NI 43-101 TECHNICAL REPORT ON THE FEASIBILITY STUDY OF THE TERRONERA PROJECT Jalisco State, Mexico

Effective Date: 9 September 2021

Prepared for: Endeavour Silver Corp.

Prepared by:

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Mr. Kirk Hanson, P.E. (Wood)
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Important Notice

This report was prepared as a National Instrument 43-101 Technical Report for Endeavour Silver Corp. (Endeavour Silver) by Wood Canada Limited (Wood). The quality of information, conclusions and estimates contained herein is consistent with the terms of reference, constraints, and circumstances under which the report was prepared by Wood and the report is based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report.

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wood.

CERTIFICATE OF QUALIFIED PERSON

Tatiana R. Alva Jimenez, P.Geo.
Wood Canada Limited
111 Dunsmuir St, Suite 400
Vancouver, British Columbia, Canada V6B 5W3

I, Tatiana R. Alva Jimenez, P.Geo., am employed as a Principal Resource Geologist with Wood Canada Limited.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of Engineers and Geoscientist of British Columbia (Reg. No. 48312). I graduated from the Universidad Nacional de Ingenieria, Peru in 2000 as a Geologist and obtained a Master of Science (MSc) from the University of British Columbia, Canada in 2011.

I have practiced my profession for 20 years. I have been directly involved in drilling supervision, sampling techniques, ore control, diamond drill and reverse circulation logging, supervision of technical staff, QA/QC sample control, data management and have worked as a Geostatistician and Mineral Resource geologist on base and precious metal deposits in North and South America.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Terronera property between May 17-19, 2021.

I am responsible for Sections 1.1, 1.2, 1.7, 1.8, 1.10, 1.19, 1.21; Section 2; Section 3; Section 11; Section 12; Section 14; Section 25.3, 25.4; Sections 26.1, 26.4, 26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the Terronera property.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

____

Tatiana Alva Jimenez, M.Sc., P.Geo.

Dated: October 21, 2021

CERTIFICATE OF QUALIFIED PERSON

William Bagnell, P.Eng.
Wood Canada Limited
111 Dunsmuir St, Suite 400
Vancouver, British Columbia, Canada V6B 5W3

I, William Bagnell, P.Eng. am employed as a Technical Director, Underground Mining with Wood Canada Limited.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of Association of Professional Engineers and Geoscientists of Saskatchewan (# 12147). I graduated from the Technical University of Nova Scotia in 1996 with a Bachelor of Engineering, Mining.

I have practiced my profession for 25 years. I have been directly involved in mine planning and Mineral Reserve estimation for pre-feasibility and feasibility level studies for underground projects in uranium, gold, potash and diamonds. I have been in a senior technical role with mine operations in coal, potash, gold, and base metals.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I am responsible for Sections 1.1, 1.2, 1.11, 1.12, 1.17.1, 1.17.2, 1.19, 1.20, 1.21; Section 2; Section 3; Section 15; Sections 16.1, 16.5-16.9; Sections 21.1, 21.2.1-21.2.4, 21.2.10-21.2.12, 21.3, 21.4.1, 21.4.2, Section 24; Sections 25.5, 25.6, 25.11, 25.13, 25.14; Section 26.1, 26.3, 26.4, 26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have no previous involvement with the Terronera property.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

William Bagnell, P.Eng.

Dated: October, 21 2021

CERTIFICATE OF QUALIFIED PERSON

Adam Coulson, PhD., P.Eng.
Wood Canada Limited
2020 Winston Park Drive, Suite #600
Oakville, Ontario, Canada, L6H 6X7

I, Adam Coulson PhD., P.Eng. am employed as a Principal Rock Mechanics Specialist with Wood Canada Limited.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of Professional Engineers of Ontario (Member No. 100049242). I graduated with a B.Eng, from Camborne School of Mines, UK in 1990; obtained a MSc. (Eng) from Queens University, Canada in 1996; and a PhD. from the University of Toronto, Canada in 2009.

I have practiced my profession for 31 years. I have been employed by mining operations, as a consulting engineer, and in rock mechanics research during this time with specialization in underground and open pit mine design.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I am responsible for parts of Sections 1.1, 1.2, 1.12, 1.19, 1.20, 1.21; Section 2; Section 3; Sections 16.2, 16.3; Sections 25.13, 25.14; Section 26.1, 26.3, 26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the Terronera property.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

____

Adam Coulson, PhD., P.Eng.

Dated: October, 21 2021

CERTIFICATE OF QUALIFIED PERSON

Alan Drake, P.L.Eng.
Wood Canada Limited
111 Dunsmuir St, Suite 400
Vancouver, British Columbia, Canada V6B 5W3

I, Alan Drake, P.L.Eng., am employed as a Manager, Process Engineering with Wood Canada Limited.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a Professional Licensee Engineering with Engineers and Geoscientists British Columbia. I graduated from the Technicon Witwatersrand with a National Higher Diploma in Extraction Metallurgy in 1993.

I have practiced my profession for 27 years. I have been directly involved in metallurgical plant operations, process design, construction and commissioning of minerals processing and hydrometallurgical facilities for base and precious metals.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I am responsible for Sections 1.1, 1.2, 1.9, 1.13, 1.17.1, 1.17.2, 1.19, 1.20, 1.21; Section 2; Section 3; Section 13; Section 17; Sections 21.1, 21.2.1-21.2.3, 21.2.6, 21.2.7, 21.2.10, 21.2.11, 21.2.12, 21.4.1, 21.4.3, 21.4.4; Sections 25.7, 25.11, 25.13, 25.14; Sections 26.1, 26.5, 26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the Terronera property.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

Alan Drake, P.L.Eng.

Dated: October, 21 2021

CERTIFICATE OF QUALIFIED PERSON

Kirk Hanson, P.E.
Wood USA Mining Consulting SLC Engineering
10876 S River Front Pkwy #250
South Jordan, UT 84095 United States

I, Kirk Hanson, P.E., am employed as a Technical Director, Open Pit Mining with Wood USA Mining Consulting SLC Engineering.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am registered as a Professional Engineer in the State of Idaho (#11063). I graduated with a B.Sc. degree from Montana Tech of the University of Montana, Butte, Montana in 1989 and from Boise State University, Boise, Idaho with an MBA degree in 2004.

I have practiced my profession for 32 years. I was Engineering Superintendent at Barrick's Goldstrike operation, where I was responsible for all aspects of open-pit mining, mine designs, mine expansions and strategic planning. After earning an MBA in 2004, I was assistant manager of operations and maintenance for the largest road department in Idaho. In 2007, I joined AMEC (now Wood) as a principal mining consultant. Over the past 14 years, I have been the mining lead for multiple scoping, pre-feasibility, and feasibility studies. I have also done financial modelling for multiple mines as part of completing the scoping, pre-feasibility and feasibility studies.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I am responsible for Sections 1.1, 1.2, 1.18, 1.19; Section 2; Section 3, Section 22; Section 25.12; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement been involved with the Terronera property.

I have read NI 43–101, and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

____

Kirk Hanson, P.E. Technical Director

Dated: October 21, 2021

CERTIFICATE OF QUALIFIED PERSON

Paul G. Ivancie, C.P.G.
Wood E&I Solutions
920 East Sheridan, Suite A
Laramie, Wyoming 82070

I, Paul G. Ivancie, C.P.G., am employed as an Associate Hydrogeologist with Wood E&I Solutions.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of American Institute of Professional Geologists (Certified Professional Geologist, #8507), and a registered professional geologist in the following States: Wyoming, PG -171, Texas, 5235 and Nebraska, G-0479. I graduated from the University of Colorado, Boulder, 1982 with a B.A. degree in Geology.

I have practiced my profession for 38 years. I have worked as an exploration and development geologist in the petroleum industry from 1983 to 1990 and began practicing in water resources and hydrogeology thereafter. I was water resources manager for 14 years with JR Engineering, Ltd responsible for all aspects of surface water and groundwater exploration and development, well design, and strategic water rights planning. In 2009, I joined AMEC (now Wood) as an associate hydrogeology consultant. Over the past 13 years, I have been working with and have supported several mining scoping, pre-feasibility, and feasibility studies.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Terronera property between January 11-14, 2021.

I am responsible for Sections 1.1, 1.2, 1.19, 1.20, 1.21; Section 2; Section 3; Section 16.4; Sections 25.13, 25.14; Sections 26.1, 26.7, 26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the Terronera property.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

Paul G. Ivancie, C.P.G.

Dated: October 21, 2021

CERTIFICATE OF QUALIFIED PERSON

Dale Mah, P.Geo.
Endeavour Silver Corp.
609 Granville St, Suite1130
Vancouver, British Columbia, Canada, V7Y 1G5
Tel: (604) 685-9775

I, Dale Mah, P,Geo., am currently employed as Vice President, Corporate Development with Endeavour Silver Corp. ("Endeavour Silver").

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of the Engineers & Geoscientists, British Columbia (#52136). I graduated from the University of Alberta with a Bachelor of Science (Specialization) degree in Geology in 1996.

I have practiced my profession for over 25 years. In this time I have been directly involved in generating and managing exploration activities, and in the collection, supervision and review of geological, mineralization, exploration and drilling data; geological models; sampling, sample preparation, assaying and other resource-estimation related analyses; assessment of quality assurance-quality control data and databases; supervision of Mineral Resource estimates; project valuation and cash flow modeling.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Terronera Property between November 9-10, 2016 and most recently between October 15-16, 2021.

I am responsible for Sections 1.1-1.7, 1.15, 1.19, 1.21; Sections 2-10; Section 19; Section 23; Section 25.1-25.3, 25.10; Sections 26.1, 26.2, 26.9; and Section 27 of the Technical Report.

I am not independent of Endeavour Silver as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Terronera property since my employment commenced with Endeavour Silver in June 2016.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

"signed and stamped"

Dale Mah, P.Geo.

Dated: October 21, 2021

CERTIFICATE OF QUALIFIED PERSON

Humberto F. Preciado, P.E.
Wood Environment & Infrastructure Solutions, Inc.
2000 S. Colorado Blvd., Suite 2-1000
Denver, Colorado, USA 80222

I, Humberto F. Preciado, P.E., am employed as a Principal Geotechnical Engineer with Wood Environment & Infrastructure Solutions, Inc.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" with an effective date of September 9, 2021 (the "Technical Report").

I am a member of the Society for Mining, Metallurgy & Exploration and I am a registered Professional Engineer (Civil) in the States of Arizona, Colorado and Nevada. I graduated from Universidad Autónoma de Guadalajara in 1992 with a Bachelor of Science in Civil Engineering and earned a PhD in Civil Engineering from the University of British Columbia in 2005.

I have practiced my profession 29 years. During this time I have conducted and reviewed multiple environmental studies, statements, as well as civil and geoenvironmental design of waste storage facilities for infrastructure and mining projects/operations. I have been involved in previous NI 43-101 studies such as the AZOD Zinc Oxide Pre-feasibility and Ollachea Gold Feasibility Projects in Peru, the Las Chispas Feasibility Project in Mexico, and the Cozamin Mine in Mexico.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Terronera property between December 11-14, 2015.

I am responsible for contributions to Sections 1.1, 1.2, 1.14, 1.16, 1.17.1, 1.19-1.21; Section 2; Section 3; Section 18; Section 20; Sections 21.1, 21.2.1-21.2.3, 21.2.5, 21.2.8-21.2.12, 21.3; Sections 25.8, 25.9, 25.13, 25.14; Sections 26.1, 26.6-26.9; and Section 27 of the Technical Report.

I am independent of Endeavour Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Terronera property since 2015 participating in the geotechnical investigation and the pre-feasibility design of the tailings and waste rock storage facilities and as a Qualified Person for previous Technical Reports entitled "Updated Technical Report for the Terronera Project, Jalisco State, Mexico" with effective date of February 12, 2019 and "Endeavour Silver Corp Terronera Project NI 43-101 Technical Report" with effective date July 14, 2020.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

Humberto F. Preciado, P.E.

Dated: October, 21 2021

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1.0 SUMMARY

1.1 Introduction

Wood Canada Ltd. (Wood), together with Endeavour Silver Corp. (Endeavour Silver), prepared the Technical Report (Report) summarizing the results of a feasibility study (FS) on the Terronera Silver-Gold Project (Terronera Project). The Terronera Project is located 50 km northeast of Puerto Vallarta in Jalisco State, Mexico.

1.2 Terms of Reference

Mineral Resource and Mineral Reserve estimates were prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019) and followed the definitions in CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014).

Measurement units used in this Report are metric unless otherwise noted. Currency is expressed in US dollars or unless specified as Mexican pesos (MXN).

1.3 Property Description and Location

The Terronera Project is located in the mountainous region of San Sebastián, a historical mining district in Mexico. The site can be accessed via Federal Highway No. 70 from Guadalajara, approximately 160 km southeast, and from Puerto Vallarta approximately 50 km southwest (Figure 1-1).

Endeavour Silver holds the Terronera Project through its 100% owned Mexican subsidiary, Endeavour Gold Corporation S.A. de C.V. (Endeavour Gold). Endeavour Gold holds the Terronera Project through its 100% owned subsidiaries Terronera Precious Metals S.A. de C.V. (TPM) and Minera Plata Adelante S.A. de C.V. (MPA).

The Terronera Project consists of 24 mineral concessions, totalling 17,369 ha all of which are valid and in good standing. Surface rights and access rights have been negotiated with various private ranch owners and three local three local Ejidos in support of exploration activities. Mexican Mining law provides the right to use water from the mine for exploration, exploitation, processing, and project personnel.

The Terronera Project is subject to three royalties. The Mexican government retains 0.5% royalty on any precious metals produced. Industrias Minera México S.A. de C.V. (IMMSA) and Compañia Plata San Sebastian S.A. de C.V. (AGREMIN) retains 2% net smelter return (NSR) royalty on mineral production from the concessions each individually conveyed or optioned to Endeavour Silver (10 concessions totaling 3,388 ha from IMMSA; and 4 concessions totaling 9,752 ha from AGREMIN).

Figure 1-1: Terronera Project Location Map (Burga et al., 2020)

1.4 History

The Terronera Project is situated near the town of Sebastián del Oeste founded in 1605 during the Spanish colonial period. By 1785 the Sebastián del Oeste mining district consisted of more than 25 mines and a number of smelters and was considered one of the principal sources of gold, silver, and copper for New Spain. The main mines in the district included Real de Oxtotipan, Los Reyes, Santa Gertrudis, Terronera, and La Quiteria.

In 1979 Consejo de Recursos Minerales conducted regional and local semi-detailed mapping and exploration followed by prospecting activities in 1985 by Compañía Minera Bolaños, S.A. In the late 1980s IMMSA began exploring the historical mining district and continued with geological mapping and sampling of outcropping structures of a number of veins to the mid-1990s. Over the years, IMMSA drilled several holes intersecting widespread silver-gold mineralization, mainly at the Terronera Vein; however, a Mineral Resource estimate was not undertaken.

In 2010, Endeavour Silver acquired the option to purchase the San Sebastián properties from IMMSA and have conducted several exploration, and drilling campaigns that have resulted in Mineral Resource estimates, a preliminary economic assessment in 2015, a pre-feasibility study in 2017, and an updated pre-feasibility study in 2020.

There has reportedly been significant historical production from the San Sebastian del Oeste region spanning from 1566 through to the early 20th century; however, the amount of silver production is unknown.

1.5 Geology and Mineralization

The San Sebastián del Oeste mining district is situated at the southern end of the Sierra Madre Occidental metallogenic province, a north-northwesterly trending volcanic belt of mainly Tertiary age. This volcanic belt is more than 1,200 km long and 200 to 300 km wide and hosts most of Mexico’s gold and silver deposits. The volcanic belt is one of the world’s largest epithermal precious metal systems.

The San Sebastián del Oeste silver-gold district hosts high-grade silver-gold, epithermal vein deposits characterized by low-sulphidation mineralization and adularia-sericite alteration. The veins are typical of epithermal silver-gold vein deposits in Mexico in that they are primarily hosted in volcanic flows, pyroclastic, and epiclastic rocks, or sedimentary sequences of shale and its metamorphic counterparts.

The Terronera Project lies within the structurally and tectonically complex Jalisco Block at the western end of the younger (early Miocene to late Pliocene) Trans-Mexican Volcanic Belt. The more important mineralized veins in the San Sebastián del Oeste district are controlled by west-northwest to northwest striking structures related to a transcurrent fault system.

The Terronera Project is underlain by a volcano-sedimentary sequence which consists of shale, sandstone, and narrow calcareous-clayey interbeds overlain by tuffs, volcanic breccias, and lava flows of mainly andesitic composition. The volcano-sedimentary units crop out in the north-central part of the district. Further to the north, granitic to granodioritic intrusive rocks are present.

The principal Terronera Vein has been traced by drilling for 1.5 km on strike and from surface to the maximum depth of drilling at 546 m identifying its average true width to be 3.9 m. In addition to the main Terronera Vein, there are additional hanging wall and footwall veins. The veins are primarily hosted in volcanic flows, pyroclastic and epiclastic rocks, associated shales, and metamorphic counterparts.

1.6 Exploration

Endeavour Silver has conducted several exploration programs since 2010. Exploration activities include geological mapping, data compilation, rock chip sampling, trenching, soil geochemistry surveys, and topographical and geographical mapping using satellite photogrammetry.

Areas explored include: Real Alto, located in the southern part of the Terronera Project (including the Real, Tajo, Las Animas, Los Negros, La Escurana, Los Lodos, La Mora, Peña Gorda, El Maguey, Monte Obscuro and several other structures located in the area); Central part of the project (which includes the Terronera, La Luz and Quiteria West veins, in addition, several other structures in the area, highlighting El Padre, Los Espinos, Democrata, El Fraile, La Escondida, Vista Hermosa, La Atrevida, La Loma, Los Pajaros, Valentina, Jabalí, Lindero, San Simón, El Fresno, Zavala and Pendencia); North part of the project, around the Santiago de los Pinos town, including Los Reyes, La Ermita, Las Coloradas, La Plomosa and Los Encinos veins; La Unica area (La Unica vein and Julio-Camichina system); and more recently Los Cuates area (La Sanguijuela and San Sebastian 11 claims).

1.7 Drilling and Sampling

Drilling was initiated by IMMSA between 1995 and 2010, completing 17 diamond drill holes. Since 2011 Endeavour Silver completed 194 diamond drill holes and 40 channels totaling 66,076.6 m on the Terronera Vein and 41 diamond drill holes totaling 9,795.65 m on the La Luz Vein. Only holes drilled by Endeavour Silver were used to construct the Mineral Resource estimates.

Core logging recorded mineralization types, structure, density, recovery, rock quality designation (RQD), alteration, and geology. Core recovery is within acceptable levels with an average of 90% in the Terronera Vein, 100% in the La Luz Vein, and 100% in the host rock surrounding both.

Collar surveys are carried out with total station and a dual-band global positioning system (GPS), while surface holes are surveyed using a Reflex multi-shot down-hole survey instrument at 30 m intervals from the bottom of the hole and back up the collar.

Sampling is conducted in the Endeavour Silver core storage facilities, where it is geologically and geotechnically logged (RQD). Sampling is done in the mineralized structure with intervals between 20 and 100 cm and within the surrounding host rock with intervals between 20 and 150 cm. Photographs and density measurements are taken.

The whole core is cut in half with a diamond rotary saw, and broken core pieces are split with a pneumatic core splitter for sampling and are bagged and tagged. Samples are prepared at the ALS Chemex facility Guadalajara (ALS Guadalajara) which is independent of Endeavour Silver and holds an ISO/IEC 17025 accreditation. Independent laboratory ALS laboratory in Vancouver, Canada (ALS Canada) with ISO/IEC 17025 accreditation carried out the analytical process between 2012 and 2018. Samples from the 2020 campaign were sent to the SGS Durango-Mexico laboratory (SGS Durango) which is also independent of Endeavour Silver and accredited under ISO/IEC 17025. SGS Durango were also used as the secondary laboratory for the 2019 drilling campaign. Inspectorate laboratory in Hermosillo has been used as a secondary laboratory since 2012. They are independent of Endeavour Silver and hold global quality certifications under ISO9001:2008, Environmental Management under ISO14001, and Safety Management under OH SAS 18001 and AS4801.

Silver grades were determined by ALS Canada using inductively couple plasma atomic emission spectroscopy (ICP-AES) following aqua regia digestion. Gold was assayed by fire assay (FA) followed by atomic absorption (AA) analysis of the FA bead on a 30 g pulp sample. Assays reporting over the gold and silver limit is FA followed by gravimetric analysis on a 30 g pulp sample. Detection limits for high-grade gold assays are 0.5 to 1,000 ppm and 5 to 10,000 ppm for silver assays.

SGS Durango uses aqua regia digestion followed by ICP optical emission spectroscopy (OES) for silver and FA for gold. Overlimit silver and gold assays are by FA with a gravimetric finish.

Endeavour Silver employed a quality assurance quality control (QA/QC) program, including certified reference materials (CRMs), blanks, and duplicates inserted in the sample stream at a rate of approximately one control for every 20 samples. Check assaying was also conducted with a frequency of approximately 5%. A review of the QC data from drilling used for Mineral Resource estimation found potential low-level carry-through contamination in ALS Canada results that have been deemed minor and not material to the Mineral Resource estimate. The Qualified Person (QP) concludes that the sample preparation, security, and analytical procedures are adequate for use in Mineral Resource estimation.

1.8 Data Verification

The drill hole database was inspected and validated by the QP. Assay data was verified against the original laboratory certificates. Minor errors were found, addressed and discussed with Terronera's team.

The QP performed verification and validation of drill hole collars, downhole surveys, geological logging, sampling, sample preparation, and assaying procedures during their site visit. Drilling practices were reviewed by visiting a rig, drilling an exploration drill hole, and checking downhole survey measurements. Core logging of drill holes from the Terronera and La Luz veins were reviewed. Sampling practices were reviewed together with the Terronera Project geologists. Witness samples were selected from the Terronera and La Luz veins, sent to ALS Canada, and a blank and standard for each vein. Results confirm the data to be reliable and suitable for use in updating the Mineral Resource.

1.9 Mineral Processing and Metallurgical Testing

Hazen Research completed initial comminution testing in 2016 and 2019. Samples were subjected to semi-autogenous grind mill comminution (SMC), Bond rod mill and ball mill work indexes (BWi and RWi, respectively), Bond abrasion index (Ai), and Bond impact work index (CWi) with results showing material classified as hard and highly abrasive. Additional comminution testing performed in 2021 supported these initial results with ore classified as very hard and highly abrasive.

ALS Metallurgy performed metallurgical test work in Kamloops, B.C., Canada. Testing before 2019 focused on evaluating flotation parameters from composite samples representative of materials with various precious metal grades, and reviewing the potential for deleterious elements.

The 2019/2020 metallurgical program included grind versus recovery, flash flotation, rougher and cleaner circuit confirmation testing with the aim to refine the process design parameters and flowsheet. Recovery models were generated from composites from current and previous testwork campaigns.

The 2021 testwork focused on assessing the metallurgical performance of both the Terronera and La Luz veins. Testwork completed includes Ai, BWi, flash flotation, rougher and batch cleaner flotation, and locked cycle tests. Additional comminution tests determined the hardness of the Terronera ore be 19.1 kWh/t and an Ai of 0.47. Results showed a two-stage flotation cleaning circuit is recommended to achieve a marketable concentrate grade. Additionally, recycling the cleaner scavenger tails should be implemented and maintained as an option in the current circuit. The final concentrate quality used in the lock cycle tests was analyzed for minor and deleterious elements and was deemed not to affect the extraction of gold and silver significantly.

Based on the projected LOM plan, overall recoveries of silver and gold are 87.7% and 76.3%, respectively.

1.10 Mineral Resource Estimate

Mineral Resources estimates were prepared for the Terronera and La Luz veins using drill holes completed by Endeavour Silver between 2010 and 2020. Estimation domains were constructed to include the mineralization portions of the veins and wall rock along the structural corridors responsible for vein emplacement and silver and gold deposition using a nominal 150 g/t silver equivalent (AgEq) cut-off grade.

Following the identification of a high-grade silver sample population, continuity of high-grade samples at the scale of the drill hole spacing and sampling interval was found. Based on these findings, a high-yield restriction was used to model the high-grade mineralization and prevent the over-projection of extreme silver grades.

An in-situ bulk density model used core recovery data to adjust the modeled density to reflect voids and open spaces and expected reduction in metal contained in the rock mass.

Estimation for both veins was performed in three passes using anisotropic search ellipsoids and inverse distance weighting to the third power. The models were validated by means of visual inspection and checked for global bias and local bias using swath plots. No areas of significant bias were noted.

Blocks in the Terronera Mineral Resource model have been assigned a resource confidence category based on drill hole spacing criteria selected that considers a visual assessment of the continuity of the mineralized zones width along strike and down dip, and a geostatistical drill hole spacing study. For the Terronera Zone, a 50 m drill spacing was used to define Indicated Mineral Resources with all remaining blocks inside the mineralized domain classified Inferred Mineral Resources. For the La Luz Zone, blocks estimated with composites from at least two drill holes with a nominal drill hole spacing of 30 m are classified as Indicated Mineral Resources. Holes spaced wider than the nominal 30 m spacing are classified as Inferred Mineral Resources.

A cut-off grade of 150 g/t silver equivalent (AgEq) is applied to identify blocks that will have reasonable prospects of eventual economic extraction.

The silver equivalent calculation and cut-off grades used for the 2021 Mineral Resource estimate are consistent with values used from the preliminary economic assessment and pre-feasibility studies. AgEq for the Terronera Project is Ag + 75 x Au. The AgEq value takes into account silver grade plus gold grade factored by the differential of gold and silver metal prices and metallurgical recoveries. The 150 g/t AgEq cut-off grade generates sufficient revenue assuming metallurgical recovery and long-range silver price to cover operating costs, including mining, processing, general and administrative (G&A), treatment, refining, and royalties.

The Mineral Resource estimates for the Terronera, and La Luz deposits are summarized in Table 1-1 and Table 1-2, respectively and are reported according to the 2014 CIM Definition Standards.

The majority of the Terronera Mineral Resources have been classified as Indicated, and it is possible that infill and grade control drilling and production sampling may result in local changes to the thickness and grade of the blocks currently drilled at nominally 50 m spacing. Additional drilling and production sampling are recommended to produce accurate forecasts for annual and short-range plans. Other factors that could affect the Mineral Resource estimate include changes to metal prices, mine, and process operating cost, variability in metallurgical performance, mine design, and mining method selection due to geotechnical stability.

Table 1-1: Terronera Deposit Mineral Resource Estimate with Effective Date March 5, 2021

Classification	Tonnes (000s)	Ag (g/t)	Ag (000s oz)	Au (g/t)	Au (000s oz)	AgEq (g/t)	AgEq (000s oz)
Indicated	5,181	256	42,707	2.49	415	443	73,755
Inferred	997	216	6,919	1.96	63	363	11,624

Notes:

1. Mineral Resources have an effective date of March 5, 2021. The Qualified Person responsible for the Mineral Resource estimate is Tatiana Alva, P. Geo, an employee of Wood Canada Ltd.
2. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. AgEq is calculated as the sum of silver plus gold grades factored by the differential in gold and silver metal prices and metallurgical recoveries
4. Mineral Resources are constrained within a wireframe constructed at a nominal 150 g/t AuEq cut-off grade
5. A 150 g/t AgEq cut-off grade considers Wood's guidance on industry consensus for long term silver and gold prices for Mineral Resource estimation, metallurgical performance, mining, processing, and site G&A operating costs, treatment and refining charges, and royalties
6. Mineral Resources are stated as in-situ with no consideration for planned or unplanned external mining dilution.
7. The silver and gold ouncesestimates presented in the Mineral Resource estimate table have not been adjusted for metallurgical recoveries.
8. Numbers have been rounded as required by reporting guidelines and may result in apparent summation differences.

Table 1-2: La Luz Deposit Mineral Resource Estimate with Effective Date March 5, 2021

Classification	Tonnes (000s)	Ag (g/t)	Ag (000s oz)	Au (g/t)	Au (000s oz)	AgEq (g/t)	AgEq (000s oz)
Indicated	122	182	745	13.11	54	1,165	4,774
Inferred	61	150	295	11.35	22	1,001	1,977

Notes:

1. Mineral Resources have an effective date of March 5, 2021. The Qualified Person responsible for the Mineral Resource estimate is Tatiana Alva, P. Geo, an employee of Wood Canada Ltd.
2. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. AgEq is calculated as the sum of silver plus gold grades factored by the differential in gold and silver metal prices and metallurgical recoveries
4. Mineral Resources are constrained within a wireframe constructed at a nominal 150 g/t AuEq cut-off grade
5. A 150 g/t AgEq cut-off grade considers Wood's guidance on industry consensus for long-term silver and gold prices for Mineral Resource estimation, metallurgical performance, mining, processing, and site G&A operating costs, treatment and refining charges, and royalties
6. Mineral Resources are stated as in-situ with no consideration for planned or unplanned external mining dilution.
7. The silver and gold ounces presented in the Mineral Resource estimate table have not been adjusted for metallurgical recoveries.
8. Numbers have been rounded as required by reporting guidelines and may result in apparent summation differences.

1.11 Mineral Reserve Estimate

Mineral Reserves were classified in accordance with the 2014 CIM Definition Standards. All Mineral Reserves were converted from Indicated Mineral Resources and are classified as Probable.

The Probable Mineral Reserve estimates for the Terronera and La Luz deposits are provided in Table 1-3. There is no Proven Mineral Reserve for either zone.

Factors that could affect the Mineral Reserve estimate include but are not limited to dilution, recovery, metal prices, underground and site operating costs, and management of the operation and environmental or social impacts. Factors with the largest impacts to the Mineral Reserve estimates are the gold price for the La Luz Zone, silver prices for the Terronera Zone, and the ground conditions in the Terronera Zone during mining.

Table 1-3: Terronera and La Luz Probable Mineral Reserve

Zone	Tonnes (000s)	Ag (g/t)	Au (g/t)	AgEq (g/t)	Ag (000s oz)	Au (000s oz)	AgEq (000s oz)
Terronera	7,227	197	1.97	353	45,856	459	82,055
La Luz	153	173	15.00	1,378	851	75	6,780
Total	**7,380**	**197**	**2.25**	**374**	**46,707**	**534**	**88,834**

Note:

1. The Mineral Reserve estimate was prepared in accordance with the 2014 CIM Definition Standards by William Bagnell, P.Eng., an employee of Wood.
2. The Mineral Reserves have an effective date of June 30, 2021.
3. Mineral reserves are reported using a silver equivalency cut-off formula AgEq (g/t) = Ag (g/t) + (Au (g/t) x 78.9474). Cut-off grade varies between 156 g/t to 200 g/t AgEq depending on mining method. Metal prices used were $1,500/oz Au and $19.00/oz Ag. Metallurgical recovery of 84.9% for silver and 79.8% for gold, transport, treatment and refining charges of $0.75/oz Ag, and NSR royalties of 2.5%.
4. Mineral Reserves are reported based on mining costs of $30.00/t for sub-level open stoping, $49.18/t for cut and fill, and $48.00/t for shrinkage mining, and $28.46/t for process costs, and $8.49/t for G&A costs.
5. Figures in the table may not sum due to rounding.

1.12 Mining Methods

A geomechanical underground mine design study was performed on available core and review of previous studies. The study was used to determine location within the orebodies of the mining method, stability of openings, and requirements for ground support and dilution estimates.

Three declines from the surface will achieve underground access to Terronera and La Luz. The declines collar at the process plant pad, the mine dry, and the upper zone of the deposit. The La Luz access decline extends from the process plant decline to the La luz deposit.

Shrinkage mining methods will extract mineral Reserves at La Luz. Shrinkage is an amenable method given the narrow thickness and the vertical nature of the deposit. Broken ore will be extracted with scooptrams and hauled to remucks or direct loaded to 30-tonne haul trucks. The trucks will then haul the material to the process plant stockpile.

The Terronera deposit will be extracted by a combination of sub-level stoping (SLS) methods and cut and fill (CAF) mining. SLS accounts for approximately 59% of the extraction at Terronera. CAF mining accounts for approximately 23% of the extraction, and the remaining 11% is extracted as development ore. Primary transverse sub-level stopes and longitudinal sub-level stopes will be backfilled with cemented rockfill with an average of 5% binder content. Secondary transverse stopes will be backfilled with uncemented mine development rock.

Development of the declines will start in January 2022, and development ore extracted during this time will be stockpiled for later processing. The process plant is commissioned at the end of the third quarter of 2023. Between October and December 2023, the process plant will ramp up to 1,700 tpd sustained production rate on stockpiled material and development ore. Stoping commences in January 2024 from La Luz and Terronera. Mining is completed in La Luz in late 2025, and Terronera mining is complete at the end of the first half of 2035.

1.13 Recovery Methods

The process design was developed from the comminution and flotation testwork completed between 2017 and 2021. The process plant will operate continuously 365 days per annum with an assumed availability of 92% producing a high-grade concentrate.

Run-of-mine (ROM) material is transported to stockpiles, where a three-stage then processes it, closed crushing circuit with a designed capacity of 1,700 dry tpd in 16 hours of operation. Finely crushed product with a P80 of 6.7 mm will be conveyed to a fine ore bin and then to a primary grinding circuit to produce a product that is 80% minus 70 µm. Ground ores will be treated by flash flotation and conventional flotation with two stages of cleaning. Based on testwork results, overall recoveries of 87.7% for silver and 76.3% for gold are assumed for the LOM. Flotation tailings will be filtered and stored on the surface in a dry tailings storage facility (TSF).

Reagents used in the flotation of sulphide mineralization will be handled and stored on site. Freshwater will be provided by the Terronera and La Luz underground mining operations and used as make-up/firewater and process water. Annual power consumption required by the process is 43.3 GWh and will be supplied to the various process plant areas by the onsite power plant via overhead powerlines

1.14 Project Infrastructure

Onsite infrastructure and services required for the Terronera Project include road and air (helipad) access, a process plant, process, and mine ancillary buildings, mine portals and associated mine facilities, waste and tailings storage facilities, onsite power generation and distribution, sewage and potable water treatment facilities (Figure 1-2).

The site can be accessed by unpaved public roads that will require upgrading to a single-lane road of crushed gravel material. A helipad will provide additional access with its primary purpose for emergency use.

The majority of the process facilities will be open structures that are typically structural steel stick built. Ancillary buildings located in and around the process plant site and Portal 1 will include the gatehouse, mine emergency services, dining room, mine portal tag in/out building, truck shop and wash bay and a maintenance workshop and warehouse. Additional ancillary buildings around Portal 2/3 include a truck shop and mine portal tag in/out buildings and mine dry and administration buildings.

Tailings will be piped from the process plant to a filter plant, where a dry tailings material will be produced and trucked to the TSF located northwest of the process plant. The current footprint of the TSF occupies an area of approximately 89,760 m^2 and will accommodate approximately 3.2 million m^3 (5.3 million tonnes) of compacted filtered tailings over a 12-year mine life based on a process rate of 1,700 tpd.

A temporary waste rock storage facility (WRSF) will be constructed southeast and uphill from Portal 2 and will vary in size throughout the life-of-mine (LOM), reaching a maximum capacity of approximately 1.2 million tonnes.

Power will be provided by an onsite natural gas generator and will supply the 14.6 MW of connected load power required at the site. Power will be distributed by 13.8 kV overhead power lines from the primary power switchgear line up with two breakers. One breaker will supply for the process plant and ancillary buildings, while the second breaker will supply the surface ancillary loads at Portal 1, Portal 2, Portal 3, and the mine water management system. Electrical houses will be modular units and installed close to the main load points.

Freshwater will be piped from Portal 1 and Portal 2 to tanks located close by. Potable water will be distributed by a high-density polyethylene pipe (HDPE) pipeline to facilities around the process plant site and those around Portal 2.

An offsite construction camp facility adjacent to Santiago de Los Pinos will be converted to a permanent camp to provide personnel accommodation, meals, and ancillary services.

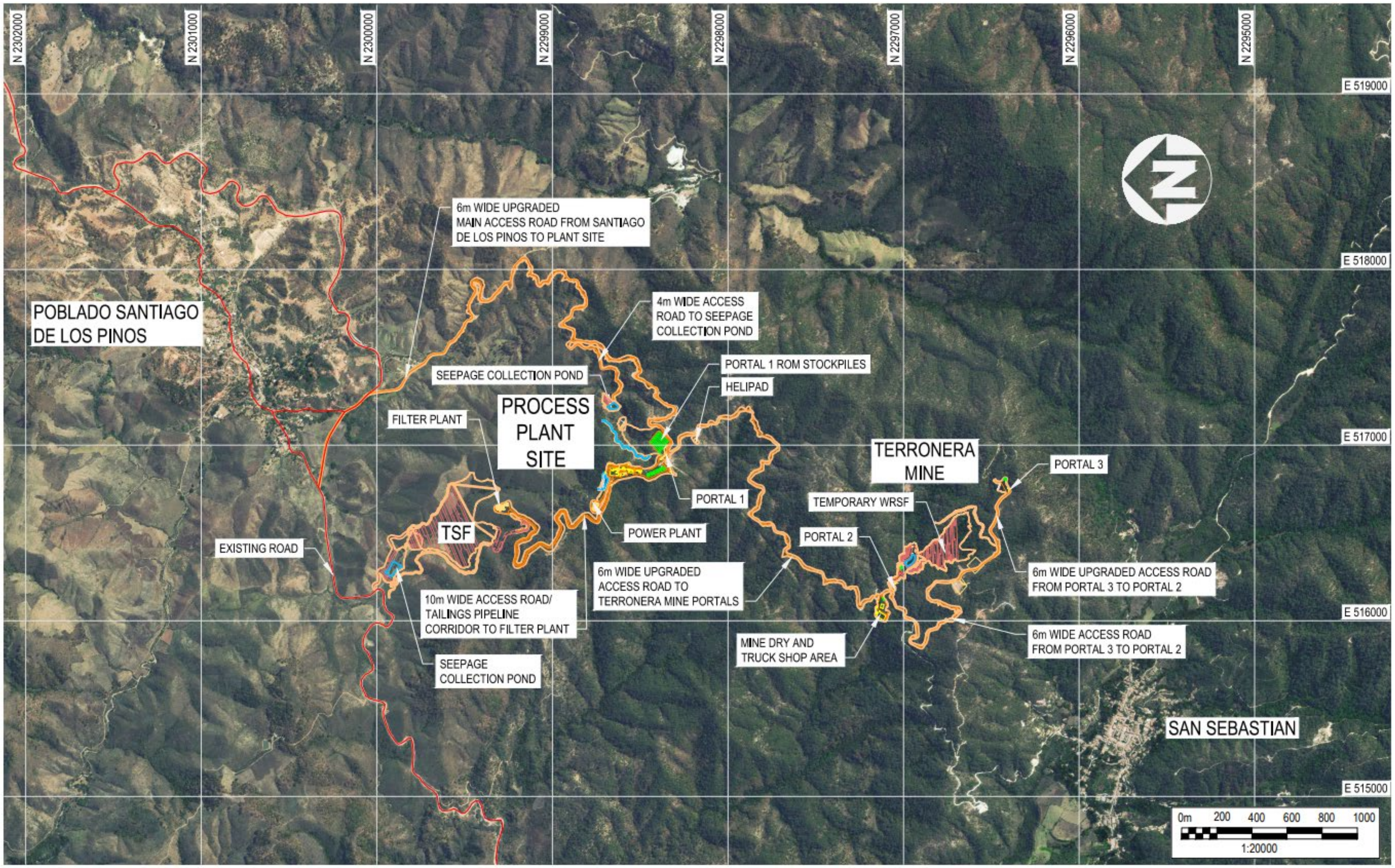


Figure 1-2: Terronera Site Layout (prepared by Wood, dated 2021)

1.15 Market Studies and Contracts

The long term silver price is assumed at $20.00/oz, and the long term gold price is assumed at $1,575/oz based on Wood's third-quarter 2021 guidelines derived from a survey of industry-consensus of forecast prices.

Endeavour Silver has not conducted any market studies, as gold and silver are commodities widely traded in world markets. Due to the size of the bullion market and the above-ground inventory of bullion, Endeavour Silver's activities will not influence gold or silver prices. Endeavour Silver produces a silver concentrate from its other current operating mines, which is then shipped to third parties for further refining before being sold. To a large extent, silver concentrate is sold at the spot price.

In its current operations, Endeavour Silver has no current contracts or agreements for mining, concentrating, smelting, refining, transportation, handling, or sales that are outside normal or generally accepted practices within the mining industry. No contracts or agreements are in place for the Terronera Project. Endeavour Silver's current hedge policy is to not enter into long-term hedge contracts or forward sales.

1.16 Environmental Studies, Permitting, and Social or Community Impact

Environmental baseline studies relating to meteorology and air quality, climatology, soil erosion and contamination, surface and subsurface hydrology, flora and fauna, and cultural, historical, and archaeological resources have been performed in support of the Manifest of Environmental Impact (MIA) initially submitted to SEMARNAT (Secretaria de Medio Ambiente y Recursos Naturales) in December 2013 for a 500 tpd operation. A modified MIA application was submitted to SEMARNAT in February 2017 with a proposed process rate of up to 1,500 tpd and a TSF developed as a filtered tailings storage facility. A further update to the MIA will be required to address the current production rate of 1,700 tpd. The QP does not consider this to be an issue.

A conceptual closure plan has been developed to ensure the post-mining landscape is safe and physically, geochemically, and ecologically stable. The plan ensures that the quality of water resources (possible effluents) in the area is protected and that communities and regulators welcome the restitution plan.

1.17 Capital and Operating Costs

1.17.1 Capital Cost

Terronera Project's initial capital cost (Table 1-4) is $175 M expressed in the second quarter of 2021 US dollars. This estimate falls under the AACE International Recommended Practice No. 47R-11 Class 3 Classification Guideline, with an expected accuracy to be within +15%/-10% of the Terronera Project's final cost, including contingency.

Sustaining capital is estimated to be $108.5 M and considers underground mining activities, mine surface facilities, tailings management, and filter plant standby requirements.

Table 1-4: Summary of Capital Costs

Area	Initial Capital ($M)	Sustaining Capital ($M)	Total Cost ($M)
Mining	54.2	105.4	159.6
Tailings management facility	2.6	1.1	3.7
Ore crushing and handling	6.6	-	6.6
Mineral processing	28.6	2.0	30.6
Onsite infrastructure	22.2	-	22.2
Offsite infrastructure	2.3	-	2.3
Project indirects and Owner costs	43.8	-	43.8
Contingency	14.6	-	14.6
Total	**175.0**	**108.5**	**283.5**

Note: Figures may not sum due to rounding.

1.17.2 Operating Cost

Total operating costs over the LOM is estimated at $494.1 M. Average operating costs are estimated at $66.96/t of processed ore and summarized in Table 1-5.

Mine operating costs account for all mining operations, excluding capital development and delineation drilling. Cost models are based on site-specific inputs provided from Endeavour Silver.

Process operating costs include labour, energy consumption, supplies (operating and maintenance), mobile equipment, laboratory, and TSF and were estimated using first principles, budget quotations for reagents, and experience with similar projects.

G&A operating costs average approximately $6.8 M/yr or $ 10.90/t of processed ore.

Table 1-5: Operating Cost Summary

Cost Area	Total ($M)	$/t	% of Total
Mining	225.7	30.58	46
Process	188.0	25.47	38
G&A	80.5	10.90	16
Total	**494.1**	**66.96**	**100**

Note: Figures may not sum due to rounding.

1.18 Economic Analysis

Certain information and statements contained in this section are forward-looking in nature and are subject to known and unknown risks, uncertainties, and other factors, many of which cannot be controlled or predicted and may cause actual results to differ materially from those presented here. Forward-looking statements include, but are not limited to, statements with respect to the economic and study parameters of the Terronera Project; mineral reserves; the cost and timing of any development of the Terronera Project; the proposed mine plan and mining strategy; dilution and extraction recoveries; processing method and rates and production rates; projected metallurgical recovery rates; infrastructure requirements; capital, operating and sustaining cost estimates; concentrate marketability and commercial terms; the projected LOM and other expected attributes of the project; the net present value (NPV), internal rate of return (IRR) and payback period of capital; future metal prices and currency exchange rates; government regulations and permitting timelines; estimates of reclamation obligations; requirements for additional capital; environmental risks; and general business and economic conditions.

The financial analysis was carried out using a discounted cash flow (DCF) methodology. Net annual cash flows were estimated to project yearly cash inflows (or revenues) and subtract projected cash outflows (such as capital and operating costs, royalties, and taxes). These annual cash flows were assumed to occur at year-end and were discounted back to the beginning of 2022 (Year -2), the start year of capital expenditure, and totalled to determine the NPV of the Terronera Project at a selected discount rate.

The financial evaluation of the Terronera Project generates positive before and after-tax results. The results show an after-tax NPV of $174.1 M at a 5% discount rate, an IRR of 21.3%, and a payback period of 3.6 years. A summary of the financial analysis results is presented in Table 1-6.

The Terronera Project is most sensitive to fluctuations in the silver price, then to silver feed grades, gold price, and gold feed grades. It is less sensitive to changes in operating costs. It is least sensitive to changes in initial capital cost. Spider graphs showing the Terronera Project's sensitivity to capital costs, operating costs, grade, and metal price are shown in Figure 1-3 and Figure 1-4.

Table 1-6: Summary of Economic Results

Description	Units	Value
Ag payable	000 oz	39,341
Au payable	000 oz	393
Ag payable equivalent	000 oz	70,310
After-Tax Valuation Indicators		
Undiscounted cash flow	$M	311.4
NPV @ 5%	**$M**	**174.1**
Payback period (from start of operations)	years	3.6
IRR	%	21.3%
Project capital (initial)	$M	175.0
Sustaining capital	$M	108.5
Closure cost	$M	7.1
Mining operating cost	$M	225.7
Processing operating cost	$M	188.0
G&A	$M	80.5

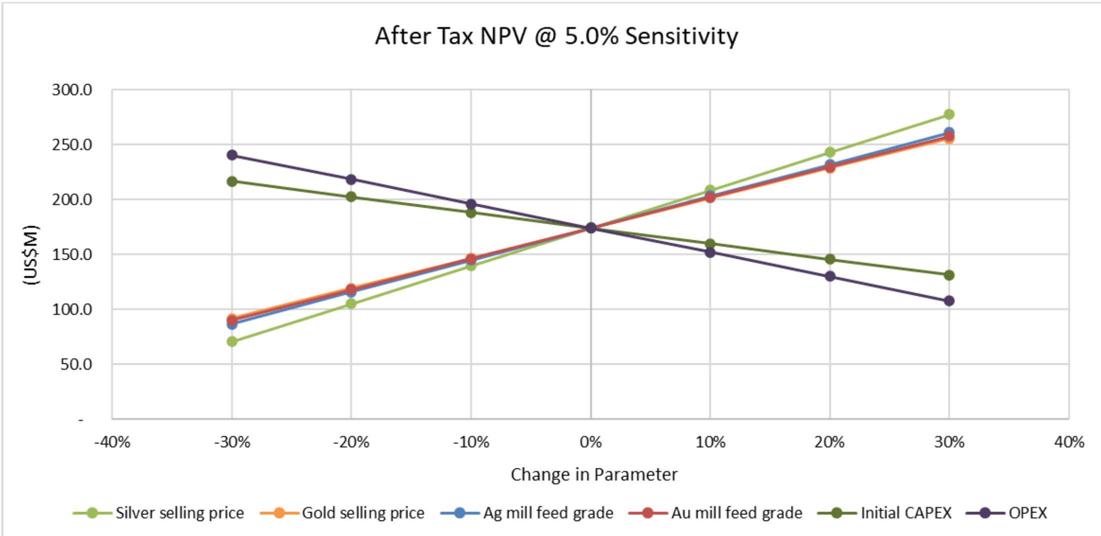


Figure 1-3: Sensitivity of After-Tax NPV Discounted at 5% (prepared by Wood, dated 2021)

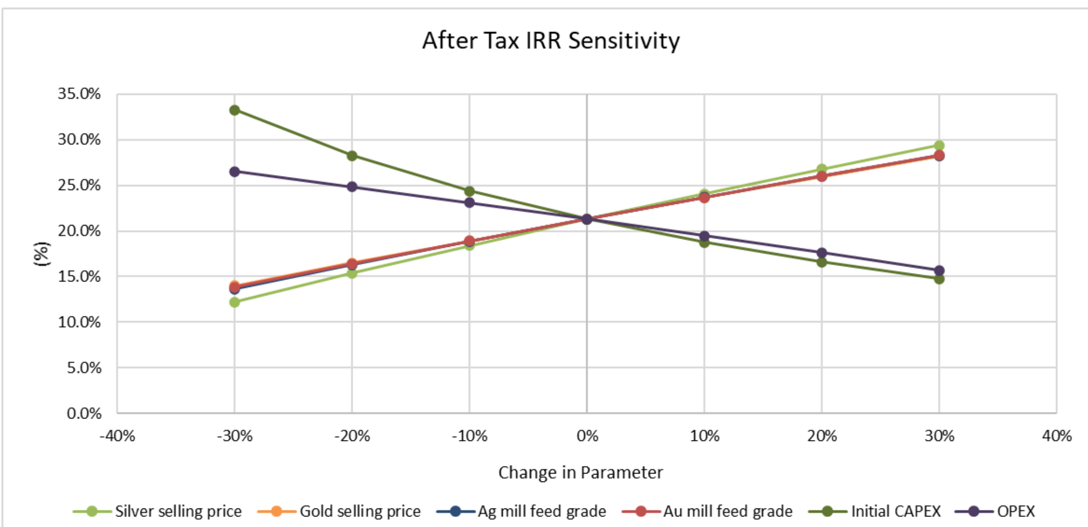


Figure 1-4: Sensitivity of After-Tax IRR Discounted at 5% (prepared by Wood, dated 2021)

1.19 Interpretation and Conclusions

Under the assumptions discussed in this Report, the Terronera Project is technically feasible and returns a positive economic outcome.

1.20 Opportunities and Risk

The following opportunities for the Terronera Project have been identified:

- A better understanding of the distribution of oxide, transition, and sulphide could improve the production and metallurgical performance forecast.
- Use mineralogical analysis to improve the understanding of the losses of gold and silver to tailings, which could identify how to reduce these losses.
- Rock mechanics conditions underground are better than currently modeled and actual conditions may allow more extensive use of SLS as the primary production method and a reduction in external dilution.
- Groundwater flows are lower than estimated, and the dewatering system requirements are less than currently designed
- If surface rights outside the property boundary can be negotiated, the filter plant could be relocated north (downhill) from its current location. This would result in cost savings of up to $1.5 M associated with access road infrastructure and filtered tailings transport.

The following risks have been identified for the Terronera Project:

- The presence of clays has potential of a negative impact on plant performance.
- Underground development, production costs and dilution may increase due to actual ground conditions being different from what was captured in the rock mechanics analysis.
- Operating costs estimates may increase as Endeavour Silver G&A costs are typically higher than those of similar-sized Mexican operations.
- The current mine plan does not optimize production from oxide, transition and sulphide ore zones. Ore blending may be required for optimal process plant performance, and this may impact mine production rate and operating costs.
- The drainage water quality at Terronera assumed to be similar to other Endeavour Silver mine sites of similar geological conditions. However, mine water quality is also influenced by site-specific factors, which could result in Terronera mine drainage requiring treatment.
- The current filtered TSF does not have an out-of-specification area for temporary filtered tailings disposal. This could result in the need for redundant filtering systems at the filter plant or an additional temporary tailings disposal site.

1.21 Recommendations

Recommended work programs provide opportunities for improvements to mitigate risks and have higher confidence in how the mine will behave in the first few years of mining. The program is estimated at $6.05 M and includes recommendations relating to rock mechanics, hydrogeological testing and modeling, testwork to support refinements to the processing plant, activities to support the TSF, investigations to support the design of site infrastructure, and water management.

2.0 INTRODUCTION

2.1 Introduction

QPs from Wood, together with QPs from Endeavour Silver, prepared the Report summarizing the results of a FS on the Terronera Project for Endeavour Silver. The Terronera Project is located 50 km northeast of Puerto Vallarta in Jalisco State, Mexico.

2.2 Terms of Reference

The Report supports Mineral Resource and Mineral Reserve estimates that were prepared in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019) and reported using the definitions in CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014).

Measurement units used in this Report are metric unless otherwise noted. Currency is expressed in US dollars or unless specified as Mexican pesos (MXN).

2.3 Qualified Persons

The following individuals served as QPs as required by National Instrument 43-101, Standards of Disclosure for Mineral Projects, and prepared the Report content required by Form 43-101F1 Technical Report:

- Ms. Tatiana Alva, P. Geo., Principal Resource Geologist, Wood
- Mr. William Bagnell, P.Eng., Technical Director Underground Mining, Wood
- Mr. Adam Coulson, P.Eng., Principal Rock Mechanics Specialist, Wood
- Mr. Alan Drake, P.Eng., Manager Process Engineering, Wood
- Mr. Kirk Hanson, P.E., Technical Director, Open Pit Mining, Wood
- Mr. Paul Ivancie, C.P.G., Associate Hydrogeologist, Wood
- Mr. Dale Mah, P. Geo., Vice President, Corporate Development, Endeavour Silver
- Mr. Humberto Preciado, P.E., Principal Geotechnical Engineer, Wood

2.4 Site Visits

Ms. Alva visited the Terronera Project site between May 17–19, 2021. During the visit, she inspected collar locations, visited the core storage facilities, reviewed core logging, sampling procedures, QAQC, and safety protocols, and took witness samples from Terronera and La Luz veins.

Mr. Ivancie visited the site from January 11-14, 2021. During his visit he located and inspected a monitoring well and retrieved groundwater data; inspected water quality sampling sites and reviewed each site's documented flow data; inspected groundwater discharge and surface water flows; and interviewed Endeavour Silver site personnel.

Mr. Preciado visited the site from December 11–14, 2015. He oversaw a portion of the geotechnical site investigation program in the proposed TSF and the collection and submittal of waste rock samples to an analytical, environmental laboratory in Mexico.

Mr. Mah visited the Terronera Project site between November 9-10, 2016 and between October 15-17, 2021. During his visits he examined drill core through the various deposits and compared the core to the geological logs. He also examined the core storage and sample splitting facilities, warehouse, camp facilities, and proposed sites for the portals, tailings storage facility, and process plant. He inspected outcrops and discussed the interpretation of the geological model with site staff.

2.5 Effective Dates

The Report has effective dates as follows:

- Mineral Resource estimates – March 5, 2021
- Mineral Reserve estimates – June 30, 2021

The overall effective date for this Report is September 9, 2021.

2.6 Previous Technical Reports

The following technical reports have previously been filed on the Terronera Project:

- Kalanchey, R., Petrina, M., Preciado, H., Puritch, E., Burga, D., Wu Y., Levy, M., Iasillo, E., 2020: NI 43-101 Technical Report for the Terronera Project, Jalisco State, Mexico: Report prepared by Ausenco Engineering Canada for Endeavour Silver Corp., effective date July 14, 2020, 324 p.
- Puritch, E., Robinson, D.G., Smith, P.J., Burga, D., Wu, Y., Iasillo, E., Preciado, H., and Peacock, B., 2019: Updated Technical Report for the Terronera Project, Jalisco State, Mexico: Report prepared by P&E Mining Consultants Inc. for Endeavour Silver Corp., effective date February 12, 2019, 334 p.
- Puritch E., Burga, D., Wu, Y., Iasillo, E., and Preciado, H., 2019: Updated Mineral Resource Estimate Technical Report for the Terronera Project, Jalisco State. Mexico: Report prepared by P&E Mining Consultants Inc. for Endeavour Silver Corp., effective date February 1, 2019, 230 p.

- Smith, P.J., Iasillo, E., Puritch, E., Wu, Y., Burga, D., Peacock, B., and Preciado, H., 2018: NI 43-101 and NI 43-101F1 Technical Report Updated Mineral Resource Estimate and Updated Preliminary Feasibility Study for the Terronera Project Jalisco State, Mexico: Report prepared by Smith Foster and Associates for Endeavour Silver Corp., effective date August 7, 2018, 317 p.
- Smith, P.J., Iasillo, E., Puritch, E., Wu, Y., Burga, D., Barry, J., Pearson, J., Peacock, B., and Fleming, S., 2017: NI 43-101 Technical Report Preliminary Feasibility Study for the Terronera Project Jalisco State Mexico: Report prepared by Smith Foster and Associates for Endeavour Silver Corp., effective date April 3, 2017, 341 p.
- Smith, P.J., Iasillo, E., Puritch, E., Sutcliff, R., Burga, D., Barry, J., Routledge, R., Pearson, J., Peacock, B., and Fleming, S., 2015: NI 43-101 Technical Report Preliminary Economic Assessment for the Terronera Project, Jalisco State, Mexico: Report prepared by Smith Foster and Associates for Endeavour Silver Corp., effective date March 25, 2015, 242 p.

Under the former project name of San Sebastián, the following technical reports were filed:

- Munroe, M.J., 2013: NI 43-101 Technical Report on the Resource Estimates for the San Sebastián Project, Jalisco State, Mexico: Report prepared by Michael J. Munroe for Endeavour Silver Corp., effective date December 31, 2013, 140 p.
- Lewis, W.J., and Murahwi, C.Z., 2012: NI 43-101 Technical Report, Audit of the Mineral Resource Estimate for the San Sebastián Project, Jalisco State, Mexico: Report prepared by Micon International Limited for Endeavour Silver Corp., effective date December 15, 2012, 128 p.
- Lewis, W.J., and Murahwi, C.Z., 2011: NI 43-101 Technical Report, Audit of the Mineral Resource Estimate for the San Sebastián Project, Jalisco State, Mexico: Report prepared by Micon International Limited for Endeavour Silver Corp., effective date December 21, 2011, 131 p.

2.7 Sources of Information

Sources of information include expert reports referenced in Section 3 and documents listed in Section 27.

3.0 RELIANCE ON OTHER EXPERTS

The QPs have relied upon other expert reports, which provided information regarding property claim tenure, property contracts and agreements, royalties and taxation, and marketing

3.1 Legal Status

The Wood QPs have not independently reviewed the legal status of the Terronera Project. They have fully relied upon, and disclaim responsibility for, information derived from experts retained by Endeavour Silver's outside legal counsel (Cereceres Estudio Legal) and Endeavour Silver (Eugenio Cantu) for the legal status through the following documentation:

- Cereceres Ronquillo, R. (2021, June 9). Legal Opinion on Mining Concessions. Terronera Project. [letter to Mr. Luis Castro, Endeavour Silver], 28 pp.
- Cantu, E. (2021, October 18). Confirmation of Legal Inputs to Section 4 of the "NI 43-101 Technical Report on the Feasibility Study of the Terronera Project, Jalisco State, Mexico" ("Technical Report") [letter to Mr. Scott Macklin, Wood], 1 page plus Exhibit.

This information is used in support of the property description and mineral tenure, surface and water rights, property agreements, royalties, any obligations that must be met to retain the property, and encumbrances described in Section 4, and in support of assessing reasonable prospects of eventual economic extraction of the Mineral Resource estimates in Section 14, and demonstrating economic viability of the Mineral Reserve estimates in Section 15 and in support of assumptions used in the economic analysis in Section 22.

3.2 Taxation

The Wood QPs have not independently reviewed the taxation information. The Wood QPs have fully relied upon, and disclaim responsibility for, information supplied by Endeavour Silver's Chief Financial Officer for information related to taxation contained in the following document:

- West, C. (2021, October 18). Taxation considerations and tax inputs to the financial model used in the Terronera Project Feasibility Study National Instrument 43-101 Technical Report prepared by Wood plc for Endeavour Silver Corp. ("Endeavour Silver") [letter to Mr. Kirk Hanson, Wood], 3 pp.

This information is used in support of the capital cost estimate in Section 21, the economic analysis in Section 22, and the Mineral Reserve estimate in Section 15.

3.3 Baseline Studies, Environmental, and Permitting

The Wood QPs have not independently reviewed the basis for, or the information in the baseline studies and application documents used to obtain the Manifestacion de Impacto Ambiental approvals for the Terronera Project. Humberto Preciado, P.E., of Wood, has fully relied upon the expert statements and representations provided by Endeavour Silver environmental experts through the following:

- Padilla, R. (2021, October 21). Terronera FS 2021 Technical Report - Section 20 Environmental Expert [email to Mr Humberto Preciado, Wood].

Wood QPs have not performed independent investigations to verify the reliability of the representations of Ruben Padilla (Endeavour Silver). However, Wood QPs have reviewed documents prepared by Ruben Padilla that support the MIA modification and has also worked with Mr. Padilla at other mine sites in Mexico. These are professionals with deep understanding of the environmental regulatory framework in Mexico that produce good quality and reliable work who continue to consult with Endeavour Silver in their current operations.

This information is used in Section 20 of the Report, and in support of the Mineral Resource estimate in Section 14, the Mineral Reserve estimate in Section 15, and the economic analysis in Section 22.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Terronera project is located in the northwestern portion of Jalisco State, near its border with the State of Nayarit, Mexico, as shown in Figure 4-1.

Figure 4-1: Terronera Project Location Map (Burga et al., 2020)

The Terronera project is near San Sebastián del Oeste, which also gives its name to the municipality and mining district that surrounds it.

The Terronera Project is situated between latitude 20° 3' 45" and 21° 0' 30" north and longitude 104° 3' 00" and 104° 5' 00" west which is between WGS 84, UTM coordinates 514,860 and 524,860 east and 2,303,715 and 2,289,120 north in Zone 13Q.

4.2 Mexican Regulations for Mineral Concessions

In Mexico, as per Article 15 of the Mining Law, all mining concessions are valid for 50 years and are extendable provided that the application is made within five years before the expiry of the concession and that the concession is kept in good standing. For the concessions to remain in good standing, the two most relevant obligations to comply with are payment of the bi-annual fees must be made (January and July) to the Mexican government, and two reports must be filed in January and May of each year that covers the production, investment and work completed on the concession between January and December of the preceding year.

All new concessions must have their boundaries orientated north-south and east-west, and the lengths of the sides must be one hundred meters or multiples thereof, except where these conditions cannot be satisfied, such as when they border other mineral concessions. The locations of the concessions are determined on the basis of a fixed point on the land (mojoneras), called the starting point, which is either linked to the perimeter of the concession or located thereupon. Before being granted a concession, the company must present a topographic survey to the Dirección General de Minas (DGM) within 60 days of staking. Once this is completed, the DGM will usually grant the concession, subject to certain exceptions (i.e. electricity has precedence over mining concessions).

Before December 21, 2005, exploration concessions in Mexico were granted for six years, and at the end of the six years, they could be converted to exploitation concessions. However, as of December 21, 2005 (through an amendment made on April 28, 2005, to the Mexican mining law), there is now only one type of mining concession. Therefore, as of the date of the amendment (April 2005), there is no distinction between exploration and exploitation concessions on all new titles granted; all concessions grant titleholders the right to carry out exploration, exploitation and beneficiation activities.

4.3 Property Description and Tenure

Endeavour Silver holds the Terronera Project through its 100% owned Mexican subsidiary, Endeavour Gold Corporation S.A. de C.V. (Endeavour Gold). Endeavour Gold holds the Terronera Project through its 100% owned subsidiaries Terronera Precious Metals S.A. de C.V. (TPM) and Minera Plata Adelante S.A. de C.V. (MPA).

The Terronera project, of which Endeavour Silver holds 100% indirect interest as per the preceding paragraph and as mentioned hereinbelow, consists of 25 mineral concessions (Table 4-1), totaling 20,128 ha; see Figure 4-2 for a concession map of the Terronera Project.

Table 4-1: Concessions and Fees on Each Concession

Concession Name	Title Number	Term of Mineral Concession	Hectares	2021 Annual Fees (MXN)	
				1st Half	2nd Half
San Sebastián 4 (100% owned)	211073	31/03/00 to 30/03/50	22.0000	$3,870	$3,870
San Sebastián 7 (100% owned)	213145	30/03/01 to 29/03/51	166.0000	$29,199	$29,199
San Sebastián 6 (100% owned)	213146	30/03/01 to 29/03/51	9.8129	$1,726	$1,726
San Sebastián 8 (100% owned)	213147	30/03/01 to 29/03/51	84.8769	$14,930	$14,930
San Sebastián 5 (100% owned)	213528	18/05/01 to 17/05/51	95.0600	$16,721	$16,721
San Sebastián 10 (100% owned)	213548	18/05/01 to 17/05/51	16.0000	$2,814	$2,814
San Sebastián 9 (100% owned)	214286	06/09/01 to 05/09/51	101.8378	$17,913	$17,913
San Sebastián 2 (100% owned)	214634	26/10/01 to 25/10/51	19.5887	$3,446	$3,446
San Sebastián 3 (100% owned)	221366	03/02/04 to 02/02/54	63.8380	$11,229	$11,229
San Sebastián 1 R-1 (100% owned)	235753	24/02/10 to 07/07/55	2808.8716	$494,081	$494,081
San Sebastián 10 Fracc. 1 (100% owned)	238532	23/09/11 to 22/09/61	2075.2311	$365,033	$365,033
San Sebastián 10 Fracc. 2 (100% owned)	238533	23/09/11 to 22/09/61	2.9233	$514	$514
San Sebastián 17 (100% owned)	243380	12/09/14 to 11/09/64	693.0000	$34,636	$34,636

Concession Name	Title Number	Term of Mineral Concession	Hectares	2021 Annual Fees (MXN)	
				1st Half	2nd Half
San Sebastián 18 (100%owned)	244668	17/11/15 to 16/11/65	118.1621	$5,906	$5,906
San Sebastián 12 (100% owned)	246040	20/12/17 to 19/12/67	650.0000	$16,153	$16,153
San Sebastián 13 (100% owned)	246037	20/12/17 to 19/12/67	1022.6114	$25,412	$25,412
San Sebastián 14 (100% owned)	246084	20/12/17 to 19/12/67	627.0893	$15,583	$15,583
Cerro Gordo 1 (100% owned)	246334	11/05/18 to 10/05/68	499.7041	$6,006	$6,006
Cerro Gordo 2 (100% owned)	246335	11/05/18 to 10/05/68	500.0000	$6,010	$6,010
Cerro Gordo 4 (100% owned)	246713	31/10/18 to 30/10/68	400.0000	$4,808	$4,808
Cerro Gordo 5 (100% owned)	246714	31/10/18 to 30/10/68	399.5386	$4,802	$4,802
Los Pinos Fracc. I (100% owned)	227004	11/04/06 to 10/04/56	4821.6775	$848,133	$848,133
Los Pinos Fracc. II (100% owned)	227005	11/04/06 to 10/04/56	14.0093	$2,464	$2,464
La Unica Fracc. I (exclusive purchase option granted)	225184	02/08/05 to 01/08/55	2157.2787	$379,465	$379,465
La Sanguijuela (exclusive purchase option granted)	229824	20/06/07 to 13/11/55	2759.4035	$485,379	$485,379
Total			**20,128.51**	**$2,796,233**	**$2,796,233**

Note: (1) All concessions in Table 4-1 for which a "100% owned" reference is included, are owned indirectly by Endeavour Silver as per the first paragraph of Section 4.3. (2) All concessions in Table 4-1 for which a "exclusive purchase option granted" are indirectly optioned to Endeavour Silver as per the first paragraph of Section 4.3.

