HELIOSTAR

San Antonio Project,
Baja California Sur, Mexico,
NI 43-101 Technical Report on Preliminary Economic Assessment

Prepared for:
Heliostar Metals Ltd.

Prepared by:
Mr. Todd Wakefield, RM SME, Mine Technical Services
Mr. Richard Schwering, RM SME, Hard Rock Consulting
Mr. Jeffrey Choquette, P.E., Hard Rock Consulting
Mr. Carl Defilippi, RM SME, Kappes Cassiday and Associates
Ms. Dawn Garcia, CPG, Stantec

Effective Date:

30 November, 2024

MTS Mine Technical Services Ltd. · Hard Rock Consulting, LLC · KCA · Stantec

CERTIFICATE OF QUALIFIED PERSON

I, Todd Wakefield, RM SME, am employed as the Manager and Principal Geologist, with Mine Technical Services Ltd., with a street address at 4110 Twin Falls Drive, Reno, NV, 89511.

This certificate applies to the technical report titled “San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report on Preliminary Economic Assessment” that has an effective date of 30 November, 2024 (the “technical report”).

I am a Registered Member (RM) of the Society of Mining, Metallurgy, and Exploration (SME), registration number 4028798. I graduated from the University of Redlands with a Bachelor of Science degree in Geology in 1986, the Colorado School of Mines with a Master of Science degree in Geology in 1989, and the University of Alberta with a Citation in Applied Geostatistics in 2019.

I have practiced my profession continuously since 1987. I have been directly involved in gold and base metal exploration and mining projects in the United States, Venezuela, Indonesia, Perú, and Mexico, and I have been involved in the evaluation of data quality, geologic modeling, resource modeling, and estimation for gold, base metal, and industrial mineral projects in North and South America, and the Asia Pacific.

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) for those sections of the technical report that I am responsible for preparing.

I most recently visited the San Antonio Project on 22 November, 2024, a duration of one day.

I am responsible for Sections 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.23 (exploration only); Sections 2.1, 2.2, 2.3, 2.4.1, 2.6, 2.7; Sections 3.1, 3.2; Section 4; Section 5; Section 6; Section 7; Section 8; Section 9; Section 10; Section 11; Sections 12.1, 12.2, 12.3.1; Section 23; Sections 25.1, 25.2, 25.3, 25.4; Sections 26.1 (exploration only), 26.2; and Section 27 of the technical report.

I am independent of Heliostar Metals Ltd. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the San Antonio Project.

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 those sections of the technical report not misleading.

Dated: 13 January 2025

“Signed”

Todd Wakefield, RM SME.

CERTIFICATE OF QUALIFIED PERSON

I, Richard Schwering, RM SME., am employed as a Principal Resource Geologist with Hard Rock Consulting LLC, with an address at 13918 E. Mississippi Ave Suite 474 Aurora Colorado 80012.

This certificate applies to the technical report titled "San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report on Preliminary Economic Assessment" that has an effective date of 30 November, 2024 (the "technical report").

I am a Licensed Professional Geologist in the State of Wyoming (PG-4086), and a Registered Member of the Society of Mining and Metallurgy and Exploration (No. 4223152RM).

I am a graduate of the University of Colorado, Boulder with a Bachelor of Arts in Geology, in 2009 and have practiced my profession continuously since 2013.

I have worked as a geologist for 15 years and as a resource geologist for a total of 10 years since my graduation from university; as an employee of a junior exploration company, as an independent consultant, and as an employee of various consulting firms with experience in structurally-controlled precious and base metal deposits.

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) for those sections of the technical report that I am responsible for preparing.

I most recently visited the San Antonio Project on 22 November, 2024, a duration of one day.

I am responsible for Sections 1.1, 1.2, 1.8, 1.10, 1.11; Sections 2.1, 2.2, 2.3, 2.4.2, 2.5, 2.6; Sections 3.1, 3.2; Section 12.3.2; Section 14; Sections 25.1, 25.6; and Section 27 of the technical report.

I am independent of Heliostar Metals Ltd. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the San Antonio Project.

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 those sections of the technical report not misleading.

Dated: 13 January 2025

“Signed and sealed”

Richard Schwering, RM SME.

CERTIFICATE OF QUALIFIED PERSON

I, Jeffrey Choquette, P.E., am employed as a Principal Engineer with Hard Rock Consulting LLC, with an office address at 13918 E Mississippi Ave, Suite 474, Aurora, CO, 80012.

This certificate applies to the technical report titled "San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report on Preliminary Economic Assessment" that has an effective date of 30 November, 2024 (the "technical report").

I am a Registered Professional Engineer in the State of Montana (No. 12265) and a QP Member in Mining and Ore Reserves in good standing of the Mining and Metallurgical Society of America (No. 01425QP).

I am a graduate of Montana College of Mineral Science and Technology and received a Bachelor of Science degree in Mining Engineering in 1995.

I have 29-plus years of domestic and international experience in project development, resource and reserve modeling, mine operations, mine engineering, project evaluation, and financial analysis. I have worked for mining and exploration companies for 15 years and as a consulting engineer for 14 years. I have been involved in industrial minerals, base metals and precious metal mining projects in the United States, Canada, Mexico 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) for those sections of the technical report that I am responsible for preparing.

I most recently visited the San Antonio Project on 22 November, 2024, a duration of one day.

I am responsible for Sections 1.1, 1.2, 1.8, 1.12, 1.14, 1.16 (excepting power), 1.17 (excepting process and infrastructure costs), 1.18 (excepting process and infrastructure costs), 1.19, 1.20.1.1, 1.21, 1.22 (mining only), 1.23 (mining only); Sections 2.1, 2.2., 2.3, 2.4.3, 2.5, 2.6; Section 3; Section 12.3.3; Section 15; Section 16; Section 18.1, 18.3, 18.4, 18.5, 18.8; Section 19, Section 21 (excepting process and infrastructure capital and operating costs); Section 22; Section 24; Sections 25.1, 25.7, 25.9, 25.11, 25.12 (excepting process and infrastructure costs), 25.13 (excepting process and infrastructure costs), 25.14, 25.15.1, 25.17; Section 26.1 (mining only), 26.3; and Section 27 of the technical report.

I am independent of Heliostar Metals Ltd. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the San Antonio Project.

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 those sections of the technical report not misleading.

Dated: 13 January 2025

“Signed and sealed”

Jeffrey Choquette, P.E.

CERTIFICATE OF QUALIFIED PERSON

I, Carl Defilippi, RM SME, am employed as a Project Manager at Kappes, Cassiday & Associates, with an office at 7950 Security Circle, Reno, NV, 89506.

This certificate applies to the technical report titled "San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report on Preliminary Economic Assessment" that has an effective date of 30 November, 2024 (the "technical report").

I am a Registered Member of the Society for Mining, Metallurgy & Exploration (RM SME) with a membership number of 775870. I graduated from the University of Nevada with a Bachelor of Science degree in Chemical Engineering in 1978 and a Master of Science degree in Metallurgical Engineering in 1981.

I have practiced my profession continuously for 43 years. I have been directly involved in the development of gold-silver leaching projects and have successfully managed studies at all levels on numerous cyanidation projects.

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) for those sections of the technical report that I am responsible for preparing.

I most recently visited the San Antonio Project on 22 November 2024, a duration of one day.

