2012, the Mexican Geological Survey, now known as "Servicio Geologico Mexicano" (SGM) again sampled the trenches and estimated "certified tonnes" with an influence of 5 m in depth. Aside from the average assay data and trench locations, no other data is available on sampling methods. This sampling campaign resulted in an average gold grade of 1.66 g/t and an average silver grade of 143 g/t.

In 2017, VanGold's consulting geologist, QP Carlos Cham Dominguez, completed a re-sampling program on the top of the stockpile consisting of 57 samples from 20 trenches (mostly historic with a few new trenches) and returned similar grades for these trench samples, as report by the SGM. The VanGold trenches average 6.42 m in length and averaged 183.5 g/t of silver and 1.75 g/t of gold. The results from VanGold's January 2017 sampling program confirmed the grades found by SGM in 2012, as most of the individual assay results and the overall averages grades are close for both gold and silver. The results from the CRM study in 1959, however, show considerably higher gold and silver values than either SGM's or VanGold's sampling. It is speculated that the top of the stockpile may be diluted by years of occasional rock fall of waste rock from the walls of the open stope.

The 2017 sampling program is well documented. The historic trenches were easily located as their identification numbers were marked on the mine walls. The bottom of each trench was cleaned of debris and rock fall material and then dug deeper for new samples. FINDORE re-sampled most of the original 20 trenches, replacing a few with nearby trenches, due to safety issues. The trenches were distributed over a length of 340 m (the approximate length of the stockpile). Figure 9.4 shows the underground stockpile long section and Figure 9.5 shows the location of the 2017 VanGold trenches on the underground stockpile.

The underground stockpile sampling programs are well documented; however, there are serious questions as the bulk of the stockpile is un-sampled. The underground stockpile fills an old open stope area from Level 4 to Level 7 of the El Pinguico Mine and ranges from 25 m to 100 m thick and occupies portions of the 56topped out El Pinguico vein. At present, only the surface of the stockpile can be manually sampled. More recently, VanGold drilled five core holes through portions of the underground stockpile. The shallowest hole cutting the uppermost portion of the stockpile returned similar grades to the trench samples, but the others returned disappointing results, which may be the result of very poor core recovery of the small fragments and fine material.

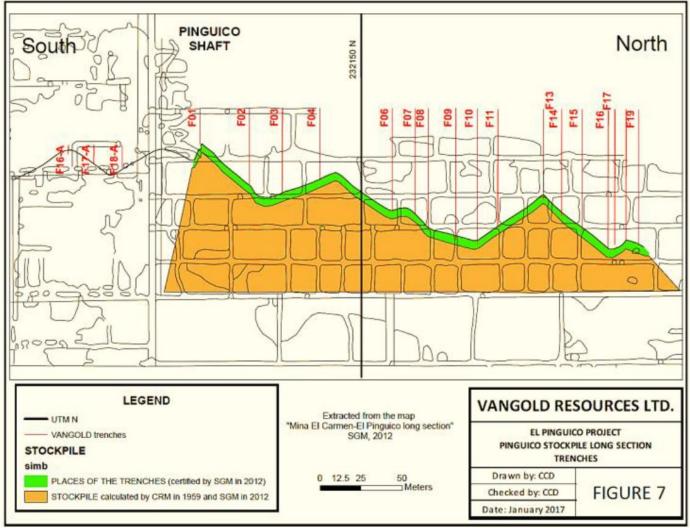


Figure 9.4. Stockpile long section

Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

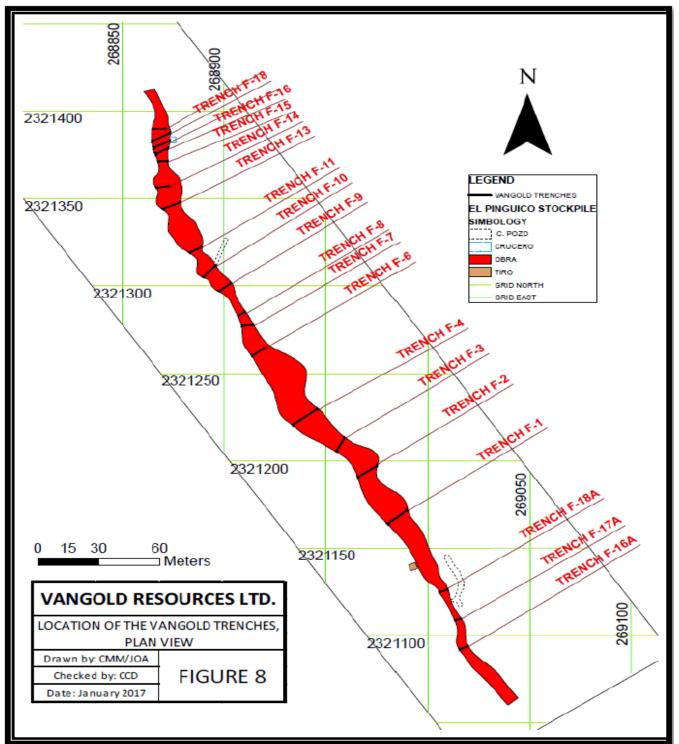


Figure 9.5. Location of the 2017 VanGold trenches on the underground stockpile Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

# 9.2.2 El Pinguico Surface Stockpile

In 2012, the Dorado family, by the recommendation of the Mexican Geological Survey, dug six trenches to test the grade of the surface stockpile. The tonnage estimate is based upon a topographic survey. Six trenches were dug returning an average silver grade of 66 g/t and an average gold grade of 0.46 g/t. No QA/QC data is available for this sampling campaign.

In early 2017, after the property was acquired by VanGold, a second sampling campaign was undertaken. Sampling was contracted out to Sr. Carlos Cham Dominguez, C.P.G., of FINDORE Geological Consulting (FINDORE) who collected two large samples at each site for a total of 20 samples. Sampling was supervised by a Qualified Person (QP) and followed NI 43-101 guidelines. Ten holes were dug with a backhoe and samples collected near the top and near the bottom of each hole. The top samples returned slightly higher assay values than the bottom reflecting no bias in sampling and matching the previous sampling results quite well. Blanks and standards were inserted into the sample stream and results confirmed no contamination or bias. Assaying was performed by a certified laboratory and with appropriate QA/QC procedures followed. Based upon photos and a sample location map, sample sites were scattered so samples representative of the entire stockpile could be collected. The early 2017 results showed a silver grade of 68 g/t and a gold grade of 0.53 g/t; thus, matching quite well the 2012 Dorado results. This grade was confirmed with a recent 1,000 tonne bulk sample. A representative sample was created and was used for flotation metallurgical tests.

A third sampling campaign was undertaken in December 2017, but results returned lower values for both silver and gold with an average silver grade of 49.3 g/t and an average gold grade of 0.28 g/t. Apparently, according to VanGold, results showed inconsistent anomalies. QA/QC data for this sampling is not available.

Except for the assay results for the 20 samples collected in early 2017, no data has been presented on individual assays, the laboratory performing the assays, or any QA/QC data. However, the 2017 sampling was the most comprehensive, was supervised by a QP geologist, and appropriate QA/QC procedures were followed. The QP has reviewed the 2017 data set on the surface stockpile and has found it to be reasonable, to NI 43-141 guidelines, and acceptable for purposes of this report.

# 10.0 DRILLING

The following sections are excerpted from the National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018, and shown as italicized unless otherwise specified. Changes to tables, figure numbers, section numbers, and standardization have been made to suit the format of this report.

Diamond drilling at the El Cubo Mine is conducted under two general modes of operation:

- 1) One by the exploration staff (surface exploration drilling); and
- 2) 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 estimates presented in this report. To date, all drilling completed at the El Cubo Mine has been diamond core.

# **10.1 DRILLING PROCEDURES**

Surface drill holes are generally oriented to intersect the veins as close to perpendicular as possible. The drill holes 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. Drill holes extend an average of 50 m beyond the target zone.

Underground drill holes 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 drill holes 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 geologists. Since 2010, surface holes were 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 prior to drilling. Inclination of underground holes is collected using the Reflex EX-Shot® survey device prior to start of drilling.

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

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

When assay results were received from the laboratory, they were merged into an Excel® spreadsheet for importation and interpretation in AutoCAD® software. The starting and ending point of each vein and/or vein/vein breccia intercept was determined from a combination of geology notes in the logs and assay results. Using approximate vein and drill hole 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 ENDEAVOUR SILVER'S CORE LOGGING PROCEDURES**

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

# **10.3 ENDEAVOUR SILVER'S DRILLING PROGRAMS**

# 10.3.1 Drilling Prior to 2015

Clark (2009) and Cameron (2012) describe exploration drilling prior to 2013, which was carried out by or on behalf of AuRico and previous operators. Between 2012 and 2015, Endeavour Silver's drilling exploration efforts were focused on locating mineralized bodies over primary and secondary structures, mainly near the current production areas. Surface drilling was conducted over the Villalpando (Villalpando Gap, Asunción and Villalpando South), Dolores (Dolores North), La Loca, and the La Paz veins. The mine exploration drilling program was undertaken to determine the extent of additional mineralization near areas currently being mined. The principal targets were the Villalpando (Area II and IV) and Dolores (II) vein systems, though a number of other structures were also explored (Table 10.1). As of December 2014, a total of 72,969 m of drilling had been completed in 277 holes, with an associated 16,522 samples.

Project Area	Number of Holes	Total Meters	Number of Samples Taken			
Villalpando Gap	8	3,741.60	344			
Dolores North	5	1,334.25	182			
La Loca	6	2,534.60	153			
La Paz	3	1,028.80	32			
Asunción	92	36,982.00	8071			
Villalpando South	11	4,781.15	543			
Mine Exploration	152	22,566.80	7197			
Total	277	72,969.20	16,522			

TABLE 10.1ENDEAVOUR SILVER'S DRILLING SUMMARY – 2012 THROUGH 2014

During 2015, Endeavour Silver completed a total of 7,178.55 m in 25 surface diamond drill holes at the El Cubo, with a total of 2,603 samples collected and submitted for assays. Underground drilling completed by Endeavour Silver in 2016 was conducted to evaluate mineralization along the Villalpando, Dolores, Soledad, and La Loca veins in areas near existing mine workings. All underground drilling was performed with Endeavour Silver's VERSA Kmb-4 drill rig. A total of 4,018.65 m was drilled in 22 underground holes in 2015.

# 10.3.2 2016 Surface Drilling

In 2016, Endeavour Silver spent US\$1,060,668 (including property holding costs) on exploration activities mainly in the Nayal, Cabrestantes, and Asunción areas in a continuing effort to identify and evaluate mineralized zones as potential targets for further exploration. A total of 3,799 m was drilled in 13 surface diamond drill holes, and 777 samples were collected and submitted for assay. These holes were not used in resource estimations. Surface

drilling was conducted in the Nayal-Cabrestantes area, but results were disappointing. Note that the El Nayal vein does host about 30% of the total Inferred Mineral Resources

# 10.3.3 2016 Underground Drilling

All drilling exploration efforts were undertaken by Endeavour.

An underground drilling exploration program was also conducted in 2016 on targets (La Loca, Vein 274, SJD, La Paz, and San Nicolás) located in close proximity to the then active mines. A total of 12 underground drill holes was completed for 1,710 m at the El Cubo Project and 584 samples were collected and submitted for analysis.

Underground drilling at San Juan de Dios returned strong gold values in hole CUDG-1006. Moderate values were returned from one hole targeting the 274 vein and one hole targeting the San Nicolas vein, while drilling at La Paz was disappointing.

As these intersections are scattered throughout the El Cubo Mine workings and at different azimuths and dips and maps include many hundreds of historic drill holes, it is impractical to attempt to show the collar and downhole projections. Nonetheless, intersections with gold and silver mineralization prove the existence of vein structures and that the mineralization will require further drilling before these scattered intercepts can contribute to the Inferred Resource.

# 10.3.4 2018 and 2019 Underground Drilling at El Cubo

All drilling exploration efforts were undertaken by Endeavour.

An underground diamond core drilling campaign was undertaken in 2018 and 2019. Year 2018 saw a major underground drilling program with 75 holes drilled in the La Loca, Vein 274, San Juan de Dios, La Paz, and San Nicolas targets. In 2019, the underground drilling campaign continued with another 40 holes drilled. Significant 2018 and 2019 drill hole intersections should be considered as mineralized material requiring further drilling and modeling before they can be considered resources. However, these results suggest that the exploration potential to expand the Resources at El Cubo are very favorable.

Table 10.2 summarizes all the most significant intercepts. In all, there were 44 gold and silver intercepts in 33 holes and an additional 42 gold and silver intercepts in 25 holes, some of which are greater than the minimum mining width, intersected in the 2018 and 2019 campaigns, respectively. An gold and silver intercept is one that contains >160 g/t equivalent silver. While gold and silver intercepts do not imply actual mine grade ores, they do represent the presence of strong mineralization which with additional drilling might be upgraded to resources. The silver equivalent (AgEq) used by Endeavour was based upon past gold and silver prices and expected recoveries, shown in Table 10.2, is based upon the formula:

$$AgEq = Ag g/t + [(Au g/t) \times 80]$$

Also, a number of holes intersected low-grade mineralization proving the existence of vein structures. Based upon computer and geologic modeling screen shots showing these underground drill holes, it appears that many of the intercepts have no adjacent channel sampling, suggesting that many of these mineralized zones have not yet been mined.

	SI	GNIFICANT	2018 AND	2019 DI	TABLE	2 10.2 rill Hole Cori	INTERCEPTS /	AT EL CUBO	)			
		rground Cor				2019 Underground Core Drilling						
Hole Number	From-To	Thickness	Ag g/t	Au g/t	AgEq (g/t)	Hole Number	From-To	Thickness	Ag g/t	Au g/t	AgEq (g/t)	
BDD-001	67.25-69.95	2.7	93.6	3.72	391	CUDG-1093	44.95 - 46.5	1.55	264	2.94	499	
BDD-002	47.5-47.95	0.45	138.7	2.7	355	CUDG-1094	23.15 - 23.6	0.45	10	7.7	626	
BDD-012	4.2-5.2	1	432.2	1.02	514	CUDG-1095	38.1 - 38.9	0.8	159	4.88	549	
BDD-015	20.25-21.9	1.65	1,006.8	3.24	1,266	CUDG-1095	41.45 - 44.7	3.25	142	2.6	350	
BDD-017	28.9-30.5	1.6	79.7	1.46	196	CUDG-1096	34.75 - 35.85	1.1	16.5	2.51	217	
BDD-021	43.45-43.95	0.5	136.0	6.19	631	CUDG-1097	20.3 - 20.85	0.55	246	0.705	302	
BDD-021	48-48.4	0.4	60.1	3.85	368	CUDG-1098	39.4 - 39.95	0.55	99	2.16	272	
BDD-023	40.85-44.35	3.5	695.2	2.98	934	CUDG-1099	40.95 - 42.1	1.15	113	2.7	329	
BDD-024	55.55-56.35	0.8	208.5	1.23	307	CUDG-1099	43.9 - 44.4	0.5	35	2.99	274	
BDD-026	39.55-39.95	0.4	1,054.1	7.13	1625	CUDG-1099	50.85-52.45	1.35	127	1.8	271	
BDD-027	38.75-39.80	1.05	23.1	2.89	254	CUDG-2005A	51.5 - 51.85	0.35	36	1.91	189	
BDD-028A	22.22.45	0.45	30.8	13.73	1,129	CUDG-1105	59.65 - 61.25	1.6	89	1.41	202	
BDD-028B	30.9-32.15	1.25	63.7	1.29	167	CUDG-1103	48.65 - 49.05	0.4	128	0.36	157	
BDD-028B	41.6-41.9	0.3	212.1	0.79	275	CUDG-1102	22.7 - 23.45	0.75	137	0.59	184	
BDD-028B	52.3-53.55	1.25	109.0	0.84	176	CUDG-1102	58.7 - 59.25	0.55	170	0.47	208	
BDD-029	54-60.25	5.2	212.74	0.81	277	CUDG-1102	60-25 - 61.95	1.7	392	0.9	464	
BDD-030	34.3-36.95	2.65	344.7	3.73	643	CUDG-1102	65.1 -66	0.9	29	3.01	270	
BDD-031	48.65-51.9	3.25	202.6	1.03	285	CUDG-1107	62.55 -64.3	1.75	59	2.62	269	
SFC-18-005	51.95-53.75	1.8	168.6	1.25	269	CUDG-1111	32.5 - 32.85	0.35	11	3.32	277	
SFC-18-009	39.15-39.65	0.5	108.9	3.76	410	CUDG-1113	32.95 - 33.35	0.4	239	1.292	342	
CUDG-1051	57.05-59.55	2.5	106.4	0.98	185	CUDG-1115	18.65 - 19.1	0.45	47	1.47	165	
CUDG-1051	62.25-62.55	0.3	57.16	4.04	380	CUDG-1116	23.4 - 23.7	0.3	185	0.31	210	
CUDG-1054	100.5-102	1.5	1,077.1	0.57	1,123	CUDG-1116	40.85 - 41.6	0.75	136	0.91	209	
CUDG-1058	3.1-3.45	0.35	215.1	1.28	318	CUDG-1116	43.85 - 46.7	2.85	777	7.43	1,371	
CUDG-1060	1.65-2.15	0.5	214.2	7.65	826	CUDG-1117	59.95 -60.95	1	174	0.605	222	

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	SI	GNIFICANT	2018 AND	2019 DL	TABL AMOND I		10.2 ill Hole Corf	E INTERCEPTS /	AT EL CUBO			
	2018 Underground Core Drilling						2019 Underground Core Drilling					
Hole Number	From-To	Thickness	Ag g/t	Au g/t	AgEq (g/t)		Hole Number	From-To	Thickness	Ag g/t	Au g/t	AgEq (g/t)
CUDG-1060	5.6-9.6	4	595.7	5.92	1,069		CUDG-1117	62.65 -63.2	0.55	145	1.959	302
CUDG-1061	1.45-3.55	2.1	332.5	6.45	848		CUDG-1117	64 - 64.8	0.8	51	2.467	248
CUDG-1061	12.35-16.35	4	1790.2	29.73	4,169		CUDG-1117	67.65 - 68.2	0.55	259	2.012	420
CUDG-1064	96.2-97.1	0.9	70.9	5.47	508		CUDG-1119A	70.85 - 72.75	1.9	242	0.89	313
CUDG-1066	4.2-4.8	0.6	272.7	0.65	325		CUDG-1119A	74.1 – 75	0.8	335	0.78	397
CUDG-1069	138.15-138.5	0.35	297.0	0.89	368		CUDG-1118	87.3 - 87.65	0.35	234	1.1	322
CUDG-1072	18.3-19.2	0.9	622.8	1.77	764		CUDG-1118	88 - 88.6	0.6	224	.34	251
CUDG-1082	48.3-348.6	0.3	25	2.60	233		CUDG-1120	20.3 - 20.6	0.3	216	0.39	247
CUDG-1082	51.1-52.4	1.3	26.4	4.92	420		CUDG-1122	23.5 - 23.95	0.45	327	2.62	537
CUDG-1082	65.75-66.25	0.5	2174	14.53	3,336		CUDG-1124	8.55 - 8.95	0.4	78	1.705	214
CUDG-1084	81.8-87.3	5.5	105.8	2.50	306		CUDG-1124	29.1 - 29.5	0.4	92	1.34	199
CUDG-1085	92.4-95.85	3.45	45.2	2.41	238		CUDG-1124	36.8 - 37.1	0.3	149	1.796	293
CUDG-1086	24.8-25.6	0.8	68	3.26	329		CUDG-1125	14.7 - 15.15	0.45	130	1.04	213
CUDG-1088	46.2-47	0.8	378.6	2.20	555		CUDG-1125	19.5 - 20.1	0.6	53	1.64	184
CUDG-1089	69.1-71	1.9	209.2	2.12	379		CUDG-1125	26 - 26.3	0.3	308	3.67	602
CUDG-1090	36-36.55	0.55	165	1.60	293		CUDG-1125	27.65 - 27.95	0.3	135	0.72	193
CUDG-1092	38-38.4	0.4	271	2.75	491		CUDG-1126	63.95 - 64.6	0.65	234	1.15	326
CUDG-1092	48.2-50.3	2.1	170.3	6.30	674							
CUDG-1092	56.95-59.15	2.2	111.9	1.00	192							

As these intersections are scattered throughout the El Cubo mine workings and at different azimuths and dips, and maps include many hundreds of historic drill holes, it is impractical to attempt to show the collar and down hole projections. Nonetheless, gold and silver and low-grade intersections prove the existence of vein structures and mineralization that will require further drilling before these scattered intercepts can contribute to Inferred Resource.

#### **10.3.5** Accuracy and Reliability of Drilling Results

Based upon drill records, core recovery was generally quite good. Sampling techniques (splitting out a representative sample by diamond saw) were to industry standards. Drill holes were surveyed and where possible, downhole surveys were completed. Drilling samples whether from surface or underground were treated as exploration samples and as such, when shipped to certified assay laboratories, included blanks and standards. QA/QC samples were used for the 2018 and 2019 underground drilling program, which totaled 115 drill holes, but the QA/QC results of that data have not been provided. However, these drill holes were not used in any resource estimations. That data will need to be reviewed, if and when those holes are used in new resource estimations. The QP opines that the drilling results are acceptable for use in this report.

#### 10.4 EL PINGUICO UNDERGROUND STOCKPILE DRILLING PROGRAM

In January and February 2018, VanGold, under the supervision of FINDORE, drilled five HC sized diamond drill core holes to evaluate the grade of the underground stockpile. A total of 214 m was drilled. Several problems were encountered: building drill pads underground suitable for the drilling machine and much more importantly, poor core recovery. Core recovery of large blocks of rhyolite was good but fine material was not recovered. The overall average core recovery was allegedly 40% with the best recovery in relatively barren large blocks of rhyolite. Table 10.3 summarizes the drill hole azimuths, inclinations, and total lengths.

EL PI	Table 10.3           El Pinguico Underground Stockpile Diamond Drilling Program					
Drill Hole ID	Pad	Location	Azimuth	Inclination (Degrees)	Total Length (Meters)	
P1 – N	Est 2	Pachuca	30	-30	45	
P2 - N	Est 2	Pachuca	30	-45	36	
P3 - N	Est 2	Pachuca	30	-60	37	
P4 - N	Est 1	Pachuca	65	-31	24	
P5 - N	Est 1	Pachuca	120	4	72	
Total					214	

Figure 10.1 shows the location of the drill pads in relation to the underground stockpile.

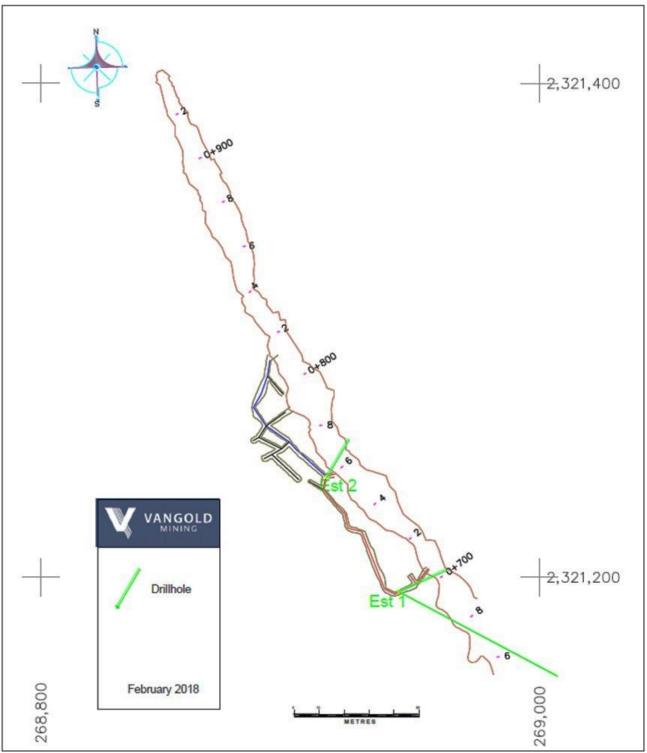
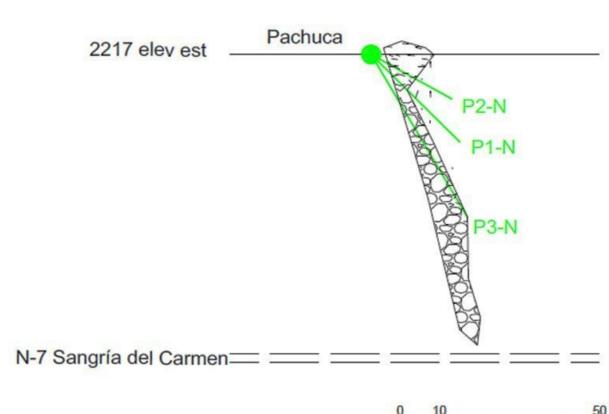


Figure 10.1. Drill holes locations – Phase 1

Source: Summary Report of the Phase 1 Diamond Drilling Program on the El Pinguico Gold-Silver Project, Guanajuato, Mexico "Stockpile," February 2018. Table 10.4 shows the assay results from the five underground core holes. The results show less silver and gold than expected, except for the fifth hole, drill hole P5-N, which was an up-hole drilled testing near the top of the stockpile, which returned an average gold grade of 0.228 g/t and an average silver grade of 45.6 g/t, the other four holes failed to substantiate grades similar to those returned from the trench sampling and assaying. Core recovery through the stockpile was very poor, from small and/or fine fragments with good recovery of solid competent rhyolite. It appears that vein material and sulfide minerals was likely flushed away into void spaces in the stockpile, whether this can explain the relative absence of "ore-grade" mineralization in deeper levels of the stockpile, it is impossible to know until further sampling data is available.

	TABLE 10.4           EL PINGUICO UNDERGROUND STOCKPILE DRILL HOLE ASSAY RESULTS						
Hole Number	Total Length (m)	Stockpile Interval (m) (not true thickness)	Composited Assay (Au g/t)	Composited Assay (Ag/t)	"High-Grade" Assay Interval (m) (not true thickness)	Composited Assay (Au g/t)	Composited Assay (Ag g/t)
P1-N	45	12-16 (4m)	0.037	7.61	12-15 (3.0)	0.049	10.15
P2-N	36	4.5-25 (20.5m	0.033	0.92	7.5-15 (7.5)	0.092	2.51
P3-N	37	18-37 (19m)	0.048	3.16	18-24 (6)	0.110	10.0
P4-N	24	4.5-9 (4.5m)	0.067	5.12	4.5-9 (4.5)	0.067	5.12
P5-N	72	10.5-33 (22.5m)	0.228	45.60	10.5-33 (22.5m)	0.228	45.60

It should be noted that only a small section of the stockpile was drill tested. Drill hole cross sections for these holes are shown as Figure 10.2, Figure 10.3, and Figure 10.4.



METERS

LOOKING NW

Figure 10.2. Cross section P1-N, P2-N, and P3-N Source: Summary Report of the Phase 1 Diamond Drilling Program on the El Pinguico Gold-Silver Project, Guanajuato, Mexico - Stockpile, February 2018.

# LOOKING NW

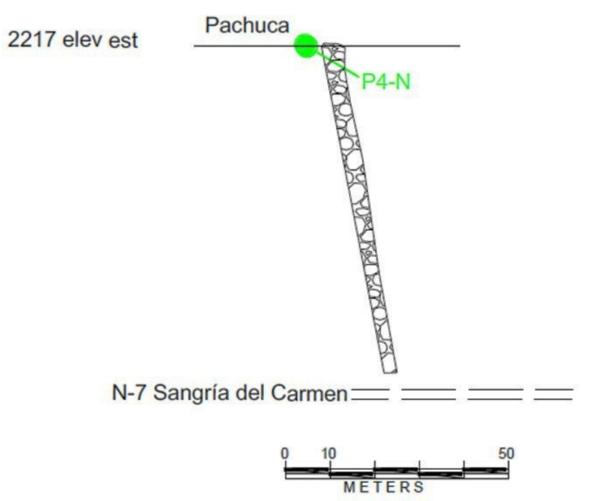
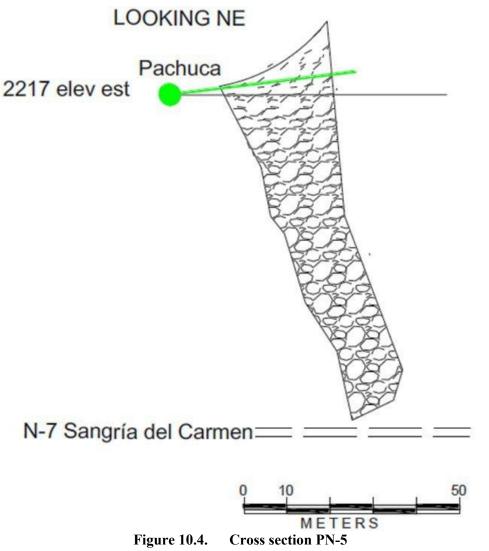


Figure 10.3. Cross section P4-N Source: Summary Report of the Phase 1 Diamond Drilling Program on the El Pinguico Gold-Silver Project, Guanajuato, Mexico – Stockpile, February 2018.



Source: Summary Report of the Phase 1 Diamond Drilling Program on the El Pinguico Gold-Silver Project, Guanajuato, Mexico – Stockpile, February 2018.

# 11.0 EL CUBO SAMPLE PREPARATION, ANALYSIS, AND SECURITY

The following sections (Section 11.1 through Section 11.4) are excerpted from the National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018, and shown as italicized, unless otherwise specified. Changes to tables, figure numbers, section numbers, and standardization have been made to suit the format of this report.

The majority of drill hole and underground chip channel assay data used in this report was obtained prior to, and utilized in, the El Cubo 2018 Technical Report. Furthermore, the assay data used for the above Resource and Reserve estimates was based entirely on diamond drill holes and underground chip channel samples.

Endeavour Silver undertook 75-hole and a 40-hole underground diamond drilling campaign in 2018 and 2019, respectively. Quality Assurance/Quality Control (QA/QC) is not available for the assaying on these drilling campaigns, although the assays were performed by certified laboratories.

#### 11.1 EL CUBO SAMPLING METHODS

#### **11.1.1 Production Chip Channel Samples**

El Cubo employed standardized procedures for collecting underground grade control chip samples, and these procedures are documented in a detailed, illustrated manual. Chip channel sampling was 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 3 m to 5 m intervals along drifts. Sample locations were cleaned and marked with two parallel, red spray paint lines to guide the sampling. Chip samples were collected on all vein faces in drifts, crosscuts, raises, and stopes. On faces and raises, they were taken perpendicular to the dip of the vein to approximate true width. Stopes were sampled across the roof (back) following the profile of the working.

The entire chip sample was divided into a number of 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 (hanging wall and footwall samples), and one sample of the vein. In more complex configurations, if there was more than one vein present, or it was divided by waste rock, then each of the vein sections is sampled separately. The chip samples were cut approximately 10 cm wide and 2 cm deep using a hammer and chisel. The rock chips were collected in a net, placed on a canvas, and any fragments larger than 2.5 cm were broken with a hammer. The maximum sample length was generally 1.5 m and minimum sample length generally 0.2 m, although a few samples were taken over as narrow a width as 0.1 m.

The samples were sealed in plastic bags with a string and sent to the laboratory at Bolanitos. Samples, which tended to be large, representing long sample intervals, can be too large for the bags provided and were reduced in size at the sample site to 1 kg to 2kg by quartering. Care was taken to collect all of the fines for the selected quarters. The samples were sealed in plastic bags and transported to the geology storage facility on the surface. From there, the samples were taken to the laboratory at the Bolanitos Mine site by a contracted transporter.

Sample locations were 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

Endeavour Silver's exploration staff was responsible for regional and mine exploration within the El Cubo mining district, including the management, monitoring, surveying, and logging of surface and underground diamond drilling.

Regardless of which program the core came from, the process was the same. Core from diamond drilling was placed in boxes, which were sealed shut at the drill site. Endeavour Silver's personnel transported the core to the core facility. Sample handling at the core facility followed a standard general procedure, during which depth markers were checked and confirmed; the outside of the boxes was labeled with interval information; core was washed and photographed; and the recovery and modified rock quality designation (RQD) logged for each drill hole.

All of Endeavour Silver's surface and underground exploration drill holes were processed at the exploration core facility (Figure 11.1).



Figure 11.1. Original Endeavour Silver's exploration core storage facility, now allocated to regional exploration

Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver, by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

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

The core was split using a diamond saw shown in Figure 11.2.



Figure 11.2. One of several core saws located at the exploration core facility Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver, by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

The QP agrees that the previous sampling methods for underground channel sampling and diamond drill core were appropriate and to industry standards.

# 11.2 SAMPLE PREPARATION AND ANALYSIS (EL CUBO)

Mine production sampling, including plant feed samples, concentrate, and doré, was sent to Endeavour Silver's inhouse Bolanitos assay laboratory. The lab at Bolanitos is ISO certified (ISO-9001:2008) and is set up in a single facility at the Bolanitos Mine with separate enclosed sections for sample preparation, fire assay with gravimetric finish, and atomic absorption facilities. The facilities are located within the Bolanitos Mine compound and operated 24 hours per day.

# **11.2.1 Exploration Drilling**

Since Endeavour Silver took control of Compania Minera del Cubo S.A. de C.V. (CMC), all samples of rock and drill core were bagged and tagged at the El Cubo core facility and shipped to the ALS preparation facility in Zacatecas, Mexico. After preparation, the samples were shipped to the ALS laboratory in Vancouver, Canada, for analysis.

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

*The analysis procedures are summarized in* Table 11.1.

SUMMARY OF ANALYSIS PROCEDURES						
Sample Type	Element	Description	Lower Detection Limit	Upper Detection Limit	ALS Code	
	Au	Fire Assay and AA analysis	0.005 ppm	10 ppm	AUAA23	
	Ag	Aqua Regia and AA analysis	0.2 ppm	100 ppm	AA45AG	
Core	Au, Ag (Samples >20ppm Ag AA45AG)	Fire Assays and Gravimetric Finish	0.05 ppm Au/ 5 ppm Ag	1,000 ppm Au / 10,000 ppm Ag	Au,Ag ME-GRA21	
	Au	Fire Assay and AA analysis	0.005 ppm	10 ppm	AUAA23	
Rock	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	
	Au	Aqua Regia and ICP-MS Finish	0.001 ppm	1 ppm		
Soil	Multielements (51 Elements)	Aqua Regia and ICP-MS and ICP-AES Finish	0.002 ppm Ag / 0.01 ppm Cu, Pb and Zn	100 ppm Ag / 10,000 ppm Cu, Pb and Zn	TL42-PKG Au- TL42 + ME-MS41	

TABLE 11.1Summary of Analysis Procedures

Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

ALS is an independent analytical laboratory company that 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 <u>http://www.alsglobal.com</u>.

# 11.3 EL CUBO SAMPLE QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

# **11.3.1 Production Sampling and Security**

Samples remained in the custody of the technicians and geologists who collected them until they were delivered to designated sample storage areas on the surface. Samples from the Dolores Mine were stored for pickup at the geology storage area located in the Dolores Mine Patio. Samples from Sta. Cecilia and San Nicolas Mines were stored with

security at the entrance to the mine patio. Samples were collected from each storage area by a contracted transporter and delivered to the assay lab on site at the Bolanitos Mine.

Field duplicate samples were inserted at the frequency of about 1 in 20 chip lines. The last sample taken was a duplicate sample. The sample interval to be duplicated was chosen at random from one of the vein intervals. Waste duplicates were not collected. The sample was collected from a point approximately 10 cm above the original sample. Duplicate samples were sent with the rest of the samples from the chip line. The QA/QC protocol for production samples involved repeat assays on pulp and reject, along with in-house prepared blanks. No commercially available standards were used in 2016. In 2017 and 2018, duplicates, pulp checks, and blanks were utilized for the QA/QC protocol. It is not known whether any commercially available standards were utilized.

The QP agrees that sampling methods used by Endeavour Silver for production underground channel sampling, security, and duplicate, pulp check, and blank assays were appropriate and to industry standards. The QP recommends that standards be inserted as part of the QA/QC protocol.

# 11.3.2 Production Samples – QA/QC

The QA/QC protocol for production samples involved repeat assays on pulps and rejects, along with in-house prepared blanks. No commercially available standards were used in 2016.

Maximum-minimum scatter plots for duplicate samples are shown in Figure 11.3 through Figure 11.8. In general, results of the duplicate re-assays indicate a good correlation for silver and moderate to poor correlation for gold. Acceptable failure rate for pulp duplicates is 10%. Silver pulps show a 10% failure rate while gold shows a 45% failure rate.