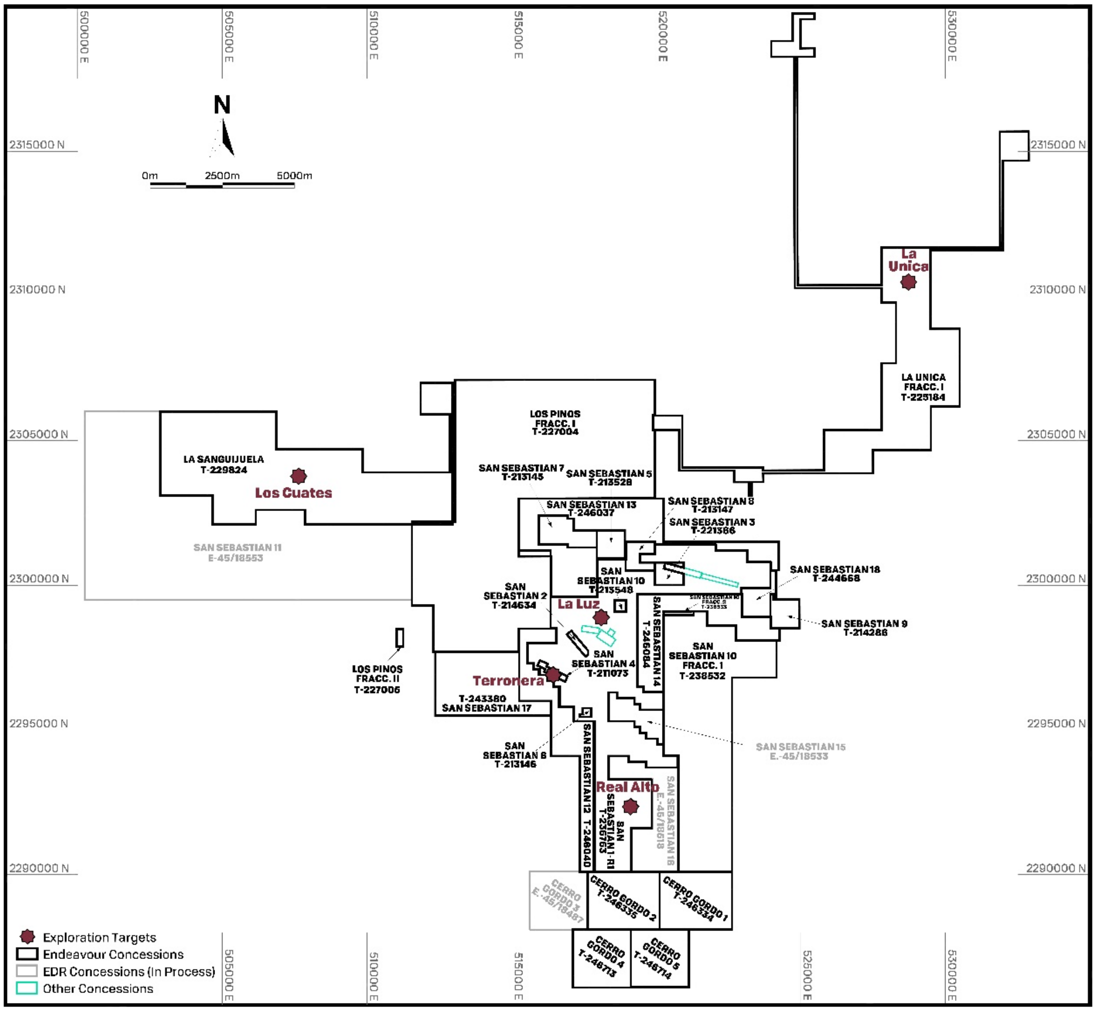


Figure 4-2: Terronera Project Concessions Map (prepared by Endeavour Silver, dated 2021)

Note: coordinate system: WGS 84/UTM Zone 13Q

In February 2010, Endeavour Silver acquired an option to purchase the San Sebastián concessions in Jalisco State from Industrias Minera México S.A. de C.V. (IMMSA), also known as Grupo Mexico, one of the largest mining companies in Mexico. In 2013, Endeavour Silver completed the acquisition of a 100% interest of these core group of 10 concessions, totaling 3,388 ha. These concessions (San Sebastián 1 R-1, and San Sebastián 2 to San Sebastián 10) cover the main area of the known mining district.

In 2011, Endeavour Silver filed and received the title from the Mexican Federal Government for two concessions (San Sebastián 10 Fracc. 1 and Fracc. 2), totaling 2,078 ha.

Additionally, in 2013, Endeavour Silver filed a total of seven concessions (San Sebastián 12, San Sebastián 13, San Sebastián 14, San Sebastián 15, San Sebastián 16, San Sebastián 17 and San Sebastián 18) totaling 4,163 ha. To date, five of these concessions have been titled, except for San Sebastián 15 and San Sebastián 16, which were re-filed in November and August 2018, respectively. The San Sebastián 12, San Sebastián 13, and San Sebastián 14 concessions were titled by the Mexican Federal Government in 2017, San Sebastián 17 in 2014 and San Sebastián 18 in 2015. The refiling of requests for San Sebastián 15 and San Sebastián 16 provide Endeavour Silver (indirectly as per first paragraph of Section 4.3) a right of preference, over any third party who may have filed for them after Endeavour Silver, to obtain title to such concessions (Table 4-2).

In 2015, Endeavour Silver acquired an option to purchase a group of properties (Los Pinos Fracc. I, Los Pinos Fracc. II and La Fundisión 2 Fracc. I, totaling 8,373 ha), surrounding the San Sebastián silver-gold properties, from Agregados Mineros de Occidente S.A. de C.V. (AGREMIN). In 2017 Endeavour Silver also acquired another option from AGREMIN to purchase the La Única Fracc. II (3,538 ha) concession. AGREMIN transferred these properties and the options agreement to its affiliate, Compañia Plata San Sebastián S.A. de C.V. (such corporate group hereinafter "AGREMIN". In December 2018, Endeavour Silver terminated the option agreement for La Fundisión 2 Fracc. I (Title 228866) and La Única Fracc. II (Title 225185) concessions.

At the end of 2017, Endeavour Silver filed for a total of three concessions at the southern boundary of the San Sebastián properties; these concessions were called Cerro Gordo 1 (499.7 ha), Cerro Gordo 2 (500 ha), and Cerro Gordo 3 (400 ha). Two of these concessions have been titled, except for Cerro Gordo 3 (filed again in June 2018). In early 2018, Endeavour Silver filed and received the title for two more concessions in the area: Cerro Gordo 4 (400 ha) and Cerro Gordo 5 (399 ha). The refiling of the request for Cerro Gordo 3 provides Endeavour Silver (indirectly as per the first paragraph of Section 4.3) a right of preference, over any third party who may have filed for such concession after Endeavour Silver, to obtain title to it (Table 4-2).

In August 2018, Endeavour Silver acquired an exploration and option to purchase agreement covering the La Unica Fracc. I (2,157 ha) property from AGREMIN. This option is effective for four years as of execution. Other than the legal minimum to evidence exploration works as per Mining Law and its regulations, no minimum investment was imposed by AGREMIN. For this purchase option Endeavour Silver is to pay $500,000 plus VAT, in yearly payments as of execution year, each for each year the option is effective. Endeavour Silver retained the right to terminate this option for convenience. If the purchase is executed, all amounts paid during the term of the option agreement are considered towards purchase price ($500,000).

In April 2019, Endeavour Silver filed for one concession called San Sebastián 11 (4,217 ha), titling in process.

On September 24, 2020, Endeavour Silver acquired an exploration and option to purchase agreement covering the La Sanguijuela (2,759 ha) property from a person related to AGREMIN ("JPAB") of which name is omitted for such person's security . This option is effective for four years as of the date of execution. Other than the legal minimum to evidence exploration works as per Mining Law and its regulations, no minimum investment was imposed by JPAB. For this purchase option Endeavour Silver is to pay $550,000 plus VAT, in yearly payments as of execution year, each for each year the option is effective. Endeavour Silver retained the right to terminate this option for convenience. If the purchase is executed, all amounts paid during the term of the option agreement are considered towards purchase price ($550,000).

The annual 2021 concession fees (hectare basis – Table 4-1) for the Terronera project was MXN 5,592,466, which is equal to $279,623 (at an exchange rate of 20 MXN to US$1.00). Confirmation of payment and statutory reporting included in the June 9, 2021, title opinion by Cereceres Estudio Legal, S.C.

The Endeavour Silver concessions surround mining concessions owned by Minera Cimarron S.A. de C.V. (Minera Cimarron), a private Mexican Company. These concessions cover the active La Quiteria Mine and the historical Los Reyes and San Andres mines indicated as Other Concessions in Figure 4-2.

Table 4-2: Concessions for which a Request was Re-filed with the Mexican Government.

Concession Name	Date of Re-filing	Hectares	Indirect interest of Endeavour Silver in Concession if granted by the Federal Government
San Sebastián 15	November 16, 2018	174	100% as per first paragraph of Section 4.3
San Sebastián 16	April 02, 2018	551	100% as per first paragraph of Section 4.3
Cerro Gordo 3	May 23, 2018	400	100% as per first paragraph of Section 4.3

4.4 Surface Rights

In addition to the mineral rights, Endeavour Silver has agreements with various private ranch owners and three local Ejidos (San Sebastián del Oeste, Santa Ana, and Santiago de Los Pinos) that provide access for exploration purposes. Table 4-3 summarizes the surface access rights as of October 2021.

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

Owner	Activity	Validity (yrs)	Term
Ejido Santiago de Los Pinos (Exploration)	Exploration	3	15/01/2019 - 2022
Ejido San Felipe de Hijar (Exploration)	Exploration	5	15/01/2019 - 2024
Ejido San Sebastián del Oeste (Exploration and Operations)	Exploration and Mine Operations	25	05/09/2016 - 2041
Ejido Santiago de Los Pinos (La Terronera Mine Area)	Mine Operations	25	07/07/2014 - 2039
Ejido Santiago de Los Pinos (El Portezuelo)	Mine Operations	25	07/07/2014 - 2039
Ejido Santiago de Los Pinos (El Mondeño)	Mine Operations	25	27/04/2015 - 2040
Ejido Santiago de Los Pinos (Antenas; Telecomunicaciones)	Mine Operations	15	09/08/2016 - 2031
Felipe Santana García de Alba (Telecomunicaciones)	Mine Operations	6	15/07/2016 - 2022

4.5 Water Rights

The Mexican Mining Law states in Article 19 that mining concessions give the right to use the water coming from the mine for exploration, exploitation, and processing of the minerals or substances obtained and for domestic use of the personnel within the project area; therefore, a groundwater use concession title is not required if the supply is guaranteed by mine water.

4.6 Royalties, Government Fees and Encumbrances

IMMSA, JAB and AGREMIN each retain a 2% NSR royalty on mineral production from the concessions each individually conveyed or optioned to Endeavour Silver.

In addition, the concessions and their exploitation impose (as applicable) the payment of:

- Surface Area Fees – fees for the area covered by each mining concession on a per Hectare basis (referenced in Table 4-1 above)
- Special Mining Fees – 7.5% of the positive difference resulting from the income derived from the sale of the metals produced minus the allowable deductions

- Extraordinary Mining Fee – 0.5% of the income derived from the sale of gold, platinum and silver
- Additional mining fees – applicable to mining concessions where no exploration or exploitation work has been performed.

4.7 Environmental and Permitting Considerations

The Terronera project is a greenfield mine development. Current and past land use has been for agriculture, grazing, and forestry purposes. Environmental disturbances for these historical uses include road construction, cattle corrals, and other small farming structures.

Other than the historical adits, and some historical mining activities, no major and recent mining activities appear to have occurred within the project boundaries. Currently, site disturbance has been limited to mining exploration drilling within La Luz and Terronera mining areas. These areas represent small footprints around the exploration boreholes that are remediated and reclaimed rapidly after the drilling campaign is completed. Therefore, as a greenfield mining project, the current environmental liabilities of Endeavour Silver are low and limited to localized exploration-disturbed areas.

Environmental studies, permitting and social impacts are discussed in Section 20.

4.8 Significant Factors and Risks

The 2020 Fraser Institute Annual Survey of Mining Companies (Yunis & Aliakbari, 2020) provides an independent assessment of the overall political risk facing an exploration or mining project across various global jurisdictions. Overall, Mexico ranked 42 out of 77 jurisdictions in the survey on the investment attractiveness index, which combines the policy perception index in which Mexico ranked 61st, with results from the best practices mineral potential index where it ranked 27th.

No other significant factors and risks are known to the QP that may affect access, title, or right or ability to perform work on the property, other than what are discussed in this Report.

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

5.1 Accessibility

The Terronera Project is situated approximately 160 km west of Guadalajara in Jalisco State and 50 km northeast of Puerto Vallarta. Road access is via paved roads. From Guadalajara, travel by road is via Federal Highway No. 70 that passes through the town of Mascota, about 210 km west of Guadalajara, and then it is another 55 km to San Sebastián del Oeste. Highway 70 continues to Puerto Vallarta on the Pacific coast. Good gravel roads exist within the Terronera Project area, and year-round access is possible, although some difficulties may be experienced during the rainy season.

Recent road improvements have reduced the road transit time from Puerto Vallarta to San Sebastián del Oeste to less than two hours. San Sebastián del Oeste is also served by a paved airfield in excellent condition.

National and international access to Puerto Vallarta and Guadalajara are good, with numerous daily flights from major cities in Mexico, the United States, and Canada, giving many options for traveling to and from the Terronera Project.

5.2 Local Resources and Infrastructure

There is currently a 1 MW powerline owned by the Mexican government that passes through the Terronera Project site with an agreement for Endeavour Silver to access 250 kW and an objective to increase Endeavour Silver's capacity.

As of 2015, the population of municipality of San Sebastián del Oeste was approximately 5,086, with 638 living in the town of the same name and 566 living in the town of Santiago de Los Pinos, the closest town to the main facilities proposed for the project. The town of San Sebastián del Oeste is well maintained, and tourism is the principal industry with several hotels and restaurants. It receives regular tourist visits from nearby Puerto Vallarta, while agriculture and livestock are the main activities of Santiago de Los Pinos.

Most of the labour and small equipment required for exploration programs can be found in the municipality of San Sebastián del Oeste. Supplies are usually purchased in Puerto Vallarta, Mascota, or Guadalajara. During mine operations it is anticipated that labour will be sourced from neighbouring communities and Puerto Vallarta.

Additional information on local resources and infrastructure envisaged in the FS is provided in Section 18.

5.3 Climate

The climate type reported for the Terronera Project site is subtropical, with the rainy season occurring from June to September. July is typically the wettest month. The weather is predominantly humid in the winter and dry and warm during the spring. The mean annual temperature is 18°C, with a maximum of 25.6°C and a minimum of 11.7°C. Prevailing winds in the area are from the southwest.

Exploration activities can be curtailed by wet weather. It is envisaged that any future mining operations will be conducted on a year-round basis.

5.4 Physiography

The Terronera Project is in a mountainous region of Western Mexico with elevations ranging from sea level at the Pacific coast to 2,850 m at the highest elevation in the San Sebastián region of the Sierra Madre Occidental mountain range (Figure 5-1). The town of San Sebastián del Oeste is at an elevation of 1,480 m above sea level, Santiago de Los Pinos is at an elevation of 1,120 m above sea level.

Elevations range from 1,160 m to 1,800 m within the Terronera Project footprint. Within Endeavour Silver's surface rights, there exists sufficient flat land to support the surface facilities of the mine.

The surrounding area is mountainous and heavily forested, mainly with pine and oak trees. The surrounding valleys are occupied by cattle ranches, cornfields, and coffee plantations.

Figure 5-1: View of Topography Surrounding the Town of San Sebastián (provided by Endeavour Silver, dated 2020)

6.0 HISTORY

6.1 San Sebastián del Oeste Mining District

The following section is summarized from Lewis and Murahwi (2012) and Munroe (2013). San Sebastián del Oeste is a silver and gold mining town founded in 1605 during the Spanish colonial period. By 1785, more than 25 mines and several smelters had been established in the district and, during the peak mining period, the area was considered one of the principal sources of gold, silver, and copper for New Spain. The primary mines in the district included Real de Oxtotipan, Los Reyes, Santa Gertrudis, Terronera, and La Quiteria.

San Sebastián del Oeste was declared a city in 1812 and reached a peak population of more than 20,000 people by 1900. It was the provincial capital and one of Mexico's more critical gold and silver mining centres. The prosperity of the city declined after the revolution of 1910.

The mines were, in part, responsible for the founding of the city of Puerto Vallarta that supplied those mines with salt. Mules took the salt to San Sebastián del Oeste and other mines in the high sierras for use in the metal smelting process. Mined silver and gold were sent through Guadalajara and Mexico City to Veracruz and sent to Spain.

Exploration activities, where known, are summarized in Table 6-1.

Table 6-1: Exploration History Summary

Year	Company	Exploration
1921	Various, unknown	After the Mexican Revolution, intermittent small-scale mining took place in Santiago de Los Pinos, Los Reyes, and Navidad. All of these areas are currently inactive.
1979	Consejo de Recursos Minerales	Regional and local semi-detailed mapping and exploration activity.
1985	Compañía Minera Bolaños, S.A.	Prospecting activities in the areas of Los Reyes and Santiago de Los Pinos. This work eventually ended, and many of the concessions were allowed to elapse.
The late 1980s	IMMSA	Exploration begins in Sebastián del Oeste district.
1992-1995	IMMSA	Detailed geological mapping and sampling of outcropping structures including the La Quiteria, San Augustin and Los Reyes veins, as well as other veins of secondary importance. IMMSA assayed more than 200 rock samples from many of the old mines.

Year	Company	Exploration
1995-2010	IMMSA	An initial program of 17 widely-spaced diamond drill holes was completed, mainly at the Terronera Vein. Drilling succeeded in intersecting widespread silver-gold mineralization, generally ranging from 1 g/t Ag to 50 to 150 g/t Ag over 2 to 6 m widths. Drilling was suspended, and quantification of Mineral Resources was not undertaken.
2010	Endeavour Silver / IMMSA	Endeavour Silver acquires the option to purchase San Sebastián properties from IMMSA.
2010	Endeavour Silver	Data compilation, geological mapping, rock chip and soil sampling.
2011	Endeavour Silver	Geological mapping, rock chip sampling, topographic surveying. Core drilling (36 holes; 7,691 m). Mineral Resource estimate.
2012	Endeavour Silver	Rock chip sampling. Core drilling (35 holes; 14,566 m). Updated Mineral Resource estimate.
2013	Endeavour Silver	Geological mapping, trenching, rock chip, and trench sampling. Core drilling (30 holes; 8,574 m). Updated Mineral Resource estimate. In the year 2013, all IMSA commercial agreement were fulfilled and the concesions were transferred entirely to Endeavour Silver.
2014	Endeavour Silver	Geological mapping, trenching, rock chip, and trench sampling. Core drilling (49 holes; 15,110 m).
2015	Endeavour Silver	Concessions that constitute the Terronera Project were purchased (100%) from AGREMIN. Concessions not related to the project were returned to AGREMIN. Geological mapping, trenching, and soil and trench sampling. Core drilling (27 holes; 6,133 m). Updated Mineral Resource estimate. Preliminary economic assessment.
2016	Endeavour Silver	Reconnaissance exploration, rock chip, and soil sampling. Core drilling (67 holes; 17,570 m). Geotechnical core drilling (4 holes; 1,241 m).
2017	Endeavour Silver	Geological mapping, trenching, and rock chip and trench sampling. Core drilling (47 holes; 12,252 m). Updated Mineral Resource estimate. Pre-feasibility study. First-time declaration of Mineral Reserves.

Year	Company	Exploration
2018	Endeavour Silver	Geological mapping, rock chip sampling. Core drilling (39 holes; 18,774 m). Geotechnical core drilling (2 holes; 405 m). Updated Mineral Resource estimate.
2019	Endeavour Silver	Geological mapping, rock chip sampling. Geotechnical core drilling (2 holes; 385 m). Updates to mine design and production schedule from the 2017 pre-feasibility study.
2020	Endeavour Silver	Geological mapping, rock chip sampling. Core drilling (24 holes; 6,324 m). Updated pre-feasibility study.

6.2 Past Production History

There has reportedly been significant historical production from the San Sebastián del Oeste region spanning 1566 when the Villa de San Sebastián was founded through to the early 20th century. The amount of silver production; however, is unknown since historical production records have not survived the revolutions, passing of the individual owners, closing of the mines, corporate failure, or government seizure of assets (Lewis and Murahwi (2012); Munroe (2013)).

However, in the Terronera Project area including surface construction and mine, no old mine operations and portals are present. Beyond the project area, there are old mines from the 15 century, which do not affect the project both in the surface or underground.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The following section is summarized from Lewis and Murawhi (2012) and Munroe (2013). The mining district of San Sebastián del Oeste, shown in Figure 7-1, is situated at the southern end of the Sierra Madre Occidental metallogenic province, a north-northwesterly trending volcanic belt of mainly Tertiary age. This volcanic belt is more than 1,200 km long and 200 to 300 km wide and hosts most of Mexico's gold and silver deposits. The volcanic belt is one of the world's largest epithermal precious metal systems.

The oldest rocks in the southern part of the Sierra Madre Occidental are late-Cretaceous to early-Tertiary calc-alkaline, granodiorite to granite batholiths that intrude coeval volcano-sedimentary units of late Eocene to Miocene age.

The Terronera project lies within the structurally and tectonically complex Jalisco Block at the western end of the younger (early Miocene to late Pliocene) Trans-Mexican Volcanic Belt. Country rocks within the Jalisco Block include Cretaceous silicic ash flows and marine sedimentary rocks deposited between 45 and 115 Ma that are intruded by Cretaceous to Tertiary granite, diorite, and granodiorite of the Puerto Vallarta Batholith. The volcanic rocks of the San Sebastián cinder cone field are dated at 0.48 to 0.26 Ma, and are characterized by distinct, high potassium, alkalic compositions and were extruded within the Tepic-Zacoalco Graben that bounds andesitic stratovolcanoes located to the north and northeast.

The area has been affected by strong tectonic activity during the Cretaceous to Recent period, which has resulted in regional northwest-southeast striking transcurrent faults associated with movements of the northern portion of the Jalisco Block.

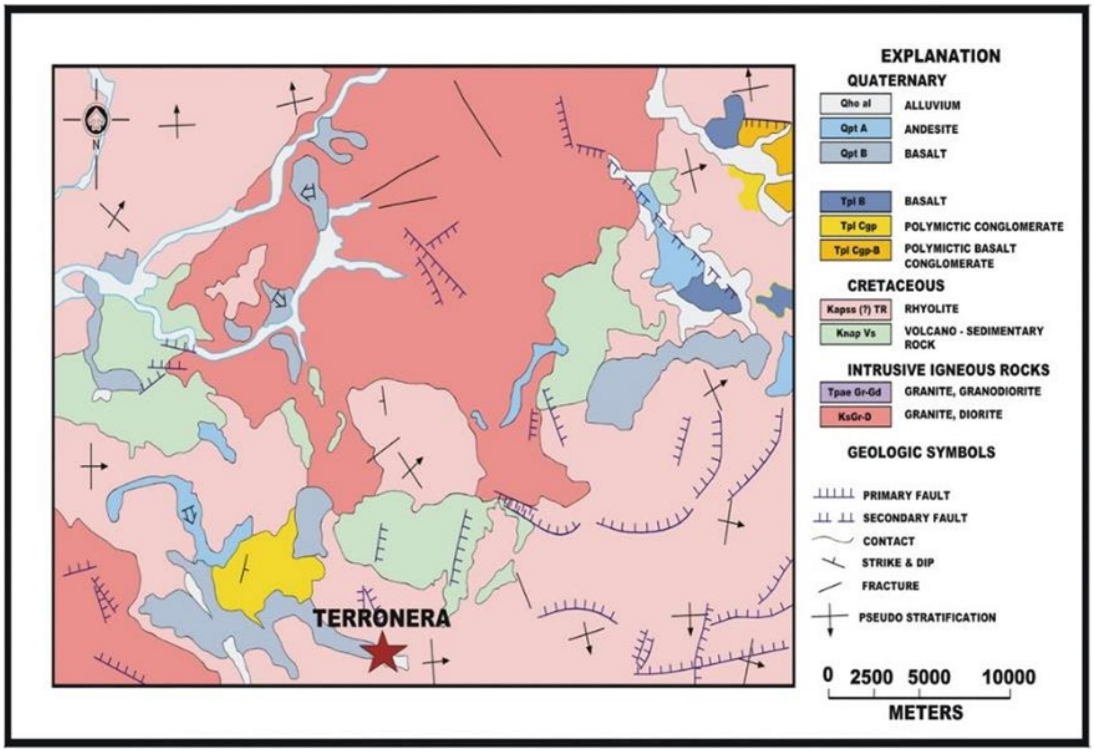


Figure 7-1: Geology of the San Sebastián del Oeste Area (Lewis and Murahwi, 2013)

7.2 Local and Property Geology

The San Sebastián del Oeste area, including the Terronera Project, is underlain by an intermediate to felsic volcanic and volcaniclastic sequence correlated with the middle to lower Cretaceous Lower Volcanic Group of the Sierra Madre Occidental geological province. This volcano-sedimentary sequence consists of shale, sandstone, and narrow calcareous-clayey interbeds overlain by tuffs, volcanic breccias, and lava flows of mainly andesitic composition. The volcano-sedimentary units crop out in the north-central part of the district. Further to the north, granitic to granodioritic intrusive rocks are present.

The sedimentary basin most likely developed along with a volcanic arc later intruded by granitic granodiorite intrusions. This magmatism gave rise to andesite flows and pyroclastic eruptions followed by deposition of the rhyolite flows, volcanic breccias, pyroclastic dacites, and basalt, which are host to the epithermal veins in the district. A later volcanic event, attributable to the formation of the Trans Mexican Volcanic Belt, resulted in volcanic rocks of mafic alkaline composition. The geology of the Terronera Project area is shown in Figure 7-2.

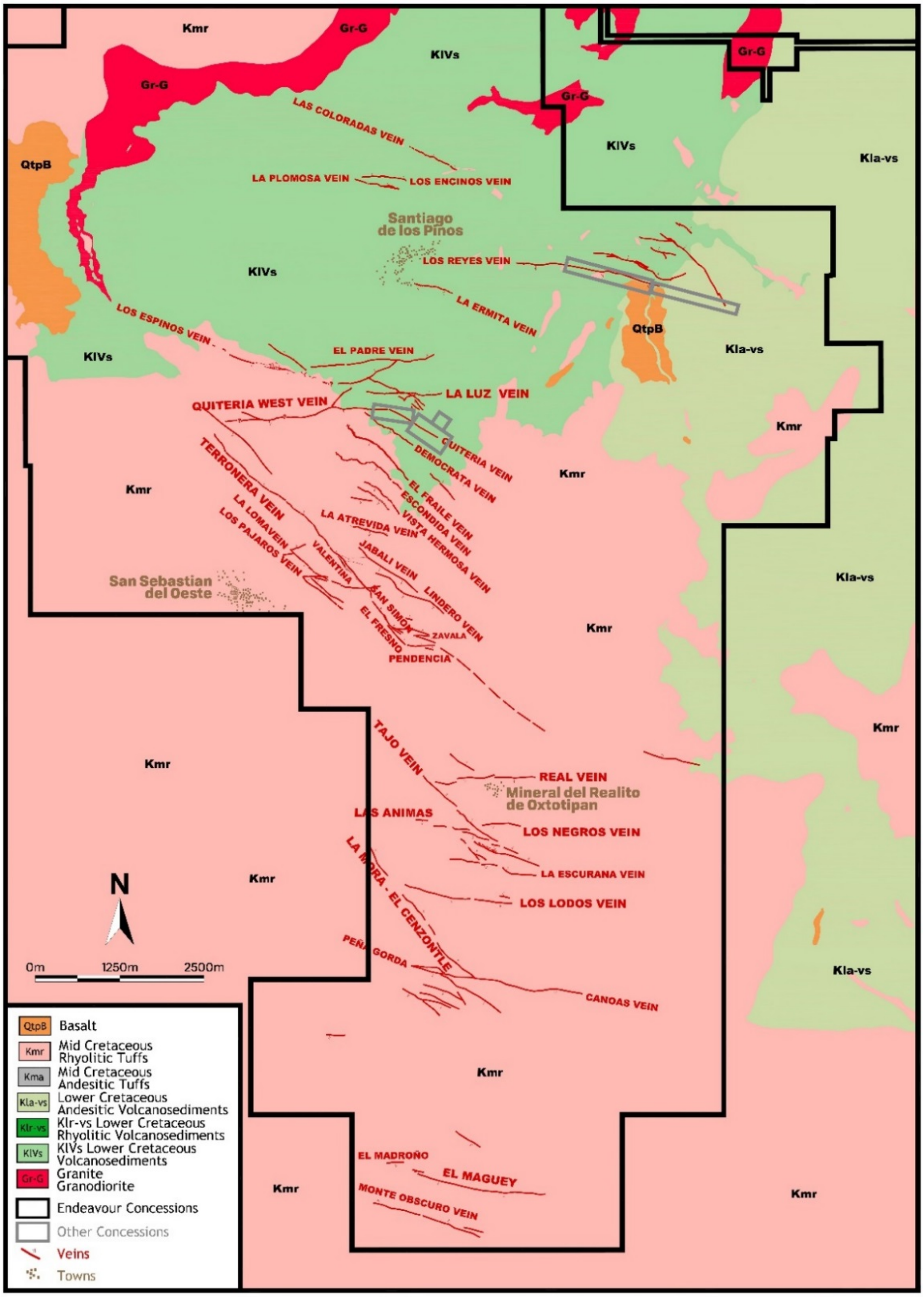


Figure 7-2: Terronera Project Geology Showing Mineralized Veins (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system is WGS 84/UTM Zone 13Q

7.3 Structure

The more critical mineralized veins in the San Sebastián del Oeste district are controlled by west-northwest to northwest striking structures related to a transcurrent fault system. An extensive, second-order, east-west structural trend is related to extension caused by sinistral movement on the primary structures.

7.4 Alteration

In the San Sebastián del Oeste district, silver and gold mineralization represents the upper portion of an epithermal vein system. Illite, sericite, and adularia are characteristic alteration assemblages that typically occur in the veins and in the vein wall rocks. In higher elevation areas, where limited mining (colonial-era artisanal mining), has occurred, such as the El Hundido and Real de Oxtotipan mines, the quartz is amorphous and milky white, indicative of a low-temperature environment.

7.5 Mineralization

The epithermal veins' silver-gold ± base metal mineralization is hosted in structurally controlled quartz and quartz breccia veins. The principal Terronera Vein has been traced by drilling for 1.5 km on strike and from the surface to the maximum depth of drilling at 546 m, as shown in Figure 7-2. The Terronera Vein strikes at approximately 145° and dips 80° east. The actual width of the principal Terronera Vein ranges from 1.5 to 15 m and averages 3.9 m. In addition to the main Terronera Vein, there are additional hanging wall and footwall veins. The veins are primarily hosted in volcanic flows, pyroclastic, and epiclastic rocks and associated shales and their metamorphic counterparts (Lewis and Mulahwi (2012); Munroe (2013)).

Metallic minerals include galena, argentite, and sphalerite associated with quartz, calcite, and pyrite gangue constituents. Munroe (2013) reported that high silver and gold values from 2011 sampling of underground workings in the Terronera Vein were primarily obtained from crystalline quartz veins, drusy in places, with limonite and manganese oxides lining box works after sulphides and fine-grained disseminated pyrite and traces of dark grey sulphides, probably silver sulphides.

Regionally, known deposits contain polymetallic sulphide mineralization in wide vein structures. The veins at higher elevations may represent the tops of ore shoots containing significant silver and gold mineralization at depth.

8.0 DEPOSIT TYPES

The deposits within the San Sebastián del Oeste district are considered to be examples of low-sulphidation epithermal deposits.

8.1 Low-Sulphidation Epithermal Deposits

The following description for a low-sulphidation epithermal model is taken from Pantaleyev (1996).

8.1.1 Geological Setting

High-level hydrothermal systems form low-sulphidation epithermal deposits from depths of ~1 km to surficial hotspring settings. Deposition is related to regional-scale fracture systems related to grabens, (resurgent) calderas, flow-dome complexes, and rarely, maar diatremes. Extensional structures in volcanic fields (normal faults, fault splays, ladder veins, and cymoid loops) are common; locally graben or caldera-fill clastic rocks are present. High-level (subvolcanic) stocks and dikes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are related to underlying intrusive bodies.

Most types of volcanic rocks can host the deposit type; however, calc-alkaline andesitic compositions predominate. Some deposits occur in areas with bimodal volcanism and extensive subaerial ash-flow deposits. A less common association is with alkalic intrusive and shoshonitic volcanic rocks. Clastic and epiclastic sediments can be associated with mineralization that develops in intra-volcanic basins and structural depressions.

8.1.2 Mineralization

Ore zones are typically localized in structures but may occur in permeable lithologies. Upward-flaring ore zones centred on structurally controlled hydrothermal conduits are typical. Large (> 1 m wide and hundreds of metres in strike length) to small veins and stockworks are familiar with lesser disseminations and replacements. Vein systems can be laterally extensive, but ore shoots have a relatively limited vertical extent. High-grade mineralization is commonly found in dilational zones in faults at flexures, splays, and cymoid loops.

Textures typical of low-sulphidation deposits include open-space filling, symmetrical and other layering, crustification, comb structure, colloform banding, and multiple brecciation.

Deposits can be strongly zoned along strike and vertically. Deposits are commonly zoned vertically over 250 to 350 m from a base metal-poor, gold–silver-rich top to a relatively silver-rich base metal zone, and an underlying base metal-rich zone grading at depth into sparse base metal, pyritic zone. From surface to depth, metal zones can contain gold–silver–arsenic–antimony–mercury, gold–silver–lead–zinc–copper, or silver–lead–zinc. In alkalic host rocks, tellurides, vanadium-mica (roscoelite), and fluorite may be abundant, with lesser molybdenite.

The main mineral species are pyrite, electrum, gold, silver, argentite, chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalt, and selenide minerals. Quartz, amethyst, chalcedony, quartz pseudomorphs after calcite, calcite, adularia, sericite, barite, fluorite, calcium–magnesium–manganese–iron carbonate such as rhodochrosite, hematite, and chlorite are the most common gangue minerals.

8.1.3 Alteration

Silicification is extensive in mineralization as multiple generations of quartz and chalcedony are commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes can be flanked by sericite–illite–kaolinite assemblages. Intermediate argillic alteration (kaolinite–illite–montmorillonite (smectite)) can form adjacent to some veins; advanced argillic alteration (kaolinite–alunite) may form along the tops of mineralized zones. Propylitic alteration dominates peripherally and at depth.

Figure 8-1 illustrates the spatial distribution of the alteration and veining found in a hypothetical low-sulphidation hydrothermal system.

8.2 Applicability of the Low-Sulphidation Model to the Terronera Project

Low-sulphidation epithermal veins in Mexico typically have a well-defined, subhorizontal ore horizon about 300 to 500 m in vertical extent where bonanza grade mineralization shoots have been deposited due to boiling of hydrothermal fluids. Neither the top nor the bottom of the mineralized horizons at the Terronera Project have been precisely established.

The San Sebastián del Oeste silver-gold district hosts high-grade silver-gold, epithermal vein deposits characterized by low-sulphidation mineralization and adularia-sericite alteration. The veins are typical of epithermal silver-gold vein deposits in Mexico in that they are primarily hosted in volcanic flows, pyroclastic, and epiclastic rocks, or sedimentary sequences of shale and its metamorphic counterparts.

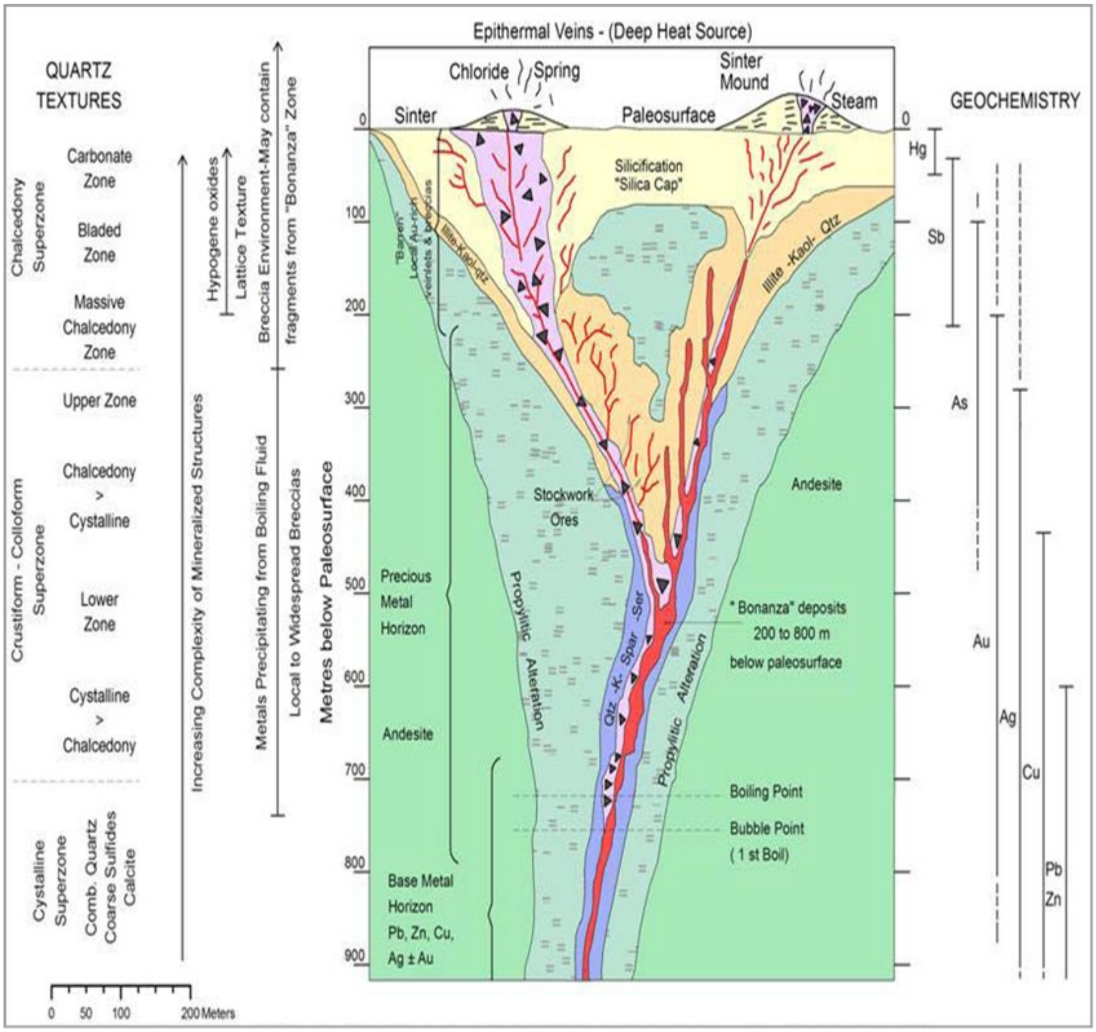


Figure 8-1: Alteration and Mineralization Distributions within a Low-Sulphidation Epithermal Vein System (Lewis and Murahwi, 2013)

9.0 EXPLORATION

9.1 Grids and Surveys

The topographical and geographical mapping basis for the Terronera Project uses satellite photogrammetry took on March 1, 2012, by Photosat Satellite and GIS Data Consultant of Vancouver, Canada. The topographic resolution for these data generated 1 m contours. Because the Terronera Project area has remained relatively undisturbed since the date of this satellite capture, the image and contour data are used as the basis of the FS.

9.2 Sampling Method and Approach

To establish exploration drill hole targets, Endeavour Silver has collected surface outcrop, underground channel, surface channel samples, and conducted numerous surface geologic mapping campaigns.

9.2.1 Surface Channel Samples

Chip channel samples are marked by a line at each end of the channel and are collected across zones of mineralization, alteration, and structure by taking continuous (approximately 10 cm width) chips from a geologically defined traverse. The sample is chipped from the face with a mallet and chisel and captured by a large canvas. The canvas is cleaned after each sample has been taken and a lithologic description is recorded. The samples range from 1 to 2 m long, depending on degree of mineralization and weigh approximately 3 to 6 kg. Sample locations are recorded by a hand-held GPS unit.

9.2.2 Rock Chip Samples

As with the channel samples, single point rock chip samples are collected from an area of 1 to 2 m in diameter. Multiple chips are collected from different points in the sampling area with a resulting weight from 1 to 3 kg. The chips are bagged and the same protocol is applied as with the channel samples. Sample locations are recorded with a hand-held GPS unit.

9.2.3 Soil Geochemical Samples

The soil geochemical sample method is primarily utilized in areas with a higher degree of weathering. Where appropriate, soil samples were taken from the A horizon, just below the organic horizon in pits dug by hand with shovels; in other areas, soil samples constituted fine-grained material collected from weathered slopes. Soil samples constituted approximately 400 to 600 g of material with as much organic matter removed as possible by screening or hand-picking. Soil sampling typically occurred on lines or grids with one sample taken every 50 to 100 m. The grids or lines are oriented perpendicular to the structure being tested. Samples and sample location were described by the geologist / sampling technician and location recorded by hand-held GPS.

9.3 2010 to 2019 Endeavour Silver Exploration Programs

Initial work in 2010 included data compilation, field mapping, and sampling. Surface mapping was completed over the Real Alto Zone in the southern part of the Terronera Project. One thousand and four rock and soil samples were collected in 2010, mainly from the historical mines in the San Sebastián del Oeste district. A soil geochemistry survey was conducted over the Real Alto Zone to potentially delineate buried veins in the area and map and sample any veins exposed to the surface. A total of 735 soil samples were collected in the Real Alto area.

In 2011, geological mapping, rock chip sampling, and topographic surveying were conducted. Mapping and sampling of structures in the Santiago de Los Pinos area, including El Alcribil, El Orconcito, El Padre, El Izote, La Plomosa, Tierras, Coloradas, Los Cuates, La Yesquilla, and La Ermita areas were completed. In early 2011, mapping and sampling were also carried out on the Terronera Vein near San Sebastián del Oeste. In late 2011, mapping and sampling were conducted in the La Luz and the Los Reyes areas. A total of 301 rock chip samples were collected in 2011.

In early 2012, exploration activities focused on surface sampling at the Quiteria West (Los Leones and La Cueva), Terronera, and La Zavala areas; 24 rock chip samples were collected.

In 2013, Endeavour Silver conducted geological mapping, trenching, and sampling. Mapping focused on the southern strike extension of the Terronera Vein, La Zavala Vein, and the Quiteria West structures. Some samples were collected at the eastern extension of the Real Vein in the Real Alto area. A total of 350 rock chip samples were collected. The trenching program included 129 rock chip samples collected from 24 trenches excavated in the Terronera and La Zavala areas.

In 2014, geological mapping, trenching, and sampling was conducted at the Quiteria West and Terronera NW areas, including sampling at the Terronera, Lupillo, El Salto, and La Cascada mines located over the Terronera Vein and the Resoyadero, La Tapada 2, Otates, Tajo los Cables, El Toro, ZP3, Copales, Mina 03, Mina 04 and Cotete areas/mines in the Quiteria area.

A West Vein trenching program was conducted over the projection of the Quiteria West (east and west portions) and Terronera (northwestern area) veins. The program included a total of 1,091 rock chip and surface channel samples collected from the underground, surface and trenching programs. Regional geological mapping was undertaken.

In 2015, Endeavour Silver conducted geological mapping, trenching, and a soil geochemical survey. Mapping included the Terronera North, La Zavala, El Fraile, El Padre, SE part of Quiteria-Democrata, and La Ermita areas. The trenching program was conducted over the Democrata and La Luz veins. The soil geochemical survey was completed to locate a possible eastern extension of the Democrata and Quiteria veins while simultaneously conducting geological mapping over the area. The sampling program included 2,170 rock chip samples (107 collected during the trenching program) and 425 soil/rock chip samples within a sampling grid.

During 2016, several thousand rock chip and surface channel samples were collected, and analysis revealed the Terronera Vein system to extend over a 7 km x 7 km area and identified nine other veins in the northern half of the Terronera Project area. A soil geochemistry grid (810 samples collected) was completed at the Las Coloradas area to define potential buried structures in areas with extensive vegetation cover.

In 2017, geological mapping, trenching, and sampling were conducted at the Terronera Project to determine drill targets. This work focused on the Terronera NW, Quiteria West, Los Espinos-Guardarraya, El Jabalí, El Fraile, Vista Hermosa, La Escondida, El Armadillo, La Atrevida, Miguel, Santana, Peña Gorda and Los Tablones areas. A total of 1,244 rock chip samples and 308 rock chip samples from trenching were collected from Terronera NW, Los Espinos NW, El Fraile, Vista Hermosa, La Escondida, El Armadillo, La Atrevida, and Miguel areas.

During 2018, geological mapping activities were carried out within Endeavour Silver's concessions to generate targets of interest with the potential to contain mineralization. The areas explored included Terronera Central and Terronera South, Real Alto, El Jabalí, La Mesa and San Felipe de Hijar. In addition, regional exploration programs continued with the objective of defining possible targets of interest around the Terronera Project. A total of 1,735 rock chip samples were collected from the local and regional programs.

During 2019, exploration activities carried out by Endeavour Silver consisted of geological mapping and sampling mainly focused on the areas of Real Alto, Los Pajaros, Terronera North (El Gavilan Vein), Terronera Central (La Gris Vein and La Piedad Shear Zone), Terronera South (El Hundido, San Simon, Monte Negro, and Tierra Blanca areas), El Muro, San Sebastián 17 claim, San Sebastián 11 claim, and La Saguijuela claim (Los Cuates area). The regional exploration program continued collecting a total of 1,697 rock chip samples.

9.4 2020 Endeavour Silver Exploration Program

During 2020, exploration was carried out within the Terronera Project covering Terronera North, Terronera Central, and Terronera South, El Fresno-La Zavala, La Sanguijuela Claim, Sab Sebastián 11 Claim, Real Alto, and La Unica Claim. During the year, 22 new structures were mapped within the Terronera Project.

9.4.1 Terronera North

Point 10 Zone was identified close to where the Gavilán Vein was mapped. Point 10 is marked by reddish, oxidized quartz with strong jointing and traces of sulphides. Field measured thickness is up to 6 m, and the structure trends N70°W, dipping 75° to the southwest. Field investigating of the intersection between the Juan Dueñas Mine Quitería Vein was also carried out.

9.4.2 Terronera Central and Terronera South

Field evidence at the hanging wall and footwall of Terronera Vein were analyzed, including the correlation of the Jabalí, Lindero, El Carmen, and Laura structures to identify areas for growth.

The Lindero structure is located towards the hanging wall of the Terronera Vein is oriented N35 to 40°W, dipping from 60° to 75° southwest with an average thickness of 1.8 to 2.0 m. Lindero is hosted in the Cretaceous unit of rhyolites near the contact with the andesites. Figure 9-1 shows a 2 x 2 m historically mined area developed within a sulphide bearing quartz vein as part of the Lindero structure.

The Jabalí Vein trends N40°W dips 70° northeast and is marked by crystalline quartz, sulphides, oxidized pyrite, barite, and veinlets of calcite, with minor gray sulphides. Jabalí has a thickness of 1.5 to 2.0 m. Figure 9-2 shows an outcrop on the Jabalí Vein trace. The vein is 2.5 m thick and marked by opaque, chalcedonic quartz with traces of grey sulphides, and manganese (pyrolusite) in fractures, hosted in rhyolite.

The El Carmen structure is located at the hanging wall of the Terronera Vein and is interpreted to be a vein-fault type feature with an east-west trend dipping 46° to the south. The average thickness is 1 m and has opaque white quartz with saccharoid texture and moderate oxides in fractures.

The Laura Vein is also a hanging wall structure relative to the Terronera Vein. Historical workings are parallel with the structure trend and developed for approximately 30 m. The Laura Vein corresponds to the projection of the La Piedad Shear Zone.

Figure 9-1: Outcrops of the Lindero Vein (prepared by Endeavour Silver, dated 2020)

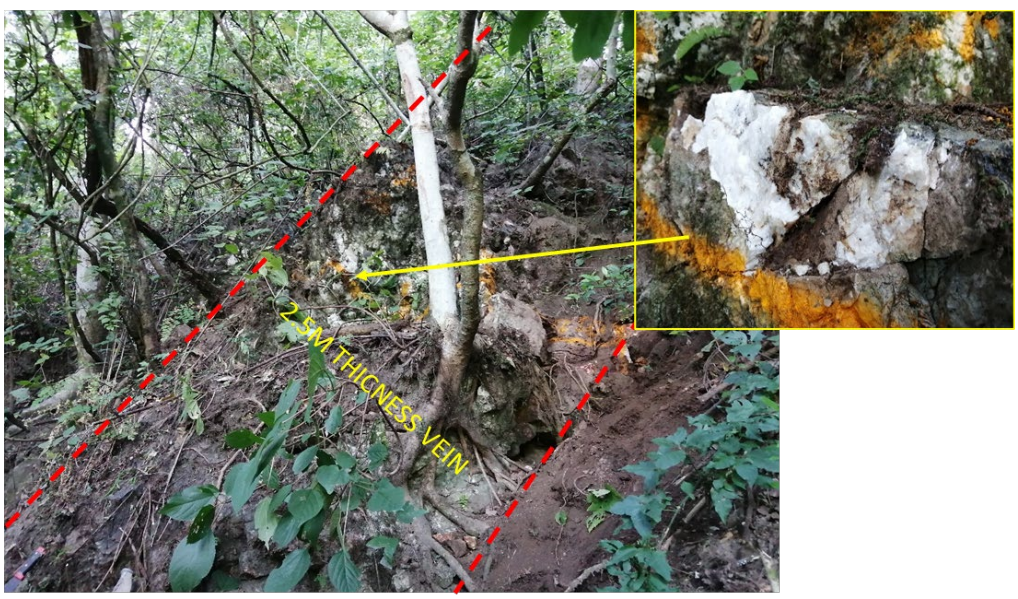


Figure 9-2: Outcrops of the Jabalí Vein (prepared by Endeavour Silver, dated 2020)

9.4.3 El Fresno-La Zavala

The El Fresno-La Zavala area consists of Pendencia, La Semilla, Gloria system, 12 De Diciembre, and Detachment Fresno. In addition, new records were located identifying the possible projection of the El Fresno structure. A trenching program was conducted over this trace to determine the continuity or limit of the El Fresno mineralized structure.

The Pendencia Vein was traced for approximately 300 m with a general east-west trend dipping 75° north. Along with this structure, the old Pendencia Mine is considered one of the more extensively developed mines in the area. Currently, access is limited to a 40 m adit oriented perpendicular to the structure but is believed to have two levels of development. Pendencia is a footwall structure with thickness up to 2m and is marked by quartz veining with sulphide veinlets.

The La Semilla structure presents a general trend-oriented N65 to 75° W dipping from 75 to 80° to the northeast and has been traced approximately 200 m. A small 3 m adit has been located along La Semilla and consists of quartz-hematite, with traces of sulphides and an average thickness of 1.5 m.

The El Fresno structure is marked by alteration zones and mineralized float that aligns with the trend of the structure. A new outcrop was mapped along with the projection of the vein within a gap zone (Figure 9-3).

Silver results of the El Fresno-La Zavala area are presented in Figure 9-4.

Figure 9-3: Strong Alteration Zone (hematite-jarosite) with Fractured Quartz, Argillic Alteration Zone, with Outcrops of Massive Quartz, on the Trend of the El Fresno Structure (prepared by Endeavour Silver, dated 2020)

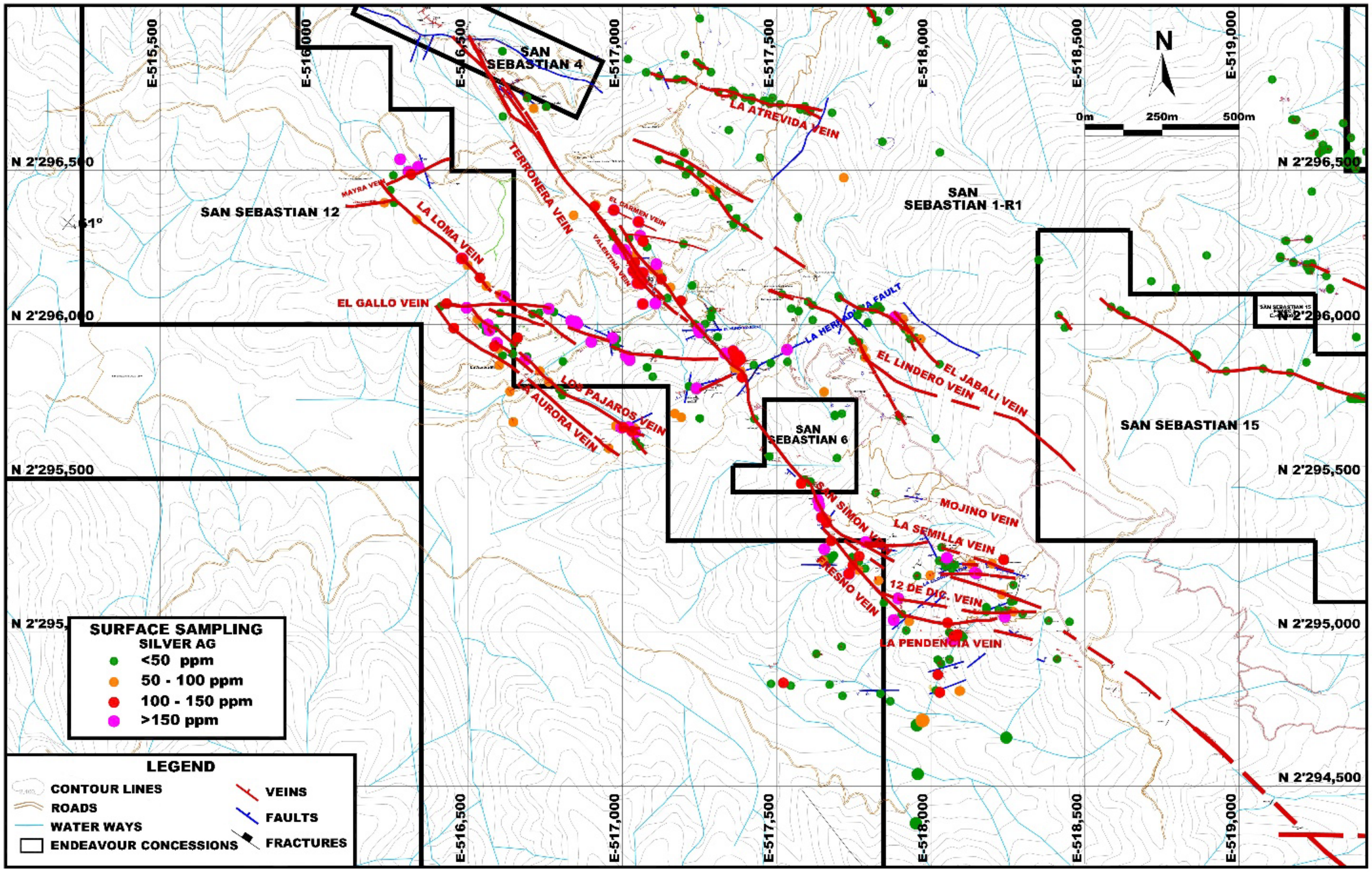


Figure 9-4: Silver Results in the Terronera El Fresno-La Zavala Area (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system WGS 84/UTM Zone 13 Q

9.4.4 La Sanguijuela Claim

Reconnaissance mapping conducted on the La Sanguijuela claim mainly focused on the local geology of Los Cuates area. The El Puerto, La Pastura, and El Columpio veins were identified and mapped.

The Los Cuates Vein presents a general east-west trend dipping from 65 to 85° to the north with a length of 1,700 m. The area is marked by uneven terrain, which varies in elevation by +/- 150 m. The Los Cuates Vein has an average thickness of 4 m and is known to host nine mine workings (Los Cuates, El Abuelo, El León, El Tejón, El Moloaste, La Hojarasca, and El Solitario Mines; in addition, Los Cuates and La Escalera shafts). Figure 9-5 shows adits of the Los Cuates Mine, developed on Los Cuates Vein. The structure consists of two veins separated by a fault zone at the footwall of the main structure. The veins contain opaque quartz with hematite in fractures and very narrow veinlets of gray sulphides (galena).

The El Puerto Vein is developed within the rhyolite unit surrounded by the alteration zone containing intense fractures, moderate to strong oxidation, and traces of sulphides. The mapped area is characterized by opaque chalcedonic quartz veinlets of calcite and dendritic manganese. In some areas, the vein becomes narrow and loses continuity.

La Pastura Vein trends N45°W, dipping from 60 to 75° to the northeast, with an average thickness of 1.5 m. It is hosted in a sedimentary unit where the host rock is a massive clay-rich limestone (mudstone). The topography is characteristic of sediments with gentle hills and dendritic drainage patterns. Quartz is more crystalline with traces of fine copper (malachite) and zinc (sphalerite) mineralization.

The El Columpio structure is located 200 m to the south of the main Los Cuates Vein. It is oriented in an east-west trend, dipping from 50 to 65° to the north. Outcrops are rare, but when mapped, El Columpio can be seen hosted in rhyolites as opaque white quartz with oxidized fractures containing dendritic manganese and traces of sulphides. The vein trace is defined or identified by float remnants and zones of oxide alteration and argillic alteration.

Silver results of the La Sanguijuela claim are presented in Figure 9-6.

Figure 9-5: Adits to Los Cuates Mine (Number 4 shows the Main Adit; Numbers 1 to 3 shows the secondary adits) (prepared by Endeavour Silver, dated 2020)

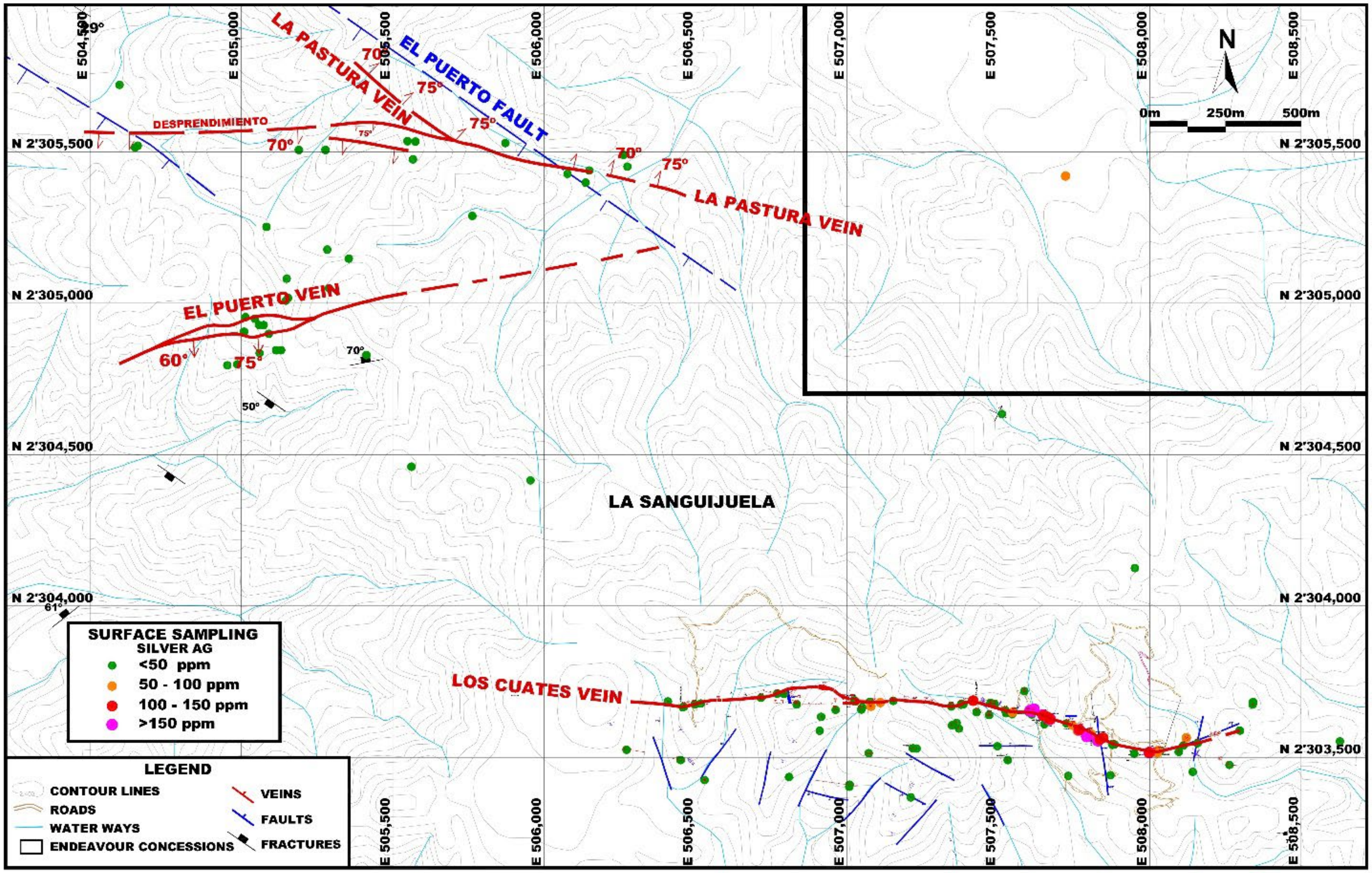


Figure 9-6: Silver Results in the La Sanguijuela Area (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system WGS 84/UTM Zone 13 Q

9.4.5 San Sebastián 11 Claim

Exploration work of the San Sebastián claim was limited to field mapping of the El Volantin.

9.4.6 Real Alto

Within the Real Alto Zone, the El Saucillo Vein was mapped towards the Cerro Gordo claims. Structural analysis was carried out on the northwest-southeast and east-west structures.

Silver results of the Real Alto area presented in Figure 9-7.

9.4.7 La Unica Claim

Reconnaissance mapping and field checks identified three structures requiring further investigation: La Única, Julio Camichina, and El Bonete. A total of 911 rock chip samples were collected during the 2020 regional exploration program, which focused on identifying areas for growth within 25 km of the Terronera Vein.