I am responsible for Sections 1.1, 1.2, 1.8, 1.9, 1.13, 1.14, 1.17 (process and infrastructure costs only), 1.18 (process and infrastructure costs only), 1.20.1.2, 1.21, 1.23 (process and infrastructure only); Sections 2.1, 2.2, 2.3, 2.4.4, 2.6; Sections 3.1, 3.2; Section 12.3.4; Section 13; Section 17; Sections 18.2, 18.6, 18.7, 18.9, 18.10, 18.11, 18.12, 18.13, 18.14; Section 21 (process and infrastructure costs only); Sections 25.1, 25.5, 25.8, 25.9, 25.12 (process and infrastructure costs only), 25.13 (process and infrastructure costs only), 25.15.2, 25.16; Sections 26.1 (process and infrastructure only), 26.4; and Section 27 of the technical report.

I am independent of Heliostar Metals Ltd. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the San Antonio Project since 2011. I have previously co-authored the following technical report on the San Antonio Project:

- Mach, L., Willow, M., Rhoades, R., and Defilippi, C., 2012: NI 43-101 Technical Report on Resources San Antonio Project: report prepared by SRK Consulting for Argonaut Gold, Inc., effective date 1 September, 2012.

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 those sections of the technical report not misleading.

Dated: 13 January 2025

“Signed”

Carl Defilippi, RM SME

CERTIFICATE OF QUALIFIED PERSON
DAWN H. GARCIA

I, Dawn H. Garcia, state that:

(a) I am a Senior Associate at:
Stantec Consulting Services Inc.
One South Church Avenue, Suite 2100
Tucson, Arizona, USA

(b) This certificate applies to the technical report titled “San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report on Preliminary Economic Assessment” that has an effective date of 30 November, 2024 (the “Technical Report”).

(c) I am a “qualified person” for the purposes of National Instrument 43-101 (“NI 43-101”). My qualifications as a qualified person are as follows: I am a graduate of Bradley University with a bachelor’s degree in Geological Sciences in 1982 and a graduate of California State University, Long Beach, with a master’s degree in Geology in 1995. I am a licensed Professional Geologist in Arizona (License No. 26034) and am certified as a Professional Geologist (CPG) with the American Institute of Professional Geologists (Membership Number 08313). I am also a registered member of the Society for Mining, Metallurgy & Exploration (Membership No. 4135993). I have practiced my profession as an environmental geologist and hydrogeologist for over 35 years. I have over 20 years of experience in the mining industry. My relevant experience for the purpose of this Technical Report is:
- Acted as the Qualified Person for the Environmental, Permitting and Social section for 18 public disclosure technical reports and more than 20 detailed environmental and permitting reviews.
- Conducted environmental, socio-economic, or water-related tasks for over 50 mineral development, mineral processing, and mining operations.

(d) My most recent personal inspection of the San Antonio Project occurred on 12 September 2024 and was for a duration of one day.

(e) I am responsible for Sections 1.1, 1.2, 1.15, 1.22 (environmental only), 2.1 2.2, 2.3, 2.4.5, 3.1, 3.2, 12.3.5, 20, 25.1, 25.10, 26.1 (environmental only), 26.5, and 27 of the Technical Report.

(f) I am independent of the issuer as described in Section 1.5 of NI 43-101.

(g) I have no previous involvement with the San Antonio Project.

(h) I have read NI 43-101 and the part of the Technical Report for which I am responsible has been prepared in compliance with NI 43-101; and

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

Dated at Tucson, Arizona, USA this 13th day of January 2025.

Dawn H. Garcia, PG, CPG

IMPORTANT NOTICE

This report was prepared as National Instrument 43-101 Technical Report for Heliostar Metals Limited (Heliostar) by Mine Technical Services Ltd., Hard Rock Consulting LLC, Kappes, Cassiday & Associates, and Stantec Consulting Services Inc. (collectively the Report Authors). The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in the Report Author's services, based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Heliostar, subject to terms and conditions of its contracts with each of the Report Authors. Except for the purposes legislated under Canadian provincial and territorial securities law, any other uses of this report by any third party is at that party's sole risk.

CONTENTS

TABLES

FIGURES

1.0 SUMMARY

1.1 Introduction

Mr. Todd Wakefield, RM SME, Mr. Richard Schwering, RM SME, Mr. Jeffrey Choquette, P.E., Mr. Carl Defilippi, RM SME, and Ms. Dawn Garcia, CPG, prepared this technical report (the Report) for Heliostar Metals Ltd. on the San Antonio Project, located in Baja California Sur, Mexico.

The San Antonio Project is owned and operated by Minera Pitalla, S.A. de C.V. (Minera Pitalla), which is a wholly-owned Heliostar subsidiary.

Heliostar announced notice of the acquisition of the Project on July 17, 2024, from Florida Canyon Gold Inc., an interim successor to the former operator Argonaut Gold Inc. (Argonaut), and completed the acquisition on November 8, 2024.

The Report summarizes the results of a preliminary economic assessment (the 2024 PEA) on the Project. The Project includes the Los Planes, Intermediate, Las Colinas and La Colpa deposits and a number of prospects. Mineral Resources are reported for the Los Planes, Intermediate, Las Colinas, and La Colpa deposits.

1.2 Terms of Reference

The Report was prepared to support Heliostar's news release dated 13 January 2025 entitled "Heliostar Files Technical Reports on Mines and Development Project Recently Acquired in Mexico".

Mineral Resources are classified using the 2014 edition of the Canadian Institute of Mining and Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (the 2014 CIM Definition Standards).

All measurement units used in this Report are metric, and currency is expressed in United States (US) dollars unless stated otherwise. The Mexican currency is the peso (MXN$). The Report uses Canadian English.

1.3 Project Setting

The Project is adjacent to the historic mining town of San Antonio, about 40 km southeast by paved Highway No.1 from the port city of La Paz, and about 160 km north of the resort town of Cabo San Lucas. The closest towns are San Antonio, 8 km west of the Project, Triunfo, 10 km northwest of the Project, and Los Planes, 15 km east of the Project. Travel time from San Antonio is about 10 minutes. Highway 1, a bitumen highway, passes through the Project. Access within the Project area is provided by good gravel and dirt roads. La Paz is served by the Manuel Márquez de León International Airport that has flights to the most important cities of Mexico such as Mexico City, Guadalajara, and Monterrey, and has direct flights to Los Angeles in the United

States. The main regional sea port of La Paz is a principal supply point from mainland Mexico and international sources for the state of Baja California Sur.

The climate is normally arid and hot. Significant rainfall can result from hurricane systems that are most likely to occur during August and September. It is expected that any future mining operations will be able to be conducted year-round. Minor interruptions may occur to activities if hurricane conditions develop.

The closest town is San Antonio, a former mining hub. There is no existing Project infrastructure. Exploration crews stay in San Antonio and travel to site as required. Cell coverage in the area is available. Roads and powerlines pass directly through the Project area. Mexico has sufficient experienced and skilled professionals to run the proposed San Antonio operation. Workforce for any future mining activity could be sourced from the local area; however, the workforce would require dedicated training programs.

The northern part of the Project is characterized by rounded hills rising from the pediment with elevations ranging from 200–250 m above sea level. The southern part is more rugged with elevations from 400 m to 600 masl. Vegetation consists of numerous varieties of thorny desert cacti, small shrubs and bushes, including manzanilla, mesquite, and palo verde.