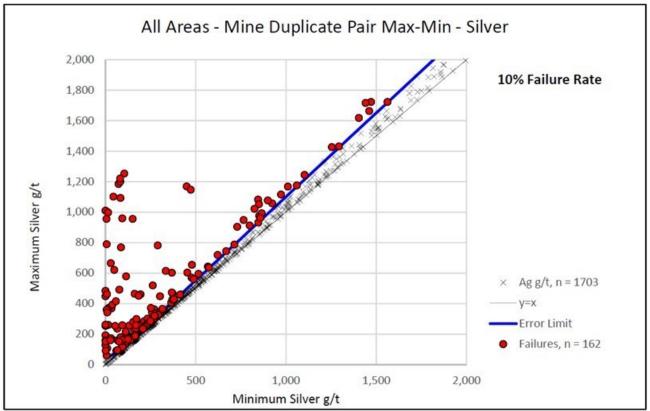
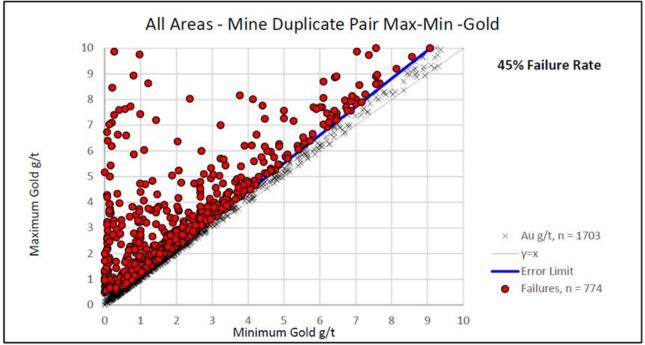


Figure 11.3. Silver pulp duplicates





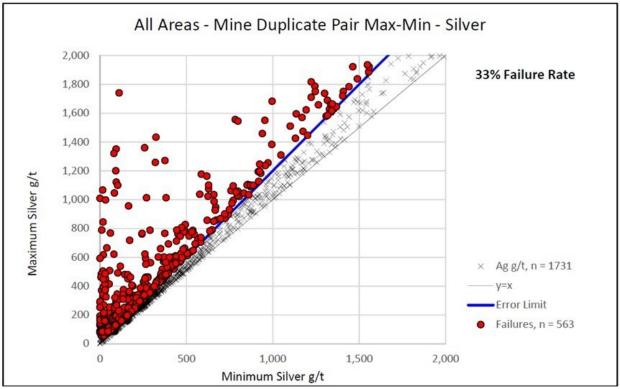


Figure 11.5. Silver reject duplicates

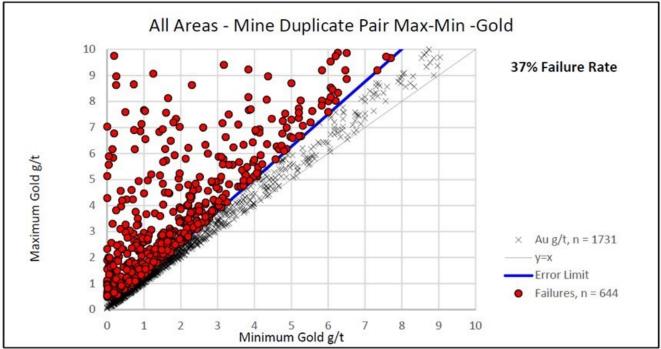


Figure 11.6. Gold reject duplicates

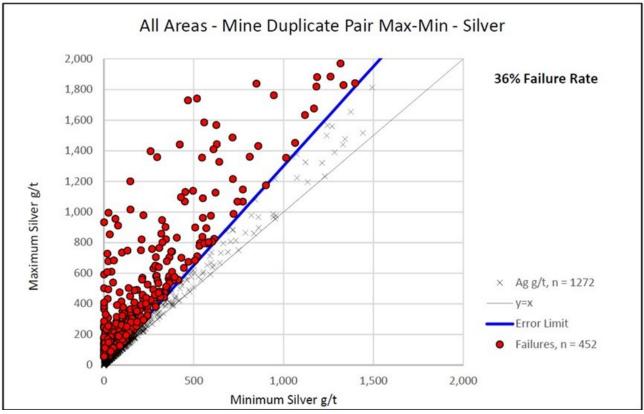
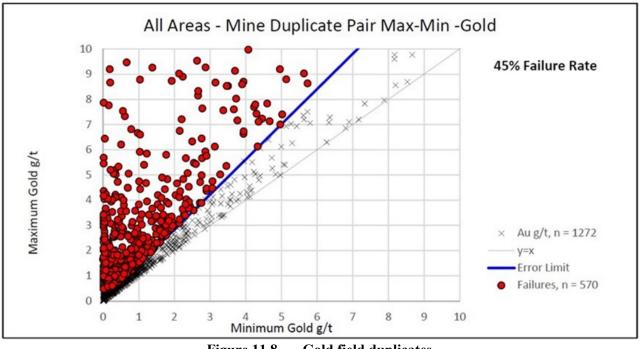


Figure 11.7. Silver field duplicates



The QP opines that there was an issue which needed to be addressed by Endeavour Silver with the QA/QC on the production assaying results. Production assaying was undertaken by the Bolanitos Mine laboratory of Endeavour Silver. There was poor correlation on check results for both gold and silver. The 2018 Technical Report authors state in Section 11.3.2 that "in general the results of the duplicate re-assays indicate a good correlation for silver and a moderate to poor correlation for gold." The authors then state that for pulps, a 10% failure rate for silver and 45% failure rate for gold; and for reject duplicates, a failure rate of 33% and 37% for silver and gold, respectively. For mine duplicates, they state a failure rate of 36% and 45% for silver and gold, respectively. Typically, a failure rate greater than 10% is un-acceptable. However, a portion of the failure rate in reject duplicates and mine duplicates can be expected considering the normal erratic nature of silver and gold grades in vein systems. For check silver assays on pulps, a 10% failure rate is not good, but barely marginal.

The QP opines that the cause of this failure rate in re-assays of mine and reject duplicates is likely insufficient fine grinding of the pulp and/or contamination caused by insufficient cleaning of grinding equipment between samples. VanGold should note that moderately coarse grained ore-mineral mineralogy will require grinding of at least 85% passing 75 microns (-200 mesh).

Part of the failure rate in sample duplicate and reject duplicate check assays may be partially due to the erratic nature of silver and gold mineralization and partially due to contamination or insufficient grinding. Coarse gold and or silver (nugget effect) could also play are part in a high failure rate; however, those issues were not seen in assaying done on exploration samples where assays were undertaken by ALS.

Endeavour Silver submitted 857 mine production coarse pulp blanks (prepared in-house) to the Bolanitos Mine Laboratory to monitor sample preparation procedures in 2015. The results as reported show an 18% and 27% failure rate for silver and gold, respectively. This is an un-acceptable rate of failure on blanks with likely two possible reasons:

- a) Possible contamination by the Bolanitos Mine laboratory; or
- b) The blank is weakly mineralized and is not suitable as a blank.

Also, the El Cubo staff did not utilize standards in 2016, a poor operating procedure. The QP opines that if production is resumed by VanGold, the new in-house laboratory staff be taught appropriate procedures including increasing the grind time for pulps; ensuring sufficient cleaning between samples and establishing the use of standards and continue use of true blanks (such as Enviroplug coarse bentonite).

#### **11.3.3 Exploration Samples**

During 2016, Endeavour Silver's surface and underground drilling was supported by a QA/QC program conducted to monitor the integrity of all assay results. Each batch of 20 samples included one blank, one duplicate and one standard. Check assaying was also conducted at a frequency of approximately 5%. Discrepancies and inconsistencies in the blank and duplicate data were resolved by re-assaying the pulp, reject or both.

In 2016, a total of 1,361 samples, including control samples, were submitted during the drilling exploration program at El Cubo. A summary of sample type and number is shown in Table 11.2. A 70 pulps (approximately 5%) were also submitted for check assaying.

Samples	No. of Samples	Percentaje (%)
Standards	73	5.4%
Duplicates	67	4.9%
Blanks	63	4.6%
Normal	1,158	85.1%
Total	1,361	100.0%
Check samples	70	5.1%

# TABLE 11.2SUMMARY OF SAMPLE TYPE AND NUMBER USED DURINGTHE 2016 SURFACE EXPLORATION PROGRAM

Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

The sampling process, including handling of samples, preparation, and analysis, is shown in the quality control flow sheet (Figure 11.9).

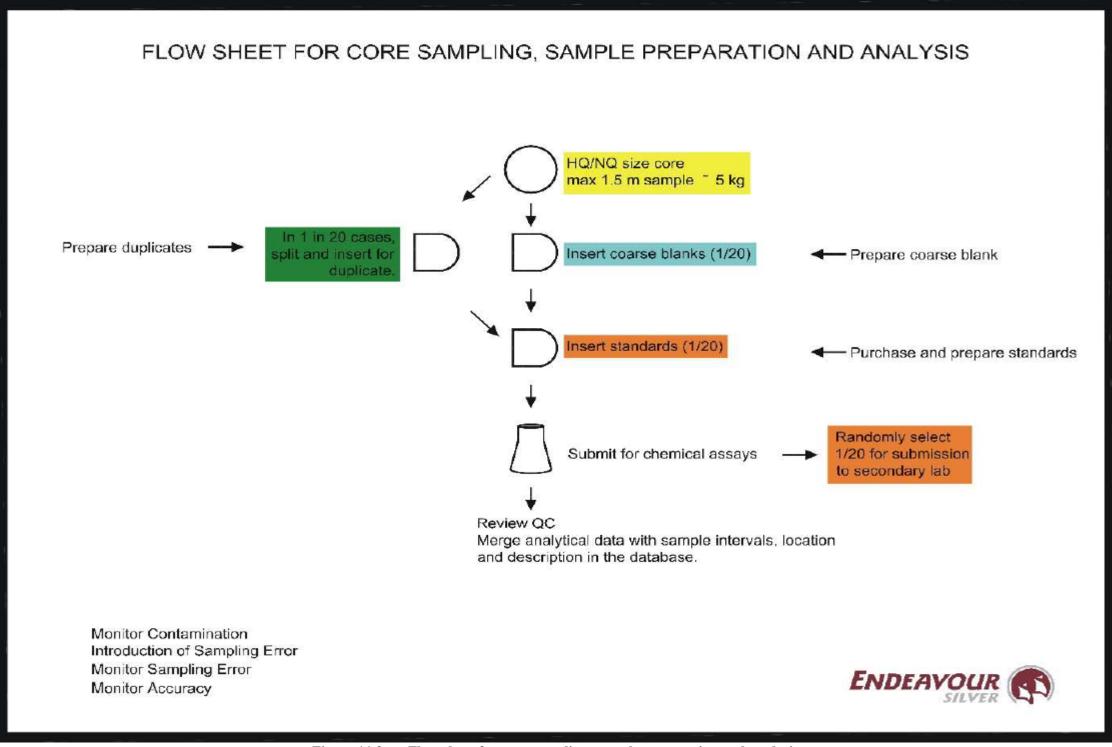


Figure 11.9. Flow sheet for core sampling, sample preparation and analysis Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

The QP agrees that the QA/QC procedures for exploration diamond drill core were appropriate and to industry standards.

#### **11.3.3.1** Exploration Blank Samples

Blank samples were inserted to monitor possible contamination during the preparation process and analysis of the samples in the laboratory. Commercial Enviroplug Coarse (¼ inch) bentonite was used as the blank 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. The control limit for blank samples is 10 times the minimum limit of detection of the assay method of the element: 0.05 ppm for gold and 2.0 ppm for silver. Only a limited number of blank samples returned assay values above the detection limits for gold and silver (Figure 11.10 and Figure 11.11).

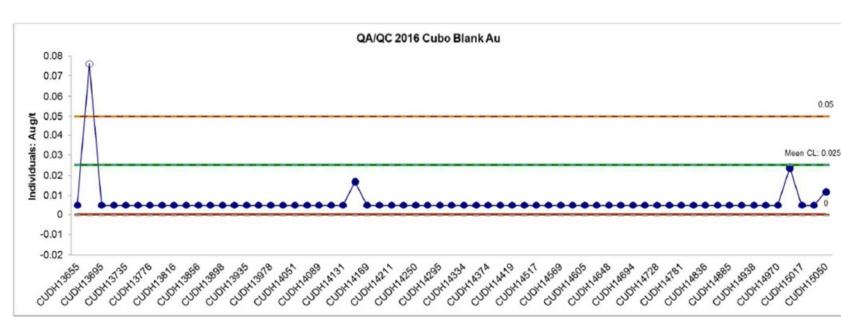


Figure 11.10. Control Chart for gold assay from the blank samples inserted into the sample stream Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018

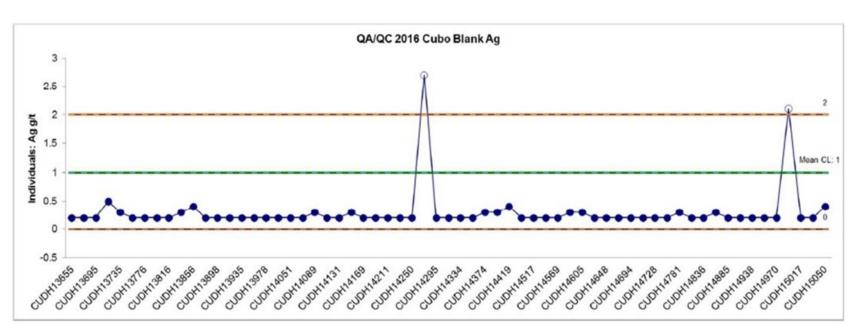


Figure 11.11. Control Chart for silver assay from the blank samples inserted into the sample stream Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018. The QP agrees that Endeavour Silver's procedures for the use of blanks for exploration samples are appropriate and to industry standards. However, we note that there was either some contamination in a few of the blank samples or assay errors. The cause of these slight problems is undeterminable.

# **11.3.3.2** Exploration Duplicate Samples

Duplicate samples are used to monitor:

- a) *Potential mixing up of samples; and*
- b) *Variability of the data as a result of laboratory error or the lack of homogeneity of the samples.*

Duplicate core samples were prepared by Endeavour Silver's personnel at the core storage facility at El Cubo. Preparation first involved randomly selecting a sample interval for duplicate sampling purposes. The duplicates were then collected at the time of initial sampling by first splitting the core in half and then crushing and dividing the half-split into two portions, which were sent to the laboratory separately. The duplicate samples were ticketed with the consecutive number following the original sample. One duplicate sample was collected for each batch of 20 samples.

Discrepancies and inconsistencies in the duplicate sample data were resolved by re-assaying either the pulp or reject or both. For the duplicate samples, graphical analysis showed a low correlation coefficient for gold (0.49) and satisfactory correlation coefficient for silver (0.86). The low correlation was attributed to the narrow range between the sample values and the detection limit of the method; even though the variation is minimal in terms of units (ppm), the comparison between the two values (duplicate and original) shows, graphically, a low correlation.

The QP opines that Endeavour Silver's procedures requiring re-assaying either the pulp or reject or both was appropriate and to industry standards and the explanation for the low correlation for gold is acceptable.

Scatter plots for gold and silver are presented as Figure 11.12 and Figure 11.13.

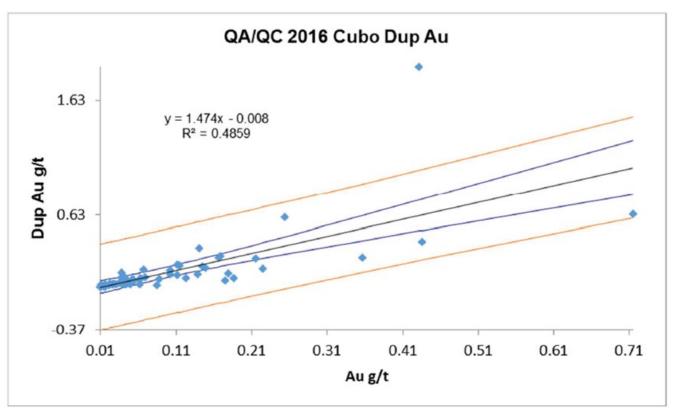


Figure 11.12. Scatter plot for duplicate samples for gold Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

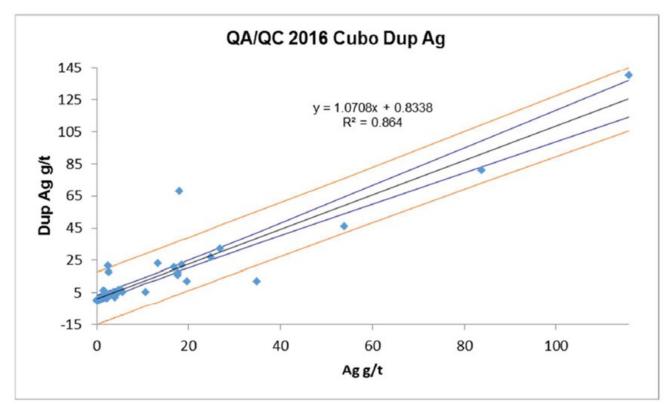


Figure 11.13. Scatter plot for duplicate samples for silver Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

# 11.3.3.3 Standard Reference Samples

Endeavour Silver used commercial reference standards to monitor the accuracy of the laboratories. Standard reference material (SRM) was purchased from CDN Resource Laboratories Ltd. Each reference standard was prepared by the vendor at its own laboratories and shipped directly to Endeavour Silver, along with a certificate of analysis for each standard purchased.

In 2016 (the last year such data is available), a total of 73 standard reference control samples was submitted at an average frequency of 1 for each batch of 20 samples. Reference standards were ticketed with pre-assigned numbers in order to avoid inadvertently using numbers that were being used during logging.

Five different standards were submitted and analyzed for gold and silver. Reference standard information for 2016 is summarized in Table 11.3.

Reference Standard	Reference Number	Reference Source		andard Assays ficate)	The second s	andard Assays Ilated)
Stanuaru	Number		Gold (g/t)	Silver (g/t)	Gold (g/t)	Silver (g/t)
edr-36	CDN-ME-1101	Cdn Resource Lab	0.56	68	0.60	68
edr-38	CDN-ME-19	Cdn Resource Lab	0.62	103	0.67	100
edr-40	CDN-ME-1302	Cdn Resource Lab	2.41	419	2.49	416
edr-41	CDN-GS-2Q	Cdn Resource Lab	2.37	73	2.43	74
edr-42	CDN-ME-1408	Cdn Resource Lab	2.94	396	2.92	388

 TABLE 11.3
 Reference Standards Used for Endeavour Silver's Drilling Programs

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 11.4.

 TABLE 11.4
 Basis for Interpreting Standard Sample Assays

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	

Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

Endeavour Silver's criteria for a batch failure included:

- *A reported value for a standard greater than 3 standard deviations from the mean is a failure.*
- Two consecutive values of a standard greater than 2 standard deviations from the mean is a failure.
- *A blank value over the acceptable limit is a failure.*

Results of each standard were reviewed separately. Most values for gold and silver were found to be within the control limits, and the results were considered satisfactory. The mean of the ALS assays agreed well with the mean value of the standard. Examples of the control charts for the standard reference material generated by Endeavour Silver are shown in Figure 11.14 through Figure 11.21.

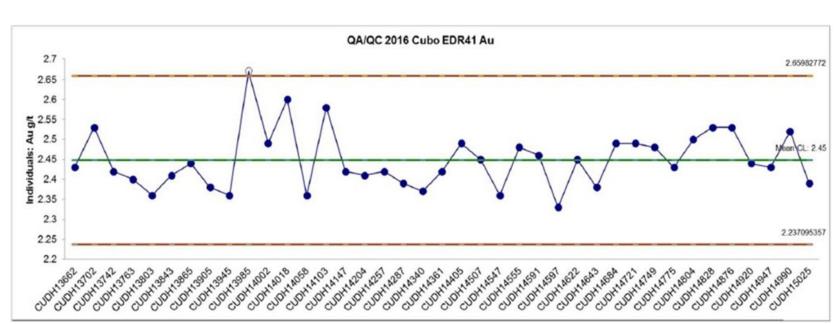


Figure 11.14. Control Chart for gold assays from the standard reference sample Endeavour Silver-41 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

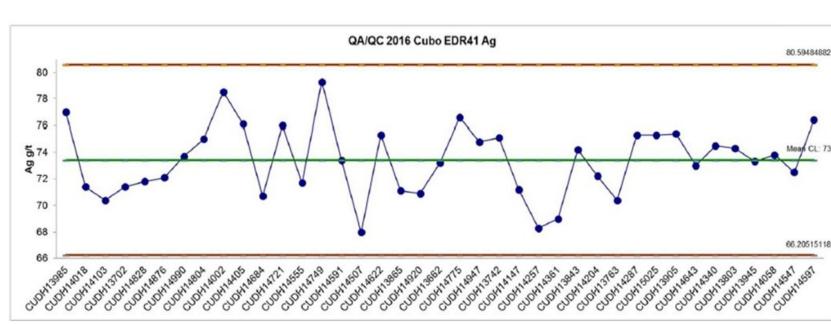


Figure 11.15. Control Chart for silver assays from the standard reference sample Endeavour Silver-41 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

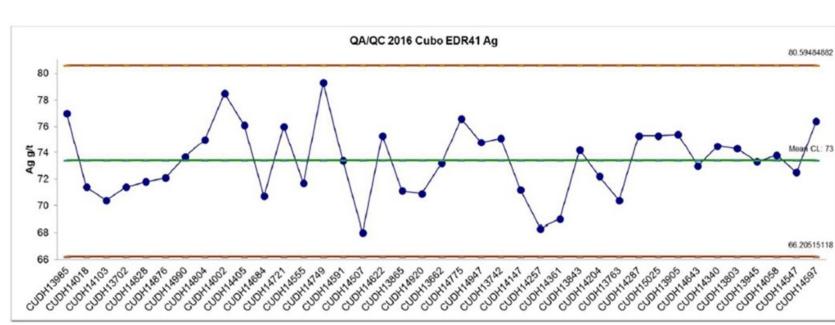


Figure 11.16. Control Chart for gold assays from the standard reference sample Endeavour Silver-42 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

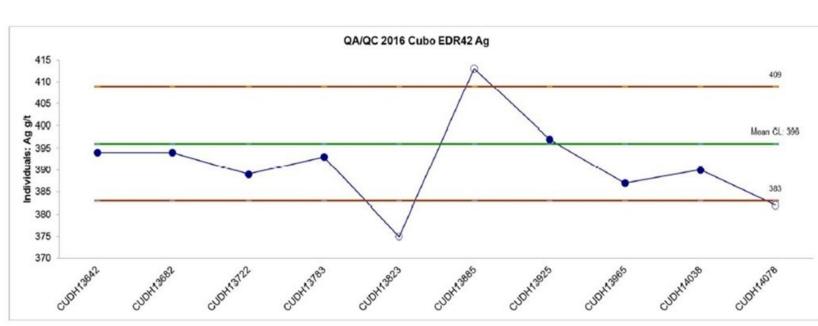


Figure 11.17. Control Chart for silver assays from the standard reference sample Endeavour Silver-42 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

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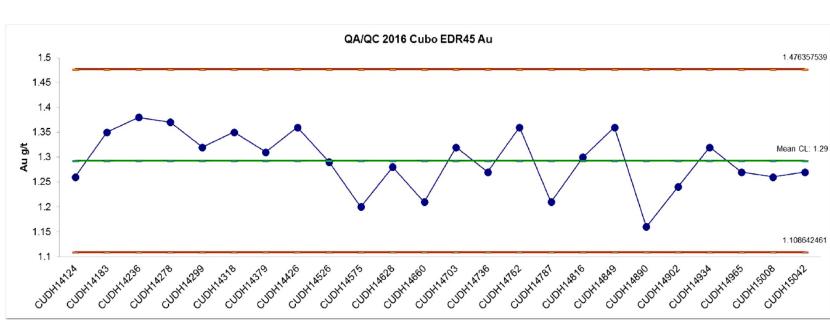


Figure 11.18. Control Chart for gold assays from the standard reference sample Endeavour Silver-45 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

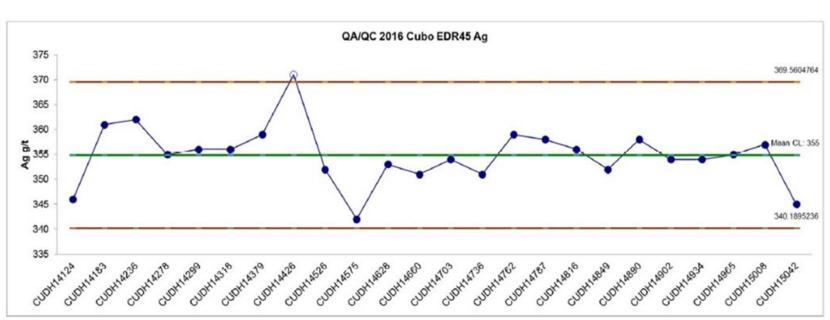


Figure 11.19. Control Chart for silver assays from the standard reference sample Endeavour Silver-45 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

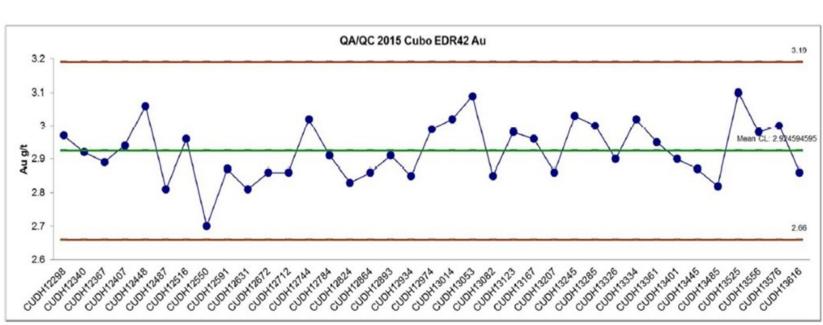


Figure 11.20. Control Chart for gold assays from the standard reference sample Endeavour Silver-42 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

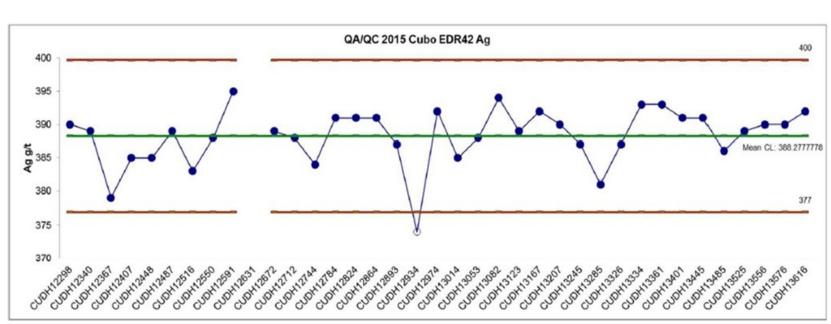


Figure 11.21. Control Chart for silver assays from the standard reference sample Endeavour Silver-42 Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

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The QP agrees that the assay results on gold and silver standards were acceptable and to industry standards.

# 11.3.3.4 Exploration Check Assaying

Endeavour Silver periodically conducted check analyses in order to evaluate the accuracy of the primary laboratory. Random pulps selected from original core samples were sent to a second laboratory to verify the original assay and monitor any possible deviation due to sample handling and laboratory procedures. Endeavour Silver employed the BSI-Inspectorate laboratory in Durango, Mexico for check analyses.

Correlation coefficients are high (>0.95) for both silver and gold, indicating a high level of agreement between the original ALS assay and the BSI-Inspectorate check assay. Figure 11.22 and Figure 11.23 show the correlations between the values of gold and silver, respectively.

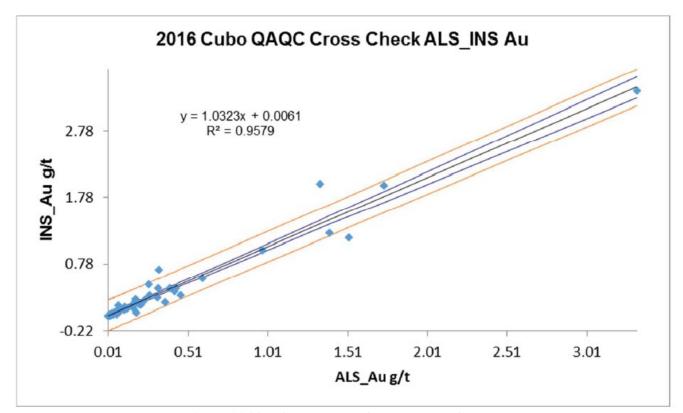


Figure 11.22. Scatter plot of check assays for gold Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

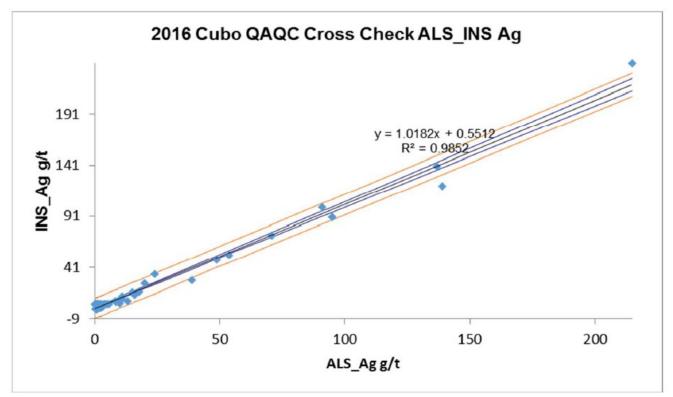


Figure 11.23. Scatter plot of check assays for silver Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

# 11.4 EL CUBO ADEQUACY OF DATA

The QP opines that the exploration and underground channel sampling procedures used by Endeavour Silver for sample collection, sample preparation, density determinations, security, analytical, and QA/QC procedures were correct and assay results were acceptable for the purpose of this Technical Report. We also agree that the diamond drill and underground channel samples were of sufficient quality and quantity to comprise a representative unbiased database. The QP also opines that there were some issues with either contamination or inadequate grinding on production underground channel samples. Similarly, we find some issues with the blanks assays; the high failure rate is likely due to contamination or the blank being slightly mineralized. However, for the purposes of this report, particularly concerning Resources and Reserves, production channel assays are acceptable. Furthermore, the QP opines that issues with the underground channel samples would have had some effect on the Resource and Reserve grades as a preponderance of the assay data was derived from the channel samples. However, whether it would be a positive or negative effect is indeterminable. Similarly, it may have had an effect on any negative reconciliation results between planned and actual production grades, although negative reconciliation on grade may have more to do with excessive mining dilution.

# 11.5 EL PINGUICO SAMPLE PREPARATION, ANALYSIS, AND SECURITY

For both the 2017 surface stockpile sampling and the underground stockpile sampling, samples were secured by FINDORE and/or VanGold until shipped to the assay lab.

#### 11.6 EL PINGUICO UNDERGROUND STOCKPILE SAMPLE PREPARATION AND ANALYSIS

No data is available for sample preparation and analysis for the early sampling programs undertaken by the Mexican Geological Survey.

For the January 2017 FINDORE underground sampling program, secured samples were sent to the ALS Laboratory in Guadalajara, Mexico for sample preparation. Gold, silver, and multi-element ICP analysis was completed at the ALS laboratory in North Vancouver, Canada. Rock samples were fine crushed (70% passing a 2 mm screen), pulverized (85% passing a 75 micron screen) and a pulp a split separated for assaying by a riffle splitter. A 30 gram portion was assayed for gold and silver by standard fire assay and a 10 gram split was analyzed for 35 elements by ICP method.

# 11.7 EL PINGUICO UNDERGROUND STOCKPILE SAMPLE QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Certified Reference Material (CRM) was purchased from CDN Resource Laboratories Ltd. in Vancouver, Canada and blank samples (quaternary andesite from Guanajuato) were inserted into the sample stream at a 5% insertion rate with pulped samples from the underground stockpile for quality control purposes. The results of the standards and blanks samples were satisfactory and shown in Table 11.5.

REFERENCE MATERIAL AND DLANK SAWI LES								
SAMPLE	ТҮРЕ	Au (ppm)	Ag (ppm)	Reference values for the standards Au (ppm)	Reference values for the standards Ag (ppm)			
F-011	BLANK	0.007	0.5					
F-033	STANDARD	0.861	67	0.896 g/t	64.7 g/t			
F-043	BLANK	0.016	1.5					
F-053	STANDARD	0.463	38.4	0.452 g/t	38.2 g/t			

TABLE 11.5ASSAY RESULTS AND EXPECTED VALUE FOR STANDARDREFERENCE MATERIAL AND BLANK SAMPLES

Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

The QP opines that the 2017 underground sampling program undertaken by FINDORE and the sample preparation, security, and analytical procedures were all completed to industry standards and acceptable for purposes of this report.

# 11.8 EL PINGUICO UNDERGROUND STOCKPILE DRILLING SAMPLE PREPARATION AND ANALYSIS

Core and rubble were split using non-selective methods. Core was split in half; 50% of the rubble was collected at small but appropriate meter intervals. Where rubble material was poor, 100% was collected on 1.5 m intervals or combined with split core at 1.0 m intervals where a majority of the core run was in solid core.

### 11.9 EL PINGUICO UNDERGROUND STOCKPILE DRILLING SAMPLE QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Blanks and Certified Reference Materials (CRM), as standards, were inserted; one blank for each hole and standards at the rate of one each for every ten samples. The blank material was provided by the VanGold personnel and consisted of barren andesitic fragments that had been previously analyzed. A five blanks were utilized and all returned <0.05 g/t of gold and <5.0 g/t of silver.

Two different standards were utilized: CDN ME 1204 with a mean gold grade of 0.975 g/t and a silver grade of 58 g/t and CDN GS ST with a gold grade of 4.76 g/t and a silver grade of 126 g/t. One standard assay returned a slightly low value (lower than -2 standard deviations). All other gold and silver assays returned values within acceptable margins.

Duplicate samples were not prepared, nor were re-check assays undertaken.

The QP opines that the core splitting procedures, handling of rubble, and the QA/QC were all to industry standards and acceptable for the needs of this report.

## 11.10 EL PINGUICO ADEQUACY OF DATA

#### 11.10.1 Surface Stockpile

The QP opines that the assay results and estimated grade and tonnes for the El Pinguico surface stockpile are realistic, adequate, and acceptable for the purposes of this report. The recent results of the 1,000 tonne bulk sample confirm the estimated grade of the stockpile.

#### **11.10.2 Underground Stockpile**

The QP opines that the sample collection of the underground stockpile trenches, sample preparation, assaying techniques, and QA/QC for the El Pinguico underground stockpile sampling campaign are to industry standards and acceptable for the needs of this report.

The QP opines the sample collection of the diamond drill core, sample preparation, assaying techniques, and the QA/QC of the El Pinguico underground stockpile are to industry standards and acceptable for the needs of this report.

The issue of the grade of the El Pinguico underground stockpile is far from resolved. The issue remains as to the grade of the stockpile beneath the uppermost meters. The 2018 five-hole diamond drilling campaign failed to confirm that gold and silver mineralization is relatively uniform through the stockpile. In fact, the results suggest the opposite, that is, that much of the stockpile consists of true waste material. Except for drill hole P5-N, which was an up-hole drilled testing near the top of the stockpile that returned an average gold grade of 0.228 g/t and an average silver grade of 45.6 g/t, the other four holes failed to substantiate grades similar to those returned from the trench sampling and assaying. Core recovery through the stockpile was a very poor recovery of material consisting of small and/or fine fragments with good recovery of solid competent rhyolite. Obvious vein material and sulfide minerals were likely

flushed away into void spaces in the stockpile. Whether this can explain the relative absence of "ore-grade" mineralization in deeper levels of the stockpile, it is impossible to know until further sampling data is available.

It is possible that the loss of fines contributed to the disappointing results, as fine material typically hosts higher grade mineralization in epithermal low sulfidation systems and its loss in drilling resulted in an un-representative sample. However, it seems that the loss of nearly all the expected grade being attributed totally to loss of fines may be an unreasonable assumption as vein material is often highly competent or competent but broken (brecciated) fragments. Pictures of the core do show recovery of some broken zones. Also, it is noted that the five diamond drill holes tested a very limited portion of the stockpile and other portions of the stockpile may host grades similar to those found in the trenches. The QP concludes that the results of the stockpile core drilling program are inconclusive and a definitive statement on the overall grade of the stockpile must await further detailed sampling from Levels 5, 6, and 7 as well as potentially a future drilling program across the stockpile.

The QP has three recommendations:

- Re-sample several of the underground stockpile trenches with selective sampling by separating out large competent pieces and the finer fraction and assaying them separately. This type of sampling is similar to screen-size analysis. This may provide valuable information on the distribution of silver and gold values in the stockpile (*i.e.*, percent of silver-gold mineralization present in large competent fragments versus in the smaller fragments and fines).
- It is also recommended that if further drilling is undertaken to test the stockpile, then triple tube coring be utilized. Triple tube coring recovers much of the broken fine material.
- Sample the stockpile on as many other locations on different levels as possible.

# **12.0 EL CUBO DATA VERIFICATION**

The following section is excerpted from the National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018, and shown as italicized, unless otherwise specified. Changes to tables, figure numbers, section numbers, and standardization have been made to suit the format of this report.

The Mineral Resource and Reserve estimates in the El Cubo 2018 Technical Report rely in part on the following information provided to Hard Rock Consulting by Endeavour Silver, with an effective date of December 31, 2016:

- Discussions with Endeavour Silver personnel;
- Personal investigation of the El Cubo Project office;
- A surface exploration drilling database (2014-CAS) received as .csv files;
- An underground drilling database (DDH\_NQHQ\_2014);
- *Production channel sample database received as a .csv file;*
- Modeled solids for veins Villalpando, Asuncion, Dolores, Dolores Alto, and Desp. Dolores by Endeavour Silver;
- Technical Report "NI43-101 Technical Report Resource and Reserve Estimates for the El Cubo Mines Project Guanajuato State Mexico" dated February 25, 2015 and authored by Michael J. Munroe, RM-SME; and
- Polygonal 2D long sections for veins 143, 178, 274, 680, 750 Alto, 995, Anabel, Desp. Anabel, Inmaculada, La Loca Antigua, Juan Diego, Marmajas, Poniente, San Francisco, Santa Frida, San Nicolas, and Villalpando Alto with Resource and Reserve calculations.

# **12.1 DATABASE AUDIT**

The surface drilling, underground drilling, and underground channel samples were combined into a single database for Mineral Resource estimation. Hard Rock Consulting conducted a thorough audit of the current Endeavour Silver exploration and operation sample databases. The following tasks were completed as part of the audit:

- *Performed a mechanical audit of the database;*
- Validated the geologic information compared to the paper logs;
- Validated the assay values contained in the exploration database with assay certificates from the Endeavour Silver Bolanitos Mine laboratory; and
- Validated the assay values contained in the 2D polygonal long sections by comparing with select, relevant historical assays and the original drawings.

Hard Rock Consulting limited the audit to the rock-type, assay, drill hole collar, and survey data contained in the exploration database.

#### 12.1.1 Mechanical Audit

A mechanical audit of the combined database was completed using Leapfrog Geo® software. The database was checked for overlaps, gaps, duplicate channel samples, total drill hole length inconsistencies, non-numeric assay values, and negative numbers. The following list of drill holes were missing information:

- Missing Collar Coordinates
  - Underground Drilling
    - *CUDG-00943A*
    - CUDG-00948
    - CUDG-00952
    - CUDG-00963
    - CUDG-00964
    - CUDG-00965
    - CUDG-00967
    - CUDG-00968
    - CUDG-00969
    - CUDG-00970
    - CUDG-00971
    - CUDG-00972
    - *CUDG-00973*
    - CUDG-00974
    - CUDG-00975
- No Assay Data
  - Surface Drilling
    - CAS-87
  - Underground Channel Samples
    - 122067
    - 123585
    - 212472-74
    - 433815-17
    - 48835-38
    - 421664-66
    - 9378-81
    - 170342-48
    - 583448-52
    - 115359
    - 167460

*A total of 103 surface drill holes, 22 underground drill holes, and 12,474 underground channel samples was imported into Leapfrog*® *for validation. Data with missing information were not used in the estimation of Mineral Resources.* 

#### 12.1.2 Gaps, Non-numeric Assay Values, and Negative Numbers

The software reported missing intervals for silver and gold. Below detection limit samples are reported as a nonpositive value of 0. All the non-positive numbers (<0) were assumed to be non-sampled intervals and were omitted from the data set. No non-numeric assays were encountered in the audit. Table 12.1 summarizes the number of intervals imported, the number of missing intervals, the number of non-positive values, and the number of valid assays for each element.

TABLE 12.1DATABASE IMPORT SUMMARY						
Element	Missing	Non-Positive Values	Assay Values			
Ag (g/t)	10,423	5,618	50,706			
Au (g/t)	10,437	7,986	50,692			

Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

#### **12.1.3** Table Depth Consistency

The survey, assay, and geology tables maximum sample depth was checked as compared to the maximum depth reported in the collar table for each drill hole. No intervals exceeded the reported drill hole depths.