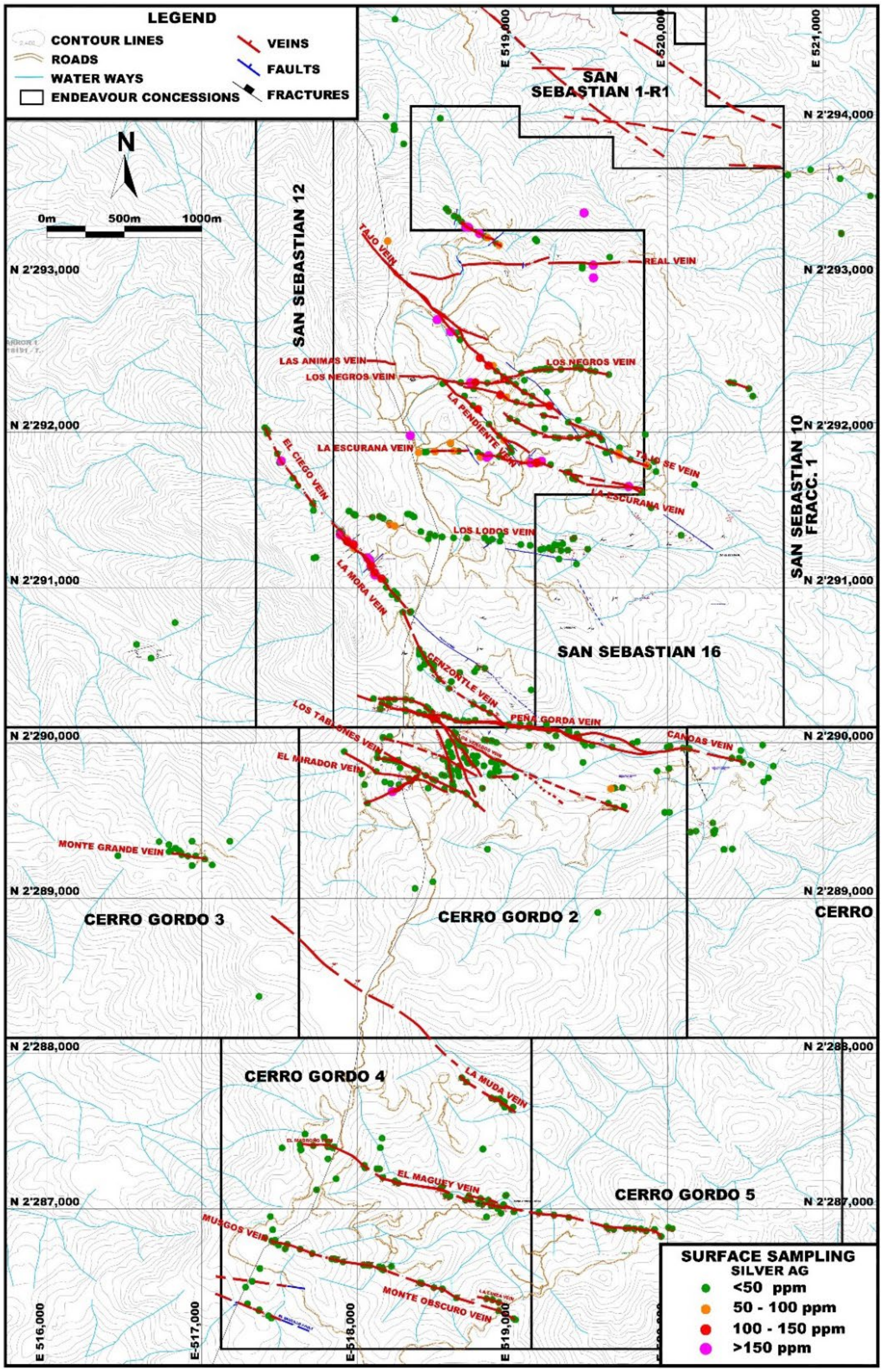


Figure 9-7: Silver Results in the Real Alto Area (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system WGS 84/UTM Zone 13 Q

10.0 DRILLING

The drill programs conducted at the Terronera Project are summarized in Table 10-1. Drill holes were typically drilled starting with HQ core diameter and eventually reducing to NQ.

Drill collar location maps for the Terronera Project, Terronera Vein, and La Luz Vein are presented in Figure 10-1, Figure 10-2, and Figure 10-3, respectively. The Terronera Vein intercepts and La Luz Vein intercepts are shown on the longitudinal projection in Figure 10-4 and Figure 10-5, respectively. Results of the drilling program carried out during 2020 are summarized in Table 10-2 to Table 10-6.

Interpretations of the Terronera drilling results can be found in Figure 14-1 and Figure 14-2 and interpretations of La Luz drilling results in Figure 14-13 and Figure 14-14.

Table 10-1: Drill Hole Summary

Company	Year	No. of Core Holes	Metres Drilled	Areas Drilled
IMMSA	1992-1995	17	Unknown	Terronera, Quiteria West, La Luz
Endeavour Silver	2011	36	7,691	Real Alto, Quiteria West
Endeavour Silver	2012	35	14,566	Real Alto, Quiteria West, Terronera
Endeavour Silver	2013	30	8,574	Terronera
Endeavour Silver	2014	49	15,110	Terronera and Zavala
Endeavour Silver	2015	27	6,133	Terronera
Endeavour Silver	2016	67	17,570	Terronera, La Luz, El Mondeño, Exploration drilling around Terronera and La Luz veins
Endeavour Silver	2016	4	1,241	Geomechanical – Terronera Vein
Endeavour Silver	2017	47	12,252	La Luz, Quiteria West, Exploration drilling around Terronera and La Luz veins
Endeavour Silver	2018	39	18,774	Terronera
Endeavour Silver	2018-2019	4	789	Geomechanical – La Luz
Endeavour Silver	2020	24	6,324	Terronera, Real Alto, Los Cuates, Exploration drilling around Terronera vein
Total		**379**	**109,024**	

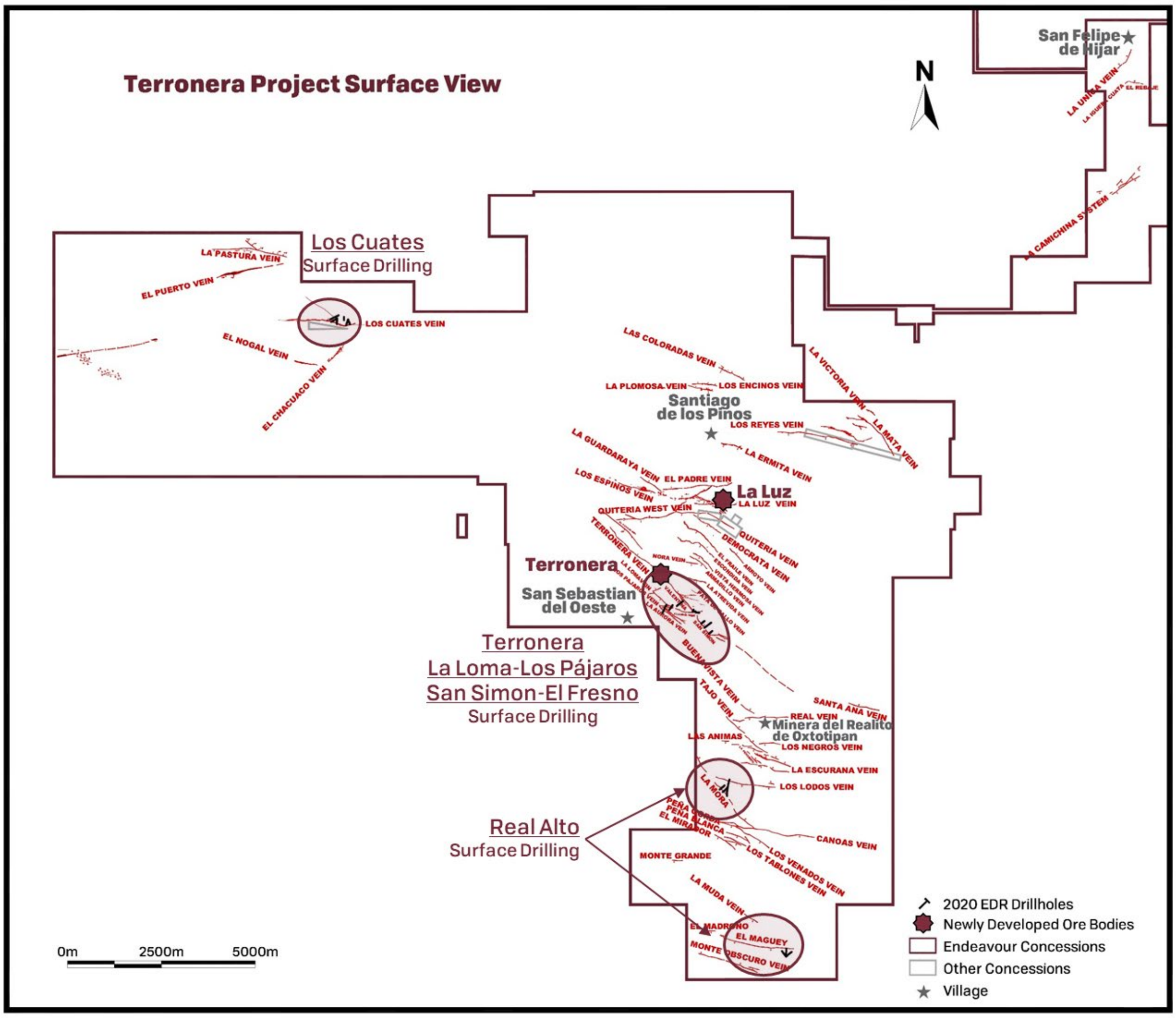


Figure 10-1: Terronera Surface Map Showing Completed 2020 Drill Holes (prepared by Endeavour Silver, dated 2020)

Note: Completed drill holes are shown in black; EDR = Endeavour Silver; Coordinate system - WGS 84 / UTM Zone 13Q

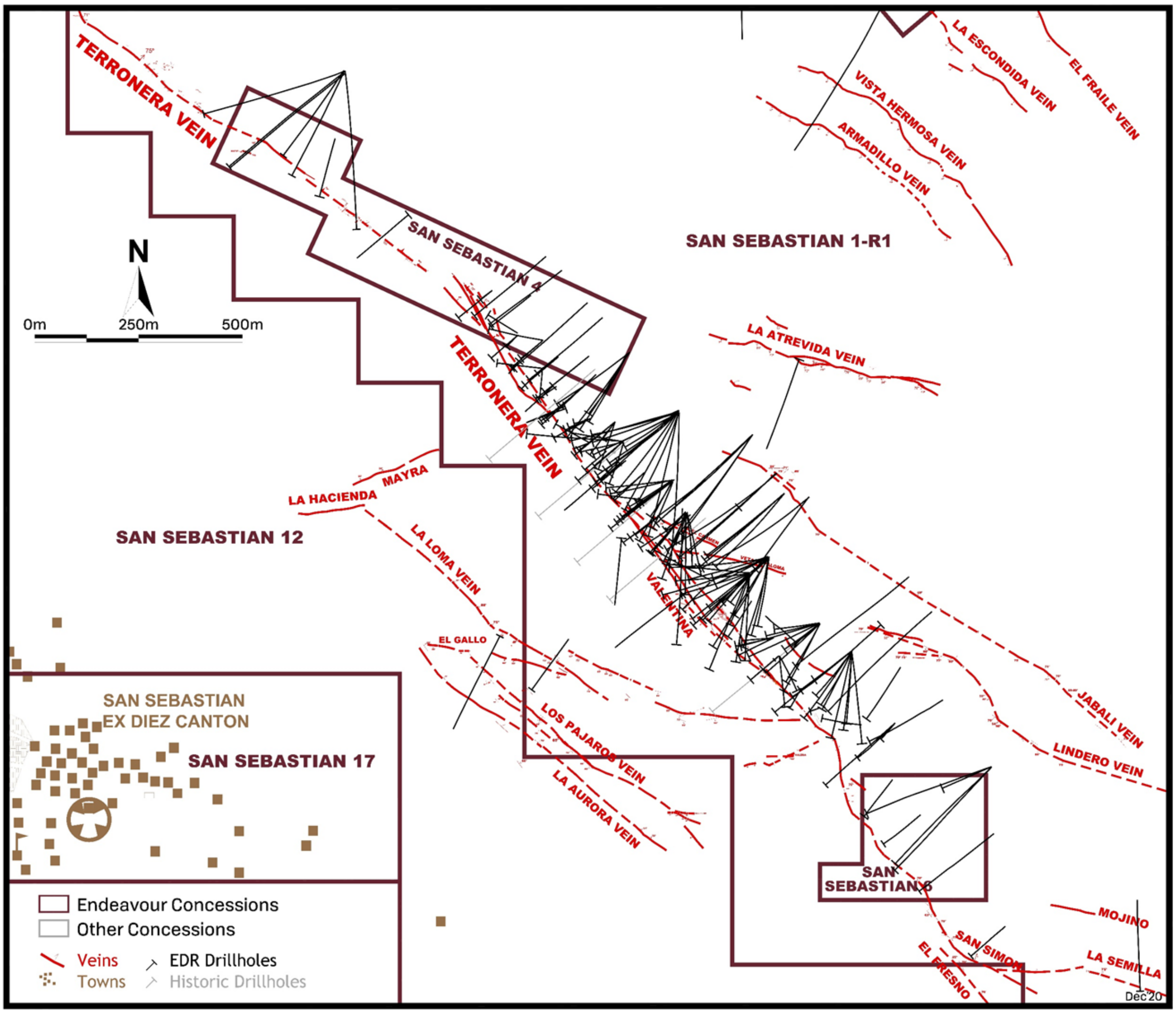


Figure 10-2: Drill Collar Locations - Terronera Vein (prepared by Endeavour Silver, dated 2020)

Note: EDR = Endeavour Silver

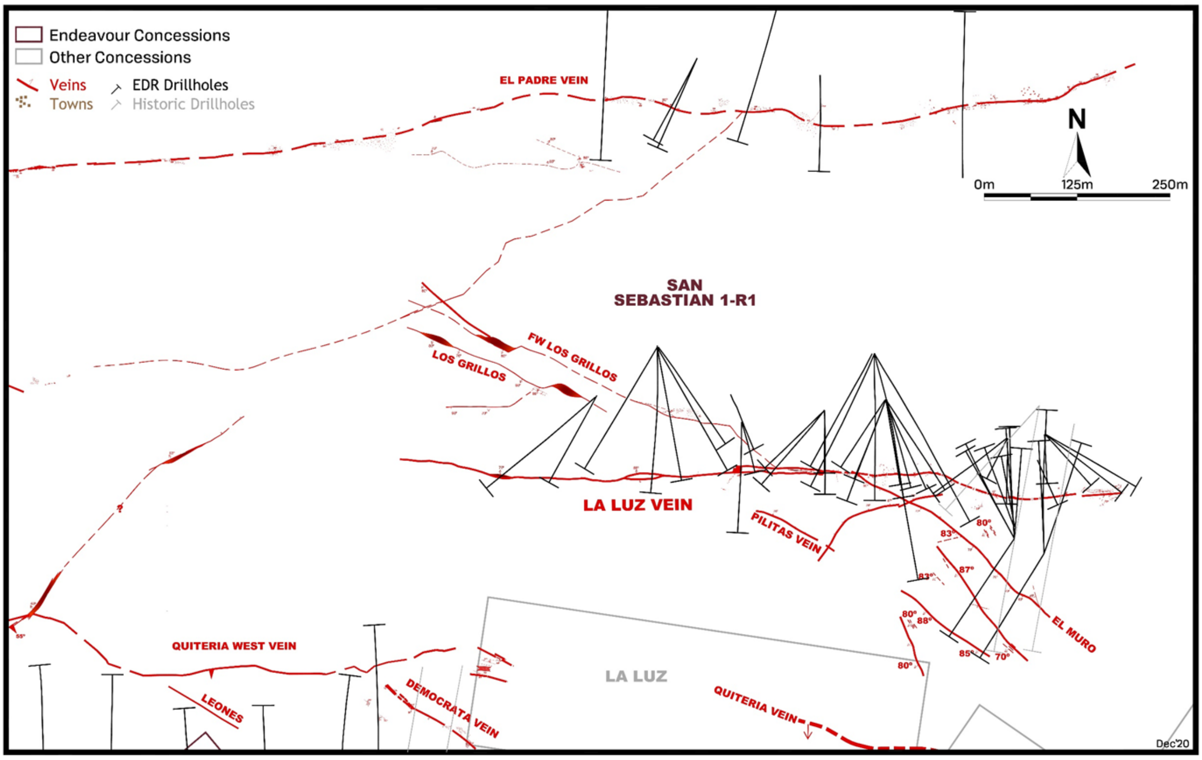


Figure 10-3: Drill Collar Locations – La Luz Vein (prepared by Endeavour Silver, dated 2020)

Note: EDR = Endeavour Silver

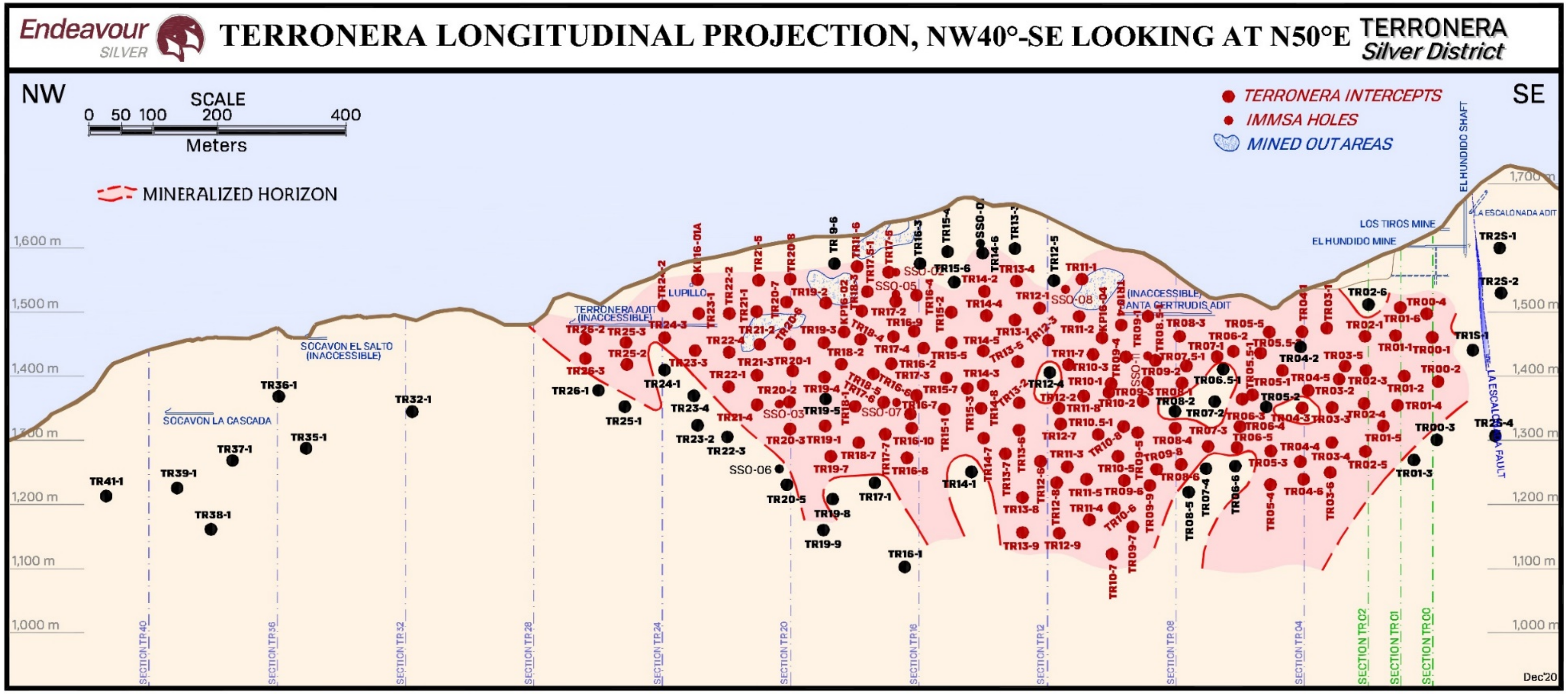


Figure 10-4: 2020 Drill Intersections – Terronera Vein Longitudinal Projection (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system – WGS 84/UTM Zone 13Q

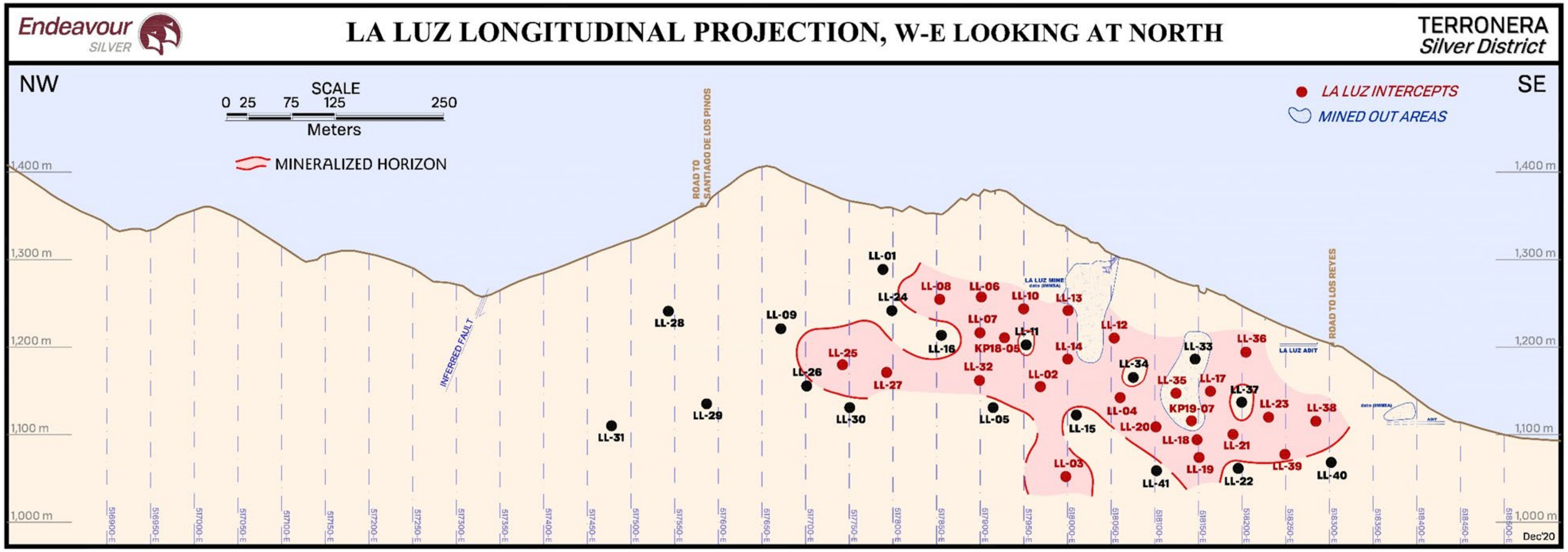


Figure 10-5: 2020 Drill Intersections – La Luz Vein Longitudinal Projection (prepared by Endeavour Silver, dated 2020)

Note: Coordinate system – WGS 84/UTM Zone 13Q

Table 10-2: Surface Drill Hole Assay Summary for Mineral Intercepts in the La Loma - Los Pajaros Area

Drill Hole No.	Structure	Mineralized Interval				Assay Results	
		From (m)	To (m)	Core Length (m)	True Width (m)	Silver (g/t)	Gold (g/t)
PJ-01	Valentina	243.50	246.40	2.90	2.21	5	0.06
	Valentina Composite	244.95	246.40	1.45	1.10	6	0.07
	Including	245.70	246.40	0.70	0.53	11	0.12
PJ-02	La Loma Projection	107.65	112.50	4.85	3.72	2	0.03
	La Loma Proj Composite	109.00	110.60	1.60	1.23	2	0.04
	Including	109.80	110.60	0.80	0.61	2	0.04
PJ-03	Los Pajaros	89.95	91.20	1.25	1.18	4	0.01
	Including	90.95	91.20	0.25	0.24	12	0.02

Table 10-3: Surface Drill Hole Assay Summary for Mineral Intercepts in the Real Alto Area

Drill Hole No.	Structure	Mineralized Interval				Assay Results	
		From (m)	To (m)	Core Length (m)	True Width (m)	Silver (g/t)	Gold (g/t)
REA-01	La Mora	210.25	215.95	5.70	4.24	31	0.57
	La Mora Composite	211.25	212.65	1.40	1.04	60	1.14
	Including	211.25	212.15	0.90	0.67	80	1.45
REA-02	Hw Los Lodos	245.10	245.80	0.70	0.51	388	0.56
	Hw Los Lodos Composite	245.10	246.50	1.40	1.02	273	0.36
	Including	245.10	245.80	0.70	0.51	388	0.56
	Los Lodos	254.20	256.70	2.50	1.74	36	1.10
	Los Lodos Composite	255.20	256.70	1.50	1.04	45	1.76
	Including	255.45	256.70	1.25	0.87	48	2.09
REA-03	La Mora	232.10	234.10	2.00	1.12	3	0.03
	Including	232.50	233.10	0.60	0.34	8	0.04
REA-04	La Mora	167.50	175.95	8.45	6.38	16	0.39
	La Mora Composite	172.25	174.30	2.05	1.55	19	1.16
	Including	172.25	172.70	0.45	0.34	35	1.19
REA-05	La Mora	277.70	285.60	7.90	3.77	17	0.19
	La Mora Composite	277.70	279.90	2.20	1.05	39	0.59
	Including	277.70	278.55	0.85	0.41	48	0.95
REA-06	El Maguey	170.40	172.25	1.85	1.74	3	0.08
	El Maguey Composite	170.40	171.40	1.00	0.94	4	0.09
	Including	170.40	171.40	1.00	0.94	4	0.09
REA-07	El Maguey	205.85	208.90	3.05	2.02	<2	0.01
	El Maguey Composite	205.85	207.20	1.35	0.89	<2	0.01
	Including	205.85	206.30	0.45	0.30	<2	0.03
REA-08	El Maguey	221.10	227.10	6.00	4.63	2	0.05
	El Maguey Composite	222.65	224.15	1.50	1.16	2	0.07
	Including	222.65	223.05	0.40	0.31	3	0.08

Table 10-4: Surface Drill Hole Assay Summary for Mineral Intercepts in the San Simón - El Fresno Area

Drill Hole No.	Structure	Mineralized Interval				Assay Results	
		From (m)	To (m)	Core Length (m)	True Width (m)	Silver (g/t)	Gold (g/t)
TR6S-1	San Simón	164.05	168.90	4.85	4.16	28	0.20
	San Simón Composite	163.15	164.70	1.55	1.33	80	0.19
	Including	163.15	164.05	0.90	0.77	123	0.28
TR9S-1	San Simón	219.95	221.65	1.70	1.66	126	0.33
	San Simón Composite	219.95	221.10	1.15	1.12	170	0.32
	Including	220.80	221.10	0.30	0.29	569	0.67
TR13S-1	San Simón	126.55	128.10	1.55	1.35	214	9.78
	Including	127.35	128.10	0.75	0.65	254	12.70
	El Fresno	179.95	180.50	0.55	0.46	216	14.45
	El Fresno Composite	179.95	183.40	3.45	2.88	1056	6.05
	Including	183.00	183.40	0.40	0.33	2210	4.40

Table 10-5: Surface Drill Hole Assay Summary for Mineral Intercepts in the Los Cuates Vein Area

Drill Hole No.	Structure	Mineralized Interval				Assay Results	
		From (m)	To (m)	Core Length (m)	True Width (m)	Silver (g/t)	Gold (g/t)
LCT-01	Los Cuates	118.85	144.10	25.25	22.40	45	0.10
	Los Cuates Composite	121.75	123.10	1.35	1.20	132	0.30
	Including	122.65	123.10	0.45	0.40	273	0.63
LCT-02	Los Cuates	210.40	212.10	1.70	1.05	2	<0.005
	Including	210.40	211.40	1.00	0.62	2	<0.005
LCT-03	Hw Los Cuates	198.80	202.80	4.00	2.15	<2	0.07
	Hw Los Cuates Composite	199.80	201.75	1.95	1.05	<2	0.08
	Including	201.45	201.75	0.30	0.16	<2	0.17
	Los Cuates	208.05	211.80	3.75	2.01	101	0.86
	Los Cuates Composite	209.55	211.80	2.25	1.21	156	1.36
	Including	209.55	210.30	0.75	0.40	83	2.42
LCT-04	Los Cuates	138.70	146.10	7.40	7.00	39	0.05
	Los Cuates Composite	139.80	141.30	1.50	1.42	126	0.14
	Including	139.80	140.55	0.75	0.71	150	0.20
LCT-05	Los Cuates	163.15	164.40	1.25	1.08	2	0.01
	Including	163.70	164.40	0.70	0.61	2	0.01
LCT-06	Vein	212.20	212.70	0.50	0.38	<2	0.03
	Veinlet	218.50	218.75	0.25	0.19	<2	0.01
	Veinlet	236.30	236.50	0.20	0.15	<2	0.02

Table 10-6: Surface Drill-Hole Assay Summary for Mineral Intercepts in the Terronera Vein Area

Drill Hole No.	Structure	Mineralized Interval				Assay Results	
		From (m)	To (m)	Core Length (m)	True Width (m)	Silver (g/t)	Gold (g/t)
TR00-4	Terronera	192.60	196.00	3.40	1.75	344	0.56
	Terronera Composite	192.60	196.20	3.60	1.65	357	0.58
	Including	192.85	193.65	0.80	0.39	796	0.85
TR01-6	Terronera	91.85	98.50	6.65	2.22	571	3.26
	Terronera Composite	88.10	99.10	11.00	3.67	459	2.07
	Including	92.30	93.00	0.70	0.23	947	11.32
TR02-6	Terronera Projection	60.15	60.40	0.25	0.12	3	0.02
	Terronera Composite	58.65	61.00	2.35	1.10	2	0.02
	Including	59.45	60.15	0.70	0.33	3	0.03

10.1 Sampling and Logging

For sampling and logging descriptions, please refer to Section 11.

10.2 Core Recovery

In general, core recovery in the Terronera Vein is within acceptable levels, with an average of 90% in the mineralized zone and 100% in the host rock.

Core recovery at La Luz is mostly 100% for both mineralized and host rock.

10.3 Drill Hole Surveying

10.3.1 Collar

Surveys are carried out by Endeavour Silver surveyors with total stations with dual-band GPS. The survey starts from a previously positioned survey point (with GPS) and with adequate quality control. Based on the baseline survey point related to an open support polygonal, topographic control points (stations) are propagated to the drilling areas.

Collar measurement, based on the open support polygon, is performed by positioning the total station at a topographic control point. A survey prism reflects the electronic distance measurement beam back to the source providing the total station with the coordinates of the collar. Coordinates of the collar are entered into Excel, and later imported into the drilling databases.

10.3.2 Downhole

Surface holes are surveyed using a Reflex multi-shot down-hole survey instrument, performed by personnel from the drilling companies, generally at 30 m intervals from the bottom of the hole and back up to the collar. As a first step, an initial survey is taken at 15 m to verify the correct inclination and azimuth of the drill hole.

Drill-hole survey data is transferred to databases in Vulcan and AutoCAD and corrected for local magnetic declination, as necessary. Information for each drill hole is stored in separate folders.

10.4 Geotechnical Drilling Program

10.4.1 2016 Drilling Program

In 2016, Endeavour Silver engaged Knight Piésold Ltd. (KP) to provide pre-feasibility level geomechanical and hydrogeological support for the proposed underground mine at the Terronera Vein of the Terronera Project. A total of 1,241 m was drilled in four drill holes.

The investigation program consisted of four geomechanical drill holes with detailed geomechanical logging. Core orientation was undertaken on three of these geomechanical drill holes to determine discontinuity orientations within all encountered rock units. A fourth geomechanical drill hole was drilled subparallel to the existing Lupillo adit, which was used to calibrate the rock mass quality observed in the exploration core to the performance of the adit.

The hydrogeological site investigations consisted of hydraulic conductivity testing and the installation of vibrating wire piezometers. Sixteen constant head packer tests were completed in three geomechanical drill holes.

10.4.2 2018-2019 Drilling Program

In 2018 and early 2019, Endeavour Silver engaged KP to provide geomechanical and hydrogeological support for the proposed underground mine at the La Luz Vein of the Terronera Project.

The investigation program consists of four geomechanical drill holes with core orientation and detailed geomechanical logging, hydrogeological packer testing at approximately 30 m intervals, and a nested vibrating wire piezometer installation.

Two drill holes were completed by the end of 2018, totaling 405 m, and two more drill holes for 385 m was completed in early 2019.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Introduction

The dataset used for the 2021 Mineral Resource estimate for the Terronera and La Luz deposits consists of over 20,000 1-m drill core samples that were taken under the supervision of Endeavour Silver's geology team and prepared and analyzed at commercial laboratories since 2012.

Endeavour Silver implemented QA/QC programs at the Terronera Project in data collection campaigns executed since 2012, accounting for all of the drill holes used in the Mineral Resource estimates for the Terronera and La Luz veins. Wood carried out a review of the QC data for the 2012 to 2020 drill programs used in the Mineral Resource estimate and concluded that notwithstanding minor issues with the QC program itself and potential low-level carry-through contamination in the primary lab, the results indicate the precision and accuracy of the Terronera silver and gold assays is good.

11.2 Sampling

Table 11-1 shows the number of samples and control samples analyzed by campaign.

The 2011 drill program focused on exploration targets within the Terronera Project area, including the Real Alto, Animas-Los Negros, El Tajo, Real veins, and the Central area (Quiteria Vein and Quiteria Mine West). This drilling was not used in the 2021 Mineral Resource estimates for the Terronera and La Luz veins.

The 2020 drill program was the last program included in the 2021 Mineral Resource estimate and consisted mainly of exploration drilling at the La Loma-Los Pajaros, Real Alto, San Simon-El Fresno, and Los Cuates areas. Three new drill holes were drilled at the southern portion of the Terronera Vein (458.20 m, 137 samples) and represent 14% of the total samples drilled in 2020 (Table 11-1).

Table 11-1: Number of Samples and Control Samples by Campaign

Campaign	No. of Samples	No. of Control QC samples			Total No. of Samples	Check Samples
		Standards	Duplicates	Blanks		
2011	2,980	0	0	0	2,980	0
2012-2014	7,027	394	394	390	8,205	394
2014-2016	6,623	367	366	372	7,728	361
2016	3,425	176	188	200	3,989	197
2017	2,095	139	114	119	2,467	121
2018	2,564	150	139	154	3,007	148
2020	980	50	51	59	1,140	58

Endeavour Silver has followed consistent sampling protocols since the implementation of the 2012 drill campaign. An Endeavour Silver geologist supervises all drilling and sampling. Sampling takes place at the core storage facilities at the Endeavour Silver campsite in Santiago de Los Pinos. Drill core boxes are collected from the surface drill platforms by an Endeavour Silver geologist and taken to the core storage facility where the boxes are laid out, opened, measured, marked for sampling, and are geologically and geotechnically logged.

Sampling is done in the mineralized structure and a few centimetres in the host rock on either side. In mineralized structures, sample intervals are between 20 and 100 cm and between 20 and 150 cm in the host rock. Intervals of high core recovery are not mixed with those of low recovery. Technicians record the RQD data. Sample numbers are tagged on the boxes and intervals, and sample numbers are tracked in an Excel spreadsheet. Technicians take photographs and density measurements for each box of core.

Whole, intact core pieces are cut in half with a diamond rotary saw, and broken core pieces are split with a pneumatic core splitter for sampling.

Cut samples are put in plastic bags with a corresponding sample number generated by the geologists. Samples are bagged and tagged at the core storage facilities and shipped to the ALS-Chemex preparation facility in Guadalajara, Mexico. The un-sampled half core is stored at the Terronera core storage facility.

11.3 Sample Preparation

Sample preparation consists of weighing the entire sample, drying the sample, if necessary, at a temperature between 100 and 120°C, and then crushing the dried sample to 70% passing -10 mesh (2 mm). The crushed sample is homogenized and split through a riffle splitter to obtain a 250 g sub-sample that is pulverized to 85% passing -200 mesh (75 µm) in a ring and puck mill. The cleaning procedure when crushing is by compressed air and by-passing silica rock through the crusher following samples with high clay content. At the pulverization stage, cleaning is done by compressed air and silica sand.

11.4 Drill Core Storage

The Terronera Project has two core storage facilities located in Santiago de Los Pinos and within the Terronera Project area. There is no security for the core shack's mineralized core, and the camp is an open site area.

Plastic core boxes and paper pulp bags are stored in an orderly manner in metal racks. Core Storage 1 is where core drilled until the 2020 drill program is stored. Core Storage 2 is where the post-2020 drilling campaign core is stored.

Endeavour Silver maintains the chain of custody throughout the drilling, sampling, and dispatch process to ensure no tampering takes place. Both Wood's witness samples and those of P&E Mining Consultants Inc. in 2018 support the presence of economically siginficant mineralization in the intervals sampled. Further discussion of Wood's witness sampling is found in Section 12.

11.5 Laboratory Certification

Samples from the Terronera Project are prepared at ALS Guadalajara. The laboratory is independent of Endeavour Silver and holds an ISO/IEC 17025 accreditation.

With ISO/IEC 17025 accreditation, ALS Canada, independent of Endeavour Silver, carried out the analytical process between the 2012 and 2018 campaigns. The Inspectorate laboratory in Hermosillo was used as a secondary laboratory from 2012 to 2018. Inspectorate holds global certifications for quality under ISO9001:2008, Environmental Management under ISO14001, and Safety Management under OH SAS 18001 and AS4801 and is independent of Endeavour Silver.

For the 2020 drilling campaign, holes drilled between August and mid-October used ALS Canada as the primary laboratory and SGS Durango as the secondary laboratory. For holes drilled from mid-October to December, SGS Durango was the primary laboratory while ALS Canada was the check laboratory. SGS Durango is also independent of Endeavour Silver and accredited under ISO/IEC 17025.

11.6 Analytical Methods

At ALS Canada, silver grades and the grades of 35 additional elements are determined by inductively ICP-AES following aqua regia digestion. The detection range for the silver assay is 0.2 to 100 ppm.

Gold was assayed by FA followed by AA analysis of the FA bead. A 30 g nominal pulp sample weight is used. The detection range for the gold assay is 0.005 to 10 ppm.

The analytical procedure for high-grade (over-limit) gold and silver mineralization is FA followed by gravimetric analysis. A 30 g nominal pulp sample weight is used. The detection limits for high-grade gold assays are 0.5 to 1,000 ppm and 5 to 10,000 ppm for silver assays.

The 2020 surface exploration program samples were analyzed by SGS Durango using aqua regia digestion, followed by ICP-OES for silver and 31 additional elements and by FA for gold. Overlimit silver and gold assays are by FA with gravimetric finish, and multielement overlimit analyses are by ICP-OES after sodium peroxide fusion.

11.7 Quality Assurance/Quality Control Program

Endeavour Silver submitted QA/QC samples, including standards, duplicates, blanks, and check assays to ensure accuracy and precision of the analyses. Blanks, duplicate, and standards samples were inserted approximately every 20th sample, representing approximately 5% of the total number of samples analyzed for each drilling campaign since 2012. Check assaying was also conducted with a frequency of approximately 5%.

Wood reviewed the QA/QC results for the 2012 to 2020 drill programs. A summary of the program and concussions from the review are presented below.

11.7.1 Standard Samples

Endeavour Silver uses commercial CRMs to monitor the accuracy of the laboratory. The CRMs were obtained from CDN Resource Laboratories Ltd., of Langley, B.C., Canada. Each CRM was prepared by the vendor at its laboratory and shipped directly to Endeavour Silver together with a certificate of analysis for each standard purchased.

A standard was inserted at a rate of approximately one in every 20 samples. This represents approximately 5% of the samples sent to the laboratory. Control charts provided by Endeavour Silver's team were reviewed and analyzed by Wood. Wood concluded that the silver assays at ALS Canada were 2 to 3% low compared to the best values provided with the CRMs.

11.7.2 Duplicate Samples

Endeavour Silver took routine field duplicate samples by quarter sawing, crushing and splitting half core intervals, and preparing one-quarter as the original sample and the second split as the duplicate sample. The original and the duplicate crushed samples were tagged with consecutive sample numbers and sent to the laboratory as separate samples. Crushed duplicates were taken and analyzed at a rate of approximately one in every 20 samples representing approximately 5% of the total samples for each campaign since 2012.

Correlation plots demonstrate a high correlation between original and field duplicate assays for gold and silver for all drilling campaigns. Scatter in gold grades is attributed to the relatively low concentration and coarse nature of the gold mineralization. There were several outliers in field duplicate silver assays for the 2014 to2016 and 2016 campaigns and in field duplicate gold assays for the 2018 campaign but no outliers in the other campaigns. Endeavour Silver did not take any action to re-assay sample batches based on the performance of the field duplicates. In reviewing the control charts, Wood estimates that more than 90% of duplicate pairs returned an average relative difference of less than 10%, which is considered reasonably good precision for this type of duplicate sample and for this style of mineralization.

11.7.3 Blanks

Coarse blank materials are used to monitor possible contamination during both preparation and analysis of the samples in the laboratory. The expected values for the blank samples should be below detection limits for silver and gold.

Coarse blank samples were inserted randomly at an average rate of approximately one in 20 samples representing approximately 5% of the total samples assayed in each campaign. In their review Wood noted that in several cases, the blank returned anomalously high silver grades of several ppm even when following waste samples containing only trace mineralization, indicating that there are likely low levels of precious metal mineralization in the blank material. However, Wood also noted that a higher-than-average proportion of blank samples analyzed after mineralized sample intervals returned silver grades of several ppm, indicating potential low-level carry-through contamination issues with several campaigns. The magnitude of the contamination appears to be limited to a few ppm of silver which is relatively minor given that the average grade of silver mineralization is several hundred ppm.

11.7.4 Check Assaying

As an additional QC measure, check assaying was used to determine the relative accuracy of the primary laboratory. From 2012 to 2018, Endeavour Silver routinely conducted check analyses using Inspectorate. For the 2020 drilling campaign, both ALS Canada and SGS Durango were used as the secondary laboratory. Pulps were randomly selected from the samples prepared and analyzed at the primary laboratory and sent to the secondary laboratory for check assaying. The total number of check samples selected represents approximately 5% of the total samples taken during each drill program.

Campaigns from 2012 to 2018 produced a correlation coefficient higher than 0.98 for silver and gold, with very few outliers indicating good agreement between the original ALS Canada assay and the check assays from Inspectorate. A similar agreement is shown between ALS Canada and SGS Durango laboratory in 2020. However, overall a slight negative bias of 3 to 5% is observed in the ALS Canada results relative to the check assay labs.

11.8 QP Comments on Section 11

The QP notes:

- Sampling, sample preparation, and sample chain of custody practices are consistent with industry standards for high-grade silver-gold mineralization
- Overall, results of the QA/QC program indicate that the precision and accuracy of the Terronera silver and gold assays are good
- In the QP's opinion, the sample preparation at the drill core facilities, security and analytical procedures described by Endeavour Silver's geologists meet industry accepted practices and the sample results are adequate for use in the estimation of Mineral Resources.
- The QP did not visit ALS Canada, Inspectorate, or SGS Durango laboratories.

12.0 DATA VERIFICATION

12.1 Database Verification

The database used for the 2021 Mineral Resource estimate has a cut-off date of January 21, 2021 and consists of diamond drill hole data and modeled estimation domains (wireframes) for the Terronera and La Luz veins. The drill hole database consists of collars, assays (gold and silver), survey information, lithology and alteration description, recovery, and density data that Wood visually inspected.

Assay data was verified against the original laboratory certificates. The QP performed the verification and validation of drill hole collars, downhole surveys, geological logging, sampling, sample preparation, and assaying procedures during their site visit.

Wood visually validated the La Luz Vein domain wireframes and updated the wireframe for the Terronera Vein based on three new drill hole intersections from the 2020 drill campaign.

Wood considers the current drill hole data and modeled estimation domains of the Terronera and La Luz veins suitable for the Mineral Resource estimation.

12.2 Wood Site Visit and Independent Sampling

In verifying the data's suitability for use, a number of procedures were observed while the QP was on site. The scope of verification and review of data acquisition and data management procedures included:

- The selection and checking using a GPS of seven collar locations from the Terronera and La Luz veins. Six collars were located and found to be acceptably close to the collar coordinates in the database, with one collar not found
- The review of drill core box labeling sampling procedures, QA/QC protocols, and safety at the core shack facilities
- The verification of sampling and core logging from seven drill holes of the Terronera and La Luz veins and the independent sampling from each vein (Section 12.2.4)
- The review of the density measurement procedures during the visit to the project logging and core storage facility
- An understanding of the database management system controlled by Endeavour Silver's exploration team from the Durango office.

12.2.1 Drilling

Drilling practices were reviewed by visiting a rig drilling an exploration drill hole at the Pendencia vein, southeast of the Terronera Vein. Energold de Mexico, S.A. de C.V has worked at the Terronera Project for several drill campaigns keeping consistent drilling practices. Drill hole collars are located and oriented by Endeavour Silver geologists and/or surveyors. Downhole surveying is performed using a Reflex instrument. The QP checked selected downhole survey measurements from the Terronera Vein during the visit.

12.2.2 Core Logging

Three drill holes were selected for the core logging review of the Terronera Vein and four drill holes of the La Luz Vein. Drill holes TR09-5, TR11-4, and TR12-3 intersect the central part of the Terronera Vein at a depth of 302 m, 548 m, and 242 m, respectively. For La Luz Vein drill holes LL-35, LL-25, LL-08 and LL-34 intersect the vein at approximately 105 m, 215 m, 92 m, and 107 m depth, respectively.

Core logging forms are used to record mineralization types as silver sulphide and disseminated pyrite; however, the forms do not describe the presence and modal percentage of minerals including galena, argentite, chalcopyrite, covellite, or sphalerite that are described in mineralogy studies done at Terronera (Ochoa, 2015) and observed in the core selected for the review (Figure 12-1). Core logging is manually recorded in several paper forms: box log, structure log, sampling form, density form, recovery and RQD form, alteration and mineralization form, and geology drill log form (photograph). The forms are later compiled and uploaded into an Excel table database.

Most of the core selected for review was strongly fractured. Some discrepancies were noted between the core logging. The observed alteration type, intensity and oxidation intensity, and the data collection and quality of this data could be improved; however, the QP notes that these issues will not compromise the integrity of the interpretation used to produce estimation domain wireframes used for Mineral Resource estimation.

Figure 12-1: Drill Hole TR09-5, 306 to 308.10 m, illustrating breccia with bands of strong silicification, strong sulphide mineralized zone, crystals of argentite, galena, chalcopyrite, and pyrite disseminated. Weak oxidation. (prepared by Wood, dated 2021)

12.2.3 Sampling

Wood reviewed sampling practices with the Terronera Project geologists during the site visit and confirms the sampling practices presented in Section 11.

12.2.4 Witness Samples

Wood took five samples from the Terronera Vein and four from La Luz Vein during the site visit. Intervals were selected from mineralized zones. The witness samples were sent to ALS Canada for analysis. One blank and standard was added to each vein group of samples.

The same analytical methods used for the original samples (Section 11) were used to assay the witness samples.

Results of witness sampling for the Terronera Vein are shown in Table 12-1 and Figure 12-2. The re-analysis of sample SDH31421 shows considerably lower silver and gold grades than the original sample that may be related to the loss of fines material from the archived drill core available for re-sample.

Results of the witness samples taken from the La Luz Vein are shown in Table 12-2, and the scatter plot in Figure 12-3. The blank sample inserted as a control sample assayed at 5.7 g/t Ag and 0.013 g/t Au which is above detection limits for both silver and gold. The low-level mineralization may indicate background silver-gold mineralization in the blank material or low-level carry-through contamination from high-grade samples, as discussed in Section 11.

Overall, the results from the witness samples support the data as being reliable and suitable for use in Mineral Resource estimation.

Table 12-1: Terronera Vein Witness Samples

Drill Hole ID	Original Sample_ID	From (m)	To (m)	Original grade Ag (g/t)	Original Grade Au (g/t)	New Sample_ID	New Grade Ag (g/t)	New Grade Au (g/t)
BLK						SDH31415	0.1	0
TR09-5	SDH17733	306	306.5	4470	3.95	SDH31416	4820	3.89
TR09-5	SDH17735	306.5	307.1	2230	1.13	SDH31417	2570	1.055
TR11-4	SDH25567	564.75	565.6	346	12.8	SDH31418	408	13.45
STD	CDN-ME-1302			419	2.41	SDH31419	409	2.36
TR09-5	SDH17737	307.6	308.05	6650	4.78	SDH31420	6050	5.02
TR12-3	SDH12621	254.2	254.85	6940	6.93	SDH31421	3580	3.92

Note: BLK = blank; STD = standard.

Table 12-2: La Luz Vein Witness Samples

Drill Hole ID	Original Sample_ID	From (m)	To (m)	Original grade Ag (g/t)	Original Grade Au (g/t)	New Sample_ID	New Grade Ag (g/t)	New Grade Au (g/t)
BLK						SDH31422	5.7	0.013
LL-35	SDH24133	106.85	107.05	798	57.6	SDH31423	847	54.2
LL-25	SDH23245	216.2	216.65	1830	1.05	SDH31424	1345	0.887
STD	CDN-ME-1302			419	2.41	SDH31425	409	2.22
LL-08	SDH19865	96.45	97.55	23.5	8.76	SDH31426	17.2	7.71
LL-34	SDH24095	109.75	110	9.4	9.65	SDH31427	13.6	9.66

Note: BLK = blank; STD = standard. Blank reference value (is not certified).

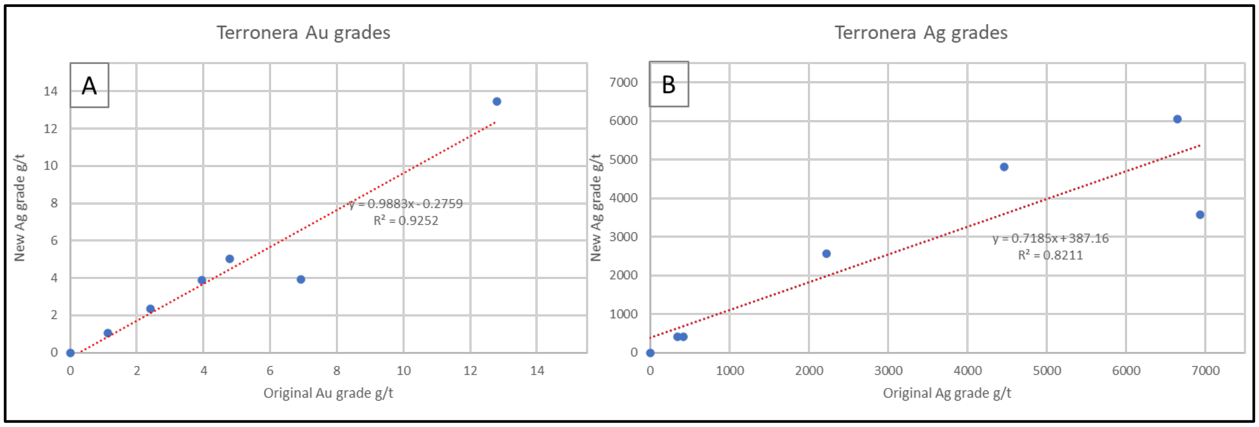


Figure 12-2: Gold (A) and Silver (B) Check Assays for the Terronera Vein (prepared by Wood, dated 2021)

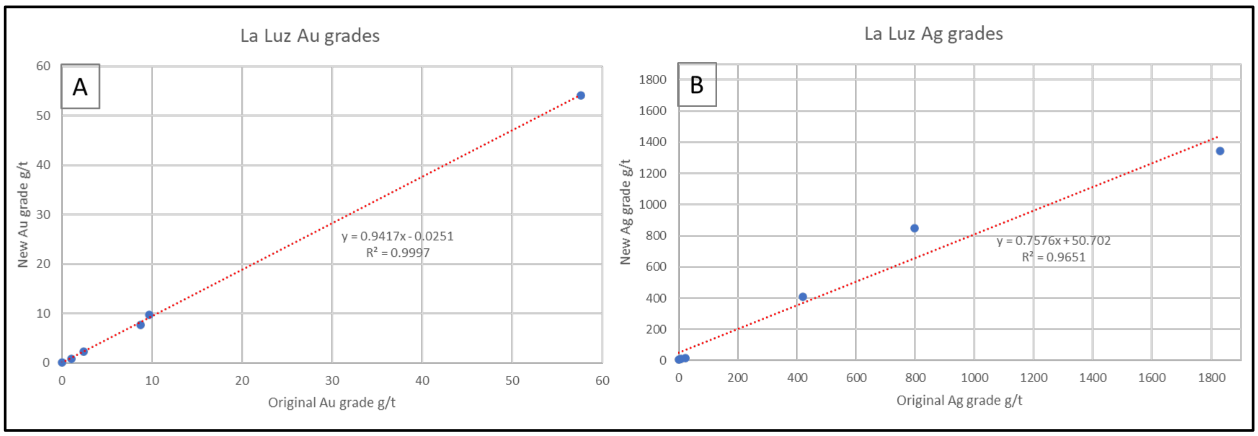


Figure 12-3: Gold (A) and Silver (B) Check Assays for La Luz Vein (prepared by Wood, dated 2021)

12.3 QP Comments on Section 12

The QP notes that overall, sampling and core logging at the Terronera Project follow industry accepted practices. The QP's data verification procedures supports the integrity of the Mineral Resource database for its use in updating the Mineral Resource estimate.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Summary of Historical Metallurgical Testwork

A series of metallurgical testwork was performed between 2017 and 2019, 2020, and most recently in 2021.

13.1.1 Pre-2019 Testwork

In 2016, initial comminution testwork was completed at Hazen Research.

Between 2017 and 2019, initial metallurgical testwork was conducted by ALS Metallurgy in Kamloops, B.C., Canada. The metallurgical test program included evaluation of the flotation parameters for one composite representing an average grade of the deposit and three composite samples representing low, medium, and high-grade materials identified in the deposit. Each composite sample was subjected to rougher flotation testing at three different grind sizes, including 80% passing 150, 200, and 270 mesh (Tyler). Precious metals and metal sulphides mineralization flotation characteristics were evaluated to develop the levels of gold and silver recoveries that could be achieved at different grinds. The following samples were used to test the metallurgical response to a flotation process, with additional samples submitted for comminution and abrasion testing:

- TR2015 – 1 Average Grade
- TR2016 – 03 Low Grade (LG)
- TR2016 – 01 Medium Grade (MG)
- TR2016 – 02 High Grade (HG)
- TERRONERA Comminution Testing

Approximately 20 kg of each of the LG, MG, and HG samples were procured for evaluation. The material was crushed to P100 passing 6 mesh, blended, and split into 1 kg charges. A representative sample was pulverized and submitted for head analyses. The composite samples provided by Endeavour Silver were deemed representative of materials with various precious metal grades present at the Terronera Vein. The results obtained are shown in Table 13-1.

Table 13-1: Samples Characterization and Head Assay, Fire Assay, and Whole Rock Analysis (%) on Low Grade, Medium Grade, and High-Grade Composite Samples

Sample	Head Assays						
	Au (g/t)	Ag (g/t)	SiO_2 (%)	CaO (%)	Fe_2O_3 (%)	Total S (%)	Sulphide (%)
TR2016-03 LG	0.967	115.7	89.2	4.6	1.08	0.45	0.18
TR2016-01 MG	2.014	241.4	84.8	5.6	1.13	0.24	0.05
TR2016-02 HG	3.734	881.3	92	1.13	1.49	0.99	0.57

Results of the head analysis showed:

- Some variability in the whole rock analyses
- Lower quartz contents in the LG and MG composites when compared to the HG composite
- Differences in the calcium oxide and sulphide contents
- Iron content is higher in the HG composite
- An indication of the presence of pyrite in the HG composite with higher levels of iron and sulphide.

The analytical data developed on the average grade composite is provided in Table 13-2. Approximately 81.9% of the gold and 89.3% of the silver present in the sample were cyanide soluble. The total sulphur assayed was 0.39%, with slightly more than half coming from sulphide sulphur. Analytical data indicates that one of the most abundant elements is iron. The sulphur flotation mass balance calculations provide indications that a significant portion of the sulphur is present as a sulphide. These findings were corroborated by mineralogical examination of the flotation tailings sample and flotation test results, which indicate the presence of pyrite.

Based on the test data, it was estimated that the second cleaner concentrate would contain approximately 68% of the gold and 80% of the silver contained in the feed to flotation, as shown in Table 13-3.

Flash flotation with a regrind circuit was also part of this initial testwork program to enhance precious metal recovery. Metallurgical data developed by ALS Metallurgy is summarized in Table 13-4.

Table 13-2: Head Analyses of the Average Grade Composite Sample

Element (units)	Assay
Gold (g/t)	1.124
Silver (g/t)	225.0
Cyanide solution gold (g/t)	0.92
Cyanide solution silver (g/t)	201.0
Iron (mg/kg)	9440
Mercury (mg/kg)	0.11
Sulphide (%)	0.23
Sulphate (%)	0.16
Total sulphur (%)	0.39

Table 13-3: Metallurgical Test Data for Second Cleaner Concentrate

Metallurgical Product	Weight (%)	Distribution (%)		Assay (g/t)	
		Au	Ag	Au	Ag
Cleaner concentrate	1.50	67.50	80.70	54.90	14,625
Cleaner scavenger tail	2.30	8.30	7.10	4.36	837
Rougher tail	96.20	24.20	12.20	0.30	34
Combined final tail	98.50	32.50	19.30	0.40	53
Calculated head	100.00	100.00	100.00	1.19	267

Table 13-4: Metallurgical Data Developed by ALS Metallurgy

Metallurgical Product	Weight (%)	Distribution (%)		Assay (g/t)	
		Au	Ag	Au	Ag
Flash + cleaner concentrates	2.3	82.3	86.6	76.20	12,813
Cleaner tail	3.3	2.9	4.1	1.83	420
Rougher tail	94.4	14.8	9.3	0.33	33
Calculated head	100.0	100.0	100.0	2.10	336

The following observations were made:

- A single open cycle test was conducted in open cycle simulating a 100 µm primary grind size
- Approximately 50 and 60% gold and silver recoveries, respectively, are obtained in the flash flotation stage
- Overall recovery is the sum of the precious metal reporting to the final products in the flash and second cleaner flotation concentrates.

13.1.1.1 Deleterious Elements

The test program detected trace elements in the ICP scan conducted in the final concentrate product and identified deleterious elements, including arsenic, cadmium, chromium, mercury, and antimony.

13.1.1.2 Comminution Testing

Initial samples were submitted to Hazen Research for comminution testing in 2016. The samples were subjected to SMC testing, RWi, Ai, and CWi. The results are presented in Table 13-5. Test results indicated the material would be classified as a hard and highly abrasive material.

Table 13-5: Hazen Research Comminution Test Results

RWi (kWh/t)	Ai (g)	CWi (kWh/t)	SCSE (kWh/t)
17.2	1.0916	8.3	9.85

Note: SCSE = standard circuit specific energy

In 2019, a BWi was determined for four samples from various areas of the deposit for variability testing. Each sample was tested at a closed size setting (CSS) of 100 mesh. In addition, the BWi was determined for the original average grade composite sample at a CSS of 100 and 200 mesh. The BWi results obtained in previous testwork are summarized in Table 13-6.

Table 13-6: Bond Ball Mill Work Index Test Results

Sample	BWi @100 mesh (kWh/t)
501	17.40
502	18.68
503	18.40
504	19.42
TR 2015-1 Average Grade	19.10
Sample	**BWi @200 mesh (kWh/t)**
TR 2015-1 Average Grade	19.01

Note: For the preparation of this report, BWi were corrected from the updated pre-feasibility study (Burga et al., 2020) as these values had been incorrectly reported.

13.1.1.3 Findings

The 2017 to 2019 metallurgical testwork resulted in the following:

- Overall gold recovery of 82.3%
- Overall silver recovery of 86.6%
- Flash and cleaner concentrates combined represent approximately 2.3% of the original feed to flotation.

The following flowsheet was recommended to provide an improved level of precious metal recovery and lower capital and operating costs:

- A two-stage crushing circuit
- A coarser primary grind size of 100 µm
- Higher flotation recovery using flash flotation
- Improved final concentrate grade with a regrind circuit.

13.1.2 2020 Recovery Model

The 2019/2020 metallurgical testwork was conducted at the ALS Metallurgy facility in Kamloops, B.C., Canada, from samples obtained in 2019. The program completed included grind versus recovery, flash flotation, and cleaner circuit confirmation testing to refine the process design parameters and flowsheet. No additional comminution testing was completed.

Recovery models were generated from composites from current and previous testwork campaigns, as summarized in Table 13-7.

Primary grind versus recovery tests compared recoveries at three different grind sizes between 70 to 135 µm at 80% passing. The relationship between grind size and silver/gold recovery shows similar trends for both high- and low-grade samples in Figure 13-1. The recovery benefits of silver/gold outweigh grinding mill capital and operating cost savings at 70 µm.

Table 13-7: Test Samples Head Assays

Sample	Head Assays			
	Au (g/t)	Ag (g/t)	Fe (%)	S (%)
Terronera MC1	3.6	172.0	1.2	0.35
Terronera MC2	2.17	231.0	1.4	0.43
Low S MC	3.36	283.0	0.9	0.05
High S MC	1.68	1450.0	2.0	1.87

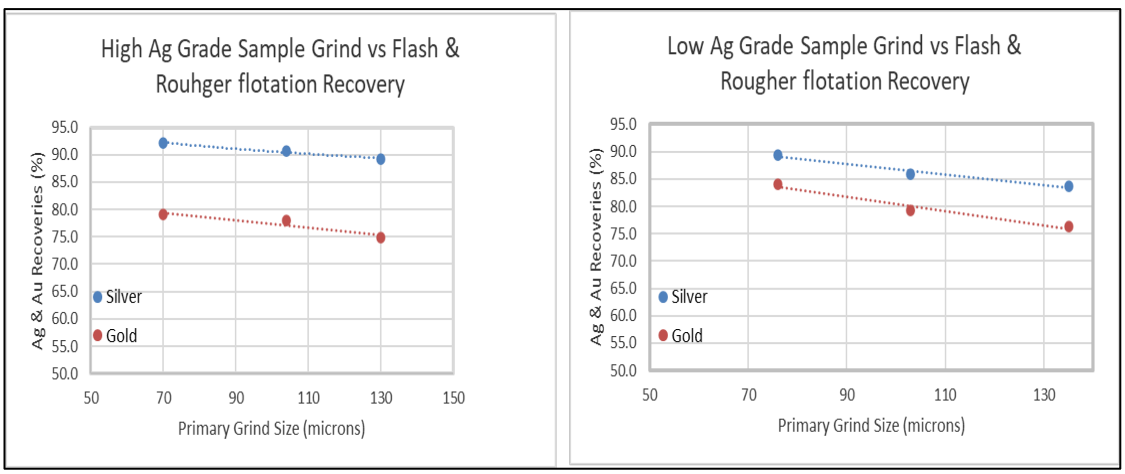


Figure 13-1: High and Low-Grade Grind Size versus Recovery (Burga et al., 2020)

Two cleaner circuit lock cycle tests (LCT) using the high- and low-grade samples were conducted to investigate the removal of the regrind mill and reduction of cleaner circuit stages to achieve a minimum target of 4,500 g/t Ag in the final concentrate. Results achieved a concentrate silver grade higher than the target; however, the lower grade sample required two stages of cleaning to achieve the 4,500 g/t Ag concentrate grade.

Silver and gold recovery models were developed to include additional LCTs (Figure 13-2 and Figure 13-3) and indicated an expected recovery of 84.9% and 82.3%, respectively. These levels of recovery were achieved at a grind of 70 µm at 80% passing.

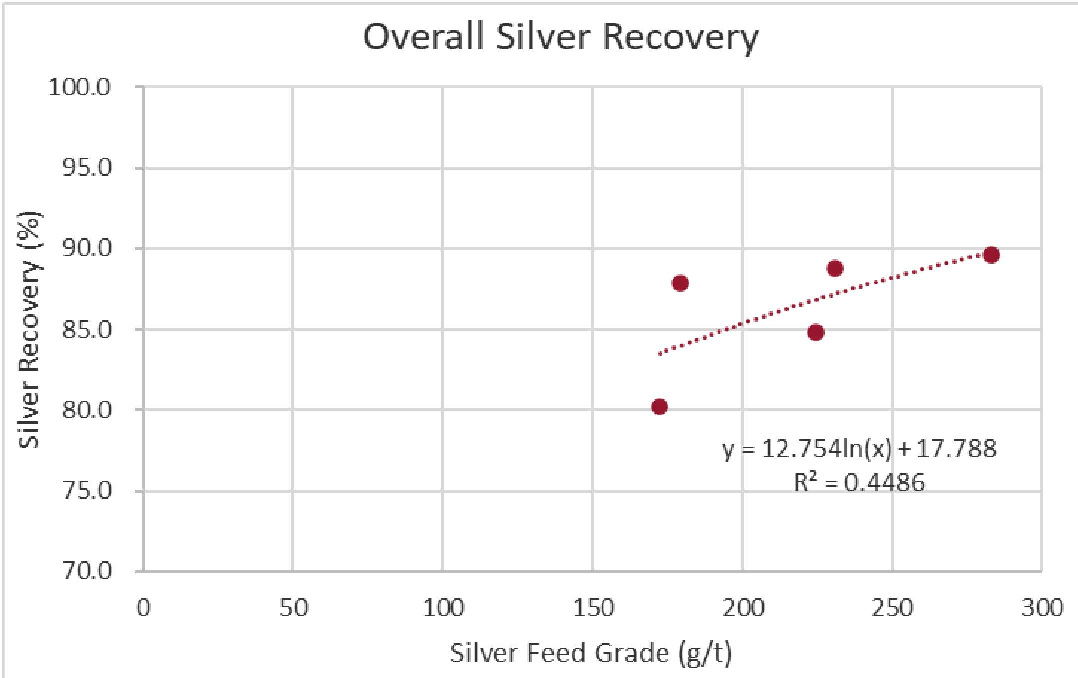


Figure 13-2: 2020 Silver Recovery Model (Burga et al., 2020)

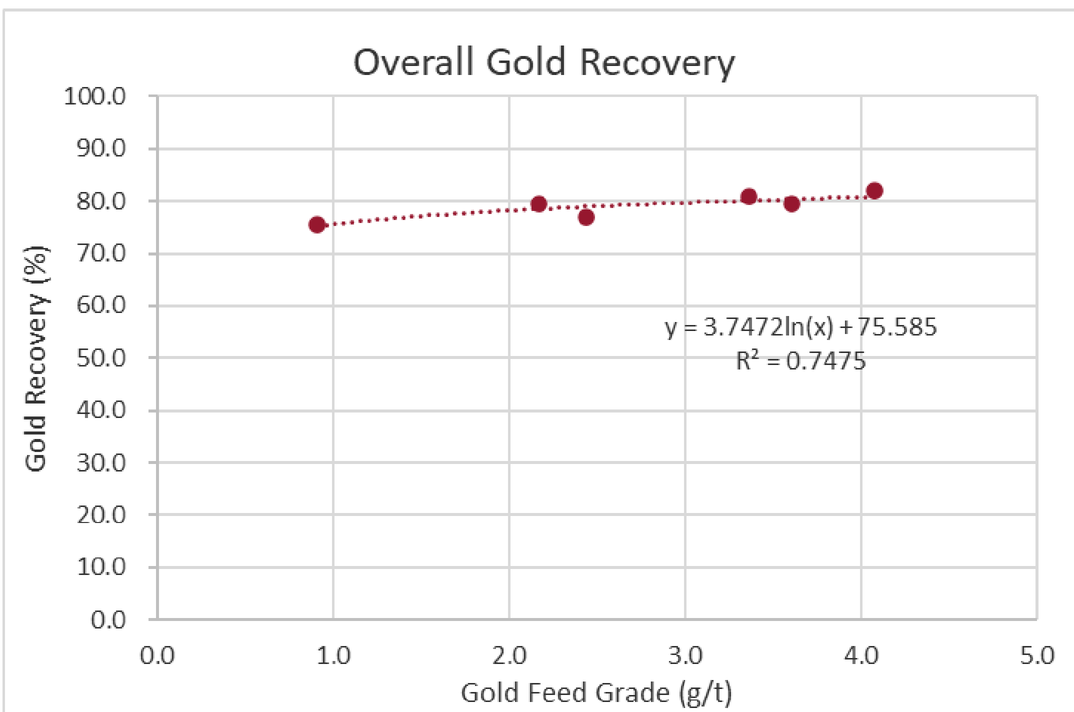


Figure 13-3: 2020 Gold Recovery Model (Burga et al., 2020)

13.2 2021 Testwork

The 2021 metallurgical testwork campaign was conducted on five master composites, three from the Terronera Vein and two from the La Luz Vein. Additionally, six variability composites from the Terronera Vein were prepared and tested. Samples selected to construct the composites were based on the pre-feasibility mine plan to provide good spatial coverage of the various mining periods over the LOM. Spatial distribution of these samples is illustrated in Figure 13-4 to Figure 13-6. Master composites prepared for Terronera represent low-, medium- and high-grade silver in the plant feed. Master composites for La Luz represent the expected grade of silver and gold delivered to the plant. Variability composites for Terronera represent the variability in silver and gold grade during the first three years of operation.