The closest flora reserve is the Sierra La Laguna Biosphere Reserve. The Project is situated 19 km from the nearest border of the buffer zone of the biosphere reserve, and approximately 25 km from the nearest border of the core of the biosphere reserve. A major highway and the village of San Antonio are located between the biosphere reserve and the Project, as is the semi-active La Testera mining/milling operation that is conducted by third-parties.

The Project site and the Sierra La Laguna Biosphere Reserve are separated by a major topographic divide, and so surface drainage in the Project area flows north–northeast towards the Gulf of California, in the opposite direction from the waters draining into the biosphere reserve.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Project comprises 15 mineral concessions totalling approximately 23,284 ha. Concessions are held in the name of Minera Pitalla. The concessions were granted for a duration of 50 years, and were in good standing at the Report effective date. No mining duties have been paid on this concession since 2019, and no work assessments or production reports have been filed since 2019. As per Mexican requirements for grant of tenure, the concessions have been surveyed on the ground by a licensed surveyor. Heliostar advised that duty payments for the concessions have been made, as required. Payments typically increase annually, based on a scale determined by the Mexican Government. Annual exploration reports were lodged as required.

Heliostar owns 636 ha of surface rights in the Project area. An additional 290 ha is leased under occupation and exploration agreements. Additional surface rights may be required to support any planned infrastructure locations, depending on the infrastructure type and location.

There are two ejidos that pertain to Project activities: the San Antonio ejido and the San Luis ejido. San Antonio ejido has granted to Minera Pitalla, for a term of 30 years, a Land Occupation Agreement dated November 22, 2009. The Land Occupation Agreement and Approval was certified by the National Agrarian Registry (NAR). A Land Assignment Agreement has been completed with the San Antonio ejido, whereby ownership (parcela) rights to 260 ha of land-in-common-use of the San Antonio ejido. The lands cover the Los Planes and Las Colinas deposits and surrounding area. The Land Assignment Agreement was formally approved by the ejido. The Land Assignment Agreement and Approval was certified by the NAR.

The Mexican Government imposes a mining duty of 8% of taxable earnings before interest and depreciation. In addition, precious metal mining companies must pay a 1% duty on revenues from gold, silver, and platinum.

The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on four of the concessions. The sliding scale is based on fluctuations in gold price. The royalties do not apply to the Mineral Resource estimate in this Report. In July 2008, Pediment Gold acquired the El Triunfo–Valle Perdido concessions from the Mexican Geological Survey and committed to a variable 1–3% net smelter return (NSR); payable to the Mexican Geological Survey on those concessions.

Water rights agreements have been concluded with various individuals and ejidos.

1.5 Geology and Mineralization

The mineralized zones are considered to be typical of mesothermal vein-style, or orogenic-style gold deposits.

The general Project area consists of two separate intrusive complexes hosted in sediment-derived schists and gneisses. Cretaceous marine sedimentary rocks overlie the basement assemblage. In turn, the Cretaceous rocks are overlain by lower Tertiary marine sediments. Overlying these rocks are Miocene shales, siltstones, sandstones, conglomerates, tuffs, lahars and flows.

Mineralization has been identified over approximately 1.8 km of strike length within the Project area, and was subdivided into four fault-bounded zones referred to as Los Planes, Intermediate, Las Colinas, and La Colpa. Local normal and listric faulting displaces and truncates the mineralized zones. Drilling suggests that a northwest-trending graben basin has displaced the Los Planes deposit by more than 200 m, over increments of 20–100 m. These blocks are bounded by listric faulting and are dropped en echelon down to the northeast along N40W-trending structures.

Mineralization commonly consists of gold and arsenic occurring with disseminated and veinlet sulphides associated with cataclasite and locally extending into the wall rocks. Quartz veining is widespread. Pyrite appears more commonly throughout the mineralizing system; however the more intense development of mineralization can be accompanied by an increase of arsenopyrite and pyrite in addition to pyrrhotite. Sulphides are often present in brittle structures including cracks, faults, joints and micro-fractures.

Oxidation can reach up to 100 m in depth; and is best developed along fault zones.

Opportunities exist to expand the known limits of mineralization at San Antonio by exploring along strike of key structures defined by drilling and by testing other subsidiary mineralized trends where they appear to extend beyond the deposit limits. Prospects include:

- Las Colinas South, where mineralization remains open at the surface to the south;
- Los Planes West, where the hanging wall mineralization to the west is poorly defined;
- Los Planes East, where mineralization is open on the eastern margin of the apparent fold axial plane;
- La Colpa, where multiple mineralized corridors with varying orientations are open and untested by drilling beyond the current deposit limits.

Mineralization remains open to the north and down plunge at Los Planes. Mineralization hosted in an apparent fold hinge, and the main shear structure hosting the cataclasite, are unconstrained by drilling down plunge to the north. Much of the mineralization at the Los Planes, Intermediate, and La Colpa deposits is hosted in a north-striking, moderately west-dipping, structural zone. This structural zone and the accompanying mineralization remain open at depth in several areas.

The majority of the exploration has focused on the areas immediately around the San Antonio deposits. Much of the wider Project area remains underexplored, and hosts numerous historical mining centres that should be evaluated.

1.6 History

Prior to Heliostar's Project interest, the following companies had undertaken exploration activities in the Project area: Consejo De Recursos Minerales, Viceroy Resource Corp. (Viceroy), Echo Bay Exploration Inc. (Echo Bay), Pediment Gold Corp. (Pediment Gold), and Argonaut. Work completed included geological mapping; geochemical surveys (stream sediment, soil, rock chip and grab sampling); trenching; geophysical surveys (very-low frequency electromagnetic, magnetic and induced polarization surveys); reverse circulation (RC) and core drilling (deposit delineation, exploration, condemnation, and water well purposes); metallurgical testwork; Mineral Resource estimates, baseline environmental studies; geotechnical and hydrological/hydrogeological studies; and mining and technical studies in support of preliminary economic assessments.

Heliostar has completed, since Project acquisition, a confirmation survey of historical drill hole locations.

1.7 Drilling and Sampling

Argonaut, Pediment Gold and Echo Bay conducted drill programs from 1995 to 2012. Drilling totals 602 holes for 103,820.41 m, consisting of 476 RC drill holes (83,110.39 m) and 126 core holes (20,710.02 m). Echo Bay completed 31 RC holes totalling 6,187.0 m, but no record of the drill contractors, chip trays, logging methods or other data were available at the Report effective date. During 2010, 27 of the drill holes at Los Planes, Las Colinas and the Intermediate zone were specifically completed to provide additional material for metallurgical testwork.

Drilling used in estimation consisted of 525 holes for 89,176.68 m, consisting of 427 RC drill holes (73,796.03 m) and 98 core holes (15,380.65 m). Drill holes that were not used included drill holes with uncertain collar locations, unsampled or intermittently sampled drill holes, twin drill holes, and drill holes that were beyond the extents of the Mineral Resource model.

RC chips were logged at the drill site on paper, and where required, geological interpretations checked by viewing chips under a binocular microscope. Core logging used standard procedures, and was subsequently transferred to Microsoft Excel spreadsheet files. Standardized logging forms and geological legends were developed for the Project. Geotechnical logs were completed in sequence prior to the geological logging.