# **12.2 CERTIFICATES**

Hard Rock Consulting received original assay certificates in Excel® format for the samples collected in 2015 in the current database. A random manual check of 10% of the database against the original certificates was conducted. The error rate within the database is considered to be less than 1% based on the number of samples spot checked.

# **12.3 ADEQUACY OF DATA**

HARD ROCK CONSULTING has reviewed Endeavour Silver's check assay programs and considers the programs to provide adequate confidence in the data. Samples that are associated with QA/QC failures are reviewed prior to inclusion in the production and exploration databases; however, in production, there is not always sufficient time for corrective measures prior to exploitation of the stope being sampled. Improvements to the sampling procedures and QA/QC failure corrective measures may improve the overall sample quality of the production samples.

The laboratories are clean, well-documented, and appear to be working properly. HARD ROCK CONSULTING would, however, recommend that Endeavour Silver install a Laboratory Information Management System (LIMS) to eliminate human error or correcting of values to an expected result. LIMS systems are proven to reduce errors in the sampling process that result in considerable money lost. This system will automate the QA/QC reporting for the geology department and the laboratory while reducing the time required for inputting data into a database for modeling.

Exploration drilling, sampling, security, and analysis procedures are being conducted in a manner that meets or exceeds industry standard practice. All drill cores and cuttings from Endeavour Silver's drilling have been photographed. Drill logs have been digitally entered into exploration database, organized, and maintained in Vulcan®. The split core and cutting trays have been securely stored and are available for review, as needed.

The QP spent two days at the EL Cubo property. Endeavour's professionals made presentations focused on areas that the company believed viable for near-term mining. The Mineral Resources that were presented totaled about 509,000 tonnes. The QP participating in the El Cubo site visit undertook the following steps to verify the accuracy of the Mineral Resources:

• Visited every projected area selected as a potential resource including in place material ready for blasting and mining;

- Inspected numerous underground vein exposures and mineralization in-place and found the were as depicted on the underground mine maps;
- Inspected drill core encompassing the vein mineralization;
- Inspected geological, structural, and vein maps and was satisfied with their validity; and
- Was present on discussions on resource methodology, sampling and assay analysis procedures, and validity of the results.

Questions were asked and the QP was satisfied with the procedures, methodologies, and validity of the analytical results.

Accordingly, the QP opines that the data available is adequate for the purposes used in this technical report and a reasonable expectation exists that the mineralization present is economic.

# **12.4 DATA VERIFICATION AT EL PINGUICO**

The QP also spent two days at the El Pinguico project site. During that period, the QP:

- Inspected the surface stockpile;
- Inspected the accessible portions of the underground stockpile;
- Was satisfied that the surface and underground stockpiles are present and appear as shown in the database; and
- Inspected exposures of in-place underground vein material and was satisfied that the mineralogy, style of mineralization, and approximate widths were as expected.

The QP opines the data for the surface stockpile at El Pinguico is adequate and suitable for the requirements of this PEA. The QP also opines that the underground stockpile trench assay data is also adequate for the needs of this PEA. The results of the underground stockpile drilling are not definitive and additional information is required before the entire stockpile can be considered as a Mineral Resource. The QP opines that the surface stockpile and the uppermost, sampled portion of the underground stockpile can reasonably be expected to be economic.

# **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

The El Cubo Mill complex has operated for a number of years and through experience has determined that the ore has fairly consistent metallurgical characteristics. As such, Endeavour Silver did not perform any metallurgical testing of ores. Metallurgical parameters were determined from operating data.

The El Pinguico property has not been mined since the early 1900s. Additionally, there has not been any significant exploration or metallurgical test work completed. A bulk milling test of an above ground stockpile was completed in May 2019, which provides the sole reference for gold and silver recoveries for this property.

#### 13.1 MINERALOGY

The mineralogy of the mining district is the result of an epithermal deposition caused by hydrothermal activity. The result is a vein system with low sulfidation and adularia-sericite alteration. Adularia is a variety of orthoclase feldspar found as colorless to white prismatic crystals deposited in voids. Sericite is the name given to very fine, ragged grains and aggregates of white to colorless micas.

Significant silver and gold bearing metallic minerals include argentite (Ag<sub>2</sub>S), gold/silver electrum, ruby silver sulfosalt, such as pyragyrite (Ag<sub>3</sub>SbS<sub>3</sub>), native silver and native gold.

Historically, flotation has been the primary method to recover precious metals. It was reported that in past decades, cyanide was applied to the flotation concentrate at El Cubo to recovery approximately 96% of the precious metals contained in 88% of the values recovered in the flotation concentrate for an overall recovery of 84%. It was reported that El Pinguico also had a cyanide recovery plant.

The host rock or wall rock is generally a rhyolite. However, in certain sections of El Pinguico, there are indications of mineralization in andesite.

There are varying degrees of silicification, which extends into the wall rock. The degree of silicification determines the hardness of the ore and the ability of the milling circuit to achieve liberation size at projected mill throughput.

# **13.2 EL CUBO METALLURGICAL PARAMETERS**

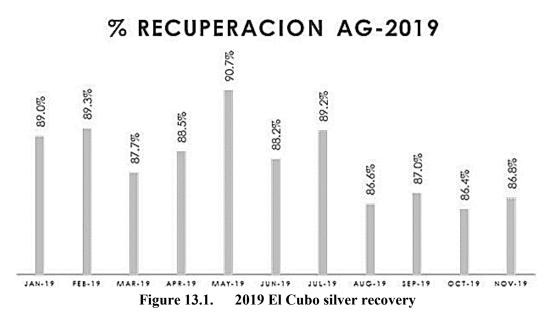
El Cubo Mill operated from 2013 to 2019 in its current configuration. Operating records from January 2017 to November 2019 were provided. Throughput tonnage in 2017 and 2018 ranged from 1,500 to 2,000 tonnes per day. In 2019, the tonnage was reduced to approximately 750 tonnes per day due to a reduction in projected Resources available for milling.

#### **13.2.1 Projected Metallurgical Recoveries**

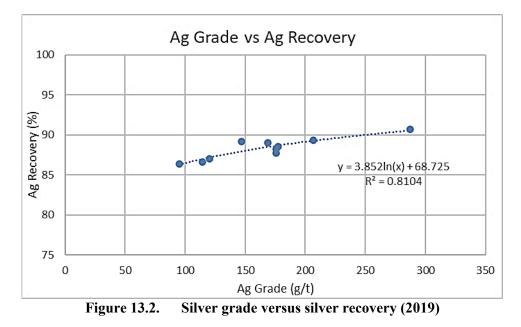
As noted above, the mineralogy of the mining district is the result of an epithermal deposition caused by hydrothermal activity. The result is the operating data obtained from the El Cubo Mill showed that between 2017 and 2019 recoveries averaged 87% for silver and 86.5% for gold. The feed to the mill during this period varied as it derived from many different parts of the mine.

Resources that would be scheduled for processing would be mined from the same areas that were previously mined. These Resources were identified as part of Endeavour Silver's production schedule that was not enacted.

Figure 13.1 shows the silver recovery from El Cubo for 2019, as reported by Endeavour Silver, which averaged 88.2%.



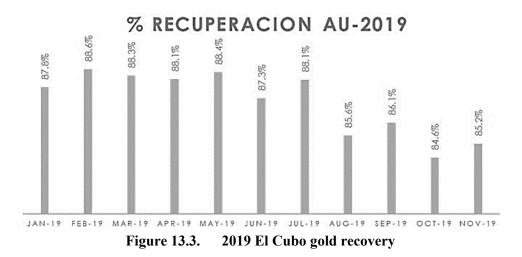
When average silver recovery for 2019 is compared to the average silver head grade on a monthly basis, the result is a reasonable correlation as shown in Figure 13.2.



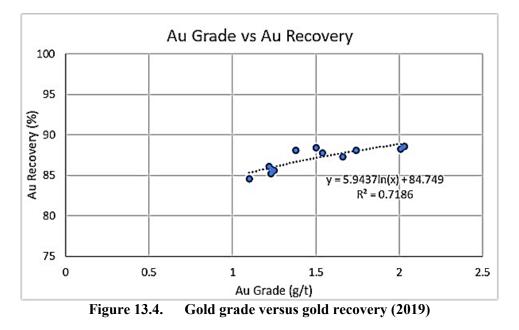
The average silver recovery for El Cubo during 2019 was 88.2% for silver at an average grade of 165 g/t. However, the silver recovery used in this assessment is calculated using the derived formula illustrated in Figure 13.2.

Recovery  $(Ag)\% = 3.85 \times ln$  (Ag grade g/t) + 68.725

Figure 13.3 shows the gold recovery for El Cubo for 2019, as reported by Endeavour Silver, which averaged 87.4%.



When average gold recovery for 2019 is compared to the average gold head grade on a monthly basis, the result is a reasonable correlation as shown in Figure 13.4.



The average gold recovery for El Cubo during 2019 was 87.2% for silver at an average grade of 1.5 g/t. However, the gold recovery used in this assessment is calculated using the derived formula illustrated in Figure 13.4.

Recovery (Au)% =  $5.9437 \times \ln$  (Au grade g/t) + 84.749

#### **13.2.2** Reagent Consumptions

Table 13.1 shows the reagent consumption from January through November 2019.

TABLE 13.1EL CUBO REAGENT CONSUMPTIONSJANUARY THROUGH NOVEMBER 2019							
	Consumption	<b>Delivery Method</b>	Description				
El Cubo							
KAX	79 g/t	55 gallon drums	Liquid Reagent				
7310	29 g/t	55 gallon drums	Liquid Reagent				
CC-1065	17 g/t	50 pound bags	Solid				
Copper Sulfate	10 g/t	50 pound bags	Solid				
Flocculant	35 g/t	50 pound bags	Solid				

### 13.2.3 Mill Power Requirements and Media Consumption

Endeavour Silver's personnel reported Bond Work Index (BWi) values that ranged from 16 to 21 kWh. The BWi values have not been verified.

Media consumption was not reported by Endeavour Silver. However, the cost of media consumption was reported in the monthly cost summary as \$1.37 per tonne of ore. By using a value of \$2,400 per tonne for grinding media, the ball consumption was estimated at 0.6 kg/t.

#### **13.2.4** Concentrate Grades

Table 13.2 shows the concentrate grades and concentration ratios for El Cubo from 2017 to 2019. Projected concentrate grades and concentration ratios are based on operating results from 2019. The estimated concentrate grades are 8,100 grams of silver and 79 grams of gold per tonne of concentrate. Concentration ratios are estimated at 59:1.

	TABLE 13.2     CONCENTRATE GRADE FOR EL CUBO							
Year	Ag, g/t	Au, g/t	<b>Concentration Ratio</b>					
2017	6,901.4	78.6	59					
2018	10,172.8	107.7	67					
2019	8,105.0	79	59					

#### **13.3 EL PINGUICO METALLURGICAL PARAMETERS**

#### 13.3.1 Bulk Sample Milling and Testing

A 1,000 tonne bulk sample was taken from the stockpile located above ground at the El Pinguico shaft and processed through the neighboring Planta Bolanitios Mill owned by Endeavour Silver. The material was milled during May 2019.

The mill is approximately the same configuration as the El Cubo Mill, with the exception that there is a cleaner column cell after a conventional two stage cleaning circuit for the final concentrate.

The calculated gold head grade averaged 0.74 g/t and the calculated silver head grade averaged 47 g/t. Assay results from the above ground stockpile at El Pinguico indicated that the average gold head grade measured approximately 0.5 g/t and the average silver head grade measured approximately 71 g/t. Both gold and silver grades for the bulk sample milling were lower than the assayed average values of the stockpile.

Gold recovery averaged 75.2% and silver recovery averaged 60.4%.

Table 13.3 summarizes the result of the milling test, as reported by Endeavour Silver.

The concentrate that was produced averaged 132 g/t of gold and 6,661 g/t of silver. The concentrate also contained 0.6% arsenic and 18.8% moisture.

	Table 13.3           Summary Mill Test Results for El Pinguico Above Ground Stockpile										
	Tonnage	e (tonnes)	Gra	de (gpt)	Contained (kg)		% Re	covery		Ounce	s
	Wet Weight	Dry Weight	Au	Ag	Au	Ag	Au	Ag	Au	Ag	AgEq
Calculated Head	1,039	1,006	0.74	46.79	0.75	47.05			24	1,513	3,824
Head Assay	1,039	1,006	0.57	48.46	0.58	48.73			19	1,567	3,049
Difference			23.1%	-3.64%	-						
Concentrate		4.27	132	6,661	0.56	28.41	75.18	60.36	18	913	2,651
Tailing		1,001	0.19	18.61	0.2	18.6			6	599	1,173

# 13.3.2 Bulk Sample Milling and Testing Reagent Consumptions

TABLE 13.4           Bulk Sample Milling Test Reagent Consumption							
Consumption Delivery Method Description							
El Pinguico							
Xanthate C-3505	60 g/t	55 gallon drums	Liquid Reagent				
Collector – 534	37 g/t	55 gallon drums	Liquid Reagent				
Frother – F120	9 g/t	50 pound bags	Solid				
Collector – 2200	41	55 gallon drums	Liquid Reagent				
Silicate	95	50 pound bags	Solid				
Flocculant	35 g/t	50 pound bags	Solid				

Reagent consumptions for the bulk milling test are shown in Table 13.4.

The reagent scheme is similar to what is being used for the El Cubo ore differing in the use of a silicate depressant. Reagent costs for El Pinguico ore would be expected to be similar to reagent costs for the El Cubo ore.

## 14.0 MINERAL RESOURCE ESTIMATE

The Mineral Resource estimate used as the basis for this PEA was developed using the Endeavour Silver 31 December 2016 Mineral Resource estimate and computer models for the El Cubo property and the VanGold 28 February 2017 resource estimate for the El Pinguico property.<sup>4,5</sup> The QP has extensively reviewed and audited the primary drilling data, computer models, wireframes,, estimation methods, and the previous estimates to help develop the QP's estimate. The QP is of the opinion that the estimates in this section are reasonable and can be utilized for this PEA after adjustments discussed in the following sections. Although the following Mineral Resources estimated in this report are used for the economic analysis, the QP would caution that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

### **14.1 DATA VERIFICATION**

The QPs of this report completed detailed reviews of the 2016 models, Endeavour Silver's stope plans and layouts as well as field observations and detailed discussions during the site visit in order to assure reasonableness and accuracy of the data provided. The QP of this section completed checks of the wireframes, computer models, and manual estimates to ensure accuracy of the representation of the data.

### **14.2 EL CUBO PROPERTY**

#### 14.2.1 Resource Estimate Effective 31 December 2016

The original 2016 El Cubo Mineral Resource estimate is comprised of 37 individual models. These models were developed for each vein or area using two different estimation methods. The Mineral Resources are estimated for each vein using either a traditional manual polygonal method referred to in the NI 43-101 Technical Report as a Vertical Longitudinal Projection (VLP) or as a 2-dimensional (2D) polygonal method while the majority of the estimates were made using computerized 3-dimensional (3D) block models. Fifteen areas were estimated using manual techniques and 22 different block models were used for the computerized estimates. These models were supplied by Endeavour Silver in electronic form and reviewed and modified by the QP, where appropriate, to generate an estimate of the current Mineral Resources.

In addition, a QP geologist for this report spent two days at the EL Cubo property verifying the information provided in electronic form by Endeavour Silver. Endeavour's professionals made presentations focused on areas that the company believed viable for near-term exploitation. The Mineral Resources in these areas totaled approximately 509,000 tonnes, which agrees with total tonnage presented in Endeavour's 2019 and 2020 filings for their El Cubo project. The QPs participating in the site visit undertook the following steps to verify the accuracy of the Mineral Resources:

- Visited every projected area selected as a potential resource including in place material ready for blasting and mining;
- Inspected numerous underground vein exposures and mineralization in-place and found they were as depicted on the underground mine maps and cross sections;
- Inspected drill core encompassing the vein mineralization;
- Inspected geological, structural, and vein maps and was satisfied with their validity; and

<sup>&</sup>lt;sup>4</sup>National 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017. Downloaded from SEDAR.

<sup>&</sup>lt;sup>5</sup>NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017. Downloaded from SEDAR.

• Had detail discussions on resource methodology, sampling and assay analysis procedures and validity of the results.

Questions were asked and the QP was satisfied with the procedures, methodologies, and validity of the analytical results.

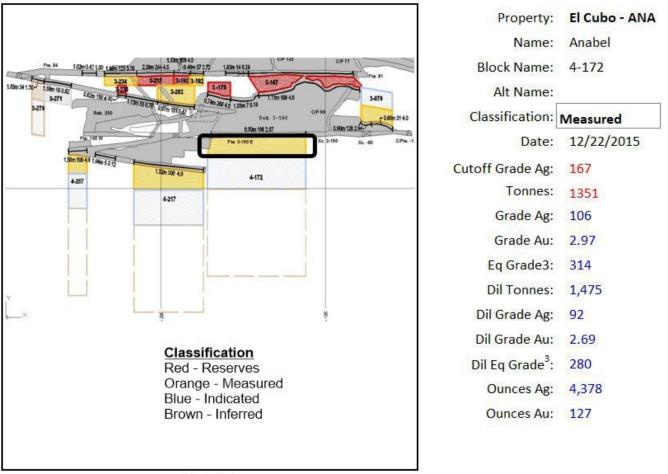
Accordingly, the QP opines that the data available is adequate for the purposes used in this technical report and a reasonable expectation exists that the mineralization present is economic.

Based on long production experience and historic measurements, a density factor of 2.5 t/m<sup>3</sup> is used to convert volumes to tonnages at the El Cubo property.

### 14.2.1.1 Polygonal Method or VLP

VLP estimates were created by projecting the mine workings of a vein onto a vertical 2D long section. Resource blocks were constructed on the VLP based on the sample locations in the plane of the projection and potential mining access. The average grades and thicknesses of the samples were then 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 resource tonnage for each area in the VLP was determine by multiplying the volume times density (2.5) and the grades are reported as a length weighted average of the samples inside each Resource block.

Measured Mineral Resources are the area of the defined Resource blocks within 10 m of a sample. Indicated Mineral Resources are the area of the defined Resource blocks within 20 m of a sample. Inferred Mineral Resources are those blocks greater than 20 m from a sample and have a value for estimated silver. Figure 14.1 displays one of the 15 VLPs (Anabel) and its Mineral Resource estimate for one area within the VLP. The VLPs used for the 2016 resource estimate were provided as part of the backup data for the El Cubo property by Endeavour. The QP of this report reviewed the consistency of selected VLPs for accuracy and consistency with the sampling data.



# Anabel VLP

Location

Figure 14.1.Example of Vertical Longitudinal Projection used in Mineral Resource estimateSource: From file CBO\_ANA\_HRC.xlsx provided by Endeavour Silver

# 14.2.1.2 Computerized Block Model Method

The geologic model (wireframes) for the 22 different block models used to estimate Mineral Resources at El Cubo was generated using the Leapfrog® geologic modeling software. Cross sections drawn orthogonal to the strike of the vein and level maps (horizontal sections) were used to generate the 3D wireframes. The surfaces were then evaluated in 3Ds to ensure that both the down dip and along strike continuity was maintained throughout the model. Vein volumes were clipped using a distance buffer of 100 m, except the Villalpando vein, which used a distance buffer of 125 m, from the selected vein intercepts. Veins were clipped against younger veins, topography, and the concession boundaries.

These wireframes were used to code the blocks in the various block models to vein material using the Datamine® modeling software for each of the veins. The model is rotated along strike and down dip and encompasses the entire vein. A block size of 10 m  $\times$  10 m in the strike and dip directions was established. The blocks in the x-direction or y-direction were sub-blocked to the vein thickness except for the Villalpando South model where the block size is set at

 $2.5 \text{ m} \times 2.5 \text{ m}$ . Mined out areas, drifts, and shafts were digitized and removed from the models. Figure 14.2 shows an example of one the 3D wireframes (Villalpando South). Figure 14.3 shows the Villalpando Vein and the underground workings and mining in red. The QP has reviewed the wireframes to ensure consistency with the sampling data.

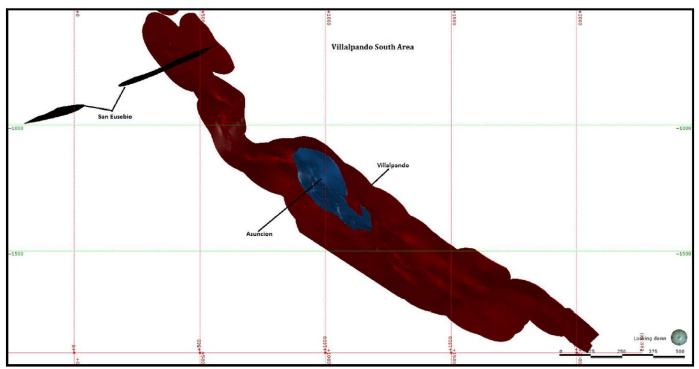


Figure 14.2. Villalpando South area – 3D model Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

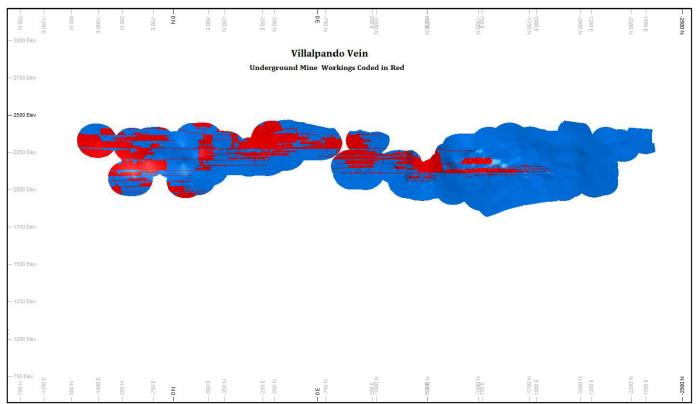


Figure 14.3. Villalpando South area – Long section showing mined out areas Source: National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the El Cubo Project, Guanajuato State, Mexico for Endeavour Silver by Hard Rock Consulting, LLC. Effective Date, December 31, 2016, Report Date: March 3, 2017, Amended Date: March 27, 2018.

In 2015, the estimations of block grades were completed using ordinary kriging (OK) and inverse distance to the 2.5 power ( $ID^{2.5}$ ) methods and nearest neighbor algorithms. The  $ID^{2.5}$  method was used for reporting of Resource grades as the grade estimates using this method more closely fit the grades in the drill hole data. The QP reviewed the parameters used to estimate grade and tonnages in the block models and is of the opinion that they were appropriate for the El Cubo property. The QP then re-estimated the block grades within several block models to check the accuracy of the estimates. No significant differences were found.

Mineral Resource classification was determined using kriging efficiency, distance from samples, and the number of samples used to estimate the grade for each individual block. Measured Mineral Resources are those blocks with at least 15 composites, a kriging efficiency of at least 75%, and a distance no greater than 10 m. Indicated Mineral Resources are those blocks at least 20 m from a sample. Inferred Mineral Resources are those blocks greater than 20 m from a sample that has a value for estimated silver.

# 14.2.2 2016 Resource Summary for El Cubo

The Mineral Resources in 2016 at El Cubo are reported as in addition to the Mineral Reserves. The total Mineral Resource, as of 31 December 2016, are shown in Table 14.1. The QP of this section opines that the 2016 Mineral Resource was done appropriately, and the tonnage and grades report conform to the CIM definitions for Mineral Resources.

TABLE 14.1EL CUBO MINERAL RESOURCES AS OF 31 DECEMBER 2016								
Classification	Townse		Silver	G	Silver Eq			
Classification	Tonnes	g/t	OZ	g/t	OZ	g/t		
Measured	213,000	192	1,318,500	3.13	21,400	414		
Indicated	732,000	194	4,561,100	2.44	57,400	366		
Measured + Indicated	945,000	194	5,879,600	2.60	78,800	377		
Inferred	1,453,000	214	10,004,000	2.78	129,900	411		
Notes:								

1. Measured, Indicated, and Inferred Resource cut-off grades were 177 g/t silver equivalent at El Cubo.

2. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

3. Metallurgical recoveries were 87.8% for silver and 84.7% for gold.

4. Silver Equivalents are based on a 1:75 gold:silver ratio.

5. Price assumptions are \$16.29 per ounce for silver and \$1,195 per ounce for gold for resource cut-off calculations.

Mineral Resources are estimated exclusive of and in addition to Mineral Reserves. 6.

As of 31 December 2016, El Cubo had Mineral Reserves were reported in addition to the Mineral Resources. These are shown in Table 14.2. The QP would caution that currently there are no Mineral Reserves at El Cubo as they were consumed in the mining completed from 2017 through 2019.

TABLE 14.2EL CUBO MINERAL RESERVES AS OF 31 DECEMBER 2016								
<u>a</u> :e .:	T Silver			G	fold	Silver Eq		
Classification	Tonnes	g/t	OZ	g/t	OZ	g/t		
Proven	409,300	154	2,028,900	1.99	26,240	295		
Probable	452,700	159	2,311,100	1.71	24,850	280		
D 1 D 1 11	0(1.000	157	4.240.000	1.04	51.000	207		
Proven + Probable	861,900	157	4,340,000	1.84	51,090	287		

nts in this table are based on the 2016 1:75 gold:silver ratio.

The reader should note that this is the previous Mineral Reserve published in 2016 and there are no current Mineral 2. Reserves at El Cubo as of 2020.

#### 14.3 **CURRENT MINERAL RESOURCE ESTIMATE AT EL CUBO**

The QP estimated the current silver and gold resource at El Cubo by taking the 2016 Mineral Resource and Mineral Reserve estimates at El Cubo and eliminating the mined out material from each of the cross sections (see example of the cross sections in Figure 14.1) or block model; thus, subtracting the mine and mill production at the property since January 1, 2017. Table 14.3 shows the production at the El Cubo Mine during 2017 through 2019 as reported in Endeavour Silver's Form F-40 filled with the SEC. The author also reviewed El Cubo's monthly mine production reports for the period of January 2017 through the end of 2019. These reports totaled slightly less tonnage than the audited financial statement in Endeavour's SEC Form F-40 and therefore, the author chose to adjust the final estimate to conform with the data from Endeavour Silver's Form F-40.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup>Endeavour Silver, Form 40-F, 2019, Page 165 and Form 40-F, 2018, Page 150, Filed with the U.S. SEC.

	TABLE 14.3EL CUBO PRODUCTION BY YEAR						
Year	Tonnes	Ag g/t	Au g/t				
2017	511,836	136	1.55				
2018	520,784	176	1.87				
2019	245,418	155	1.54				
Total	1,278,038	156	1.68				

To estimate the remaining Mineral Resources as of 31 January 2021 at El Cubo property, the QP eliminated the known mine production and mined out veins from 2016 to 2019. The mine production records provided to the QP did not detail where all of the 2017 through 2019 production originated so, the QP eliminated the known production areas from either the VLP estimate or block models and then subtracted the remaining production reported from the SEC Form F-40 from the 2016 Mineral Resources to estimate the remaining Mineral Resources at El Cubo. This results in the QP's estimate of the current Mineral Resource at El Cubo, as shown in Table 14.4. The silver equivalent in Table 14.4 has been calculated using a conversion of 1 ounce of gold is equal to 80 ounces of silver. The conversion ratio of 80 was based solely on gold and silver prices using the average 5-year trailing price for gold of \$1,387 per ounce and for silver of \$17.36 per ounce ( $$1,387 \div $17.36 = 80$ ). As the historical recoveries from the El Cubo mill averaged 87% for silver and 86.5% for gold (see Section 17.0.) the differential of recoveries was not considered in developing the conversion factor.

TABLE 14.4Estimate of the Present El Cubo Mineral Resources as of 31 January 2021									
Cleasification	Towwoo	Silver Gold		Silver Gold		Silver Gold		Gold	Silver Eq
Classification	Tonnes	g/t	OZ	g/t	OZ	g/t			
Measured	None								
Indicated	508,055	194	3,169,000	2.44	39,860	389			
Inferred	1,453,000	214	10,004,000	2.78	129,900	435			
Notes:									

1. Silver Equivalent calculated using 1 ounce of gold is equal to 80 ounces of silver, on the basis of the average 5-year historic silver and gold prices of \$17.36 and \$1,387.

2. Numbers have been rounded.

3. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

The QP's estimate of 508,055 tonnes of Indicated Resources matches well with Endeavour's various 2019 and 2020 resource disclosures ranging from about 509,000 to 514,000 tonnes. The QP recognizes that Endeavour's most recently published resource estimates do not include the 1.4 million tonnes of Inferred Resources documented in the 2016 NI 43-101 El Cubo Technical Report. The author opines that the Inferred Resource of 1.45 million tonnes shown in Table 14.4 is a reasonable estimate of the remaining Inferred Resources at El Cubo.

There are no known or material pre-existing environmental conditions or liabilities at the El Cubo Project that could materially affect the potential development of the Mineral Resources. As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement by VanGold.

To the best of the QP's knowledge, information, and belief, there is no new material scientific or technical information that would make the disclosure of the mineral resources shown in of this preliminary economic assessment inaccurate or misleading.

# 14.4 EL PINGUICO RESOURCES

There are two stockpiles at El Pinguico that date back to 1913 when the mine shut down during the Mexican Revolution; a surface and an underground stockpile. In 2017, VanGold commissioned a review of the accuracy of these estimates and published an NI 43-101 of the estimate.<sup>7</sup> This report estimated tonnage and average grades of these stockpiles but did not classify the estimates as a Mineral Resource.<sup>8</sup>

# 14.4.1 Surface Stockpile

The surface stockpile has been sampled by digging 10 pits by excavator and sampling near the top and near the bottom of the pits. These were assayed using acceptable QA/QC procedures. The data for the surface stockpile was reviewed during the two-day site visit at the El Pinguico Project. The surface of the stockpile was visually inspected and found consistent with lower grade mineralization at the El Pinguico property. Detailed discussions were held about the topographic survey and sampling procedures. The mineralogy, style of mineralization, and approximate size of the stockpile were found to be consistent with the data provided. Based on visual inspection and the sampling location map reviewed for this report, these pits are scattered relatively evenly on the stockpile necessary for estimating potential grades.

Based upon the topographic survey and all the sampling data, VanGold estimates the surface stockpile to contain approximately 175,000 tonnes to 185,000 tonnes with a silver grade of 67 g/t and a gold grade of 0.45 g/t. The QP used the topographic survey of the stockpile and the sampling data to re-estimate the volume and average grade of the mineralization. With the acquisition of the El Cubo property, VanGold is planning to reclaim this material and transport it for processing at the El Cubo Mill.

The QP considers that this stockpile should be classified as an Indicated Mineral Resource based on the sample work.

# 14.4.2 Underground Stockpile

The underground stockpile at El Pinguico fills an old open stope area from Level 4 to Level 7 of El Pinguico ranging from 25 m to 100 m thick and occupying portions of the stoped out El Pinguico vein. At present, only the surface of the underground stockpile can be sampled. VanGold dug and sampled 20 shallow trenches some 0.5 m to 1 m deep (see Figure 9.5) in 2017. Part of the dump surface appears to have been contaminated by rock fall from the overlying waste rock adjacent to the Pinguico vein. The data for the underground stockpile was reviewed during the two-day site visit to the El Pinguico Project. The surface of the stockpile was visually inspected and found consistent with lower grade mineralization at the El Pinguico property. Detail discussions were held about the topographic survey and sampling procedures. The mineralogy, style of mineralization, and approximate size of the stockpile were found to be consistent with the data provided.

Based upon the sampling campaigns, VanGold estimated that the underground stockpile contains a silver grade of 167 g/t and a gold grade of 1.66 g/t. The sampling by VanGold in 2017 roughly confirms that their historic grade estimates are reasonable. Since only the upper 5 m of the stockpile has been sampled utilizing acceptable QA/QC procedures, the QP has less confidence in this material below the 2017 trenching. It is assumed that this stockpile is

<sup>&</sup>lt;sup>7</sup>NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017. Downloaded from SEDAR. <sup>8</sup>Ibid, page 4.

comprised of low-grade vein material from development drifts, but we caution that it could also include barren waste rock from development drifts. The QP has reviewed the sampling work in 2017 and is of the opinion that the underground stockpile contains potentially economic material in the upper portion, which has been sampled using modern QA/QC controls.

VanGold is planning to access Level 7 and sample the base of the stockpile via raises and draw points, which may increase the confidence in the entire stockpile grade. However, until that work is completed, the QP is of the opinion that only the top portion (upper 5 m) can be considered as Resources and would classify only 25,600 tonnes as an Indicated Mineral Resource at this time.

### 14.4.3 Current Mineral Resources at El Pinguico

TABLE 14.5EL PINGUICO MINERAL RESOURCES AS OF 31 JANUARY 2021								
Cleasification	Tannag	Silver		Gold		Silver Eq		
Classification	Tonnes	g/t	OZ	g/t	0Z	g/t		
Measured	0							
	•							
Indicated								
Surface Stockpile	185,000	67	398,500	0.45	2,680	103		
Underground Stockpile	25,600	166	136,600	1.67	1,375	300		
~ ·	•		• · · •					
Total	210,600	79	535,100	0.60	4,055	127		
Notes:	•	-	•			•		

The QP has estimated the remaining Mineral Resources in 2021 at El Pinguico as shown in Table 14.5.

2. Numbers have been rounded.

3. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

There are no known or material pre-existing environmental conditions or liabilities at the El Pinguico property that could materially affect the potential development of the Mineral Resources. As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement by VanGold.

To the best of the QP's knowledge, information, and belief, there is no new material scientific or technical information that would make the disclosure of the Mineral Resources shown in of this preliminary economic assessment inaccurate or misleading.

# 14.5 BASIS FOR REASONABLE PROSPECTS FOR ECONOMIC EXTRACTION

The estimated cost for reclaiming, transporting, and processing the surface stockpile material to the El Cubo mill is estimated in this report to be approximately \$33.04 per tonne (see Table 21.2). Assuming a silver price of \$19.49 per troy ounce (\$0.637 per gram) and a silver recovery of 85%, then the break-even cutoff for the mineralization is

estimated at 62 g/t silver equivalent.<sup>9</sup> The surface stockpile mineralization averages a silver grade of 103 g/t silver equivalent.

### 14.5.1 El Pinguico Underground Stockpile

The estimated cost for reclaiming, transporting, and processing the underground stockpile material to the El Cubo mill is estimated in this report to be approximately \$48.04 per tonne (see Table 21.2). Again, assuming a silver price of \$19.49 per troy ounce (\$0.637 per gram) and a silver recovery of 85%, the break-even cutoff for the mineralization is estimated at 89 g/t silver equivalent.<sup>10</sup> The underground Mineral Resource estimated for this report averages approximately 300 g/t silver equivalent.

### 14.5.2 El Cubo Underground

The estimated cost for mining, and processing mineralization at El Cubo is approximately \$92.96 per tonne including exploration and development costs (see Table 21.2). Assuming a silver price of \$19.49 per troy ounce (\$0.637 per gram) and a silver recovery of 85%, the break-even cutoff for the mineralization is estimated at 172 g/t silver equivalent.<sup>11</sup> The underground Mineral Resource estimated for this report averages approximately 300 g/t silver equivalent.

### 14.6 MINERAL RESOURCE RECOMMENDATIONS

Although Endeavour Silver and VanGold have significantly increased the drilling and sampling data at the properties since the 2016 database used for the Mineral Resource estimate, this drilling is primarily exploration drilling on parallel vein structures and it needs additional infill drilling to achieve a drill spacing adequate for an Inferred Mineral Resource estimate. The QP is of the opinion that targeted drilling should be completed to increase the Mineral Resource tonnage, classification, and mine life prior to Pre-feasibility and Feasibility studies.

 $<sup>^{9}</sup>$ \$33.04 ÷ (\$0.637 × 0.85) = 62 g/t of silver equivalent

 $<sup>^{10}</sup>$ \$48.04 ÷ (\$0.637 × 0.85) = 89 g/t of silver equivalent  $^{11}$ \$90.64÷ (\$0.637 × 0.85) =172 g/t of silver equivalent

# 15.0 MINERAL RESERVE ESTIMATE

Currently, there are no defined Mineral Reserves at either the El Cubo or El Pinguico properties. The QPs of this Preliminary Economic Analysis (PEA) would caution that the economic analysis presented later in this report is based on Mineral Resources which includes Inferred Mineral Resource that are considered too speculative geologically to have economic consideration applied to them and it is preliminary in nature. There is no certainty that the PEA will be realized, and that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

# 16.0 MINING

VanGold plans to operate the combined El Cubo and El Pinguico properties to provide feed to the El Cubo Mill. Material from the underground mine at El Cubo and both underground material and surface dump material at El Pinguico are planned to be processed. VanGold has provided a conceptual mine plan to further the exploitation of the combined properties.

At El Cubo, there are stopes where Endeavour Silver has drilled ore for blasting. These stopes require no development costs and are ready to be mined. There are other areas where stopes have been defined by Endeavour Silver but not developed. Following this, Inferred Resources have been identified for evaluation and development.

At El Pinguico, VanGold proposes to haul the surface stockpile and a portion of the underground stockpile to the concentrator at El Cubo for processing. Road access for the surface stockpile exists but will require some improvement. Access to the underground stockpile requires that the Level 7 adit be opened and a short road from the adit opening to the El Pinguico surface stockpile be constructed.

Mining method(s) proposed in this PEA are methods used throughout Mexico and are well understood in the Guanajuato area. Mechanized cut-and-fill stoping using small LHD (load-haul-dump) machines and handheld jackleg drills is the proposed method for the initial production from the underground operation. This method does allow for some degree of resuing to eliminate or minimize the amount of waste dilution and to provide fill for the stopes. Other methods, such as long hole stoping or stull stoping(tumbe sobre levante), may be considered in the future.

Development methods that would be proposed would be conventional drill-blast-muck using jumbos for drilling and LHDs and trucks for haulage. Ground support would be installed, as required.

Illegal miners, colloquially known as *Lupillos*, appear to have stolen electrical cables and piping throughout the El Cubo Mine. Further, there is evidence of illegal mining efforts in the Villalpando Dolores vein, as observed on the site visit on November 24, 2020. This issue has been resolved by the current owners with the addition of armed security personnel at the site.

This mining section of the PEA addresses El Cubo and El Pinguico, separately, as far as operations are concerned but combines the economics of the Project in the final analysis.

#### 16.1 EL CUBO

Planned production from El Cubo will initially occur from stopes that were shut down and require no pre-production development. Endeavour Silver reported that approximately 9,000 tonnes have been drilled and blasted and can be hauled to the mill provided access can be restored. Another 60,000 tonnes of material is ready for drill and blasting after some minor development. Some de-watering may be required.