The primary objective of the test program was to assess the metallurgical performance of the Terronera and La Luz veins. Testwork completed include Ai, BWi, flash flotation, batch cleaner flotation and LCTs.

The chemical assays of the composites tested are shown in Table 13-8.

Table 13-8: Chemical Assays - Composites

Composite Sample	Chemical Assays			
	Ag (g/t)	Au (g/t)	Fe (%)	S (%)
Terronera Vein				
MC01	251	1.57	1.1	0.62
MC02	410	2.25	1.4	0.67
MC03	105	2.06	0.9	0.48
Year 1 VC TN01	409	0.45	1.5	0.70
Year 1 VC TN02	426	0.82	1.4	0.40
Year 2 VC TN03	160	0.25	1.5	0.19
Year 2 VC TN04	96	2.79	0.9	0.29
Year 2 VC TN05	154	4.28	0.6	0.24
Year 3 VC TN06	115	1.86	1.4	1.17
La Luz Vein				
LL-MC-Y1	182	7.22	2.4	1.63
LL-MC-Y2	60	9.69	2.0	1.08

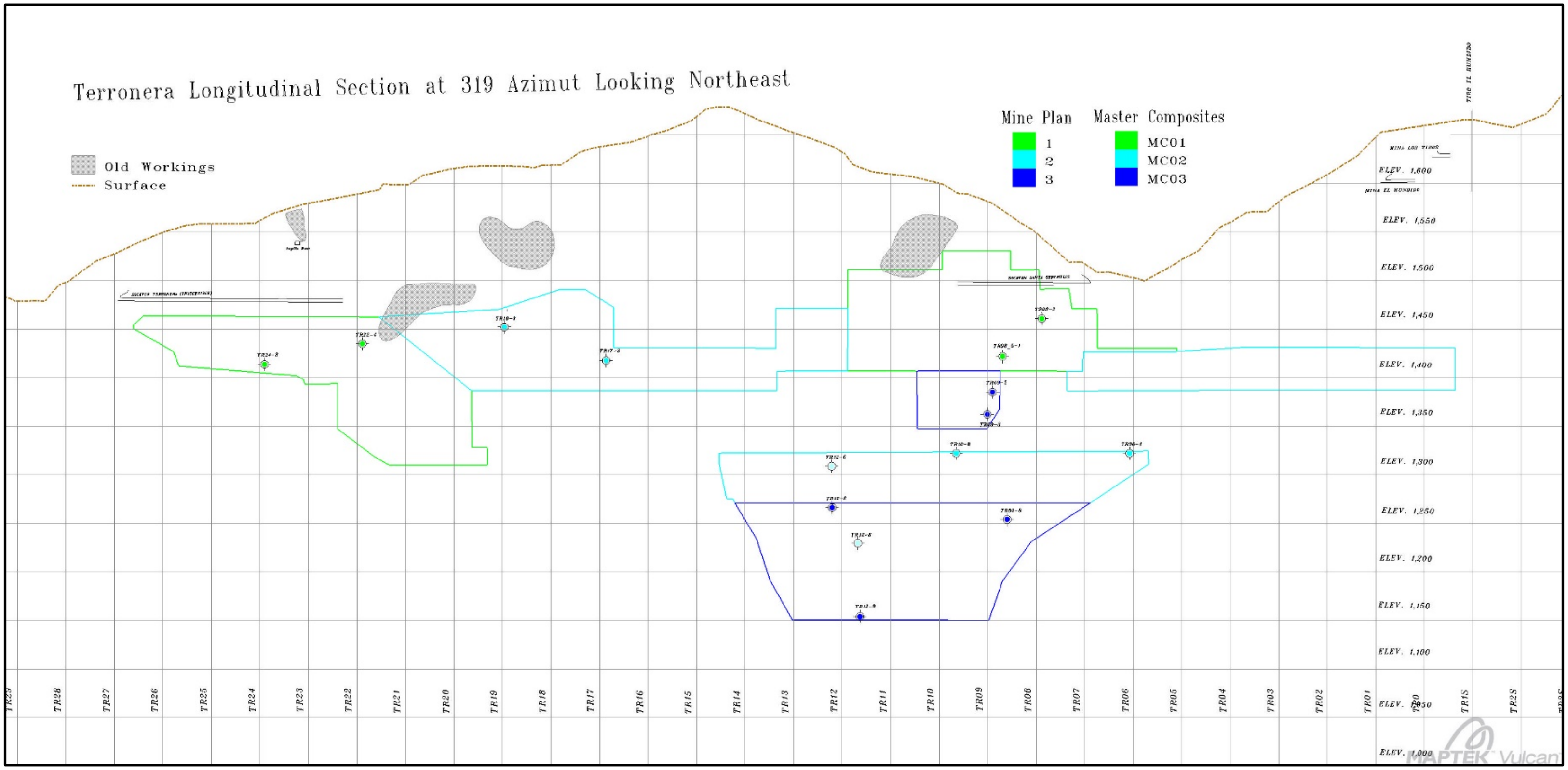


Figure 13-4: Location of Master Composites at Terronera Vein (prepared by Endeavour Silver, dated 2020)

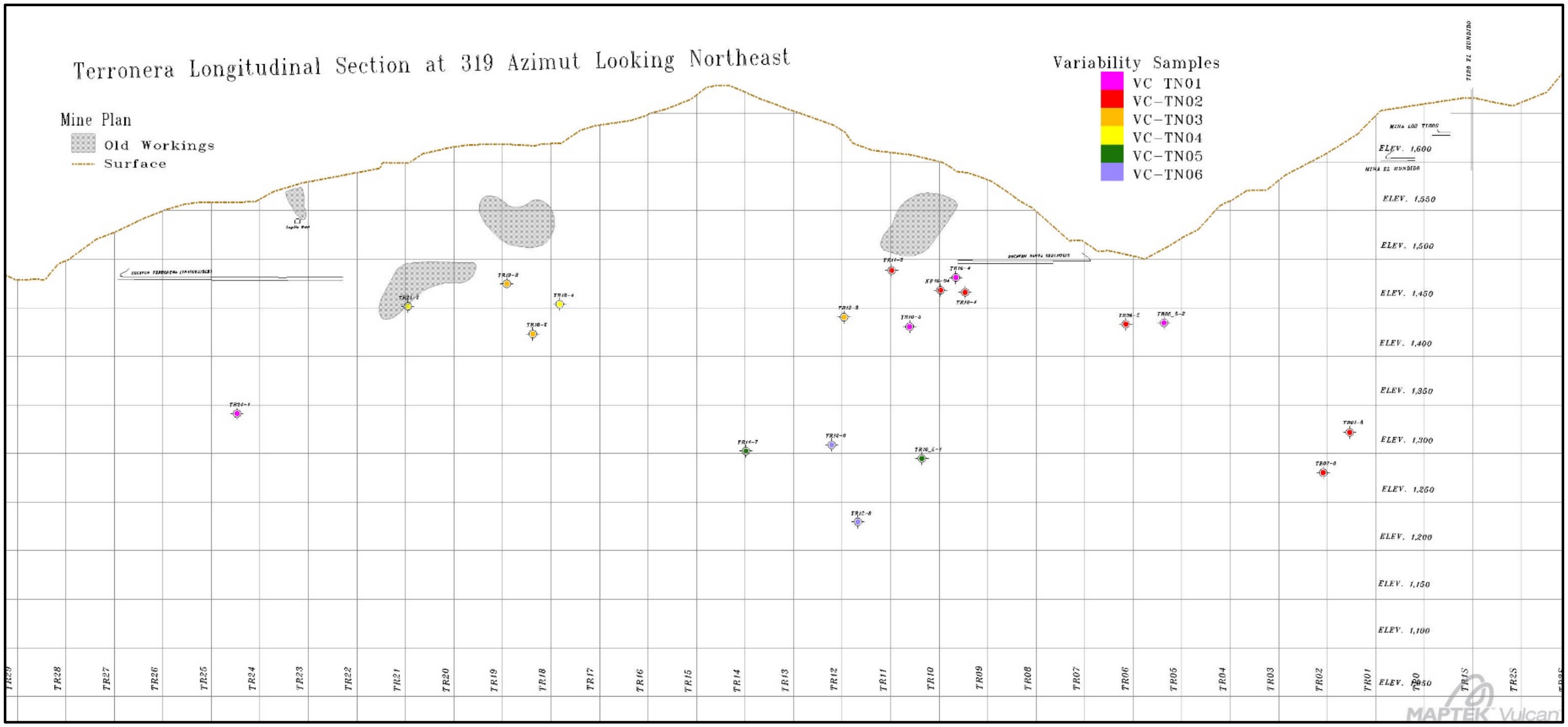


Figure 13-5: Location of Variability Composites at Terronera Vein (prepared by Endeavour Silver, dated 2020)

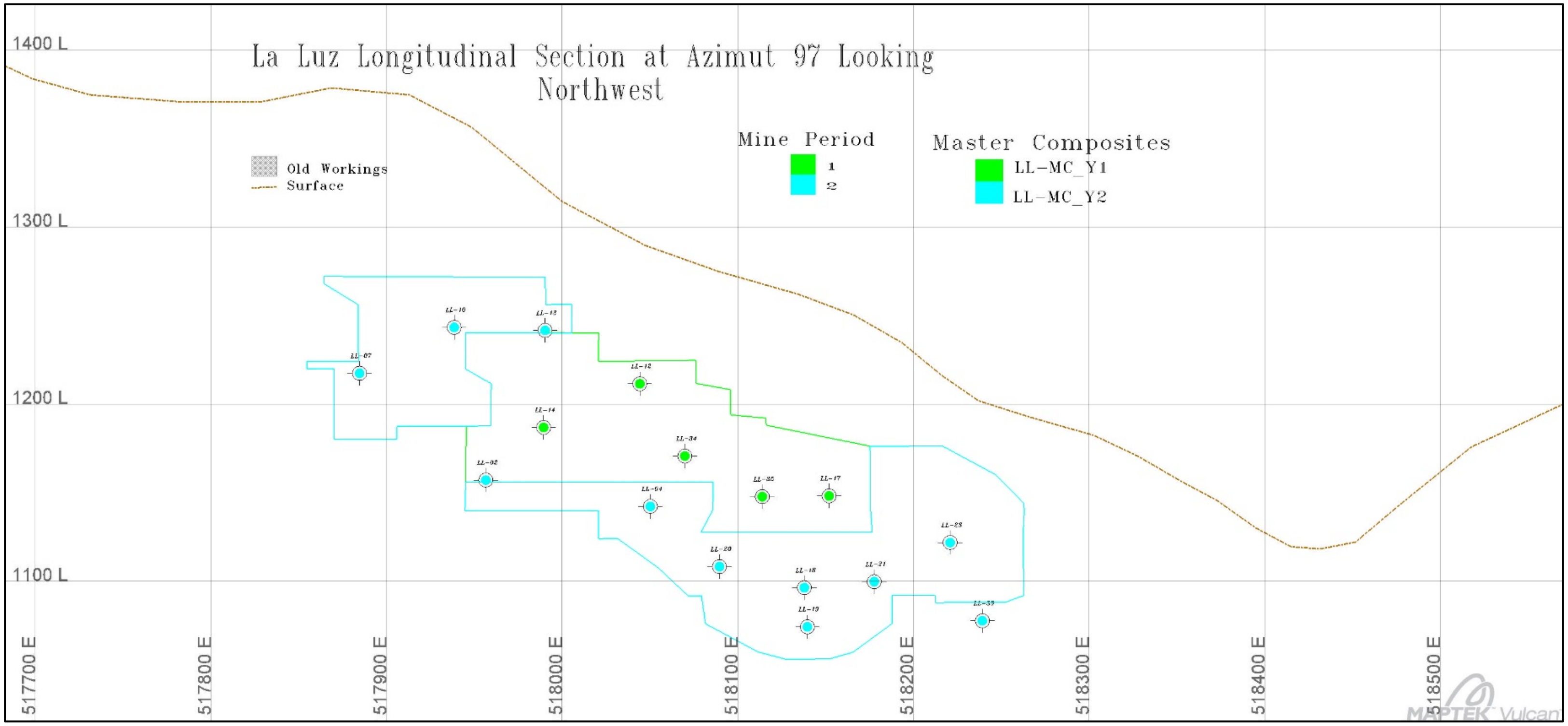


Figure 13-6: Location of Master Composites at La Luz Vein (prepared by Endeavour Silver, dated 2020)

13.2.1 Comminution Testing

Ai and BWi tests were completed on all composites with results (Table 13-9) showing all samples can be classified as highly abrasive and very hard.

For design purposes the hardness of the Terronera material was determined as 19.1 kWh/t, which equates to the 75th percentile of all comminution test results for the deposit. An Ai of 0.47 was considered for design.

Table 13-9: 2021 Comminution Test Results

Composite Sample	Ai	Classification	BWi (kWh/t)	Classification
Terronera Vein				
MC-01	0.4660	Highly Abrasive	19.0	Very Hard
MC-02	0.4250	Highly Abrasive	18.3	Very Hard
MC-03	0.3893	Abrasive	18.0	Very Hard
VC-01	0.3620	Abrasive	18.2	Very Hard
VC-02	0.5140	Highly Abrasive	18.0	Very Hard
VC-03	0.3340	Abrasive	18.2	Very Hard
VC-04	No Test	N/A	18.4	Very Hard
VC-05	0.2850	Abrasive	18.7	Very Hard
VC-06	0.4750	Highly Abrasive	20.3	Very Hard
La Luz Vein				
LL-MC-Y1	0.4050	Highly Abrasive	18.0	Very Hard
LL-MC-Y2	0.3560	Abrasive	17.3	Hard

Note: Testing was conducted at 150 mesh.

13.2.2 Flash Flotation

Flash flotation tests were performed on all composites from the Terronera an La Luz veins. Figure 13-7 shows the recovery versus head grade for both silver and gold illustrating recovery as a function of head grade to have a positive trend; however, this trend is not well marked to establish a firm relationship between recovery and head grade.

Figure 13-8 indicates when the head grade is below 100 g/t Ag, the flash concentrate will have a silver content below the marketable quality of 3,000 g/t Ag.

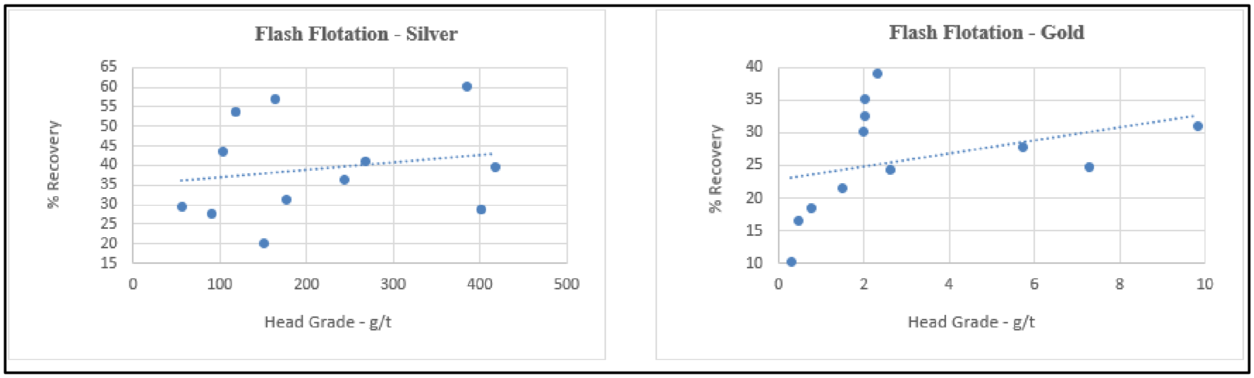


Figure 13-7: 2021 Recovery versus Head Grade for Silver and Gold (prepared by Wood, dated 2021)

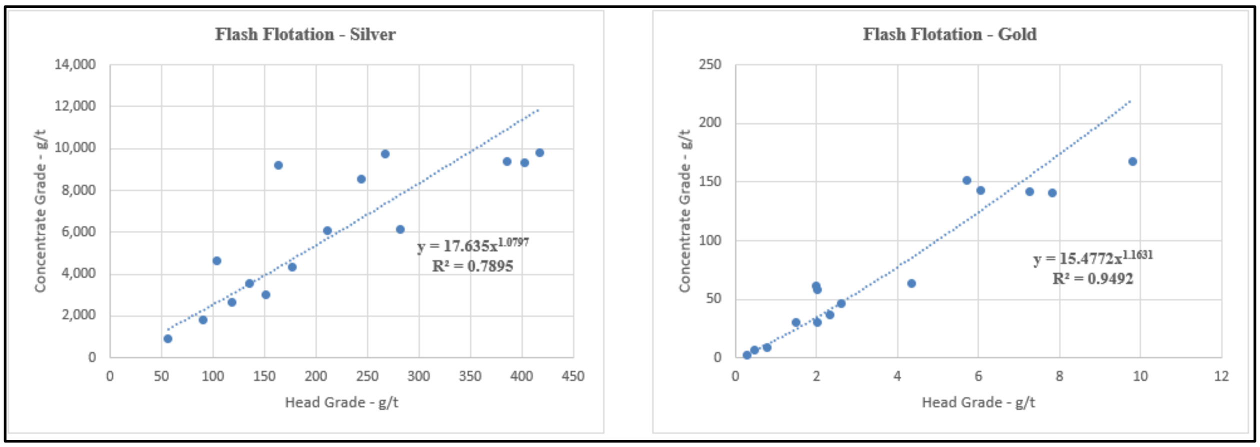


Figure 13-8: 2021 Flash Concentrate Grade versus Head Grade for Silver and Gold (prepared by Wood, dated 2021)

13.2.3 Flash Flotation Blend Tests

Flash flotation test results showed a low head grade would not produce a good quality concentrate. A series of tests were planned to evaluate the effect of blending low-grade material from La Luz Vein with a medium-grade material from Terronera Vein. Blend composites containing 25%, 50% and 75% from La Luz Vein were prepared and tested. Table 13-10 shows the characteristics of the composites tested and Figure 13-9 shows the corresponding recovery versus head grade for both silver and gold. Results show the positive impact of blending different grade material on the recovery of both silver and gold.

Figure 13-10 indicates the positive impact of blending material of different grades on the concentrate quality of both silver and gold.

Table 13-10: 2021 Flash Flotation Blend Composites

Composite			Chemical Assays		
Terronera Vein	La Luz Vein	Ag (g/t)	Au (g/t)	Fe (%)	S (%)
75%	25%	282	4.35	1.7	0.79
50%	50%	217	5.88	1.9	0.94
25%	100%	135	7.82	2.1	1.03

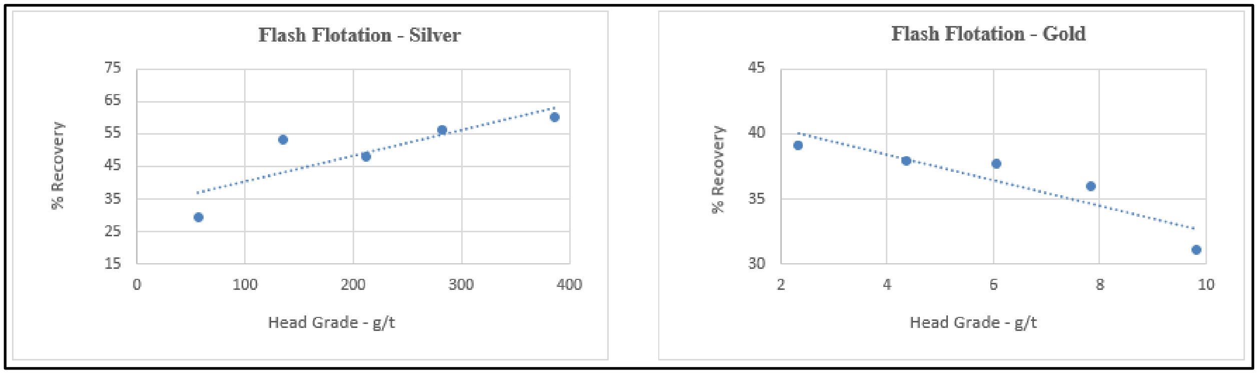


Figure 13-9: 2021 Recovery versus Head Grade of Blended Material for Silver and Gold (prepared by Wood, dated 2021)

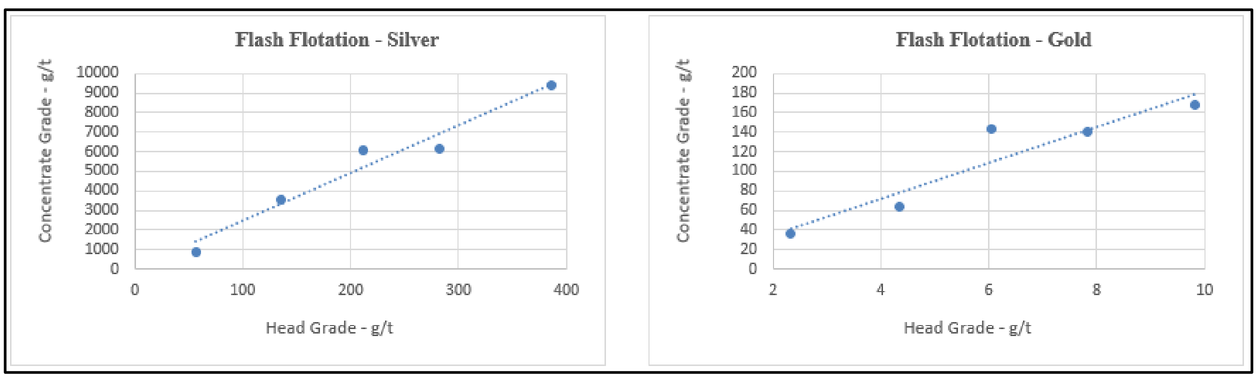


Figure 13-10: 2021 Flash Concentrate Grade vs Head Grade of Blended Material for Silver and Gold (prepared by Wood, dated 2021)

13.2.4 Cleaner Flotation Testing

Batch cleaner flotation tests were performed on six composites (five from the Terronera Vein and one from La Luz Vein) to determine silver and gold grade in a combined concentrate. Additionally, two composites were tested without flash flotation and adding a third cleaning stage to evaluate the impact of removing the flash flotation stage. Figure 13-11 shows that low-grade material from the Terronera Vein can produce a good quality concentrate with the addition of a third cleaning stage; however, very low silver grade material from the La Luz Vein cannot produce a good quality concentrate. This confirms the need to blend material from the La Luz Vein and the Terronera Vein to improve recovery.

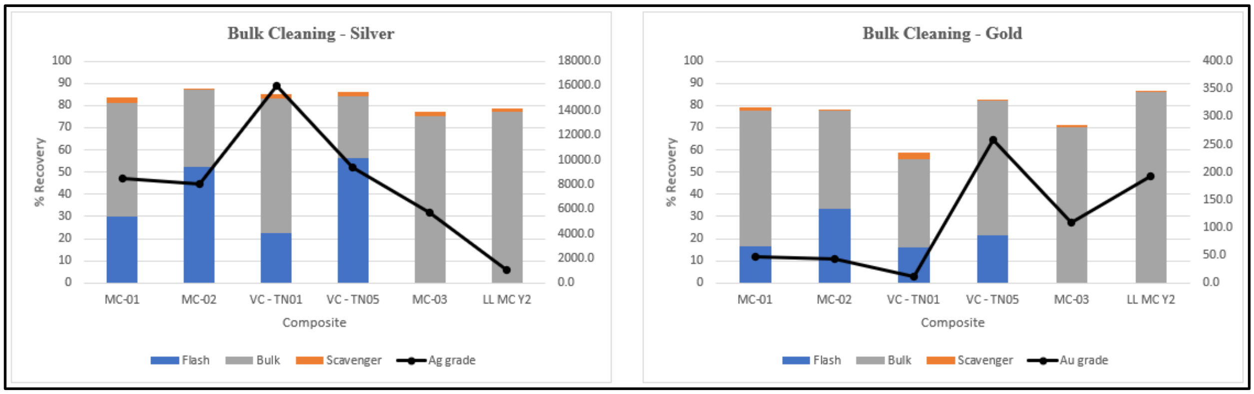


Figure 13-11: 2021 Cleaning Performance – Silver and Gold (prepared by Wood, dated 2021)

13.2.5 Locked Cycle Tests

Testing was performed on four master composites, three from Terronera and one blend composite from the La Luz Vein and Terronera Vein. The LCT flowsheet is presented in Figure 13-12. The flowsheet differs from previous tests in that the bulk cleaner scavenger tail stream is not recycled back to the rougher flotation feed but discarded to the final tailings. The two tailings streams are combined to produce a final circuit tail. Additionally, an alternate flowsheet consisting of one cleaning stage and recycling cleaner scavenger tails back to rougher feed was tested. Figure 13-13 shows the recovery at the flash and bulk flotation stages, and the overall recovery for both silver and gold. Figure 13-14 and Figure 13-15 show the recovery and final concentrate grade, respectively versus feed grade at the bulk flotation stage for both silver and gold. The feed to the bulk flotation is the flash flotation tails.

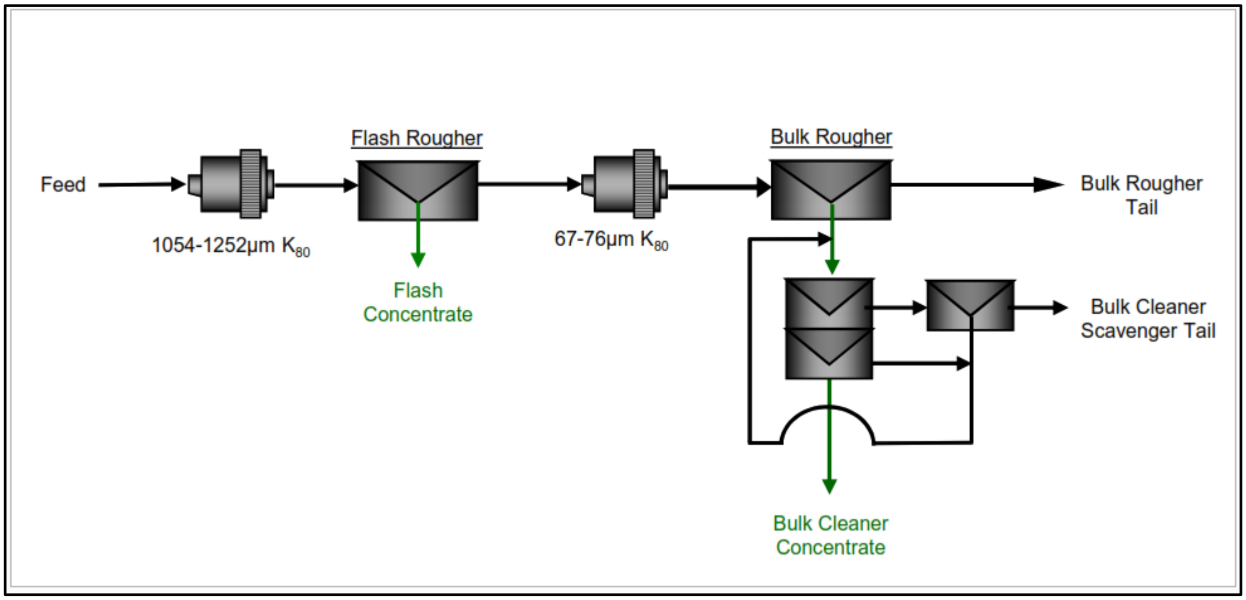


Figure 13-12: Locked Cycle Test Flowsheet (prepared by Wood, dated 2021)

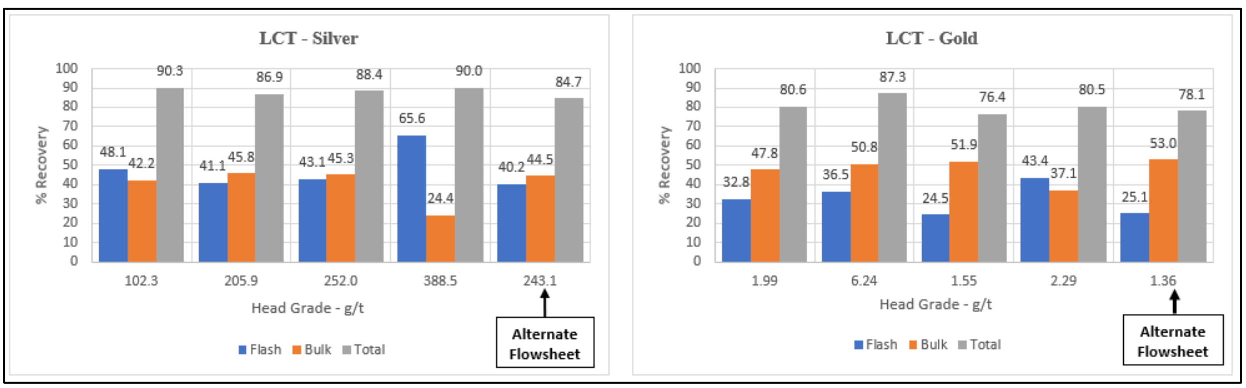


Figure 13-13: Flash and Bulk Flotation Recovery versus Head Grade (prepared by Wood, dated 2021)

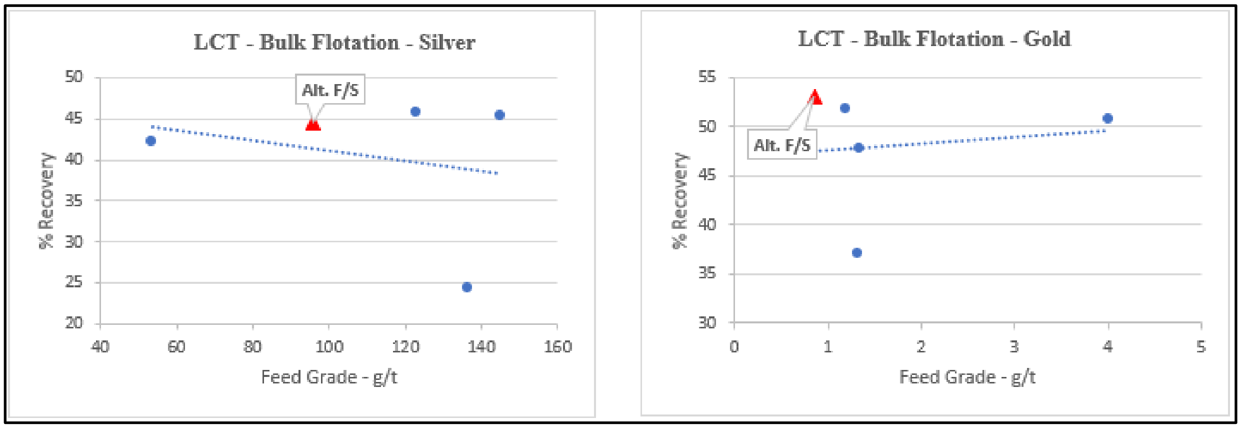


Figure 13-14: Bulk Flotation Recovery versus Feed Grade (prepared by Wood, dated 2021)

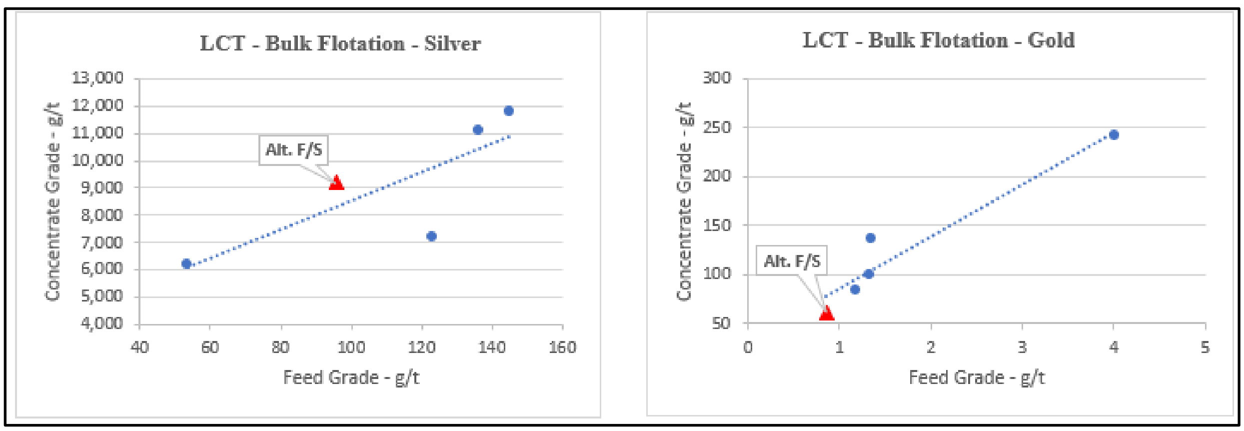


Figure 13-15: Bulk Flotation Concentrate Grade versus Feed Grade (prepared by Wood, dated 2021)

The results show that good silver and gold recoveries can be achieved with a single cleaning stage and a marketable silver concentrate can also be produced. However, it would not be possible to have the same metallurgical response with a low-grade silver content in the feed. Therefore, a two-stage flotation cleaning circuit is recommended to achieve a marketable concentrate grade. It is also recommended that the recycling of the cleaner scavenger tails be implemented and maintained as an option in the current circuit. Operating the circuit with or without recycling and when, must be determined by operations as part of the optimization process.

13.2.6 Concentrate Quality/Deleterious Elements

The final concentrate quality (flash + bulk flotation) of four composites used in the lLCTs was analyzed for minor and deleterious elements. Table 13-11 shows the chemical assays of the blended concentrates produced. The level of these concentrations will not have a significant effect on the extraction of gold and silver.

Table 13-11: 2021 Concentrate Quality

Element	Units	MC01	MC02	MC03	MCBL
Antimony	g/t	853	1645	541	906
Arsenic	%	0.34	0.35	0.51	1.26
Cadmium	g/t	122	199	39	121
Calcium	%	2.83	7.57	2.61	2.87
Chlorine	g/t	90	100	90	100
Copper	g/t	3010	4250	1570	5480
Fluorine	g/t	300	190	210	220
Gold	g/t	57.2	64.2	105	209
Lead	%	1.49	1.64	0.66	1.04
Manganese	g/t	1270	3470	1500	1140
Mercury	g/t	15	9	7	5
Phosphorus	g/t	650	410	220	330
Selenium	g/t	64	84	111	342
Silica	%	31.6	28.8	30.6	23.3
Silver	g/t	8670	9190	6114	6870
Zinc	%	3.87	4.73	0.82	2.6

13.3 Recovery Model

A statistical analysis was performed to help predict the silver and gold recoveries as a function of head grade. Results of the flash flotation testing (Figure 13-8) shows good correlation between the head grade and flash concentrate quality. The analysis, however, could not establish a meaningful relationship between the head grade and the flash flotation mass pull (FMP), and as a result, an average FMP of 1.602% was used. The concentrate grade equations for silver and gold together with the mass pull were used to establish the recovery of the flash flotation stage. Equations to estimate the silver (AgFConc) and gold (AuFConc) content in the flash flotation concentrate are:

- AgFConc = 17.6350 * (AgHead)^1.9797
- AuFConc = 15.4772 * (AuHead)^1.1631

The equations to estimate the silver and gold recovery to the flash concentrate are:

- Ag Recovery (%) = FMP * 0.176350 * (AgHead)^0.9797
- Au Recovery (%) = FMP * 0.154772 * (AuHead)^0.1631

Results of a bulk flotation stage demonstrates (Figure 13-15) very good correlation between the rougher feed head grade and the bulk flotation final concentrate quality. The analysis, however, could not establish a meaningful relationship between the rougher feed head grade and the bulk flotation mass pull (BMP), and as a result, an BMP of 1.0% was used. The concentrate grade equations for silver and gold together with the mass pull were used to establish the recovery of the bulk flotation stage and consequently the overall plant and silver recovery. The equations to estimate the silver (AgBConc) and gold (AuBConc) content in the bulk flotation concentrate are shown below:

- AgBConc = 77.0797 * (100 * AgHead – FMP * 17.6350 * (AgHead)^1.9797)/ (100 – FMP)
- AuBConc = 65.7559 * (100 * AuHead – FMP * 5.4772 * (AuHead)^1.1631)/ (100 – FMP)

The equations to estimate the silver and gold recovery to the bulk flotation concentrate are shown below:

- Ag Bulk Recovery (%) = BMP * 0.176350 * (AgHead)^0.9797
- Au Bulk Recovery (%) = BMP * 0.154772 * (AuHead)^0.1631

Thus, the overall concentrate grade and plant recovery can be estimated as follows:

- % Ag Recovery (Flash + Bulk) = Ag Flash Recovery + Ag Bulk Recovery
- % Au Recovery (Flash + Bulk) = Au Flash Recovery + Au Bulk Recovery

- % Ag Content (Flash + Bulk) = (FMP * % AgFConc + BMP * % Ag BConc) / (FMP + BMP)
- % Au Content (Flash + Bulk) = (FMP * % AuFConc + BMP * % Au BConc) / (FMP + BMP)

Based on the mine plan Table 13-12 summarizes the projected LOM grades and recoveries for silver and gold.

Table 13-12: Grade and Recovery for LOM Projected Production

Stage	Value
Flash Concentrate Production	
Tonnes	118,079.6
Ag (g/t)	5,288.8
Au (g/t)	39.73
Ag Recovery (%)	42.99
Au Recovery (%)	28.26
Bulk Concentrate Production	
Tonnes	73,799.8
Ag (g/t)	8,791.4
Au (g/t)	107.81
Ag Recovery (%)	44.66
Au Recovery (%)	47.94
Total Concentrate Production	
Tonnes	191,879.4
Ag (g/t)	6,636.0
Au (g/t)	65.91
Ag Recovery (%)	87.7
Au Recovery (%)	76.3

14.0 MINERAL RESOURCE ESTIMATES

14.1 Terronera Deposit Mineral Resource Estimate

14.1.1 Introduction

This section presents an updated Mineral Resource estimate for the Terronera deposit, including the Terronera Vein (TRV), and Footwall (FW), and Hanging Wall (HW) zones. The estimates were updated to include three new drill holes drilled at the southeast end of the Terronera Vein in 2020. The geological model and drill hole and assay database for most of the deposit and the interpolator and interpolation parameters remain unchanged from the previous resource model estimated in 2017 and used in the 2017 and 2020 pre-feasibility studies.

14.1.2 Database

The drilling, sampling, and assaying data and geological models used for the 2018 estimate were provided to Wood by the Endeavour Silver Terronera Project Team in the form of excel spreadsheets and a set of triangulations in the Vulcan 00t format. The drill holes drilled in 2020 were provided separately and integrated with the 2018 dataset. The geological model was updated to account for the intersection of the three new holes with the Terronera Vein at the southeast end of the deposit.

Statistics for the Terronera deposit database are presented in Table 14-1.

Table 14-1: 2021 Terronera Drill Hole Database Statistics

Drill Campaign	Drill Holes/Channels	Metres	Samples	Density Measurements
2011-2018	191 DDH/40 CH	65,618.4	16,735	2,756
2020	3 DDH	458.2	119	119

DDH = diamond drill holes; CH = channel samples

Channel samples taken from underground exploration development in three locations were compared with the grades of samples taken from nearby drill holes. Channel sample data quality was assessed to be reasonably good, and it was decided that this data would be included to maximize the local accuracy of the 2021 estimate.

Figure 14-1 shows a longitudinal view of the Terronera deposit and the drill hole information used for the 2021 resource model and Mineral Resource estimate.

In previous estimates, the raw assay grades were factored downwards by recovery to adjust metal content and account for open space in the sample interval. In 2021 Wood used the raw assay grades for estimation and produced an in-situ bulk density model using the core recovery data to adjust the modeled measured density to reflect voids and open spaces and expected reduction in metal contained in the rock mass. This approach provides more accurate estimates of in-situ grade and tonnage for mine and production planning.

14.1.3 Estimation Domains

The Terronera Mineral Resource model consists of eight modeled mineralized domains. The wireframes were prepared by Endeavour Silver and adjusted by Wood to include the intersections of the three 2020 drill holes. The wireframes are constructed to include the mineralization portions of the veins and wall rock along the structural corridors responsible for vein emplacement and silver and gold deposition using a nominal 150 g/t silver equivalent (AgEq) cut-off grade. AgEq was calculated as:

AgEq = Ag + (Au x 75)

The wireframes were created from three-dimensional polylines digitized on vertical cross-sections spaced 25 m apart and oriented with an azimuth of 50° perpendicular to the strike of the deposit.

Figure 14-2 presents a cross-section of the Terronera deposit estimation domains and composites with silver equivalent data along a section line with an azimuth of 50° at the west end of the deposit, showing the stacked steeply northeast dipping zones from the FW to the HW5 zone.

14.1.4 Exploratory Data Analysis

Exploratory data analysis was carried out on silver and gold assay data to understand the distributions of grades and make decisions about parameters for grade estimation.

Histograms and cumulative frequency plots of silver assays within the estimation domains are shown in Figure 14-3. The log-histogram and cumulative frequency plot show grades have a continuous lognormal distribution to about 2,000 g/t Ag and a distinct high-grade population with grades between 2,200 g/t Ag to over 15,000 g/t Ag.

The histogram of gold assays presented in Figure 14-4 indicates that the gold grade distribution is less skewed to high grades. The log-histogram and cumulative frequency plots also indicate that the gold grade distribution is bimodal with modes less than and greater than 1 g/t Au.

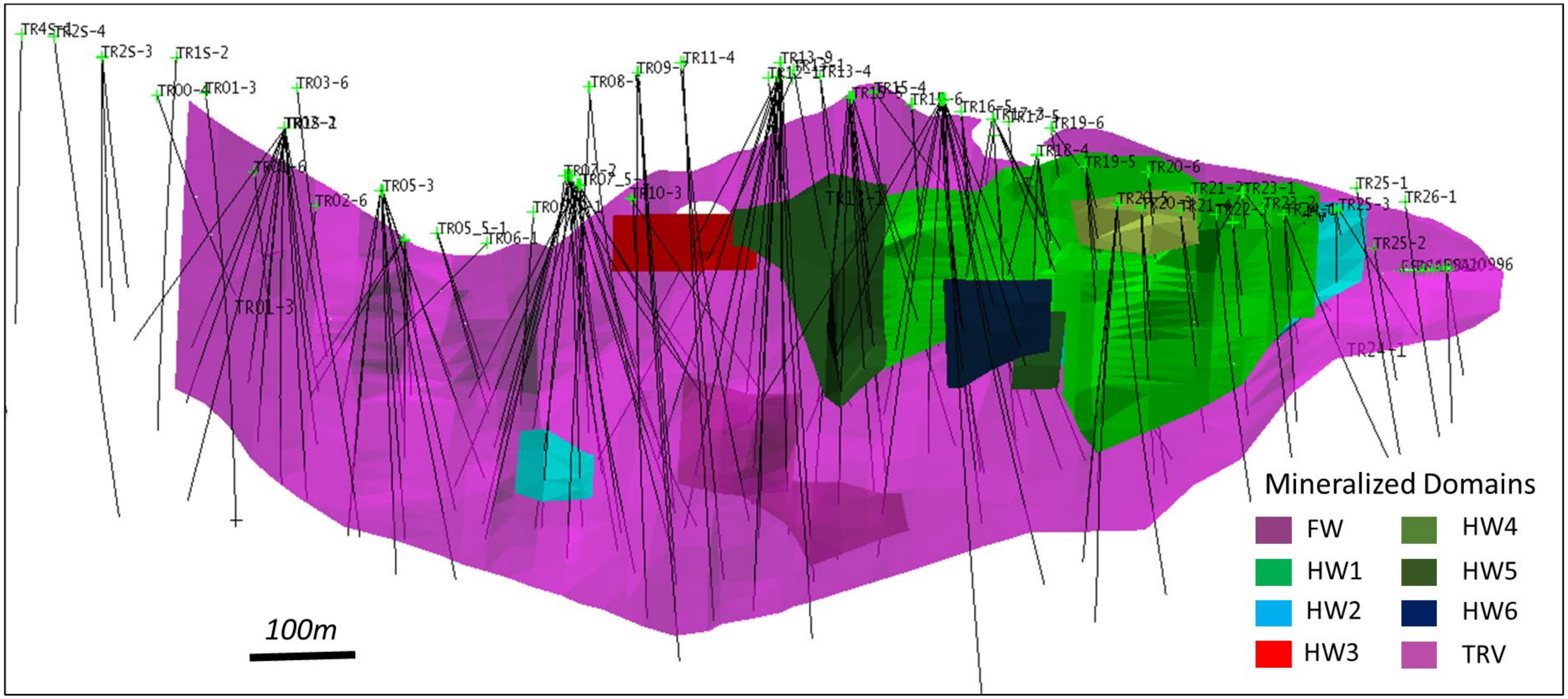


Figure 14-1: Longitudinal View Looking North of the Terronera Deposit and Drill Hole and Channel Sample Database (prepared by Wood, dated 2021)

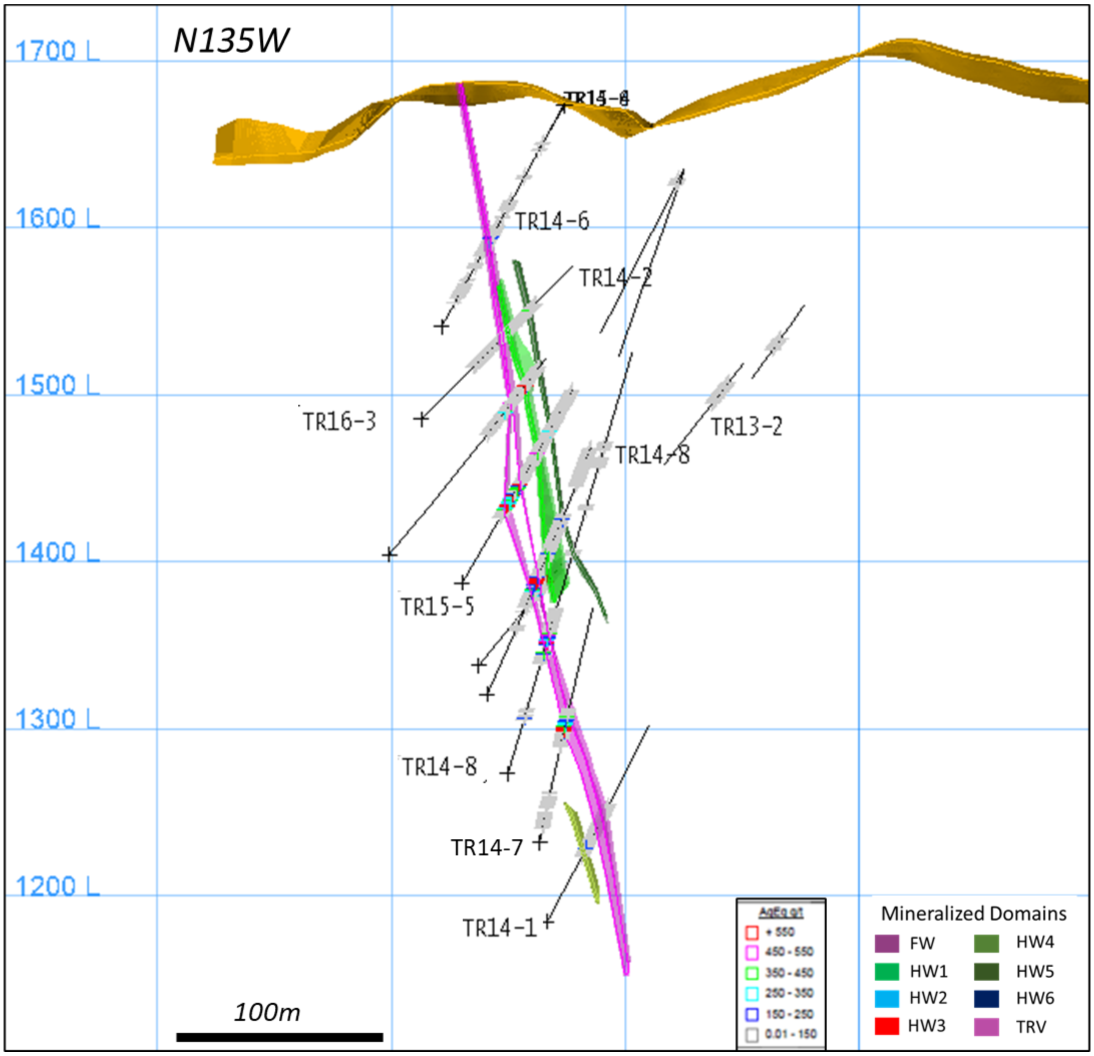


Figure 14-2: Cross-Section of the Terronera Deposit Estimation Domains (prepared by Wood, dated 2021)

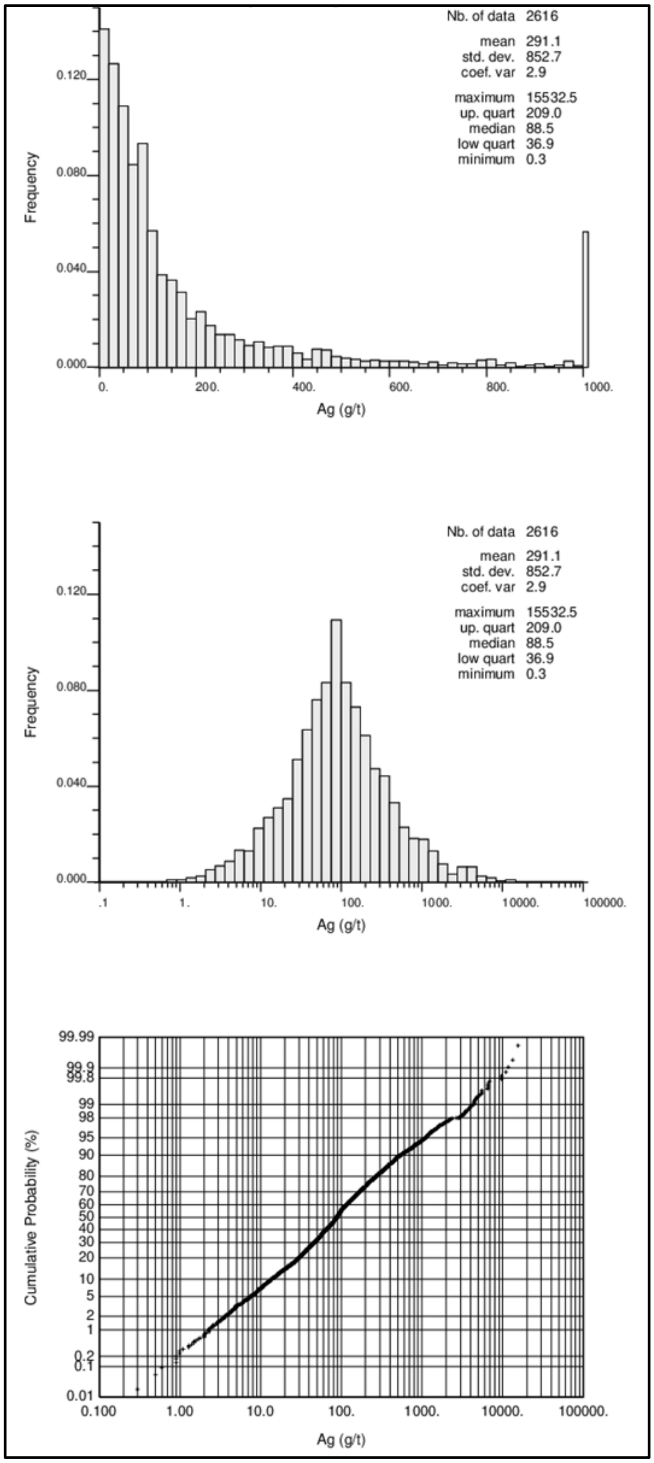


Figure 14-3: Distribution of Silver Assays - Terronera Deposit (prepared by Wood, dated 2021)

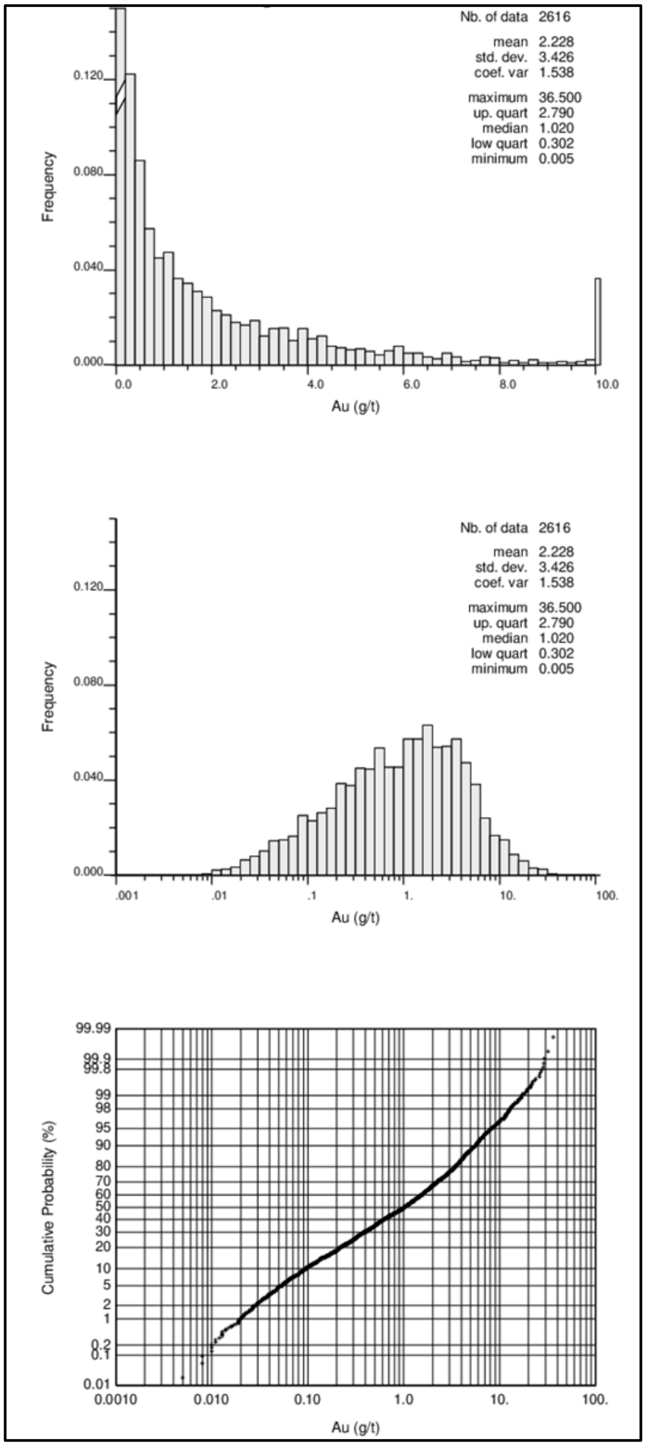


Figure 14-4: Distribution of Gold Assays – Terronera Deposit (prepared by Wood, dated 2021)

14.1.4.1 Compositing and Analysis

A 1 m composite interval length was selected, honouring the estimation domain boundaries. The composite length reflects the nominal 1 m sampling interval and maximizes the mineralization to waste selectivity of the dataset. Composites with lengths less than 0.25 m were not used in estimation. A boxplot showing silver and gold composite statistics for each estimation domain is presented in Figure 14-5 and Figure 14-6, respectively.

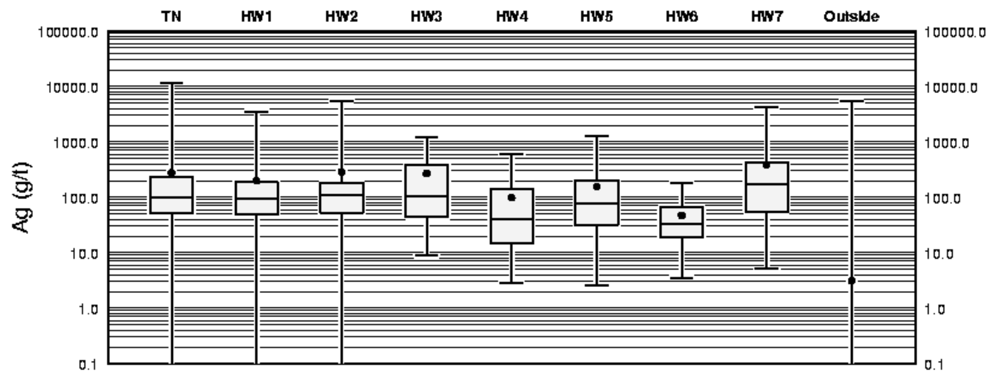
The maximum silver grades of the composites inside within the estimation domains exceeds 15,000 g/t Ag while the coefficient of variation (CV) ranges from 1.0 to 2.9 which is relatively low for an epithermal precious metal deposit. These observations indicate that a linear estimation method using outlier or high-yield restriction to mitigate the over-projection of high-grade composites is a suitable approach for grade estimation.

The maximum gold grade of the composites is 36.5 g/t with CVs generally lower (between 1.1 to 2.0) than the silver composites.

The scatterplot in Figure 14-7 shows that the mineralization has two distinct silver to gold ratios caused by the two gold grade populations. Mineralization with higher gold grades have silver to gold ratios around 30. An investigation into the zonation of the two gold grade populations and different silver to gold ratios indicates that the higher gold mineralization with lower silver to gold ratios tends to be located deeper and toward the west end of the deposit. Mineralization with lower gold mineralization has a silver to gold ratio of about 1,000 and is generally found higher in the deposit.

14.1.4.2 Variography

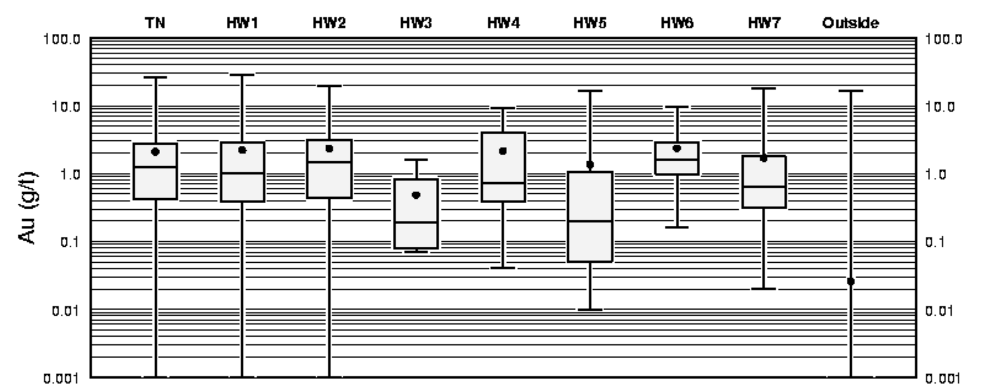
Experimental correlograms were calculated from 1 m composites to understand the continuity of silver grades. A directional variogram along the strike direction of the estimation domains indicates a moderate nugget effect of 30% and a range of continuity of approximately 60 m. The down-dip variogram indicates a range of approximately 40 m and the range of continuity perpendicular to plane of continuity is approximately 20 m. The experimental correlograms and simple correlogram models are presented in Figure 14-8.