Drilling recovery measurement were not recorded for the RC drilling. Core drilling recovery measurements from Pediment Gold drill logs within consolidated lithologies range from zero to 100% with a median measurement of 91%, indicating that the recovery is high and acceptable for resource estimation.

Drill hole collars were located using global positioning system (GPS) instruments. Down-hole surveys were carried out for dip and deviation using a Reflex Easy Shot instrument.

In the QP's opinion the quantity and quality of the lithological, collar, and downhole survey data collected in the exploration and infill drill programs are sufficient to support Mineral Resource estimation.

Cuttings and core were sampled in 5 ft (1.52 m) increments regardless of lithology, alteration, or mineralization.

Density determination of drill core from the Los Planes and Las Colinas areas were completed by Oestec. Average values for mineralized oxide, mineralized sulphide, unmineralized oxide, and unmineralized sulphide were calculated.

The primary analytical laboratory for the Argonaut and Pediment Gold drill programs was ALS Chemex in Vancouver, Canada. Gold was analyzed by fire assay of a 30 g subsample with atomic absorption finish. An additional 35 elements were determined by aqua regia digestion and ICP analysis. Over-limit gold analysis (>10 g/t Au) was completed using fire assay of a 30 g subsample and a gravimetric finish.

In general, one control sample (i.e. duplicate, standard reference material (SRM), or blank) was inserted for every 10 drilled samples. Thus, each mineralized interval, normally >30 m, typically contained two to three control samples.

Samples were always attended or locked at the sample dispatch facility. Sample collection and transportation were undertaken by company or laboratory personnel using corporately-owned vehicles. The Project data are stored in a MS Access database.

The QP is of the opinion that the sample preparation, sample security, and analytical procedures undertaken for the San Antonio Project are acceptable. The QA/QC procedures and subsequent results demonstrate that the drill hole data are reasonable and suitable for estimating Mineral Resources.

1.8 Data Verification

The Qualified Persons performed site visits in support of Report compilation and data verification. The QPs individually reviewed the information in their areas of expertise, and concluded that the information supported Mineral Resource estimation, and could be used in PEA-level mine planning and economic analysis.

1.9 Metallurgical Testwork

Metallurgical test work was performed by the Colorado Mineral Research Institute (CMRI), SGS Mineral Services (SGS Durango), and Metcon Research Facility (Metcon). Tests included gravity concentration, flotation, bottle roll leach, column leach testing and preliminary environmental testing.

The samples tested have demonstrated amenability to flotation and heap leach cyanide leaching. Gold recovery in laboratory column leach testing varied from 47–91%, depending on material type. Field gold recovery by heap leaching is estimated to range from 44–86% considering averages of similar material types and pit locations and crushing to P80 9.5 mm (⅜ inch). Cyanide consumption will be low to moderate, on the order of 0.26 kg/t, and lime consumption will be low on the order of 1.3 kg/t.

1.10 Mineral Resource Estimation

The geological model is divided into five model areas: Los Planes, Intermediate, Las Colinas, La Colpa, and NE Waste. Three significant faults were modeled. Review of gold grades against structure logs showed a significant increase in gold grades in material logged as cataclasite. The final cataclasite domains at Los Planes, Intermediate, and Las Colinas can generally be described as a gold grade model with an underlying geologic support. At La Colpa, there was insufficient logged cataclasite to create a reliable model. A gold grade model was created using an approximate 0.10 g/t Au cut-off. Material outside the modeled cataclasite is identified as massive rock. The end result was eight estimation domains for the Project limited to within 100 m of the drilling included in the Mineral Resource estimate. An oxidation state model was created from logged geological information and was divided into four volumes using three surfaces: base of alluvium, base of oxidation, and base of the transition. Material below the transition zone surface was modeled as sulphide material. The oxidation model was not constrained by distance to drill holes. Estimation used hard boundaries between domains.

Samples were composited on 3 m intervals. Capping and restriction grade limits were imposed by domain. Variograms were modeled for all mineralized domains using the 3 m composites. Specific gravity values were assigned to blocks using the median density by oxidation model and mineralized or unmineralized domain.

The interpolation of gold grades was completed by estimation domain using an ordinary kriging algorithm. The estimation was completed in three passes. The estimation method required three drill holes to estimate a block in the first pass, two drill holes in the second pass, and single drill holes were allowed to estimate blocks in the third pass. The search ellipse was oriented using a variable orientation which allowed for the search ellipse to follow the curvature of the estimation domains, following the same structural model controls that were used to generate the domain wireframes. In cases where outliers were handled using a restricted distance methodology, grades were allowed to be unrestricted to within a constant distance of 45 x 22.5 x 7.5 m which corresponded to 75% of the search ellipse in the first pass, 50% of the search ellipse in the second pass, and 25% of the search ellipse in the third pass.

The OK interpolant was validated using both visual and statistical (alternate estimation methods, global bias checks, swath plots, and quantile–quantile plots) methods. No significant biases were noted.

The classification of blocks was primarily based on the confidence of the domain model, and the calculated average distance between three drill holes. No blocks were classified as Measured. Blocks within the modeled cataclasites were classified as Indicated if three drill holes were within 45 m, the block was estimated in the first two passes, and had at least two drill holes estimating the blocks. Blocks were classified as Inferred if the drill spacing was within 100 m. Blocks classified as Inferred also included specific domain and geological considerations.

Mineral Resources were constrained within an optimized pit shell that met the requirements for reasonable prospects of eventual economic extraction. Small surfaces from the conceptual pit and any mineralization beyond the mineral tenure boundaries were excluded from inclusion in the Mineral Resource estimates.

Cut-off grades were calculated by model area, and by material type, and ranged from 0.095–0.199 g/t Au.

1.11 Mineral Resource Statement

Mineral Resources are reported insitu, using the 2014 CIM Definition Standards. The Mineral Resource estimates have an effective date of 30 November, 2024.

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The Qualified Person for the estimate is Mr. Richard Schwering, RM SME, an employee of Hard Rock Consulting.

Mineral Resources are summarized in Table 1-1.

Factors that may affect the Mineral Resource estimates include changes to: metal price and exchange rate assumptions; assumptions used to generate the estimation domains; local interpretations of mineralization geometry and continuity of mineralized zones; geological and mineralization shape and geological and grade continuity assumptions, including structural modeling assumptions in the Los Planes area where additional faulting is suspected but not confirmed, and the modeling of post-mineralization dikes; treatment of high-grade gold values; density assignments; the assumptions used to generate the gold cut-off grades; geotechnical assumptions used for assumed pit slope angles; metallurgical recovery assumptions; input and design parameter assumptions that pertain to the open pit shell used to constrain the estimates; assumptions as to the ability to access the site, retain mineral and surface rights titles, obtain environmental and other regulatory permits, and obtain the social license to operate.

The San Antonio Project lies within a separate hydrologic watershed from the Sierra de La Laguna Biosphere Reserve, so Minera Pitalla anticipates no impacts to water usage or quality in the biosphere reserve. There have been concerns with mining projects that are within the hydrologic watershed of the biosphere reserve. There has been generalized opposition based in La Paz against all mining activities in the region, based on water concerns.