Production would next occur in areas that have been drilled, sampled, and defined as Resources. These areas require decline ramps, ore drifts, and ventilation shafts. Approximately 150,000 tonnes are identified for development.

El Cubo was last in operation in 2019. Figure 16.1 is a plan view of the El Cubo property. Figure 16.1 shows the different entrances, surface haulage and underground haulage routes. When Endeavour operated the mine, the mine was divided up into different operating areas and each area maintained designated crews along with separate

infrastructure for access stoping, ventilation, and ore haulage.<sup>12</sup> Also shown are surface facilities, such as offices and the El Cubo (El Tajo) Mill.

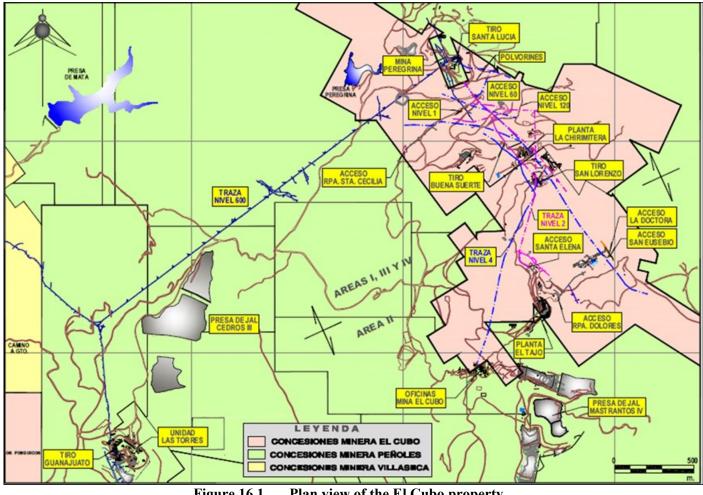


Figure 16.1. Plan view of the El Cubo property Source: Endeavour Silver Corp., November 2020.

# 16.2 EL PINGUICO

In the early 1900s when the El Pinguico Mine was in operation, it consisted of five vertical shafts and two horizontal adits. The shafts and adits are listed in Table 16.1 with their corresponding physical data information:

<sup>&</sup>lt;sup>12</sup>Donald E. Cameron, "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 August 2012, page 7.

TABLE 16.1SHAFTS AND ADITS					
Shaft Name	Depth (m)	Length (m)			
El Pinguico	283				
Humboldt	397				
Fortuna	303				
El Centro	200				
Carmencitas	61				
Adit	Level				
El Carmen	4	800			
Sangria	7	1,200			

Historically, El Pinguico consisted of 10 mining levels.<sup>13</sup> The levels are in various stages of decay but shafts, adits, and drifts developed in competent rhyolite are still intact. The hanging wall and foot wall that were developed along the vein structure, which are in competent rhyolite, are still intact (Figure 16.2 and Figure 16.3).



Figure 16.2. El Carmen Portal Level 4

<sup>&</sup>lt;sup>13</sup>Carlos Cham Domínguez, "NI 43-101 Technical Report for the El Pinguico Project, Guanajuato Mining District, Mexico," 28 February 2017, page 62.



Figure 16.3. El Pinguico shaft

There is material contained in an old shrinkage stope that may be available for extraction using draw points from Level 7. In this report, the material contained in the old stope is referred to as the underground stockpile. The outline of the stockpile is illustrated in Figure 16.4.

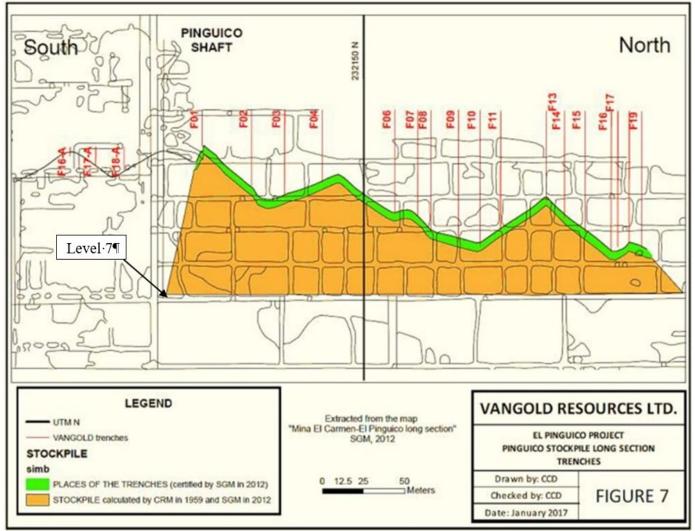


Figure 16.4. Long section of El Pinguico showing the underground stockpile surface above Level 7 Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

The underground stockpile is accessible for top-sampling via the El Pinguico shaft and the El Carmen adit on Level 4.

Stockpile draw points, once established, would make extraction possible by either the El Pinguico shaft or the Level 7 Sangria adit. Figure 16.5 shows the upper portion of the underground stockpile.



Figure 16.5. Surface of the underground stockpile at Level 4

On the surface, a stockpile contains approximately 185,000 tonnes of material with a silver grade of 67 g/t and a gold grade of 0.45 g/t.<sup>14</sup> This stockpile can be loaded into trucks and hauled directly to the El Cubo Mill (Figure 16.6).

<sup>&</sup>lt;sup>14</sup>Behre Dolbear, "El Cubo Desktop Review – Phase 1," 22 October 2020, page 1.



Figure 16.6. El Pinguico surface stockpile

Mining methods for extraction of in situ material that may remain in the mine in the form of mineable pillars and resources that may be identified from exploration drilling along the known vein system have not been defined. However, any newly identified Mineral Resources would likely be mined using the same methods employed at El Cubo.

# **16.3 MINING INFRASTRUCTURE**

## 16.3.1 El Cubo

Existing mining infrastructure at El Cubo consists of electrical connection to the grid, surface buildings for offices, shops and warehousing, haulage levels, and shafts. The shafts are not planned for hoisting in the re-start of El Cubo but will be used as routes for piping, ventilation, and electrical cables. All haulage from the mine is planned for the Santa Cecilia and Dolores declines, using trackless equipment.

## 16.3.1.1 Haulage

Prior to 2014, ore was hauled for toll-milling at the nearby Las Torres plant. Ore from Areas 1, 2, and 3 was hauled by truck. Area 4 ore was hoisted through the Guanajuato shaft.<sup>15</sup>

<sup>&</sup>lt;sup>15</sup>Donald E. Cameron, "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 Aug 2012, page 117.

Since 2014, ore has been hauled to EL Cubo's El Tajo plant via the Santa Cecelia and Dolores declines. Haul distance from underground orebodies to the plant were reported by Endeavour Silver to be:

- Level 12 to Level 8 crusher up to 2.5 km
- Level 8 crusher to El Cubo plant 8 km
- (Ore from Santa Cecelia's Level 8 primary jaw crusher was fed directly to the plant's secondary cone crusher.)

Waste rock generated in development was used in the cut-and-fill stoping areas. Excess waste was used to backfill empty open stopes to avoid haulage to the surface, provide stability for old openings, and to conserve surface area.

Haulage will initially be carried out with trackless equipment. Rail haulage from Santa Cecelia may be used in later stages of the operation should mine life projections warrant (Figure 16.7).



Figure 16.7. Delores portal

# 16.3.1.2 De-watering

The upper levels of El Cubo are dry. Water inflows are a factor only in the lowest development levels. In Area 4, water was collected and distributed to supplement mine and plant requirements. Approximately 80% of the water was used by the plant and mine, with excess going to the nearby Fresnillo plant. Fresillo, in return, allowed El Cubo the use of a ventilation raise on their property for exhaust air flow.

In 2012, the lowest developed level of Area 2, Level 9 of the Villalpando vein, was de-watered to gain access.<sup>16</sup> During the site visit, the water level was observed at Level 21.

The El Cubo underground workings produce approximately 8 liters per second of water. An existing pump station at Level 7 will require pumps capable of providing 200 m of head. Auxiliary pumps will be used to de-water the active work faces.

## 16.3.1.3 Utilities

Most vertical services, including compressed air, water and de-water lines, and electrical cables were installed in raises. Most of these cables and pipes have been pilfered by *Lupillos* and will need to be replaced in areas that are planned for future development and production.

Compressed air requirements will be approximately 1,200 cubic feet per minute. Approximately 2 km of distribution piping will be required and installed prior to production in the Villalpando's Level 7.

It is anticipated that 1,800 kilowatts of power will be required for the initial 12 months production that would include three compressors, two primary fans, six secondary fans and other pumps and miscellaneous equipment.

## 16.3.1.4 Ventilation

The ventilation system at EL Cubo has been a combination of natural and forced, with flow rates and directions influenced by the season. The system was operational when the El Cubo Mine was idled in November 2019.

Primary fans will be reinstalled to service the discrete working areas proposed in the mining sequence rather than reestablish a whole-mine ventilation. Bulkheads, vent doors, and secondary fans will be constructed underground to direct air as needed and non-ventilated areas isolated to prevent access.

## 16.3.1.5 Explosives Storage

Explosive materials will be stored in secure facilities consisting of separate magazines for the storage of detonators and explosives. These facilities, located on Level 7, will follow Mexican statutes for the storage of explosives and detonators.

## 16.3.1.6 Maintenance and Materials

Maintenance functions for the repair of the mining equipment will be performed at a maintenance facility located on site. This facility will have the capability of performing normal service routines as well as repairs to all operating equipment, including drills, jumbos, LHDs, trucks, and other equipment used in the mining operation.

A facility for the warehousing and distribution of materials for equipment repairs and operations supplies is maintained at the site. With adequate sources of mining supplies nearby and readily available, the warehouse inventories are expected to be kept at low levels. A large underground maintenance facility, complete with concrete lined service pits, is located on the 7-Level.

<sup>&</sup>lt;sup>16</sup>Donald E. Cameron; "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 August 2012, page 7.

## 16.3.2 Security

Currently, 30 armed security guards prevent illegal activities in the mine. This level of security would be maintained during planned future operations.

#### 16.3.3 El Pinguico

#### 16.3.3.1 Haulage

Ore from the underground stockpile would be hauled along the Level 7 adit that ends at the La Sangria portal.

#### 16.3.3.2 Ventilation

The steep topography and multiple historic adits, shafts, and raises create adequate natural ventilation for the exploration and initial underground infrastructure installation. Ultimately, the primary ventilation circuit will have fresh air drawn in from El Carmen and Sangria adits and exhausted through the El Pinguico shaft.

#### 16.3.3.3 Mine De-watering

All accessible areas of the mine are dry, with no de-watering required in the near term. Information provided indicates the water table to be below the Level 7.

## **16.4 PROPOSED DEVELOPMENT**

#### 16.4.1 El Cubo

Villalpando within Delores South contains approximately 60,000 tonnes of material developed and ready for mining.

Recommendations for development include efforts to concentrate working places to areas with close proximity to one another. This will reduce tramming time between distant headings with Dolores first followed by Santa Cecelia.

It is anticipated that 300 m per month of decline and crosscut waste development will be a required mine-wide to ensure continuous production of 11,000 tonnes per month over the life of mine (assuming 300 tonnes per vertical meter of ore).

Similar mines in the Guanajuato and surrounding districts have recorded these rates of advance:<sup>17</sup>

- Access Drifts  $-3 \times 3$  m
  - Jumbo 5.0 m/day
  - Jackleg 3.5 m/day
- Attack Ramps  $-2.5 \times 2.5$  m
  - Jumbo 4.5 m/day
  - Jackleg 3.0 m/day
  - Stope Raises  $-1.5 \times 1.5$  m
- Jackleg 5.0 m/day

<sup>&</sup>lt;sup>17</sup>Behre Dolbear; "El Cubo Desktop Review – Phase 1," 22 October 2020, page 15.

Historical excavation dimensions of the various development sections, which were also used in this evaluation, are as follows:<sup>18</sup>

- Main Declines ......4.3 wide × 4 m high at 13% gradient
- Ore Drifts......2.5 wide × 2.5 m high (if wider width of structure)
- Ladder Raises ..... $1.5 \times 1.5 \text{ m}$
- Raise Bore Raises.....1.8 m diameter

The ore drifts were sized to accommodate 1.5 m wide LHDs.

Since 2104, ore has been hauled to the EL Cubo Mill via the Santa Cecelia and Dolores declines. Endeavour Silver stated that the haul distance from orebodies to the plant were:

- From Level 12 to the Level 8 Primary Crusher Up to 2.5 km
- From the Level 8 Primary Crusher to the El Cubo Mill 8 km

## 16.4.2 Initial El Cubo Operations

Development work will commence in the defined areas where mining was halted in December 2019. Table 16.2 summarizes the development required to bring these identified veins into production, which would provide an estimated 136,000 tonnes of ore in the first two years of operation. As noted previously, this is in addition to the 60,000 tonnes from Villalpando within Dolores South, where the development work has already been completed.

TABLE 16.2         Remaining Waste Development										
	Development (meters)									
	Decline	Vertical	Horizontal							
Villalpando within Dolores South	0	0	0							
Villalpando Level 14	0	150	56							
El Niño Lode Level 9	9	30	75							
San Nicolas Level 8	0	0	80							
Villalpando Lode Level 3		Mined Out								
San Francisco Level 6	203	50	71							
Dolores Lode		Mined Out								
Decline 2250, Villalpando Upper	110	70	80							
Decline 2250 Negative, Lower		Mined Out								
Villalpando Upper Lode Level 12-11	0	60	100							
Decline Fault Cube Lode	0	460	750							
Total	313	820	1,212							

These Resources are spread across the five different work areas of the mine and require additional planning in order to extract them in a timely and efficient manner.

<sup>&</sup>lt;sup>18</sup>Donald E. Cameron; "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 August 2012, page 111.

# 16.4.2.1 El Pinguico

Extraction of the underground stockpile material would be by truck via the Sangria adit. The El Pinguico shaft would not be used for hoisting but solely for utilities and ventilation and possibly secondary egress.

The Sangria adit will require rehabilitation and re-installation of rail track or, alternatively, widening for rubber-tired haul trucks.

To extract the material between the existing widely spaced draw points of the underground stockpile significant work would be required including:

- The addition of approximately 35 additional draw points over the length of the area;
- Sub-level modification and rehabilitation; and
- Addition of crosscuts for draw point access.

The surface road connecting the Sangria portal to the El Pinguico shaft would need to be constructed.

## 16.5 MINING METHODS

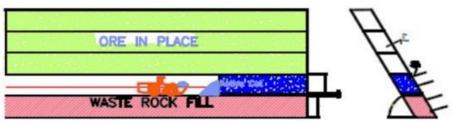
Approximately 80% of the stoping at El Cubo has been jackleg and LHD cut-and-fill or resue mining techniques, with a small amount of long hole open-stoping.

For lodes (veins) narrower than the ore drift, Resue stoping was used, whereby 2-m holes were drilled over a 12 m blasting block (see Appendix 2.0). The production cycle started after geologists marked up the lode then the stope was drilled in ore and blasted accordingly. After the ore had been mucked, the waste was drilled and blasted to achieve the dimensions required for the LHD to work in the next production lift.

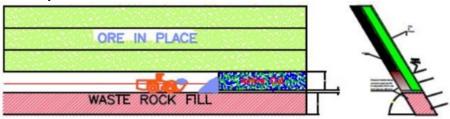
Basic production stoping steps include:

- 1) Grade control technician identifies the bounds of the mining face, marks the limits, and advances the demarcation line to the face;
- 2) Miners drill round within the confines of the area marked;
- 3) Drilled blastholes in the ore are blasted;
- 4) Ore is removed;
- 5) Waste blast holes are loaded and blasted; and
- 6) Broken waste is leveled off for use as the working floor and the process is repeated.

Shown below is the basic concept for overhand cut-and-fill and resue stoping methods (Figure 16.8 and Figure 16.9). Sketches for the resue mining sequence are shown in Appendix 2.0.



Overhand cut-and-fill with wider vein widths. Recommended for vein widths at or wider than the mucking equipment. Small jumbos may be used in this scenario for increased efficiency.



Overhand cut-and-fill using resue techniques to separate waste and ore in the stope. Allows for dilution control but is inefficient in that two drill/blast cycles are required for a unit of ore production. Recommended for higher grades where vein width is less than the equipment width.



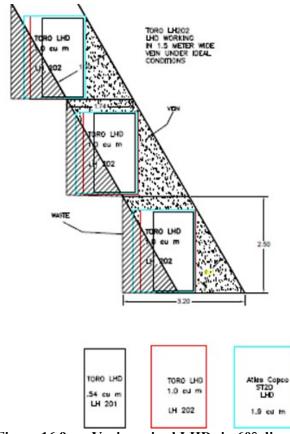


Figure 16.9. Various sized LHDs in 60° dip vein

Historically, there was a minimum block model width of 0.8 m. When mining narrower veins, such as 0.3 m, the dilution was proportionally increased and mining was deemed unprofitable.

Where the lode (vein) was as wide as the ore drift, the backs were blasted full-width and cut-and-fill stoping was used. Internal dilution of 24% against block model was assumed for this method. Ore was mined upward in horizontal slices and the void was filled with waste. El Cubo used unconsolidated mine waste from development headings as stope backfill.

Under certain circumstances, concrete was used as fill to create a solid floor. This enabled mining from the stope below up to the concrete pillar to recover most of the ore pillar that would otherwise be left behind. This process was usually reserved for high-grade floor pillars.

Historically, a small amount of native silver had been encountered in the upper levels of the mine where supergene enrichment had occurred. To prevent loss of such high-grade ore, it is recommended that the coarse backfill be capped with sand prior to blasting the next lift.

Where larger and less variable more continuous blocks were modeled, 2-inch diameter long hole open stope up-holes were drilled 10-m to 15-m in 30-m mining blocks. As the stope retreated, a void resulted that could only be filled by mill tailings that were piped into the stope. Ore was extracted using remote-controlled LHDs.<sup>19</sup> A few stopes were mined by drilling 15-m down holes. The empty stope was filled with waste from above, which then allowed for the next panels to be mined with the ore falling over the backfill. The ore drift for the now-filled stope became the extraction level for the next stope as mining advanced upward. An internal dilution of 36% was assumed for this method.

On November 24, 2020, during the site visit, material was observed that was thought to be ore left on the ground in the 21-715 cut-and-fill stope and at the bottom of a definition-mapping ladder-raise. The stope had topped out at its upper progressive ramp. FTES 2-775 level had a backfilled LHOS and a resue stope. The progressive ramp crosscut was at a downward grade and contained an ore pass to one side. The 1850 Level had a cut-and-fill stope with both ascending and descending ramps. The 13-10 wide lode stope, accessed by a positive grade ramp, was ready to drill (Figure 16.10).

<sup>&</sup>lt;sup>19</sup>Donald E. Cameron, "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 August 2012, page 112.

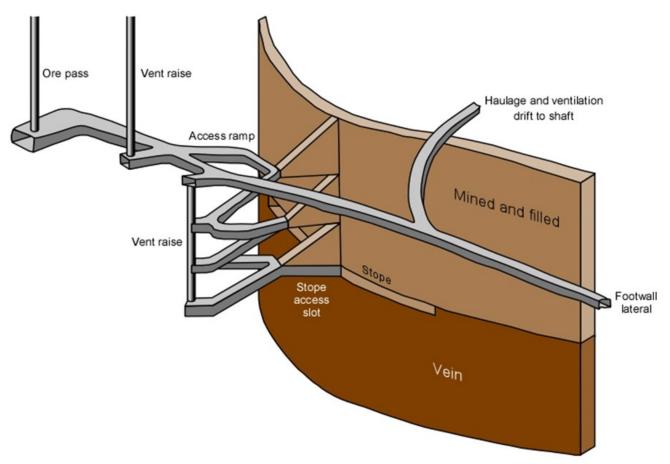
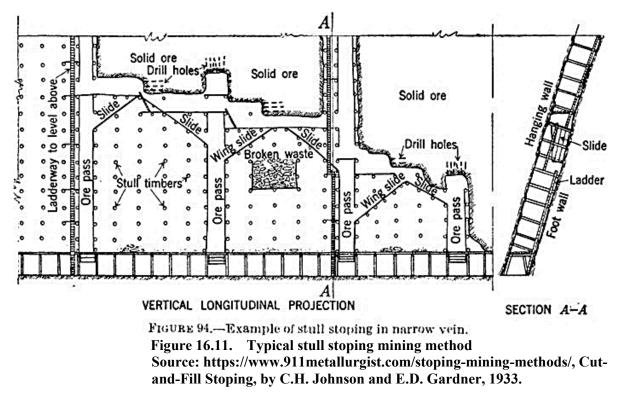


Figure 16.10. Generic overhand cut-and-fill mining showing progressive crosscuts

Mechanized cut-and-fill stoping with some resuing is planned for future production. Long hole open stoping will be considered, if significant wide-vein blocks are identified to justify the equipment capital cost and specialized workflow.

Highly selective stull stoping may be considered in the future to exploit narrow, high-grade veins in certain areas. While highly selective with resulting higher grades, productivity is very low, and cost are significantly more than mechanized cut-and-fill. Figure 16.11<sup>20</sup> shows a typical stull stoping mining method.

<sup>&</sup>lt;sup>20</sup>https://www.911metallurgist.com/stoping-mining-methods/



As with any mining method considered, a productivity element is always present. For example, if a method such as mechanized cut-and-fill is used and a productivity rate of 10 tonnes per miner shift is assumed, a stull stoping method with a high degree of selectivity may yield a higher-grade product. The productivity, however, may be reduced to somewhere around 2 tonnes per miner shift. The dilemma is the ability to provide feed to the concentrator. To provide 350 tonnes per day of plant feed with a mine working 2 shifts per day would require 8.75 working stopes with 2 miners per shift using mechanized cut-and-fill techniques. In a highly selective situation, that same 350 tonnes per day of plant feed would require 43.75 working stopes. To be clear, this is a dramatic example, but it illustrates how a balanced approach to the mining methods is required to fulfill the envisioned concentrator feed requirements. In all likelihood, a combinations of mining methods and variations of each will be used.

It is proposed to commence production by continuing the fill cycle of visually verified half-mined 21-715 and 1850 cutand-fill stopes. As the nearby Dolores-Villalpando, San Eusebio, and La Loca areas become available, they will come into production before more distant stopes are mined.

Long hole open stoping is not recommended at this phase unless a number of consistently wide vein blocks are identified, to justify the capital equipment cost, and additional costs associated with introducing an additional mining method.

## 16.6 GROUND SUPPORT AT EL CUBO

Existing El Cubo openings indicate competent rock exists in most places. Above Level 12 development is in a rhyolite rock type with little ground support installed. Below Level 12 is a red conglomerate<sup>21</sup> with occasional split set ground support fixtures installed, as required. No mesh, mats, or shotcrete was observed below Level 12.

<sup>&</sup>lt;sup>21</sup>Monday, November 23, 2020, Mill presentation.

Cable bolting was used during the preparation of stopes for long hole blasting.<sup>22</sup>

Proposed ground support methods will likely follow similar methods to those used in the past, however; with little or no long hole stoping proposed, the requirement for cable bolting may not be necessary.

## **16.7 PRODUCTION AND DEVELOPMENT QUANTITIES**

#### 16.7.1 El Pinguico

Surface stockpile material appears to be sized adequately for loading into haul trucks without further size reduction.

It is anticipated that the historically dry underground stockpile material will flow freely though draw points, as described in Section 16.2.

## 16.7.2 El Cubo

Currently, 60,000 tonnes of material is prepped for extraction, with 9,000 tonnes of that tonnage blasted but not mucked.<sup>23</sup> The long section and plan below details the location of what has been mined and the remaining material in the Villalpando Level 12 mine area. When calculating cutoff grade, the former mine operator assumed an extraction cost of \$97.79/t.<sup>24</sup>

#### 16.7.3 Combined Production Schedule

Table 16.3 provides an estimate of the tonnes, grade, development mining, and drift on vein that would be completed in the first 36 months of operation. In summary, Table 16.3 shows the areas that would be mined to supply the El Cubo Mill with an average of 750 tonnes per day.

At El Pinguico, Mineral Resources would be mined at a rate that would vary between 12,000 and 18,000 tonnes per month.

At El Cubo, Mineral Resources would come from nine areas where mining would take place with three to five areas active at any one time. Tonnage would vary from 4,500 tonnes per month to 10,500 tonnes per month. After Month 20, El Cubo would supply 22,500 tonnes per month from Inferred Resources that converted to ore.

<sup>&</sup>lt;sup>22</sup>Donald E. Cameron, "Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine," 30 August 2012; page 7.

<sup>&</sup>lt;sup>23</sup>Gerardo, November 24, 2020, debrief.

<sup>&</sup>lt;sup>24</sup>Tuesday, November 24, 2020, presentation.

	COMBINED PRODUCTION SCHEDULE																																						
	Develop	a Ore			Month			Month	Month								Month	Month	Month	Month	Month	Month	Month Mon	th Mont	th Mo	onth Month	Month	Month	Month	Month									Month
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EL PINGUICO																																							
Surface Stockpile	40.00	-			2.000	2,000																		_															
Road to El Cubo Mill Stoping	10,000	185,00	0 67	0.45	2,500	2,500	2,500	2,500	7,500	12,000	18,000	15,000	12,000	12,000	12,000	12,000	12,000	12,000	- 12,000	12,000	12,000	12,000	12,000	500	-						-	-	-			-	-	-	-
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Undergro un d Stockpile																																							
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Parallel Drift Croscu S	35	0								350	30		-						-																				
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Aug	<u> </u>		_							12.000		10.000	12.000	12.000	12.000	12.000	43.433	12.000	12.000	12.000	12.000	751			3,267			· ·			-	-		· ·					
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Gold g/t				0.59 N/9				N/A	0.45																1.66 N/A														4/A
EL CUBO		1																																					
Villalpando within DoloresS	South	-																																					
Stoping	-	32,00	0 209	2.03	-		-	-	-	-		-	-		1,821	10,500	10,500	6,261	1,375	188	1,215	140		-	-		-		-	-	-	-	-	-	-		-	-	-
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			157	N/9	A	N/A	N/A			N/A	215	194	133	223	221	209	209	184	144	122	136	152	145	145	140	140 14	140	140	140	140	140	140	140		140		140	139	139
Silver g/t Gold g/t				1.64 N/8		N/A	T MUR	N/A	I MURN	N/A	1.79	1.59	1.04				2.03		1.20		1.67	1.89	2.38			1.93 1.9		1 4.00	4.00			1.93						1.80	1.80

TABLE 16.3COMBINED PRODUCTION SCHEDULE

# **BEHRE DOLBEAR**

# 16.8 EQUIPMENT

Very small underground LHDs, less than 1 cubic meter (m<sup>3</sup>) capacity for in-stope mining, would be used at El Cubo to avoid undue dilution in the cut-and-fill and resue methods.<sup>25</sup> Development equipment would consist of larger LHDs for mucking the development headings. These 4.5 m<sup>3</sup> LHDs will be integrated with 10 tonne capacity trucks for the removal of development waste.

A list of recommended fleet, machinery, and underground infrastructure is shown in Table 16.4.

TABLE 16.4 El Cubo – Recommended Fleet, Machinery, and Underground Infrastructure									
	Capacity	Quantity							
Surface Mobile Fleet									
Surface Truck	$7 \text{ m}^3$	1							
Fork Tractor		1							
Vehicle		5							
Surface Fixed Plant									
Compressor	300 hp	3							
Primary Fan		2							
Underground Mobile Fleet									
Scoop Tram	1.5 m <sup>3</sup>	7							
Scoop Tram	$4.5 \text{ m}^3$	2							
Underground Truck	10.0 tonne	4							
Tractor		2							
ATV		2							
Jumbo		1							
Underground Fixed Plant									
Sub-station		1							
Secondary Fan		6							
Fixed Pump		2							
Portable Pump		3							
Workshop		3							
4" Air/Water Pipe (m)		2,600							
2" Air/Water Pipe (m)		4,000							
Cable (m)		5,850							
Crusher		1							
Fan		10							
Jackleg		20							
Slusher		5							

<sup>&</sup>lt;sup>25</sup>Behre Dolbear, "El Cubo Desktop Review – Phase 1," 22 October 2020, page14.

## 16.8.1 El Pinguico

At El Pinguico, the development to the underground stockpile, stockpile reclaim, and hauling would be done by contractors. Equipment required would be limited to the infrastructure to support the contractor and would include surface compressors, fans, and sub-stations.

## 16.8.2 El Cubo

The equipment estimated for El Cubo that would be sufficient for mining the grade and tonnes at a rate of 350 tonnes per day is shown in Table 16.4. When production is increased to 750 tonnes a day from the mine in the second year of production, the equipment count will increase accordingly.

Table 16.4 shows the estimated number of equipment items required for the El Cubo Mill for the first year of operation.

#### 16.9 STAFFING

The staffing for the first year of operation, at 350 tonnes per day, is shown in Table 16.5. The staffing numbers are based on the previous mine operation.

TABLE 16.5EL CUBO STAFFING – FIRST YEAR OF OPERATION								
Personnel	Quantity							
Non-Union	39							
Union	141							
Personnel Transport	4							
Construction	7							
Security	23							
Haulage	11							
Mining	34							
Development	9							
Total	268							

As the mining rate from El Cubo increases in the second year of operation, the number of employees in the mine would also increase, accordingly.

# **17.0 RECOVERY METHODS**

The El Cubo Mill was constructed as a conventional crushing, grinding, and flotation plant. The plant includes twostage crushing, ball mill grinding, reagent storage, flotation, flotation concentrate filtration for product shipment, and tailings disposal.

Historical recoveries from the El Cubo Mine for ore processed through this mill averaged 87% for silver and 86.5% for gold.

A 1,000-tonne bulk sample that was taken from the stockpile located above ground at the El Pinguico shaft and processed through a neighboring mill of approximately the same configuration averaged 60% for silver and 75% for gold.

The mill will be operated at 750 tonnes per day to produce approximately 12 tonnes of gold/silver concentrate. The rate of 750 tonnes per day will be achieved by a combination of feed from the El Cubo Mines and the El Pinguico stockpiles.

## **17.1 PROCESSING METHODS**

Precious metals bearing ore will be treated using conventional methods. Processing will consist of crushing, grinding, flotation, concentrate filtration, and tailings disposal.

Water supply for the El Cubo Mill will be from the existing underground workings, which currently make sufficient water for the plant requirements.

Power supply for the El Cubo Mill will be from an existing 13 kV overhead transmission line.

## **17.2 FLOW SHEET**

The El Cubo Mill will be operated at 750 tonnes per day to produce approximately 12 tonnes of gold-silver concentrate. The rate of 750 tonnes per day will be achieved by a combination of feed from the El Pinguico above ground and underground stockpiles and from the El Cubo underground mine.

The El Cubo Mill was recently operated at 1,500 tonnes per day of ore to produce approximately 25 tonnes of goldsilver concentrate. Due to restrictions in the mine, mill feed was curtailed to approximately 700 tonnes per day at the end of 2019.

Rail cars from the El Cubo underground mine will discharge primary crushed ore into a 650-tonne rail dump storage hopper at a rate of 30 tonnes in 10 minutes. The rail cars may discharge along the entire length of the rail dump storage-hopper.

Trucks will haul ore from El Pinguico and place material in a storage area that can contain up to 3,000 tonnes. Ore trucks from El Cubo will also place material in the same storage area. Ore will be reclaimed from the storage area using a front-end loader and fed to a primary crusher grizzly, which in turn feeds a primary crusher.

Ore will be fed to a grizzly feeder/primary jaw crusher using front-end loader at the rate of 40 tonnes per hour. Crusher product will fall onto a conveyor that transports the material to the rail car dump hopper. Crusher product discharges into the rail car dump hopper at a single point. This limits the storage bin storage capacity if only the primary crusher is operated as a source of crushed ore feed.

Primary crushed ore will be discharged from the rail dump hopper via a series of clam shell feeders onto a series of belts that will carry the material to a vibrating screen. Screen oversize will be fed to a secondary cone crusher. Screen undersize, minus 5/8 inches, will be discharged onto the vibrating screen product conveyor. Secondary crusher product will also be discharged onto the vibrating screen product conveyor and the combined stream will be conveyed to a 650 tonne mill storage feed bin.

The minus 5/8-inch material will be reclaimed from the 650 tonne mill storage feed bin with a slot feeder and fed to a single stage ball mill at the rate of 37.5 tonnes per hour.

The 12 foot diameter  $\times$  14 foot EGL ball mill will operate in closed circuit with hydro-cyclones and will grind the material to a 200 mesh (75  $\mu$ m) product size.

Cyclone overflow will flow, by gravity, to a conditioning tank where flotation reagents will be added.

Conditioned slurry will be fed to a 5-stage 30 m<sup>3</sup> tank cell rougher flotation circuit. Rougher flotation product will advance to a two stage cleaner circuit. Rougher flotation tails will discharge to a tailings thickener circuit.

The first stage cleaner circuit consists of a 4-stage 50 ft<sup>3</sup> Denver flotation cells. First stage cleaner concentrate will advance to the second cleaner circuit, which consists of a 2-stage 50 ft<sup>3</sup> Denver flotation cells. Concentrate from the second cleaner circuit will be pumped to an 8-m diameter high rate thickener.

Concentrate thickener underflow, at approximately 55% solids, will be pumped into a 1.5 m  $\times$  1.5 m Diemme plate and frame filter press for de-watering. The filter press has 3.4 m<sup>3</sup> of filtration volume ore, or approximately 6 to 8 tonnes of concentrate. Filtered concentrate will be dumped from the filter press to the cement floor directly below. Filtered concentrate will then be reclaimed from the floor with a front-end loader and loaded into trucks for shipment to a refinery. Flotation concentrate will be filtered for shipment at a rate of approximately 12 tonnes per day.

Tailings from the rougher flotation circuit will be pumped to a 21 m diameter high rate Outotec thickener. Tailings will be thickened to approximately 55% solids and pumped to a conventional tailing pond for final disposal.

# **17.3 PLANT DESIGN AND EQUIPMENT CHARACTERISTICS**

The plant design is based on a plant throughput rate of 750 tonnes per day or 34 tonnes per hour. Considering mine availability and plant maintenance downtime, the annual rate is estimated to be 273,750 tonnes per year.

El Cubo is located at an elevation of approximately 2,200 m above sea level, which was considered in the equipment and motor design.

The crusher and screening circuits will be designed to run at approximately 100 tonnes per hour until the fine ore bin that feeds the ball mill is full, then shuts down.

Table 17.1 and Table 17.2 show the key process design criteria and major process equipment for the crushing, grinding, flotation, and filtration operations for the plant.

Figure 17.1 shows the simplified El Cubo Mill flow sheet.

<b>TABLE 17.1</b>									
KEY PROCESS DESIGN CRITERIA									
Process Area	Units	Description							
Plant Capacity									
	t/y	273,750							
	t/d	750							
Mineral Characteristic									
Bulk Density	kg/m <sup>3</sup>	1,800							
Specific Gravity	kg/m <sup>3</sup>	2.8							
Moisture Content	<u>%</u>	2.0							
	70	/							
Crushing									
ROM Size	meters	0.75							
Product Size	microns	14,000							
Grinding									
Bond Work Index (BWi)	kWh/t	16-21							
Ball Mill Feed (F80)	microns	16,000							
Product Size (P80)	microns	74							
Flotation									
Slurry Density	%	33							
Rougher Cells Retention Time	minutes	40							
1 <sup>st</sup> Cleaner Retention Time	minutes	21							
2 <sup>nd</sup> Cleaner Time	minutes	17.5							
pН		7.2							

	TABLE	2 17.2							
MAJOR EQUIPMENT LIST									
Process Area Quantity Description									
Crushing									
Primary Jaw Crusher	1	$30$ inches $\times$ 42 inches	150						
Secondary Crusher Feed Screen	1	$6 \text{ ft} \times 16 \text{ ft} (\text{double deck})$	30						
Secondary Cone Crusher	1	4.25 ft	150						
Fine Ore Bin	1	650 tonnes							
Grinding									
Ball Mill	1	12 ft diameter × 14 ft EGL	1,250						
Cyclones	2	10 inches							
Flotation									
Rougher Circuit	5	30 m <sup>3</sup> Outotec Tank Cells	60						
1 <sup>st</sup> Cleaners	4	50 ft <sup>3</sup> Denver	20						
2 <sup>nd</sup> Cleaners	2	50 ft <sup>3</sup> Denver	20						
Blowers	2		100						
Filtration									
Concentrate Filter	1	1,500 mm × 1,500 mm (39 chambers)	205						

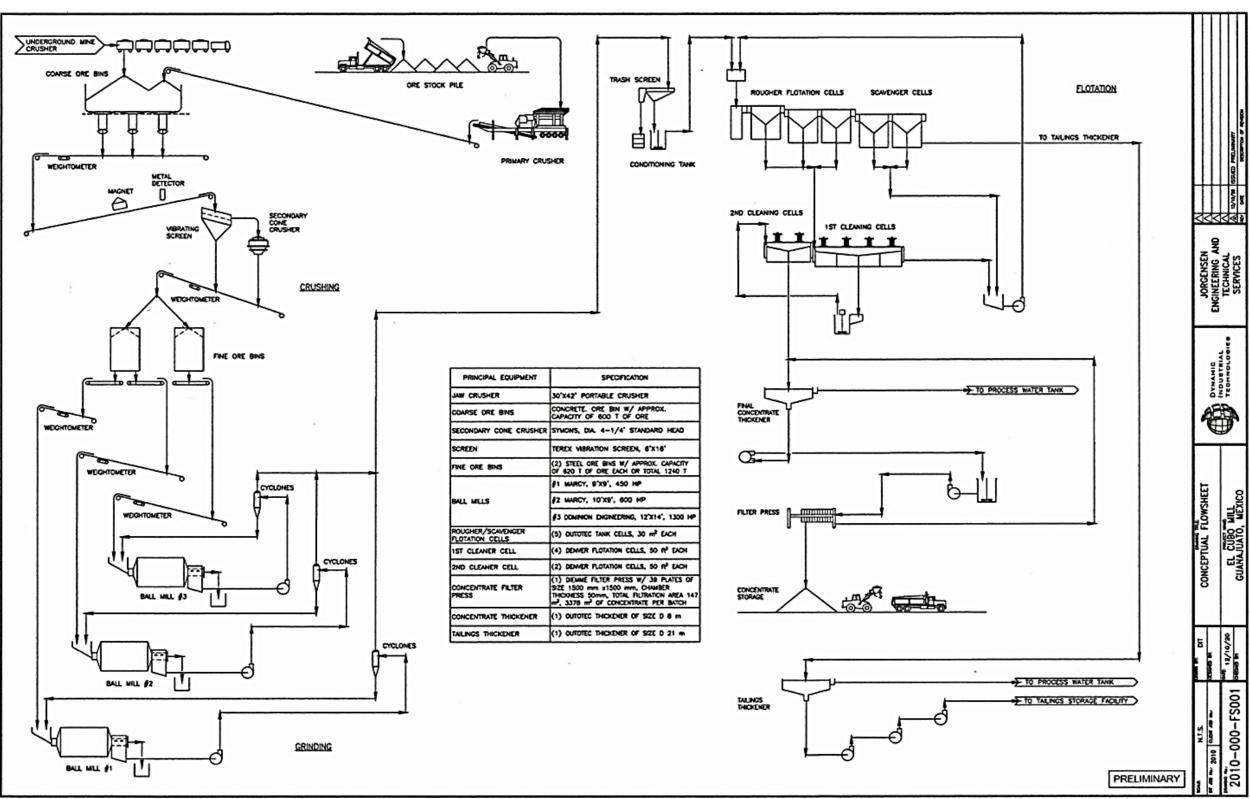


Figure 17.1. El Cubo simplified process flow diagram

# 17.3.1 Plant Ramp-up to 750 Tonnes per Day

Initially, the ore from the El Pinguico stockpiles and El Cubo may be limited. Mining rates have tentatively been set at 250 tonnes per day for initial operation and would ramp up to 750 tonnes per day during the first year of operation.