	TN	HW1	HW2	HW3	HW4	HW5	HW6	HW7	Outside	
No. of data	1573	319	154	18	35	75	45	76	64336	No. of data
Mean	276.6	198.0	285.5	269.9	98.3	155.9	47.0	389.5	3.1	Mean
Maximum	11559.7	3469.1	5510.0	1209.5	587.6	1245.0	180.0	4203.5	5357.5	Maximum
U.Quartile	236.3	186.3	180.0	378.7	141.0	201.0	65.9	426.4	0.0	U.Quartile
Median	101.6	96.5	108.4	104.2	41.0	78.6	33.1	170.0	0.0	Median
L.Quartile	50.8	49.5	52.7	44.4	14.8	31.0	19.0	55.6	0.0	L.Quartile
Minimum	0.0	0.0	0.0	8.9	2.9	2.6	3.5	5.1	0.0	Minimum
Variance	421176.6	121866.3	507467.9	122917.1	15677.5	50392.5	1814.3	440364.1	944.9	Variance
CV	2.3	1.8	2.5	1.3	1.3	1.4	0.9	1.7	10.1	CV
Skewness	6.4	5.8	5.3	1.7	2.2	3.3	1.4	3.8	96.6	Skewness

Figure 14-5: Boxplot of Terronera Deposit Silver Composite by Zone (prepared by Wood, dated 2021)

Note: TN = all data



	TN	HW1	HW2	HW3	HW4	HW5	HW6	HW7	Outside	
No. of data	1573	319	154	18	35	75	45	76	64336	No. of data
Mean	2.096	2.229	2.355	0.485	2.143	1.363	2.367	1.703	0.026	Mean
Maximum	25.800	26.719	19.600	1.589	9.220	16.690	9.475	17.839	16.550	Maximum
U.Quartile	2.762	2.635	3.164	0.824	4.069	1.051	2.863	1.776	0.001	U.Quartile
Median	1.225	1.030	1.486	0.193	0.729	0.200	1.631	0.636	0.001	Median
L.Quartile	0.418	0.390	0.430	0.080	0.395	0.050	0.985	0.310	0.001	L.Quartile
Minimum	0.001	0.001	0.001	0.070	0.040	0.010	0.160	0.020	0.001	Minimum
Variance	7.198	12.019	8.438	0.256	6.257	7.699	4.427	8.551	0.029	Variance
CV	1.280	1.556	1.233	1.044	1.168	2.035	0.889	1.718	6.567	CV
Skewness	3.041	4.158	2.656	0.998	1.466	3.113	1.566	3.458	31.432	Skewness

Figure 14-6: Boxplot of Terronera Deposit Gold Composites by Zone (prepared by Wood, dated 2021)

Note: TN = all data

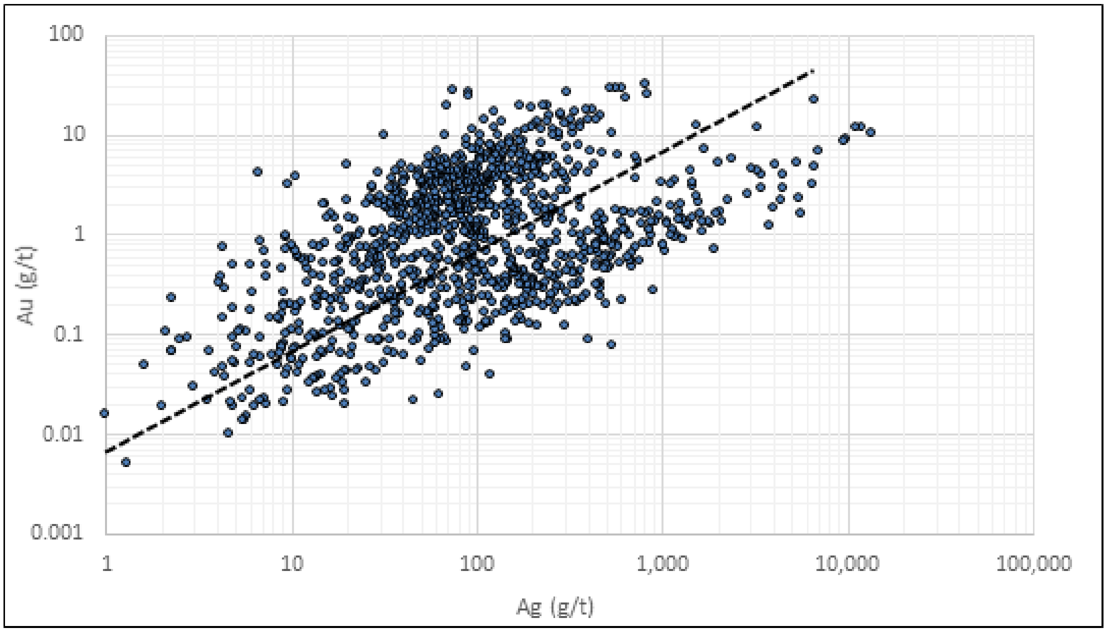


Figure 14-7: Scatterplot Terronera Deposit Silver and Gold Grades (prepared by Wood, dated 2021)

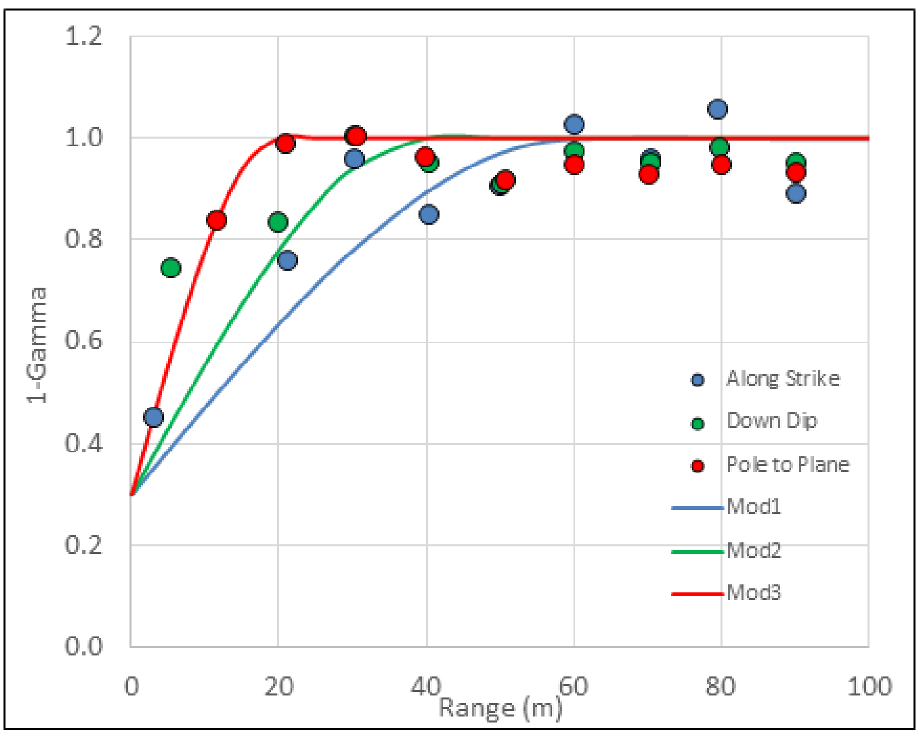


Figure 14-8: Silver Experimental and Model Correlograms (prepared by Wood, dated 2021)

14.1.5 Management of Extreme Grades

Following the identification of the high-grade population of samples in the silver assay database during exploratory data analysis, the QP carried out an assessment of the quality of the drill core intersections and any potential issues that could affect sample representivity, the spatial continuity of the high-grade samples and the location and geological context of the samples.

Core photographs indicate that the majority of the high-grade samples were taken from core with high core recovery and relatively good RQD. The photographs clearly show a high abundance of argentite and other oxide minerals in banded vein material and the high assay grades are clearly reflected by the intensity of mineralization in these intervals. An example of the high-grade mineralization is shown in photographs of four high grade samples from 550.9 to 558.05 m depth in hole TR11-4 (Figure 14-9). High-grade banded silver vein mineralization from 550.9 m ends at 555.7 m when a block of wall rock and lower grade massive quartz occur within the vein. The high-grade banded mineralization returns from 557.75 to 558.05 m depth. The average grade of the four mineralized samples in this zone is over 3,000 g/t Ag.

Several of the high-grade samples occur within the same intersection, and in several cases the high-grade intervals are found in adjacent drill holes indicating that the high-grade mineralization has continuity at the scale of the drill spacing and sampling interval.

The high-grade samples were found to occur in two locations within the deposit. The highest-grade samples are located in a vertical zone extending from the bottom of the mineralized zone to near surface in the eastern half of the Terronera Vein. This portion of the deposit is interpreted to be a feeder zone for epithermal fluids related to vein formation and silver deposition. The second set of high-grade samples were found to be located at a relatively consistent depth below surface and are interpreted to be located at a paleo elevation where boiling, liquid-vapour separation and maximum silver saturation and deposition occurred. The quality of the sampling, continuity, and occurrence of the high-grade samples within these two zones indicate that the high grades should be reflected in the resource model and not capped. A high-yield or outlier restriction approach was selected to ensure that the samples be used for local estimates but would not be over-projected beyond the observed range of continuity of the high-grade mineralization in these zones.

Figure 14-10 presents a longitudinal view of the Terronera Vein, the feeder and boiling zones and locations of the high-grade samples.

Based on the review of the data quality, spatial continuity and location of the high-grade samples in favourable locations, the QP selected outlier or high-yield restriction as an appropriate way to model the high-grade mineralization while mitigating against over projection of the extreme silver grades.

Figure 14-9: High-Grade Silver Mineralization from TR11-4 (551.9 to 555.8 m) (prepared by Wood, dated 2021)

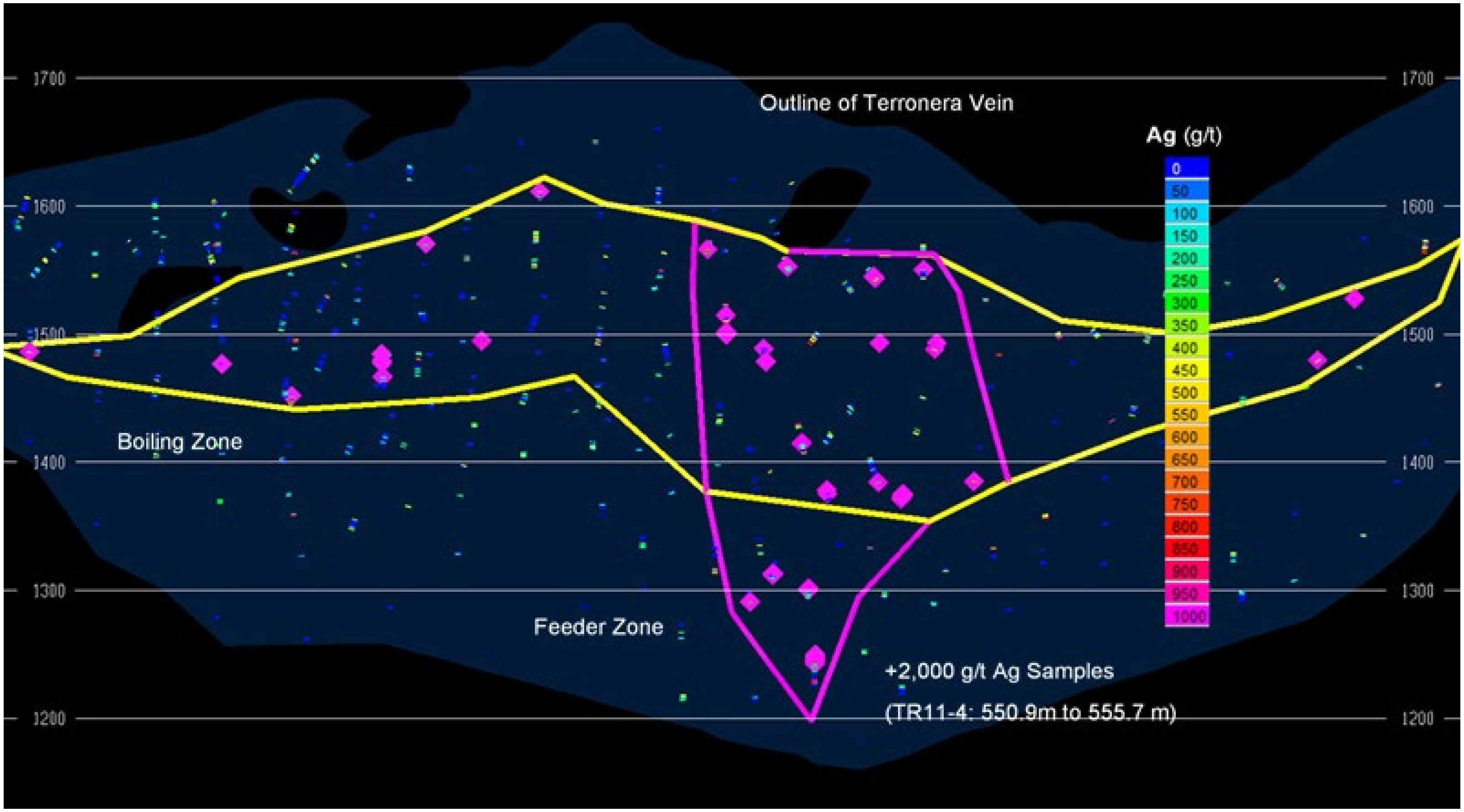


Figure 14-10: Longitudinal View Looking 50° Northeast of High-Grade Samples in the Feeder and Boiling Zones of the Terronera Vein (prepared by Wood, dated 2021)

14.1.6 Grade Estimation

Silver and gold grades were estimated from 1 m composites into parent blocks measuring 4 m along strike, 4 m high and 1 m wide across strike using the Vulcan mining software package. Sub-cells along the margins of the estimation domains were used to provide an accurate tonnage and grade of mineralized material. No dilution or ore loss was applied to the Mineral Resource estimate.

Grades were estimated in three passes using anisotropic search ellipsoids and inverse distance weighting to the third power. Search ellipsoids are oriented with the major axis along strike at 140/00, the semi-major axis down dip at 050/-80 and the minor axis at 050/10. Estimation parameters are shown in Table 14-2.

High-yield restriction was applied to composites during estimation. Thresholds were selected by reviewing the locations of the high-grade assays for each estimation domain. The parameters for the high-yield restriction applied in silver and gold grade estimation are shown in Table 14-3.

Table 14-2: Terronera Deposit Estimation Parameters

Metal	Estimation Pass	Search Distance (m)			Max.Comp /Hole	Min. No. Comp.	Max.No. Comp.
		Major	Semi-major	Minor			
Ag	1	30	27	6	2	5	12
	2	50	45	10	2	3	12
	3	150	135	30	2	1	12
Au	1	25	20	5	2	5	12
	2	40	30	10	2	3	12
	3	150	135	30	2	1	12

Note: Comp = composite

Table 14-3: Terronera Deposit High-Yield Restriction Parameters

Estimation Domain	Ag Threshold (g/t)	Ag Range (m)	Au Threshold (g/t)	Au Range (m)
FW	1,500	20	12	20
HW1	1,300	20	15	20
HW2	2,200	20	12	20
HW3	600	20	None	-
HW4	None	-	None	-
HW5	700	20	10	20
HW6	None	-	None	-
TRV	3,470	20	17	20

14.1.7 Density Estimation

The density database for the Terronera deposit consists of 2,756 bulk density measurements from wax-sealed core samples from 127 drill holes. The samples selected for bulk density measurement are sealed with wax so that open vugs and cavities are accounted for in the density measurements preventing larger open cavities and fractures in the rock mass that are relatively common at Terronera from being included.

In discussion with the geotechnical engineering team, it was concluded that the density measurements could be factored by core recovery as proxy for the open space in a given drill interval, to factor bulk density obtained from water displacement of intact drill core pieces that do not reflect the open space in open fractures and centimetre-scale voids in the in-situ rock mass. However, the core recovery measurement also includes losses of drill core related to drilling, especially in highly fractured ground, so the factors for calculating in-situ bulk density were modified to better reflect the expected density for sand, gravel and highly fractured rock mass and to exclude core losses related to drilling in difficult ground conditions.

The in-situ bulk density estimate for the Terronera deposit was developed as follows:

- The 1,062 selected bulk density measurements are estimated into blocks inside the estimation domains (DEN) using inverse distance to the second power. These measurements have a mean of 2.59 g/cm^3
- Logged drill core recovery (REC), expressed as a percentage, is estimated into blocks inside the estimation domains. The mean REC inside the estimation domains is 90%
- In-situ bulk density (DENI) is calculated according to the following formula:
  - If REC < 50%: DENI = 0.6*DEN
  - If REC >= 50% and <80%: DENI = 0.7* DEN

– If REC >=80% and <90%: DENI = 0.8* DEN
– If REC >=90%: DENI = DEN

The mean estimated in-situ bulk density for the blocks within the estimation domains is 2.6 g/cm^3.

14.1.8 Model Validation

The Terronera resource model was validated by:

- Visual inspection of silver and gold composite grades and block grades on plan and cross-section
- Comparison of declustered mean composite grades to model grades (Figure 14-11)
- Comparison of model grades to unrestricted grades
- Construction and review of swath plots showing trends in grades of composites, nearest neighbour model (NN), high-yield restricted and unrestricted silver and gold model grades
- Reconciliation of the new model to the previous model

Figure 14-12 shows a comparison of the silver model with 1 m composite (1m Comp), NN model, high-yield restricted model (HYR) and a capped model (Cap) recreated by Wood. Spikes in the composite data are eliminated from the NN model. The final silver grades closely follow the NN grade profile and in several locations can be observed to be slightly higher than the capped model.

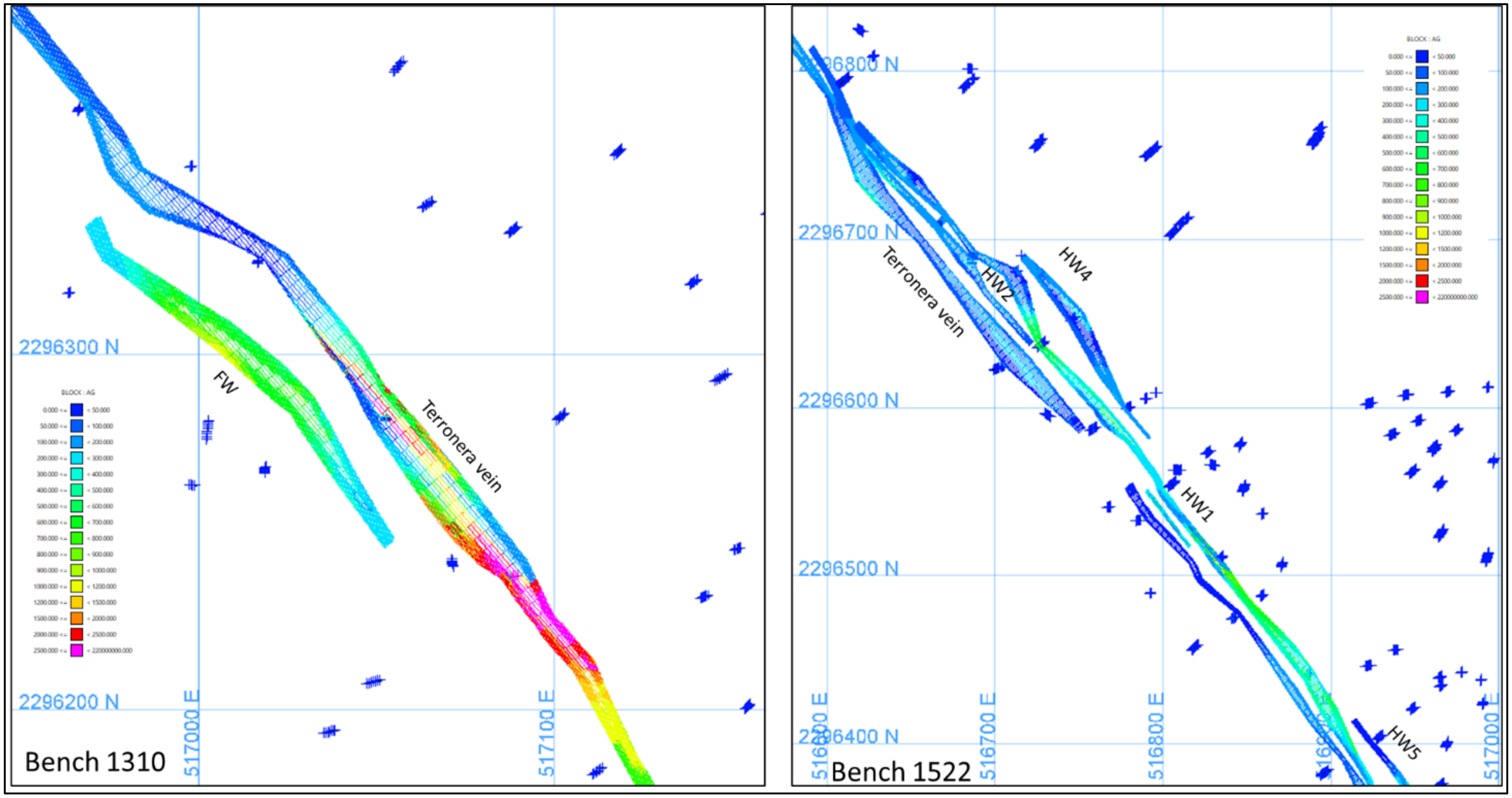


Figure 14-11: Bench Plan Showing Block Silver Grades and Declustered Silver Composites (prepared by Wood, dated 2021)

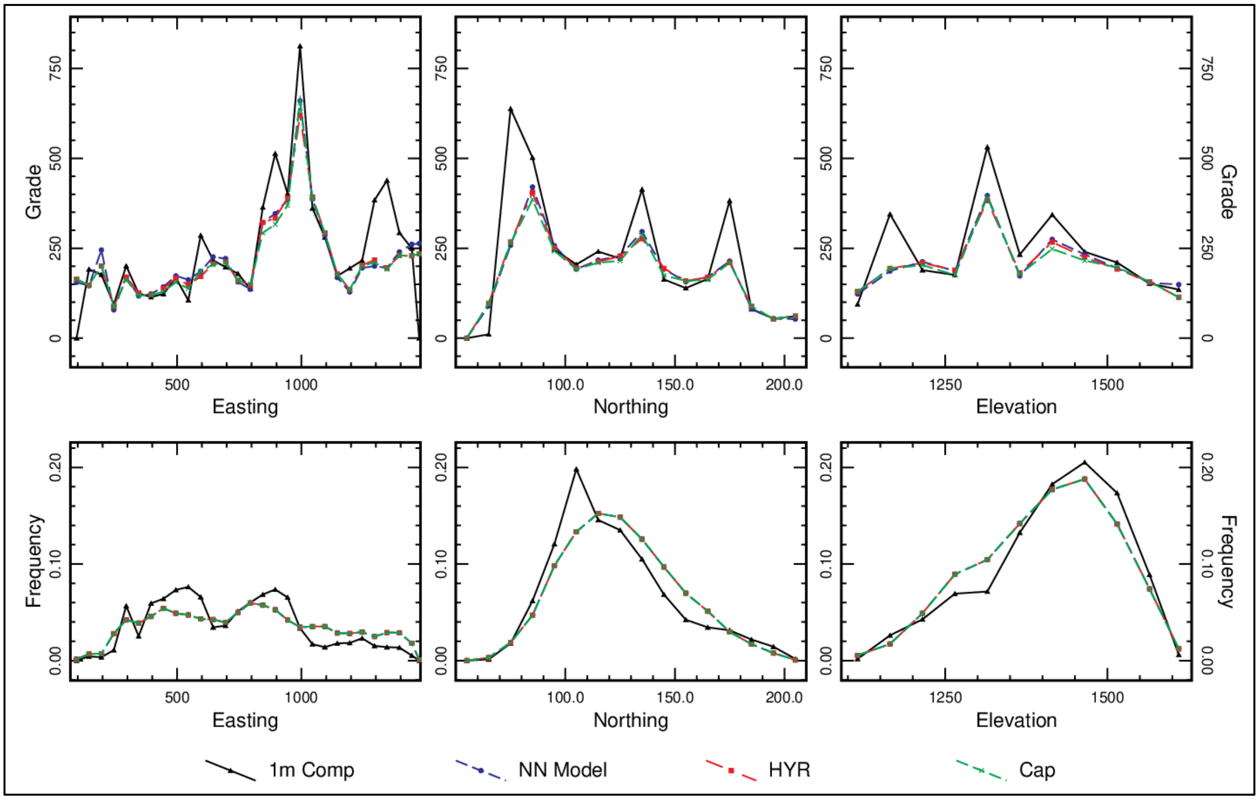


Figure 14-12: Swath Plot of Silver Grades in the Terronera Vein (prepared by Wood, dated 2021)

14.1.9 Mineral Resource Classification

Blocks in the Terronera Mineral Resource model have been assigned a resource confidence category based on drill hole spacing criteria selected that considers a visual assessment of the continuity of the mineralized zones width along strike and down dip, and a geostatistical drill hole spacing study. The study provides quantification of the expected error of estimates with quarterly and annual production volumes for a range of drill patterns given the spatial continuity of grades defined by an input variogram, and the overall variance of assay composite grades.

The relative standard error of the average silver grade of a monthly production volume was estimated by calculating the kriging variance of a monthly ore panel using the correlogram model and drill hole intersections with a range of spacings from 20 m x 20 m to 80 m x 80 m, including a 50 m x 50 m pattern representing the nominal drill spacing for the majority of the Terronera deposit.

The mineralized zones at Terronera have excellent continuity along strike and down dip, but the variance of silver grades in the estimation domains is relatively high. Due to the moderate nugget effect, relatively short range of the correlogram models, and moderate variance of the 1 m silver composites in the mineralized zones, the estimation error of annual production for a nominally 50 m x 50 m drill pattern is +/-25% for annual production volumes at the 90th percentile, and a nominal 50 m drill spacing was used to define Indicated blocks.

Estimation errors for quarterly production are significantly higher, and ongoing infill grade control drilling to a 20 m x 20 m pattern, or tighter spacing, is recommended to provide data for stope design and block estimates for production planning on quarterly and shorter time horizons.

All remaining estimated blocks inside the mineralized domains are classified as Inferred Resources.

14.2 La Luz Deposit Mineral Resource Estimate

14.2.1 Introduction

An updated Mineral Resource estimate for the La Luz deposit located 4 km to the northwest of the Terronera Veins uses the estimation methodology followed for the Terronera Vein. The geological model, drill hole and assay database, and the interpolator and interpolation parameters are unchanged from the previous resource model that was used in the 2020 pre-feasibility study.

14.2.2 Database

The drilling, sampling, and assaying data and geological models used for the La Luz estimate were provided to Wood by the Endeavour Silver Terronera Project Team in the form of excel spreadsheets and a set of triangulations in the Vulcan 00t format.

Statistics for the La Luz deposit database are presented in Table 14-4. No holes were drilled in 2020.

Figure 14-13 shows a longitudinal view of the La Luz deposit looking north and the drill hole information used for the 2021 resource model and Mineral Resource estimate.

Table 14-4: 2021 La Luz Drill Hole Database Statistics

Drill Campaign	Drill Holes/ Channels	Metres	Samples	Density Measurements
2016-2017	41	9,795.65	1,472	424

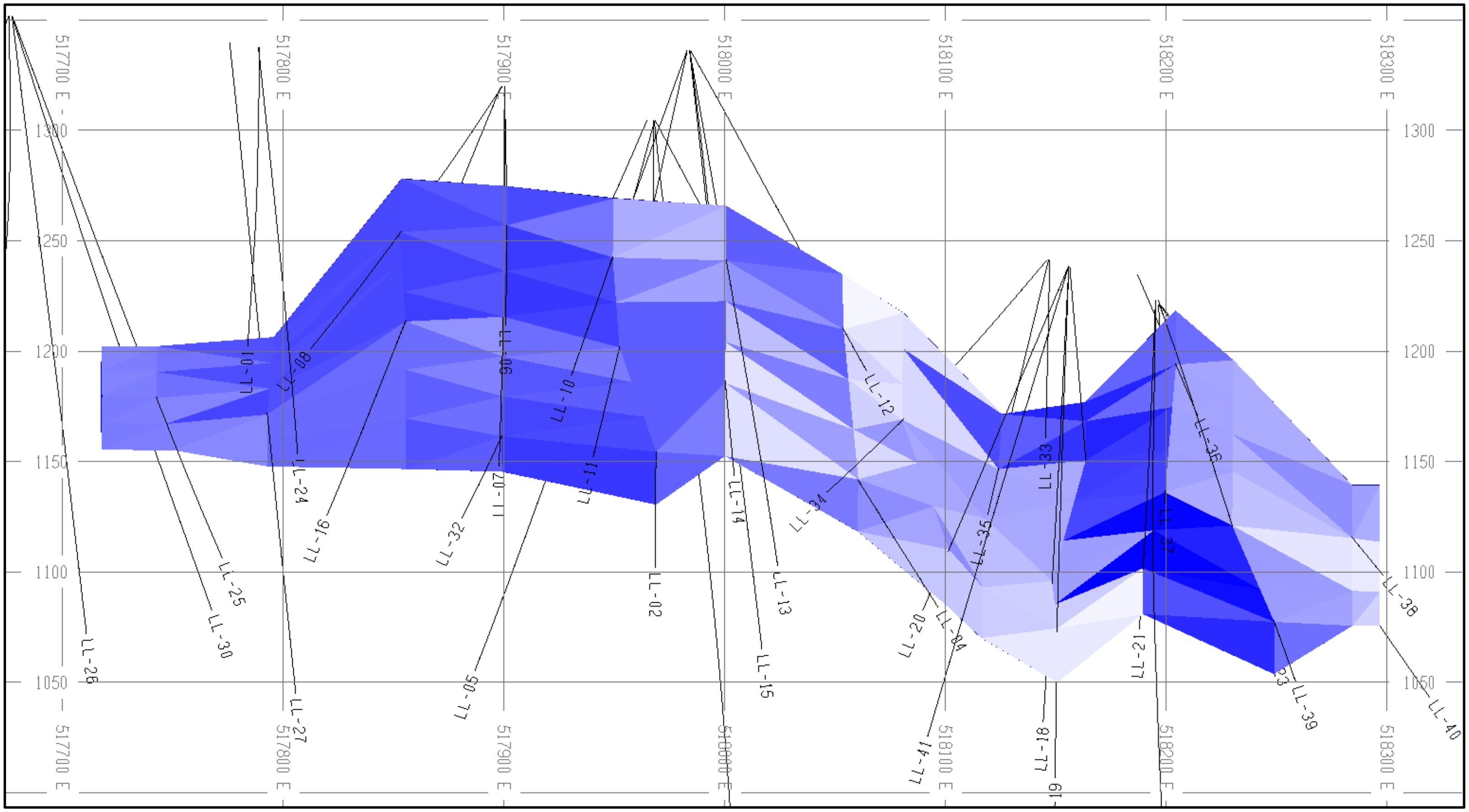


Figure 14-13: Longitudinal View Looking North of the La Luz Deposit and Drill Hole Database (prepared by Wood, dated 2021)

14.2.3 Estimation Domains

The estimation domains used for the La Luz Mineral Resource model have been constructed similarly to the domains for the Terronera model; however, zones are narrower, have lower mean silver grades and higher mean gold grades. The main zone (La Luz Zone) and a small zone in the hanging wall (La Luz HW Zone) of the east end of the La Luz Zone have been modeled. Endeavor Silver prepared the wireframes and were constructed to include the mineralization portions of the veins and wall rock along the structural corridors responsible for vein emplacement and silver and gold deposition using a nominal 150 g/t AgEq cut-off grade. AgEq was calculated as:

$$\mathbf{AgEq = Ag + (Au \times 75)}$$

The wireframes were created from three-dimensional polylines digitized on vertical cross-sections spaced 50 m apart and oriented north-south, perpendicular to the strike of the deposit.

Figure 14-14 presents a cross-section of the La Luz deposit estimation domains along a section line with an azimuth of 50° at the west end of the deposit, showing the stacked steeply north-east dipping zones from the La Luz and La Luz HW zones.

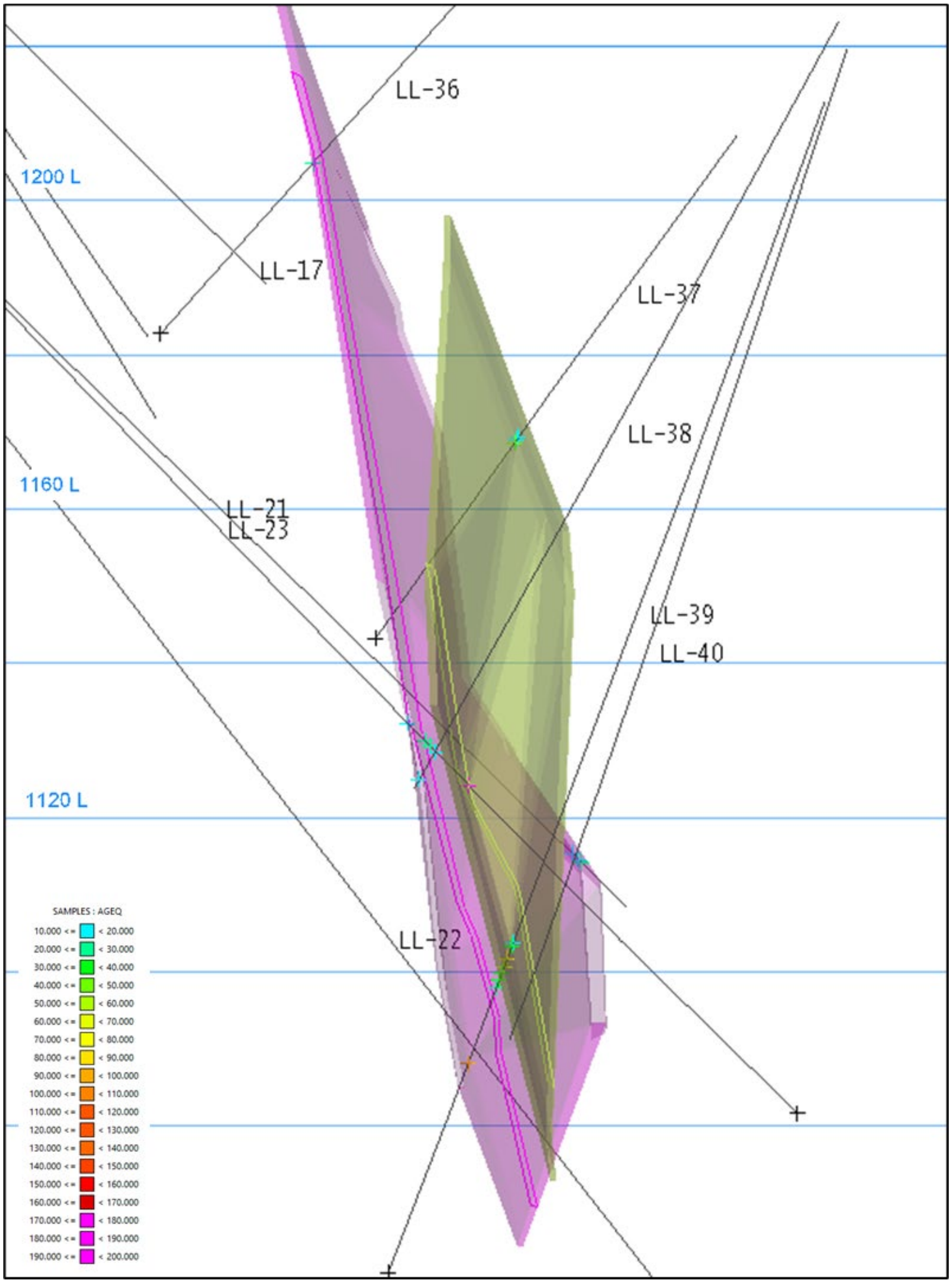


Figure 14-14: Cross-Section of the La Luz (pink) and La Luz HW (gold) Zones Looking West (281 azimuth, 100 m width of view) (prepared by Wood, dated 2021)

14.2.4 Exploratory Data Analysis

Exploratory data analysis was carried out on silver and gold assay data to understand the distributions of grades and make decisions about parameters for grade estimation for the La Luz deposit.

14.2.4.1 Compositing and Analysis

A 1 m composite interval length was selected, honouring the estimation domain boundaries. The composite length reflects the nominal 1 m sampling interval and maximizes the mineralization to waste selectivity of the dataset. Composites with lengths less than 0.25 m were not used in estimation.

Histograms and cumulative frequency plots of silver and gold composites within the estimation domains are shown in Figure 14-15. The cumulative frequency plot of both silver and gold grades shows roughly a lognormal distribution.

Boxplots displaying the silver and gold distribution (Figure 14-16) of the La Luz and La Luz HW zones show they are relatively small with a limited number of 1 m composites within each zone. The grade distribution of silver is more skewed than that of the gold grade distribution. The maximum grade of composites inside the La Luz Zone is over 1,000 g/t Ag and 100 g/t Au, but the CV is moderate for both indicating a linear estimation method using outlier or high-yield restriction to mitigate the over-projection of the high-grade composites is a suitable approach for grade estimation.

Gold grades are higher, and the silver to gold ratio of the La Luz Zone is lower compared with the Terronera Vein.

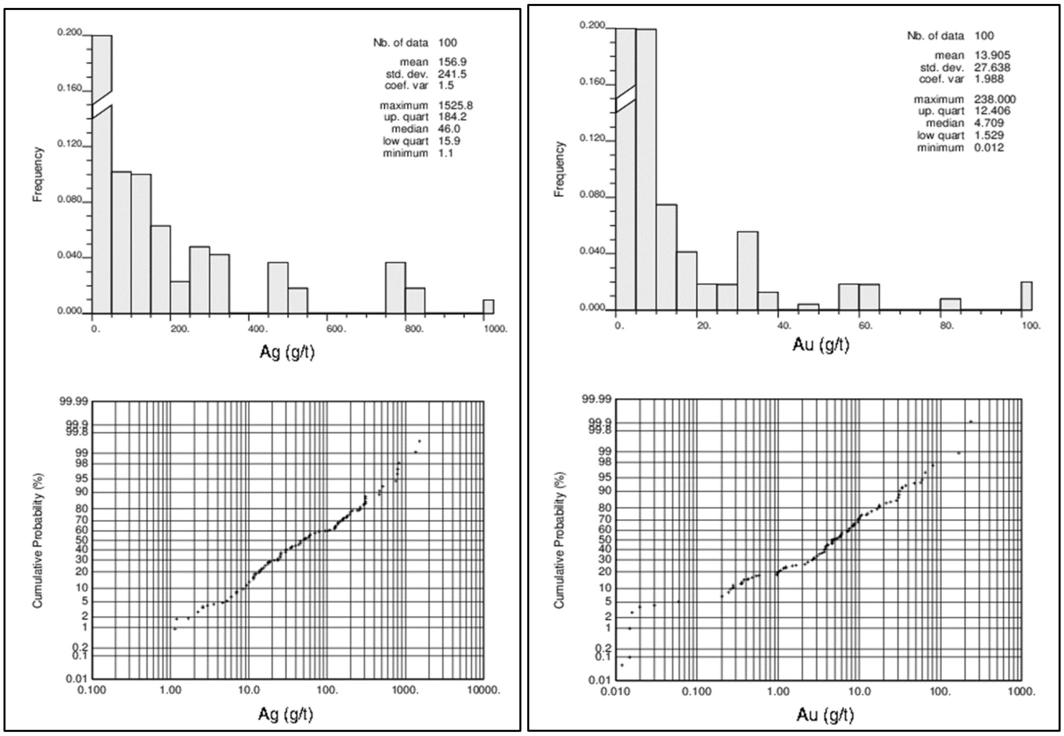


Figure 14-15: Distribution of Silver (left) and Gold (right) Composites - La Luz Deposit (prepared by Wood, dated 2021)

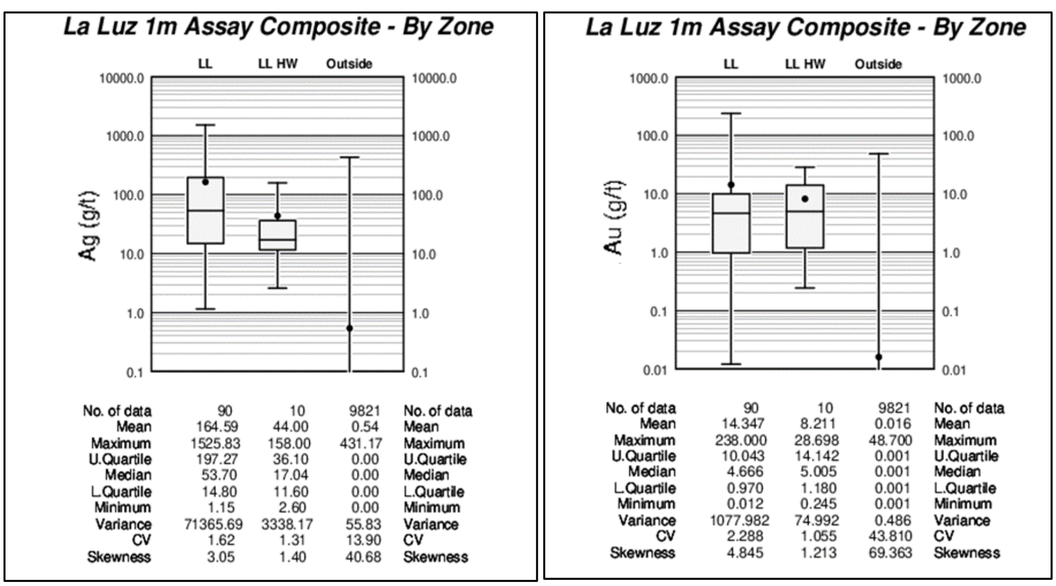


Figure 14-16: Boxplots La Luz Deposit Silver (left) and Gold Composites by Zone (prepared by Wood, dated 2021)

Note: LL = La Luz Zone; LL HW – La Luz HW Zone

14.2.5 Management of Extreme Grades

Exploratory data analysis of silver and gold grades indicates that the approach used to manage extreme grades at the Terronera deposit would be appropriate at the La Luz deposit. An outlier threshold of 1,000 g/t Ag and 90 g/t Au with a maximum range of influence of 20 m was used to estimate the La Luz deposit.

14.2.6 Grade Estimation

Silver and gold grades were estimated from 1 m composites into parent blocks measuring 4 m along strike, 4 m high, and 1 m wide across strike using the Vulcan mining software package. Sub-cells along the margins of the estimation domains were used to provide an accurate tonnage and grade of mineralized material. No dilution or ore loss was applied to the Mineral Resource estimate.

Grades were estimated in two passes using anisotropic search ellipsoids and inverse distance weighting to the third power. Search ellipsoids are oriented with their major axis along the strike direction of the deposit at 277/00, the semi-major axis down-dip at 007/-75, and the minor axis at 007/15. Estimation parameters are shown in Table 14-5.

High-yield restriction was applied to composites during estimation. Thresholds were selected by reviewing the locations of the high-grade assays for each estimation domain. The parameters for the high-yield restriction applied in silver and gold grade estimation are shown in Table 14-6.

Table 14-5: La Luz Deposit Estimation Parameters

Metal	Estimation Pass	Search Distance (m)			Max. Comp/ Hole	Min. No. Comp	Max. No. Comp
		Major	Semi-major	Minor			
Ag	1	45	45	10	2	3	12
	2	90	90	20	2	2	12
Au	1	40	40	10	2	3	12
	2	80	80	20	2	2	12

Note: Comp = composite

Table 14-6: La Luz Deposit High-Yield Restriction Parameters

Estimation Domain	Ag Threshold (g/t)	Ag Range (m)	Au Threshold	Au Range (m)
La Luz	1,000	20	90	20
La Luz HW	1,000	20	90	20

14.2.7 Model Validation

The La Luz resource model was validated by:

- Visual inspection of silver and gold composite grades and block grades on plan and cross-section (Figure 14-17)
- Comparison of declustered mean composite grade to model grade
- Comparison of model grade to unrestricted grade
- Construction and review of swath plots showing trends in grades of composites, nearest-neighbour model restricted, and unrestricted silver and gold grades
- Reconciliation of the new model to the previous model

The swath plot of silver grades is presented in Figure 14-18 validates the grade trends in the estimate based on the nearest neighbour and composite grade profiles, especially in the centre of the deposit where grades exceed 250 g/t Ag.

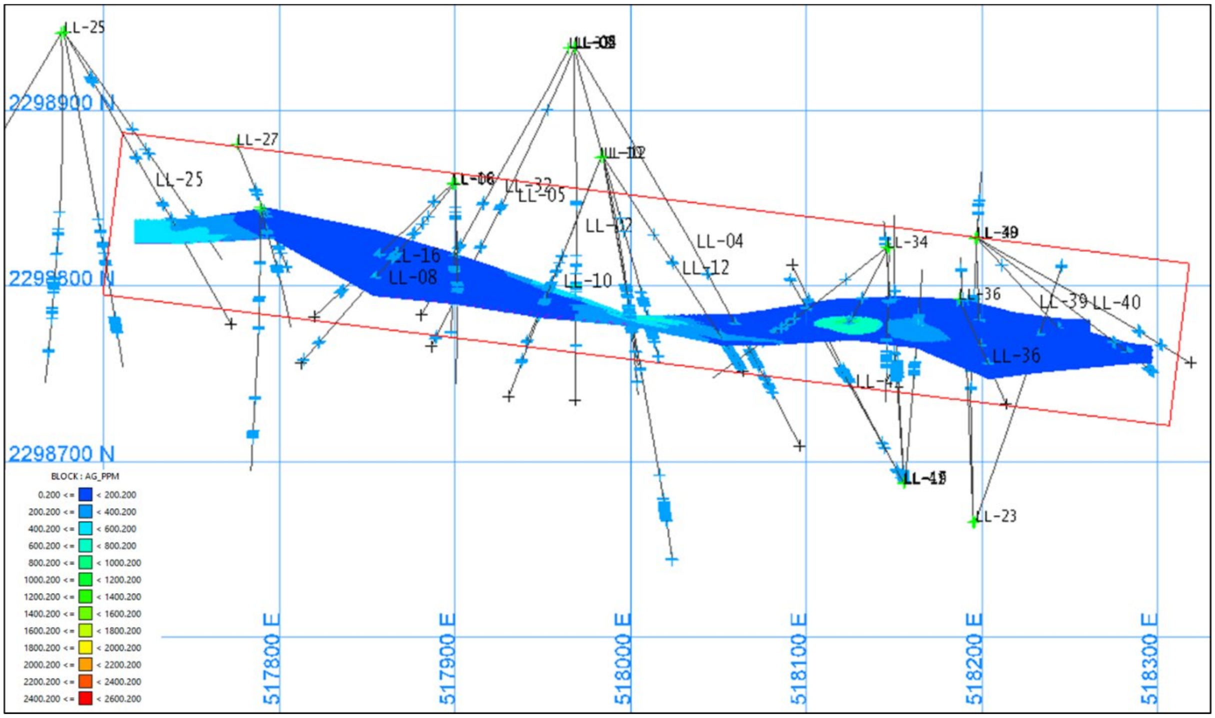


Figure 14-17: Plan View of the Silver Block Model with the Silver Composites - La Luz Zone (prepared by Wood, dated 2021)

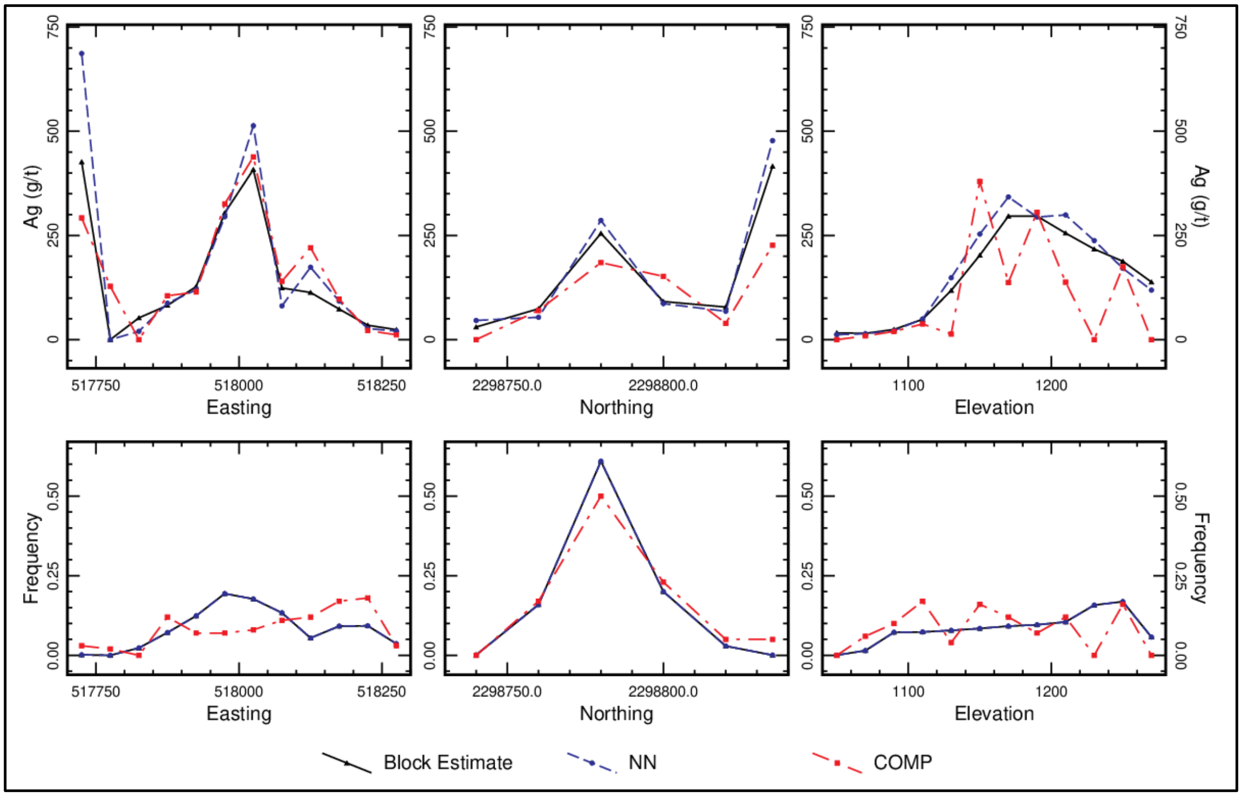


Figure 14-18: Swath Plot of Silver Grades in the La Luz Vein (prepared by Wood, dated 2021)

14.2.8 Mineral Resource Classification

Blocks in the La Luz resource model have been assigned a resource confidence category based on drill hole spacing criteria that considers a visual assessment of the continuity of mineralized zones width along strike and down dip and the drill hole spacing study carried out for the Terronera deposit.

The mineralized zones of the La Luz deposit have moderate continuity along strike and down dip but are relatively narrow, and the variance of silver and gold grades in the mineralized zones are relatively high. As a result, the drill hole spacing required to produce estimates of grade and tonnage suitable for the LOM planning is closer than that required for the Terronera deposit.

Blocks estimated with composites from at least two drill holes with a nominal drill hole spacing of 30 m x 30 m along strike and down dip are classified as Indicated Mineral Resources for the La Luz deposit and blocks estimated with composites from only one hole or holes spaced wider than the nominal 30m spacing are classified as Inferred.

Estimation errors for quarterly production are significantly higher and ongoing infill grade control drilling with a tighter spacing (15 m x 15 m pattern) is recommended to provide data for stope design and block estimates for production planning on quarterly and shorter time horizons.

14.3 Reasonable Prospects of Eventual Economic Extraction

The Terronera and La Luz veins have sufficient widths and continuity suitable for high extraction by CAF and SLS and shrinkage stoping mining methods. A cut-off grade of 150 g/t AgEq is applied to identify blocks that will have reasonable prospects of eventual economic extraction.

The silver equivalent calculation and cut-off grades used for the 2021 Mineral Resource estimate are consistent with values used from the PEA and pre-feasibility studies.

AgEq for the Terronera Project is Ag + 75 x Au. The AgEq value considers silver grade plus gold grade factored by the differential of gold and silver metal prices and metallurgical recoveries.

The 150 g/t AgEq cut-off grade generates sufficient revenue assuming metallurgical recovery and long-range silver price to cover operating costs, including mining, processing, G&A costs, treatment and refining, and royalties.

Wood tested the silver equivalent and cut-off grade assumptions using Wood's third-quarter guidance on industry consensus for long-term silver and gold prices used for Mineral Resource estimates and the average LOM metallurgical recovery and operating costs obtained from the 2021 FS:

- Assuming the mean silver recovery of 87% and the mean gold recovery of 76% from the 2021 FS and Wood's guidance for silver price recommendation of $23.00/oz for Ag and $1,810/oz for Au, the gold grade factor for the silver equivalent calculation would fall 8% from 75 to 68.
- If Wood's guideline price for silver price, average metallurgical recovery for silver, and average LOM operating costs from the 2021 FS totaling $86.88/t comprised of $30.78/t for mining, $25.47/t for processing, $10.91/t for G&A costs, $15.26/t for treatment and refining costs and $4.46/t for royalties. There would be an opportunity to decrease the Mineral Resource cut-off grade 10% from 150 g/t AgEq to 135 g/t AgEq.

Wood's test indicates that changes in metal prices, metallurgical performance, and operating costs do not significantly impact previous assumptions for silver equivalent and cut-off grades and these values are reasonable for use in the 2021 Mineral Resource estimate.

14.4 Mineral Resource Estimate

The estimated tonnages and grades in the Mineral Resource estimates for the Terronera Project include Mineral Reserves and have not been adjusted for mining recovery and dilution. Additionally, silver and gold metal estimates presented in the Mineral Resource tables have not been adjusted for metallurgical recoveries. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Mineral Resource estimates for the Terronera, and La Luz deposits are summarized in Table 14-7 and Table 14-8, respectively, and are reported in accordance with the 2014 CIM Definition Standards.

Table 14-7: Terronera Deposit Mineral Resource Estimate with Effective Date March 5, 2021

Classification	Tonnes (000s)	Ag (g/t)	Ag (000s oz)	Au (g/t)	Au (000 oz)	AgEq (g/t)	AgEq (000 oz)
Indicated	5,181	256	42,707	2.49	415	443	73,755
Inferred	997	216	6,919	1.96	63	363	11,624

Notes:

1. Mineral Resources have an effective date of March 5, 2021. The Qualified Person responsible for the Mineral Resource estimate is Tatiana Alva, P. Geo, an employee of Wood Canada Ltd.
2. Mineral Resources reported are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. AgEq is calculated as the sum of silver plus gold grades factored by the differential in gold and silver metal prices and metallurgical recoveries
4. Mineral Resources are constrained within a wireframe constructed at a nominal 150 g/t AuEq cut-off grade
5. A 150 g/t AgEq cut-off grade considers Wood's guidance on industry consensus for long-term silver and gold prices for Mineral Resource estimation metallurgical performance, mining, processing, site G&A operating costs, treatment and refining charges, and royalties
6. Mineral Resources are stated as in-situ with no consideration for planned or unplanned external mining dilution.
7. The silver and gold ounces presented in the Mineral Resource estimate table have not been adjusted for metallurgical recoveries.
8. Numbers have been rounded as required by reporting guidelines and may result in apparent summation differences.

Table 14-8: La Luz Deposit Mineral Resource Estimate with Effective Date March 5, 2021

Classification	Tonnes (000s)	Ag (g/t)	Ag (000s oz)	Au (g/t)	Au (000 oz)	AgEq (g/t)	AgEq (000 oz)
Indicated	122	182	745	13.11	54	1,165	4,774
Inferred	61	150	295	11.35	22	1,001	1,977

Notes:

1. Mineral Resources have an effective date of March 5, 2021. The Qualified Person responsible for the Mineral Resource estimate is Tatiana Alva, P. Geo, an employee of Wood Canada Ltd.
2. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. AgEq is calculated as the sum of silver plus gold grades factored by the differential in gold and silver metal prices and metallurgical recoveries
4. Mineral Resources are constrained within a wireframe constructed at a nominal 150 g/t AuEq cut-off grade
5. A 150 g/t AgEq cut-off grade considers Wood's guidance on industry consensus for long-term silver and gold prices for Mineral Resource estimation metallurgical performance, mining, processing, site G&A operating costs, treatment and refining charges, and royalties
6. Mineral Resources are stated as in-situ with no consideration for planned or unplanned external mining dilution.
7. The silver and gold estimates presented in the Mineral Resource estimate table have not been adjusted for metallurgical recoveries.
8. Numbers have been rounded as required by reporting guidelines and may result in apparent summation differences.

14.5 Factors that Could Affect the Mineral Resource Estimate

The majority of the Terronera Mineral Resources have been classified as Indicated, and it is possible that infill and grade control drilling and production sampling may result in local changes to the thickness and grade of the blocks currently drilled at nominally 50 m spacing. Additional drilling and production sampling are recommended to produce accurate forecasts for annual and short-range plans.

Other factors that could affect the Mineral Resource estimate are:

- changes to metal prices
- mine and process operating cost
- variability in metallurgical performance
- mine design and mining method selection due to geotechnical stability.

15.0 MINERAL RESERVE ESTIMATES

15.1 Introduction

Two deposits will be developed at the Terronera project for extraction, the Terronera Zone, which is the main deposit, and the satellite La Luz Zone.

The Terronera Zone will be mined via three methods

- CAF stoping
- Transverse SLS
- Longitudinal SLS.

The La Luz Zone will be mined via shrinkage methods.

Indicated Mineral Resources were converted to Probable Mineral Reserves by applying the appropriate modifying factors described in the following sections. Mining shapes were created during the mine design process

15.2 Cut-Off Grade

Cut-off grades for the Terronera and La Luz zones were developed separately, given the difference in zone tonnages and the silver and gold grades. Input parameters used are summarized in Table 15-1. Cut-off grades have been calculated using a silver-equivalent grade (AgEq) as defined by the formula:

$$AgEq(g/t) = Ag(g/t) + (Au\ (g/t) \times 78.9474)$$

Table 15-1: Cut-off Grade Input Parameters

Parameter	Unit	Value
Silver Price	$/oz Ag	19.00
Gold Price	$/oz Au	1,500
Payable Metal	%	97.5
Refining and Transport	$/oz Ag	0.75
Royalties	%	2.5
SLS Operating Cost	$/t	30.00
CAF Operating Cost	$/t	49.18
Shrinkage Operating Costs	$/t	48.00
Processing Cost	$/t	28.46
G&A Cost	$/t	8.49
Silver Process Recovery	%	84.9
Gold Process Recovery	%	79.8
Cut-off Grade SLS	g/t AgEq	156
Cut-off Grade Shrinkage	g/t AgEq	197
Cut-off Grade CAF	g/t AgEq	200

15.3 Mining Dilution

Unplanned dilution quantities were applied to all mill feed tonnes based on mining type and location within the mining sequence. Equivalent linear overbreak or slough (ELOS) factors were applied to all mining methods. Unplanned dilution is assumed to have zero grade. The density for host rock dilution was based on the stope block being diluted, and a specific gravity of 2.15 t/m^3 was assigned to cemented rockfill dilution.

The calculated ELOS values were applied to the stope designs to produce diluted tonnes and grade for each stope based on the planned mining method. The stopes were interrogated against the block model to produce undiluted tonnes and grades. The ELOS for each method was converted to a percent dilution based on the planned stope dimensions and applied to the overall tonnage of the stope.

Dilution for the SLS and CAF areas of the Terronera Zone was determined for the hanging wall and footwall as summarized in Table 15-2. High dilution results from poor rock mass quality and narrow veins, which improves where the rock mass quality improves, and the zone gets thicker.

Table 15-2: Estimated Dilution at the Terronera Zone

Mining Zone	Mining Method	Dilution (%)
Terronera	CAF	21
	SLS	41
	Ore Development	0
La Luz	Shrinkage	20
	Ore Development	0

The stope dilution analysis for the shrinkage stopes has been completed using a combination of ELOS and the conventional draw curves developed for sub-level caving (Page and Bull, 2011). Based on the stope height and length, ELOS for each hanging wall and footwall is expected to be around 0.125 m or a total of 0.25 m. The estimated dilution for the La Luz Zone is presented below:

- The first 50% ore drawn has minimal dilution (10% dilution from walls), which equates to 50% ore plus 5% waste (55% drawn) for an ELOS of 0.125 m (mainly hanging wall)
- The last 50% ore drawn has a higher dilution (33% dilution from walls), which equates to 30% ore plus 15% waste (45% drawn) for an ELOS of 0.43 m (hanging wall and footwall).

This equates to an overall dilution of 20% or an overall ELOS of 0.26 m for a 1.3 m wide stope.

15.4 Mining Recovery

Mine recovery factors were applied to all methods to capture the quantities of ore left behind as part of the mining process. Mine recovery factors were determined for the various mining activities and applied to the diluted tonnes to calculate the mucked tonnes as summarized in Table 15-3.

Table 15-3: Recovery Factors based on Mining Activity

Zone	Mining Method	Recovery (%)
Terronera	SLS	90
	CAF	95
	Ore Development	100
La Luz	Shrinkage	80
	Ore Development	100

15.5 Mineral Reserve Table

Mineral Reserves were classified in accordance with the 2014 CIM Definition Standards. All Mineral Reserves were converted from Indicated Mineral Resources and are classified as Probable.

The Probable Mineral Reserve estimates for the Terronera and La Luz deposits are provided in Table 15-4. There is no Proven Mineral Reserve for either zone.

Table 15-4: Terronera and La Luz Probable Mineral Reserve

Zone	Tonnes (000s)	Ag (g/t)	Au (g/t)	AgEq (g/t)	Ag (000s oz)	Au (000s oz)	AgEq (000s oz)
Terronera	7,227	197	1.97	353	45,856	459	82,055
La Luz	153	173	15	1,378	851	75	6,780
Total	**7,380**	**197**	**2.25**	**374**	**46,707**	**534**	**88,834**

Note:

1. The Mineral Reserve estimate was prepared in accordance with 2014 CIM Definition Standards by William Bagnell, P.Eng., an employee of Wood.
2. The Mineral Reserves have an effective date of June 30, 2021.
3. Mineral reserves are reported using a silver equivalency cut-off formula AgEq (g/t) = Ag (g/t) + (Au (g/t) x 78.9474). Cut-off grade varies between 156 g/t to 200 g/t AgEq depending on mining method. Metal prices used were $1,500/oz Au and $19.00/oz Ag. Metallurgical recovery of 84.9% for silver and 79.8% for gold, transport, treatment and refining charges of $0.75/oz Ag, and royalties of 2.5% NSR.
4. Mineral Reserves are reported based on mining costs of $30.00/t for sub-level open stoping, $49.18/t for cut and fill, and $48.00/t for shrinkage mining, $28.46/t for process costs, and $8.49/t for G&A costs.
5. Figures in the table may not sum due to rounding.

15.6 Factors That May Affect the Mineral Reserve Estimate

Factors that could affect the Mineral Reserve estimate include but are not limited to dilution, recovery, metal prices, underground and site operating costs, management of the operation, and environmental or social impacts.

Factors with the most significant impacts to the Mineral Reserve estimate are:

- Gold price for the La Luz Zone
- Silver price for the Terronera Zone
- Ground conditions in the Terronera Zone during mining.

No metallurgical, infrastructure or other relevant factors could materially affect the Mineral Reserve estimates at Terronera and La Luz.

16.0 MINING METHODS

16.1 Introduction

The Terronera mine will be accessed via three declines developed from the surface. An internal decline will be used to access the La Luz deposit. The declines are designed at approximately 15% grade and will be developed as single face headings.

The declines will collar on separate portals located at the process plant, the mine dry, and a temporary access portal at the upper level of the Terronera deposit. The dual decline will incorporate re-muck/sump and re-muck/electrical substation cut-outs on a nominal 159 m spacing. Passing bays are not included in the ramp design as the design supports using a dedicated decline for material transport to the surface, reducing the potential traffic interferences from routine operations.

Figure 16-1 shows the Terronera mine with associated infrastructure and accesses.

Three main ventilation raises will exhaust air from the Terronera deposit, and another provide ventilation to the La Luz deposit. All raises will be bored from a surface installation to the full depth of the deposits connecting to the footwall haulage drifts and developed in phases to meet development and production requirements.

An internal ramp will be developed from 1560 elevation to 1120 elevation. This ramp will be a single face heading to provide mobile equipment access throughout the mine when completed. Mine sub-levels will be spaced at a nominal 20 m interval to support SLS and CAF mining.

Alimak raises will be developed to support the movement of waste and ore. Material movement during the decline development and early production will be via truck haulage up the decline.

The size of the headings for ramps, level development, and other infrastructure was selected based upon the equipment to be used and to accommodate the ventilation ducting required during development.

The underground mine designs were developed to provide access to the ore, accommodate infrastructure, and offer efficient routes for ventilation and ore and waste handling, including:

- Primary development: capital infrastructure including ramps, levels, sumps, shops and associated infrastructure. Endeavour Silver mining personnel will perform primary development
- Vertical development: capital infrastructure including raise bore, and Alimak raises. This development is to support ventilation and material handling

- Secondary development: internal ramps and level accesses that connect the primary development with the mining blocks.
- Ore development: development to support production by mining method. Transverse SLS, longitudinal SLS, and CAF. Methods were selected primarily by local deposit geometry and rock mechanics conditions.

16.2 Geotechnical Considerations

16.2.1 Geotechnical Characterization

As part of the FS pertaining to the geomechanical support for underground mine design, Wood reviewed previous work and investigation by others, in which site investigation at both the Terronera and the La Luz project sites were performed by KP (2019a, 2019b, and 2019c). These investigations were performed in 2016 and 2018 during which 1,180 m of HQ3 oriented core (using Reflex ACT III) from four boreholes at Terronera and 790 m of HQ3 oriented core from four boreholes at the La Luz site were drilled. In addition, there is an extensive database of rock RQD values recorded in most exploration boreholes. For this study Wood, with the assistance of Endeavour Silver geologists, performed virtual logging (internet video conference real-time logging) of 2,998 m of core concentrating on three of the KP boreholes in the Terronera deposit, plus a selection of 54 exploration boreholes to review core from either side of the Terronera orebody as well as through the orebody. A three-day site visit was made by Wood to perform physical verification logging on 1,268 m of core, to review the existing accessible workings and general site layout, and to observe the hydrological and hydrogeological conditions.

16.2.2 Geotechnical Domains and Rock Mass Properties

16.2.2.1 Terronera Orebody

The Terronera orebody is tabular, with a strike length of approximately 1,200 m, a thickness between 3 and 15 m, extending from surface to 570 m deep. The orebody is oriented southeast-northwest and dips on average 75° to 80° towards 050°. The footwall rock is mainly rhyolite (uniaxial compressive strength (UCS) approximately 92 MPa), with the hanging wall rock predominantly andesite (UCS approximately 175 MPa); the ore zone is termed the Terronera Vein (UCS approximately 62 MP based on limited samples). Testing was performed by Wood (2016 and 2018) and also by Endeavour Silver (2015).

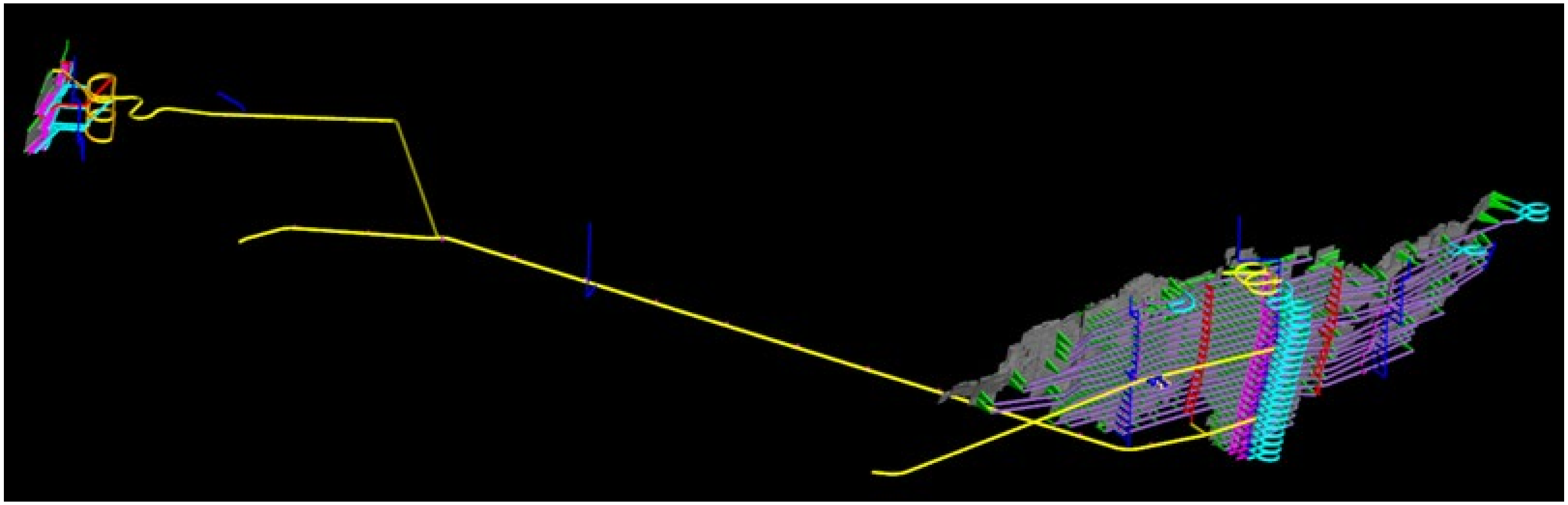


Figure 16-1: Isometric View of the Mine Design Layout (prepared by Wood, dated 2021)

The rock mass quality is generally poor with a range between very poor to fair. Based on the oriented core and mapping of the Lupillo Mine Adit there are three principal joint sets with many random sets. The main set is a strong foliation set that is steeply dipping and parallel to the strike of the orebody, and a sub-horizontal and sub-vertical sets perpendicular to the strike of the orebody. The hanging wall has the best rock mass quality in the immediate ore zone region. The hanging wall mean rock mass rating (RMR'76) (Bieniawski, 1976) varies from 34 to 57 with the mean modified Q-system (Barton, 1974), Q' ranging from 0.33 to 4.2. The ore zone and footwall are typically five points lower on the RMR ranges and 0.1 to 1.0 lower for the Q' range. The poor rock mass quality is mainly associated with low RQD values (0 to 60%), that may be related to a faulted footwall contact and splay shears. Due to the variability in quality, the Terronera orebody was modeled using GEM4D© (Basrock, 2001) and contoured in three-dimensions to develop comparable mining zones based primarily on the hanging wall rock quality, resulting in five mining zones MZ1 to MZ5 (Table 16-1 and Figure 16-2). The hanging wall is one of the critical surfaces and on average has a better rock mass quality than the ore zone or immediate footwall.