1.12 Mining Methods

The 2024 PEA is preliminary in nature and includes Inferred Mineral Resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realized.

Pit shells were generated using Lerchs–Grossmann (L–G) algorithms based on varying metal prices with a base gold price of US$1,900/oz Au. Starting with the current topography, a total of 51 pit shells were generated to determine optimal break points for developing pit phases and for determining the ultimate final pit phases for each deposit.

Pit slopes followed recommendations by Golder Associates Inc. (Golder). The pits were grouped into a single structural domain, based on observation of similar orientation of small-scale geologic structures logged in core holes located in Las Colinas, Intermediate, and Los Planes. The geotechnical model provided the basis for the analysis of potential modes of inter-ramp and overall slope instability, including rock-mass controlled instability and planar and wedge sliding mechanisms. The recommend inter-ramp slope angles were limited to 41° in the oxide zones, 45° in the sulphide zones and 35° in the alluvium.

Table 1-1: Mineral Resource Statement

Confidence Classification	Area	Oxidation State	Cut-off Grade (g/t Au)	Tonnage (kt)	Gold Grade (g/t Au)	Contained Metal (koz Au)
Indicated	Los Planes	Oxide and transition	0.095	15,839	0.91	461.2
		Sulphide	0.156	26,607	1.10	943.7
	Intermediate	Oxide, transition, and sulphide	0.150	5,239	0.87	146.3
	Las Colinas	Oxide and transition	0.184	1,430	0.69	31.9
		Sulphide	0.199	6,407	0.77	158.1
	Total	***Oxide, transition, and sulphide***	***0.095–1.99***	***55,522***	***0.98***	***1,741.3***
Inferred	Los Planes	Oxide and transition	0.095	5,479	0.34	59.1
		Sulphide	0.156	1,319	0.71	30.2
	Intermediate	Alluvium, oxide, transition, and sulphide	0.150	660	0.43	9.2
	Las Colinas	Alluvium, oxide, and transition	0.184	689	0.49	10.9
		Sulphide	0.199	579	0.59	11.0
	La Colpa	Alluvium, oxide, and transition	0.120	4,635	0.29	43.9
		Sulphide	0.194	1,597	0.39	19.9
	Total	***Alluvium, oxide, transition, and sulphide***	***0.095–1.99***	***14,957***	***0.38***	***184.4***

Notes to Accompany Mineral Resource Table:

1. Mineral Resources are reported insitu, using the 2014 CIM Definition Standards.
2. Mineral Resources have an effective date of 30 November, 2024. The Qualified Person for the estimate is Mr. Richard Schwering, RM SME, a Hard Rock Consulting employee.
3. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. Mineral Resources are constrained within a conceptual open pit shell that used the following input parameters: gold price of US$2,150/oz; a mining cost of US$2/t mined, incremental mining cost of US$0.017/t mined for each 6 m depth; variable processing costs by oxidation state, ranging from US$3.84–5.26/t processed; general and administrative costs of US$1.00/t processed; finishing and selling costs of US$0.75/t processed; variable metallurgical recoveries by oxidation state, ranging from 44–86%; and variable pit slope angles ranging from 35–45º. Mineral Resources are reported above variable cut-off grades, ranging from 0.095–1.99 g/t Au.
5. Numbers have been rounded.

For the pit stability analyses the pit slopes were assumed to be fully depressurized by natural drawdown or through groundwater pumping and installation of horizontal drains, if necessary. Drainage diversions ditches will be established around the upper crest of the open pit and waste rock storage facilities (WRSF) to divert storm water. There are two major arroyos that merge just to the southeast of the Intermediate pit. The 2024 PEA assumes that these arroyos will be diverted in between the Intermediate and Las Colinas pits.

Haul roads were designed at a width of 25 m, which provides a safe truck width (6.7m wide for Caterpillar 777 size truck) to running surface width ratio of 1:3 with an additional 5 m for a berm and a drainage ditch. Maximum grade of the haul roads was 10%, except for the lower benches where the grade was increased to 12%, and the ramp width was narrowed to 15 m to minimize excessive waste stripping. Mining levels were planned on 6 m benches.

The final Los Planes, Intermediate, and Las Colinas pit designs were limited to the US$1,900/oz Au pit shell. The Los Planes pit was designed to have three separate phases with the first phase being based on a US$380/oz Au pit and the second phase on a US$523/oz Au pit. The final Los Planes pit will be approximately 0.75 km wide (east–west) by 1.2 km long (north–south) and up to 290 m deep. The Intermediate pit will be approximately 0.45 km wide (east–west) by 0.45 km long (north–south) and up to 170 m deep. The Las Colinas pit will be approximately 0.41 km wide (east–west) by 0.5 km long (north–south) and up to 152 m deep. The Las Colinas pit was limited to the south by the property boundary.

The Mineral Resource estimates are considered to be internally diluted by compositing. For the 2024 PEA mine plan no external or mining loss factors were added in to the mine schedule. As the Project advances, dilution and mining loss factors should be investigated further to determine the appropriate amounts for the deposit.

Cut-off grades were calculated by open pit area, and by material type. The internal cut-off grade calculation includes the estimated plant operating costs, all general and administrative costs, and refining and selling costs during pit operations and metallurgical recoveries. The cut-off grades range from 0.11–0.23 g/t Au depending on the material type and area.

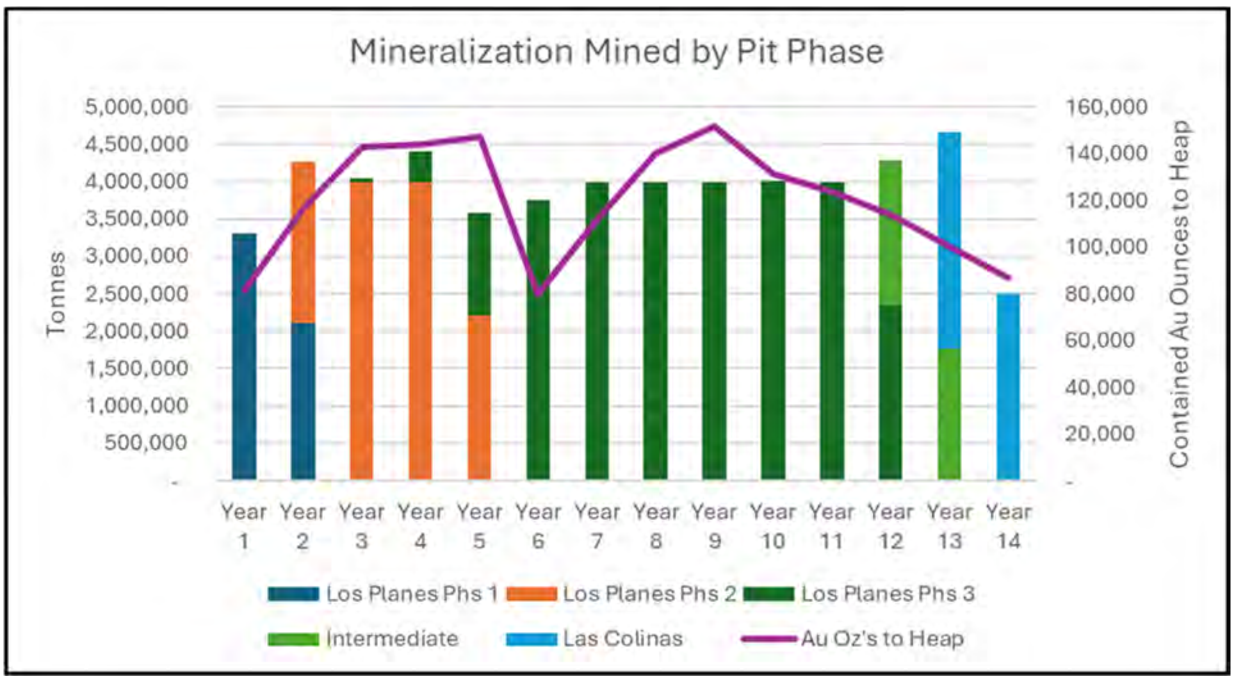
The mine pre-production requirements at the project are minimal given the presence of mineable mineralization near the bedrock surface. The first pit phase was planned near the crusher area, so the haul distances would be relatively short at the beginning of the mine life. Waste material from the pit areas will be required for construction of the heap leach pad, crusher area and other infrastructure. Additional studies should evaluate how much material will be required and determine if the first pit phases will provide sufficient waste, or if waste may have to be obtained from future phases.