The El Cubo Mill has a minimum rate that it must be operated at to keep tanks and lines clear and operational. Previous operational experience indicated that the 12 foot diameter × 14 foot EGL ball mill and flotation circuit required a feed rate of 30 tonnes per hour or approximately 670 tonnes per day. Hence, the plant would likely campaign ore through the crushing and milling circuit once sufficient ore has been stockpiled by the mine.

The crushing circuit is designed to process 100 tonnes per hour, which requires that the plant only be operated approximately 8 hours per day to provide the required tonnage to fill the ball mill feed bin for several days of operation at the initial feed rate of 250 tonnes per day. Likewise, the plant would only need to operate approximately 8 hours per day at 30 tonnes per hour to process the initial feed rate of 250 tonnes per day.

## **18.0 PROJECT INFRASTRUCTURE**

The El Cubo Mine was shut down in November 2019 with all the infrastructure intact. Roads, power supply, water supply, buildings, and tailings facilities are still in place. Underground electrical equipment was missing and was identified as one of the few infrastructure items that would need to be replaced.

El Pinguico has not operated since 1913 and infrastructure, such as roads, power supply, water supply, and buildings will need to be constructed.

## 18.1 ROADS

#### 18.1.1 El Cubo

The access road from Guanajuato to El Cubo follows an unpaved public road. The road is poorly maintained and in need of an upgrade. As an example, intermittent stream crossings are not serviced by culverts. The road has a maximum speed of 25 km per hour. The road was used for a number of years by Endeavour Silver and was deemed to be adequate.

#### 18.1.2 El Pinguico

The access road from Guanajuato to El Pinguico shares the same route as El Cubo for the first 5 km then branches off near the village of Calderones to the mine. The portion of the road around the village of Calderones, approximately 3 km, will need to be constructed to accommodate ore truck haulage to the El Cubo Mill.

#### **18.2 OFFICES AND BUILDINGS**

#### 18.2.1 El Cubo

The main office for El Cubo is located inside the mine site located at the Dolores Mine. There are a number of buildings at this site and all are connected to power and water. A second office site and company warehouse, La Hacienda, is located near the village of El Cubo, which has connected power but a questionable water supply. There is a third site adjacent to the Santa Cecelia Mine that has a maintenance shop and additional office building.

#### 18.2.2 El Pinguico

There are no buildings at the El Pinguico site. Only temporary facilities to support the surface and stockpile mining is planned at this time, pending development of the mine.

## **18.3 EL CUBO MILL**

The El Cubo Mill was constructed in 2013 and has adequate office space for exploration, mine, mill, and administration personnel. Power and water is available. The buildings, drainage collection, and access are in reasonable condition.

There are warehouse storage facilities at the mill site for reagents and spare parts. Some critical spares, such as the mill pinion gears, are still located at the site.

There is a building that was used as a machine shop.

The mill facilities and equipment will need to be serviced and repaired. Some equipment has been removed. However, all major pieces of equipment are in place and serviceable. The PLC control system has been removed and reportedly relocated to a local warehouse.

A third-party vendor was contacted for an estimate of time and materials to replace the missing equipment, service the equipment in place, re-install missing electrical components, and re-line the mills and pumps, as required.

## 18.4 WATER

#### 18.4.1 El Cubo

Water is pumped from the Dolores Mine into a series of water reservoirs at the surface for storage and distribution. These facilities are in place and are currently functioning.

#### 18.4.2 El Pinguico

A water supply system for El Pinguico has not been identified. Water needs are currently defined as only potable water for drinking and sanitation, both of which can be supplied on a contract basis.

#### **18.5 ELECTRICAL POWER**

Electrical power to the mine facilities is supplied by the state-owned Comision Federal de Electricidad (CFE) via 13.3 kV overhead transmission lines connected to the national grid.

#### 18.5.1 El Cubo

A series of sub-stations distributes power to the different mine areas, office areas, and the El Cubo Mill. The substations are in place and are functioning with the exception of the underground facilities, which have been removed and will need to be replaced, as mining is advanced in the different areas.

It is anticipated that 1,800 kilowatts of power will be required for the initial 12 months production, which would include 3 compressors, 2 primary fans, and 6 secondary fans, and other pumps and miscellaneous equipment.

## 18.5.2 El Pinguico

A power line from the national grid and a small transformer supply of 255 kilowatts is needed to the El Carmen portal.

Additional power would be supplied by diesel generation, as required.

#### **18.6 TAILINGS STORAGE – EL CUBO**

There are seven tailings basins as part of the El Cubo tailings and process water management complex. Tailings Basin 3B is the only basin that is active. Tailings Basins 1, 2, 3A, 4, and 5 are closed. Tailings Basin 3A is fully reclaimed and re-vegetated. The other closed basins are in various stage of reclamation and re-vegetation.

All of the tailings basins are located upstream of the village of El Cubo and were built using upstream dam construction techniques.

#### **18.6.1** Tailings Basin 3B

Tailings Basin 3B was the basin that was used during the last years of operation, prior to shut down at the end of November 2019. The basin covers an area of 99 hectares.

Engineering personnel from Endeavour Silver stated that Tailings Basin 3B has a remaining capacity of approximately 900,000 tonnes. At the project design throughput rate of 750 tonnes per day, the basin would store slightly more than 3 years of tailings. During the site visit, the configuration of the basin was observed and it was noted that there was unused capacity in the Tailings Basin 3B. Additional engineering information would be required to confirm the remaining capacity.

Storage in Tailings Basin 3B would benefit from the construction of a diversion ditch constructed on the north side of the basin to intercept rainfall and divert it to a channel that flows underneath the existing tailings facility, which in turn is diverted to a stream that runs through the village of El Cubo. The ditch construction was engineered but not completed prior to the mine shut down in November 2019. A diversion ditch on the south and east side of the basin already exists that diverts rainfall to the stream that runs through the village of El Cubo.

Several other improvements have been made to Tailings Basin 3B, including:

- The addition of engineered structural fill to construct a buttress to improve the stability of the Tailings Basin 3B dam; and
- Additional piezometers and other dam stability monitoring features were installed (total of 36 are in place).

# 18.6.2 Tailings Basin 6

Tailings Basin 6 is full and has not been operated for the past several years. During the site visit, the configuration of the basin was observed. The basin appeared structurally sound.

Engineering personnel from Endeavour Silver stated that one additional lift to the dam could be added and that the engineering and permits exist for the expansion. The lift would add approximately 600,000 tonnes of storage. At the project design throughput rate of 750 tonnes per day, the basin would store more than 2 years of tailings. Additional engineering information would be required to confirm the potential for increasing the capacity of this facility.

There are no provisions in place to divert non-contact water from entering Tailings Basin 6 from the surrounding hills or historic water courses.

## 18.6.3 Contact Water

Contact water is recycled via in-basin drains, which lead to pipelines that carry the process water to a pond located below Tailings Basin 3A. The water is then pumped from this pond to storage tanks above the processing plant with the water being drawn down by the mill, as needed.

During the site visit, the pipe and pumping systems were observed to be in good working order.

## 18.6.4 Tailings Basin 7

A new Tailings Basin 7 has been engineered by Wood Engineering. It would be located to the south of Tailings Basin 6, in a non-populated drainage basin. The dam would be constructed using either downstream or centerline construction techniques. It would have a capacity of approximately 3.6 million tonnes. At the project design throughput rate of 750 tonnes per day, the basin would store more than 10 years of tailings. Additional engineering information would be required to confirm the potential for increasing the capacity of this facility.

## 18.6.5 Alternative Tailing Storage Technologies

Alternatives that should be considered, prior to additional tailings basin construction, would include:

- Cement fill tailings disposal in the mine; and
- Dry stack tailings disposal in the existing tailings basins.

Due to the steep and difficult terrain, these options may prove more economic and environmentally sound than conventional slurry tailings storage. The deactivated tailings basins could also be used to store dry stack tailings, assuming fugitive dust impacts could be properly managed.

A general layout of the existing tailings basins, Nos. 1-6, is shown in Figure 18.1, below.

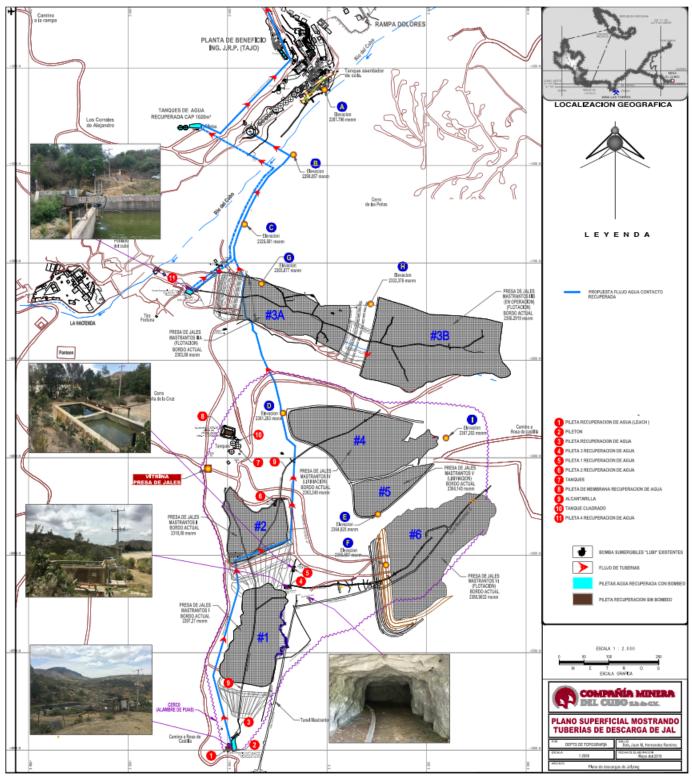


Figure 18.1. General layout of the existing tailings basins Nos. 1-6 Source: Endeavour Silver Engineering Department map prepared by Juan M. Hernandez Ramirez, May 2019.

# **19.0 MARKET STUDIES AND CONTRACTS**

## **19.1 PRECIOUS METALS PRICE**

Silver and gold price projections compiled by Consensus Economics Inc. in their January 2021 Energy and Metals Consensus Forecasts® survey were used in the economic analysis. The silver survey is compiled from polling of 23 forecasters and the gold survey is compiled from polling of 30 forecasters. The resulting silver and gold prices are shown in Table 19.1.

Conse	TABLE 19.1           Consensus Economics Inc. Silver and Gold Forecasts as of January 2021											
	Q1 2021	2022	2023	2024	2025	Long Term						
Silver Prices												
Nominal	24.44	23.30	21.22	20.39	20.20	20.86						
Real <sup>1</sup>	24.44	22.68	20.11	18.81	18.14	18.48						
<b>Gold Prices</b>												
Nominal	1,851	1,823	1,696	1,639	1,628	1,660						
Real <sup>1</sup>	1,851	1,775	1,607	1,512	1,462	1,431						
<sup>1</sup> Annual silver and gold prices are reported by Consensus Economics Inc. in nominal dollar terms. The long-term prices												
are reported in both nominal and real terms. The average annual inflation rate implied for the long-term prices (2.7%)												
has been applied to	the annual nomi	nal forecasts to	determine the f	orecasts in real d	ollar terms.							

For comparison, the 12-quarter and 20-quarter average prices for gold and silver are shown in Table 19.2.

TABLE 19.2 Historical Metal Prices (\$/oz)										
ParameterUnits12-Quarter Average20-Quarter AverageAverage Spot Price January 2021										
Silver	US\$/oz	17.55	17.36	25.90						
Gold	US\$/oz	1,477	1,387	1,867						
Ratio – Gold:Silver		1:84	1:80	1:72						

As the result of COVID-19 and uncertainties in the global economy, both silver and gold prices have demonstrated a level of volatility in the past year (see Figure 19.1 and Figure 19.2 with significant increases in price when compared to pre-2020 prices. Because of the ongoing uncertainties in the commodity markets and the relatively short mine life of the combined El Pinguico and El Cubo Project, the QP used consensus pricing in the cash flow model rather than historical average values. The 3- and 5-year average historical silver and gold prices do not potentially reflect the changes in the silver and gold prices that may result from the COVID-19 pandemic and other global economy factors, such as the move to renewable energy.

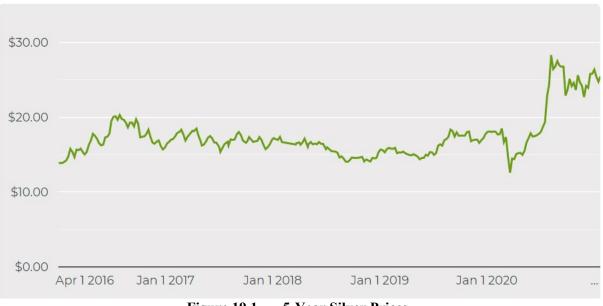
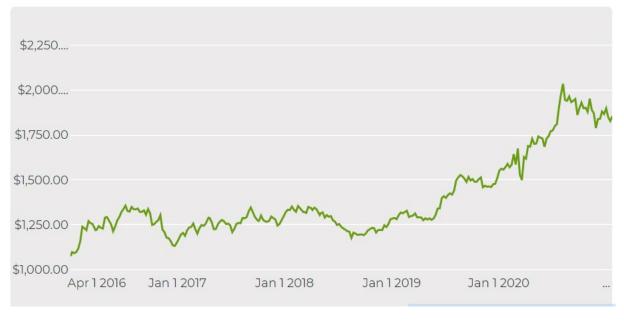


Figure 19.1. 5-Year Silver Prices Source: <u>www.mining.com</u>





Silver prices have different market drivers than gold. Silver prices are not only affected by the economy, but silver prices also have an important industrial component. In 2019, nearly half of the silver demand was in industrial applications.<sup>26</sup> Silver prices and demand have been directly affected by the global mandate for increasing renewable

<sup>&</sup>lt;sup>26</sup><u>https://www.silverinstitute.org/silver-supply-demand/</u>

energy resources. Silver is necessary for the manufacture of photovoltaic cells. Based on projections by CRU on behalf of the Silver Institute, nearly 888 million ounces of silver will be needed between now and 2030 for the manufacture of photovoltaic cells. The global output of silver mines in 2019 fell short of this by approximately 52 million ounces, indicating the potential for silver supply shortages.<sup>27, 28</sup> It should be noted that the long-term silver demand will be affected by changes in photovoltaic technology and the possibility of substitutions, although silver will likely continue to be a component in photovoltaic cells.<sup>29</sup>

Additionally, silver is also used in electronic components for 5G telecommunications networks, as well as medical applications. In 2019, approximately 7.5 million ounces were used in 5G technology applications. It is projected this value will triple by 2030.<sup>30</sup>

CRU has also indicated the most significant demand indicator for silver could be in the application of hybrid and battery elective vehicles. The silver load in these vehicles is higher than in internal combustion engines. Obviously, this increase in silver demand is directly related to the sustained growth of the electric vehicle battery market and its market drivers.<sup>31</sup>

## **19.2 REFINING AND CONCENTRATE FREIGHT CHARGES**

A quotation for processing gold and silver concentrates was obtained from Antiplano Goldsilver S.A. de C.V. located in Matehuala, San Louis Potosi. Terms and conditions are shown in Table 19.3.

TABLE 19.3         Refining and Concentrate Freight Charges										
Item Au Ag										
Pay	95%	95%								
Refining Charge (\$/oz payable)	30.00	2.20								
Escalator (Base to Actual price)		10%								

Freight charges would be estimated at \$350 per truckload for approximately 45 wet metric tonnes containing 6% moisture.

A rollback charge of \$15 per wet metric tonne would also be charged.

A credit of 16% IVA would be added to the total.

Based on a concentrate grade of 132 g/t of gold and 6,680 g/t of silver for El Pinguico and a concentrate grade of 79 g/t of gold and 8,105 g/t of silver for El Cubo, the average estimated cost for refining and freight is \$138 per ounce for gold and \$3.75 per ounce for silver.

<sup>&</sup>lt;sup>27</sup><u>https://www.mining.com/web/precious-metals-outlook-2021-renewable-energy-will-be-a-key-driver/</u>

<sup>&</sup>lt;sup>28</sup>https://www.silverinstitute.org/wp-content/uploads/2020/04/World-Silver-Survey-2020.pdf

<sup>&</sup>lt;sup>29</sup>https://www.pv-magazine.com/2018/07/06/amount-of-silver-needed-in-solar-cells-to-be-more-than-halved-by-2028-silverinstitute-says/

<sup>&</sup>lt;sup>30</sup><u>https://www.mining.com/web/precious-metals-outlook-2021-renewable-energy-will-be-a-key-driver/</u>

<sup>&</sup>lt;sup>31</sup>https://www.silverinstitute.org/wp-content/uploads/2020/04/World-Silver-Survey-2020.pdf

## 20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

## 20.1 EL CUBO

Compañía Minera El Cubo (CMC) – Aurico – Compañía Minera del Cubo, S.A.de C.V. (CMC) was owned by AuRico Gold before 2013 and they obtained the necessary environmental permits for the operations at the El Cubo Mine.

Environmental regulators (PROFEPA) detected irregular permitting issues in the Land Rezoning (CUS, Cambio de Uso de Suelo) and EIA (MIA, Manifestación de Impacto Ambiental) at the El Tajo process plant, the Calaveras and Santa Cecilia waste dumps, and the Mastranto IIIB tailings pond. PROFEPA (Procuraduría Federal para Protección del Medio Ambiente) requested these issues be corrected. CMC did not address the permit violations and regulators ordered that operations be suspended and fined CMC.

#### 20.1.1 Endeavour Silver Corporation

CMC was sold to R.R. Silver (Endeavour Silver) in 2013. Endeavour Silver immediately entered into negotiations with PROFEPA/SEMARNAT (Secretaría del Medio Ambiente y Recursos Naturales) and secured approval to resume operations. Endeavour Silver promised to resolve the outstanding environmental issues by submitting a new MIA to correct existing environmental deficiencies in the mine area, renew existing permits, and comply with all PROFEPA requirements. A new EIS in the Regional Mode category (MIA-R) was then prepared between 2013 and 2018. All outstanding issues at El Cubo were resolved. The new MIA-R included the following items:

- Submittal of a MIA-R 2017-2018 covering the operation, maintenance, closure, and abandonment of the El Cubo Mine Operations that was approved March 21, 2018.
- An Environmental Impact authorization, valid for 50 years (allowing for 48 years of operations and 2 years for closure valid until March 20, 2068).
- Submittal of Annual Reports to SEMARNAT for years No. 1 (2019) and No. 2 (2020).
- CMC submitted to DGIRA (Dirección General de Impacto y Riesgo Ambiental) a report detailing its plans to manage areas affected by waste dumps, tailing dams, and other facilities on May 27, 2019.
- CMC submitted a request to modify the MIA-R permit by DGIRA on March 3, 2020 to make water channeling improvements and to be able to excavate construction materials. Approval is pending from DGIRA.

#### 20.1.2 Environmental Management Plan (PMA) – Endeavour Silver

CMC developed and submitted to DGIRA an Environmental Management Plan, which was approved in October 2018. The plan was subject to a series of conditions detailed below:

• Submittal of a Technical and Economic Study (ETE) that will describe the preventative, mitigation, and remediation measures to be taken during the operation, closure, and restoration stages of the Project area. This report was submitted to and approved by DGIRA in September 2018.

- CMC had to purchase an environmental responsibility bond, which was submitted to DGIRA for 2018 and was renewed for years 2019 to 2021. The current bond is valid until December 19, 2021.
- Appointment of a registered environmental supervisor, which CMC did on September 7, 2018.

## 20.1.3 Notification of Initiation of Operations

A notification of beginning operations to SEMARNAT and PROFEPA was submitted on February 18, 2019 and approved by SEMARNAT on July 12, 2019.

# 20.1.4 Licencia Ambiental Única (LAU) and Cédula De Operación Annual (COA) (Single Environmental Permit, Annual Operation Card)

- The original LAU permit was issued on August 20, 2009 by SEMARNAT Guanajuato.
- Reception of annual COA renewals has been issued from 2015 to 2019.
- According to CMC's environmental department, registration, logbooks of collection and transfer of hazardous residues, water consumption, zero discharge of solutions, gas emissions calculations, energy consumption, and other have been filed with the respective regulatory authorities.

## 20.1.5 Mine and Hazardous Residues Management Plan

- According to the MIA-R 2017-2018, which was approved March 21, 2018 and covers the operation, maintenance, closure, and abandonment of the El Cubo Mine Operations, requires the development of a PMMRM (Mine Residues Management Plan), this plan was submitted for approval to the DGGIMAR Directorship October 8, 2019. Missing information and clarifications were requested and a modified PMMRM was submitted December 20, 2019.
- The plan is valid until March 20, 2068, provided that annual reports are issued, registered, and approved.
- According to information provided by CMC's environmental department, annual reports have been submitted covering all Plan areas, including waste dump contouring, potential acid rock drainage, tailing ponds, and corresponding inspections of oil and grease and chemical reagents storage, laboratory discharges, and residue disposal and lamp disposal.

## 20.1.6 Closure and Reclamation Plan

- A Conceptual Closure Plan by Wood Environmental & Infrastructure Solutions Inc. was developed for Endeavour Silver's internal use and delivered to DGIRA and PROFEPA Guanajuato on March 11, 2020. This plan considers the reclamation of soils, re-vegetation, monitoring, and follow-up activities as well as abandonment activities.
- Reclamation of areas included in the Modified MIA-R permit is in progress and re-forestation is currently ongoing with approximately 1.0 hectare per year being reforested.
- In order to comply with a request by DGIRA, Endeavour Silver contracted with the mining consulting firm Clifton Associates Ltd. to develop a Plan for the Reclamation and Closure of the El Cubo Mine

and facilities (PRC 2019). This plan focuses on the different infrastructure elements on site and their cost of reclamation and closure.

• According to the original operation plans, operations are scheduled until 2066, with final closure and reclamation requiring two years until 2068.

## 20.1.7 Notice of Temporary Suspension of Activities

Regulations require a formal notice of the end of operations and final closure should be submitted to DGIRA/PROFEPA 30 days before the end of activities. CMC decided to temporarily suspend activities and notified DGIRA authorities with the corresponding document dated March 11, 2020. Comments and/or approval from DGIRA/PROFEPA have not been received, as of this writing.

#### 20.1.8 Pending Environmental Issues

CMC submitted the second annual report complying with the terms and conditions of the Environmental Management Plan (PMA) authorization. The following items have either not been submitted or are still pending approval:

- CMC submitted to DGIRA a request to temporarily suspend activities March 11, 2020. Comments and/or acceptance from DGIRA/PROFEPA has not been received.
- CMC has complied with DGIRA's request of clarification to the MIA-R in the areas of vegetation removal to follow the regulations of UGAT (Regional Environmental Administration Units), water channeling, and the use of a construction materials bench. Modifications to the MIA-R are not considered until the evaluation of DGIRA is completed and notified.
- Per the PMA approved on October 26, 2018, environmental activities have to be summarized in an annual report. The corresponding third annual report must be submitted before March 21, 2021.
- According to CMC's environmental department, the following projects are under development and require regulatory approval:
  - Modifications to the EIS authorization of Environmental Impact (MIA-R), as stated above.
  - Approval of the La Doctora waste dump, located in a Federal Zone, has been requested to CNA (National Waters Commission). This was done after a hydrological study to define the Arroyo de el Cubo Federal Zone was completed. Due to COVID-19 related delays, the approval has not been received.
  - CMC has to build a small bridge across the El Cubo Creek in the village of El Cubo to mitigate water impacts on the community. Approval from the village government for this Project has been delayed due to COVID-19.

#### 20.1.9 El Cubo Ejido Status

Based on the review of available documents, the Ejido agreement covering the area of the El Cubo Project area, the neighboring village and surrounding areas contains no negative impacts on the day-to-day operations for the mine, mill, tailings basins, and other project areas.

## 20.1.10 Environmental Summary – El Cubo

- After a review of all relevant documents in the El Cubo data room and information from CMC's Environmental Department, it appears that CMC is in compliance with all environmental permits and obligations.
- Some issues related to the compliance with modifications, corrections and or requirements requested from CMC, are still pending approval by regulators. This is due to SEMARNAT's delayed responses due to COVID-19 impacts.
- The third annual PMA report for 2021 must be submitted before March 21, 2021.
- The QPs are unaware of any significant or material technical, legal, environmental, or political considerations or liabilities, which would have an adverse effect on the extraction and processing of the Resources and Reserves located at the El Cubo Mine Project.
- Environmental compliance and permitting costs are budgeted at US\$130,000 per year for VanGold's El Cubo and El Pinguico projects.

## 20.2 EL PINGUICO PROJECT

## **20.2.1** El Pinguico Permits

VanGold is in the process of rehabilitating the El Pinguico Mine shaft as well as adits on Level 7 and Level 4 to access the El Pinguico underground workings. Access at these portals will facilitate the transport of the underground stockpile to the El Cubo Mill for processing.

A review of the environmental regulations and discussions with local officials indicates that no specific permits are required for removing the stockpiles and transporting them to the El Cubo Mill for processing.

## 20.2.2 Ejido Agreement

The village of Calderones is in close proximity to the mine and the road that services the El Pinguico Project and as such, there is an ejido agreement is in place with VanGold. VanGold's obligations to the community are summarized as follows:

- Local citizens have the "right to pass" granting them access to cross the mining claim properties;
- A payment to the community of MX\$100,000, when the updated ejido was signed (completed); and
- An annual payment of MX\$30,000 plus inflation, payable February of every year to members of the community.

Additionally, VanGold has committed to:

- Minimize fugitive dust and noise impacts on the village of Calderones and the surrounding area;
- Rehabilitation of the existing but degraded road from the village of Calderones to the intersection of the main road from Guanajuato;

- Re-routing of all mine traffic from the village of Calderones and constructing a new road around the village. The new road configuration is shown, in yellow, in Figure 20.1; and
- Projects, such as recreational field improvements, educational support, and other items, as identified by the community.



Figure 20.1. New road configuration for the village of Calderones Source: Google Earth<sup>™</sup> map created by VanGold, December 2020.

As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement.

There are no significant or material pre-existing conditions or environmental conditions or liabilities at the El Pinguico Project site.

# 21.0 CAPITAL AND OPERATING COSTS

# 21.1 CAPITAL COST ESTIMATE

#### 21.1.1 Mine Capital Cost

The El Cubo Mine was idled in November 2019. When operations ceased, all crushing equipment, mining equipment, electrical equipment, and pumps were removed. The lower levels of the mine were allowed to flood.

At El Pinguico, surface facilities will need to be constructed including fans, compressors, and electrical equipment. Due to the relatively small amount of tonnes that will be recovered from the underground stockpile a contractor will be used to mine both the above ground stockpile and the underground stockpile. A contractor would also be used to open the Sangria Adit on Level 7.

The estimated mine capital cost considers the purchase of new mining equipment, installation of crushing and electrical equipment, and the pumping for El Cubo. Surface facilities will need to be installed at both mines, including substations, compressors, and fans. Mine capital for the first year of operation is estimated at \$11.0 million for the two operations. After Year 2, an estimated sustaining capital cost of 10% per year for the mine equipment is added to the capital cost. An estimate of the equipment required and corresponding costs is detailed in Appendix 3.0.

Additional mine capital of \$4.1 million is required in Year 2 at El Cubo to increase the mine production rate from 350 tonnes per day to 750 tonnes per day. An estimate of the additional equipment required, and corresponding costs is detailed in Appendix 3.0.

Table 21.1 shows the capital cost associated with the surface equipment, underground equipment, and mine equipment cost.

TABLE 21.1         CAPITAL COST ASSOCIATED WITH SURFACE EQUIPMENT, UNDERGROUND EQUIPMENT, AND MINE EQUIPMENT											
Category	Year 1	Year 2	Years 3 -6								
Surface Mobile Fleet	607,500	121,000									
Surface Fixed Plant	1,381,400										
Underground Mobile Fleet	7,554,400	3,232,500									
Underground Fixed Plant	1,453,435	769,517									
Sustaining Capital – Mobile Fleet			1,078,690								

## 21.1.2 Mine Capital Costs – Contractor Alternative

An alternative to the initial capital cost expenditure for mine equipment would be the use of a contract miner. In this instance, only the surface facilities would be constructed. All mine equipment and underground facilities would be furnished by a contractor. This alternative mode of operation would only by relevant to El Cubo since El Pinguico is already planned to use contractor services. Operating costs would correspondingly increase using this alternative.

The estimated mine capital cost for this alternative considers only the purchase of surface facilities, including substations, compressors, and fans. Mine capital for the first year of operation is estimated at \$2.7 million for the two operations and \$0.6 million for the increase in tonnage at El Cubo in the second year of operation.

## 21.1.3 El Cubo Mill Capital Cost

The El Cubo Mill was idled in November 2019. The mill was shut down in a reasonable fashion by emptying belts, bins, tanks, and flushing pipelines.

After shut down, some equipment was removed from the building. Various pumps were removed and used by Endeavour Silver at other nearby operations. The PLC system was removed from the control room and placed in a warehouse, in storage, in Leon. All inventory, such as spare mill liners, pump liners, pump parts, conveyor belt, and conveyor idlers, were removed to other operations.

Major equipment was left in place. The primary crusher, secondary crusher, dust collectors, grinding mills, bins, conveyor belts, flotation cells, thickeners, tanks, concentrate filter, and most pumps are still correctly located in the mill complex.

Pipelines and valves were left in place.

Instrumentation was sporadically removed. As an example, the metal detector on the secondary crusher feed belt was removed but the weightometer on the primary crusher discharge belt system was left in place. Instrumentation wiring appeared to still be in place.

Major electrical equipment, such as transformers and switchgear, have not been disturbed.

Other electrical equipment and some cables have been removed. Several starters in the milling circuit have been removed. Some major cables had been stolen.

The electrical motors for the equipment are still in place; however, the status of the electrical motors in the mill is unknown. The motors were operating when the mill was idled but there is no record of the motors being rotated or checked since that time.

All reagents in process and in the warehouse storage were removed to other operations.

All equipment, piping, valving, instrumentation, and electrical associated with tailings disposal and water reclaim appear to be in place and operable.

VanGold contacted Minas Carrillo S.A. de C.V. to provide an estimate of the replacement cost of equipment and materials and the maintenance required to bring the plant back into operation. Representatives toured the plant with the QPs during the site visit in late November 2020 to view firsthand the status of the plant and equipment.

Minas Carrillo estimated that approximately \$1.5 million and 4 to 5 months of work would be required to bring the plant back into operation. Included in this estimate is the cost to repair and replace existing mechanical equipment, reinstall the mill distributed control system (DCS), refurbish the mill office control room, and perform commissioning services.

The cost of operational spares is estimated at \$200,000 for a total cost of \$1.7 million.

## 21.1.4 Tailings Facilities

Prior to start of operations, a diversion drainage ditch for rainwater would be constructed on the north side of Tailings Storage Facility 3B at an estimated capital cost of \$750,000.

Construction of additional capacity in Tailings Storage Facility 6 would take place in the third year of operation of the El Cubo Mill and would cost approximately \$350,000.

#### 21.2 OPERATING COST ESTIMATE

The operating cost estimate is summarized in Table 21.2 and represents an average cost for seven years of operation.

TABLE 21.2       SUMMARY OF OPERATING COSTS						
Category	El Cubo (\$/tonne)					
Ore Haulage	5.44	5.44	3.78			
Mine Development <sup>1</sup>	N/A	N/A	15.88			
Definition Drilling <sup>1</sup>	N/A	N/A	2.30			
Mine Direct	N/A	15.00	43.40			
Mill	14.29	14.29	14.29			
General and Administration	13.31	13.31	13.31			
Total 33.04 48.04 N/A						
<sup>1</sup> Mine Development and Definition Drilling have been capitalized in the cash flow model but have been included here to show their effect on the estimated overall operating cost if the costs were treated as operating costs rather than being capitalized. Since these costs are accounted for in the capital cost, a sum total is not noted in the table.						

#### 21.2.1 El Pinguico

#### 21.2.1.1 Ore Haulage

The above ground stockpile at the El Pinguico will be mined using a front-end loader with truck haul to the El Cubo Mill. The distance to the El Cubo Mill is approximately 8 km. The operating cost of the load and haul to the El Cubo Mill is based on a quotation that was received in July 2019 to haul 4,000 tonnes of material from El Pinguico to an adjacent mill that was 11 km away. The cost was adjusted by the Mexican CPI value change of 6% from July 2019 to November 2020. The cost of load and haul from El Pinguico to the El Cubo Mill is estimated at \$5.44 per tonne.

The ore haulage from the El Pinguico site to the El Cubo Mill is also estimated at \$5.44 per tonne of ore.

The cost for transportation from El Pinguico to El Cubo is US\$0.68/tonne/km. The expected rate would be in the range of US\$0.15 to US\$0.25/tonne/km. The reason for the higher cost would likely be the rough road that limits truck speed between the two properties. Investment to improve the road conditions would likely reduce the truck cycle time and correspondingly reduce the contractor rate.

#### 21.2.1.2 Mine Direct

The cost of removing material from the underground stockpile to the surface area near the El Pinguico shaft is estimated at \$15 per tonne of ore.

#### 21.2.2 El Cubo

The development and operating cost estimate for mining is based on independent benchmarking and Endeavour Silver's cost of mining from November 2019 escalated to November 2020.

#### 21.2.2.1 Mine Development Costs

For internal budgeting purposes, Endeavour Silver used a 4.3 m  $\times$  4 m decline development capital cost of \$540 per meter (adjusted for inflation) using single-boom jumbos. However, independent benchmarking of similar mines in Mexico, as well as local contractors' quotes, indicated of range of between \$750 and \$1,200 per meter, with an average of \$900 per meter.

Likewise, for internal budgeting purposes, Endeavour Silver used a 3 m  $\times$  3 m horizontal development (in ore) capital cost of \$540 per meter (adjusted for inflation) using jacklegs. However, independent benchmarking of similar mines in Mexico, as well as local contractors' quotes, indicated a range of between \$450 and \$680 per meter, with an average of \$550 per meter.

Horizontal development in waste was estimated at \$639 per meter and vertical development was estimated at \$289.07 per meter. Both costs are based on in-house experience.

TABLE 21.3Mining Cost by Unit of Measure				
Ore Drift (\$/meter)	550.00			
Ore Stoping (\$/t) 36.22				
Decline Development (\$/meter)	900.00			
Vertical Development (\$/meter)	289.07			
Horizontal Development (\$/meter)	639.00			

Table 21.3 shows the different components of the mine development costs.

Based on the estimated meters of development, the average development cost was estimated at \$15.88 per tonne of ore. The amount of decline development, vertical development, and horizontal development is detailed in Table 16.3.

#### 21.2.2.2 Definition Drilling

Definition drilling costs are estimated at \$720,000 per full calendar year, which equates to approximately 600 m of drilling per month.

#### 21.2.2.3 Mine Direct

Table 21.3 shows that ore drift was estimated at \$550 per meter based on Endeavour Silver's cost of mining.

Ore stoping was estimated at \$36.22 per tonne of ore, which was based on Endeavour Silver's cost of mining in November 2019 and escalated to November 2020. The tonnes developed by ore stoping are detailed in Table 16.3.

Direct mining costs include ore drift, stoping, and general administration costs associated with geology and mine planning, which are estimated at \$43.40 per tonne of ore. The tonnage for the direct mine operating costs are found in Table 16.3. The cost per tonne is an average number calculated for the life of the project.

#### 21.2.2.4 Ore Haulage

Ore haulage for El Cubo is estimated at \$3.78 per tonne of ore. A rate of \$0.47 per tonne-kilometer was used for underground haulage. Surface haulage from El Pinguico to the El Cubo Mill was based on a contractor quote of \$5.44 per tonne of ore.

#### 21.2.3 El Cubo Mill Processing Cost

The El Cubo Mill processing cost is based on Endeavour Silver's cost of milling from November 2019 escalated to November 2020 using the Mexican CPI value change of 3.5% for this period.

There are some modifications to the El Cubo Mill processing cost based on information obtained during the site visit and experience at other milling operations of similar size in Mexico. The Endeavour Silver milling cost contained refining charges for concentrate that was mixed in from an adjacent property to lower penalties associated with arsenic, bismuth, antimony, selenium, and mercury. Since this concentrate would no longer be mixed with the material from El Cubo, the cost of refining this material can be eliminated. Additionally, the cost of process salaries and labor was reduced to reflect the smaller 750 tonne per day operation.

TABLE 21.4EL CUBO MILL ORE PROCESSING COSTS		
Category	Cost (US\$/tonne)	
Plant Salaries	2.00	
Plant Labor	2.00	
Electricity	4.96	
Grinding Media	1.42	
Maintenance Supplies	1.73	
Operating Supplies	0.46	
Contractors	0.38	
Miscellaneous	0.37	
Tailings	0.39	
Reagents	0.58	
Total	14.29	

Table 21.4 shows the mill operating cost at \$14.29 per tonne of ore.

For the purposes of this study, the cost of processing El Pinguico ore would be considered the same as the average El Cubo ore due to the similar vein like material and mineralogy that make up the deposits.

#### 21.2.4 General and Administration

The general and administration costs were estimated based on the Endeavour Silver's monthly cost report for 2019 and adjusted to reflect a smaller business organization. Table 21.5 shows the summarized categories of the general and administrative costs. The costs have been adjusted by the Mexican CPI to November 2020.