The hanging wall and footwall was modeled using the inverse distance method with an optimized search radius of 80 m based on the distribution of the boreholes. The hanging wall and footwall volumes contoured were based on ± 10 m shells from the orebody contact. The ore zone contoured full width and was based on the relogged core. The results are found Table 16-1 are statistically derived from the borehole intersections for the hanging wall, ore zone and footwall of each mining zone.

Table 16-1: Q' Statistics by Domain and Sub-domain, Terronera Deposit

Sub-Domain	Description	Q' MZ1	Q' MZ2	Q' MZ3	Q' MZ4	Q' MZ5
FW	**Mean**	**1.31**	**1.10**	**0.14**	**3.64**	**0.81**
	Std Dev	2.89	1.70	0.13	4.38	1.98
	Median	**0.51**	**0.42**	**0.14**	**1.67**	**0.35**
HW	**Mean**	**0.81**	**2.74**	**0.33**	**4.18**	**1.18**
	Std Dev	0.77	2.83	0.31	3.65	2.19
	Median	**0.56**	**1.75**	**0.21**	**3.26**	**0.42**
OZ	**Mean**	**0.81**	**2.29**	**0.27**	**3.24**	**0.72**
	Std Dev	0.91	3.62	0.22	4.28	1.06
	Median	**0.51**	**0.70**	**0.21**	**1.55**	**0.26**

Note: FW = footwall; HW = hanging wall; OZ = ore zone.

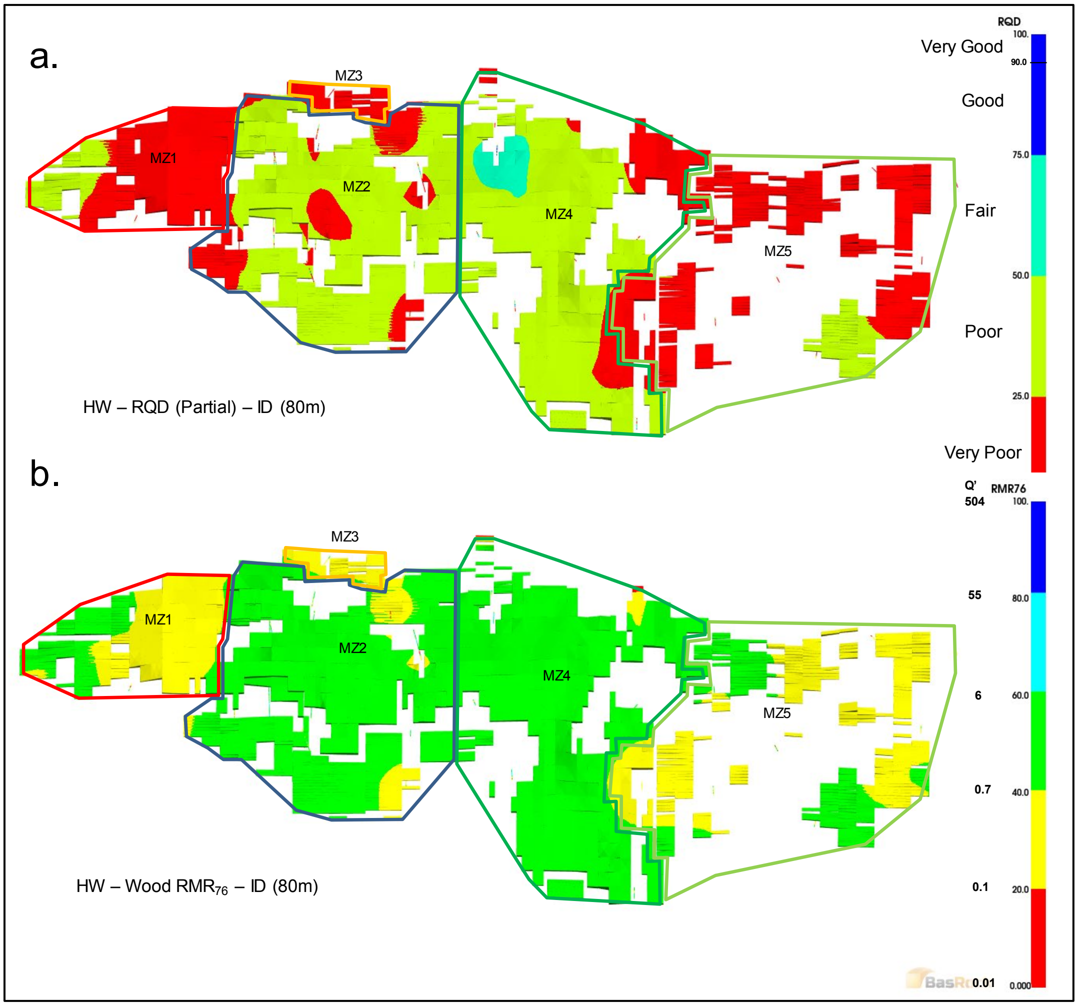


Figure 16-2: a) Terronera Contoured Hanging wall (HW) RQD and Indicated Mining Zones, b) Terronera Contoured HW RMR'76 and equivalent Q' values HW (prepared by Wood, dated 2021)

The rock mass quality, ore thickness and continuity were used to determine the most likely feasible mining method for each zone, with MZ1 MZ3 and MZ5 being predominantly CAF. The two largest zones MZ2 and MZ4 will be a combination of transverse SLS (where thicknesses dictate) and longitudinal retreat mining for ore widths 7 m or less.

La Luz Orebody

The La Luz orebody is also tabular and steeply dipping, with a strike length of 500 m, thickness of 1 to 1.5 m, extending from 60 m below surface to a depth of 250 m. The orebody is oriented east-west and dips 80° towards 005°. The La Luz Vein is very narrow and is wholly contained in an andesite (UCS = 115 MPa) rock unit that forms both the footwall and hanging wall.

The rock mass quality varies from poor to fair with a mean RMR ranging from 49 to 65, and a mean Q' from 3 to 10. The orebody region does appear to be of slightly better rock mass quality than observed at Terronera; however, it should be noted that in Wood's review not all the exploration boreholes were included in the assessment. This is because only data collected by KP had rock mass data and unlike Terronera, a detailed verification and relogging was not performed as the emphasis in terms of mineable tonnes is in the Terronera deposit. A summary of the rock mass statistics can be seen in Table 16-2.

Table 16-2: Rock Mass Classification Statistics for the La Luz Deposit

Domain	Description	RQD (%)	RMR'76	Q'
FW	**Mean**	**72**	**55**	**6.81**
	Std Dev	31	14	5.92
	Median	**81**	**58**	**4.89**
HW	**Mean**	**78**	**62**	**10.66**
	Std Dev	27	9	7.10
	Median	**87**	**67**	**13.57**
OZ	**Mean**	**70**	**50**	**2.89**
	Std Dev	34	10	2.00
	Median	**74**	**53**	**2.76**

Note: FW = footwall; HW = hanging wall; OZ = ore zone.

16.2.3 In-Situ Stresses and Numerical Stress Modeling

The stress regime that has been used for the Terronera Project is based on the stress interpretation on the World Stress Map (Heidbach et al., 2016), the site topography and the orientation of the site faulting. Therefore, in-situ stresses have been estimated by the following gradients:

- Maximum principal stress, σ_1 = 0.0491 MPa/m; [050,00] trend and plunge
- Intermediate principal stress, σ_2 = 0.0369 MPa/m; [140,00] trend and plunge
- Minimum principal stress, σ_3 = 0.0245 MPa/m; [000,90] trend and plunge.

Map3D Fault-Slip Software, version 67, dated August 2020 (Mine Midelling, 2020) was used in this study for three-dimensional linear elastic stress analyses of the Terronera deposit (Figure 16-3). Numerical stress modeling was not performed for the La Luz deposit because of its limited dimensions and thickness, and its proximity to surface.

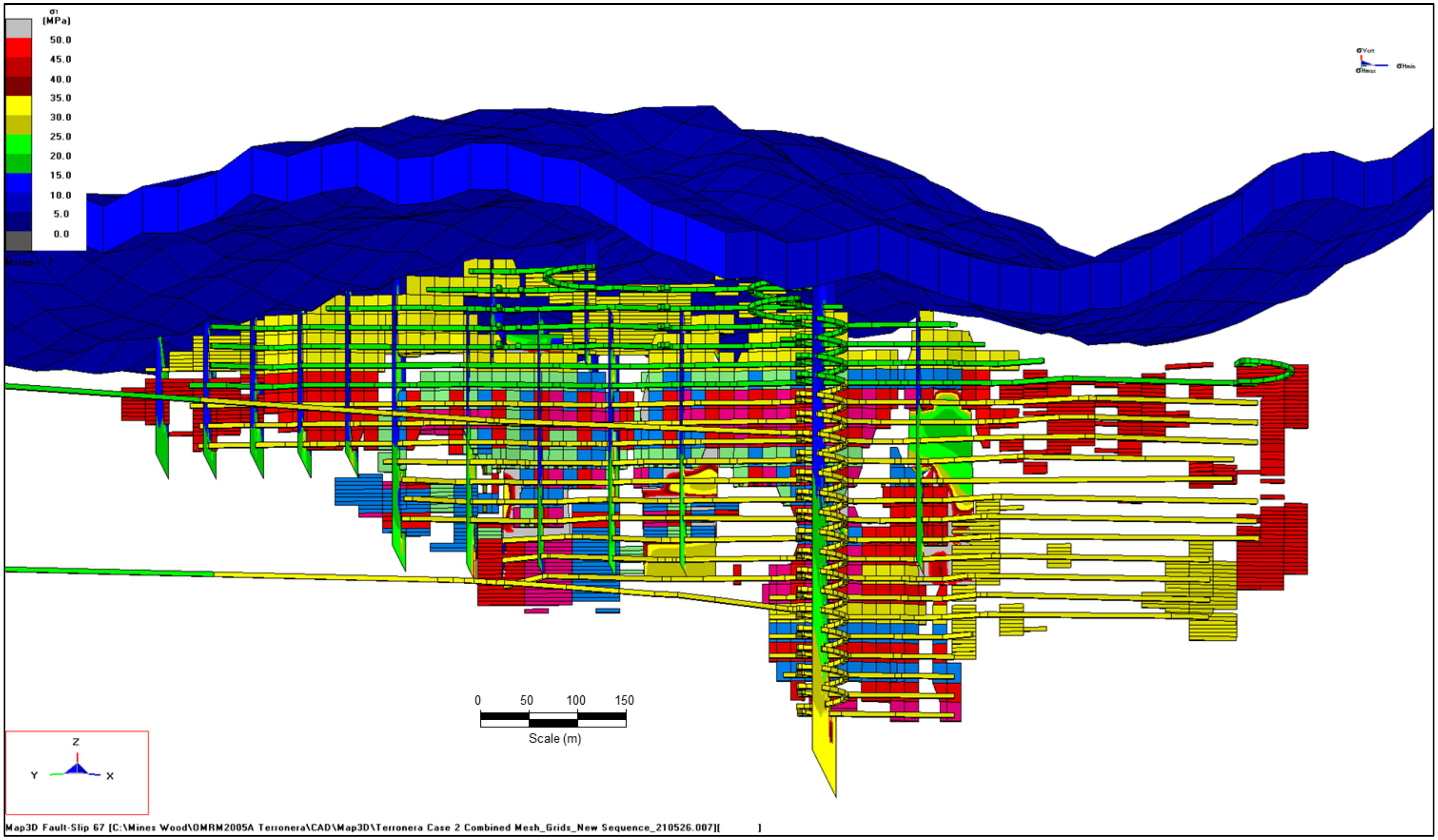


Figure 16-3: Terronera Map3D© Model View Looking Northeast (prepared by Wood, dated 2021)

The numerical stress model is based on a preliminary production sequence to assess the stress around the openings for:

- Mathews stope stability (after Potvin, 1988; 2014)
- Crown pillar stability (after Carter et al., 2008; 2014)
- Sill pillar stability (after Lunder, 1994; Pakalnis, 2014)
- Infrastructure placement
- Potential stress damage to development and requirements for support upgrades.

Linear elastic stress analysis using the Hoek-Brown brittle failure criteria (Martin et al., 1999) was used to review the sequencing and based on stress evolution around the development, to estimate the levels of ground support. Explicit modeling of the surface was performed to include the influence of the mountainous terrain.

16.2.4 Empirical Stope Design Analysis

Open stope design recommendations are based on empirical analysis using the modified stability graph method (after Potvin, 1988; 2014; Nickson, 1992; Hadjigeorgiou et al., 1995), with consideration for the hanging wall, footwall and of the ore zone rock mass forming the backs and end walls. Man-entry design limits and support requirements are based on span design graph method (Lang, 1994; Palkanis, 2002). This was used to determine the transition from longitudinal retreat to transverse stoping.

Each domain (mining zone) has been analyzed to optimize the stope dimensions based on typical cross-sections to account for the variation of the ore zone dip and thickness. The sub-level spacing was set at 20 m. The stresses surrounding the various stope surfaces for both scenarios were determined using the modified stability graph method and verified with modeling.

Mining zones MZ1, MZ3 and MZ5 were identified as best suited to mining via CAF, while mining zones MZ2 and MZ4 were identified to be suitable for SLS backfilled with cemented rockfill. The latter two zones are contiguous, located in the centre of the deposit, and represent approximately 70% of the deposit tonnes. Stope sizes are determined to be 15 m along strike x 20 m high and vary in width from 3 to 12m. Most (66%) hanging walls will require 6 m long cable bolt support installed from the overcut; backs that are greater than 5 m wide (66%) will require deep support using Swellex or cable bolts the former preferred to aid stability. Some zones will be mined by longitudinal retreat mined full width if the ore zone is 7 m wide or less (to a maximum practical width of 3m) and at present in the mine design it has been assumed that these will be mined in 15 m panels and backfilled. An example of one zone is indicated in and Figure 16-4.

At La Luz shrinkage mining due to the limited thickness of the deposit has been selected. Shrinkage stopes were designed to be 45 m high and 30 m along strike (1.3 to 1.5 m thick), and to be mined in panels leaving a 2 m wide pillar between stopes. Stopes will be backfilled with uncemented rockfill. Spot and pattern bolting and screening will be required in the stope hanging wall, footwall and backs where applicable.

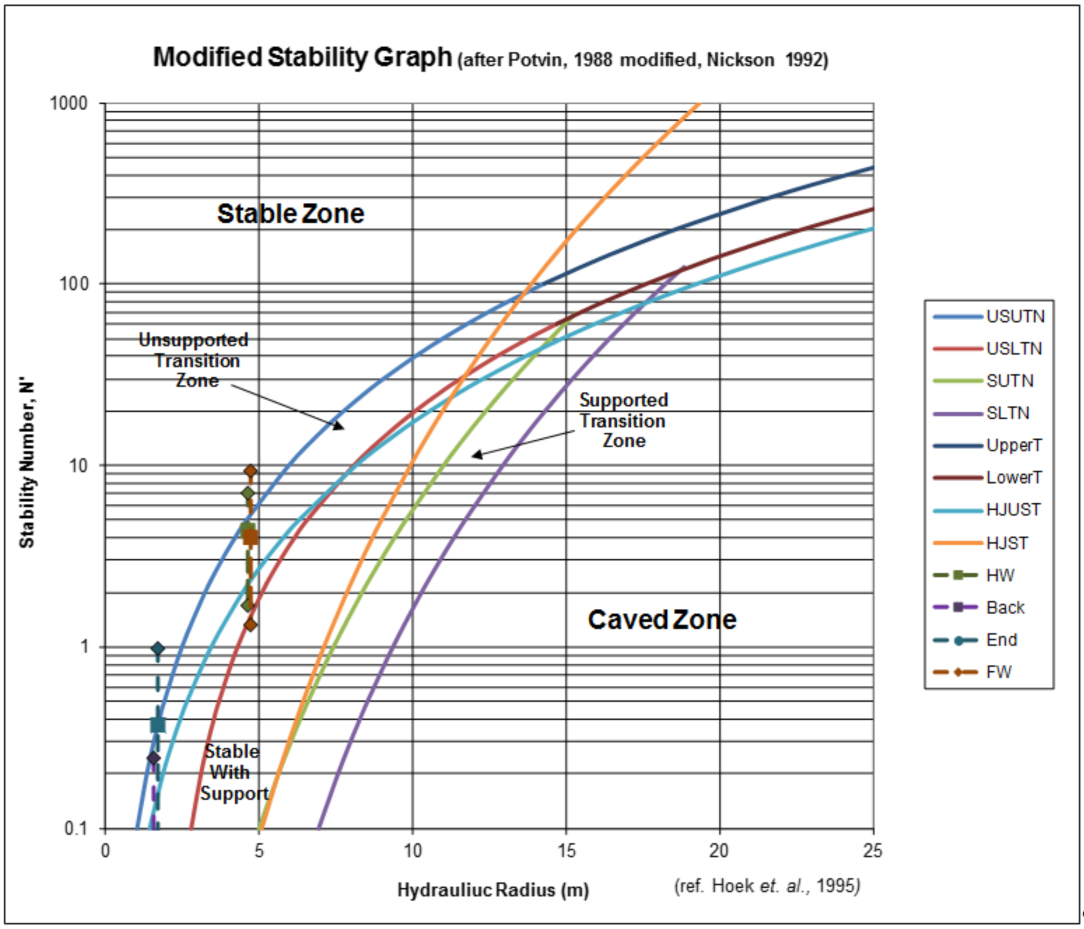


Figure 16-4: Example MZ4 – Modified Stability Graph (modified after Potvin, 1988; Nickson, 1992)

16.2.5 Unplanned Dilution (Equivalent Linear Overbreak or Slough)

Estimated ELOS (Pakalnis, 2002; Clark, 1998) for the for SLS zones of MZ2 and MZ4 for the hanging wall and footwall are summarized in Table 16-3 based on the base case of 15 m stope strike lengths. Each zone was defined by a number of different vertical sections based on approximately 60 m through each zone.

For the CAF stopes the ELOS was assessed also after Pakalnis (2002), and values for backfill dilution are based on typical CAF operations. These are summarized in Table 16-4.

The estimate ELOS and dilution at La Luz which will be mined by shrinkage mining (average ore thickness 1.3 to 1.5 m) was calculated two different ways. The expected ELOS during mining is 0.125 m from the hanging wall and footwall for a total of 0.25 m. As dilution will occur at the final stages of draw down due to sloughing from the hanging wall and some from the footwall, conventional draw curves indicate that at 100% of draw there will be 80% recovered and 20% dilution based on good draw control across the undercut (Page and Bull, 2001). The latter equates to an ELOS of 0.26 m for a 1.3 m ore/stope width.

Table 16-3: Estimate Hanging Wall and Footwall ELOS for MZ2 and MZ4

Mining Zone	Section	ELOS by Section (m)	Avg. Stope/OZ Thickness (m)	Rounded Avg. Stope/OZ Thickness (m)	No. of Stopes in Section	Avg. ELOS (m)	Avg. Stope/OZ Thickness (m)
2 HW	S4	1.40	4.96	5.00	170	1.55	4.33
	S5	1.60	3.83	4.00	173		
	S6	1.70	4.00	4.00	141		
4 HW	S7	0.80	4.37	4.50	103	1.14	6.38
	S8	1.30	7.59	7.50	132		
	S9	1.50	7.51	7.50	98		
	S10	0.70	5.70	6.00	111		
Overall						1.31	5.42
2 FW	S4	1.00	4.96	5.00	170	1.00	4.33
	S5	1.00	3.83	4.00	173		
	S6	1.00	4.00	4.00	141		
4 FW	S7	0.90	4.37	4.50	103	0.90	6.38
	S8	0.90	7.59	7.50	132		
	S9	0.90	7.51	7.50	98		
	S10	0.90	5.70	6.00	111		
Overall						0.94	5.42

Note: HW = hanging wall; FW = footwall; OZ = ore zone.

Table 16-4: Estimated ELOS for CAF stopes MZ1, MZ3 and MZ5

Mining Zone	FW (m)	HW (m)	Ore Floor Dilution (m)	Total (m)
MZ1	0.25	0.25	0.25	0.75
MZ3	0.25	0.50	0.25	1.00
MZ5	0.25	0.25	0.25	0.75

Note: HW = hanging wall; FW = footwall.

16.2.6 Ground Support

The support design recommendations for this study are based on the majority of the support being a single-pass support system, placing screen concurrent with primary support bolts. This has been found to be most economic for the development cycle time schedule. The minimum support recommendations specified are based on static wedge analysis and experience at other Canadian operations in various stress and rock mass conditions.

The planned ground support for both deposits is illustrated in Figure 16-5 and Figure 16-6 and described as follows:

- Rock bolts on the backs and walls at a 1.2 m x 1.2 m pattern, with a welded wire mesh at the back and walls (All excavations should have screen placed to cover the back and walls, to within 1.5 m of the floor), with some areas of lower rock mass quality requiring additionally shotcrete.
- Rock bolts installed on the back should be 2.4 m (8') of length, threaded 20 mm (3/4") resin rebar on a 1.2. x 1.2 m spacing using bolts to secure the screen.
- Rock bolts installed on the walls should be 1.5 m (5') of length, threaded 20 mm (3/4") resin rebar or split sets on a 1.2. x 1.2 m spacing using bolts to secure the screen for short-term development and <= 4.5 m high.
- Typical screen should be #6-gauge weld wire with 0.1 m (4") squares. It has been assumed that this package will be required at a minimum throughout the mine.
- Mine development dependent on long-term or short-term will require approximately 5% to 15% typically of 50 mm shotcrete per metre of lateral development
- SLS in MZ2 and MZ4 will require 66% of the time deep support in the back consisting of either 4 to 6 m long Swellex (SP16 to Pm24C) or Garford Bulge Single Strand bolts, 1.5 m inter ring spacing with rings spaced 2 m apart for stopes 5 to 15 m wide, utilizing 0.3 m (12") butterfly plates.
- SLS stopes are required 100% of the time in MZ2 and 66% of the time in MZ4 deep support in the hanging wall consisting of 6 to 9 m long single Garford Bulge cable bolts, with 4 bolts per ring and rings spaced 2 m apart, fanned into the hanging wall from the overcut.

- All draw point brows should be supported with a minimum of three rings, spaced 1.5 m apart, of 4 m Swellex with large 0.3 m (12”) butterfly plates.
- Permanent long-term openings, intersections or development with spans greater than 10 m should additionally be supported with 6 m single Garford cable bolts on a maximum spacing of 2.0 x 2.0 m.
- For temporary short-term openings or intersection in the ore zone with spans greater than 7 m, these should be supported with a minimum of 4 m to 6 m cable bolts on a 1.5 m x 1.5 m spacing.

Ground support at La Luz will follow the same standard as per the Terronera deposit above in the footwall; however, as La Luz will be mined by shrinkage methods it has been assumed the in ore spot bolting and screening will be performed and cable bolt support will not be required.

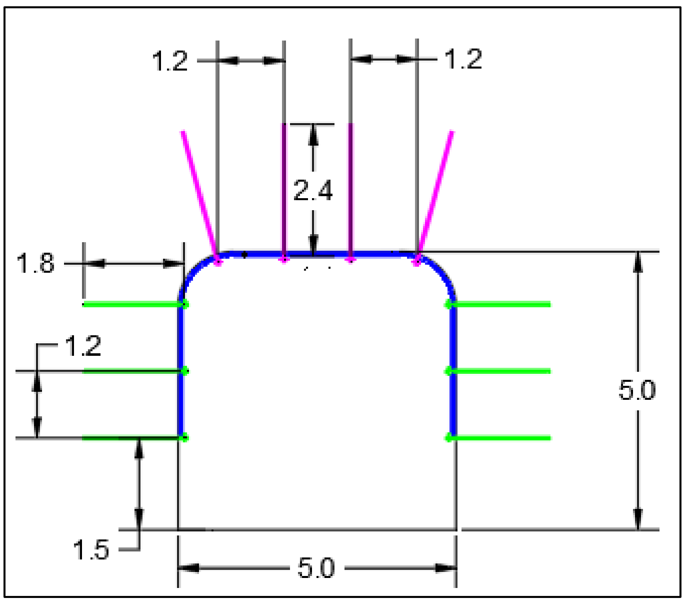


Figure 16-5: Simplified Typical Ground Support Section (wall bolts (green), back bolts (magenta), mesh (blue)) (prepared by Wood, dated 2021)

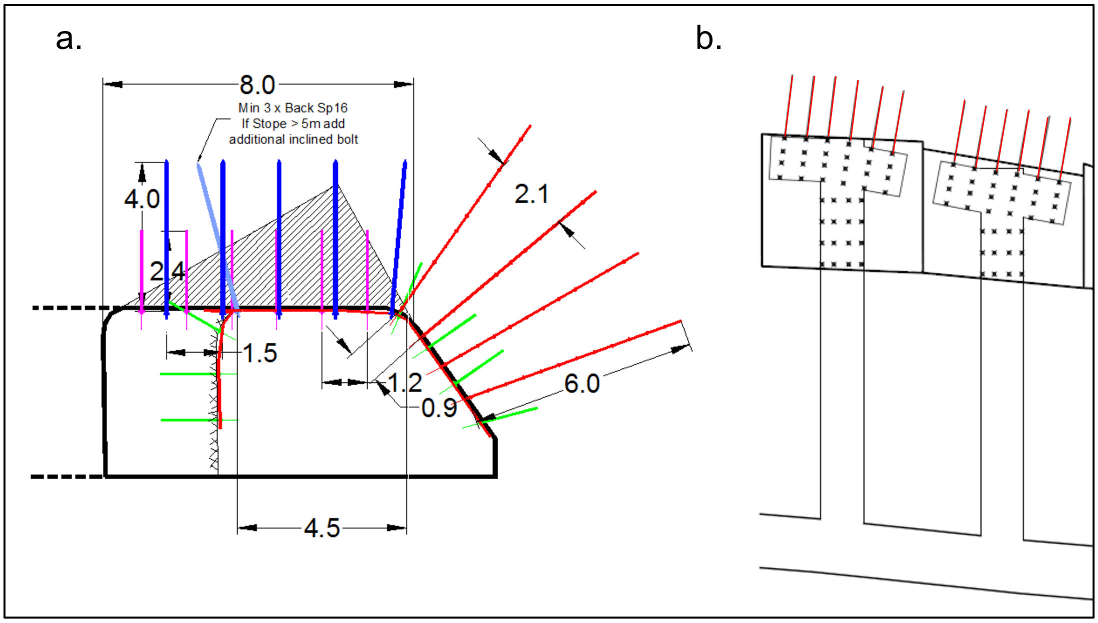


Figure 16-6: Typical SLS Back and Hanging Wall Support a) Cross Section through Typical Stope b) Plan View of Typical Stopes (prepared by Wood, dated 2021)

16.3 Backfill Strength Requirements

Backfill strength requirements have been based on the confined block mechanism limit equilibrium simplified approach (Mitchell et al., 1981), combined with the geometry of the proposed stopes. Three cases were analyzed in terms of varying stope widths of 4 m, 8 m and 12 m. The backfill strength requirements increase with the width of the stope, in the order of 0.2 MPa, 0.3 MPa and 0.4 MPa.

Based on experience of in-situ strength versus laboratory strength, it has been identified that the field strength can be typically 33 to 50% of the laboratory strength. This is a result of incomplete mixing, segregation during filling, ground/mine water influences, and other environmental constraints. Hence, a required laboratory target strength of double that predicted is required. For Terronera the target strength has been set at 0.8 MPa for the wider stopes (wider than 5 m). For thinner stopes (with thickness less than 5 m), the target strength has been set at 0.4 MPa.

Currently no testwork has been performed. It is planned to look at a variety of waste rock sources that will be available due to surface and underground construction, and potential backfill quarry. Typically for cemented rockfill as long as there are no deleterious effects due to potentially acid generating rock, binders of around 5% should be able to provide adequate strength; however, testing still needs to be performed to confirm.

16.4 Hydrogeological Considerations

Past hydrogeological evaluations of groundwater inflow potential/characterization by GIXTOH Ingenieria & Medio Ambiente (GIXTOH) (2016), and KP (2017) were used as inputs into the underground water balance from which the dewatering systems were sized. Wood reviewed the data and confirmed the mine inflow magnitudes from the site visit conducted. Mine water inflows estimated by KP were used as guidance for establishing the FS and are summarized in Table 16-5.

Wood has since provided a review of the available hydrogeological information, current conceptual hydrogeological model, and estimation of the groundwater inflows and underground dewatering requirements for the Terronera and La Luz deposits. A conceptual plan has been developed for locating and installing additional test wells/boreholes and dewatering wells at the concession. The location of proposed test well/boreholes and active dewatering wells are based on current mine dewatering plan and available Wood resource/structural models.

Table 16-5: Summary of Estimated Mine Water Inflows

Mine Year	KP 2017			2021 FS (L/s)
	Total Inflow Lower Bound (L/s)	Total Inflow Base Case (L/s)	Total Inflow Upper Bound (L/s)	
Pre-development	10	15	40	40
Mine Years 1 – 14	10 – 15	25 – 30	55 – 85	64

16.5 Mine Design

16.5.1 Mine Access

Decline 1 will collar at the process plant pad and serve as the primary ore haulage route out of the Terronera and La Luz deposits. Decline 1 accesses Terronera at an elevation of 1,200 m above sea level and La Luz at 1,235 m above sea level. An interim ventilation raise will be developed 775 m down the ramp to develop an early fresh air loop. Access to ventilation raise 1 will be established at elevation 1,248 m to support reaming of the ventilation raise and the establishment of the ventilation loop. Cut-outs for electrical sub-stations and re-muck bays will be developed on a 150-m spacing.

Decline 2 provides primary access for personnel and material transport into the mine. The decline is collared at elevation 1,454 m above sea level and accesses the mine at elevation 1,400 m above sea level and is limited to a 15% grade. A connection to ventilation raise 1 is planned at elevation 1,415 m to support reaming and establish a ventilation loop when completed.

Decline 3 is collared at elevation 1,640 m and provides access to the underground installation of the raise-bore for pilot and reaming of the second section of the ventilation raise 2. Decline 3 also provides early access to the oxide portion of the deposit.

16.5.2 Ramps

An internal ramp provides access to the mine sub-levels from the declines and allows development and early production from the oxide and transition zones.

The inter-level ramp system connects the mining levels and provides access to the mining levels from the decline access. This provides routing for ore and waste haulage from production and development headings to ore passes or for transit to the surface. The internal ramp system extends from elevations 1,560 to 1,120 m. The dimensions of the ramp (5.0 m wide x 5.0 m high) consider a 30-tonne haulage truck with an overall gradient of 14%.

16.5.3 Lateral Development

The mine levels are planned to support rubber-tired mobile equipment for production and development activities to achieve the nominal 1,700 tpd capacity. Level layouts incorporate two primary development heading profiles, a 5.0 m wide x 5.0 m high primary haulage and a 4.5 m wide x 4.5 m high ore access heading. Each profile will have a flat back with arched shoulders in the drifts to simplify wire mesh screen installation and minimize deterioration of the drive corners associated with blasting damage and stress redistribution.

Level access will be achieved through primary development off the main ramps. All the mining levels are designed with a haulage drift in the nominal footwall of the deposit to provide access to the ore zones and the associated infrastructure. Level access is designed to support truck traffic on the level and is 5.0 m wide x 5.0 m high in section to allow transit of loaded trucks.

Early primary haulage will be accomplished by the side loading of 30-tonne haul trucks by load-haul-dump (LHD) units traveling loaded up the decline system to surface. As mine development progresses, muck passes with chutes on the bottom will become available for loading trucks.

Production (ore and waste) will be loaded into trucks via chutes at the bottom of the ore pass system. When the ore passes are commissioned, ore and waste will be trammed across levels to dump points for the material handling system. Ore and waste production below the 1260 level will be transported by truck up the ramp to the dump points for either ore pass.

Access to the ore will be accomplished through lateral development either in a transverse layout for thick ore zones or along strike in a longitudinal layout in zones less than 8 m in width across strike. The ore access cross-cut will be developed in dimensions ranging from 3.0 m wide x 3.0 m high to 4.5 m wide x 4.5 m high to fit the width of the deposit in that area.

Stoping areas will be accessed off either ramp systems or off the main haulage levels. Secondary development is generally flat with declines where appropriate. Secondary development includes dump accesses to muck passes, finger raises into muck passes, and breakthrough into ventilation exhaust raises.

16.5.4 Vertical Development

Three types of vertical development are planned, including raisebores, Alimak raises, and service holes. Raisebores and Alimak raises will be excavated by experience contractor crews. Service holes will be self-performed by Endeavour Silver drill crews.

Table 16-6 shows the expected vertical development.

Table 16-6: Vertical Development Quantities Through LOM

Mine Area	Type	Units	Total
La Luz	Ventraise	m	252
Subtotal		m	252
Terronera	Finger	m	219
	Ore Pass	m	636
	Ventraise	m	1,435
Subtotal		m	2,290
Total Length		**m**	**2,543**
Total Tonnes		**t**	**64,330**

16.5.5 Sub-level Stoping

Approximately 59% of the Terronera deposit will be mined using transverse and longitudinal SLS.

16.5.5.1 Transverse Sub-level Stoping

Transverse SLS is a high productivity and lower-cost mining method compared with CAF or drift-and-fill methods.

The stope dimensions will be a maximum of 20 m high x 15 m wide x 15 m long and a minimum mining width of 8 m.

The stopes will be mined in a bottom-up sequence and in a primary then secondary sequence laterally. Primary stopes will be backfilled with cemented rockfill. Secondary stopes will be filled with uncemented rockfill. Delineation of stopes was based on a stope optimizer that generated triangulated solids above a cut-off grade of 155 g/t AgEq.

After the top and bottom cuts are established, the stoping sequence will commence. If necessary, the upper drilling level will be silled to the stoping width for ground support, or drill holes will be fan drilled into the pillars for extraction. A 1.8 m x 1.8 m slot raise will be drilled with holes breaking through the sill level.

Ore will be mucked using remote-controlled LHDs, transported, and dumped into the nearest muck pass through a grizzly. After the commissioning of the material handling system, the ore will be loaded to trucks through hydraulic chutes at the 1200 loading level and will then be trammed to the surface stockpile at the process plant.

16.5.5.2 Longitudinal Sub-level Stoping

In areas where the ore is less than 8 m thick across strike, longitudinal SLS will be employed.

Stopes will be mined in a bottom-up sequence. After the top and bottom cuts are established, the stoping sequence can commence. Deep ground support will be added according to the ground conditions. A 1.8 m x 1.8 m slot raise will be drilled with holes breaking through to the bottom level.

Production ring blast holes will be loaded and fired from the slot raise, retreating towards the mucking access. Ore will be mucked using remote-controlled LHDs, transported, and dumped into the nearest muck pass through a grizzly. The ore will be loaded onto muck trucks through hydraulic chutes at the lower loading level and will be transported to the surface to the primary crusher.

Cemented rockfill will be placed in the stopes using trucks and scoop trams. When the stope is completely backfilled, the top of the fill forms the mucking floor of the overlying stope.

16.5.6 Cut and Fill Mining

To maximize recovery of the Mineral Reserve, in the areas of the Terronera deposit where the rock mechanics properties are poorer, CAF mining will be employed to minimize the exposure of hanging wall during the mining cycle.

Access to the CAF mining zones will be through an attack ramp developed in waste or ore, depending on the geometry and location of the mining zone. Attack ramp development will start approximately 150 m from the footwall of the deposit and develop at a downslope grade of approximately 20%. This should minimize the necessary attack ramp development to access the lifts of the zone.

Mining will progress laterally in the ore once the attack ramp is completed and will extend approximately 100 m along strike. CAF stoping includes methods in which a lift or single excavation pass is completed and backfilled before another cut is made. Horizontal cuts are mined, advancing away from the attack ramp access. The excavated material falls and rests on the backfill placed during the previous CAF cycle. As CAF cycles are completed, the stope is advanced upward.

Cemented rockfill or uncemented rockfill will be used to backfill stopes and provide a working platform for the next CAF lift. Fill delivery to all the CAF areas will be via haul truck and placement by scoop tram. Accesses will be designed at a size of 4.0 m wide x 4.0 m high at a maximum grade of 20% and will be completed using the usual drifting methods with standard support of Swellex and wire mesh screen

16.5.7 Shrinkage Stoping

The La Luz deposit will be extracted using the shrinkage stoping method. Shrinkage is applicable to La Luz due to the geometry and size of the deposit. La Luz has vertical extents from of 220 m and lateral extents of 360 m. The deposit thickness ranges from 1.0 to 1.5 m.

Shrinkage stopes will be developed on 15 m widths and 48 m heights. Drawbells will be developed in the draw points to support the hanging wall and reduce dilution during mining. Cross-cuts developed on a 4.0 m wide x 4.0 m high profile will allow access to the shrinkage stopes.

Hanging wall stability will be provided by mucking blasted material to provide sufficient void volume for the subsequent blast.

16.6 Material Handling

16.6.1 Ore Handling

Initially, Terronera ore will be trammed from the stoping area by scoop tram and placed in re-mucks or directly loaded onto haul trucks for transit to the surface. Upon completion of the ore pass system, scoop tram haulage to ore passes will take place. Material dumped into the ore passes will be discharged to haul trucks via chutes at the bottom and hauled to the surface.

Ore handling at La Luz will be via scoop tram direct loading 30-tonne haul trucks. The trucks will tram the ore to the surface and discharge on the process plant stockpile pad.

16.6.2 Waste Handling

Mine rock at Terronera and La Luz will be moved to re-mucks by development scoop trams during the development cycle. Haul trucks will be loaded by scoop tram at the re-muck locations, and the mine rock will be transferred by truck to the temporary WRSF on the surface. Approximately 2.4 Mt of mine rock will be excavated from Terronera and La Luz over the LOM period.

16.6.3 Backfill Handling

The cemented rockfill planned for transverse sub-level primary stopes and longitudinal sub-level stopes will be mixed underground. Mine rock will be backhauled from the temporary WRSF with 30-tonne haul trucks. The mine rock will be placed in re-muck near the current fill location and mixed with cement slurry before placement in stopes. Stope placement will be completed by scoop tram.

16.7 Mine Infrastructure

16.7.1 Ventilation

The ventilation strategy for Terronera and La Luz is a pull system with main ventilation fans underground to minimize noise impacts to the surrounding communities. Fresh air will be downcast through the declines and auxiliary raises for initial development with exhaust to the surface through ventilation raises at Terronera (three) and La Luz (one). The steady-state ventilation system will downcast fresh air through the declines with distribution through the internal ramp system and across the levels for upcast through ventilation raises to surface.

Auxiliary ventilation to the non-flow-through headings will be used. The auxiliary ventilation system will provide fresh air to the required areas through impeller ventilation ducting. Exhaust air will return through the lateral headings and be directed to the exhaust raises. During development at Terronera, 13 auxiliary fans will be required, reducing to 11 during production. At La Luz, two auxiliary fans are required during development and two during production. The combined peak installed power of the auxiliary fans is 1,395 kW.

Throughout the LOM, 49 production regulators will be installed at Terronera and six at La Luz.

The air requirement was determined by considering the equipment fleet over the LOM, percentage of use, and the standard airflow requirement per diesel. Terronera is expected to require 313 m^3/s at peak production at 94 m^3/s at La Luz. Based on these requirements, the following fan sizing is required for the Terronera Project:

- Terronera Raise 1 - 112 kW installed fan
- Terronera Raise 2 – 149 kW installed fan
- Terronera Raise 3 – 150 kW installed fan
- La Luz Raise 1 – 149 kW installed fan

16.7.2 Electrical

Electrical power will be provided throughout the mine for drill jumbos, ventilation fans, dewatering pumps, lighting, and other miscellaneous loads. The power will be distributed to the mine via 13.8 kV feeders through Portal 1 and Portal 2; This will provide redundant capacity to the mine in the event of a failure in one of the feeders.

Substations will be developed at each level access to support the distribution of 4,160 V to the production and development areas. Power centres will be located on each level to reduce the voltage to the required 480 V for mining equipment. Power centres are portable and will be relocated as necessary from inactive to active mining areas over the LOM.

16.7.3 Dewatering

The underground dewatering systems for the Terronera mine were sized based upon the inputs from the underground water balance. The water balance consists of the process water requirements and natural water inflows expected during mining. The combination of these two volumes provides the final volume required to size the dewatering sumps and pumps to remove water from the mine on a daily basis, with some contingency.

16.7.3.1 Temporary Dewatering System

During the underground development phase, a temporary dewatering system is required to handle the mine water inflows attributed to groundwater inflows and equipment usage.

Temporary sumps equipped with sump pumps will be constructed on the declines and the internal ramps, using re-purposed re-muck bays. Sump boxes will be required along with re-mucks once they are not being used for mine rock storage. Pumped water will be cascaded up the ramp to each subsequent sump until it is discharged at the portal to temporary mine water ponds. Each temporary sump will be similar in design and include a 3.7 kW sump pump.

16.7.3.2 Permanent Dewatering System

Each mining level at Terronera and La Luz will include a collection sump at the low elevation points near the level access. Each sump will be similar in design and will be located off the level access drift. They will be driven 5.0 m wide x 10 m long at a decline of 17%.

Sumps have been aligned vertically to allow water to gravity feed to the level directly below, thus eliminating the need for sump pumps.

The bottom elevation sump will include one operating 75 kW submersible pump that will dewater the collected water to the main dewatering pump station on 1220 level to pump the water to the process plant water tank on the surface.

The La Luz dewatering sump will be located on the 1196 level and pump to the process plant water tank via the La Luz and Terronera declines. The system will be gravity-fed from levels above and fed by sump pumps installed in the level sumps below the 1196 level.

Table 16-7 provides the pump station details.

Table 16-7: Terronera and La Luz Pump Station Details

Location	Level	Operating	Standby
Terronera pump station	1120	1 x 75 kW	1 x 75 kW
Terronera pump station	1220	2 x 93 kW	2 x 93 kW
La Luz Pump Station	1196	1 x 150 hp	1 x 112 kW

16.7.4 Compressed Air

Portable and on-board compressors will provide underground compressed air requirements. The various locations that require compressed air will be supplied with on-board units sized appropriately for the work required. The portable compressors will be skid or trailer-mounted and will feed equipment through a connecting airline.

The mechanical shop portable compressors will be installed in an appropriate dedicated location in the maintenance shop. A fixed pipe on the compressor, sized to the equipment requirements, will feed all service bays that require compressed air.

16.7.5 Underground Maintenance Shops

Mobile equipment maintenance will be performed on the 3000 level and the 1510 level maintenance shops. The shops will be fully equipped to perform running repairs, preventative maintenance, and significant repairs as required. Equipment rebuilds will be performed either at surface shops near the portal or at off-site facilities.

The maintenance facilities will be equipped to service diesel LHDs, jumbos, trucks, rock bolters, and support equipment. The maintenance facility will be constructed with a unidirectional travel-way loop, with each bay branching off the main access, and will include the following facilities:

- Two service bays
- Welding facilities
- Electrician shop
- Office space
- Parts warehouse
- Storage facilities
- Wash bay
- Tire storage
- Refuge/lunchroom
- Comfort station
- Parking.

All services, including ventilation, power, and service water, will be routed from the main distribution systems into the maintenance shop. Each shop will be equipped with general fire suppression and interlocked fire doors. Rotary man doors in the bulkhead will allow egress of personnel in the event of an emergency.

16.7.6 Explosives and Detonator Magazines

Explosives will be delivered to the site on an as-required basis from local vendors. A forklift at the surface magazine facility will load explosives and detonators into a boom truck for immediate transport down the decline ramp to the appropriate storage magazine. The explosives and the detonators will be loaded and transported separately. Packaged explosives and detonators will be transported in flammable-resistant crates and emulsion in bulk totes. Once underground, the boom truck will offload explosives directly within the explosives magazine. Detonators will be offloaded by hand and stacked on wooden shelving in the cap magazine.

As required, a dedicated underground explosives truck will transport all explosives and other blasting materials directly from the storage magazines to the stope or development face. A portable emulsion loader will load the stored explosives into the truck, and all other blasting materials will be loaded by hand into designated compartments within the truck.

16.8 Equipment

Key equipment proposed for mining the Terronera and La Luz deposits over the LOM is listed in Table 16-8.

Table 16-8: Proposed Mining Equipment over the LOM

Equipment Type	2022	2023	2024	2025	2026	2027
Truck (30 t / 14.5 m^3)	5	2	1	1	2	-
LHD (6.7 t / 3.0 m^3)			1	1		
LHD (10 t / 4.0 m^3)	3	2	-	1	-	-
Jumbo – 2 Boom	3	2	2	-	-	-
Longhole Drill – Top Hammer	-	1	1	1	-	-
Bolter	3	-	1	-	-	-
Shotcrete Sprayer – Mobile	1	-	-	-	-	1
Scissor Lift	3	-	1	-	-	-
Boom Truck	2	-	-	-	-	-
Mobile Rock Breaker	-	-	1	1	-	-
Mechanics Truck	1	-	1	-	-	-
Fuel / Lubricant Truck	2	-	-	-	-	-
Electrician Truck	1	-	1	-	-	-
Supervisor Truck	4	2	3	4	-	-
CRF Mixing Plant	-	1	-	-	-	-

Mobile equipment will be replaced or rebuilt based on the equipment's accumulated hours. It has been assumed that only primary development and production equipment will be replaced. Each unit of primary equipment will be rebuilt once at the half-life of the equipment and then replaced after.

Auxiliary or support equipment will undergo rebuilds as required based on its accumulated hours; however, they will not be replaced. Subsequent rebuilds will take place as required.

No equipment rebuilds or replacements will be undertaken in the final two years of the mine life as a cost-saving measure.

16.9 Schedule

Underground development at Terronera is scheduled to commence in January 2022, with the initial collaring of the portals to begin access to the underground. The transition to operating in October 2023 indicates that mill commissioning with production ore will commence. Full sustained production of 1,700 tpd is not achieved until January 2024.

16.9.1 Development

Mine advance rates were calculated from a zero-base approach, and lateral development rates were not permitted to exceed that rate during the scheduling process. Table 16-9 and Table 16-10 show the development quantities for Terronera and La Luz, respectively.

16.9.2 Production

Table 16-11 shows the production tonnes and grades from the Terronera deposit. Terronera has a sustained production period of 11 years between 2024 and 2034, with a reduction in production rate in 2035.

The production tonnes and grade from the La Luz deposit are shown in Table 16-12. La Luz is a low tonnage, high-grade operation in production for approximately two years following two years of pre-production development.

Table 16-9: Terronera LOM Lateral and Vertical Development

Development	Name Heading	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Operating Ore Development	Attack ramp	172		1,480	2,158	929	1,829	414								6,982
	Cross-cuts	808	1,126	5,969	6,869	2,910	4,611	3,689								25,981
Operating Waste Development	Attack ramp	43	65	512	1,595	1,166	605	733								4,717
	Cross-cuts	20	47	124	229	268	433	363								1,486
Capital Development	Electrical	50	17	81		146		81								374
	Finger Raise	34	11	36	51		8	78								219
	Footwall Haulage	2,531	2,262	3,100	1,228	6,680	5	1,007								16,813
	Haulage	3,269	651													3,920
	Level access	566	463	158		55										1,241
	Ore pass		636	0												636
	Ore pass access	113	101	57	150	102	172									696
	Ramp	1,910	1,513	341	196	363										4,325
	Refuge station			8		7										15
	Remuck	28	21	28	49		7	83								215
	Electrical station	45	7	30	52	90	89									314
	Sump	147	132	44		15										337
	Sump drain hole	138	211	82												431
	Maintenance shop (large)				46	7										53
	Maintenance shop (small)	5		43	67											116
	Ventilation drive	428	340	65	85	36	425	9								1,388
	Ventilation raise	683	652	100												1,435
Development Ore Metres		**980**	**1,126**	**7,449**	**9,027**	**3,839**	**6,440**	**4,102**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**32,962**
Development Ore Tonnes		**38,644**	**42,341**	**287,852**	**355,243**	**157,416**	**260,114**	**167,126**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,308,735**
Development Waste Metres		**10,010**	**7,129**	**4,808**	**3,748**	**8,936**	**1,745**	**2,354**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**38,730**
Development Waste Tonnes		**577,974**	**369,801**	**267,524**	**187,780**	**512,979**	**83,356**	**113,873**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2,113,288**

Table 16-10: La Luz LOM Lateral and Vertical Development

Development	Name Heading	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Operating Ore Development	Cross-cuts		1,119	210												1,329
	Level access		49													49
Operating Waste Development	Cross-cuts		105	106												211
	Level access		318													318
Capital Development	Footwall haulage		1,213	134												1,347
	Haulage	1,187	210													1,397
	Ramp		1,391													1,391
	Ventilation drive	88	265	103												456
	Ventilation raise		252													252
Development Metres Ore		**-**	**1,591**	**316**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,907**
Development Tonnes Ore		**-**	**51,356**	**7,133**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**58,489**
Development Metres Waste		**1,275**	**3,330**	**237**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4,843**
Development Tonnes Waste		**76,315**	**190,923**	**12,245**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**279,483**

Table 16-11: Terronera LOM Production Schedule

	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Totals
Ore Development	Tonnes	38,600	42,300	287,900	355,200	157,400	260,100	167,100	-	-	-	-	-	-	-	1,308,600
	Ag (g/t)	192	225	290	213	222	189	156	0	0	0	0	0	0	0	218
	Au (g/t)	1	1	2	2	2	3	4	0	0	0	0	0	0	0	2
	AgEq (g/t)	232	321	462	376	405	425	456	0	0	0	0	0	0	0	412
CAF Mining	Tonnes			43,600	26,000	121,300	105,600	66,100	80,800	150,200	170,500	229,900	243,000	192,000	243,000	1,671,900
	Ag (g/t)			194	281	333	421	310	229	423	302	203	170	239	155	255
	Au (g/t)			2.93	3.32	2.00	1.72	1.48	1.39	1.79	1.75	2.38	2.61	2.02	2.07	2
	AgEq (g/t)			426	544	491	557	427	339	564	440	391	376	399	318	420
Longitudinal Primary	Tonnes			42,500	19,100	29,900	54,000	66,800	20,200	47,000	31,700	13,300	31,400	4,800	3,900	364,500
	Ag (g/t)			233	495	289	209	104	92	85	78	199	100	94	23	163
	Au (g/t)			1.77	0.88	1.04	2.71	2.85	1.57	1.29	1.36	1.15	0.94	3.96	1.57	2
	AgEq (g/t)			373	564	371	423	330	216	187	186	290	126	406	147	307
Longitudinal Secondary	Tonnes			107,200	47,000	126,000	90,000	202,400	227,400	247,600	300,900	247,600	287,000	281,000	160,400	2,324,500
	Ag (g/t)			223	346	316	126	147	149	153	130	115	103	112	89	144
	Au (g/t)			1.07	1.20	1.34	2.76	2.62	2.13	1.52	1.82	1.77	1.36	1.39	1.40	2
	AgEq (g/t)			308	441	422	344	354	317	273	274	255	210	222	200	279
Transverse Primary	Tonnes			17,700	49,100	46,200	5,400	14,600	66,600	32,500	-	-	-	-	-	232,000
	Ag (g/t)			149	379	168	140	179	109	94	-	-	-	-	-	184
	Au (g/t)			1.31	1.62	2.38	4.68	1.99	1.44	1.24						2
	AgEq (g/t)			252	507	356	509	336	223	192	-	-	-	-	-	321
Transverse Secondary	Tonnes			64,200	59,900	139,600	116,100	106,500	213,500	143,400	117,400	131,400	59,100	142,800	31,400	1,325,300
	Ag (g/t)			217	362	297	196	210	278	160	149	155	223	125	100	209
	Au (g/t)			1.61	1.12	1.64	2.09	2.12	2.36	2.08	1.59	1.43	2.58	1.87	1.91	2
	AgEq (g/t)			344	450	427	360	377	464	324	275	268	426	273	251	359
Total Production	**Tonnes**	**38,600**	**42,300**	**563,100**	**556,200**	**620,500**	**631,100**	**623,400**	**608,600**	**620,500**	**620,500**	**622,200**	**620,500**	**620,500**	**438,800**	**7,226,800**
	Ag (g/t)	**192**	**225**	**253**	**267**	**279**	**221**	**173**	**199**	**212**	**178**	**158**	**138**	**154**	**126**	**197**
	Au (g/t)	**0.51**	**1.22**	**1.90**	**1.87**	**1.85**	**2.57**	**2.74**	**2.02**	**1.68**	**1.73**	**1.91**	**1.94**	**1.72**	**1.81**	**1.97**
	AgEq (g/t)	**200**	**321**	**403**	**415**	**425**	**424**	**390**	**358**	**344**	**315**	**309**	**291**	**290**	**269**	**353**
	Ag (oz)	**237,800**	**305,800**	**4,572,800**	**4,783,000**	**5,567,300**	**4,490,100**	**3,475,000**	**3,886,500**	**4,220,100**	**3,554,800**	**3,157,900**	**2,754,800**	**3,073,700**	**1,776,800**	**45,856,000**
	Au (oz)	**600**	**1,700**	**34,400**	**33,500**	**36,900**	**52,100**	**54,900**	**39,500**	**33,600**	**34,600**	**38,200**	**38,800**	**34,200**	**25,500**	**458,500**
	AgEq (oz)	**-**	**436,800**	**7,291,900**	**7,428,100**	**8,477,000**	**8,603,400**	**7,812,900**	**7,004,500**	**6,869,000**	**6,284,200**	**6,173,700**	**5,814,300**	**5,777,600**	**3,793,000**	**82,055,000**

Table 16-12: La Luz LOM Production Schedule

	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Totals
Ore Development	Tonnes	-	29,600	4,900	-	-	-	-	-	-	-	-	-	-	-	34,500
	Ag (g/t)		225	15	-	-	-	-	-	-	-	-	-	-	-	196
	Au (g/t)		19.87	8.15	-	-	-	-	-	-	-	-	-	-	-	17.89
	AgEq (g/t)		1765	654	-	-	-	-	-	-	-	-	-	-	-	1,608
Shrinkage Production	Tonnes		54,300	64,200	-	-	-	-	-	-	-	-	-	-	-	118,500
	Ag (g/t)		227	115	-	-	-	-	-	-	-	-	-	-	-	166
	Au (g/t)		12.87	15.88	-	-	-	-	-	-	-	-	-	-	-	14.50
	AgEq (g/t)		1,243	1,368	-	-	-	-	-	-	-	-	-	-	-	1,311
Total Production	**Tonnes**	**-**	**83,900**	**69,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**153,000**
	Ag (g/t)	**0.00**	**227**	**108**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**173**
	Au (g/t)	**0.00**	**15.21**	**15.33**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15.27**
	AgEq (g/t)	**0.00**	**1,428**	**1,318**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,378**
	Ag (oz)	**-**	**6,121,000**	**239,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**851,000**
	Au (oz)	**-**	**41,000**	**34,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**75,100**
	AgEq (oz)	**-**	**3,851,000**	**2,929,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6,780,000**

17.0 RECOVERY METHODS

17.1 Overall Process Design

The process design was developed from the comminution and flotation testwork completed between 2017 and 2020. The testwork and results discussed in Section 13 form the basis for the process design.

17.2 Process Design Basis and Criteria

The key process design criteria for the mill are listed in Table 17-1.

Table 17-1: Key Process Design Criteria for the Mill

Design Parameter	Units	Value
Terronera Vein		
Distribution of Feed (LOM)	%	97.9
Ag Grade (LOM)	g/t	197
Au Grade (LOM)	g/t	1.97
La Luz Vein		
Distribution of Feed (LOM)	%	2.1
Ag Grade (LOM)	g/t	173
Au Grade (LOM)	g/t	15.26
Plant Design Criteria		
Plant Throughput	tpd	1,700
Au Head Grade (LOM)	g/t	2.25
Ag Head Grade (LOM)	g/t	197
Crushing Availability	%	65
Mill Availability	%	92
Concentrate Filtration Availability	%	85
Tailings Filtration Availability	%	85
CWi	kWh/t	18.0
BWi	kWh/t	19.1
RWi	kWh/t	17.3

Design Parameter	Units	Value
Ai		0.47
Material Specific Gravity	t/m^3	2.61
Moisture	%	4
Plant Ag Recovery	%	87.65
Plant Au Recovery	%	76.20
ROM F100	mm	500
Primary Cyclone P80	µm	70
Concentrate Production (Projected LOM)	t	191,879
Concentrate Ag Content (Average LOM)	g/t	6,636.0
Concentrate Au Content (Average LOM)	g/t	65.91

17.3 Process Plant Description

ROM material from La Luz and Terronera veins will be transported via haul trucks to one of three 10,000 t coarse material stockpiles located approximately 200 m from the plant. The stockpiles are separated by the ore type: sulphide, transition, and oxide. Alternatively, ROM material can be directly transported to one of three 2,300 t capacity stockpiles located at the plant. Ore from the stockpiles is transported to the primary crusher dump pocket by a front-end loader. The crushing circuit is designed to process 1,700 dry tpd in 16 hours of operation. The beneficiation plant will operate continuously 365 days per annum with an assumed availability of 92%. The bulk density of the ROM material is 2.61 t/m^3 with an average moisture content of 4%. The beneficiation plant will produce a precious metal-bearing high-grade concentrate as the final product.

The processing methodology selected consists of the following processing circuits:

- Stockpiles (2,000 t capacity)
- Crushing plant (three-stage, closed-circuit 1,700 tpd capacity)
- Fine ore storage (850 t capacity)
- Primary grinding (1,700 tpd capacity)
- Flotation (1,700 tpd capacity)
- Flash flotation
- Rougher flotation
- First and second cleaners
- Final concentrate sedimentation and filtration (1,700 tpd capacity)
- Final concentrate storage and shipping (1,700 tpd capacity)
- Tailings sedimentation (1,700 tpd capacity)

- Reclaimed and make-up/firewater systems
- Filter plant
- Dry stack TSF

The overall process flow diagram of the proposed beneficiation plant is shown in Figure 17-1.

17.3.1 Crushing and Stockpiling

The crushing circuit will comprise a (50 t) dump ore pocket fitted with a stationary Grizzly with a 305 mm by 305 mm opening. The Grizzly oversize will be broken with a hydraulic breaker. A grizzly feeder will send the ore to a 635 mm by 1,270 mm primary jaw crusher fitted with a 112kW drive to reduce the material to minus 70 mm. The crushed material and the feeder undersize will be transported to subsequent stages of screening and crushing in a closed circuit to further reduce the material to minus 10 mm. The double-deck screen will be where the first oversize will feed a secondary cone crusher operating with a 25 mm CSS. The second oversize will feed a tertiary cone crusher operating with a 12 mm CSS. Both cone crushers are fitted with a 150 kW drive. The crushers' discharge will return to the screen feed end. Conveyor belts will be used to transport the intermediate and fine crushed materials throughout the entire crushing circuit. The crushing circuit design provides a weigh scale for accounting purposes and a belt magnet and a metal detector to protect the cone crushers from iron coming from underground mining operations. The finely crushed product with a P80 of 6.7 mm will be transported to a fine ore bin with an 870 t live capacity.

17.3.2 Grinding Circuit

The grinding circuit design consists of a single stage of grinding in a primary ball mill. The vein materials at Terronera have been classified as very hard with a 75th percentile BWi of 19.1 kWh/t.

A variable speed belt feeder draws the crushed ore from the fine ore bin and feeds it onto a conveyor belt that transports the crushed material to a 4.4 m diameter by 7.5 m effective grinding length primary ball mill. The mill will be fitted with a 2,200 kW drive. The material is ground to 80% minus 70 µm in a closed circuit with a battery of cyclones of 250 mm diameter. Grinding media will be added to the mill to ensure an effective and efficient grind. Some flotation collector and frother will be added to the ball mill discharge to allow for conditioning. Cyclone overflow at approximately 35% solids will be sent to a trash screen for removal of debris. After trash removal, the clean slurry will be directed to the flotation process.

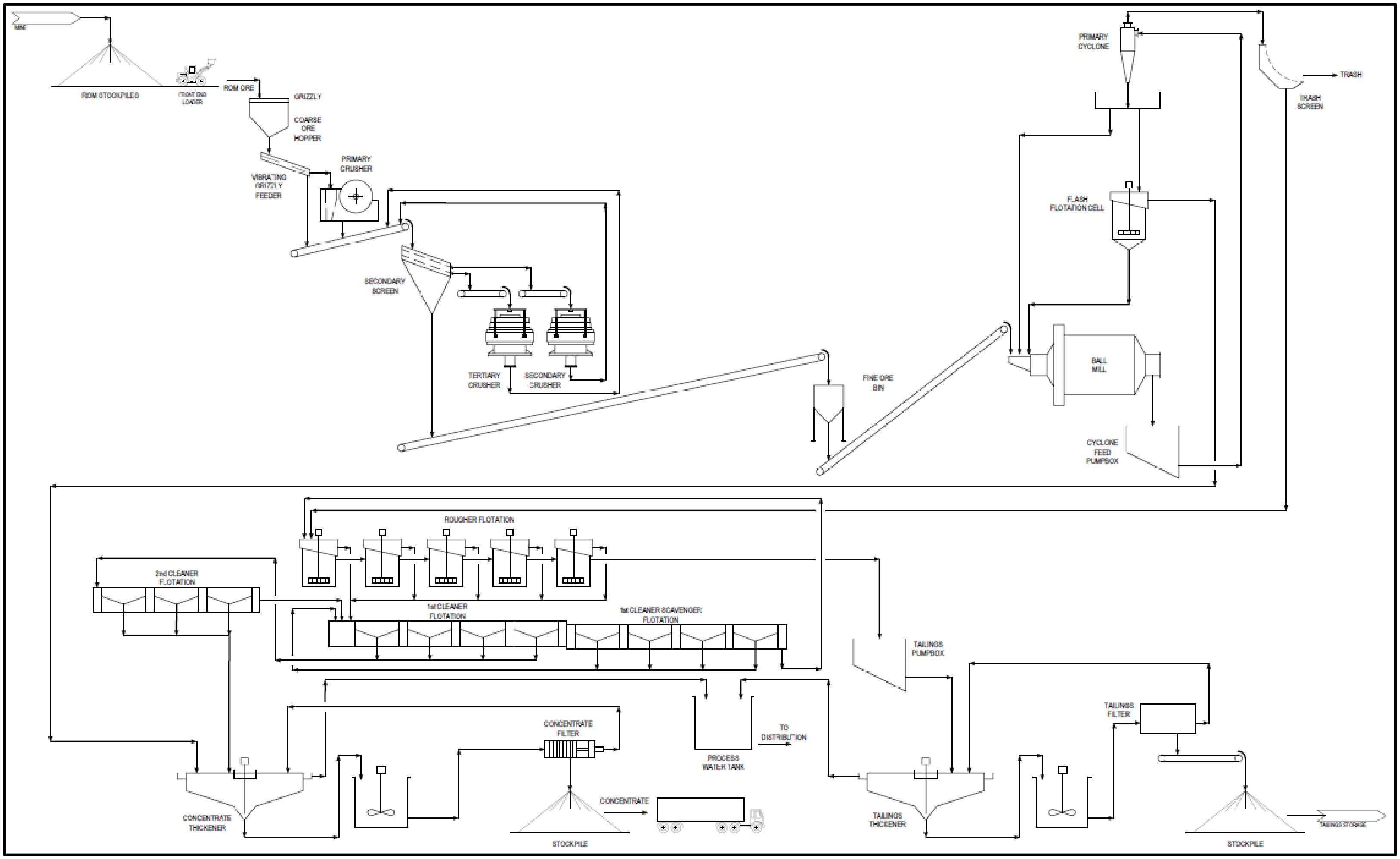


Figure 17-1: Overall Process Flow Sheet (prepared by Wood, dated 2021)

17.3.3 Flash Flotation

The flash flotation cell (6.5 m^3 cell) will be installed in the grinding circuit area. This cell will be fed with a portion of the cyclone underflow slurry. Dilution water will be added to achieve an optimal density. The flash flotation tail product will be directed to the mill feed box. The flash flotation concentrate will be sent directly to the final concentrate thickener.