Production of mineralized material from the open pits, summarized in Table 1-2, is driven by the nominal crusher capacity rate of 11,000 t/d, which is equivalent to 4.0 Mt/a, and results in a mine life of approximately 14 years with one year of residual leaching. A total of 54.8 Mt of mineralized material is scheduled to be sent to the crusher (Figure 1-1) and 176 Mt of waste rock and alluvium is scheduled to be sent to the WRSF (Figure 1-2) for an average strip ratio of 3.2:1.

Table 1-2: Mineral Resources Scheduled Within 2024 PEA Mine Plan

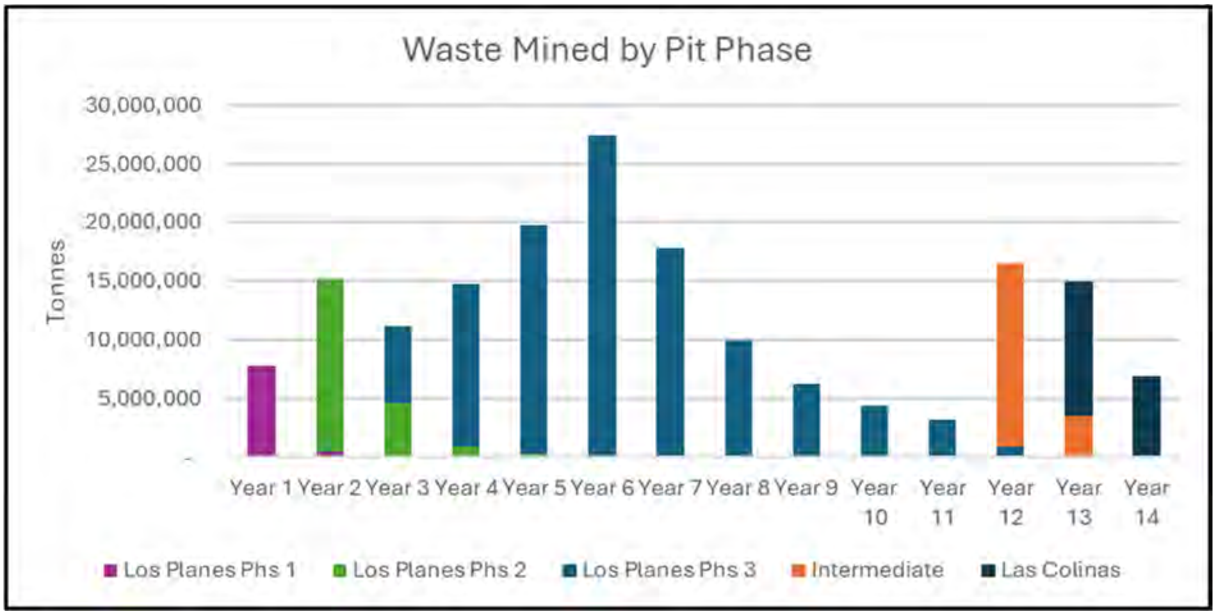
Material Type	Indicated			Inferred		
	Tonnes (kt)	Gold Grade (g/t Au)	Contained Gold (koz Au)	Tonnes (kt)	Gold Grade (g/t Au)	Contained Gold (koz Au)
Los Planes; oxide, mixed	15,566	0.92	458.0	3,569	0.40	46.3
Los Planes; sulphide	25,276	1.13	918.9	968	0.76	23.7
Intermediate; oxide, mixed	478	0.58	8.9	204	0.40	2.6
Intermediate; sulphide	3,242	0.88	91.3	120	0.44	1.7
Las Colinas; oxide, mixed	1,275	0.69	28.3	313	0.42	4.2
Las Colinas; sulphide	3,574	0.74	84.8	223	0.42	3.0
Total	***49,410***	***1.00***	***1,590.2***	***5,397***	***0.47***	***81.6***

Figure 1-1: Annual Mineralized Material Forecast



Note: Figure prepared by Hard Rock Consulting, 2024. Phs = phase.

Figure 1-2: Annual Waste Schedule



Note: Figure prepared by Hard Rock Consulting, 2024. Phs = phase.

The WRSF designs are of sufficient size for disposal of the waste material defined in the 2024 PEA LOM plan. Peak mineralized material and waste production is estimated at 86,000 t/d.

Year 6 is the peak year for total tonnes mined per annum at 31.5 Mt. As the Project advances, alternative mine schedules should be investigated to better balance the strip ratio around this time. Moving up the start date for the Phase 3 Los Planes stripping or possibly adding a fourth phase to Los Planes are options to be investigated.

The mining equipment for the 2024 PEA mine plan is planned to be supplied by a mining contractor. All loading, hauling, drilling, basting and support services are planned to be included within the mining contract.

Based on the size of mine and production requirements, it is likely Caterpillar 777 (100 t or equivalent) size trucks will be used along with Caterpillar 992 (or equivalent) front-end loaders. The current designs have been developed, assuming this sized mining fleet will be used for the 2024 PEA LOM plan.

1.13 Recovery Methods

The 2024 PEA assumes an open-pit mine with a heap leach operation using a multiple- lift, single-use leach pad. Results from several column tests on various composite samples and crush sizes were used to develop the conceptual process flowsheet and to determine the crush size, recoveries and reagent consumptions used in this Report.

Crushing will be accomplished using a three-stage crushing circuit. The crushing circuit will be designed to produce a 9.5 mm product. The final product from the crushing circuit will be conveyed to a stacking system at the heap leach pads. The heap leach pads were historically designed by Golder and reviewed by KCA.

The stacked material will be leached with a low-grade cyanide solution. The gold- and silver-bearing solution will be collected in a pregnant pond and pumped into a carbon adsorption circuit to extract gold and silver. The loaded carbon will be shipped to Heliostar's La Colorada Mine facility in Sonora, Mexico, where the metal from the loaded carbon will be processed and recovered as doré. Treated carbon will be returned to the San Antonio operation.

Equipment to be used is standard in the industry and the La Colorada Mine facility has sufficient capacity to treat the carbon from any future operations at San Antonio.