TABLE 21.5SUMMARIZED CATEGORIES OF THE GENERAL ANDADMINISTRATIVE COSTS			
Category	Cost (US\$/tonne)		
Administration	1.67		
Warehouse	0.76		
Purchasing	0.13		
Security (Contractor)	2.93		
Environmental	0.48		
Human Resources	4.47		
Accounting	0.99		
Community Relations (El Cubo)	0.36		
Information Systems	0.27		
Legal Services	1.25		
Total	13.31		

#### 22.0 ECONOMIC ANALYSIS

#### **22.1 INTRODUCTION**

A discounted cash flow model was prepared for the combined El Pinguico and El Cubo Project to determine the Net Present Value (NPV), Internal Rate of Return (IRR), and payback period. The technical cash flow was prepared on an after-tax basis and was prepared in accordance with NI 43-101 Standards of Disclosure for PEA studies.

The cash flow model includes Indicated Mineral Resources for the stockpiled material at El Pinguico and Measured, Indicated, and Inferred Resources for the El Cubo. Readers are cautioned that the PEA is preliminary in nature. It includes Inferred Mineral Resources considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty the PEA will be realized. Mineral Resources that are not Mineral Reserves have not demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, and other relevant issues.

The following key parameters were integral to the's preparation of the cash flow model and determination of the NPV.

- All results are expressed in US Dollars (US\$).
- The analysis is based on a 100% equity basis. Specific business considerations, such as debt or equity financing and detailed tax strategies, have purposely not been included or analyzed in detail.
- All cash flows are determined on an after-tax basis.
- Net Present Values (NPV) are determined, assuming end-of-year cash flows.
- All costs and revenues reflect "real" or constant 2021 dollars without escalation.
- The measures used in this PEA are metric except where, by convention, gold and silver content, production, and sales are stated in troy ounces.

The results of the discounted cash flow analysis are summarized in Table 22.1.

This economic analysis is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Preliminary Economic Assessment will be realized.

TABLE 22.1Summary of Preliminary Economic Assessment for the CombinedEL Pinguico and El Cubo Project				
Metal Prices <sup>1</sup>				
Silver	\$US/oz Silver	19.49		
Gold	\$US/oz Gold	1,527		
Net Present Value (5%)	\$US million	32.9		
Net Present Value (8%)	\$US million	28.5		
Internal Rate of Return	%	105		
Net Smelter Return	\$US million	221.0		
Total Operating Costs	\$US million	124.4		
Other Costs and Depreciation	\$US million	54.8		
NPI Royalty	\$US million	0.5		
Taxes	\$US million	12.5		
Life of Mine Capital and Development Costs	\$US million	69.4		
Net Cash Flow	\$US million	42.2		
Payback Period	Years	1.87		
		1.50		
Tonnes Processed	Mtonnes	1.78		
Life of Mine Recovered Silver Equivalent <sup>2</sup>	Moz	13.21		
Initial Capital and Development <sup>3</sup>	\$US million	28.1		
Sustaining Capital and Development	\$US million	41.3		
Total Capital and Development	\$US million	69.4		
Mine Life	Years	7		
		,		
<sup>1</sup> Source: Consensus Economics, Inc.©, Energy & Metals ( <sup>2</sup> Silver Equivalents are based on a 1:80 gold:silver ratio as \$17.36/oz and gold price of \$1,387/oz. <sup>3</sup> Includes 15% contingency.				

#### **22.2** ASSUMPTIONS AND TECHNICAL INPUTS

The technical parameters and production forecasts described elsewhere in this PEA are reflected in the cash flow model. The following sections are summaries of the cash flow model inputs.

#### 22.2.1 Life of Mine and Production Forecasts

The cash flow model incorporates a 7-year operating and development period. The cash flow model has been prepared on the basis of the diluted tonnages outlined in Table 16.3. The El Pinguico stockpile material and the El Cubo Indicated Resources are scheduled to be recovered in Years 1 to 3. Inferred Resources are projected to be mined in Years 4 to 7. At steady state, the monthly targeted production rate is 22,500 tonnes per month for an annual total of 270,000 tonnes per year mined and processed. The overall projected production is summarized in Table 22.2.

TABLE 22.2           PEA CASH FLOW PRODUCTION INPUT SUMMARY					
Parameter	Units	El Pinguico Stockpiles	El Cubo	Total	
Life of Mine		17 months	7 years	7 years	
	1				
Tonnes Mined	ktonne	210	1,565	1,775	
Silver	g Ag/tonne	78.9	142	135	
Gold	g Au/tonne	0.59	1.82	1.68	
Contained Silver Ounces	Moz	0.533	7.15	7.68	
Contained Gold Ounces	Moz	0.004	0.092	0.096	
Contained Silver Equivalent Ounces	Moz	0.847	14.33	15.18	
Silver Recovery	%	65%	88%	86%	
Gold Recovery	%	77%	88%	88%	
Recovered Silver Equivalent Ounces	Moz	0.590	12.62	13.21	

#### 22.2.2 Commodity Prices and Net Smelter Return

Silver and gold price projections compiled by Consensus Economics, Inc. in their January 2021 Energy and Metals Consensus Forecasts® survey were used in this economic analysis. The annual and long-term prices are presented in Table 19.1. The prices are reported on a real basis in 2021 dollars.

For the purpose of this PEA, it has been assumed that development will begin in April 2021 and production will be initiated in October 2021. The fiscal year in the cash flow model is modeled to begin on April 1. The Consensus Economics, Inc. price forecasts for Q4 2021 through 2025 have been used for Years 1 through 5, respectively, and the Consensus Economics, Inc. long-term price forecast has been used in Years 6 and 7. The resulting average silver price is US\$19.49 and the average gold price is US\$1,527.

The net smelter return (NSR) has been determined on the basis of refining and freight costs of \$3.75 per ounce of silver and \$138 per ounce of gold. These costs are described in greater detail in Section 19.2 of this report.

The life-of-mine (LOM) gross revenues are based on the metal prices shown in Table 19.1 and Table 22.3 and the metal recovered according to the production parameters outlined in Table 22.2. For comparison purposes, the historical average silver and gold prices are also shown in Table 19.1. The LOM NSR is determined as the gross revenues minus the refining and freight costs (Table 22.4).

TABLE 22.3LOM AVERAGE METAL PRICES\$/oz (2021 REAL DOLLAR BASIS)					
Parameter	ParameterUnitsLOM Average12-Quarter20-QuarterSpotValueAverageAverageFebruary 2, 20				
Silver	US\$/oz	19.49	17.55	17.36	26.35
Gold	US\$/oz	1,527	1,477	1,387	1,833
Ratio – Gold:Silver		1:78	1:84	1:80	1:70

TABLE 22.4LOM NET SMELTER RETURN					
Parameter Units Value (US\$)					
LOM Gross Revenues					
Silver	US\$ millions	129.1			
Gold	US\$ millions	128.2			
Total LOM Gross Revenues	<b>US\$ millions</b>	257.4			
Less: Refining and Freight Charges	US\$ millions	36.4			
Total LOM Net Smelter Return	US\$ millions	221.0			

#### 22.2.3 Operating Costs

The mining, processing, and administration costs are based on the operating cost estimates presented in Section 21.2. Mine Development and Definition Drilling costs have been capitalized in the cash flow model. A summary of the LOM costs is shown in Table 22.5.

TABLE 22.5         LOM OPERATING COST SUMMARY					
Direct Unit Operating Costs         US\$ millions         Unit Cost           US\$/tonne Total Mill Feed					
El Pinguico Stockpile Haulage	1.6	0.91			
El Cubo Direct Mining and Haulage	73.8	41.55			
Processing	25.4	14.29			
General and Administrative	23.6	13.31			
Total 124.4 70.06					
<sup>1</sup> Combined mill feed from both El Pinguico and El Cubo.					

#### 22.2.4 Development and Capital Costs

The development and capital costs associated with the mine development and equipment and mill refurbishment are shown in Table 22.6. These costs are discussed in Section 21.1.

TABLE 22.6 Initial and Sustaining Capital and Development Costs (US\$ Millions)					
Cost	Initial Years 1-2	Sustaining Years 3-6 <sup>1</sup>	Total		
Direct Mine Equipment Costs	15.1	4.3	19.4		
Direct Mill Capital Costs	1.7	-	1.7		
Mine Development	4.1	24.0	28.1		
Definition Drilling	1.2	2.9	4.1		
Exploration – Underground	1.0	2.5	3.5		
Exploration – Surface	0.3	1.8	2.1		
Tailings Storage and Dam Expansion	0.8	0.4	1.1		
Reclamation	0.4	-	0.4		
	24.4	25.0	(0.4		
Total	24.4	35.9	60.4		
15% Contingency	3.7	5.4	9.1		
Total with Contingency	28.1	41.3	69.4		
<sup>1</sup> Assumes no capital or development costs in Year 7.					

#### 22.2.5 Royalties

VanGold's Mexican subsidiary, OMPSA, will own an undivided 100% interest in the El Pinguico silver and gold project free and clear from the royalties purchased in this agreement. A 15% net profits interest royalty will remain, in favor of EMBSA, solely on the existing above ground and underground stockpiles of mineralized material.

#### 22.2.6 Other Costs and Taxes

Other costs include:

- Mining Rights Tax ...... 7.5% of EBITDA
- Government Fee on Precious Metals...... 0.5% of silver gross revenues
- Workers Profit Share ...... 10% of pre-tax profits

These costs are based on the requirements of the Mexican government.

Depreciation was determined on a straight-line basis for 8 years as per Mexican tax laws.

The income tax rate is projected at 30% of operating profit (sales income or revenue less royalties, operating and other costs, and depreciation).

#### 22.3 SENSITIVITY ANALYSIS

To determine the effect of changes in several of the base case assumptions, a sensitivity analysis was prepared for each operating scenario. Certain factors, such as commodity prices, operating costs, and capital costs, could have a significant effect on the financial performance of the Project. The objective of the sensitivity analyses is to determine

the effect of several varying key parameters, as a point of comparison to the base line results. The following parameters were evaluated.

- Discount rates ranging from 0% to 10% were applied to determine the effect on NPV.
- Commodity prices generally have the greatest effect on mining project economics. The sensitivity to changes in commodity prices was determined on the basis of a constant gold-to-silver price ratio of 1:80, which is consistent with historical data.
- The cash variable operating costs were varied to determine the effect on NPV.
- Both the initial and sustaining capital costs were varied.

It should be noted that in each case, the particular parameter was changed for each year during the life of the mine (LOM) review. In reality, it is unlikely that each of the varied parameters would experience the same increases or decreases over the entire LOM. As such, these sensitivity analyses present the best or the worst-case scenarios in the ranges evaluated. The purpose of the sensitivity analysis is to provide an indication of the relative effect that a specific operating parameter can have on the overall project economics.

#### 22.3.1 Discount Rate Sensitivity

The sensitivity of the project cash flows to discount rate variations is shown in Table 22.7.

TABLE 22.7Base Case Economic Summary					
Parameter	Discount Rate (%)	Base Case			
NPV (US\$ millions)	0.0	42.2			
NPV (US\$ millions)	5.0	32.9			
NPV (US\$ millions)	8.0	28.5			
NPV (US\$ millions)	10.0	25.9			
IRR (%)		105			
Payback Period (years)		1.87			

#### 22.3.2 Commodity Price and Cost Sensitivities

Of the sensitivity factors reviewed, the Base Case cash flow was significantly affected by variations in the commodity prices (Table 22.8 and Table 22.9).

TABLE 22.8 Commodity Price Sensitivity – Base Case Assuming a Constant Gold-to-Silver Price Ratio of 1:80						
Change in Commodity Price (%)Silver Price (\$/oz)Gold Price (\$/oz)IRR (%)NPV5% (US\$ millions)NPV8% 						
-25	14.62	1,169	N/A	-38.8	-35.5	
-15	16.56	1,325	-25	-9.4	-9.2	
-10	17.54	1,375	22	5.4	3.9	
0	19.49	1,527	105	32.9	28.5	
10	21.44	1,680	243	64.3	56.5	
15	22.41	1,756	344	79.0	69.6	
25	24.36	1,909	750	108.5	95.9	

TABLE 22.9 Operating and Capital Cost Sensitivity – Base Case										
Cost	Change in Cost (%)	IRR (%)	NPV5% (US\$ millions)	NPV8% (US\$ millions)						
Operating	-25	250%	68.6	60.2						
	0	105%	32.9	28.5						
	25	-6%	-2.8	-3.3						
Capital	-25	275%	50.1	44.1						
	0	105%	32.9	28.5						
	25	40%	15.7	12.8						

The sensitivity to commodity price is shown in Table 22.8. At a 25% increase in the silver price, the resulting silver and gold prices are comparable to the average spot price in early January 2021 (\$25.90/oz silver and \$1,867/oz gold). At a 10% decrease in silver price, the project demonstrates a positive NPV(5), NPV(8), and an IRR of 22%. The silver and gold prices for this case are comparable to the 3-year historical average prices (\$17.55/oz silver and \$1,477/oz gold).

Based on the results of the sensitivity analysis, the average NPV(5) breakeven price is approximately \$17.20/oz of silver and \$1,376/oz of gold (assuming a constant gold-to-silver ratio of 1:80). There is minimal difference in the breakeven price at a 5% or 8% discount rate.

The effect of the sensitivity analysis is further shown in the spider diagram presented as Figure 22.1.

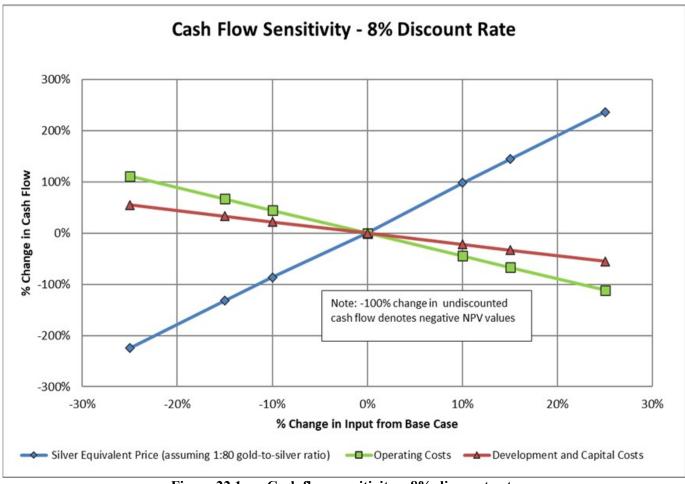


Figure 22.1. Cash flow sensitivity – 8% discount rate

#### 22.4 CONTRACTOR ALTERNATIVE

A preliminary assessment of an alternative operation scenario where both mines would be mined using a contract miner was also prepared. The advantage is the significant reduction of the initial equipment costs; however, based on the single preliminary contractor quote received by the QP at the time of this PEA, the LOM operating and underground development costs are higher for this scenario than the base case. Additional quotations are needed to confirm the operating costs. The resulting NPV(8) is lower than the base case at \$20.3 million, but the reduction in the initial capital cost is significant (nearly \$12 million).

The results of the contractor operation scenario are shown in Table 22.10.

		Mine Owner Operated	Mining Contractor Alternative
Silver Prices <sup>1</sup>	\$US/oz Silver	19.49	19.49
Gold Prices <sup>1</sup>	\$US/oz Gold	1,527	1,527
Net Present Value (5%)	\$US million	32.9	22.4
Net Present Value (8%)	\$US million	28.5	20.3
Total Operating Costs	\$US million	124.4	140.2
Initial Capital and Development <sup>2</sup>	\$US million	28.1	16.3
Sustaining Capital and Development <sup>2</sup>	\$US million	41.3	49.3
Life of Mine Capital and Development Costs <sup>2</sup>	\$US million	69.4	65.6
Net Cash Flow	\$US million	42.2	27.0
Payback Period	Years	1.87	1.06

This alternative indicates it may be advantageous to further investigate the possibility of using a contract miner during the first few years of operation and then moving to an owner-operator scenario in later years. The advantage would be a significant decrease in the initial capital costs (nearly \$12 million, as determined in this PEA) while additional exploration work and definition drilling is completed at El Cubo and the underground El Pinguico stockpile. Conversion of Inferred Resources to Measured and Indicated Resources and the identification of additional Resources would increase the LOM, further justifying further capital expenditures to move to an owner-operator scenario.

#### 22.5 DETAILED CASH FLOW MODEL

The 7-year discounted cash flow model is summarized in Seven Year Discounted Cash Flow Model.

	SEVEN YEAR DISCOUNTED CASH FLOW MODEL								
		Total/Avg Start of Year End of Year Year	1-Apr-21 1-Apr-22 1	1-Apr-22 1-Apr-23 2	1-Apr-23 1-Apr-24 3	1-Apr-24 1-Apr-25 4	1-Apr-25 1-Apr-26 5	1-Apr-26 1-Apr-27 6	1-Apr-27 1-Apr-28 7
Production	· · · · · · · · · · · · · · · · · · ·	· · · · ·	· · · · ·		· · · · ·	· · · · · ·		· · · · ·	
Resource Tonnage									
El Pinguico - Surface Stockpile	ktonnes	185.0	100.5	84.5	-	-	-	-	-
El Pinguico - Underground Stockpile	ktonnes	25.0	-	25.0	-	-	-	-	-
El Cubo Insitu Underground (stoping and drifting	) ktonnes	1,565.0	54.4	161.0	269.7	270.0	270.0	270.0	270.0
Total	ktonnes	1,775.0	154.9	270.5	269.7	270.0	270.0	270.0	270.0
Resource Recovered Silver									
El Pinguico - Surface Stockpile	oz (000s)	240.7	130.8	109.9	-	-	-	-	-
El Pinguico - Underground Stockpile	oz (000s)	107.4	-	107.4	-	-	-	-	-
El Cubo Insitu Underground	oz (000s)	6,278.3	307.5	671.0	1,065.9	1,058.5	1,058.5	1,058.5	1,058.5
Total	oz (000s)	6,626.3	438.3	888.3	1,065.9	1,058.5	1,058.5	1,058.5	1,058.5
Resource Recovered Gold									
El Pinguico - Surface Stockpile	oz (000s)	2.0	1.1	0.9	-	-	-	-	-
El Pinguico - Underground Stockpile	oz (000s)	1.1	-	1.1	-	-	-	-	-
El Cubo Insitu Underground	oz (000s)	80.9 84.0	2.6	8.5	14.6	13.8	13.8	13.8	13.8
Total	oz (000s)	84.0	3.7	10.5	14.0	15.8	15.8	15.8	13.8
Metal Prices									
Silver	US\$/oz Ag	19.49	23.56	22.04	19.78	18.64	18.23	18.48	18.48
Gold	US\$/oz Au	1,527	1,813	1,733	1,583	1,500	1,454	1,431	1,431
Unit Operating Costs			1						
Mining	100 / 20		6.00	0.04					
El Pinguico Haulage and G&A	US\$/tonne EP	7.71	5.92 5.92	9.36 9.36	-	-	-	-	-
То	tal US\$/tonne EP US\$/tonne Milled	7.71 0.91	5.92	9.30	-	-	-	-	-
El Cubo									
Drifting	US\$/tonne EC	1.31	3.91	1.60	1.17	1.17	1.17	1.17	1.17
Stoping	US\$/tonne EC	36.12	35.96	36.12	36.16	36.12	36.12	36.12	36.12
Underground Haulage	US\$/tonne EC	3.77	3.75	3.77	3.77	3.77	3.77	3.77	3.77
Mine G&A	US\$/tonne EC	5.92	5.86	6.30	5.89	5.88	5.88	5.88	5.88
То	tal US\$/tonne EC US\$/tonne Milled	47.13 41.55	49.48	47.79	47.00	46.94	46.94	46.94	46.94
Processing									
Process Cost	US\$/tonne Milled	14.29	14.29	14.29	14.29	14.29	14.29	14.29	14.29
G&A	US\$/tonne Milled	13.31	13.31	13.31	13.31	13.31	13.31	13.31	13.31
To	tal US\$/tonne Milled	27.60	27.60	27.60	27.60	27.60	27.60	27.60	27.60
Total Unit Operating Costs	US\$/tonne Milled	70.06	48.82	59.83	74.60	74.54	74.54	74.54	74.54
Capital and Development Costs			I	I	I	L		L	
Mine Capital Equipment	US\$ (000s)	19,435	10,997	4,123	1,079	1,079	1,079	1,079	-
Mill Capital Equipment	US\$ (000s)	1,700	1,700	-	-	-	-	-	-
Mine Development	US\$ (000s)	28,124	1,226	2,839	6,015	6,015	6,015	6,015	-
Definition Drilling			480	720	720	720	720	720	-
Exploration Costs - Underground			315	630	630	630	630	630	-
Exploration Costs - Surface	US\$ (000s)	2,100	-	300	600	600	300	300	-
Tailings Storage and Dam Expansion	US\$ (000s)	1,100	750	-	350	-	-	-	-
Reclamation	US\$ (000s)	364	364	-	-	-	-	-	-
Contingency	US\$ (000s)	9,055	2,375	1,292	1,409	1,356	1,311	1,311	-
Total	US\$ (000s)	69,423	18,207	9,904	10,802	10,400	10,055	10,055	-

## TABLE 22.11Seven Year Discounted Cash Flow Model

Net Income									
Gross Revenues									
Silver Revenues	US\$ (000s)	129,130	10,326	19,577	21,086	19,730	19,291	19,560	19,560
Gold Revenues	US\$ (000s)	128,242	6,727	18,141	23,179	20,676	20,054	19,732	19,732
Refining and Freight Charge	US\$ (000s)	(36,405)	(2,154)	(4,772)	(6,012)	(5,867)	(5,867)	(5,867)	(5,867)
Net Revenue	US\$ (000s)	220,967	14,899	32,945	38,254	34,539	33,479	33,426	33,426
Operating Costs									
El Pinguico Stockpile Haulage	US\$ (000s)	(1,619)	(595)	(1,025)	-	-	-	-	-
El Cubo Direct Mining	US\$ (000s)	(73,757)	(2,691)	(7,692)	(12,675)	(12,675)	(12,675)	(12,675)	(12,675)
Processing	US\$ (000s)	(25,365)	(2,213)	(3,865)	(3,854)	(3,858)	(3,858)	(3,858)	(3,858)
General Services and Administration	US\$ (000s)	(23,626)	(2,062)	(3,600)	(3,590)	(3,594)	(3,594)	(3,594)	(3,594)
EBITDA	US\$ (000s)	96,599	7,338	16,764	18,136	14,412	13,352	13,299	13,299
Gov't Fee on Precious Metals (0.5%)	US\$ (000s)	(1,287)	(85)	(189)	(221)	(202)	(197)	(196)	(196)
Mining Rights Tax (7.5%)	US\$ (000s)	(7,245)	(550)	(1,257)	(1,360)	(1,081)	(1,001)	(997)	(997)
Depreciation	US\$ (000s)	(41,595)	(2,276)	(3,514)	(4,864)	(6,164)	(7,421)	(8,678)	(8,678)
Income Before Federal Taxes	US\$ (000s)	46,473	4,427	11,804	11,690	6,965	4,733	3,427	3,427
Profit Sharing to Workers (10%)	US\$ (000s)	(4,647)	(443)	(1,180)	(1,169)	(697)	(473)	(343)	(343)
Net Income Before NPI Royalty	US\$ (000s)	41,826	3,984	10,624	10,521	6,269	4,259	3,085	3,085
NPI Royalty (El Pinguico)	US\$ (000s)	(545)	(114)	(431)	-	-	-	-	-
Net Income Before Federal Taxes	US\$ (000s)	41,280	3,870	10,192	10,521	6,269	4,259	3,085	3,085
Federal Income Taxes (30%)	US\$ (000s)	(12,548)	(1,195)	(3,187)	(3,156)	(1,881)	(1,278)	(925)	(925)
Net Income After Taxes	US\$ (000s)	70,013	6,544	17,198	17,886	10,657	7,241	5,244	5,244
			l						
After Tax Cash Flow	L							1	
Net Income After Taxes	US\$ (000s)	70,013	6,544	17,198	17,886	10,657	7,241	5,244	5,244
Add: Depreciation	US\$ (000s)	41,595	2,276	3,514	4,864	6,164	7,421	8,678	8,678
Less: Development and Capital Costs	US\$ (000s)	(69,423)	(18,207)	(9,904)	(10,802)	(10,400)	(10,055)	(10,055)	-
Project Cash Flow	US\$ (000s)	42,185	(9,387)	10,807	11,947	6,421	4,607	3,867	13,922
Cumulative Project Cash Flow	US\$ (000s)		(9,387)	1,421	13,368	19,789	24,396	28,263	42,185
After Tax Net Present Value								1	
LOM		7-year							
Internal rate of return		105%							
Net present value									
0% Discount Rate	US\$ (000s)	42,185							
5% Discount Rate	US\$ (000s)	32,855							
8% Discount Rate	US\$ (000s)	28,474							
10% Discount Rate	US\$ (000s)	25,948							

# TABLE 22.11SEVEN YEAR DISCOUNTED CASH FLOW MODEL(CONTINUED)

#### **23.0 ADJACENT PROPERTIES**

The Guanajuato region is widely recognized as a major center for silver mining with multiple veins and operations. The El Cubo and El Pinguico properties are only two of the multiple operations in the area. Major operators are Endeavour Silver, Fresnillo, Great Panther, and Peñoles. The major veins in the area are illustrated in Figure 23.1 (note – Figure 23.1 is the same as Figure 7.3 and has been included for ease of reading).

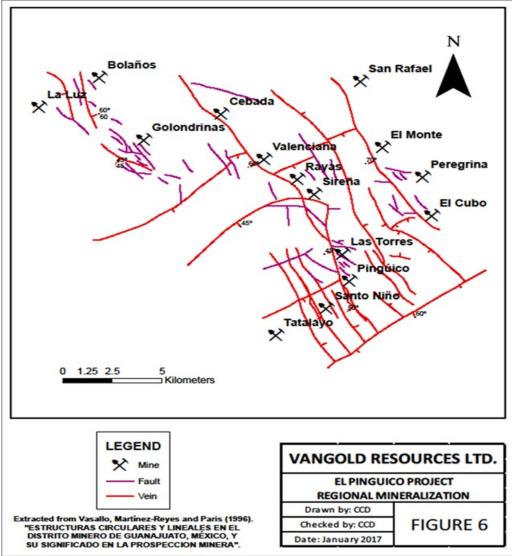


Figure 23.1. Mines and veins in the Guanajuato Silver Belt Source: NI 43-101 Technical Report for El Pinguico Project, Guanajuato Mining District, Mexico for VanGold Mining, authored by Carlos Cham Dominguez of FINDORE S.A. DE C.V., effective date February 28, 2017.

The mines are geologically similar. All host low sulfidation epithermal silver-gold deposits. The major variance being the gold versus silver ratio, which is dependent on their location in the hydrothermal column.

#### 24.0 OTHER RELEVANT DATA AND INFORMATION

The QPs are unaware of any further data or relevant information that could be considered of any practical use in this report in evaluating the El Cubo and El Pinguico properties.

The QPs are unaware of any other material facts with respect to this evaluation that are not reflected in this report.

#### 25.0 INTERPRETATIONS AND CONCLUSIONS

The QPs have reviewed the information, estimation methods, and the estimates and is of the opinion that the estimates are reasonable and can be utilized for this PEA. Although the Mineral Resources estimated in this report are used for the economic analysis, the QPs would caution that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The combined El Cubo and El Pinguico Project and the supporting facilities represent an economic opportunity for a small-scale mining operation. This historic district has been successfully mined for centuries, but now that the major veins have been identified and extracted, there is potential for mining smaller vein systems at a reduced rate of 750 tonnes per day that appears to have favorable economics.

#### 25.1 **RESOURCES**

Approximately 500,000 tonnes of Measured and Indicated Mineral Resources grading 194 g/t silver and 2.44 g/t gold and 1.45 M tonnes of Inferred Mineral Resources grading 214 g/t silver and 2.78 g/t gold have been identified at El Cubo. At the expected processing rate of 277,000 tonnes per year, this represents approximately 7 years of mine life.

#### 25.2 MINING

Mining costs, primarily the cost of development work, drive the economic viability of El Cubo. Development of a three year mine plan with identified methods for mining narrow stopes could enhance the economics of the Project. Similarly, the use of contract mining to reduce the initial capital cost could be beneficial to the Project's economics, provided similar operating rates for development and ore extraction could be realized.

Mining the above ground stockpile at El Pinguico should yield reasonable economic return until additional Mineral Resources can be developed. The mining and processing of this material appears feasible and relatively risk free.

Mining the underground stockpile at El Pinguico depends on the amount of Mineral Resource that can be developed. Currently, only the top 5 m of the stockpile, approximately 25,000 tonnes, have been identified as a Mineral Resource. Additional Resources from the stockpile would be dependent on determining the make-up of the remaining material. Diamond drilling has shown that there are a number of pieces of large barren wall rock in the stockpile. The make-up of the stockpile should be tested by gaining access to different areas by mining and clearing Level 7.

#### 25.3 METALLURGY

The El Cubo Mill appears to be ready to operate with some repair and refurbishing at a design rate of 750 tonnes per day. Due to the long mining history in the area, contractors, laborers, and supervisory personnel would be available to operate the mine and process plant.

Average metallurgical recoveries have been estimated at 87% for silver and 88% for gold are based on historical operating records and appear achievable for El Cubo. Operating costs of approximately \$14 per tonne, which are based on historical cost records at El Cubo, appear reasonable.

The above ground stockpile at El Pinguico represents a low-grade, readily accessible Resource that has economic value. Average metallurgical recoveries have been estimated at 60% for silver and 75% for gold are based on historical operating records and appear achievable for El Cubo. Operating costs are estimated at approximately \$14 per tonne.

Metallurgical test work for the El Pinguico underground stockpile has not been completed. Precious metal recovery rates have been assumed for this report at 80% for silver and 80% for gold. Operating costs are also estimated at \$14 per tonne.

#### **25.4 INFRASTRUCTURE**

The El Cubo Mine was shut down in November 2019 with much of the infrastructure intact. Roads, power supply, water supply, buildings, and tailings facilities are still in place. Underground crushing and electrical equipment was removed by Endeavour Silver and was identified as one of the few infrastructure items that would need to be replaced.

El Cubo currently has tailing storage for the next three years at the proposed 750 tonnes per day throughput rate. A diversion structure for run-off would be constructed to ensure this storage capacity. An additional two years of tailings storage would be possible at another existing storage facility with an upstream dam raise. Additional tailings storage could be available at these two facilities with new dam raises.

Tailings Basin 3B was the basin in use when El Cubo closed in November 2019. It and the related process water and other related infrastructure is properly secured and in a reasonable operating condition. The dam itself appears to have adequate monitoring instrumentation to detect any adverse conditions that may develop once operations resume.

El Pinguico has not operated since 1916 and infrastructure, such as roads, power supply, water supply, and buildings, would need to be constructed depending on the type and complexity of the mining that will take place at the property. Contractors would likely be used to provide temporary power and facilities with more permanent facilities being constructed, should additional Resources be identified and developed.

#### 25.5 ENVIRONMENTAL

There does not appear to be any apparent significant legal, environmental, or political considerations that would have an adverse effect on the extraction and processing of the Resources and Reserves located at El Cubo.

At El Pinguico, no specific permits are required for the work ongoing at the site, including VanGold's desire to ship the surface stockpile of low-grade ore or the underground stockpile material to the El Cubo Mill for processing. This was verified by VanGold's legal representative, VHG Servicios Legales, S.C. Currently, no on site mining is planned at El Pinguico.

There is no significant or material pre-existing conditions or environmental liabilities at the El Pinguico Project site.

#### 25.6 ECONOMICS

While the seven-year plan projected is economic as determined in this PEA, success beyond the seven years is dependent upon the discovery of additional Mineral Resources and their conversion to Mineral Reserves. The El Cubo and El Pinguico properties are typical in the sense that they display short Mineral Reserve life as Mineral Reserve development is dependent upon underground exploration and development.

#### 25.7 RISKS

Table 25.1 below illustrates a typical risk matrix the QPs utilize when identifying and evaluating risks associated with mining and minerals projects.

TABLE 25.1 Overall Risk Assessment Matrix							
Likelihood of Risk Consequence of Risk							
(within 5 years	Minor <sup>1</sup>	Moderate <sup>2</sup>	Major <sup>3</sup>				
Likely – will probably occur	Medium	High	High				
Possible – may occur	Low	Medium	High				
Unlikely – unlikely to occur	Low	Low	Medium				
<sup>1</sup> Major Risk: The factor poses an immediate danger of a failure, which if uncorrected, will have a material effect							

(>15% to 20%) on the project cash flow and performance and could potentially lead to project failure.

<sup>2</sup>Moderate Risk: The factor, if uncorrected, could have a significant effect (10% to 15% or 20%) on the project cash flow and performance unless mitigated by some corrective action.

<sup>3</sup>Minor Risk: The factor, if uncorrected, will have little or no effect (<10%) on project cash flow and performance.

While the seven-year plan projected is economic, success beyond the seven years is dependent upon the discovery of additional Mineral Resources and their conversion to Mineral Reserves. The El Cubo and El Pinguico properties would be typical underground mines in that exploration costs would be high and time consuming. This is viewed as a moderate risk to operating and capital costs.

It should also be noted that a PEA is by definition an initial study of a project's economic viability. Many factors that are defined only in general terms within the study could negatively impact a project's economic viability as additional study and analysis illustrates these initial assumptions and engineering work to be incorrect or the need for modification. Additionally, the success of the project is dependent on pricing for silver and gold to remain at or above the base case illustrated in the project financial model. This is viewed as a moderate to major risk with proactive management required to optimize the project by moving it through the study and engineering phases as efficiently as possible and to commence production while precious metals prices are elevated.

There appear to be no significant or material technical, legal, environmental, or political considerations or liabilities that would have an adverse effect on the extraction and processing of the Resources and Reserves located at the El Cubo Project and for exploration and evaluation work to proceed at the El Pinguico Project. However, the following environmental and social risks have been identified:

- Significant or material pre-existing environmental conditions could be discovered at the El Pinguico Project and or at the El Cubo Mine. The risk at El Cubo is considered low as a review of Endeavour Silver's records indicates a proactive environmental compliance culture and no history of significant regulatory violations. The risk at El Pinguico is considered low to moderate as work completed on site since VanGold's acquisition of the property in 2017 has not uncovered any adverse environmental conditions in the mine and no adverse historic or current negative community impacts have been noted to date. Conditions will have to be monitored as additional portions of the old mine workings are reopened and exploration work proceeds to ensure that if any adverse conditions are discovered, they are dealt with proactively.
- A review of the environmental regulations and discussions with local officials indicates that no specific permits are required for removing the surface and underground stockpiles and transporting them to the El Cubo Mill for processing. However, the large amount of truck traffic required to move the surface and underground stockpiles from El Pinguico could result in adverse dust, noise, and negative community interactions with the trucks. This risk is rated as low to moderate as the planned road refurbishment will allow truck traffic to largely bypass the village of Calderones, but potential noise, safety, and fugitive dust impacts will have to be proactively managed and mitigated to prevent the community becoming negative about the project.

• Opposition to re-starting the El Pinguico Mine and the required permitting process could develop due to outside groups or Non-Governmental Agency involvement. This could thwart or slow the permitting process for the El Pinguico re-start. This risk is considered low to moderate as the surrounding area and larger community is supported by the mining industry. However, this assumes compliance with all regulations, continued active community involvement, and support for the villages of Calerones and El Cubo.

The QPs are unaware of any significant or material technical, legal, environmental, or political considerations or liabilities that would have an adverse effect on the extraction and processing of the Resources located at the El Cubo Project.

There are no significant or material pre-existing environmental conditions or liabilities at the El Pinguico Project.

A review of the environmental regulations and discussions with local officials indicates that no specific permits are required for removing the surface and underground stockpiles and transporting them to the El Cubo Mill for processing.

As the surrounding area and larger community is supported by the mining industry, no opposition to re-starting the mine and the required permitting process is expected. This assumes compliance with all regulations and continued community involvement.

Any risks identified are typical of any advanced stage exploration project and or operating metals mine, such as tailings basin management, environmental regulatory compliance, maintaining and developing a comprehensive safety program, and ground control monitoring. None of these have been identified as significant risk.

#### 26.0 **RECOMMENDATIONS**

The QPs have reviewed the information, estimation methods, and the estimates and is of the opinion that the estimates are reasonable and can be utilized for this PEA. Although the Mineral Resources estimated in this report are used for the economic analysis, the QPs would caution that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The QPs recommend a pre-feasibility study (PFS) be undertaken to further define the recommendations for the exploration of the project, mine development, infrastructure development, and mill facilities. The PFS would incorporate the results of the exploration efforts to enable the conversion of Inferred Resources to Indicated and Measured Resources. The results would be incorporated into the cash flow model to provide a greater degree of accuracy and operational definition going forward.

There are a number of recommendations that were identified during the course of study for this PEA. The following list constitutes a compendium of these recommendations but should not be considered as a complete list. As the Project progresses toward production, the contents of this list could change.

#### 26.1 GEOLOGY

#### 26.1.1 Exploration

• Gather and document the data for blanks, standards, duplicate, and check assays for the 2018 and 2019 El Cubo underground drilling so a QA/QC report can be presented.

If such data is not available for the 2018 and 2019 El Cubo underground drilling, then a program of re-sampling or re-assaying of an appropriate number of samples or pulps (estimated at  $\pm 5\%$  - 10%) be undertaken utilizing blanks, standards, duplicate, and check assays; thus, allowing for a QA/QC report to be prepared.

- Follow-up previous favorable underground drill holes at El Cubo with an aggressive underground diamond drilling program. Gold and silver intersections show the existence of vein structures and mineralization that will require further drilling before these scattered intercepts can contribute to Inferred Resource.
- Continue exploration drilling on favorable surface and near-surface exposures at El Cubo, for example: Purisima, Cabrestantes II, and the San Juan adit.
- Continue exploration drilling on favorable underground samples at El Pinguico.
- Continue surface sampling and mapping on all the claims at the El Pinguico Project and follow-up favorable results with diamond drilling, particularly at El Pinguico, La Joya, La Joyita, El Carmen, El Pirul, and El Pino.
- Plan a "deep" drilling program testing the postulated intersection of the Veta Madre structure and the El Pinguico-La Joya vein system.
- At El Cubo, sample for anomalous silver and/or gold values in small, late-stage calcite veins in the Calderones Formation. It is not uncommon for weak silver values that are hosted in calcite (especially dark colored calcite) in unfavorable horizons and/or high in the hydrothermal system, leading to

economic mineralization in more favorable horizons at depth. This should be considered a secondary priority that should be undertaken after mining is well established and after the above exploration recommendations are underway.

#### 26.1.2 El Pinguico Underground Stockpile

- Re-sample several of the underground stockpile trenches with selective sampling by separating out large competent pieces and the finer fraction and assaying them separately. This type of sampling is similar to screen-size analysis. This may provide valuable information on the distribution of silver and gold values in the stockpile.
- Recommend taking multiple representative samples from all available locations on Levels 5, 6, and 7 from the underground stockpile to give greater confidence in the grade of the entire stockpile. It is recognized that such a program will still only provide minimal data, as there will still be much of the stockpile un-sampled.