17.3.4 Flotation and Concentrate Thickening

The flotation circuit will consist of a bank of five 30 m^3 rougher tank cells to achieve maximum precious metal recovery. The rougher concentrates will be sent to a cleaning circuit consisting of four 3m^3 tank cells to achieve the final concentrate's target silver and gold grade. The first cleaner tailing product will be sent to the first cleaner scavenging circuit consisting of four 1.5m^3 tank cells. The cleaner scavenger tailings will be returned either to the head of rougher flotation or discarded as final tails and rougher tails. The first cleaner concentrate will be sent to the second cleaner stage, which consists of three 0.5 m^3 cells, and the cleaner scavenger concentrate will report to the head end of the first cleaners.

The second cleaners' tailings will be sent to the head of the first cleaners, while concentrate will be sent to a 6 m diameter concentrate thickener. The final concentrate slurry will be thickened to 60% solids before feeding the filter. The final concentrate will be filtered in a 30 m^2 filter press, and the filter cake with the moisture of 8% will be stored in a covered shed prior to shipment. Each concentrate shipment will be sampled and analyzed for precious metal and moisture contents. Impurities present in the concentrate will be quantified and evaluated before shipment.

17.3.5 Tailings Thickening

Rougher flotation tails together with cleaner scavenger tails will be sent to a 22 m diameter tailings thickener. Flotation tails will be thickened to 66% solids prior to feeding the filter. The higher density slurry produced will be filtered using one 220 m^2 disk filter. The filter cake produced with a moisture of 16% will be stockpiled at the dry tailings filter plant before transferring the solids to the TSF. The tailings filtration plant will allow for a covered shed with a one-day storage capacity. After sedimentation and filtration, the filtered tailings will be transported to the TSF using trucks. Subsequently, the filtered tailings will be dumped in the working platform of the TSF, spread in 0.30 m lifts, and compacted according to the design specifications. Front-end loaders and compaction equipment will be used to load, spread, and compact the tailings material as required.

Advantages of a dry stack tailings system include the following:

- Water reclaim maximization
- No major dike/dam required for containment
- Minimal area required for placement
- Improved drainage control
- Lower reclamation cost.

17.3.6 Concentrate Storage

Concentrate will be stored in a six-day capacity shed from where it will be loaded onto trucks using a front-end loader. The trucks will ship the concentrate to an off-site refinery; however, the refinery's location is undecided.

17.4 Reagent Requirements

The reagents to be used in the flotation of sulphide mineralization associated with precious metals present at Terronera are outlined in Table 17-2.

Table 17-2: Reagents and Dosage

Reagent	Dosage (g/t)
Collector PAX – Xanthate	140
Frother MIBC	58
Flocculant	50

17.5 Power Requirements

The power required by the various process-related areas is provided in Table 17-3. Total power required for the processing facilities is 43.3 GWh/y which will be supplied via overhead power lines from the onsite power plant.

Table 17-3: Power Requirements

Area and Description	MWh/y	kWh/t
Crushing	3,562	5.74
Fines hopper and grinding	17,815	28.71
Flotation	2,247	3.62
Thickening and filtration	10,896	17.56
Tailings management area	395	0.64
Water management	1,377	2.22
Reagents handling	56	0.09
Auxiliary works and services	1,967	3.17
Waste rock management areas	335	0.54
Onsite infrastructure - general	168	0.27
Other ancillaries	4,470	7.20
Total	**43,288**	**69.76**

17.6 Water Requirements

The water system for Terronera will consist of two separate systems:

- Make-up/fire water
- Process water.

Fresh water will be provided by the Terronera and La Luz underground mining operations. The estimated water make-up requirement of approximately 12.7 m^3/hr is equivalent to approximately 0.16 t of make-up/fire water per tonne of ore processed.

Water from the mine will be pumped to a 50 m^3 make-up/fire water tank. A bottom section of the tank will be entirely reserved for usage as fire water. Fresh water will be pumped to the following process areas:

- Make-up to the process water tank
- Potable water
- Pumps' gland water seals
- Reagent mixing
- Filter plant.

The process water tank with a capacity of 180 m^3 will distribute water through a pump to maintain proper pressure throughout the following processing circuits:

- Grinding
- Classification (dilution water)
- Flotation (launder water).

18.0 PROJECT INFRASTRUCTURE

18.1 Summary

The onsite infrastructure required for the Terronera Project will include:

- Access roads improvements
- New access roads
- Onsite roads
- Helipad
- Process plant
- Mine portals and associated underground mine facilities
- ROM pad with stockpiles
- Water management ponds (contact and seepage/settling)
- TSF
- Temporary WRSF
- Tailings pipeline and filter plant
- Site power supply and distribution
- Gatehouse, workshop and warehouse, truck shops, dining, mine emergency services, mine dry and administration offices, tag-in/tag-out buildings
- The sanitary sewage treatment facilities, potable water treatment facilities, diesel fuel storage facilities, and other services.

The proposed layout of the Terronera Project site is shown in Figure 18-1.

Offsite infrastructure includes improvements to access roads and the construction/permanent camp located at the existing exploration campsite adjacent to the town of Santiago de Los Pinos. Also located at the camp are administration, mine emergency services, and metallurgical/assay/environmental laboratory.

18.2 Site Access

18.2.1 Roads

The Terronera Project site is accessible from Puerto Vallarta by taking JAL 544 road east towards San Sebastian and turning off La Estancia. An unpaved public access road begins just south of Santiago de Los Pinos, leading to the Terronera process plant. Driving time is approximately 2 hours from Puerto Vallarta.

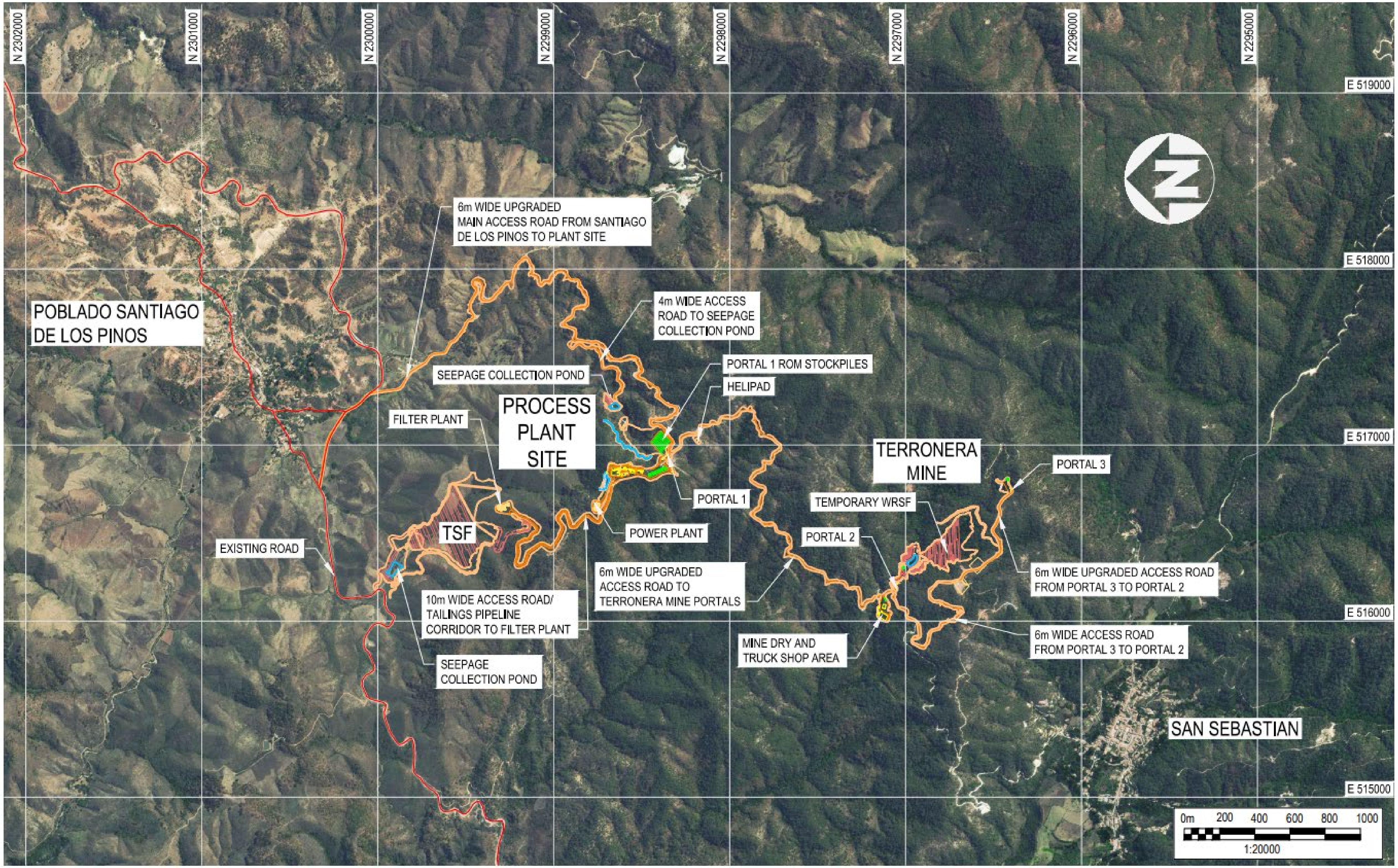


Figure 18-1: Terronera Site Layout (prepared by Wood, dated 2021)

Site access roads are mostly existing public roads that will be upgraded by reducing the steep grades, widening the roadway, increasing the tight radii, improving the drainage, providing a proper road structure, and implementing safety measures including rockfall protection and safety barriers. These roads will typically be upgraded to a single-lane road with a minimum width of 6 m, with pullouts provided for bypassing traffic where practical.

The 4.45 km main access road from the La Estancia turn-off to the process plant will be upgraded to reduce slopes and increase turning radii. Along this road is access to the seepage collection pond dam via a new 0.66 km road. A 2.85 km long road extends from the process plant site to the Terronera Mine Portal 2 area. Portal 3 is connected to Portal 2 via an upgraded road (0.8 km long) and a new road (1 km).

Site access roads will be surfaced with crushed gravel material; no asphaltic concrete will be used.

18.2.2 Helipad

A helipad has been provided adjacent to the plant site area. Its primary purpose is for emergency use, with the leading medical facilities being a 2-hour drive to Puerto Vallarta. It will also provide a secondary role as an alternative to road transport to access the site.

18.3 Plant Site Roads

Plant site roads will facilitate access within the process plant site and down to the filtration plant above the TSF. Primary plant site roads will be two lanes with a minimum width of 8 m, while secondary plant site roads will be a single lane with a minimum width of 6 m. Plant site roads will total approximately 3 km.

All roads will be surfaced with crushed gravel material; no asphaltic concrete will be used.

18.4 Process Plant

The process plant consists of several areas, including:

- Primary crushing
- Secondary and tertiary crushing
- Secondary crusher feed and screen feed conveyors
- Secondary screen area
- Fine ore conveyor
- Fine ore bin and apron feeder
- Fine ore emergency stock bunker
- Fuel station and truck scale

- Ball mill
- Flotation
- Concentrate thickening
- Filter press and concentrate storage
- Reagent building
- Contact water pond
- Plant compressed air building
- Electrical houses.

The majority of the process facilities will be open structures with the exception of the reagent building, plant compressed air building, and the concentrate storage building. Typically, structures are structural steel stick built with the exception of modular, pre-engineered buildings and vendor supply packages, including the primary crusher, fine ore bin, and conveyors.

18.5 Filter Plant

Filtered tailings will be transported by a 6-inch/8-inch HDPE tailings line from the process plant to the tailings filter plant.

The filter plant will take the flotation tails and deposit them into a thickener feed tank. From there, the tails will be thickened and then filtered by pressure filters into a dry tailings material which will be conveyed to a stockpile. Trucks will then transport the dry tailings material to the dry stack TSF.

18.6 Tailings Storage Facility

The TSF will be located in a valley approximately 1 km northwest of the process plant. The current footprint of the TSF occupies an area of approximately 89,760 m^2 and will accommodate approximately 3.2 million m^3 (5.3 million tonnes) of compacted filtered tailings over a 12-year mine life based on a process rate of 1,700 tpd. The TSF has been designed with an overall downstream slope of 2.8 Height (H) to 1 Vertical (V) with interim benches of 6 m width and slopes 10 m in height at 2.2H:1V slope. Below the TSF to the northwest will be a seepage water collection pond to collect, monitor, treat, and release stormwater from the TSF surface area and any subgrade water that is not qualified to be released downstream.

Upstream drainage will be captured in cut-off ditches constructed immediately above the TSF upstream perimeter and routed to the natural drainage course below the TSF.

18.7 Temporary Waste Rock Storage Facility

A temporary WRSF will be constructed southeast and uphill from Portal 2 and will vary in size throughout the LOM, reaching a maximum capacity of approximately 1.2 million tonnes. The overall slope ratio will be 2.7H:1V to ensure physical stability during the operation of the temporary facility.

18.8 Ancillary Buildings

Ancillary buildings located in and around the process plant site and Portal 1 area include:

- Gatehouse
- Mine emergency services
- Dining room
- Mine portal tag in/out building
- Truck shop and wash bay
- Maintenance workshop and warehouse.

Ancillary buildings located in and around the Portal 2 and Portal 3 area include:

- Truck shop
- Mine dry
- Administration building
- Mine portal tag in/out buildings (2).

18.9 Mine Power Supply and Distribution

An onsite natural gas generator will provide power for the site. The power plant comprises of:

- A natural gas Genset portion consisting of six 1.9 MW natural gas gen-sets configured for N+1 operating mode and with an output voltage of 13.8 kV
- Liquified natural gas site storage with a capacity of 227,100 L (3 x 75,700 L vertical tanks at a 1,207 kPa rating)
- Regasification equipment consisting of a heat exchanger with offloading pumps.

The anticipated electrical load for the mine site is summarized in Table 18-1.

Table 18-1: Terronera Project Electrical Load

Area	Connected Load (MW)	Average Load (MW)
Surface - Process Loads	5.3	3.6
Underground- Process Loads	5.0	2.0
Ancillary- Non-Process Loads	4.3	2.68
Total	**14.6**	**8.2**

From the power plant 's 13.8 kV primary power switchgear lineup, power will be distributed by 13.8 kV overhead power lines. This switchgear has two breakers for connections to the mine site power system. One breaker will supply power to the surface process loads and ancillary loads near the processing plant. The second breaker will supply power to the underground operations and the surface ancillary loads at Portal 1, Portal 2, Portal 3, and the mine water management system.

All process electrical houses will be modular units fabricated offsite and self-supporting, designed and packaged for road shipment to the site. Electrical houses will be installed close to the main load points to reduce cabling installation costs.

The 13.8 kV overhead powerlines will bring power to Portal 1 and connect to a 13.8 kV switchgear lineup near the portal entrance. Underground power distribution will be supplied by two 13.8 kV power feeders running down Portal 1 ramp for the Terronera and The La Luz zones. Mobile power centers are used to step down the voltage from 13.8 kV to 480 V and will be strategically located in the mine to supply power to dewatering pumps, ventilation fans, and mine operating and development areas. The mine connected load totals 5 MW, and the average running load is approximately 2 MW. The difference is since the dewatering systems and mining equipment will run intermittently. The major loads include mine ventilation and mine pumping systems.

The power source for Portal 2 will originate from Portal 1's 13.8 kV switchgear and will have a dedicated power feeder running down the Portal 1 ramp and then up the Portal 2 ramp to the surface. Power will then be transferred from a feeder cable to an overhead power line to service the ancillary facilities near Portal 2. Similarly, for Portal 3, which will be tapped off the Terronera Mine power feeder and run up the Portal 3 ramp to the surface where an overhead power line will service the ancillary loads located at the portal.

The mine dry and administration building's power distribution system will have a 500 kW standby generator. Uninterruptible power supplies will be used to provide backup power to critical control systems. The uninterruptible power supply equipment will be sized to permit operations to shut down and back up the computer and control systems for the start-up to restore normal power.

18.10 Surface Water Control

Surface contact water generated from the process plant will be collected in a contact water pond and conveyed by an 8-inch HDPE pipeline to an underground mine at Portal 2 for disposal. There is an option to send contact water to a nearby process water tank via a 3-inch HDPE pipeline for reusing this water in the process.

Seepage collection ponds will be located below the TSF, temporary WRSF, and ROM stockpile pad. These ponds will collect surface and sub-surface drainage from these locations. Water quality will be monitored to determine if it meets allowable limits so it can be discharged.

18.11 Utilities

18.11.1 Water Supply and Distribution

Fresh water will be piped from Portal 1 and Portal 2 to a fresh water tank located in the process plant site, Portal 1 area, and Portal 2 ancillary facilities. Potable water will be distributed throughout the areas by an HDPE pipeline. It will convey water to various facilities, including the truck shop, workshop, and warehouse, dining building, emergency services building in the process plant site area, and the truck shop, mine dry, and administration buildings in the Portal 2 area. Remote locations such as the gatehouse and filter plant will use bottled water.

18.11.2 Waste Management

Sewage pump stations will pump domestic waste to the sanitary sewage treatment plants located within the process plant site, Portal 1 area, and Portal 2 ancillary facilities area.

18.12 Communications

The overall site communications networks will be through a fiber optic backbone connecting all the onsite surface and underground facilities. For the surface communications backbone, single-mode fiber optic cable will be strung on the overhead power line underbuilds and run to the facilities that require services. Fiber optic cable will run down the ramps at the portals connecting the surface communications to the underground communications system. The underground communications backbone will consist of single-mode fiber-optic cable running through the adits on overhead hangers connecting the underground facilities requiring communication services such as the primary dewatering, process water, and fan ventilation systems.

The communication backbone will reside the process control network, the closed-circuit television network, voice over internet protocol telephone network, and information technology services. Local area networks with network firewalls will be used to provide security by isolating the private WTP network from the public internet system.

18.13 Offsite Camp Facilities

A construction camp will be established at the current exploration campsite adjacent to the town of Santiago de Los Pinos to provide accommodation, meals, and ancillary services for construction and operations personnel. The construction camp will be built to be transformed and used as a permanent camp when the mine operations start. The camp is designed for a peak capacity of 740 personnel. The camp will be located adjacent to the existing Terronera exploration camp, and it is expected that several employees and contractors will be residing in the neighboring towns.

Ancillary buildings located at the camp include administration and metallurgical/ assay/environmental laboratory.

19.0 MARKET STUDIES AND CONTRACTS

19.1 Market Studies

Endeavour Silver has not conducted any market studies, as gold and silver are commodities widely traded in world markets. However, Endeavour Silver participates continuously in the sales of silver and gold, by concentrate and doré, through mineral sales from the Guanacevi and Bolañitos operations, through long-standing relations to smelters worldwide.

Due to the size of the bullion market and the above-ground inventory of bullion, Endeavour Silver's activities will not influence gold or silver prices. Endeavour Silver produces doré and gold and silver concentrate from its other current mines, then shipped to third parties for further refining before being sold. To a large extent, silver concentrate is sold at the spot price.

19.2 Commodity Prices

Over the period from 2000 to 2021, world silver and gold prices have increased significantly, which had a favourable impact on revenue from the production of most of the world's precious metal mines.

Long-term metal prices for Mineral Resource and Mineral Reserve estimates and cash flow models are based on Wood's guidelines on industry consensus of long-term prices used in mineral resources, mineral reserves and cash flows. These are derived from a survey of industry-sources including technical reports filed on SEDAR over the past year and long-term forecast prices used by mining analysts and investment banks. Project economics were estimated using a long-term metal price of $1,575/oz Au and $20.00/oz Ag based on Wood’s guidelines for third-quarter 2021 long-term metal prices used in cash flows.

19.3 Contracts

In its current operations, Endeavour Silver has no current contracts or agreements for mining, concentrating, smelting, refining, transportation, handling, or sales that are outside normal or generally accepted practices within the mining industry. No contracts or agreements are in place for the Terronera Project. Endeavour Silver's hedge policy is to not enter into long-term hedge contracts or forward sales.

In addition to its workforces, Endeavour Silver has several contract mining companies working at its two operating mines and is evaluating the possibility of using contract miners at Terronera.

The refining costs, payability, and concentrate grade requirements assumed in the economic analysis are based on Endeavour Silver's other operating assets in Mexico and summarized in Table 19-1.

Table 19-1: Forecast Concentrate Grades over the LOM

Item	Units	Concentrate Grade
Ag grade	g/t	4,237 to 9,436
Au grade	g/t	49.0 to 212.5
As grade	%	0.4
Sb grade	%	0.07
Pb grade	%	1.1
Zn grade	%	2.4
Hg grade	ppm	11
F grade	ppm	255

The silver-gold concentrate production might be sold locally and delivered at the buyer's warehouse in Manzanillo, Colima, Mexico.

The following payability factors are built into the financial model:

Silver:

- If the silver content is less or equal than 3,000 g/t, pay for 96.0% of the silver content subject to a minimum deduction of 200 g/t
- If the silver content is higher than 3,000 g/t, pay for 96.5% of the silver content subject to a minimum deduction of 200 g/t.

Gold:

- If the gold content is less or equal than 100 g/t, pay for 97.5% of the gold content subject to a minimum deduction of 2.0 g/t
- If gold content is higher than 100 g/t, pay for 98.0% of the gold content subject to a minimum deduction of 2.0 g/t.

Table 19-2 outlines the concentrate treatment and refining charges applied in the economic assessment.

Table 19-2: Concentrate Treatment and Refining Charges

Description	Unit	Value
Treatment charge	$/t	354
Ag refining charge[1]	$/oz payable	0.65
Au refining charge[2]	$/oz payable	6.50

[1]At a silver price basis of $27/oz or lower. If the silver price is above $27/oz, refining charges will be increased by 7% of the price increase above $27.0/oz.

[2]At a gold price basis of $2,000/oz or lower. If the gold price is above $2,000/oz, refining charges will be increased by 7% of the price increase above $2,000/oz.

The following penalty terms have been applied:

Arsenic:

- $2.00 per each 0.1% content that exceeds 0.2% up to 0.5%
- thereafter $4.00 per each 0.1% content that exceeds 0.5% up to 0.8%
- thereafter $6.00 per each 0.1% content that exceeds 0.8% up to 1.0%
- thereafter $8.00 per each 0.1% content that exceeds 1.0% up to 1.2%
- thereafter $10.00 per each 0.1% content that exceeds 1.2%.

Antimony:

- $1.00 per each 0.01% content that exceeds 0.05%.

Lead:

- $3.00 per each 1.0% content that exceeds 2.0% up to 5.0%
- thereafter $5.00 per each 1.0% content that exceeds 5.0%.

Zinc:

- $3.00 per each 1.0% content that exceeds 2.0% up to 5.0%
- thereafter $5.00 per each 1.0% content that exceeds 5.0%.

Mercury:

- $1.00 per each 1 ppm content that exceeds 10 ppm.

Fluorine:

- $2.50 per each 100 ppm content that exceeds 400 ppm.

A $73.14/t (wet) concentrate transport cost is applied, considering a concentrate moisture of 8% and assuming a concentrate transport loss of 0.3%.

19.4 QP Comments on Section 19

There are no current contracts in place for the Terronera Project.

The QP has reviewed commodity pricing and marketing assumptions and the potential significant contracts that may be entered into and considers the information acceptable for use in estimating Mineral Resources and Mineral Reserves and the economic analysis that supports the Mineral Reserves.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Baseline Studies

The following environmental baseline studies were performed in support of the MIA:

- Meteorology and air quality
- Climatology
- Soil erosion and contamination
- Surface and subsurface hydrology
- Flora and fauna
- Cultural, historical, archaeological resources.

20.1.1 Meteorology / Air Quality

The climate type reported for the project site is subtropical, with the rainy season occurring from June to September, with July typically being the wettest month. Data from the closest meteorological station (San Sebastián del Oeste) shows average annual precipitation of 1.35 m. The maximum mean air temperature is 25.6°C, and the minimum mean is 11.7°C. Prevailing winds in the area are from the southwest.

No existing data on air quality is available for the project area. Existing unpaved road traffic may be the main source of dust, but in general, the area is considered to have good air quality as a rural and relatively undeveloped area.

20.1.2 Soil

The predominant soil type in the Mondeño is known as regosol. Soils of this type generally result from the relatively recent formation of non-alluvial substrates and are located in areas with strong erosion causing continuous soil creation from the weathering of the host rock.

The regosol soils in the Terronera area are of silt-clay texture of high plasticity clayey sands, highly compressible silts, and silty sands. Density and in-situ moisture values were obtained by sampling 17 open pit tests in the Mondeño basin. The density range is 1,359 to 1,929 $kg/m^{3,}$ and the in-situ moisture range is 6 to 37%.

20.1.3 Surface and Subsurface Hydrology

According to the hydrological classification system used by CONAGUA (National Water Commission in Mexico), the Terronera Project area is located within the administrative hydrologic region #3, Pacifico Norte.

If the flow of stormwater in the drainage area of the proposed mine facilities can flow during a five-year return period intensity with a stream width of ≥2 m and a depth of ≥0.75 m, then a permit to construct facilities in Federal Waters or Federal Zone can be required by CONAGUA. Several principal drainages in the Mondeño have been determined by hydrologic and hydraulic analysis to exceed these CONAGUA Federal Zone flow thresholds, therefore a filtered tailings deposit design and the operational procedure was established.

In May 2016, Hidrologia e Hidraulica de Mexico generated a Precipitation Analysis Study for the Terronera Project using data from three meteorological data stations within 36 km of the project, including the San Sebastián station approximately 4 km from the site. The return period data necessary for pending hydraulic sizing and design configuration of Terronera site drainage infrastructure is shown in Table 20-1.

Table 20-1: Return Period Storm Event Precipitation

Return Period Size (years)	24 Hour Precipitation (mm)
2	79
5	103
10	120
20	138
50	157
100	171
500	205
1,000	221
5,000	260
10,000	277

20.1.3.1 Watershed – Surface Hydrology

The Terronera Project is located in the watershed Rio Ameca – Ixtapa. This watershed covers an area of 3,160 km^2. The watershed western boundary occurs at the Pacific Ocean. The sub-basin, including the Terronera Project, is the San Sebastián drainage, capturing approximately 84,700 ha of drainage area.

20.1.3.2 Sub-Surface Hydrology

The Terronera Project is located above the northwest quadrant of the Mixtlán aquifer.

Endeavour Silver is anticipating that the Terronera Project will use excess water pumped from the underground mine workings and recovered from the tailings filter plant for 100% of the operations water demand. The beneficial use of processing ore using water from underground workings is established in Article 19 of Chapter 3 of the Mexican Mining Law.

Underwater law in Mexico and under SEMARNAT (Secretaria de Medio Ambiente y Recursos Naturales) NOM-001-SEMARNAT-1996, Limits of Contaminants in the Discharges of Wastewaters into the Mexican National Waters and Resources, mining process water cannot be returned to the surface or subsurface basins without treatment.

20.1.4 Land Use

Since the early 1900s, the communities in the Terronera Project area have been organized into various Ejidos, or community groups, which distribute and share agricultural and other lands for the benefit of the ejido member families. The Terronera Project has completed negotiations with various ejido members for leased surface rights of certain parcels of land needed for the location of the tailings and WRSFs. The aggregate limit of these parcels is identified in Figure 20-1 as the TSF surface area boundary.

The predominant use of land at the Terronera Project site is forestry, pastureland, and subsistence agriculture.

A network of unpaved roads exists for transportation between communities and ranches. The Terronera Project has used these roads for exploration phase access. Road improvements will be made to portions of the main community road between Santiago de Los Pinos and San Sebastián del Oeste, which the mine will utilize during the operations phase.

20.1.5 Vegetation and Ecosystems

A study area inventory was performed by Ing. Roberto Trujillo of the Consultoría Forestal y Ambiental of Durango, DGO, Mexico. The results are included in the MIA report submitted to SEMARNAT in February 2017 for a 1,500 tpd Terronera Mine and process plant. As discussed in Section 20.3, a modification will be required to the existing MIA to address the current production rate of 1,700 tpd.

The study identifies fauna and flora as a baseline condition for the Terronera Project area and recommends certain actions to minimize the environmental impact. This baseline was complemented during 2018 and 2019 as part of the evaluation and approval of the Environmental Impact Statement and the Permit to Change the Use of Land for the Waste Rock Dump project, and the expansion and rehabilitation of the current road.

20.1.6 Cultural, Historical, Archaeological Resources

According to the baseline cultural and historical resource studies, the QP is unaware of any cultural events or practices or any historical landmarks that would interfere with the development of the Terronera Project.

According to the baseline archaeological studies, the QP is unaware of any archaeological artifacts that the development of the Terronera Project would impact.

20.2 Environmental Management

20.2.1 Dry Stack Tailings Storage Facility

The TSF will store filtered tailings, or "drystack" tailing, to minimize downstream contamination risk and maximize geotechnical stability in western Mexico's seismically active coastal area.

Sizing of the TSF can be found in Section 18.

Filtered tailings will be trucked from the filter plant and placed and compacted in lifts of approximately 30 cm to a design target density of 1.76 t/m^3 at an optimal moisture content of approximately 18%. It is proposed that the TSF be constructed and reclaimed concurrently with erosion protection, re-vegetation, and drainage structures once the TSF toe dam and its initial bench and slope are completed.

The TSF was designed with a subsurface water collection system (subdrain) to capture potential infiltration during the early construction stages and to manage contact water upstream of the starting buttress structure. Water that is captured downstream of the diversion channels and within the area destined to the TSF will be removed through the contact water ditch that will follow the advance and the gradient of the filtered tailings stacking from the starter buttress so that the area where the tailings are placed remains relatively dry for the life of the facility. In addition to the surface contact water collection system, a sub-drainage system will be constructed to drain potential infiltration into the stacking, and it will extend upstream of the tailings deposit as it continues to gain elevation. A contact water pond will be built downstream and at the toe of the TSF to settle suspended particulates, monitor water quality, and if necessary, treat the water coming from the surface and subsurface of the TSF. Pending additional geochemical characterization, currently available water quality data from the site indicates low metal concentrations in groundwater and historical mine drainage. Therefore, for the FS it is assumed that water collected in the pond can be discharged, after some residence time to settle suspended solids, to the natural channel downstream of the TSF.

A starter buttress will provide a retention structure for the tailings that stack up behind and up the hill, preventing them from sliding. The area of the buttress foundation will be cleared and excavated until about 2 m deep, where competent foundation material is encountered. This buttress will have an approximate height of 20 m and will be built in layers of compacted material at a slope ratio of 2H:1V in the upstream and 2.5H:1V in the downstream face.

To avoid removing vegetation and exposing more area of the foundation soil than is necessary, areas used for tailings placement will be removed within a couple of months. The purpose of minimizing the stripped and exposed area is to mitigate the erosion and associated instability of the natural terrain. Once the starter buttress is built, and the tailings are placed in a bottom-up construction method (from the valley to the top of the hill), it is projected that the tailings will contribute to improving the stability of the natural terrain. After clearing, the area will be compacted, and the natural ground will be prepared for the disposal of unsaturated tailings.

Progressive closure of the finished tailings benches will be implemented. After placing and compacting the filtered tailings for at least one bench, the surface slopes and areas that have reached the proposed final grading will be covered with a coarse graded cover of approximately 0.5 m in thickness. The objective of this cover is to protect against erosion, mitigate tailings dust re-suspension by wind or the suspension of solids by surface water runoff and allow for re-vegetation of the surface as part of reclamation and progressive closure of those areas of the TSF that have reached its target storage capacity. The layout of the proposed TSF is shown in Figure 20-1.

20.2.2 Temporary Waste Rock Storage Facility

The WRSF will be trucked and will fill a small valley and a portion of an ephemeral creek that flows just south of Portal 2. The WRSF will be constructed from the bottom-up, starting with the installation of a culvert to allow the flow of the ephemeral creek and construction of the access road and contact water pond over the streambed. The layout of the temporary WRSF is shown in Figure 20-2.

Prior to waste rock placement, surface non-contact water diversion structures will be constructed upstream to reduce surface drainage as well as subdrains to handle sub-surface drainage. Channel systems, inlet galleries, and pipes will be built to capture non-contact water from the tributary basin and will be diverted to the existing stream downstream of the facility.

It is anticipated that the waste rock material will be coarse, with a maximum size of 1 m and with a fine fraction not greater than 10% by weight, and will be a permeable and draining material. Despite its anticipated draining properties, a sub-drainage system has been proposed to capture possible natural runoff that may occur in the lower part of the basin and to be able to drain significant infiltrations that occur due to large storm events. The sub-drainage system will be composed of selected rock drains that will lead contact water to the sedimentation and monitoring basin downstream of the WRSF. Contact water from the waste rock should be monitored and, if necessary, neutralized in the contact water pond downstream.

A starting buttress will provide support for the retained waste rock. The area of the buttress will be cleared, and the foundation soil removed until competent material is encountered. This starter buttress will have an approximate height of 20 m, will be built in layers of compacted material, and will have slopes with a ratio of 2.5H:1V. After clearing, the natural soil will be compacted and prepared for the disposal of the waste rock. To minimize erosion of exposed soil, only the areas where waste rock needs to be placed will be cleared. A select rock drain will be built to facilitate drainage of the facility, and contact water will be led to the pond system for sedimentation, monitoring, and potential treatment.

Given the lack of geotechnical exploration in the proposed WRSF location, only conceptual stability analyses have been conducted based on assumed and conservative waste rock and native materials conditions. These assumptions should be verified once a geotechnical investigation is conducted and a better characterization of the waste rock material is available. Once the temporary WRSF is depleted to provide underground backfill material, the disturbed areas will be re-graded and re-vegetated, and the natural drainage restored.

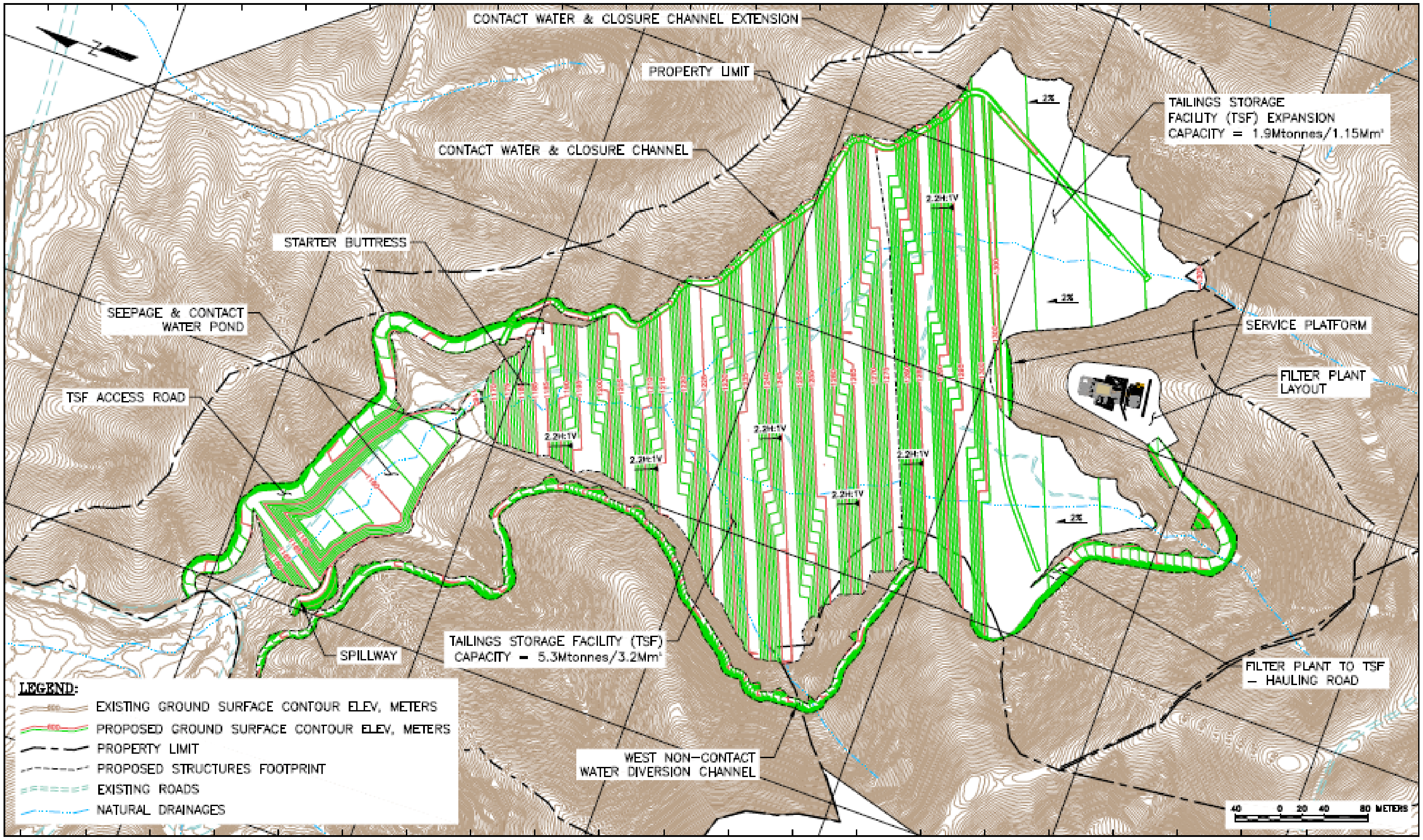


Figure 20-1: Map of the TSF Layout (prepared by Wood, dated 2021)

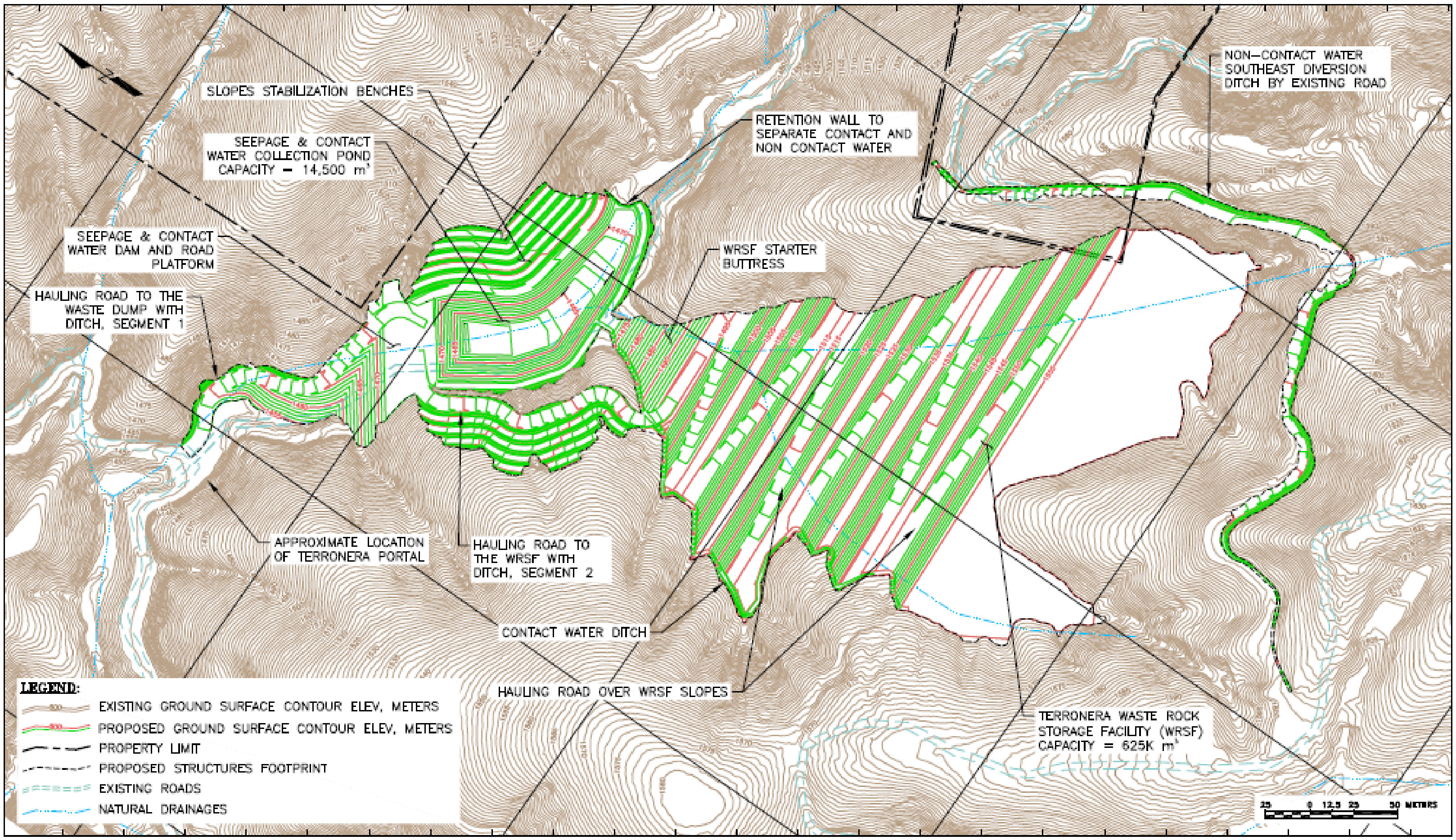


Figure 20-2: Proposed Layout of the Temporary WRSF (prepared by Wood, dated 2021)

20.2.3 Water Management

A conceptual water balance has been developed to evaluate the project water management and treatment capacity needed for the Terronera Project. The water balance model was developed based on the following:

- Dimensions of the storage facilities, including the dry TSF, WRSF, and the ponds
- Average precipitation and evaporation on a monthly basis
- Two stages of production where La Luz underground mine production is followed by Portal 2 underground mine production.

Non-contact water runoff produced by the natural terrain has not been included in the water balance due to the local topography. Runoff from the natural, undisturbed catchment areas will report directly to local watercourses and do not contribute to the overall site-wide water balance.

The mine components that have an influence on the water balance are presented in Figure 20-3; the flow list is presented in Table 20-2.

Table 20-2: Water Balance Flow List

Flow ID	List of Flows
1	Dewatering from La Luz Mine
2	Fresh water supply from Portal 1
3	Dewatering from Portal 2 to the underground sedimentation tank
4	Dewatering of non-contact water from Portal 2 to discharge
5	Contact water from ROM Pad
6	Water temporarily stored in ROM Pad contact pond to discharge
7	Contact water from WRSF
8	Water temporarily stored in WRSF contact pond to discharge
9	Fresh water to the process water tank
10	Fresh water to process plant
11	Fresh water to filter plant
12	Process water to process plant
13	Recycled water to process water tank
14	Water in tailings to Filter Plant
15	Recycled water and overflow to Process Water Tank
16	Process plant losses

Flow ID	List of Flows
17	Moisture in ore
18	Water in dry stack tailings
19	Runoff from dry stack tailings Area
20	Contact water to TSF contact water pond
21	Water temporarily stored in TSF Pond to discharge
22	Runoff from the process plant area
23	Process contact water pond to Portal 1
24	Contact water from Portal 1 to Portal 2 – Underground
25	Non-contact water from the sedimentation tank
26	Potable water
27	Fire fighting system

20.2.4 Mine Water Discharge

According to currently available water quality data, mine water may not require treatment before discharge to the environment, implying that only settling ponds would be required to mitigate suspended solids concentrations. These ponds form part of the Terronera water management plan.

The QP recommends that a geochemical characterization study be completed as well as complementing the water balance with a stochastic model using Goldsim once a geochemistry and hydrogeology modeling assessment has been completed for the project.

20.2.5 Groundwater Management

The water balance indicates that there will be a surplus of water for the project requirements, where the largest source of fresh water for the project would be groundwater from the mine dewatering system. Contact groundwater will be transported through the contact dewatering infrastructure where, after temporary storage in underground sedimentation ponds, it will be pumped and sent to the surface. The excess non-contact dewatering will also be pumped to the surface and discharged to the environment.

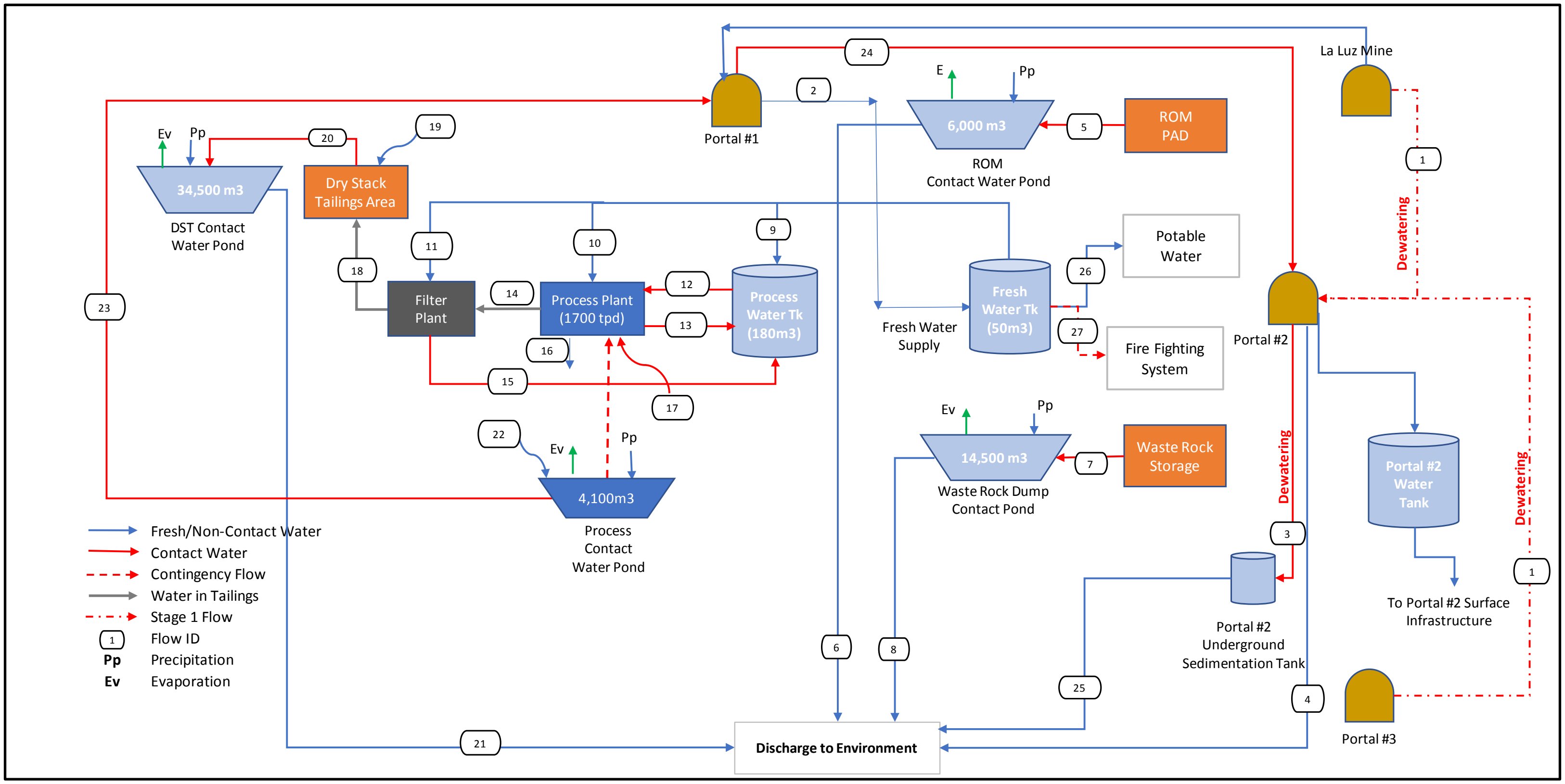


Figure 20-3: Water Balance Flow Chart (prepared by Wood, dated 2021)

20.2.6 Site Monitoring

The Terronera Project will be required to comply with the environmental regulations and standards in place in Mexico. The mining infrastructure and supporting facilities will need to be designed to minimize the impact to the natural environment.

Mexican law requires that an environmental program be implemented to monitor the surface and underground water, creek sediments, soil, air, vegetation, and wildlife conditions. Endeavour Silver has installed four dual piezometer/water quality monitoring wells in the Mondeño basin with additional wells proposed at upstream and downstream locations of the TSF to verify groundwater quality once the TSF is operational.

20.2.7 Air Quality

SEMARNAT NOM-141-SEMARNAT-2003, specific to tailings facilities, provides fairly general commentary on limiting fugitive dust contamination of surrounding communities and the need for mine perimeter particulate contamination monitoring.

20.2.8 Solid Waste Disposal

Hazardous waste management criteria are established in SEMARNAT NOM-052.SEMARNAT-2005 describes the characteristics, process of identification, classification, and listing of hazardous waste.

Hazardous waste generated onsite will be loaded into containers that clearly identify the type of waste and placed in an appropriate disposal area for such waste.

20.3 Environmental Permitting Requirements

In December 2013, the Terronera Project submitted an MIA to the Mexican environmental permitting authority known as SEMARNAT. A SEMARNAT permit for a 500 tpd Terronera Project was issued in October 2014. Before the December 2013 MIA application, Endeavour Silver was issued an exploration MIA, and certain associated SEMARNAT permits specific to the exploration phase for the project.

In February 2017, a modified MIA application was issued by SEMARNAT to expand the proposed process rate to up to 1,500 tpd and establish that the TSF would be developed as a filtered TSF. Another modification will be required to the existing MIA to address the current production rate of 1,700 tpd, which is not anticipated to be an issue.

The Terronera Project process plant feed will be processed onsite by flotation. The processing reagents will be limited principally to coagulants, surfactants, and flocculants that facilitate the process of floating the silver and gold that are introduced to the processing circuit. These flotation reagents are typically relatively inert. The majority of reagent chemicals will be captured in very fine (80% sub #200 gradation) tailings waste stored, thus contained, within the filtered TSF. To achieve constant onsite reagent containment, any potential seepage from this and other storage facilities will be monitored and treated.

Tailings that do not include cyanide processed ore are covered by unique regulations and separate in the SEMARNAT permitting system from those for cyanide leaching ore processing. These flotation regulations are more appropriate for the hydrological, seismic, TSF geometry, and natural terrain conditions at the Terronera Project.

The flow chart for Mexico mine permitting is shown in Figure 20-4. The status of the Terronera Project as of the effective date of this Report per the Federal, State, and Regional/Municipal governing bodies in Mexico is as listed in Table 20-3.

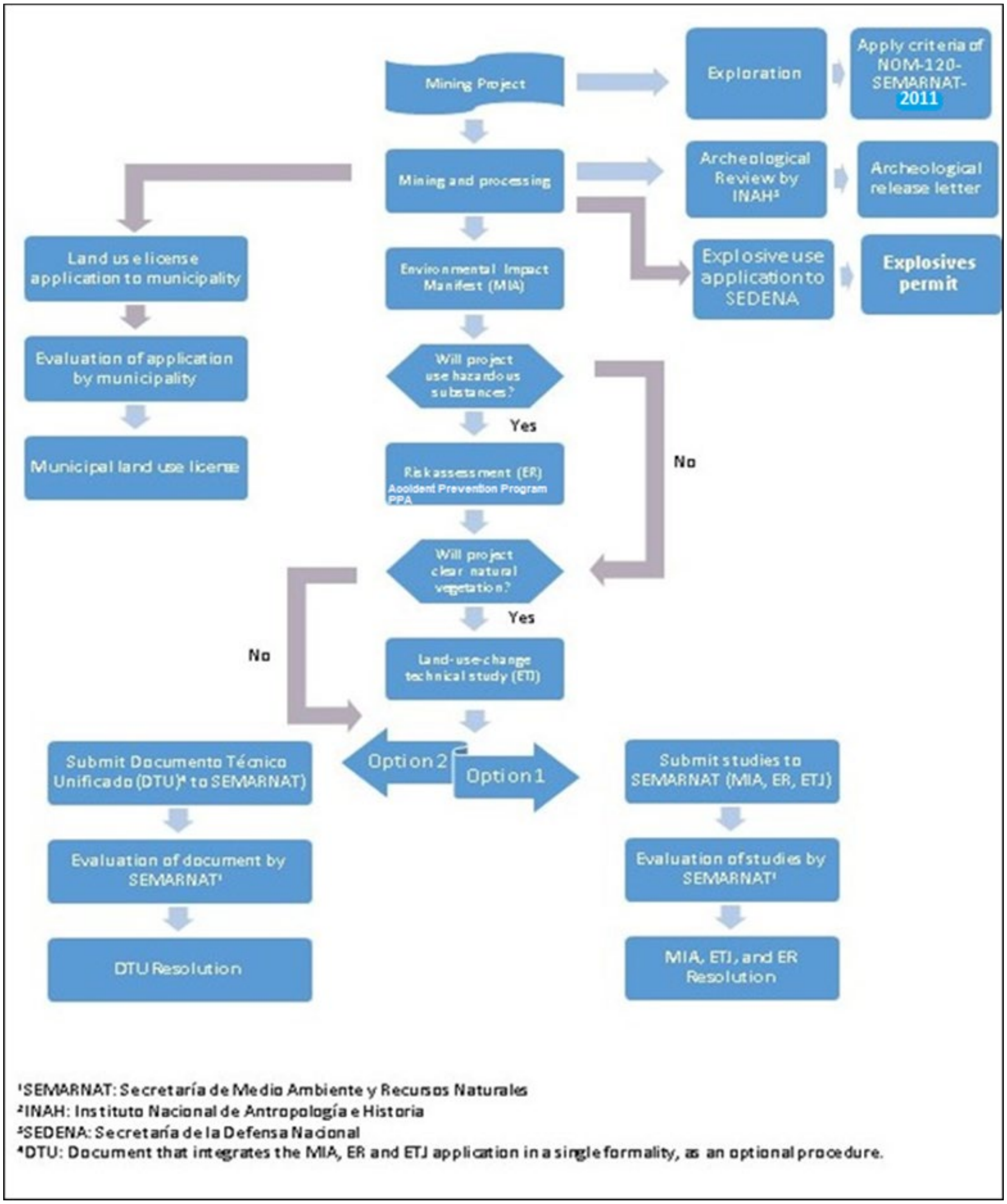


Figure 20-4: Environmental Permitting Steps for Mining Projects in Mexico (prepared by Endeavour Silver, dated 2020)

Table 20-3: Environmental Permits Required for the Terronera Project

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
Exploration	SEMARNAT/ NORMA de Ley General	Exploration MIA	October 31, 2011	Permit Issued to Minera Plata Adelante - extended for 24 months on 20 January 2017.
		Exploration Technical Economic Justification Study (ETJ), also known as Change of Soils Use (CUS)	January 19, 2013	Permit Issued to Minera Plata Adelante for the Terronera Vein exploration – Diligence ongoing for additional exploration permissions for the La Luz and Espinos Veins.
Construction	Local Municipality: (Permit for Disposal of Non-hazardous Waste Residues)	Application	Yes	Will be requested from the local municipality after the precedent permits have been granted.
	SEMARNAT: Land use License	Application	n/a	
	INAH: National Institute of Anthropology and History	Survey	n/a	No evidence of archaeological sites currently exists for Terronera Project.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	SEDENA (National Defence Secretariate) Local Municipality and State Governments: (Explosives Handling)	Application and Endorsement Letter – All submittals occur after SEMARNAT authorizations are issued.	Yes	The SEMARNAT Change of Land Use permit is issued prior to presentation of SEDENA (Federal), State, and Local applications.
	SEMARNAT: Environmental Impact Resolution for the Mining Project	Environmental Impact Manifesto (MIA)	Yes	500 tpd MIA submitted December 2013 and granted in October 2014. 1,500 tpd MIA modification was authorized by SEMARNAT on February 23, 2017. The 1,700tpd MIA modification has not been submitted for SEMARNAT review as of the date of this Report. The modification will include the increase in capacity and all-new areas and facilities that have been identified in the FS
	SEMARNAT: Environmental Impact Resolution Waste Rock Dump and auxiliary services	Environmental Impact Manifesto (MIA)	Yes	Permit issued to Terronera Precious Metals. Authorized by SEMARNAT on June 17, 2019.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	SEMARNAT: Environmental Impact Resolution road expansion and rehabilitation	Environmental Impact Manifesto (MIA)	Yes	Permit issued to Terronera Precious Metals. Authorized by SEMARNAT on September 3, 2018.
	SEMARNAT: Environmental Impact Resolution for the New Waste Rock Dump at the Terronera Mining Area	Environmental Impact Manifesto (MIA)	Yes	In-progress. Currently being developed (2-3 month period). Once submitted, the permit is expected within 90 business days.
	SEMARNAT: Environmental Impact Resolution for complementary areas derived from FS	Environmental Impact Manifesto (MIA)	Yes	In-progress. Currently being developed (2-3 month period). Once submitted, the permit is expected within 90 business days. Documents will be submitted to SEMARNAT after completion of the FS.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	SEMARNAT: Permit to Change the Use of Land	ETJ –	Yes	ETJ for 1,500 tpd mine and the plant was granted in August 2017. An increase in production to 1,700 tpd does not require an ETJ, unless the plant footprint is expanded. The permit to change the land use at the TSF installation was granted in August 2018 and June 2019.
	SEMARNAT: Permit to Change the Use of Land in Waste Rock Dump and auxiliary services	ETJ	Yes	Permit issued to Terronera Precious Metals. Authorized by SEMARNAT on November 21, 2019.
	SEMARNAT: Permit to Change the Use of Land to road rehabilitation and expansion	ETJ	Yes	Permit issued to Terronera Precious Metals. Authorized by SEMARNAT on June 28, 2019.
	SEMARNAT: Permit to Change the Use of Land in the Proposed Waste Rock Dump at the Terronera Mining Area	ETJ	Yes	In-progress. Currently being developed (2-3 month period). Once submitted, the permit is expected within 90 business days.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	SEMARNAT: Permit to Change the Use for complementary areas derived from FS	ETJ	Yes	In-progress. Currently being developed (2-3 month period). Once submitted, the permit is expected within 90 business days. Documents will be submitted to SEMARNAT after completion of the FS.
	CONAGUA: Concession to Extract Underground Water	Not required by CONAGUA since the process water source is from mining operations	n/a	Very likely that Terronera underground mine will generate 100% of the process and make up water demand. Filter plant in the Mondeño will also considerably reduce makeup water demand.
	CONAGUA: Concession to Occupy a Federal Riverbed in the TSF Area	Various Documents	Yes. It has been confirmed that the TSF basin natural drainage flow exceeds the threshold of 2 m width and 0.75 m depth in a 5-year storm event.	The concession was granted in January 2019 for a period of 30 years.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	CONAGUA: Concession to Occupy a Federal Riverbed in the Terronera Waste Rock	Various Documents	Yes	In-progress. Hydrological studies have been validated by CONAGUA. It is expected that CONAGUA shortly confirms the delimitation of the federal zone.
	CONAGUA: Permit to Construct in the Federal Zone	Application Form Supported by Technical Documents.	Yes	Application CNA 02-002 to construct the TSF in the Federal Zone has been approved by CONAGUA and is valid until August 2021. The submittal of a new application is in progress.
	CONAGUA: Permit to Construct Hydraulic Infrastructure	n/a	n/a	Considered within the construction permit mentioned above.
	SEMARNAT: Risk Analysis Study	Risk Analysis Study (ERA)	ERA is typically not required when cyanide is not used in the processing circuit. Terronera will be a flotation circuit, thus excluding the use of cyanide.	The risk level of the project is being assessed at the Feasibility Stage Project based on a list and amount of hazardous substances to be stored on-site. It will be applicable only if the list of hazardous substances and their amount exceed the limits established by the authority.

Mining Stage	**Agency / Permit**	**Submittal Documentation**	**Required per Endeavour Silver / Submittal Date if Issued**	**Comments**
	SEMARNAT: Unified Technical Document	Unified Technical Document (DTU)	n/a	Once the MIA has been issued, and the ETJ is in the process, the DTU is not typically required.
Operation	CONAGUA: Effluent Discharge Permit	Various Documents	Yes	Documents will be submitted to CONAGUA after completion of the FS and before Terronera operation activities.
	MUNICIPIAL: Sole Environmental License	Various Documents	Yes	Provides an Environmental Registration (ER) number for the mine. Requested by Minera Plata Adelante prior to the time of mine start-up.
	SEMARNAT: Accident Prevention Plan	Construction Phase Risk Analysis Covers this Requirement (PPA)	Included in ERA	Included in Risk Analysis Documentation (ER shown above). It will be applicable only if the list of hazardous substances and their amount exceed the limits established by the authority.
	SEMARNAT: Registration as Generator of Hazardous Wastes	Various Documents	Yes	This document will register the use of certain chemicals, oils, and slag materials prior to mine start-up.

Mining Stage	Agency / Permit	Submittal Documentation	Required per Endeavour Silver / Submittal Date if Issued	Comments
	SEMARNAT: Hazardous wastes management plan	Management Plan that complies with the Mexican Law for Integral Prevention and Management of Waste	Yes	Management plan will be generated and submitted to SEMARNAT by Minera Plata Adelante per the requirements of the Hazardous waste management plan
	SEMARNAT: (mining residues management plan) NOM-157-SEMARNAT-2009	Management Plan that Complies with NOM-157	Yes	Management plan will be generated and submitted to SEMARNAT by Minera Plata Adelante per the requirements of NOM-157-SEMARNAT-2009.
	SEMARNAT: Environmental license LGEEPA (General Law of Ecological Balance and Environmental Protection), regulations on air pollution	Various Documents to comply with the General Law of Ecological Balance and Environmental Protection	Yes	License will be generated and submitted to SEMARNAT by Minera Plata Adelante per the requirements of LGEEPA.
Closure	SEMARNAT: Closure and Reclamation Plan	Closure Plan that Complies with NOM141 Section 4.17 and with NOM-157, Section 5.6	Yes	The plan should be submitted to SEMARNAT with a 1,700 tpd MIA modification application, updated during the mine operation phase, and finalized prior to mine closure.

Note: n/a = not applicable

20.4 Socio-Economic and Community Relations

The Terronera Project is near the communities of San Sebastián del Oeste, Santiago de Los Pinos, and Los Reyes and belong to the municipality of San Sebastián del Oeste, Jalisco. Per the Federal Mexican census of 2020, this municipality has 5,086 inhabitants.

Endeavour Silver is currently working under existing Mexican environmental laws and, as part of the MIA process, has engaged the community to inform them about the Terronera Project and encourage public participation as the Terronera Project progresses. To date, the local community is in favour of resource development and accepts the potential economic benefit, especially employment.

20.5 Reclamation and Closure Activities

A conceptual closure plan was prepared in general accordance with applicable Mexican standards. Under Mexican law, mining may be initiated under a conceptual closure plan, with a detailed closure plan being developed later in the project life.

The conceptual closure plan incorporates the most recent engineering information from the 2021 Feasibility Study as well as environmental information provided by Endeavour Silver, which includes ongoing environmental baseline studies, MIAs, environmental laboratory testing results, and data that supplements the granted environmental permits.

The conceptual closure plan focuses on ensuring the post-mining landscape is safe and physically, geochemically, and ecologically stable. The plan ensures that the quality of water resources (possible effluents) in the area is protected and that communities and regulators welcome the restitution plan. The optimum performance of reclamation activities heavily depends on stakeholder participation and adequate monitoring of the reclaimed site conditions.

The main objectives of the conceptual closure plan are:

- Cessation of activities that cause disturbances or impacts (noise, lights, dust, vehicle traffic, etc.)
- Physical, chemical, and biological stabilization of impacted land
- Environmental compliance
- Minimizing risks to safety and public health
- Reclamation of the mine site to similar site conditions that were present before mining.

A Terronera closure and reclamation plan will be included in an amended MIA permit application and ETJ support documentation as part of the construction phase portion of the Terronera Project. Every three years during active mine operations, and no less than three years prior to the closure of the mine, an updated closure plan should be presented to SEMARNAT.

At the end of the mine life, Endeavour Silver will perform restoration activities on impacted areas, ensuring disturbed areas' stability. These efforts should be started to the extent possible during project operations and be completed within two years after the end of the mine operations.

20.5.1 Mine Surface Disturbance Closure Activities

The total anticipated disturbed area from mining operations is expected to be approximately 95 ha, including:

- TSF, associated water management structures (ponds, channels, etc.): 22 ha
- Access roads: 7 ha
- Temporary WRSF and ROM pad: 13 ha
- Buildings, yards, process plant, power plant, and miscellaneous infrastructure: 53 ha.

The TSF represents the biggest surface-impacted area to be reclaimed and the most challenging in ensuring the waste's long-term physical and chemical stability to remain onsite in the post-closure stage. Closure efforts should focus on the TSF, starting with progressive reclamation.

Closure will include the following activities:

- TSF: scarifying and grading of temporary access roads, benches and slopes; use of an inert cover material; covering the facility with a layer of topsoil to promote vegetative growth; closure of water management infrastructure; and re-vegetation
- Facilities: buildings will be dismantled, donated, retired, and/or kept
- Portal, shafts, and adits: will be sealed to prevent access from the surface
- WRSF: planned to be depleted prior to cessation of mining. Disturbed footprint areas will be graded and reclaimed
- ROM pad: disturbed footprint areas will be graded and reclaimed
- Waste and water storage ponds: will be demolished and/or filled, graded, and reclaimed
- Water and miscellaneous tanks: may be donated, sold, dismantled, or demolished
- Pipelines: will be dismantled and recycled
- Access roads: main access roads will be maintained during the monitoring phase. Secondary roads that are no longer needed will be regraded, closed, and revegetated.