1.14 Project Infrastructure

The following infrastructure will be required as the proposed mine is a greenfields site:

- Access roads to the site, including the relocation of a portion of the highway that crosses the facility;
- Power supply lines from an existing power line and relocation of a portion of the powerline that crosses the facility;
- Diesel-fired generators for back-up power supply to critical areas;
- Water supply;
- Water distribution from the storage tank, including a fire water system;
- Sewage treatment for black and gray water;
- Project buildings for:
  - Mine administration;
  - Laboratory;
  - Warehouse;
  - Process and metallurgical services;
  - Crusher office, workshop and warehouse;
  - Change room;
  - Guard house;
- Diesel fuel delivery systems for the plant and generators;
- Miscellaneous site services such as:
  - Security;
  - First aid clinic;

- Communications;
- Employee transport.

It was assumed that the proposed mining contractor would supply their own fuel storage and distribution systems, truck shop and change room/lunch facilities.

No stockpiles or tailings storage facility are envisaged for the Project.

Two WRSFs are planned. The North WRSF will receive all of the waste from Los Planes and Intermediate pits and has a capacity of 157Mt. The Colinas WRSF will receive all of the waste from the Los Colinas pit and has a capacity of 18.5Mt. Both facilities have sufficient capacity to meet the 2024 PEA LOM plan requirements.

Wells in the area have been tested in the past by the National Water Commission responsible for managing Mexico's water resources (Comisión Nacional del Agua, or CONAGUA). Groundwater quality in the Los Planes basin has historically been degraded by agricultural runoff containing nitrate, naturally-occurring arsenic in the mineralized zones, and geothermal activity. Water usage is controlled by CONAGUA, for allocation and management of water rights. The Los Planes aquifer has been considered over-exploited since 1954, having been used heavily for agriculture purposes; approximately 11 Mm^3 is withdrawn per year. No additional water rights can be licensed and all groundwater users must have a water right.

During early technical studies, Pediment Gold was told by CONAGUA that water rights obtained from the agricultural users of the Los Planes aquifer lower in the basin could be transferred nearer to the site, and that new wells could provide water needed for the Project. In 2010, a baseline delineation and characterization study of the potential water resources available for any future development was completed. This preliminary work confirmed that the Los Planes basin has no new water rights available, and that water rights would have to be purchased from existing users. the most likely sources of Project would be groundwater wells that could be sited in the alluvium to the east of the Project area. There could also be some potential contribution from surface runoff that could be captured and, later in the mine life, pit dewatering could supply water for operations needs. Future work should include drilling of test wells to determine potential locations in the basin for production water wells. Other potential water supply alternatives that require study include the direct use of sea water, the use of desalinated water, or reservoir construction to capture surface run-off during the rainy season.

Two arroyo diversions and one diversion berm are required, based on the 2024 PEA mine plan, to be constructed to manage surface water flows through the Project site. Such diversions o will require federal approval from the Secretariat of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales, or SEMARNAT) and CONAGUA.

No accommodations camp is envisaged. Personnel buses will be provided to transport workers to the Project site. It is expected that most personnel will be transported form La Paz, a 60-minute bus commute each way.

Power for any mining operation would be available from an upgraded 34.5 kV line that crosses over the Project, originating from the Triunfo substation, which is located approximately 10 km northwest of the Project area. The current route of the powerline will require relocation, as it intersects a portion of the area planned for the Los Planes open pit. About 3.2 km of line will need to be moved to the proposed road corridor. Although the substation has capacity, the existing 34.5 kV line will require upgrading to service the Project. The 2024 PEA assumes that CFE, the local power supplier, would take on costs to upgrade the El Triunfo substation capacity. In the event of a power failure, diesel-fired backup generators will be used to supply emergency power for safety and security.

1.15 Environmental, Permitting and Social Considerations

1.15.1 Environmental Considerations

The Project is located 8 km north of the historic mining town of San Antonio in the lower, transitional foothills leading to the Sierra de La Laguna mountain range. The Sierra de La Laguna lies at the southern end of the peninsula in the state of Baja California Sur, and was designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a global biosphere reserve. It includes a core area centred on the higher-elevation oak-pine forests, with transitions buffer zones at lower elevations. The Project site is located 18 km from the biosphere buffer zone, and in a completely separate hydrographic basin from the biosphere reserve.

Environmental baseline studies were carried out to document the current conditions in the project area, as well as any potential seasonal variations. Baseline studies are required as part of the permitting process. Completed studies included climate, hydrology, surface and ground water quality, air quality, flora and fauna. Although baseline studies were conducted as part of a permitting effort, no follow up environmental monitoring has been conducted since that time. Additional studies will be required to update the environmental conditions. The timing to plan and collect baseline data that reflect seasonal variations may take several years, with a minimum of one to two years of data collection. There can be an overlap in the collection of baseline data and proceeding with the preparation of permit submittals.

Planned operations at San Antonio would generate waste rock and spent mineralization from the mining operations, as well as hazardous, non-hazardous and regulated wastes. There could be wastewater generated that would be discharged from the site. All wastes and discharges would be subject to environmental permitting and management requirements under the Mexican environmental authority. No tailings would be generated by the proposed process method.

1.15.2 Closure and Reclamation Planning

Current regulations in México require that a preliminary closure program be included in the environmental permit application and a definite program be developed and submitted to the authorities during the operation of the mine (generally accepted as three years into the operation).

A closure plan was prepared in 2012 as a supplemental submission to the primary environmental authorization for the Project, the Manifesto Impacto Ambiental (MIA).

In addition to ensuring risks to human health and the environment are managed, the current closure plan also conforms to the requirements set for in the MIA as well as in regulation NOM-052-SEMARNAT-2007, promulgated by SEMARNAT, which applies to the closure of precious metal leach piles. It is anticipated that the post-closure site uses could be wildlife or grazing, and possibly some remaining materials could be used for construction or other purposes. The site would be inspected for 20 years post-closure. During the first 10 years, the surface water and groundwater would be monitored annually.

The estimated closure cost was US$17.6 M, based on 2012 costs. The total cost included an escalation of 3% annually for the activities carried out post-closure. The cost estimate assumed that grading of the waste rock facilities would be carried out during operations, and no costs for that activity were included in the closure cost estimate. The closure costs also assumed that mine site personnel and equipment would be used for earth movement (hauling and grading), as opposed to third-party contractors.

1.15.3 Permitting Considerations

Previous phases of exploration activity were permitted under an exploration permit; however, the last exploration phase was conducted in 2011. Permitting for mining exploitation was initiated based on the environmental baseline studies, but not completed. A Documento Tecnico Unificado (DTU), which combined the MIA, risk assessment (ER), and land-use change technical study (ETJ) application into a single document, was received by SEMARNAT on February 5, 2019, but was not subsequently approved. SEMARNAT cited the reasons for not approving the MIA as requiring additional information regarding potential identification, description and impacts to the environment; additional information on the construction, operation and closure plans for the project; and additional information regarding the impact on the local aquifer. Argonaut filed a lawsuit challenging the local zoning plan, which they argued was not validly constituted, and should not have been an obstacle to the permitting process. The lawsuit is still ongoing.