#### 26.2 MINING

Mining systems for the El Cubo/El Pinguico complex are recommended with a measured approach. Initially, the mining should commence with methods and means that are well understood and proven in the Guanajuato area. Specific recommendations include:

- 1) Establish a mine plan with specific steps and goals that follows a logical sequence of operations and development. This plan is to contain schedules for capital spending, mine development, construction, staffing, environmental and permitting considerations, closure, and production. Each of these must contain accurate cost estimates for the planned work.
- 2) Employ mechanized overhand cut-and-fill methods with the ability to resue when required in all stoping areas currently planned for production.
- 3) Use conventional drill, blast, and haulage equipment in both stoping and development areas.

The use of contract mining as an alternative indicates it may be advantageous during the first few years of operation and then moving to an owner-operator scenario in later years. The advantage would be a significant decrease in the initial capital costs (nearly \$12 million, as determined in this PEA) while additional exploration work and definition drilling is completed at El Cubo and the underground El Pinguico stockpile. Conversion of Inferred Resources to Indicated and Measured Resources and the identification of additional Resources would increase the life of mine and may justify further capital expenditures to move to an owner-operator scenario.

#### 26.3 PROCESS AND METALLURGY

- 1) Metallurgical recoveries are not defined for the underground stockpile at El Pinguico. Samples need to be obtained and test work completed.
- 2) As additional exploration work is completed, corresponding metallurgical samples should be prepared to test features, such as grindability, flotation recovery, and penalties associated with deleterious elements for concentrate sales.

#### **26.4 INFRASTRUCTURE**

- 1) Alternatives to conventional tailings pond storage should be investigated for implementation after the near term storage in Tailings Ponds 3B and 6 are exhausted in Year 6 of the plan of operation.
- 2) With the construction of a diversion ditch around Tailings Pond 3B, there will be an additional requirement for water supply from water generated in the mine. It is likely that additional water can be obtained from the underground workings at El Cubo.

#### 26.5 ECONOMICS

Based on the inputs used in this PEA and the average consensus silver and gold prices of \$19.49/oz silver and \$1,527/oz gold, the current Indicated and Inferred Mineral Resources at the combined El Cubo and El Pinguico Project will result in a positive NPV(8) of \$28.5 million and an IRR of 105%. The Project shows the greatest sensitivity to metal prices, with an average breakeven price of approximately \$17.25/oz of silver and \$1,371/oz of gold (assuming a constant gold-to-silver ratio of 1:80). These prices are comparable to the 3-year historical average prices (\$17.55/oz silver and \$1,477/oz gold).

A pre-feasibility study (PFS) is recommended to be undertaken to further define the recommendations for the exploration of the project, mine development, infrastructure development and mill facilities. The PFS would be incorporate the results of the exploration efforts to enable the conversion of Inferred Resources to Indicated and Measured Resources. The results would be incorporated into the cash flow model to provide a greater degree of accuracy and operational definition going forward.

#### 26.6 NEXT PROJECT PHASES

The QPs recommends a two-phase work program for the combined El Cubo/El Pinguico Project culminating in a prefeasibility study (PFS) to further define recommendations for the exploration of the project, mine development, infrastructure development, and refurbishment of the mill facilities.

Phase 1 activities would include additional exploration and definition drilling at both El Cubo and El Pinguico, refurbishment of the El Cubo Mill facilities and administrative and security staff to support these activities at the project for the initial 6-month period at an estimated \$3.35 million as set out in Table 26.1. Refurbishment of the mill would include the repair and replacement of existing mechanical equipment, reinstallation of the mill distributed control system (DCS), refurbishment of the mill office control room, the purchase of operational spares, and commissioning services.

Table 26.1           Estimated Costs for the Completion of the Phase 1 Work Program										
Item	Apr-21         May-21         Jun-21         Jul-21         Aug-21         Sep-21         Tota           (US\$×000)         (US\$×000)         (US\$×000)         (US\$×000)         (US\$×000)         (US\$×000)         (US\$×000)									
Mine Administrative Costs	71	74	116	122	168	171	722			
Exploration Costs – El Pinguico	55	55	55	55	55	55	330			
Exploration Costs – El Cubo			150	150	150	150	600			
Mill Refurbishment	200	500	500	250	150	100	1,700			
Total							3,352			

Phase 2 work would consist of the activities to complete the PFS. Estimated costs for the PFS would range from approximately \$400,000 to \$600,000, which would include geologic modeling and interpretation of drill results, a new resource model, a mine plan, mine equipment specifications, mine infrastructure, and other engineering tasks and would likely take 4 to 6 months to complete. It is anticipated that exploration drilling and mine administrative costs of approximately \$400,000 per month would continue during this same time period. Mineralogical and metallurgical testing costs would be minimal since the process is known and there is a data base of historical recoveries for El Cubo, where the bulk of the mining is currently planned.

Phase 2 is not contingent upon positive results from Phase 1.

Additional phases of the Project would be subject to the resultant findings from the PFS.

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### BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Mark K. Jorgensen, do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of the University of Nevada (Reno) in 1977 with a Bachelor of Science degree in Chemical Engineering.
- 3) I am a Qualified Professional (Q.P.) in Metallurgy with the Mining and Metallurgical Society of America (Member #012020QP). I have flotation plant experience. I have designed flotation test programs, designed flotation operating plants, and worked in flotation operating plants. I have professional experience as a Project Manager and Project Engineer and have prepared other technical reports that allow me to provide summary commentary and conclusions.
- 4) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 6) I have read this report and am responsible or jointly responsible for Sections 1, 2, 3, 5, 13, 17, 18, 19.2, 21, 24, and 27 of this report and the portions of Sections 25 and 26 that relate to Metallurgy, Recovery Methods, and Infrastructure.
- 7) The work was completed during the period November 2020 to February 2021.
- 8) I visited the property from November 21 to November 24, 2020 for a total of 4 days on site and toured the El Cubo and El Pinguico properties.
- 9) I have worked previously on this project on behalf of VanGold in a desktop study assessing the El Pinguico resources and determining the suitability of the El Cubo Mill for processing material from El Pinguico. The study was prepared for VanGold in October 2020.
- 10) I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the Technical Report, the omission to disclose, which makes the Technical Report misleading.
- 11) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 12) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 14) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

Mark K. Jorgensen, MMSA #012020QP

### BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Bernard J. Guarnera, do hereby certify that:

- 1) I am a Director and Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of the Michigan Technological University and have a Master of Science degree in Economic Geology (1967) and a Bachelor of Science Degree in Geological Engineering (1964).
- 3) I am a Qualified Professional (Q.P.) in Geology, Ore Reserves, and Valuations with the Mining and Metallurgical Society of America (Member #01171QP) and a Chartered Professional (Geology) with the Australasian Institute of Mining and Metallurgy (Member #204688).
- 4) I have extensive experience in precious metals, geology, and mineral resources and have been involved with the exploration, development, and operation of epithermal precious metal deposits for more than 30 years including all of Grupo Mexico's underground epithermal deposits in Mexico, and epithermal deposits in China, Colombia, Nicaragua, Alaska, California, and Arizona.
- 5) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 7) I have read this report and am responsible or jointly responsible for Sections 1, 6, 12, and 23 of this report. I have also reviewed Sections 7, 8, and 9.
- 8) The work was completed during the period November 2020 to February 2021.
- 9) I visited the property from November 21 to November 24, 2020 for a total of 4 days on site and toured the El Cubo and El Pinguico properties.
- 10) I have previously worked on this project on behalf of VanGold in a desktop study assessing the El Pinguico resources and determining the suitability of the El Cubo Mill for processing material from El Pinguico. The study was prepared for VanGold in October 2020.
- 11) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 12) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 14) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

Bernard J. Guarnera, MMSA #01171QP

### BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Reinis N. Sipols, P.E., do hereby certify that:

- 1) I am Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of Michigan Technological University in 1987 with a Bachelor of Science Degree in Mining Engineering.
- 3) I am a Qualified Professional (Q.P.) with the Mining and Metallurgical Society of America (Member #01440Q).
- 4) I have practiced my profession for 33 years. I have been directly involved in the mining industry in positions of responsibility ranging from the executive level, operations management in open pit mines, environmental permitting and compliance, management consulting, and construction management and engineering in surface mining operations in the United States and Canada.
- 5) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 7) I have read this report and am responsible or jointly responsible for Sections 4, 5, and 20 of this report and the portions of Sections 1, 25, and 26 that relate to Environmental, Permitting, and Social or Community Impact.
- 8) I am independent of VanGold, as independence is described by Section 1.5 of National Instrument 43-101.
- 9) The work was completed in Blairstown, New Jersey, USA and Guanajuato, Mexico, during the period November 2020 to January 2021.
- 10) The work was completed during the period November 2020 to February 2021
- 11) I visited the property from November 21 to November 24, 2020 for a total of 4 days on site and toured the El Cubo and El Pinguico properties.
- 12) I have previously worked on this project on behalf of VanGold in a desktop study assessing the El Pinguico resources and determining the suitability of the El Cubo Mill for processing material from El Pinguico. The study was prepared for VanGold in October 2020.
- 13) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 14) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 15) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 16) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

Reinis N. Sipols, P.E., MMSA #014400P

### BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, John E. Thompson, do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I graduated from the New Mexico Institute of Mining and Technology with a Bachelor of Science degree in Mining Engineering in 1968.
- 3) I am a Qualified Professional (Q.P.) in Mining with the Mining and Metallurgical Society of America (Member #01448QP).
- 4) I am a Member of the Society of Mining, Metallurgy and Exploration (SME).
- 5) I have practiced my profession for over 50 years. I have been directly involved in the base and precious metals mining industry in positions of responsibility at the executive level, operations, and management consulting, operations management, construction management and engineering in underground and surface mining operations in the United States, Canada, Argentina, Mexico, Russia, Peru, and Brazil.
- 6) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 7) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 8) I have read this report and am responsible or jointly responsible for Sections 16 and 21 of this report and the portions of Sections 1, 25, and 26 that relates to Mining.
- 9) The work was completed during the period November 2020 to February 2021.
- 10) I have not visited the El Cubo and El Pinguico properties.
- 11) I have previously worked on this project on behalf of VanGold in a desktop study assessing the El Pinguico resources and determining the suitability of the El Cubo Mill for processing material from El Pinguico. The study was prepared for VanGold in October 2020.
- 12) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 13) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 14) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 15) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

John E. Thompson, MMSA #01448QP

### BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Joseph A. Kantor, do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of Michigan Technological University in 1966 with a B.S in Geology and in 1968, with a M.S. in Geology.
- 3) I am a member in good standing with the Society of Mining, Metallurgy and Exploration (SME) and a Qualified Professional (QP) Member Mining and Metallurgical Society of America, QP (Geology) Member #01309QP.
- 4) I have practiced my profession continuously since 1966 and provide exploration services to the mineral exploration community. I have extensive experience in precious metal vein deposits.
- 5) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, and experience in low-sulfidation silver-gold vein systems, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 7) I have read this report and am responsible or jointly responsible for Sections 7, 8, 9, 10, 11, and 12 of this report and the portions of Sections 1, 25, and 26 that relate to Geology, Exploration, Drilling, Sampling, and Data Verification.
- 8) The work was completed during the period November 2020 to February 2021.
- 9) I have not visited the El Cubo and El Pinguico properties. I have previously worked on this project on behalf of VanGold in a desktop study assessing the El Pinguico resources and determining the suitability of the El Cubo Mill for processing material from El Pinguico. The study was prepared for VanGold in October 2020.
- 10) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 11) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 12) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 13) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

Joseph A. Kantor, MMSA (Geology), #01309QP

# BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Robert E. Cameron, Ph.D., MMSA QP, do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of The University of Utah with a B.S., M.S., and Ph.D. degrees in Mining Engineering.
- 3) I am currently a Qualified Person in good standing with the Mining and Metallurgical Society of America (MMSA) Member #01357QP.
- 4) I have practiced my profession since 1977. My relevant experience for the purpose of the Technical Report is acting as a consulting resource and reserve specialist and mining engineer for 40 years specializing in resource and reserve estimates and mining methods, optimization, and cost development of a wide variety of minerals and mining methods.
- 5) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 7) I have read this report and am responsible or jointly responsible for Sections 14, 15, 16, and 21 of this report and the portions of Sections 1, 25, and 26 that relate to Mineral Resources, Mineral Reserves, and Mining.
- 8) The work was completed during the period November 2020 to February 2021.
- 9) I have not visited the El Cubo and El Pinguico properties.
- 10) I have not worked previously on this project or property.
- 11) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 12) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 14) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

obert E. Cameron, Ph.D., MMSA #01357OP

# BEHRE DOLBEAR

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Amy E. Jacobsen, do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear Group, Inc. located at 4255 South Buckley Road, Aurora, Colorado 80013, USA.
- 2) I am a graduate of the Colorado School of Mines in 1989 with a B.A.Sc. Metallurgical Engineering and of the University of Denver in 2001 with an MBA.
- 3) I have practiced my profession continuously since 1989. I have extensive experience since 2001 in cash flow modeling of infrastructure projects including precious metal mining projects. This includes projects in Mexico.
- 4) I am a Qualified Professional (Q.P.) in Metallurgy (Member #01197QP) with the Mining and Metallurgical Society of America.
- 5) This certificate applies to the technical report titled "Preliminary Economic Analysis El Cubo/El Pinguico Silver Gold Complex Project, State of Guanajuato, Mexico" that has an effective date of 31 January 2021 (the "Technical Report") with an amended date of 1 April 2021.
- 6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person, as defined in National Policy 43-101.
- 7) I have read this report and am responsible or jointly responsible for Sections 19.1 and 22 of this report and portions of Sections 1, 25, and 26 that relate to the Economic Analysis.
- 8) The work was completed during the period November 2020 to February 2021.
- 9) I have not visited the El Cubo and El Pinguico properties.
- 10) I have not worked previously on this project or property.
- 11) I am independent of the Issuer, Vendor, and Property applying all of the tests in Section 1.5 of National Instrument 43-101.
- 12) I have read National Instrument 43-101 and Form 43-101Fl, and the Technical Report has been prepared in compliance with that instrument and form.
- 13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
- 14) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report, or part that the I am responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Issued Date: 12<sup>th</sup> day of February 2021.

Signed Date: 16<sup>th</sup> day of February 2021.

Amended Signed Date: 1<sup>st</sup> day of April 2021.

Jacobsen, MMSA #01197QP

APPENDIX 1.0 VHG SERVICIOS LEGALES, S.C. – MARCH 3, 2021 TITLE OPINION – EL CUBO PROJECT REPORT (Under Separate Cover)



#### PRIVILEGED AND CONFIDENTIAL

March 3, 2021 TITLE OPINION EL CUBO PROJECT

VHG Servicios Legales, S.C.

Paseo de las Palmas No. 755-902 Col. Lomas de Chapultepec 11000 Ciudad de México

Telephone +52 (55) 55403020



March 3, 2021

EL CUBO PROJECT

"Privileged and Confidential"

TSXV Venture Exchange ("TSXV") 2700-650 West Georgia Street Vancouver, B.C. V6B 4N9

Dear Sirs and Madams:

We act as legal counsel to VanGold Mining Corp. ("VanGold") in Mexico and we are providing the following opinion in connection with the acquisition by VanGold, indirectly through its wholly owned Mexican subsidiary Obras Mineras el Pinguico, S.A. de C.V. ("OMPSA"), of the 49 (forty-nine) mining concessions comprising El Cubo Project located in the State of Guanajuato, Mexico ("El Cubo Project"), owned by Compañía Minera del Cubo, S.A. de C.V. ("CMDC"), a wholly owned Mexican subsidiary of Endeavour Silver Corp. (the "Concessions"); and the surface access rights owned/hold by CMDC to access El Cubo Project.

VanGold has entered into a letter agreement dated December 15, 2020 to acquire, by way of an asset purchase (the "Asset Purchase Agreement"), the El Cubo Project, including among other things, the surface rights owned/hold by CMDC to El Cubo Project, El Tajo Plant, all buildings, equipment, machinery, tools and improvements located therein and thereon for a purchase price of US\$15,000,000 payable as follows:

- (a) US\$7,500,000 cash on closing (of which a US\$500,000 non-refundable deposit has been paid to date);
- (b) 21,331,058 common shares of the Company on closing having an aggregate deemed issue price of US\$5,000,000.00 (US\$0.2344 per share); and
- (c) An unsecure, non-interest-bearing promissory note in the principal amount of US\$2,500,000.00 payable 12 months after the closing.

The Asset Purchase Agreement provide for an asset acquisition only, and no corporate acquisition of CMDC or any other entity is contemplated therein.

Our investigations were focused on and limited to reviewing and examining the following records and to make such investigations, as we considered necessary, appropriate or relevant for the purposes of rendering the opinions expressed herein below:

- Copies of public records provided by CMDC of the General Direction of Mines (**DGM**) having federal jurisdiction and forming a part of the Ministry of Economy of the Federal Government.
- Copies of public records provided by CMDC of the Public Registry of Mining (**RPM**) having also federal jurisdiction in the United Mexican States.



- Copies of the mining certificates of the Concessions.
- Copies of mining duty payments invoices on the Concessions for the last 5 years (including the biannual payments paid on the Concessions on January 2021).
- Copies of assessment of work reports filed on Concessions for the last 5 years.
- Copy of the official communications dated June 26, 2002 issued by the DGM, authorizing to CMDC the grouping/incorporation of 44 mining concessions for purposes of the Assessment of Works Reports, which head of the group is the concession named "Unificación Villalpando Norte", title number 211996 (the "Villalpando Group").
- Copy of the official communications dated July 22, 2002 issued by the DGM, authorizing to CMDC the grouping/incorporation of 10 mining concessions for purposes of the Assessment of Works Reports, which head of the group is the concession named "Gracias a Dios", title number 212534 (the "Gracias a Dios Group").
- Copy of the public deed number 11 dated August 11, 1923 certified and attested to by Mr. Manuel Villaseñor Jr., Notary Public in the City of Guanajuato, State of Guanajuato registered under Electronic Folio number R15\*3621 with the Public Registry of Property of Guanajuato, evidencing the ownership of CMDC of the rustic surface land named Segunda Fracción del Cubo, with an extension of 816-54-93.20 hectares ("Segunda Fracción del Cubo Land").
- Copy of the public deed number 9,200 dated January 16, 1995 certified and attested to by Mr. Margarito Sánchez Lira, Notary Public number 4 in the City of Guanajuato, State of Guanajuato registered under Electronic Folio number R15\*3623 with the Public Registry of Property of Guanajuato, evidencing the ownership of CMDC of the rustic surface land named Fracción del Cubo, with an extension of 109-33-89 hectares ("Fracción del Cubo Land").
- Copy of the public deed number 9,716 dated June 9, 1998 certified and attested to by Mr. Margarito Sánchez Lira, Notary Public number 4 in the City of Guanajuato, State of Guanajuato registered under Electronic Folio number R15\*40853 with the Public Registry of Property of Guanajuato, evidencing the ownership of CMDC of the rustic surface land named La Rosa de Castilla, with an extension of 271-70-07 hectares ("La Rosa de Castilla Land").
- Copy of the temporary occupancy, leasing and ease of way agreement dated October 21, 2011, and effective until October 21, 2026 entered into by and among Industrial Santa Fe, S. de R.L. and CMDC, over the following surface lands ("Cebolletas Temporary Occupancy Agreement"):

Name of the Rustic Land	Extension (Hectares)	Location
La Sierrita 1	385-00-00	Guanajuato, Guanajuato
La Sierrita 3	286-48-20	Guanajuato, Guanajuato
La Sierrita 4	382-26-40	Guanajuato, Guanajuato
Cebolletas	142-00-00	Guanajuato, Guanajuato

• A memorandum dated as of November 23, 2020 delivered by the legal department of CMDC, regarding certain tax credit imposed by the Administración Desconcentrada de Auditoria Fiscal de Guanajuato 2 ("Tax



Administration Office"), related to the fiscal year 2016, in the total amount of MXP\$58,461,147.05 ("CMDC 2016 Tax Credit"). Pursuant to the information provided in such memorandum the Tax Administration Office imposed CMDC 2016 Tax Credit, alleging that there are some non-existing or simulated operations between CMDC and some of its suppliers, requesting evidence of such operations to confirm if they actually occurred. Also, the Tax Administration Office is alleging that some of the deductions applied for the year 2016 are not properly documented/supported, and that certain tax withholdings were not remitted to the Tax Administration Office, resulting in the CMDC 2016 Tax Credit.

CMDC offered certain mining concessions in El Cubo Mining Project to the Tax Administration Office in order to secure the payment of CMDC 2016 Tax Credit but the office did not accept the concessions as a valid form of collateral to secure the said payment, instead they put a tax line (the "**Tax Lien**") on the Segunda Fracción del Cubo Land, Fracción del Cubo Land and La Rosa de Castilla rustic surface lands.

While CMDC is currently challenging CMDC 2016 Tax Credit through the corresponding administrative appeal, CMDC has confirmed to VanGold that upon completion of the Asset Purchase Agreement, CMDC will immediately pay the CMDC 2016 Tax Credit and request the removal, as soon as possible, of the Tax Lien on the Segunda Fracción del Cubo Land, Fracción del Cubo Land and La Rosa de Castilla rustic surface lands to allow the acquisition of the same by OMPSA free and clear of any lien and/or encumbrance. We note that the Asset Purchase Agreement provides that if CMDC fails to remove and discharge the Tax Lien in full from the El Cubo Project on or before closing, VanGold shall be entitled to withhold from the purchase price on closing an amount sufficient to fully remove and discharge the Tax Lien from the El Cubo Project including all applicable interest and penalties and remit such amount directly to Tax Administration Office, in which event such amount shall be deemed to have been paid to and received by CMDC on account of the purchase price at closing.

- Copy of the Asset Purchase Agreement.
- Copy of the Environmental Permits listed in **Annex B** to this title report.
- Verbal and emailed information provided by CMDC.

Any agreement, application or filing made in respect of said concession, which recording, or acknowledgement has not been completed or made by DGM or RPM, is excluded from this report.

Our opinions are limited to the laws of the United Mexican States ("**Mexico**") as at the date hereof and not with respect to any other law.

Due to covid19 restrictions, the DGM and RMP have limited the access to public files and records, and we are relying on the information and copies of the documents delivered by CMDC to VHG for the purpose of rendering this title report. Once the public access and offices of the DGM and RMP are reopened, VHG will confirm and if necessary, update the information provided in this report.



Subject to the qualifications and assumptions expressed herein, our report follows:

### TITLE REPORT

	LOT	HOLDER	SURFACE (Hectares)	TITLE	TYPE OF CONCESSION	TERM	LOCATION
1	Albertina o La Merced*	CMDC	5.9316	182007	Mining	April 7, 2038	Guanajuato, Guanajuato
2	Ampl. de Pasadena*	CMDC	3.3399	182006	Mining	April 7, 2038	Guanajuato, Guanajuato
3	Ampl. de Cabrestante*	CMDC	8.0000	165795	Mining	December 10, 2029	Guanajuato, Guanajuato
4	Canta Ranas*	CMDC	98.5468	210492	Mining	October 7, 2049	Guanajuato, Guanajuato
5	Dalia	CMDC	129.0207	210951	Mining	February 28, 2050	Guanajuato, Guanajuato
6	El Cabrestante*	CMDC	9.0000	165792	Mining	December 10,2029	Guanajuato, Guanajuato
7	El Cuarteto*	CMDC	26.0910	182005	Mining	April 7, 2038	Guanajuato, Guanajuato
8	El Durazno*	CMDC	60.0000	164988	Mining	August 12, 2004	Guanajuato, Guanajuato
9	El Eden*	CMDC	1,675.7707	212009	Mining	August 17, 2050	Dolores Hidalgo, Guanajuato
10	Huematzin*	CMDC	37.5000	171591	Mining	November 8, 2032	Guanajuato, Guanajuato



11	La China*	CMDC	48.5754	165797	Mining	December 10, 2029	Guanajuato, Guanajuato
12	La Fragua*	CMDC	42.0000	165653	Mining	November 18, 2029	Guanajuato, Guanajuato
13	La Providencia*	CMDC	256.7454	211859	Mining	July 27, 2050	Dolores Hidalgo, Guanajuato
14	La Soledad*	CMDC	65.0000	165669	Mining	November 27, 2029	Guanajuato, Guanajuato
15	Luisa Evelia*	CMDC	22.2241	157855	Mining	November 29, 2022	Guanajuato, Guanajuato
16	Santa Fe del Monte*	CMDC	15.3541	154139	Mining	January 25, 2021	Guanajuato, Guanajuato
17	San Juan*	CMDC	37.3586	165791	Mining	December 10, 2029	Guanajuato, Guanajuato
18	Minas Viejas*	CMDC	16.0000	165794	Mining	December 10, 2029	Guanajuato, Guanajuato
19	Nueva Luz del Nayal*	CMDC	55.0000	165796	Mining	December 10, 2029	Guanajuato, Guanajuato
20	San Cayetano de Animas y Providencia*	CMDC	30.9920	181236	Mining	September 10, 2037	Guanajuato, Guanajuato
21	Socavón de los Alisos*	CMDC	66.3687	182003	Mining	April 07, 2038	Guanajuato, Guanajuato
22	San Juan Tacuitapa*	CMDC	24.0000	182004	Mining	April 07, 2038	Guanajuato, Guanajuato



23	Santa Rosa*	CMDC	20.5065	157913	Mining	December 06, 2022	Guanajuato, Guanajuato
24	San Patricio*	CMDC	3.4634	212168	Mining	September 21, 2050	Guanajuato, Guanajuato
25	La Sauceda**	CMDC	747.6730	213305	Mining	April 19, 2051	Guanajuato, Guanajuato
26	La Palma**	CMDC	327.7095	213435	Mining	May 10, 2051	Guanajuato, Guanajuato
27	Entre el Varal*	CMDC	3.8977	214132	Mining	August 09, 2051	Guanajuato, Guanajuato
28	La Asunción*	CMDC	10.0000	214133	Mining	August 09, 2051	Guanajuato, Guanajuato
29	Violeta*	CMDC	75.6694	214134	Mining	August 09, 2051	Guanajuato, Guanajuato
30	Maria Fracc. NE*	CMDC	146.1390	214135	Mining	August 09, 2051	Guanajuato, Guanajuato
31	Violeta*	CMDC	45.6837	214136	Mining	August 09, 2051	Guanajuato, Guanajuato
32	Las Palomas**	CMDC	257.0432	214260	Mining	September 05, 2051	Guanajuato, Guanajuato
33	Primera Ampliación de la Albertina o la Merced*	CMDC	8.8652	161513	Mining	April 24, 2025	Guanajuato, Guanajuato
34	Virjan*	CMDC	49.0000	214424	Mining		



						September 05, 2051	Guanajuato, Guanajuato
35	Siglo XXI**	CMDC	47.1809	214614	Mining	October 01, 2051	Guanajuato, Guanajuato
36	Los Pinguicos**	CMDC	985.1100	214742	Mining	November 21, 2051	Guanajuato, Guanajuato
37	Don Guillermo	CMDC	9.0808	215926	Mining	April 01, 2052	Guanajuato, Guanajuato
38	La Libertad*	CMDC	48.1000	165168	Mining	September 11, 2029	Guanajuato, Guanajuato
39	Paco	CMDC	188.2252	217999	Mining	September 29, 2052	Guanajuato, Guanajuato
40	Unificación Villalpando Norte*	CMDC	374.4603	229103	Mining	March 08, 2075	Guanajuato, Guanajuato
41	Unificación Villalpando Sur*	CMDC	318.1440	240917	Mining	March 08, 2057	Guanajuato, Guanajuato
42	Lety Fracción 1	CMDC	32.3682	235633	Mining	February 02, 2060	Guanajuato, Guanajuato
43	Lety Fracción 2	CMDC	18.3671	235634	Mining	February 02, 2060	Guanajuato, Guanajuato
44	Lety Fracción 3	CMDC	4.9644	235635	Mining	February 02, 2060	Guanajuato, Guanajuato
45	Marisela**	CMDC	135.9622	213751	Mining	June 14, 2051	Guanajuato, Guanajuato



46	El Chupiro*	CMDC	13.3873	171840	Mining	June 14, 2033	Guanajuato, Guanajuato
47	Ampl. de la Fragua*	CMDC	130.8850	164851	Mining	July 10, 2029	Guanajuato, Guanajuato
48	Durazno Prisco*	CMDC	43.7524	165109	Mining	August 22, 2029	Guanajuato, Guanajuato
49	Edelmira II*	CMDC	135.2726	165245	Mining	September 13, 2029.	Guanajuato, Guanajuato

\* Concessions grouped under Villalpando Group. \*\* Concessions grouped under Gracias a Dios Group.



### **RELEVANT INFORMATION OF THE MINING CONCESSIONS**

1.	Name of the lot:	ALBERTINA O LA MERCED		
	Title number:	182007		
	Titleholder	CMDC		
	Type of concession:	Mining Concession See note 1		
	Surface (hectares):	5.9316 Has.		
	Municipality:	Guanajuato, Guanajuato		
	Life of the concession:	From April 8, 1988 through April	7, 2038	
	Registration data of			
	the concession at RPM:	Book:	Mining Concessions	
		Volume:	248	
		Page:	98	
		Number:	387	
	Mining duties (surface taxes):	as of the date of this report, this c the payment of the correspondin Regarding the information provid	led by CMDC, DGM has not issued any the payment of any outstanding mining	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, oncession is in good standing regarding ks Reports. <b>See Note 3.</b>	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, jistered at RPM.	



2.	Name of the lot:	AMPL. DE PASADENA		
	Title number:	182006		
	Titleholder	CMDC		
	Type of concession:	Mining Concession See note 1		
	Surface (hectares):	3.3399 Has.		
	Municipality:	Guanajuato, Guanajuato		
	Life of the concession:	From April 8, 1988 through April	7, 2038	
	Registration data of the			
	concession at RPM:	Book:	Mining Concessions	
		Volume:	248	
		Page:	97	
		Number:	386	
	Mining duties (surface taxes):	as of the date of this report, this c the payment of the corresponding Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, oncession is in good standing regarding ks Reports. <b>See Note 3.</b>	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, jistered at RPM.	



3.	Name of the lot:	AMPL. DE CABRESTANTE	
	Title number:	165795	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	89.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 11, 1979 throug	h December 10, 2029
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	175
		Number:	695
	Mining duties (surface taxes):	as of the date of this report, this c the payment of the correspondin Regarding the information provid	ed by CMDC, DGM has not issued any the payment of any outstanding mining
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, oncession is in good standing regarding ks Reports. <b>See Note 3.</b>
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, jistered at RPM.



	Name of the lot:	CANTA RANAS	CANTA RANAS		
	Title number:	210492			
	Titleholder	CMDC			
	Type of concession:	Mining Concession See note 1			
	Surface (hectares):	98.5468 Has.			
	Municipality:	Guanajuato, Guanajuato			
	Life of the concession:	From October 8, 1999 through C	october 7, 2049		
ſ	Registration data of				
	the concession at RPM:	Book:	Mining Concessions		
		Volume:	310		
		Page:	156		
		Number:	312		
	taxes):	the payment of the correspondin Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining		
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding ks Reports. <b>See Note 3.</b>		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts registered or in process to be registered at RPM.			



5.	Name of the lot:	DALIA		
	Title number:	210951		
	Titleholder	CMDC		
	Type of concession:	Mining Concession <u>See note 1</u> 129.0207 Has. Guanajuato, Guanajuato		
	Surface (hectares):			
	Municipality:			
	Life of the concession:	From February 29, 2000 through	February 28, 2050	
	Registration data of			
	the concession at RPM:	Book:	Mining Concessions	
		Volume:	312	
		Page:	26	
		Number:	51	
	taxes):	the payment of the correspondin Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding ks Reports. <b>See Note 3.</b>	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, gistered at RPM.	



6.	Name of the lot:	EL CABRESTANTE		
	Title number:	165792		
	Titleholder	CMDC		
	Type of concession:	Mining Concession See note 1 9.0000 Has.		
	Surface (hectares):			
	Municipality:	Guanajuato, Guanajuato		
	Life of the concession:	From December 11, 1979 throug	h December 10, 2029	
	Registration data of			
	the concession at RPM:	Book:	Mining Concessions	
		Volume:	218	
		Page:	174	
		Number:	692	
	taxes):	the payment of the correspondin Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding ks Reports. <b>See Note 3.</b>	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, gistered at RPM.	



Name of the lot:	EL CUARTETO	
Title number:	182005	
Titleholder	CMDC	
Type of concession:	Mining Concession See note 1	
Surface (hectares):	29.0910 Has.	
Municipality:	Guanajuato, Guanajuato	
Life of the concession:	From April 7, 1988 through April 8, 2038	
Registration data of		
the concession at RPM:	Book:	Mining Concessions
	Volume:	248
	Page:	97
	Number:	385
Mining duties (surface taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion that as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding rks Reports. <b>See Note 3.</b>
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	



8.	Name of the lot:	EL DURAZNO	
	Title number:	164988	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	60.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 13, 1979 through A	ugust 12, 2029
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	73
		Number:	288
	Mining duties (surface taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion as of the date of this report, this concession is in good standing regative payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued official communication requesting the payment of any outstanding miduties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, oncession is in good standing regarding ks Reports. <b>See Note 3.</b>
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	registered or in process to be registered at RPM.	



9.	Name of the lot:	EL EDEN	
	Title number:	212009	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	1675.7707 Has.	
	Municipality:	Dolores Hidalgo, Guanajuato	
	Life of the concession:	From August 18, 2000 through August 17, 2050	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	315
		Page:	15
		Number:	29
	Mining duties (surface taxes):	as of the date of this report, this c the payment of the corresponding Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining
	Proof of Assessment Works:	as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. <b>See Note 3</b> . There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



10	Name of the lot:	HUEMATZIN	
	Title number:	171591	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	37.5000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From November 9, 1982 through November 8, 2032	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	227
		Page:	129
		Number:	511
	taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding rks Reports. <b>See Note 3.</b>
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	registered or in process to be registered at RPM.	



11	Name of the lot:	LA CHINA	
	Title number:	165797	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	48.5754 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 11, 1979 through December 10, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	175
		Number:	697
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>at Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



12	Name of the lot:	LA FRAGUA	
	Title number:	165653	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	42.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From November 19, 1979 through November 18, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	217
		Page:	159
		Number:	633
	taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding rks Reports. <b>See Note 3.</b>
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	registered or in process to be registered at RPM.	



13	Name of the lot:	LA PROVIDENCIA	
	Title number:	211859	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	256.7454 Has.	
	Municipality:	Dolores Hidalgo, Guanajuato	
	Life of the concession:	From July 28, 2000 through July 27, 2050	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	314
		Page:	120
		Number:	239
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



14	Name of the lot:	LA SOLEDAD	
	Title number:	165669	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	65.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From November 28, 1979 through November 27, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	158
		Number:	629
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



15	Name of the lot:	RENEWED)	ING CONCESSION SHOULD BE
	Title number:	157855	
	Titleholder CMDC		
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	22.2241 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From November 30, 1972 through November 29, 2022. Under the Mexican Mining Law holders of mining concessionaires are entitled to request the renewal of their concessions within the 5 years prior to the termination of the corresponding effective period, and provided that they are in full compliance with all the obligations imposed by the Mexican Mining Law to keep the concessions in good standing.	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	199
		Page:	133
		Number:	529
	Mining duties (surface taxes):	as of the date of this report, this c the payment of the correspondin Regarding the information provid	led by CMDC, DGM has not issued any g the payment of any outstanding mining
	Proof of Assessment Works:	as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.umbrances, contracts in stered with Registry ofThere are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



6	Name of the lot:	SANTA FE DEL MONTE	
	Title number:	154139	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	15.3541 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From January 26, 1971 through January 25, 2021. CMDC file December 18, 2020 the application under entry num 20200900135055, in order to extend the life of this concession another 50 years, under the Mexican Mining Law and its Regulations Under the Mexican Mining Law and its Regulations, the DGM has business days to process the extension application or prevent the sat should the DGM does not provide any communication or prevent the should the DGM does not provide any communication or prevention the application the extension would be deemed granted and CMDC be entitled to request the issuance and registration of the new mir certificate. Due to covid19 restrictions and the lagging on the application and procedures at the DGM, we anticipate that the issuance of the r mining certificate could take a couple of months but based on the dat the application, the documents attached therein, and the informal provided by CMDC, we are of the opinion that this concession should extended for an additional period of 50 years.	
	Registration data of the concession at RPM:	Book: Volume: Page:	Mining Concessions 193 49
	Mining duties (surface taxes):	Number:       193         Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.         Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession.         Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports.         There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



17	Name of the lot:	SAN JUAN	
	Title number:	165791	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	37.3586 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 11, 1979 through December 10, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	174
		Number:	691
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued an official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>mt Based on the information provided by CMDC, we are of the opinion that as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



18	Name of the lot:	MINAS VIEJAS	
	Title number:	165794	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	16.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 11, 1979 through December 10, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	174
		Number:	694
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



19	Name of the lot:	NUEVA LUZ DEL NAYAL	
	Title number:	165796	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	55.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 11, 1979 through December 10, 2029	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	218
		Page:	175
		Number:	696
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



20	Name of the lot:	SAN CAYETANO DE ÁNIMAS Y PROVIDENCIA	
	Title number:	181236	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	30.9920 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 11, 1987 through September 10, 2037	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	247
		Page:	5
		Number:	16
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



21	Name of the lot:	SOCAVON DE LOS ALISOS	
	Title number:	182003	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	66.3687 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From April 8, 1988 through April 7, 2038	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	248
		Page:	97
		Number:	383
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



22	Name of the lot:	SAN JUAN TACUITAPA	
	Title number:	182004	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	24.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From April 8, 1988 through April 7, 2038	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	248
		Page:	97
		Number:	384
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>t Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



23	Name of the lot:	SANTA ROSA	
	Title number:	157913	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	20.5065 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From December 7, 1972 through December 6, 2022	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	198
		Page:	143
		Number:	567
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3. There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



24	Name of the lot:	SAN PATRICIO	
	Title number:	212168	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	3.4634 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 22, 2000 throug	gh September 21, 2050
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	315
		Page:	94
		Number:	188
	taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



25	Name of the lot:	LA SAUCEDA	
	Title number:	213305	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	747.6730 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From April 20, 2001 through Apri	l 19, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	318
		Page:	123
		Number:	245
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



26	Name of the lot:	LA PALMA	
	Title number:	213435	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	327.7095 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From May 11, 2001 through May	/ 10, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	319
		Page:	8
		Number:	15
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. <b>See Note 3.</b> There are no liens, encumbrances, burdens or contracts in effect,	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



27	Name of the lot:	ENTRE EL VARAL	
	Title number:	214132	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	3.8977 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 10, 2001 through A	ugust 9, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	320
		Page:	176
		Number:	352
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



28	Name of the lot:	LA ASUNCIÓN	
	Title number:	214133	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	10.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 10, 2001 through A	August 9, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	320
		Page:	177
		Number:	353
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



29	Name of the lot:	VIOLETA	
	Title number:	214134	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	75.6694 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 10, 2001 through A	August 9, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	320
		Page:	177
		Number:	354
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. <b>See Note 3.</b> There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



30	Name of the lot:	MARIA FRACC. NE	
	Title number:	214135	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	146.1390 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 10, 2001 through A	August 09, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	320
		Page:	178
		Number:	355
	Mining duties (surface taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion that as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		ed by CMDC, we are of the opinion that, concession is in good standing regarding ks Reports. <b>See Note 3.</b>
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	<ul> <li>registered or in process to be registered at RPM.</li> <li>h</li> </ul>	



31	Name of the lot:	VIOLETA	
	Title number:	214136	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	45.6837 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 10, 2001 through A	ugust 09, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	320
		Page:	178
		Number:	356
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties. Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. <b>See Note 2.</b>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



32	Name of the lot:	LAS PALOMAS	
	Title number:	214260	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	257.0432 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 06, 2001 throug	gh September 05, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	321
		Page:	60
		Number:	120
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.essmentBased on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.erances, racts in ed withThere are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



33	Name of the lot:	PRIMERA AMPLIACION DE LA	ALBERTINA O LA MERCED
	Title number:	161513	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	8.8652 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From April 25, 1975 through April 25, 2025. Under the Mexican Mining Law holders of mining concessionaires are entitled to request the renewal of their concessions within the 5 years prior to the termination of the corresponding effective period, and provided that they are in full compliance with the obligations imposed by the Mexican Mining Law to keep the concessions in good standing.	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	210
		Page:	19
		Number:	73
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



34	Name of the lot:	VIRJAN	
	Title number:	214424	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	49.0000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 06, 2001 throug	gh September 05, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	321
		Page:	142
		Number:	284
	Mining duties (surface	Based on the information provide	d by CMDC, we are of the opinion that,
	taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>t Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> </ul>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):			



35	Name of the lot:	SIGLO XXI	
	Title number:	214614	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	47.1809 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From October 02, 2001 through	October 01, 2051
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	322
		Page:	57
		Number:	114
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):			



36	Name of the lot:	LOS PINGUICOS	
	Title number:	214742	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	985.1100 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From November 22, 2001 through November 21, 2051	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	322
		Page:	121
		Number:	242
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	



37	Name of the lot:	DON GUILLERMO	
	Title number:	215926	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	9.0808 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From April 02, 2002 through April 01, 2051	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	325
		Page:	173
		Number:	346
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	



38	Name of the lot:	LA LIBERTAD	
	Title number:	165168	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	48.1000 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 12, 1979 throug	gh September 11, 2029
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	217
		Page:	98
		Number:	388
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



39	Name of the lot:	PACO	
	Title number:	217999	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	182.2252 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From September 30, 2002 through September 29, 2052	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	331
		Page:	130
		Number:	259
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	



40	Name of the lot:	UNIFICACION VILLALPANDO	NORTE
	Title number:	229103	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	374.4603 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From March 09, 2007 through March 08, 2057	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	362
		Page:	102
		Number:	203
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties. Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. <b>See Note 2.</b>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):			



41	Name of the lot:	UNIFICACION VILLALPANDO	SUR
	Title number:	240917	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	318.1440 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From August 09, 2012, through I	March 08, 2057
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	395
		Page:	69
		Number:	137
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):			



42	Name of the lot:	LETY FRACCION 1	
	Title number:	235633	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	32.3682 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From February 03, 2010 through February 02, 2060	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	380
		Page:	127
		Number:	253
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
		There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, jistered at RPM.