20.5.2 Underground Mine Infrastructure Closure Activities

All vent raises and portals that provide access to underground workings should be properly sealed to prohibit access to underground workings. Subsurface mine water that reaches the surface should be managed as surface runoff and monitored to verify compliance with local regulations. Current surface water baseline data indicate that water discharging from historical mine workings is slightly acidic and meets the local NOM-001-SEMARNAT-1996 allowable limits for protecting aquatic life.

20.5.3 Closure Cost Estimate

The closure cost estimate for the planned operation is based on the current level of detail from the FS. The estimated cost is approximately $7 M. Closure costs are assumed to be disbursed over the operation period (for progressive reclamation at the TSF) and over 10 years of monitoring post-closure. This cost is based on drone imagery of existing facilities and landforms, a database of itemized costs from local contractors working on similar projects in the area, and assumptions derived from the QP's experience in mine closure. Details of the closure costs are incorporated in the financial model discussed in Section 22.

21.0 CAPITAL AND OPERATING COSTS

21.1 Summary

This capital cost estimate is classified as a Class 3 estimate in accordance with AACE International Guidelines Practice No. 47-R-11 with an accuracy expected to be within +15%/-10% ranges of final project cost including contingency. All costs are expressed in second-quarter 2021 US dollars. Escalation was excluded from the capital cost estimate. Conversion rates used are summarized in Table 21-1.

Table 21-1: Currency Conversion Rates

Currency	Unit per USD
Canadian Dollar (CAD)	1 CAD = 0.78 USD
European Union (EUR)	1 EUR = 1.2 USD
Mexican Peso (MXN)	1MXN = 0.05 USD

The total project capital cost for the Terronera Project is $175 M as shown in Table 21-2.

Sustaining capital is required for underground mining, mine surface facilities, filter plan and tailings management. The total sustaining capital is estimated at $108.5 M.

Operating costs were estimated for mining, process and G&A. Over the LOM, the operating costs will average $66.96/t of material processed.

Table 21-2: Capital Cost Estimate Summary

Area	Description	Cost ($M)
1000	Mining	54.2
2000	Tailings management facility	2.6
3000	Ore crushing and handling	6.6
4000	Mineral processing	28.6
5000	Onsite infrastructure	22.2
6000	Offsite infrastructure	2.3
	Total Direct Costs	**116.5**
8000	Owner's costs	25.7
9000	Indirect costs	18.1
	Total Indirect Costs	**43.8**
	Total Direct + Indirect Costs	**160.3**
P000	Contingency	14.6
	Total Capital Cost	**175.0**

Note: Figures may not sum due to rounding.

21.2 Capital Cost Estimates

21.2.1 Basis of Estimate

The basis of estimate has been developed in accordance with the following documents:

- Project scope of facilities
- Process design criteria
- Engineering discipline design criteria
- Process flow sheets
- Equipment list
- Preliminary single line diagrams
- Site layouts
- General arrangement drawings
- Geotechnical report
- Discipline material take-offs
- Construction execution plan
- Project schedule
- Budget quotations from vendors

- Regional climatic data
- Project work breakdown structure (WBS) and code of accounts
- In-house data
- Documents and information as provided by Endeavour Silver
- Instrument lists
- Instrument I/O lists
- Control system architecture block diagrams.

21.2.2 Quantity Development Basis

Where material take-offs were not available, quantities were developed from general project information, conceptual designs, preliminary drawings, sketches or 3D models from similar sized facilities or were factored based on similar sized projects and adjusted for size, capacity and site-specific requirements. Table 21-3 demonstrates the level of material take-offs information development to support the estimate.

Table 21-3: Quantity Development Method

Discipline	Description	Units	Measured	Developed	Factored	Total
Civil	General Site Prep and Roads	various	80%	10%	10%	100%
	Structural Excavations and Backfills	m^3	80%	10%	10%	100%
	Major Structures (TSF)	various	80%	20%	0%	100%
	Infrastructure Packages	various	70%	0%	30%	100%
Civil Piping	Infrastructure Piping	m	80%	20%	0%	100%
	Overland Pipelines	m	90%	10%	0%	100%
Concrete	Cast-In-Place Concrete	m^3	80%	20%	0%	100%
Steel	Heavy Steel	tonne	80%	20%	0%	100%
	Medium Steel	tonne	80%	20%	0%	100%
	Light Steel	tonne	80%	20%	0%	100%
	Miscellaneous Steel (Grating, Stairs)	various	80%	20%	0%	100%
Architectural	Pre-Engineered Buildings	various	90%	10%	0%	100%
	Cladding (Roof/Wall)	m^2	80%	20%	0%	100%
	Architectural Finishes	various	50%	25%	25%	100%

Discipline	Description	Units	Measured	Developed	Factored	Total
Building Services	Heating Ventilation Air Conditioning	m^3	50%	25%	25%	100%
	Fire Protection	m^2	0%	0%	100%	100%
	Services Piping	m^2	90%	10%	0%	100%
Mechanical	Major Equipment	each	90%	10%	0%	100%
	Minor Equipment	each	90%	10%	0%	100%
Bulk Mechanical	Plate work (Tanks, Pump boxes, Chutes)	tonne	80%	20%	0%	100%
Mobile Equipment and Misc. Tools	Mobile Equipment and Tools	each	100%	0%	0%	100%
Process Piping	Within Battery Limits of the Process Plant Large Bore	ls	80%	20%	0%	100%
	Within Battery Limits of the Process Plant Small Bore	ls	80%	20%	0%	100%
Electrical Supply	High Voltage Lines	ls	90%	10%	0%	100%
	High Voltage /Medium Voltage Distribution Equipment	ls	80%	20%	0%	100%
	Low Voltage Equipment	ls	50%	25%	25%	100%
	Low Voltage Wire/Cable/ Tray	ls	50%	25%	25%	100%
	Grounding/Lighting/Receptacles	ls	50%	25%	25%	100%
Instrumentation	Control System	ls	80%	20%	0%	100%
	Specialty Items	ls	80%	20%	0%	100%
	Field Instruments/ Cabling	ls	50%	25%	25%	100%

Measured/ Design	Quantities taken off from design drawings, 3D models, equipment and instrument lists based on process flow diagrams, piping and instrumentation drawings, calculations from mass/energy balance calculations, and other engineered calculations specific for the project.
Developed/ Concept	Quantities calculated from general project information, general arrangement drawings (GAs), conceptual design, preliminary drawings, sketches, 3D models from similar sized facilities on previous projects/studies.
Factored	Calculated from similar sized projects and factored to adjust for plant size, capacity and site-specific requirements.

21.2.3 Labour Assumptions

Wage rates for construction crews were established based on cooperation with local contractors. Labour work hours and rotations are based on six days per work, 10 hours per day and a four week on, one week off camp rotation. Different criteria were used to calculate direct labour costs per hour and indirect construction labour costs per hour

Productivity factors were incorporated into construction labour unit work hours as multipliers on the base unit work hours. The factors consider project specific conditions such as weather, crew skill and availability and craft work-site conditions.

21.2.4 Mine Capital Costs

Mining costs comprise approximately 46% of the total direct Terronera Project costs and include:

- Underground development
- Mining
- Underground Infrastructure including water management, ventilation, mobile equipment, material handling, electrical and automation and technical and safety
- Surface facilities at Portals and directly related to the mine.

21.2.5 Tailings Management Facility Capital Costs

Tailings management facility costs comprise approximately 2% of the total direct Terronera Project costs and include:

- Tailings management area
- Water management
- Overland pipelines.

21.2.6 Ore Crushing and Handling Capital Costs

Ore crushing and handling costs comprise approximately 6% of the total direct Terronera Project costs.

21.2.7 Mineral Processing Capital Costs

Mineral processing costs comprise approximately 25% of the total direct Terronera Project costs and include:

- Fines hopper and grinding
- Flotation
- Thickening and filtration
- Waste system
- Reagents handling
- Auxiliary buildings
- Auxiliary works and services
- Process control system
- Information technology and communications.

21.2.8 Onsite Infrastructure Capital Costs

Onsite infrastructure costs comprise approximately 19% of the total direct Terronera Project costs and include:

- Site earthworks
- Electrical infrastructure
- Roads
- WRSFs
- Surface mobile equipment.

21.2.9 Offsite Infrastructure Capital Costs

Offsite infrastructure costs comprise approximately 2% of the total direct Terronera Project costs and include the main access road in to site.

21.2.10 Indirect Costs

The engineering and procurement estimate covers the home-office based engineering services to design and procure the equipment for the mining, process and associated Infrastructure, as well as home office health, safety and environmental, human resources, document control, accounting, information technology, vendor inspection and expediting, contract administration and estimating.

The construction management estimate is based on the project construction execution plan, staffing plan and the average labour rate per classification. The assumption was made that construction would be carried out by multiple subcontractors through unit price/fix fee or on a lump sum basis. The estimate covers field or site-based services required to construct the facilities within the scope described. Staff who are assigned to the field office are included in the estimate with the assumption that they will be housed off-site in the local community. Construction management costs are included in the Owner's costs.

All temporary buildings and services required during construction and commissioning are estimated based on durations from the construction schedule and actual costs or in-house data.

Freight estimates are based on a percentage factor of equipment and material supply costs that required transport to site.

Capitalized spares are based on an allowance of 5% of plant equipment supply price. Critical spares were identified and priced separately per recommendation list provided by vendors (if available).

Plant first fill include such items as grinding media, screen and filter cloth, lubricants, transformer oils, fuels and reagents. First fills do not include general warehouse inventory and staff supplies such as office supplies, hardhats, gloves, glasses and tools.

The cost of commissioning assistance by the engineering, procurement and construction management contractor is based on providing an allowance for a crew of eight personnel as support over a period of four months. Technical staff during this period was included in the EP estimate. Startup and commissioning spares are based on an allowance of 1% of plant equipment supply price.

An estimate for vendor representative costs during equipment installation is based on in-house data or information provided by the vendors.

21.2.10.1 Owner's Cost

The following capital cost items were estimated and provided by Endeavour Silver:

- Owner's project team
- Owner's construction management team
- Management salary/benefits – design, construction and operations
- Permits and fees
- Camp and catering
- Pre-production G&A
- Information services/information technology services and equipment
- Operation staff training

- Operational readiness
- Insurance
- Environmental and construction permits
- Taxes/liabilities
- Closure/reclamation
- Marketing
- Land purchase/lease
- Community relations
- Working capital
- Study costs
- Owner's costs contingency.

21.2.11 Contingency

Contingency is a monetary provision in the estimated total cost of a project to cover uncertainties or unforeseeable elements of time and cost within the scope of the project as estimated. Contingency does not include for any project scope change. Contingency is expected to be spent.

The @ Risk simulation computer program was used as part of the analysis to define the contingency. The estimate was categorized by discipline, based on input risk criteria to labour work hours, labour cost per hour, subcontractor costs, material costs, and construction equipment. Expected ranges for these categories were input and the results analyzed to determine the appropriate recommended contingency amount. The discipline criterion in contingency determination is a P50 probability of meeting the estimated total cost of the project. Overall P50 contingency excluding Owner's Cost is 13.52%.

21.2.12 Exclusions

The following items were specifically excluded from the capital cost estimate, unless identified in Owner's costs:

- Cost of financing and interest during construction
- Costs due to extraordinary currency fluctuations
- Sustaining and operating costs (separate estimate)
- Working capital
- Changes to design criteria
- Scope changes or accelerated schedule
- Changes in Mexican law

- Site mitigation (identification and removal of contaminated soils (major oil and fuel spills, heavy metals, pesticides, asbestos solids, etc.)
- Deferred capital
- Taxes and duties
- Contract bonding costs
- Reclamation costs
- Closure costs
- Any provision for force majeure events
- Operations and maintenance training (included in Owner's cost)
- Wrap-up insurance (included in Owner's cost)
- Systems operations and maintenance
- Schedule delays.

21.3 Sustaining Capital Costs

Sustaining capital covers capital costs during mine operation after initial project construction and include considerations for underground mining, mine surface facilities, tailings management and filter plant. Annual sustaining capital costs are shown in Table 21-4.

Underground mine sustaining capital includes the lateral development in waste, equipment rebuilds and replacements and extensions of the underground infrastructure such as ventilation and electrical to meet the production schedule requirements. It also includes extensions of the ramp access system to access mine haulage levels, development and establishment of the level haulages and vertical development such as ventilation raises and ore pass extensions.

Mine surface facilities sustaining capital consider the installation of ancillary facilities and associated earthworks located adjacent to Portal 2.

Sustaining costs incurred for the expansion of the water management facilities at the TSF total $1.1 M while the installation of a standby filter (ceramic disk) at the filter plant totals $2 M.

Total sustaining capital is estimated at $108.5 M.

Table 21-4: Sustaining Capital Cost

WBS Area	Yr -11 ($000s)	Yr 1 ($000s)	Yr 2 ($000s)	Yr 3 ($000s)	Yr 4 ($000s)	Yr 5 ($000s)	Yr 6 ($000s)	Yr 7 ($000s)	Yr 8 ($000s)	Yr 9 ($000s)	Total ($000s)
1000 – Mining	6,974	22,491	20,122	22,122	10,314	6,297	5,288	5,797	2,431	3,600	**105,437**
2000 – Tailings management facility	-	-	-	276	-	276	-	276	-	276	**1,106**
4300 – Thickening and Filtration	-	-	2,000	-	-	-	-	-	-	-	**2,000**
Total	**6,974**	**22,491**	**22,122**	**22,399**	**10,314**	**6,573**	**5,288**	**6,074**	**2,431**	**3,876**	**108,543**

Note: Mining sustaining capital costs are incurred in fourth-quarter of 2023 (Yr -1) after commercial production is declared and project phase is over.

Figures may not sum due to rounding.

21.4 Operating Cost Estimates

21.4.1 Summary

Total operating costs over the LOM is estimated at $494.1 M. Average operating costs are estimated at $66.96/t of process ore and summarized in Table 21-5.

Table 21-5: Operating Cost Summary

Cost Area	Total ($M)	$/t	% of Total
Mining	225.7	30.58	46
Process	188.0	25.47	38
G&A	80.5	10.90	16
Total	**494.1**	**66.96**	**100**

Note: Figures may not sum due to rounding

21.4.2 Mine Operating Costs

All mining operations excluding capital development and delineation drilling were included in the mine operating cost. The operating period commences in the fourth-quarter 2023 and continues for the LOM until 2035. The cost models prepared were based on site specific inputs provided from Endeavour Silver and were used to estimate the LOM operating costs for La Luz and Terronera. The total mine operating cost over the LOM is approximately $225.7 M, equivalent to $30.57/t of mined ore as detailed in Table 21-6.

Table 21-6: Summary of Mine Operating Costs over the LOM

Deposit	Cost Area	Total Cost ($ 000s)	$/t
La Luz	Development	1,070	7.00
	Production	5,030	32.88
	Haulage	382	2.50
	Services	732	4.78
	Equipment leasing	118	0.77
	Indirect costs	1,217	7.95
	Total	**8,549**	**55.88**

Deposit	Cost Area	Total Cost ($ 000s)	$/t
Terronera	Development	44,630	6.18
	Production	89,976	12.45
	Haulage	18,613	2.58
	Services	15,326	2.12
	Equipment Leasing	933	0.13
	Indirect Costs	47,602	6.59
	Total	**217,080**	**30.05**
Site Total	Development	45,700	6.19
	Production	95,007	12.87
	Haulage	18,995	2.57
	Services	16,057	2.18
	Equipment Leasing	1,112	0.15
	Indirect Costs	48,819	6.61
	Total	**225,690**	**30.58**

Note: Breakdown by cost area have been rounded and may not sum due to rounding.

21.4.3 Process Operating Costs

The total annual process operating cost is approximately $15.8 M, equivalent to $25.48/t of processed ore.

Table 21-7 provides a summary of the estimated operating costs for the process plant by cost centre. The summary estimate includes labour, energy consumption, supplies (operating and maintenance), mobile equipment, laboratory, and TSF.

Table 21-7: Summary of Process Plant Operating Costs per Year

Cost Area	$ (000s)/y	$/t
Power consumption	6,710	10.81
Reagents	718	1.16
Operating consumables	2,639	4.25
Labour - process and tailings	1,507	2.43
Labour - maintenance	1,124	1.81
Mobile equipment	972	1.57
Laboratory	197	0.32
Maintenance materials	723	1.17
TSF	1,218	1.96
Total	**15,808**	**25.47**

Power consumption is estimated from the electrical load list totaling 43.3 GWh/y. Power costs are based on a unit electric energy cost of $1,550/MWh based on a third-party power supply.

Unit pricing for key operating supplies and reagents is obtained from budgetary quotations based on delivery to the point of usage.

Labour costs are based on 115 full-time equivalent employees for management, operations, maintenance, and laboratory and have been benchmarked against similar projects.

Mobile equipment costs for the operation and maintenance of the process plant are based on similar projects.

Laboratory costs have been benchmarked against similar projects.

Maintenance costs for each process area have been estimated based on a percentage of the mechanical/ electrical/ instrumentation costs.

Operating costs for the TSF include personnel for operating, maintenance, environmental monitoring, dam-safety-related surveillance, and provision of a light vehicle. These costs are based on Endeavour Silver’s current mining operations and Wood´s experience with similar projects in Mexico.

21.4.4 General and Administrative Operating Costs

G&A labour costs are based on 68 full-time equivalent employees including management, medical doctor and nurse, environmental, human resources, security, finance, procurement and logistics, community relations and services. Total estimated annual G&A operating costs is approximately $6.8 M/y or $10.90/t of processed ore.

Table 21-8: G&A Operating Costs

Cost Area	$ (000s)/y	$/t
Labour	2,180	3.51
Expenses	4,588	7.39
Total	**6,768**	**10.90**

22.0 ECONOMIC ANALYSIS

22.1 Cautionary Statement

Certain information and statements contained in this section are forward-looking in nature and are subject to known and unknown risks, uncertainties, and other factors, many of which cannot be controlled or predicted and may cause actual results to differ materially from those presented here. Forward-looking statements include, but are not limited to, statements with respect to the economic and study parameters of the Terronera Project; mineral reserves; the cost and timing of any development of the Terronera Project; the proposed mine plan and mining strategy; dilution and extraction recoveries; processing method and rates and production rates; projected metallurgical recovery rates; infrastructure requirements; capital, operating and sustaining cost estimates; concentrate marketability and commercial terms; the projected LOM and other expected attributes of the project; the NPV, IRR and payback period of capital; future metal prices and currency exchange rates; government regulations and permitting timelines; estimates of reclamation obligations; requirements for additional capital; environmental risks; and general business and economic conditions.

22.2 Methodology Used

The financial analysis was carried out using a DCF methodology. Net annual cash flows were estimated projecting yearly cash inflows (or revenues) and subtracting projected yearly cash outflows (such as capital and operating costs, royalties and taxes). These annual cash flows were assumed to occur at year-end and were discounted back to the beginning of 2022 (Year -2) the start year of capital expenditure, and totalled to determine the NPV of the Terronera Project at selected discount rates. A discount rate of 5% was used as the base discounting rate.

In addition, the IRR, expressed as the discount rate that yields an NPV of zero, and the payback period, expressed as the estimated time from the start of production until all initial capital expenditures have been recovered, were also estimated.

A sensitivity analysis was carried out to identify potential impacts on NPV and IRR of variations in metal prices, grades, initial capital costs and operating costs. This also includes a sensitivity scenario using a spot silver price of $24.00/oz and a spot gold price of $1,800/oz between August 24, 2021 and September 2, 2021.

All monetary amounts are presented in constant second-quarter 2021 US dollars.

22.3 Financial Model Parameters

The financial analysis was based on the Mineral Reserves tabulated in Section 15, forecast mine plan discussed in Section 16, the process plan and assumptions detailed in Section 17, the projected infrastructure requirements outlined in Section 18, the silver and gold price assumption and smelting and refining terms in Section 19, the permitting, social and environmental regime discussions in Section 20, and the capital and operating cost estimates detailed in Section 21.

22.3.1 Metallurgical Recovery

Metallurgical recoveries used for the financial analysis are summarized in Table 22-1. An 8% moisture content was used for the silver-gold concentrate.

Table 22-1: Forecast Metallurgical Recoveries over the LOM

Item	Recovery Rate (%)
Ag recovery range	87.3 to 87.9
Au recovery range	75.8 to 78.1

22.3.2 Metal Price

The financial analysis is based on a forecast long-term silver price of $20.00/oz and a gold price of $1,575/oz.

22.3.3 Smelting and Refining Terms

Smelting and refining terms are presented in Section 19.

22.3.4 Capital Costs

A construction period of 21 months was considered (starting at the beginning of 2022) for the overall project implementation, followed by a period of three months for ramp-up to full production at start of 2024. October 2023 corresponds to the start of commercial production.

Total project capital is $283.5 M comprised of $175 M in initial capital and $108.5 M in sustaining.

Capital costs were applied in the economic model excluding IVA (Mexican value added tax).

22.3.5 Leasing

A mining equipment lease was considered based on the following terms:

- Equipment capital leased: $29.3 M (equipment required in years - 2 through 3)
- Lease terms: 36 months
- Interest rate: 4.90% annual
- Down payment: 15.0% of equipment cost
- Legal fee: $1,300/equipment unit
- Structuring fee: 0.60% of leased amount (equipment cost minus down payment)

22.3.6 Royalty

The Terronera Project is subject to a 2.0% NSR royalty to both IMMSA and AGREMIN.

In addition, Derecho Extraordinario (Extraordinary Right) of a 0.5% royalty is retained by the government for the production of precious metals (applied on gross revenue, no deductions apply).

22.3.7 Taxes

The taxation and royalties modeled within the financial analysis are based on the tax rates and taxation schemes that were validated by Endeavour Silver's Chief Financial Officer. The following tax considerations have been applied:

- All expenses to be applied excluding IVA
- *Derecho Especial a la Mineria* (Special Mining Fee) - Mining tax rate of 7.5% (applied to taxable income before tax losses applied and deductible for income tax)
- Corporate income tax rate of 30.0%
- Tax loss carried forward for 10 years. A tax loss beginning balance of $19.25 M to be considered (from 2021)
- Profit sharing tax is incorporated into the fair market cost of labour and included with labour costs in the model.

Tax depreciation is straight line and was split into the following categories:

- One year (expensed when incurred) – mine development and capitalized operating cost
- 10 years – all other assets.

Depreciation to start when production starts. Ten-year asset depreciation to start the following year the associated cost is incurred.

Table 22-2 presents the capital distribution among the different depreciation categories applied.

Table 22-2: Capital Distribution Among Depreciation Categories

Depreciation Category	Initial Capital (%)	Sustaining Capital (%)	Total LOM Capital (%)
1 year	22	27	24
10 years (10%/year)	78	73	76
Total	**100**	**100**	**100**

In addition to the projected capital costs, previous exploration costs of $11.20 M are amortized over 10 years (straight line).

22.3.8 Working Capital

A working capital allocation was included in the cash flow model. The following payment terms were assumed:

- 45 days in accounts receivable, including revenue (NSR)
- 30 days in accounts payable, including operating costs.

Working capital is assumed to be recovered at project completion. Thus, the sum of all working capital over mine life is zero.

22.3.9 Closure Costs

Closure costs of $7.1 M were applied in the financial model excluding IVA.

22.3.10 Salvage Value

No salvage value was considered.

22.3.11 Inflation

No escalation or inflation has been applied. All amounts are in real (constant) terms.

22.3.12 Financing

One hundred percent equity financing is assumed.

22.4 Economic Analysis

The Terronera Project is anticipated to generate a pre-tax NPV of $289.3 M at a 5.0% discount rate, an IRR of 30.7% and a payback period of 2.5 years. The financial analysis results shows an after-tax NPV of $174.1 M at a 5.0% discount rate, an IRR of 21.3% and a payback period of 3.6 years. Table 22-3 presents a summary of the financial analysis results.

Cash costs were consolidated per ounce of silver payable, net of gold credit. LOM all-in sustaining cash cost (AISC) was also consolidated. These are presented in Table 22-4.

Figure 22-1 presents the main cost value drivers at 5% discount rate. Figure 22-2 and Figure 1-3 show the cumulative undiscounted and discounted cash flows forecast for the Terronera Project. Table 22-5 presents the cash flows summary on an annual basis.

Table 22-3: Summary of Economic Results

Description	Units	Value
Ag payable	000 oz	39,341
Au payable	000 oz	393
Ag payable equivalent	000 oz	70,310
After-Tax Valuation Indicators		
Undiscounted cash flow	$M	311.4
NPV @ 5%	**$M**	**174.1**
Payback period (from start of operations)	years	3.6
IRR	%	21.3%
Project capital (initial)	$M	175.0
Sustaining capital	$M	108.5
Closure cost	$M	7.1
Mining operating cost	$M	225.7
Processing operating cost	$M	188.0
G&A	$M	80.5

Table 22-4: Summary of LOM Cash Costs and AISC

Description	LOM ($M)	$/Ag oz payable
Cash Costs		
Mining	225.7	5.74
Process	188.0	4.78
G&A	80.5	2.05
Royalties	32.9	0.84
Concentrate transport, treatment, refining and penalties	112.6	2.86
Gold credit	(619.4)	(15.74)
Cash cost	**20.3**	**0.52**
Sustaining capital* and closure	107.2	2.73
AISC	**127.5**	**3.24**

* For the purpose of AISC statistics, sustaining capital was considered at $100.2 M, which excludes initial capital deferral due to the mining equipment lease.

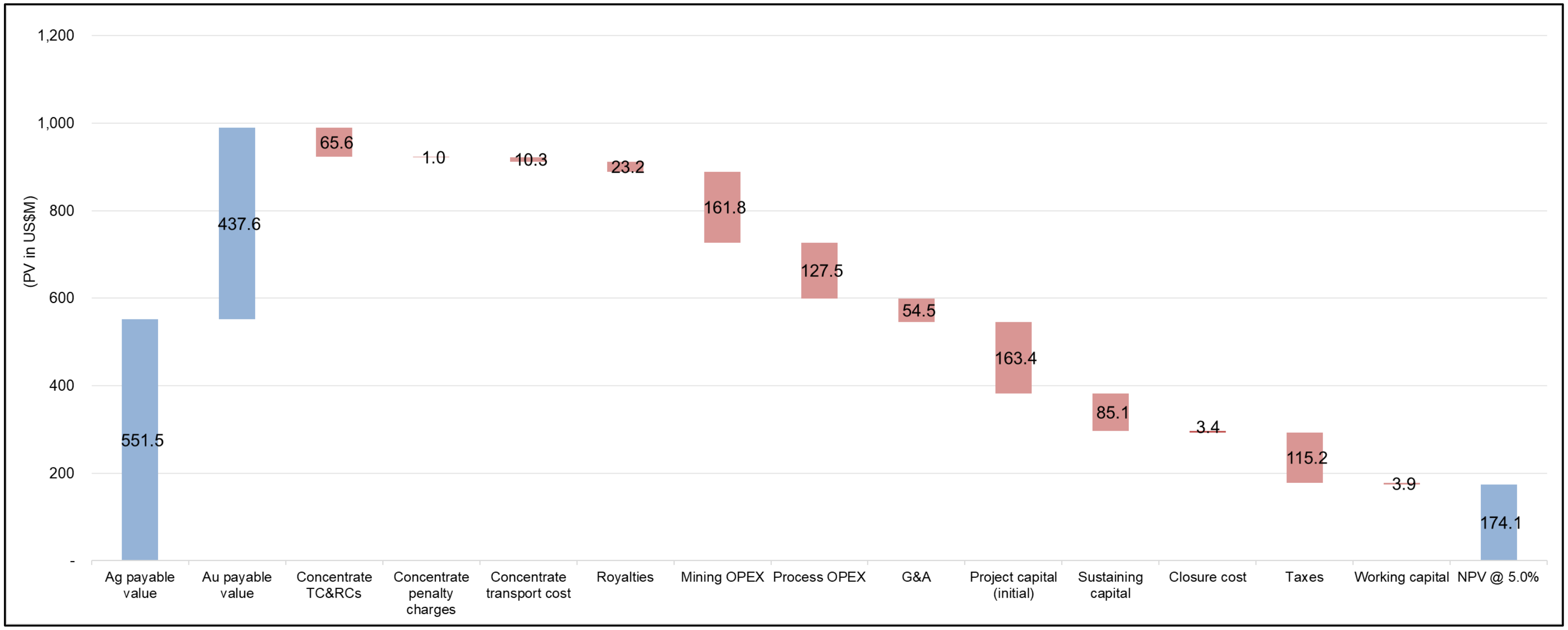


Figure 22-1: Main Cost Value Drivers (Discounted at 5%) (prepared by Wood, dated 2021)

Note: TC = treatment charges; RC = refining charges; OPEX = operating costs

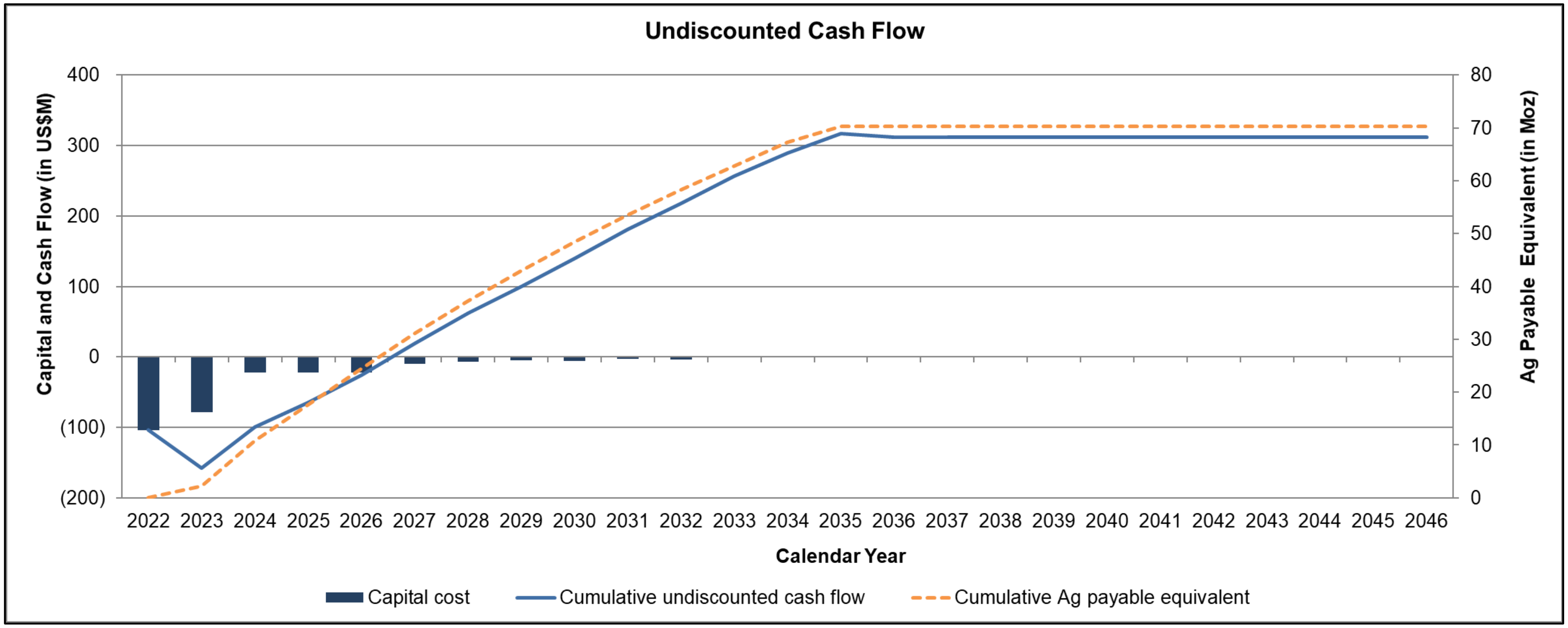


Figure 22-2: Cumulative After-Tax Undiscounted Cash Flow (prepared by Wood, dated 2021)

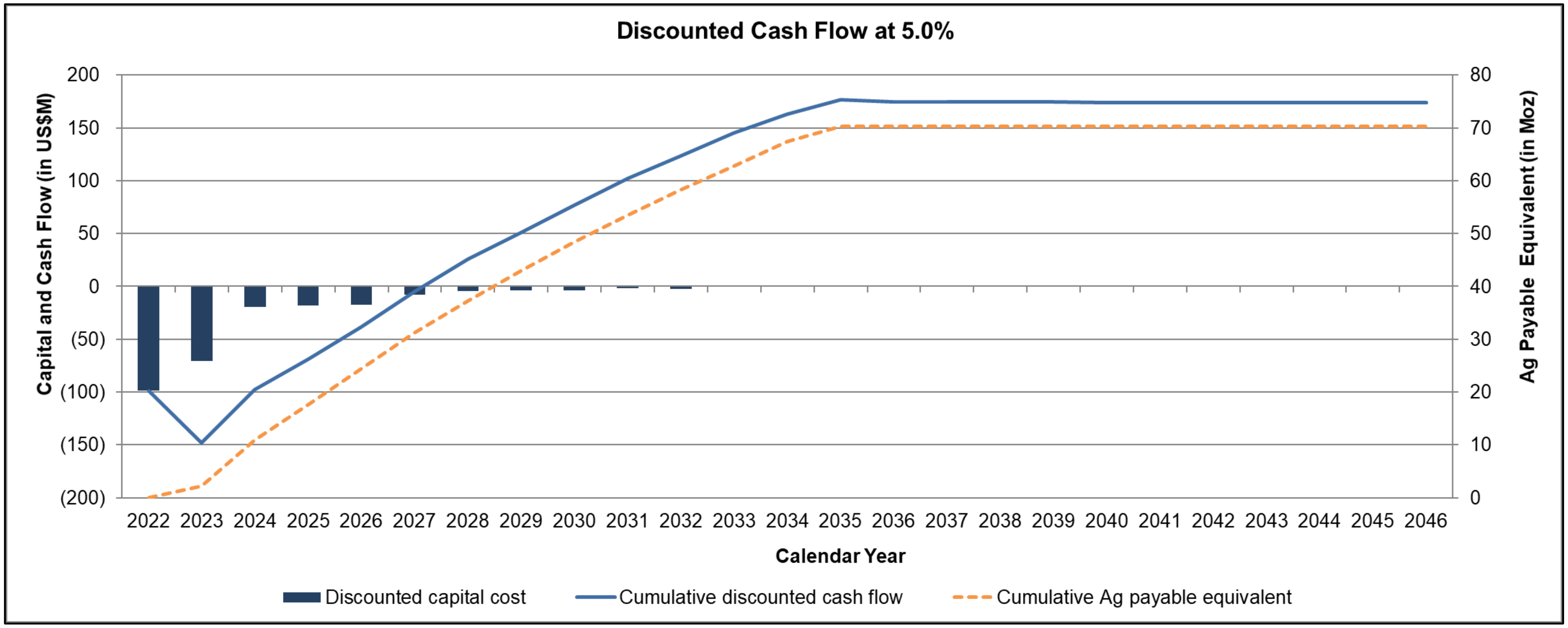


Figure 22-3: Cumulative After-Tax Discounted Cash Flow (prepared by Wood, dated 2021)

Table 22-5: Cash flow Forecast on an Annual Basis

	Unit	Total	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
			Yr -2	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23
Mine Production																											
Mined Ore	000 t	7,380	39	126	632	556	620	631	623	609	620	620	622	620	620	439	-	-	-	-	-	-	-	-	-	-	-
Ag Head Grade	g/t	197	191	226	237	267	279	221	173	199	212	178	158	138	154	126	-	-	-	-	-	-	-	-	-	-	-
Au Head Grade	g/t	2.25	0.51	10.52	3.37	1.87	1.85	2.57	2.74	2.02	1.68	1.73	1.91	1.94	1.72	1.81	-	-	-	-	-	-	-	-	-	-	-
Feed to Mill																											
Ore Processed	000 t	7,380	-	112	621	621	621	621	621	621	621	621	621	621	621	442	-	-	-	-	-	-	-	-	-	-	-
Ag Feed Grade	g/t	197	-	214	236	264	279	221	174	198	212	178	158	138	154	126	-	-	-	-	-	-	-	-	-	-	-
Au Feed Grade	g/t	2.25	-	7.07	3.98	2.03	1.85	2.57	2.74	2.03	1.68	1.73	1.91	1.94	1.72	1.81	-	-	-	-	-	-	-	-	-	-	-
Metal Recovery																											
Ag Recovered	000 oz	40,948	-	678	4,130	4,632	4,894	3,873	3,043	3,463	3,700	3,115	2,756	2,409	2,687	1,566	-	-	-	-	-	-	-	-	-	-	-
Au Recovered	000 oz	407.2	-	20.0	61.2	30.8	28.0	39.1	41.8	30.9	25.4	26.2	28.9	29.4	26.0	19.5	-	-	-	-	-	-	-	-	-	-	-
Concentrate Production																											
Concentrate Produced	000 t	191.9	-	2.9	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	11.5	-	-	-	-	-	-	-	-	-	-	-
Ag Grade	g/t	6,638	-	7,223	7,963	8,931	9,436	7,467	5,866	6,677	7,134	6,005	5,314	4,645	5,180	4,237	-	-	-	-	-	-	-	-	-	-	-
Au Grade	g/t	66.0	-	212.5	118.0	59.3	53.9	75.5	80.6	59.5	49.0	50.5	55.8	56.8	50.1	52.8	-	-	-	-	-	-	-	-	-	-	-
Payable Metals																											
Ag Payable	000 oz	39,341	-	652	3,974	4,457	4,709	3,726	2,928	3,332	3,560	2,997	2,644	2,299	2,575	1,488	-	-	-	-	-	-	-	-	-	-	-
Au Payable	000 oz	393.3	-	19.5	59.8	29.6	26.9	38.0	40.6	29.7	24.3	25.1	27.8	28.3	24.9	18.7	-	-	-	-	-	-	-	-	-	-	-
Ag Payable Value	$000s	786,814	-	13,046	79,478	89,137	94,175	74,522	58,551	66,642	71,204	59,933	52,889	45,971	51,509	29,757	-	-	-	-	-	-	-	-	-	-	-
Au Payable Value	$000s	619,388	-	30,704	94,151	46,691	42,301	59,826	63,993	46,830	38,313	39,524	43,796	44,605	39,166	29,489	-	-	-	-	-	-	-	-	-	-	-
NSR																											
Metal Payable Value	$000s	1,406,201	-	43,750	173,629	135,828	136,476	134,348	122,543	113,472	109,517	99,457	96,685	90,576	90,675	59,247	-	-	-	-	-	-	-	-	-	-	-
Concentrate TC	$000s	(67,722)	-	(1,030)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(5,694)	(4,058)	-	-	-	-	-	-	-	-	-	-	-
Ag Refining	$000s	(25,571)	-	(424)	(2,583)	(2,897)	(3,061)	(2,422)	(1,903)	(2,166)	(2,314)	(1,948)	(1,719)	(1,494)	(1,674)	(967)	-	-	-	-	-	-	-	-	-	-	-
Au Refining	$000s	(2,556)	-	(127)	(389)	(193)	(175)	(247)	(264)	(193)	(158)	(163)	(181)	(184)	(162)	(122)	-	-	-	-	-	-	-	-	-	-	-
Penalties	$000s	(1,530)	-	(23)	(129)	(129)	(129)	(129)	(129)	(129)	(129)	(129)	(129)	(129)	(129)	(92)	-	-	-	-	-	-	-	-	-	-	-

	Unit	Total	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
			Yr -2	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23
Transport Costs	$000s	(15,254)	-	(232)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(1,283)	(914)	-	-	-	-	-	-	-	-	-	-	-
NSR	**$000s**	**1,293,568**	**-**	**41,913**	**163,552**	**125,633**	**126,135**	**124,574**	**113,271**	**104,007**	**99,940**	**90,241**	**87,680**	**81,793**	**81,734**	**53,095**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Royalties																											
NSR Royalty to IMMSA	$000s	(25,871)	-	(838)	(3,271)	(2,513)	(2,523)	(2,491)	(2,265)	(2,080)	(1,999)	(1,805)	(1,754)	(1,636)	(1,635)	(1,062)	-	-	-	-	-	-	-	-	-	-	-
Royalty to Mexican government	$000s	(7,031)	-	(219)	(868)	(679)	(682)	(672)	(613)	(567)	(548)	(497)	(483)	(453)	(453)	(296)	-	-	-	-	-	-	-	-	-	-	-
Royalties	**$000s**	**(32,902)**	**-**	**(1,057)**	**(4,139)**	**(3,192)**	**(3,205)**	**(3,163)**	**(2,878)**	**(2,648)**	**(2,546)**	**(2,302)**	**(2,237)**	**(2,089)**	**(2,088)**	**(1,358)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Production Costs																											
Mining	$000s	(225,665)	-	(1,429)	(30,149)	(30,193)	(20,835)	(25,602)	(26,094)	(25,681)	(14,448)	(11,936)	(12,782)	(10,362)	(10,158)	(5,996)	-	-	-	-	-	-	-	-	-	-	-
Process	$000s	(188,003)	-	(3,007)	(15,809)	(16,135)	(15,658)	(15,658)	(16,084)	(15,658)	(15,658)	(16,049)	(15,658)	(15,658)	(15,829)	(11,143)	-	-	-	-	-	-	-	-	-	-	-
G&A	$000s	(80,470)	-	(1,244)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(4,802)	-	-	-	-	-	-	-	-	-	-	-
Production Costs	**$000s**	**(494,139)**	**-**	**(5,679)**	**(52,724)**	**(53,094)**	**(43,259)**	**(48,026)**	**(48,943)**	**(48,105)**							**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Net Operating Earnings	**$000s**		**-**	**35,177**	**106,689**	**69,348**	**79,671**	**73,385**	**61,450**	**53,255**	**60,521**	**53,188**	**50,237**	**46,918**	**46,893**	**29,795**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Taxes																											
Mining Tax (Derecho Especial de Mineria)	$000s	(36,246)	-	(2,638)	(3,070)	(3,647)	(3,725)	(3,937)	(2,921)	(2,424)	(2,935)	(2,339)	(2,100)	(1,822)	(2,997)	(1,692)	-	-	-	-	-	-	-	-	-	-	-
Income Tax (ISR)	$000s	(128,334)	-	(3,987)	(11,360)	(13,494)	(13,781)	(14,566)	(10,807)	(8,968)	(10,858)	(8,655)	(7,769)	(6,740)	(11,089)	(6,260)	-	-	-	-	-	-	-	-	-	-	-
Taxes	**$000s**	**(164,580)**	**-**	**(6,625)**	**(14,431)**	**(17,141)**	**(17,506)**	**(18,502)**	**(13,728)**	**(11,392)**	**(13,793)**	**(10,994)**	**(9,868)**	**(8,562)**	**(14,087)**	**(7,952)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Costs																											
Initial Capital	$000s	(174,953)	(103,787)	(71,166)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining Capital	$000s	(108,543)	-	(6,974)	(22,491)	(22,122)	(22,399)	(10,314)	(6,573)	(5,288)	(6,074)	(2,431)	(3,876)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closure Cost	$000s	(7,057)	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,587)	(4,797)	(35)	(35)	(86)	(86)	(86)	(86)	(86)	(86)	(86)	-
Capital Costs	**$000s**	**(290,553)**	**(103,787)**	**(78,140)**	**(22,491)**	**(22,122)**	**(22,399)**	**(10,314)**	**(6,573)**	**(5,288)**	**(6,074)**	**(2,431)**	**(3,876)**	**-**	**-**	**(1,587)**	**(4,797)**	**(35)**	**(35)**	**(86)**	**(86)**	**(86)**	**(86)**	**(86)**	**(86)**	**(86)**	**-**
Working Capital																											
Change in Working Capital	$000s	(0)	-	(4,701)	(11,130)	4,705	(870)	584	1,469	1,073	(422)	1,021	353	527	5	7,385	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow																											
Before Tax	$000s	475,973	(103,787)	(47,664)	73,068	51,931	56,402	63,655	56,345	49,040	54,026	51,778	46,714	47,445	46,897	35,593	(4,797)	(35)	(35)	(86)	(86)	(86)	(86)	(86)	(86)	(86)	-
After Tax	$000s	311,393	(103,787)	(54,289)	58,637	34,790	38,896	45,153	42,617	37,648	40,232	40,784	36,846	38,883	32,811	27,641	(4,797)	(35)	(35)	(86)	(86)	(86)	(86)	(86)	(86)	(86)	-

Note: TC = treatment charges

22.5 Sensitivity Analysis

A sensitivity analysis was carried out to identify potential impacts on the after-tax NPV and IRR of variations in metal prices, grades, initial capital costs and operating costs. Results of this analysis are presented in Figure 22-4, Figure 22-5 and Table 22-6.

Table 22-7 presents a sensitivity scenario using a spot silver price of $24.00/oz and a spot gold price of $1,800/oz between August 24, 2021 and September 2, 2021.

The Terronera Project is most sensitive to fluctuations in the silver price, then to silver feed grades, gold price and gold feed grades. It is less sensitive to changes in operating costs. It is least sensitive to changes in initial capital cost.

Table 22-8 presents the Terronera Project NPV at a range of discount rates from 2 to 12% with the base case bolded.

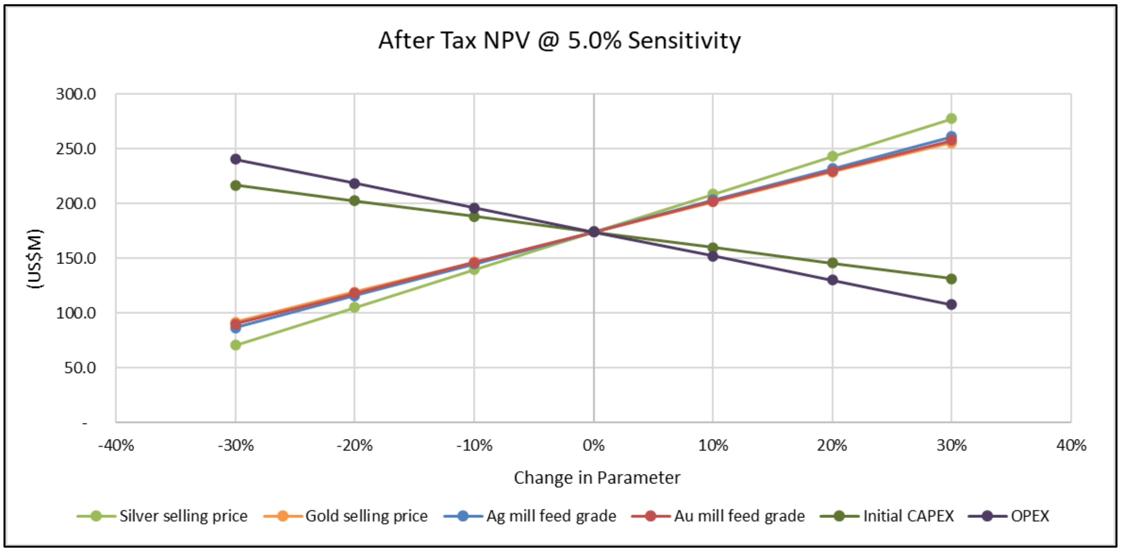


Figure 22-4: Sensitivity of After-Tax NPV Discounted at 5% (prepared by Wood, dated 2021)

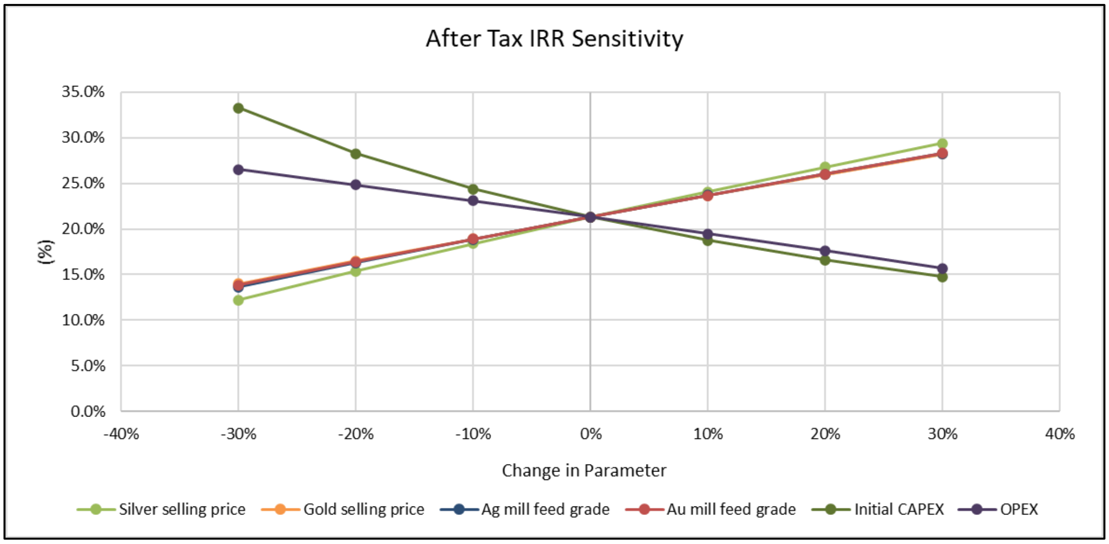


Figure 22-5: Sensitivity of After-Tax IRR Discounted at 5% (prepared by Wood, dated 2021)

Table 22-6: Sensitivity of After-Tax NPV Discounted at 5% and IRR at Selected Metal Prices Based on 75:1 Silver to Gold Ratio

Au Price ($/oz)	Ag Price ($/oz)	After-Tax NPV @ 5.0% ($M)	After-Tax IRR (%)
1,050	14.00	(21.8)	2.6%
1,200	16.00	39.9	9.1%
1,350	18.00	100.5	14.9
1,575	**20.00**	**174.1**	**21.3%**
1,650	22.00	221.6	25.2%
1,800^	24.00^	282.2	30.0%
1,950	26.00	342.8	34.6%

^Spot price between August 24, 2021 and September 2, 2021

Table 22-7: Summary of Economic Results of Base Case and Spot Price Sensitivity

Description	Units	Base Case	Spot Price Sensitivity
After-tax undiscounted cash flow	$M	311.4	466.6
After-tax NPV @ 5%	**$M**	**174.1**	**282.3**
After-tax payback period (from start of operations)	years	3.6	2.5
After-tax IRR	%	21.3%	30.0%
LOM cash cost (net of gold credit)	$/Ag oz payable	0.52	(1.58)

Table 22-8: After-Tax NPV at Different Discount Rates

Description	After-Tax NPV ($M)
NPV @ 2%	247.7
NPV @ 5%	174.1
NPV @ 8%	119.7
NPV @ 10%	91.3
NPV @ 12%	67.8

23.0 ADJACENT PROPERTIES

This section is not relevant to the Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not relevant to the Report.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Surface Rights, Mineral Tenure, Royalties, and Agreements

An expert legal opinion was provided by Endeavour Silver that supports its ownership of mineral concessions that holds the Terronera Project through its 100% owned Mexican subsidiary Endeavour Gold. Endeavour Silver has several agreements with private ranch owners and local Ejidos to provide access for exploration purposes and/or mine operations. A 2% royalty on the mineral production of the core group of concessions is in place, as is the 0.5% royalty retained by the government of Mexico for the production of precious metals.

25.2 Geology and Mineralization

The San Sebastián del Oeste silver-gold district hosts high-grade silver-gold, epithermal vein deposits, characterized by low-sulphidation mineralization and adularia-sericite alteration. The veins are typical of epithermal silver-gold vein deposits in Mexico in that they are primarily hosted in volcanic flows, pyroclastic, and epiclastic rocks, or sedimentary sequences of shale and its metamorphic counterparts.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support Mineral Resource estimation.

25.3 Data Collection in Support of Mineral Resource Estimation

Exploration completed to date has resulted in the delineation of several structures and exploration targets of interest with the potential to contain mineralization.

Sampling, logging, core recovery, and collar and downhole survey data collected are consistent with industry standards and adequately support Mineral Resource estimation and mine planning.

Independent, accredited laboratories conducted analytical procedures for gold and silver. The QP found the QA/QC programs to indicate the precision and accuracy of the silver and gold assays to be good.

As part of the site visit conducted in 2020, the QP performed high-level verification and validation of drill hole collars, downhole surveys, geological logging, sampling, sample preparation, and assaying procedures. Sampling, core logging, sample preparation, and sample chain of custody practices are consistent with industry standards for high-grade silver-gold mineralization.

The QP considers the current drill hole data and modeled estimation domains of the Terronera, and La Luz veins are suitable for Mineral Resource estimation.

25.4 Mineral Resources

The Mineral Resource estimates conform to industry best practices and are reported using the definitions in 2014 CIM Definition Standards.

Mineral Resources are reported using a 150 g/t AgEq cut-off grade which generates sufficient revenue assuming metallurgical recovery and long-range silver and gold prices to cover operating costs, including mining, processing, G&A costs, treatment, and refining charges and royalties.

The sensitivity of the Mineral Resource estimate was tested assuming third-quarter 2021 guidance on silver and gold prices, showing an opportunity to decrease the Mineral Resource cut-off grade by approximately 10%. Other factors that could affect the Mineral Resource estimate include changes to mine and process operating cost, variability in metallurgical performance, mine design, and mining method selection due to geotechnical stability. Additionally, it is possible that infill and grade control drilling and production sampling may result in local changes to the thickness and grade of the blocks that are currently drilled at a nominal 50 m spacing. Additional drilling and production sampling are recommended to produce accurate forecasts for annual and short-range mine plans.

25.5 Mineral Reserves

Probable Mineral Reserves for the Terronera Project are classified using the definitions in the 2014 CIM Definition Standards and have been modified from Indicated Mineral Resources.

Factors that may affect the Mineral Reserve estimates include but are not limited to dilution, recoveries, metal prices, underground and site operating costs, management of the operation, and environmental or social impacts. Factors with the largest potential impacts to the Mineral Reserve estimates include the gold price for the La Luz Zone, the silver price for the Terronera Zone, and ground conditions in the Terronera Zone during mining.

25.6 Mine Plan

Mining methods were selected based on the geometry of the orebodies and the geotechnical conditions to maximize recovery of the Mineral Reserves. Stopes will be backfilled with cemented rockfill or mine development rock using waste rock temporarily stored on the surface. Ore will be mined, dumped to ore passes and trucked to the surface via a decline at the process plant site. Run-of-mine ore will be stockpiled, and waste will be stored at a temporary WRSF.

Underground development will commence in January 2022 and transition to operating in October 2023. Full sustained production of 1,700 tpd will be achieved in January 2024 and will extend until June 2035.

25.7 Metallurgical Testwork and Mineral Processing

The process plant has been designed to process 1,700 tpd of ore utilizing crushing, grinding, rougher and cleaner flotation, and sedimentation and filtration to produce a silver-gold concentrate.

Comminution and flotation testwork have been conducted on the Terronera and La Luz veins. Comminution tests show the material to be hard to very hard while blending low-grade silver ore from La Luz with medium-grade ore from Terronera Vein resulted in improved concentrate quality. LCTs showed good silver and gold recoveries, and a marketable silver concentrate can be achieved with a single cleaning stage; however, the design maintains two cleaning stages. Levels of deleterious elements in the final concentrate will not significantly affect the extraction of gold and silver.

Variability composites for the Terronera Vein represent the silver and gold grade variability during the first three years of operation. Master composites were constructed to provide good spatial coverage of the various mining periods over the LOM. The Terronera Vein master composites represent low-, medium- and high-grade silver in the plant feed, while those for La Luz represent the expected silver and gold grade delivered to the plant.

25.8 Infrastructure

The site requires the development of infrastructure including road and air (helipad) access, a process plant, process and mine ancillary buildings, mine portals and associated mine facilities, waste rock and tailings storage facilities, onsite power generation and distribution, sewage, and potable water treatment facilities. Additionally, the construction of an offsite construction turned permanent camp is planned.

25.9 Environmental Studies, Permitting and Social Impact

Environmental baseline studies have been completed in support of the MIA. Studies relate to meteorology and air quality, climatology, soil erosion and contamination, surface and subsurface hydrology, flora and fauna, and cultural, historical, archaeological resources.

An initial SEMARNAT permit was issued in 2014 for a 500 tpd operation, and this was later modified to expand the proposed process rate to up to 1,500 tpd and to establish a TSF. Another modification will be required to the existing MIA to address the current production rate of 1,700 tpd, which is not anticipated to be an issue.

In working under existing Mexican environmental laws and as part of the MIA process, Endeavour Silver has engaged the community to inform them of the Terronera Project. To date, the local community has been in favour of resource development and accepts the potential economic benefit.

25.10 Markets and Contracts

No market studies have been conducted for the Terronera Project, as gold and silver are widely traded in world markets. Endeavour Silver produces a silver concentrate from its other current operating mines, which is then shipped to third parties for further refining before being sold. To a large extent, silver concentrate is sold at the spot price.

There are no current contracts or agreements for mining, concentrating, smelting, refining, transportation, handling, or sales outside the mining industry's normal or generally accepted practices. Endeavour Silver's hedge policy is to not enter into long-term hedge contracts or forward sales.

25.11 Capital and Operating Costs

The capital cost estimate is classified as a Class 3 estimate following AACE International Guidelines Practice No. 47-R-11 with an accuracy within the range of +15%/-10% of final project cost, including contingency. The initial capital cost is estimated to be $175 M, and sustaining capital cost is $108.5 M for a total Terronera Project capital of $283.5 M. The operating costs over the LOM are estimated at $494.1 M, equivalent to $66.96/t processed.

25.12 Economic Analysis

Under the assumptions presented in this Report, the Terronera Project shows positive economic returns over the LOM. The after-tax IRR is 21.3%, and after-tax NPV at 5% is $174.1 M using a base case silver price of $20.00/oz and gold price of $1,575/oz. After-tax payback is achieved 3.6 years following the start of operations.

The Terronera Project is most sensitive to fluctuations in the silver price, then to silver feed grades, gold price, and gold feed grades. It is less sensitive to changes in operating costs and least sensitive to changes in initial capital cost.

25.13 Opportunities

The following opportunities for the Terronera Project have been identified:

- A better understanding of the distribution of oxide, transition, and sulphide could improve the production and metallurgical performance forecast.
- Use mineralogical analysis to improve the understanding of the losses of gold and silver to tailings, which could identify how to reduce these losses.
- Rock mechanics conditions underground are better than currently modeled and actual conditions may allow more extensive use of SLS as the primary production method and a reduction in external dilution.
- Groundwater flows are lower than estimated, and the dewatering system requirements are less than currently designed
- If surface rights outside the property boundary can be negotiated, the filter plant could be relocated north (downhill) from its current location. This would result in cost savings of up to $1.5 M associated with access road infrastructure and filtered tailings transport.

25.14 Risks

The following risks have been identified for the Terronera Project:

- The presence of clays has potential of a negative impact on plant performance.
- Underground development, production costs and dilution may increase due to actual ground conditions being different from what was captured in the rock mechanics analysis.
- Operating costs estimates may increase as Endeavour Silver G&A costs are typically higher than those of similar-sized Mexican operations.
- The current mine plan does not optimize production from oxide, transition and sulphide ore zones. Ore blending may be required for optimal process plant performance, and this may impact mine production rate and operating costs.
- The drainage water quality at Terronera assumed to be similar to other Endeavour Silver mine sites of similar geological conditions. However, mine water quality is also influenced by site-specific factors, which could result in Terronera mine drainage requiring treatment.
- The current filtered TSF does not have an out-of-specification area for temporary filtered tailings disposal. This could result in the need for redundant filtering systems at the filter plant or an additional temporary tailings disposal site.

26.0 RECOMMENDATIONS

26.1 Summary

A single-phase work program has been developed by discipline area. These programs look for opportunities for improvements to mitigate risks and have higher confidence on how the mine will be behave in the first few years of mining.

26.2 Exploration and Definition Drilling

Endeavour Silver should continue with the company's infill and exploratory drill program strategies. Definition drilling should be orientated to investigate the continuity of silver-gold mineralization at depth to improve and to increase the tonnage of the current deposits and advance the deposit knowledge toward higher levels of mineral resource confidence classification.

Exploratory drilling should be used in collaboration with detailed mapping and sampling to test for mineralization and potential expansion of both the Terronera and La Luz deposits.

A total of 6,000 m is recommended.

This work is estimated to cost $1.0 M.

26.3 Mining

The following recommendations apply to all Mineral Reserves to further refine the mine plan:

Rock Mechanics Underground Mine Design

- Conduct orientated core and/or acoustic televiewer surveys to increase the amount of data available for assessing the rock mass quality (estimated at three boreholes for a total of approximately 750 m at Terronera and two boreholes for a total of approximately 500 m at La Luz) and for critical mine infrastructure of the portals (estimated at nine boreholes for a total of approximately 225 m for Terronera and La Luz)
- Conduct hydrogeological testing (in coordination with the geotechnical drilling) and modeling to increase the amount of data available and confirm ground water inflow and pumping requirements
- Perform laboratory strength tests and geotechnical investigations to increase confidence in rock mass quality determination, and rock properties in areas of critical mine infrastructure for bulk mining

- Conduct a cemented rockfill strength study to evaluate the use of crushed rock from development waste and/or other potential sources for backfill, and identify backfill binder content percentage and type to meet target properties
- Create a three-dimensional structural model of the main faults for use in refining ground support requirements for the development work and production mining
- Perform laser surveys of the existing mine workings to assess void geometry, stability and confirm extent of ore extraction
- Conduct further three-dimensional numerical stress modeling using linear and non-linear criteria with updated input parameters as the project progresses
- Initiate an in-situ stress measurement campaign in two locations separated vertically by 100 m to 150 m once the ramp has reached 400 m in depth from below the highest surface expression.

This work is estimated to cost $1.3 M.

Mining

- Conduct drill and blast testing to be carried out by drilling vendors and local explosives suppliers by analyzing local rock types and conditions to assess the achievable drill penetration rates, optimal explosives mix and target powder factor for use in this operation
- Progress feasibility level designs to detailed engineering for mine development and construction packages
- Engage with mining contractors and equipment vendors to receive updated quotations for development unit rates and equipment purchases
- Complete a trade-off study investigating the use of semi-autonomous versus fully autonomous haulage equipment from the ore passes to the process plant stockpile location
- Complete a trade-off study to consider the transition to battery electric vehicles for the underground fleet to lower ventilation requirements and reduce operating costs.

This work is estimated to cost 0.5 M

26.4 Mineral Resources and Mineral Reserves

Incorporate any new drill data and structural data into the geological and resource model to update the Mineral Resources and Mineral Reserves estimates.

This work is estimated to cost $0.55 M.

26.5 Metallurgical Testwork

Testwork is recommended in the following areas to support refinements to the processing plant design:

- Ore type (oxide, transition and sulphide) - to determine the impact on recovery and improve the forecast of production and metallurgical performance
- Clays - to quantify the presence of clays and determine whether there is any potential negative impact on plant performance
- Tailings - to improve the understanding of the gold and silver losses to tailings and evaluate the potential for gold and silver recovery improvements through mineralogical analysis.

This work is estimated to cost $0.25 M.

26.6 Site Infrastructure

To support the design of the site infrastructure beyond the FS, it is recommended that the current geotechnical investigation program be used to:

- Better define the split of rippable rock excavation versus drill and blast
- Review slope stability of major cut and fill
- Verify foundation requirements of major structures to refine the construction cost and to support the project execution.

This work is estimated to cost $0.15 M.

26.7 Water Management

The following activities are recommended to support the design of the water management systems:

- Continue geochemical testing and assessment of acid rock drainage/metals leaching to further refine parameters of potential concern and determine whether a water treatment plant is required
- Install five HQ borings equipped with multi-level piezometers (totaling 1,900 m), install two test and dewatering wells totaling 900 m, and test hydraulic response to obtain hydrogeological data to accurately estimate the underground pumping requirements and assess whether fresh water for the process plant site and Portal 2 area can be sourced from nearby fresh water wells instead of running a conveyance pipeline from the underground mine.

This work is estimated to cost $0.50 M.

26.8 Tailings Storage Facility

The following activities are recommended to support the TSF:

- Consider additional land acquisition to optimize the TSF geometric design and allow for potential storage expansion
- Consider the inclusion of a temporary out of specification tailings disposal site
- Advance engineering for potential relocation of filter plant down hill of the current location
- Complete tailings test-work to determine whether disc filters are acceptable instead of plate and frame filter press.

This work is estimated to cost $0.8 M.

26.9 Environmental, Permitting, and Community Relations

A revised EIA application should be submitted to SEMARNAT to reflect the revised production rate of 1,700 tpd.

In terms of Environmental initiatives, Endeavour Silver improved its baseline information by increasing the number of data collection points throughout the project site. Currently, a program to teach local community members to grow vegetables and trees is underway. The objective is to generate local providers for the project reforestation needs and improve the availability of local vegetable products for the community and the community workers in the project area.

In community relations, work is underway to teach local contractors to maintain the road, improve access to the site, reduce maintenance costs, and further the local business environment. Training is also underway to improve the community waste management to improve the environmental well-being of the area.

Total environmental and community relations initiatives have a project budget of $1.0 M.

26.10 Costs

Estimated costs for completing work recommended in this section is summarized in Table 26-1.

Table 26-1: Estimated Costs for Recommended Work Programs

Program Component	Cost Estimate ($M)
Exploration and definition drilling	1.00
Mining and geotechnical studies	1.80
Mineral Resource and Reserve Estimate updates	0.55
Site geotechnical studies	0.15
Metallurgical testing	0.25
Hydrogeological/geochemical studies	0.50
TSF – Advance the design to construction level	0.80
Environmental baseline studies and social programs	1.00
Total Cost	**6.05**

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