43	Name of the lot:	LETY FRACCION 2	
	Title number:	253634	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	18.3671 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From February 03, 2010 through February 02, 2060	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	380
		Page:	127
		Number:	254
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		nces, burdens or contracts in effect, jistered at RPM.	



44	Name of the lot:	LETY FRACCION 3	
	Title number:	235635	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	4.9644 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From February 03, 2010 through February 02, 2060	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	380
		Page:	128
		Number:	255
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		nces, burdens or contracts in effect, jistered at RPM.	



45	Name of the lot:	MARISELA	
	Title number:	213751	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	135.9622 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From June 15, 2001 through June 14, 2051	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	319
		Page:	166
		Number:	331
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



46	Name of the lot:	EL CHUPIRO	
	Title number:	171840	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	13.3873 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From June 15, 1983 through June 14, 2033	
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	227
		Page:	161
		Number:	640
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.	



47	Name of the lot:	AMPL. DE LA FRAGUA	
	Title number:	164851	
	Titleholder	CMDC	
	Type of concession:	Mining Concession See note 1	
	Surface (hectares):	130.8850 Has.	
	Municipality:	Guanajuato, Guanajuato	
	Life of the concession:	From July 11, 1979 through July	10, 2029
	Registration data of		
	the concession at RPM:	Book:	Mining Concessions
		Volume:	217
		Page:	59
		Number:	231
	Mining duties (surface taxes):	<ul> <li>as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.</li> <li>as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.</li> <li>There are no liens, encumbrances, burdens or contracts in effect, registered or in process to be registered at RPM.</li> </ul>	
	Proof of Assessment Works:		
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):		



48	Name of the lot:	DURAZNO PRISCO					
	Title number:	165109					
	Titleholder	CMDC					
	Type of concession:	Mining Concession See note 1					
	Surface (hectares):	43.7524 Has. Guanajuato, Guanajuato					
	Municipality:						
	Life of the concession:	From August 23, 1979 through August 22, 2029					
	Registration data of						
	the concession at RPM:	Book:	Mining Concessions				
		Volume:	218				
		Page:	88				
		Number:	349				
	Mining duties (surface taxes):	<ul> <li>Based on the information provided by CMDC, we are of the opinion as of the date of this report, this concession is in good standing regative payment of the corresponding mining duties.</li> <li>Regarding the information provided by CMDC, DGM has not issue official communication requesting the payment of any outstanding reductive derived from this concession. See Note 2.</li> </ul>					
	Proof of Assessment Works:	Based on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. <b>See Note 3.</b>					
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):	There are no liens, encumbra registered or in process to be reg	nces, burdens or contracts in effect, jistered at RPM.				



49	Name of the lot:	EDELMIRA II					
	Title number:	165245					
	Titleholder	CMDC					
	Type of concession:	Mining Concession See note 1					
	Surface (hectares):	135.2726 Has.					
	Municipality:	Guanajuato, Guanajuato					
	Life of the concession:	From September 14, 1979 through September 13, 2029					
	Registration data of						
	the concession at RPM:	Book: Mining Concessions					
		Volume:	217				
		Page:	107				
		Number:	425				
	Mining duties (surface taxes):	as of the date of this report, this concession is in good standing regarding the payment of the corresponding mining duties.Regarding the information provided by CMDC, DGM has not issued any official communication requesting the payment of any outstanding mining duties derived from this concession. See Note 2.AssessmentBased on the information provided by CMDC, we are of the opinion that, as of the date of this report, this concession is in good standing regarding the filing of the Assessment Works Reports. See Note 3.ncumbrances, or contracts in gistered with c Registry ofThere are no liens, encumbrances, burdens or contracts in effect, registered at RPM.					
	Proof of Assessment Works:						
	Liens, encumbrances, burdens or contracts in effect, registered with the Public Registry of Mining (RPM):						



## NOTES

- 1. As concerns the type of concessions and the life of said concessions, it is important to notice that, on April 28, 2005, the Mexican Mining Law was amended and one of the most important purposes of said amendment was to change the legal regime applicable to the mining concessions, from two kinds of concessions formerly recognized (exploration and exploitation) to only one kind of mining concession, with a term of 50 (fifty) years counted from the date on which the respective title is recorded in the RPM, in such a manner that, effectively as of January 1, 2006, the mining concessionaires are formally allowed to perform exploration and exploitation of minerals, since the date on which the mining concession title is issued.
- 2. Should there be any mining duties incorrectly or not paid, the DGM would have the obligation to provide to the concessionaire with an official communication granting the latter a 60 day-term from the date on which the respective official communication is received, to either provide DGM with sufficient evidence that the respective payment was timely and correctly made or to cure said deficiency by means of paying the outstanding mining duties plus the corresponding surcharges and provide the DGM with copies of said payments. In the worst scenario, assuming the aforesaid official communication is issued and the concessionaire does not properly answers during the abovementioned term of 60 days, DGM would initiate the procedure to cancel the respective concession for that reason.
- **3.** Pursuant to that set forth in the Mexican Mining Law, holders of mining concessions are obliged to perform mining works in their concessions, taking into consideration for said purposes the minimum investment amounts provided for in the Regulations to the Mexican Mining Law.

Concessionaires that hold concessions covering a surface of more than 1,000 (one thousand) hectares, also have the obligation to file before the DGM annual assessment works reports, during the month of May; concessionaires that hold less than 1,000 hectares do not have this obligation. It is important to mention that the concessionaire has to confirm if he has another mining concessions, in order to know if he should or not comply with this obligation.

Notwithstanding the foregoing, it is of utmost importance to consider that the DGM may at any time verify the mining works within the lots; which would include the information contained in the reports submitted to such authority; should such be the case, concessionaires must provide with documents evidencing the investments reported and also attend the inspection visit that must be carried out by the DGM.

4. As part of the obligations derived from titles of mining concessions, concessionaires have the obligation to file after the sixth year of the term of the concession: (i) production reports on mineral obtained from the concessions; and (ii) technical reports on works carried out the company is current in the compliance in this obligation; this last obligation must be fulfilled only once after the sixth year of the term of the concession.



## CONCLUSIONS

- 1. We are of the opinion that, as of the date hereof, the Concessions that are the subject matter of this Title Report are valid in full force and effects.
- 2. There is no evidence in the public records of any lien, encumbrance, burden or judicial proceeding currently affecting the Concession subject matter of this title report, nor has any contract or agreement been recorded, whereby the rights deriving from said concessions are transferred or optioned to a third party different to the ones described in this document
- **3.** As of the date of this report, the Concessions are in good standing regarding the payment of the mining duties, including the mining duties due in January 2021.
- **4.** As of the date of this report, the Concessions are in good standing regarding the filing of the Assessment Work Reports.
- 5. Likewise, and regarding the evidence provided by CMDC, we are of the opinion that, as of the date of this report, the Concessions are in good standing regarding the filing of the Production Reports.
- 6. CMDC is the owner of the surface rights to El Cubo Project trough Segunda Fracción del Cubo Land, Fracción Del Cubo Land, La Rosa de Castilla Land on which the El Tajo Plant, all buildings, equipment, machinery, tools and improvements required to operate the same are located and holds additional access rights through the Cebolletas Temporary Occupancy Agreement duly described in this report. See Annex A.
- 7. Except for the Tax Lien, there are no restrictions on the surface rights owned or hold by CMDC, as of the date of this report.
- 8. Except for the fines issued by PROFEPA in 2013 in the amount of MXP\$800,000 each with respect to two waste dumps located on the El Cubo Mines Project, being at Tepetateras Calaberas and Santa Cecilia, El Cubo Project is compliant with all environmental permits and obligations and there are no apparent significant legal, environmental, or political considerations that would have an adverse effect on the extraction and processing of the mineral resources and reserves located at El Cubo Project.
- **9.** To the best of our knowledge there are no restrictions on the ability of CMDC to transfer the Concessions and all assets contemplated in the Asset Purchase Agreement to OMPSA under applicable laws, as of the date of this report.
- 10. To the best of our knowledge and upon effecting in Mexico the Asset Purchase Agreement, OMPSA will have the full and exclusive right, including receipt or all required permits, licenses and other applicable governmental and regulatory approvals, to carry out the operation at El Cubo Project. We have been advised by VanGold that should additional permits or authorizations are required they will be applying for any other necessary permits immediately following the closing of the transaction.



In order to provide this report, we have assumed: (i) the authenticity of all of the documents provided, (ii) the genuineness of all of the signatures in the documents, (iii) the validity and authenticity of all of the seals affixed thereto, and (iv) the veracity of all of the representations made and information provided in all of those documents.

The opinions expressed herein are based upon the law in effect on the date hereof, and we assume no obligation to revise or supplement this report should such law be changed in any respect by legislative action, judicial decision or otherwise.

We are only authorized to practice law in México and are not permitted to practice in any other jurisdiction, and hence we do not purport to be experts on, or to express any opinion herein concerning, any law other than the laws of the United Mexican States.

Deriving from that mentioned above, this Firm grants no warranty particularly with respect to the viability or future success of the operations in the Concessions subject matter of this report nor El Cubo Project.

This report is being furnished for the benefit of the TSX Venture Exchange, and for the use and/or purposes such entity may consider necessary.

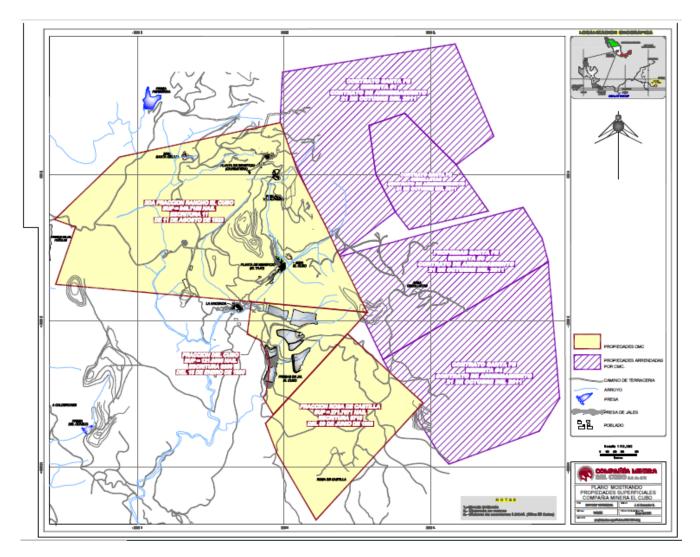
Sincerely, VHG Servicios Legales, S.C.

Juan M. Coronado Avila

**Patricia Vivar Zirate** 



Annex A

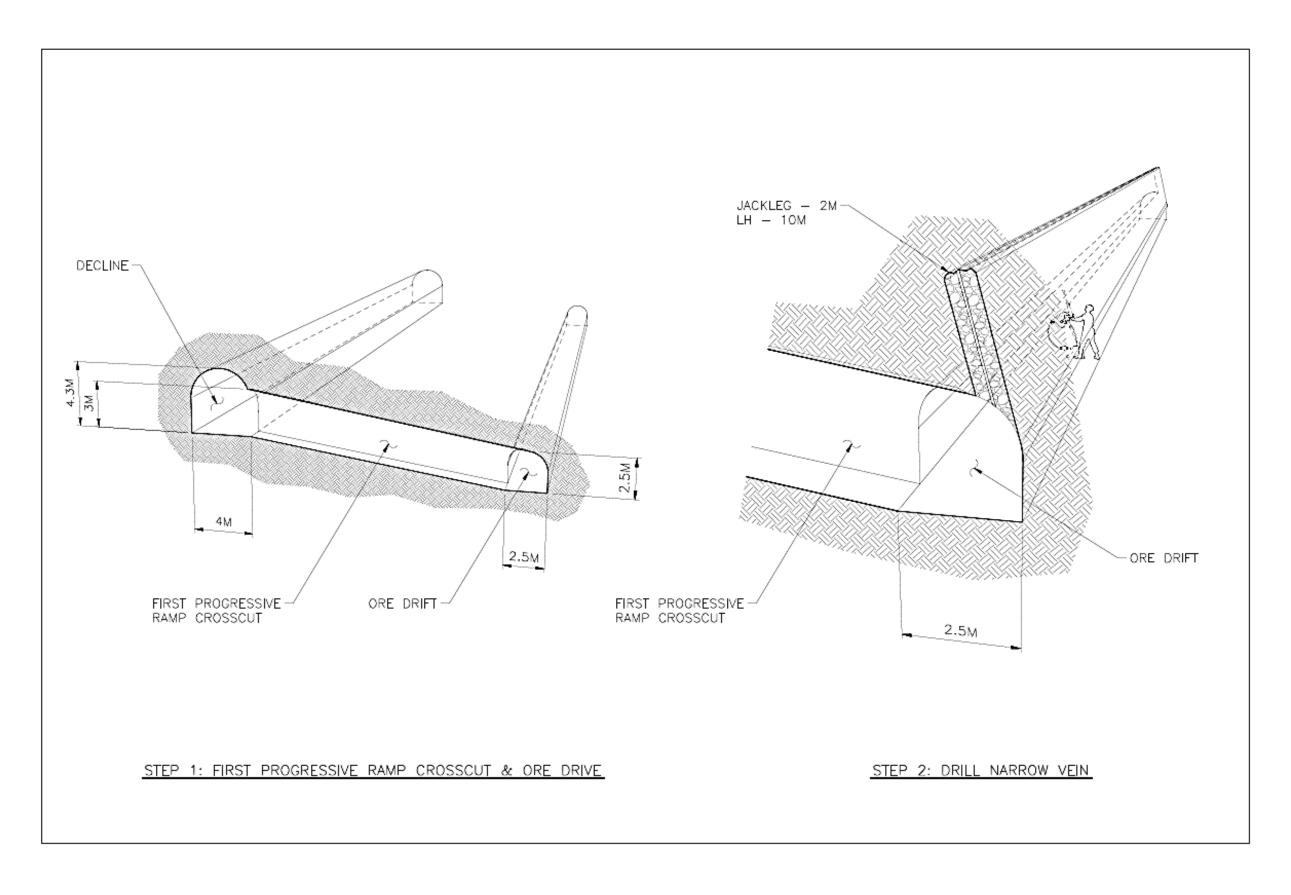


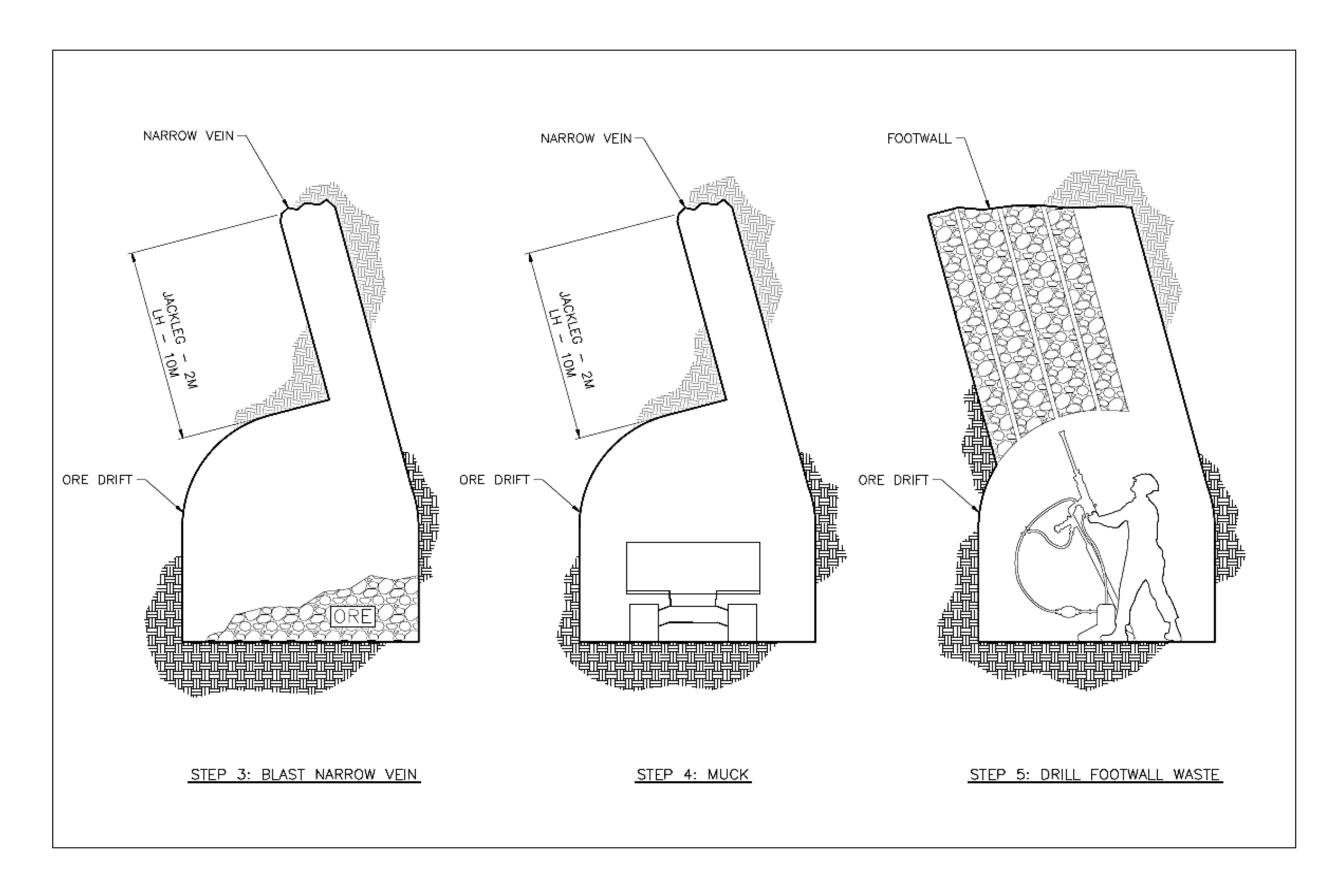


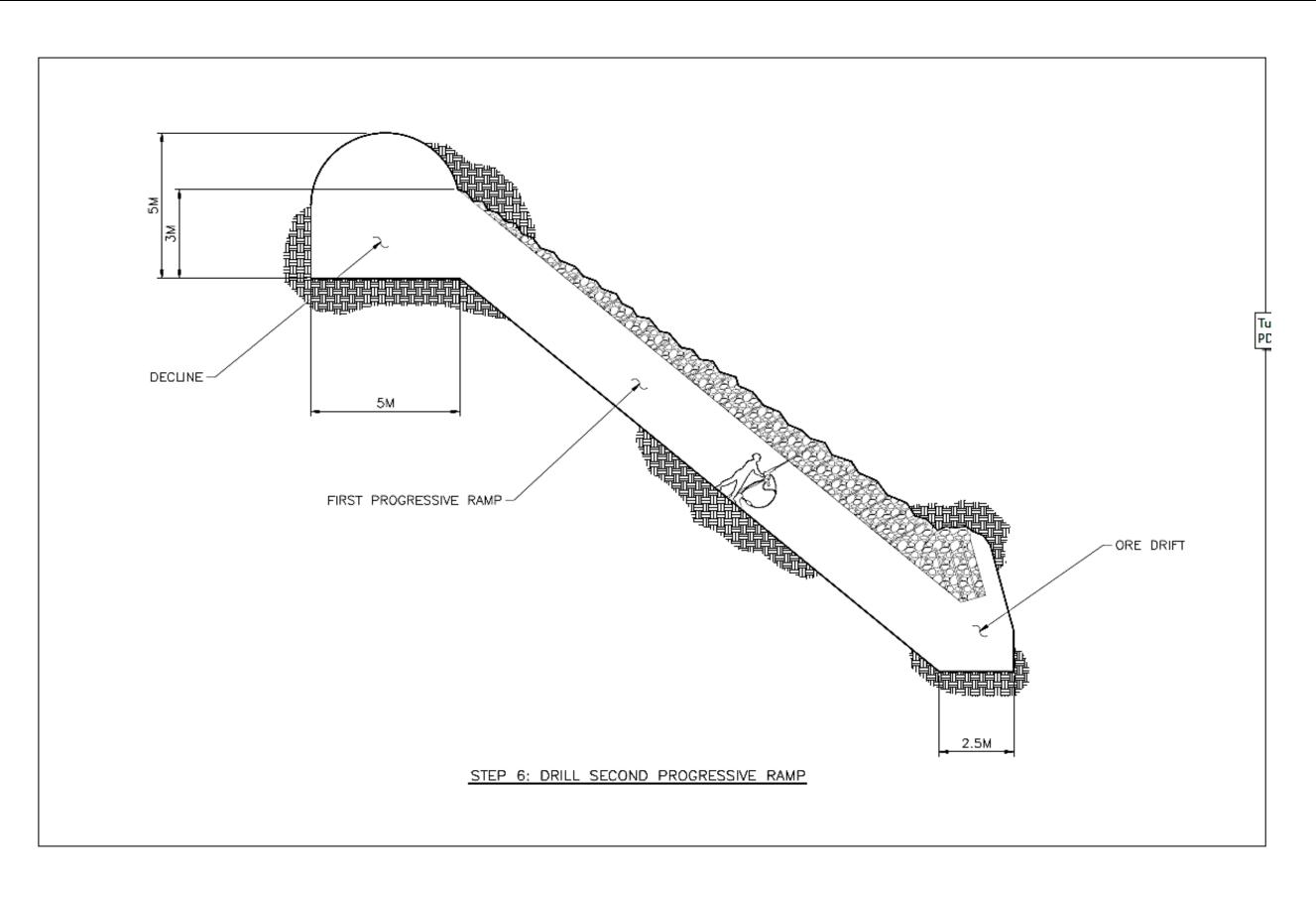
## ANNEX B

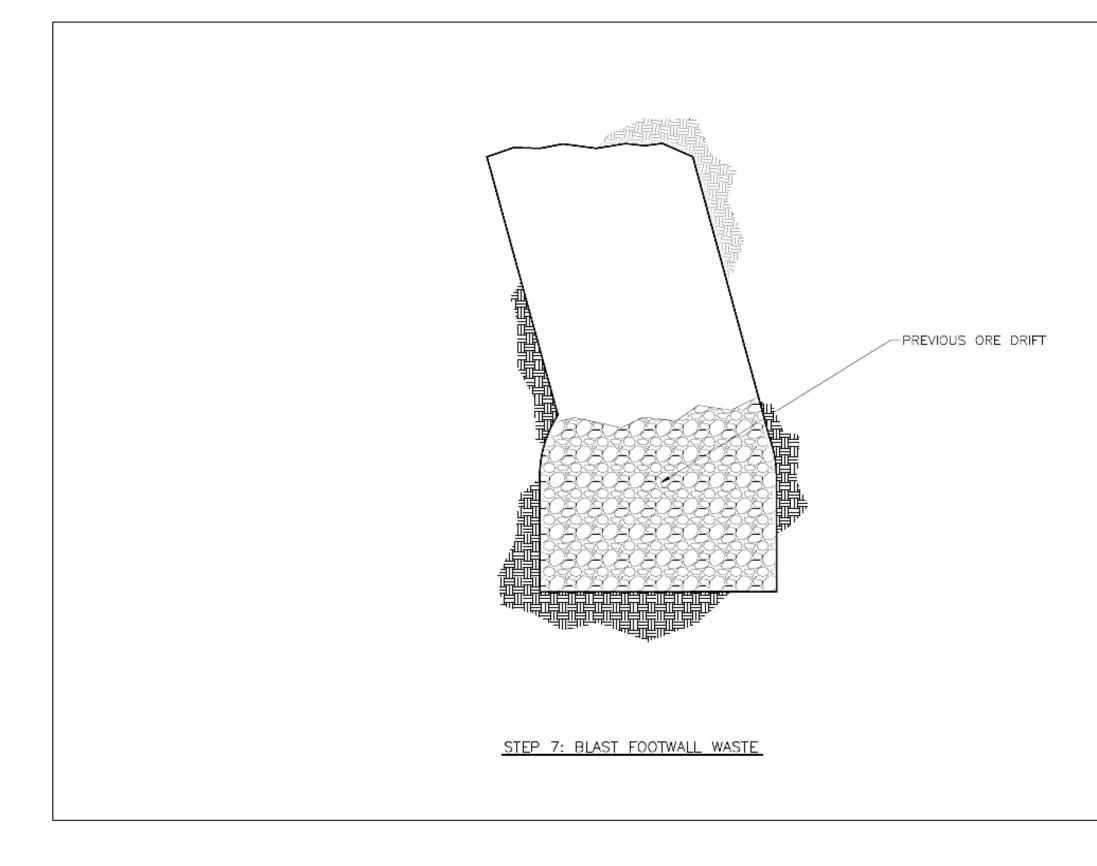
	Jurisdiction	Project	Authorization	Log/Project Code	Matter
1	Federal (DGIRA)       Operation, maintinance, closure a abandonment of the Del Cubo Mining Premi (Recinto Minero del Cubo).		SGPA/DGIRA/DG 02053	11GU2018M0004	Environmental Impact
2		Beneficiation Plant Engineer Ricardo Chico Villaseñor	D.O.O.DGOEIA001788	-	Environmental Impact
3		Tailings Dam at La Chirimitera	D.O.ODGOEIA006508	-	Environmental Impact
	Federal (SEMARNAT Guanajuato Branch)	Environmental Registry Number ( <i>Número de Registro Ambiental</i> ; NRA)	MCUMJ1101511	-	Waste / Atmosphere
4		Registry as great hazardous waste generator	MCUMJ1101511	-	Waste
5	Federal (DGGIMAR)	Hazardous Waste Management Plan	11-PMG-I-3739-2019	11/FW-0064/10/19	Waste
6		Mining Waste Management Plan		11/GC-0063/10/19	Waste
7	Federal (SEMARNAT Guanajuato Branch)	Environmental Permit	Gto131.1.1/0624/09	11/LU-0047/07/09	Waste / Atmosphere
8	Municipal (General Directorate of Environment and Territorial Order; Dirección General de Medio Ambiente y Ordenamiento Territorial)	Feasibility Certification	DAU/0030/2020	-	Land Use
9	Federal (CONAGUA)	Waste Water Discharge Permit	4GUA101250/12EMGE94	-	

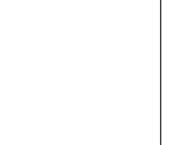
APPENDIX 2.0 RESUE MINING

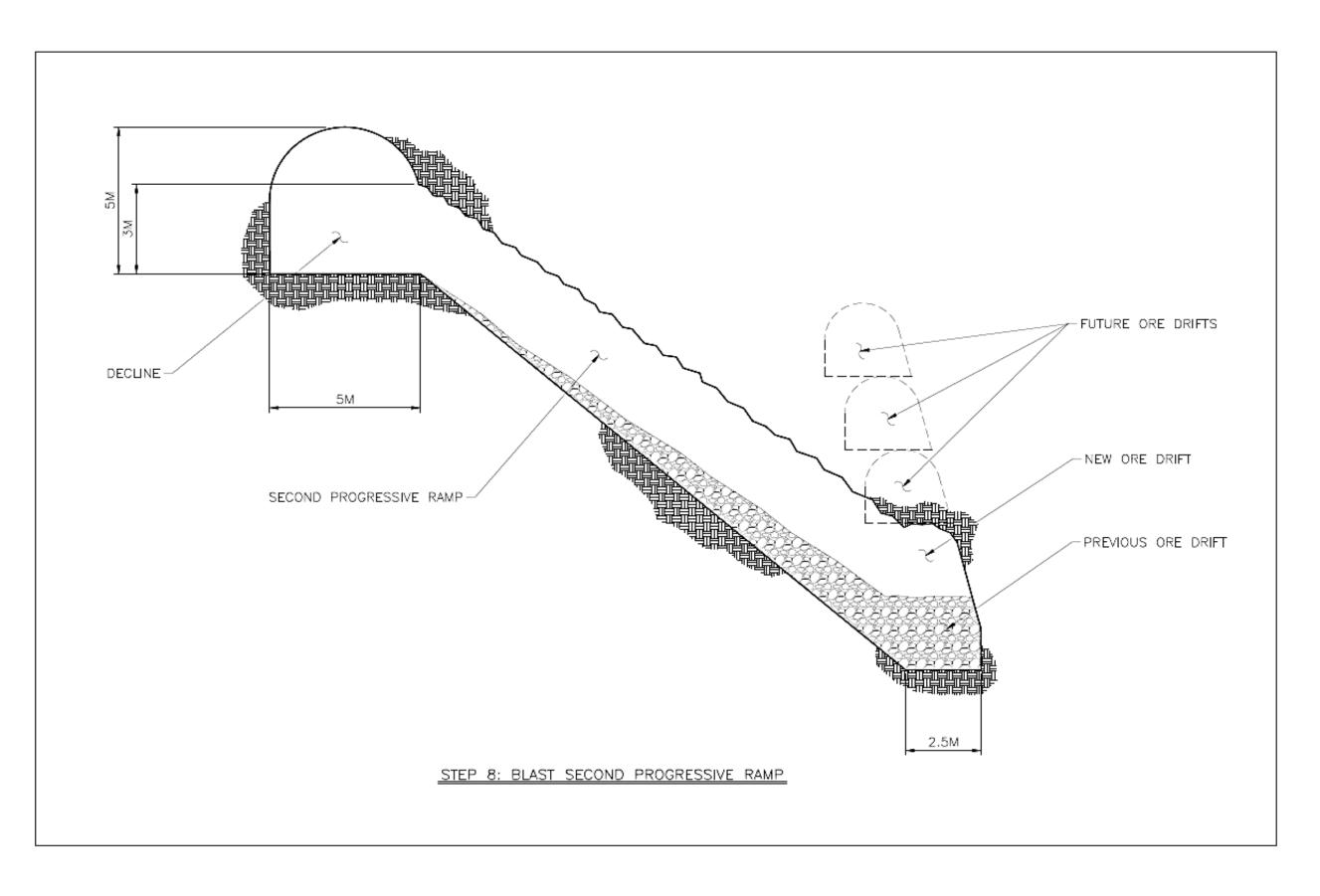












APPENDIX 3.0 MINE EQUIPMENT LIST FOR EL CUBO AND EL PINGUICO

MINE EQUIPMENT FOR EL CUBO (YEAR 1)						
EL CUBO – Year 1	Capa	city	Quantity	at \$US	\$US	
Surface Mobile Fleet					577,500	
Surface Truck	7	m <sup>3</sup>	1	106,000	106,000	
Grader			0	373,000	-	
Fork Tractor			1	396,500	396,500	
Vehicle			5	15,000	75,000	
Surface Fixed Plant					715,800	
Compressor	300	hp	3	86,600	259,800	
Primary Fan			2	228,000	456,000	
Underground Mobile Fleet					7,554,400	
Scoop Tram	1.5	m <sup>3</sup>	7	383,000	2,681,000	
Scoop Tram	4.5	m <sup>3</sup>	2	642,200	1,284,400	
Underground Truck	4.0	t	0	143,900	-	
Underground Truck	10.0	t	4	225,100	900,400	
Locomotive	4.5	t	0	127,400	-	
Tractor			2	793,000	1,586,000	
ATV			2	189,000	378,000	
Jumbo			1	724,600	724,600	
Raise-Bore			0		-	
LH Rig			0	415,300	-	
TeleHandler			0	336,000	-	
Underground Fixed Plant					1,303,535	
Sub-station			1	149,900	149,900	
Secondary Fan			6	14,286	85,714	
Fixed Pump			2	23,810	47,619	
Portable Pump			3	7,143	21,429	
Workshop			3	23,810	71,429	
4" Air/Water Pipe (m)			2,600	19	49,524	
2" Air/Water Pipe (m)			4,000	3	13,334	
Cable (m)			5,850	62	365,286	
Crusher			1	131,800	131,800	
Fan			10	18,210	182,100	
Jackleg			20	9,270	185,400	
Slusher			0	28,870	-	

TABLE A3.1Mine Equipment for EL Cubo (Year 1)

ADDITIONAL MINE					
EL CUBO – Year 2+	Capacity		Quantity	at \$US	\$US
Surface Mobile Fleet					121,000
Surface Truck	7	m <sup>3</sup>	1	106,000	106,000
Grader			0	373,000	-
Fork Tractor			0	396,500	-
Vehicle			1	15,000	15,000
Surface Fixed Plant					-
Compressor	300	hp	0	86,600	-
Primary Fan			0	228,000	-
Underground Mobile Fleet					3,232,500
Scoop Tram	1.5	m <sup>3</sup>	5	383,000	1,915,000
Scoop Tram	4.5	m <sup>3</sup>	1	642,200	642,200
Ungerground Truck	4.0	t	0	143,900	-
Underground Truck	10.0	t	3	225,100	675,300
Locomotive	4.5	t	0	127,400	-
Tractor			0	793,000	-
ATV			0	189,000	-
Jumbo			0	724,600	-
Raise-Bore			0		-
LH Rig			0	415,300	-
TeleHandler			0	336,000	-
Underground Fixed Plant					769,517
Sub-station			1	149,900	149,900
Secondary Fan			4	14,286	57,143
Fixed Pump			1	23,810	23,810
Portable Pump			2	7,143	14,286
Workshop			0	23,810	-
4" Air/Water Pipe (m)			2,400	19	45,714
2" Air/Water Pipe (m)			4,000	3	13,334
Cable (m)			2,150	62	134,250
Crusher			-	131,800	-
Fan			8	18,210	145,680
Jackleg			20	9,270	185,400
Slusher			0	28,870	-

 TABLE A3.2

 Additional Mine Equipment for EL Cubo (Year 2+)

EL PINGUICO	Capa		Quantity	at \$US	\$US
Surface Mobile Fleet					30,000
Surface Truck	15	t	0	326,088	-
Loader			0	500,000	-
Water truck			0	200,000	-
Grader			0	373,000	-
Fork Tractor			0	396,500	-
Vehicle			2	15,000	30,000
Surface Fixed Plant					665,600
Power Supply			1	53,000	53,000
Winder and Headframe			0	400,000	-
Surface Stockpile Loading			1	70,000	70,000
Compressor	300	hp	1	86,600	86,600
Fan			2	228,000	456,000
Underground Mobile Fleet					-
Scoop Tram	1.5	m <sup>3</sup>	0	383,000	-
Scoop Tram	4.5	m <sup>3</sup>	0	642,200	-
Underground Truck	4.0	t	0	143,900	-
Underground Truck	10.0	t	0	225,100	-
Locomotive	4.5	t	0	127,400	-
Tractor			0	793,000	-
ATV			0	189,000	-
Jumbo			0	724,600	-
TeleHandler			0	336,000	-
Underground Fixed Plant					149,900
Sub-station			1	149,900	149,900
4" Air/Water Pipe (m)			-	19	-
2" Air/Water Pipe (m)			-	3	-
Cable (m)			-	62	-
Fan			0	18,210	-
Jackleg			0	9,270	-
Slusher			0	28,870	-

TABLE A3.3EL PINGUICO MINE EQUIPMENT LIST