The Project maintains land occupation permits negotiated with the ejidos of San Antonio and San Luis. Minera Pitalla holds a water concession granted by CONAGUA, which allows for an annual extraction volume of 731,000 m^3. The QP notes that the water concession usage would need to be changed from agricultural to industrial usage.

Despite the ongoing lawsuit, due to changes in the mine planning, Project advancement will require that environmental permit documents be updated and/or developed and submitted to SEMARNAT for approval. The QP notes that due to the presence of ephemeral flows in arroyos at the site, CONAGUA will be included in the permit review process. It is anticipated that a construction permit is required from the local municipality (Municipality of La Paz) along with an archaeological release letter from the National Institute of Anthropology and History (INAH). An explosives permit will be required from the Ministry of Defense (SEDENA). Power supply operational authorization will be required from the federal electrical commission.

A two-lane, paved road from San Juan de Los Planes passes directly through the proposed Project site, connecting State Highway 286 with Federal Highway 1 in San Antonio. A portion of this road will require relocation as part of Project development. In Mexico, the agency responsible for authorizing the relocation of a road is typically the Secretariat of Communications and Transportation, as well as environmental authorization from SEMARNAT. Road relocation is anticipated to also involve authorization from both state and municipal authorities.

1.15.4 Social Considerations

A social baseline study was conducted in 2010 (DS Dinamica, 2011). Throughout the summer of 2010, a team of interviewers went house-to-house conducting surveys in villages near the Project site. In addition, several key government and community leaders were interviewed.

Minera Pitalla personnel have indicated that, for the most part, local community leaders and residents in the San Antonio, El Triunfo and San Juan de Los Planes areas appear to be in favour of Project development as at the Report effective date. Minera Pitalla's summary of the key stakeholders included government agencies, non-governmental organizations, and media representatives. Of the 13 key stakeholders identified, three were against mining activities and 10 were favourable to the Project. None of the three stakeholders against mining activities were from the local communities.

Minera Pitalla has a permanent office in San Antonio with two employees who participate in social programs for the local communities.

Regionally, there has been significant opposition from well-organized groups from the population centres of Todos Santos, La Paz and Los Cabos against the Concordia Gold Project (formerly the Paredones Amarillos Project) which is located approximately 30 km from the Project. The Concordia Gold Project has faced significant opposition due to environmental concerns, particularly its potential impact on the Sierra de La Laguna Biosphere Reserve. In early 2024, the anti-mining group "Medio Ambiente y Sociedad" (Environment and Society) conducted various events focused on protecting the Sierra de La Laguna Biosphere Reserve. The San Antonio Project lies within a separate hydrologic watershed from the Sierra de La Laguna Biosphere Reserve, so Minera Pitalla anticipates no impacts to water usage or quality in the biosphere reserve. There has been generalized opposition based in La Paz against all mining activities in the region, due to water concerns.

1.16 Markets and Contracts

Markets for doré are readily available. The 2024 PEA assumes that loaded carbon will be shipped from the San Antonio Project to Heliostar's La Colorada Mine, located near Hermosillo, Sonora, Mexico, and that gold room facility would be used for the production of doré from the Project.

A gold price of US$1,900/oz Au was used for the development of the 2024 PEA mine plan and economic analysis to reflect a long-term conservative price forecast. A gold price of US$2,150/oz Au was used for the Mineral Resource estimate, in accordance with industry-accepted practice.

No contracts are in place. The 2024 PEA assumes that San Antonio will be a contract mining operation with an Owner-operated process facility. Contracts would be entered into with third parties, where required, and could cover areas such as diesel and fuel; reagents; catering; explosives and blasting; mine grade control, RC and core drilling; oils and lubricants.

Contracts would be negotiated and renewed as needed. Contract terms are expected to be typical of similar contracts in Mexico that predecessor company Argonaut had entered into on its active mining operations.

1.17 Capital Cost Estimates

Capital cost estimates were derived from Heliostar's other mining operations in Mexico, Hard Rock Consulting's and KCA's in-house database of projects and studies including experience from similar operations and recent quotes. KCA also used historical inputs from Golder for heap leach earthworks and liner requirements, URBICON for highway relocation costs and Aa Electrificaciones for powerline relocations costs.

Initial capital in the 2024 PEA included items purchased in the first two years before production, production is estimated to start in month 1 of Year 1. Initial capital costs were developed for all of the required processing and infrastructure facilities required before production can begin. Total initial capital including contingency was estimated at US$138.6 M.

A contingency of 20–25% was allocated for all direct and indirect plant costs and mine infrastructure and equipment. The overall contingency for the process and infrastructure estimate is approximately 23% of direct pre-production plant and spare parts costs. Total initial contingency costs were estimated to be US$20.3 M.

Initial capital costs for the mine were minimal, based on the assumption that mining will be executed by a mining contractor. Costs were included for a mine truck shop, survey and slope monitoring equipment and the contractor mobilization, and total US$5.4 M.

Process and infrastructure costs were estimated by KCA with historical inputs from Golder for heap leach earthworks and liner requirements, URBICON for highway relocation costs and Aa Electrificaciones for powerline relocations costs. All equipment and material requirements were based on the design information described in previous sections of this Report. Budgetary capital costs were estimated primarily based on recent quotes in KCA's files for all major and most minor equipment as well as recent contractor quotes for all major construction contracts. Where quotes were not available, a reasonable estimate or allowance was made based on KCA's experience with similar projects. All capital cost estimates were based on the purchase of equipment quoted new from the manufacturer or to be fabricated new. Costs included considerations for key discipline areas (major earthworks and liners, civil (concrete), structural steel, platework, mechanical equipment, piping, electrical, instrumentation, infrastructure and buildings, supplier engineering, and commissioning and supervision); freight, customs fees and duties, and installation costs; engineering, procurement, and construction management (EPCM), indirect costs, and initial fills inventory.

The Owner's costs are estimated to be US$4.5 M. Working capital was estimated to be US$7.3 M. The estimated sustaining capital allocation for the Project is US$48.6 M with a 23% contingency on the infrastructure items.

The total LOM capital is estimated to be US$179.90 M with US$131.28 M in initial capital costs and US$48.6 M in sustaining capital costs (Table 1-3).

Working capital is excluded from the totals as the costs are credited back to the operation at the end of the mine life.

1.18 Operating Cost Estimates

The operating costs include the ongoing cost of operations related to mining, processing, and general administration activities. Operating cost estimates were derived from Heliostar's other mining operations in Mexico and their mining contract quotes, and Hard Rock Consulting's and KCA's in-house database of projects and studies including experience from similar operations.

Operating cost estimates use terms that are non-International Financial Reporting Standards measures:

- All-in sustaining costs (AISC): as set out in the 2018 World Gold Council guidance note. AISC are the sum of operating costs (as defined and calculated above), royalty expenses, sustaining capital, corporate expenses and reclamation cost accretion related to current operations. Corporate expenses include general and administrative expenses, net of transaction related costs, severance expenses for management changes and interest income. AISC excludes growth capital expenditures, growth exploration expenditures, reclamation cost accretion not related to current operations, interest expense, debt repayment and taxes;
- Cash operating costs: include mine site operating costs such as mining, processing and administration, but exclude royalty expenses, depreciation and depletion and share based payment expenses and reclamation costs.

Mine operating costs were calculated using recent mining contracts and quotes from Heliostar's operations in Mexico. Support services were estimated from historic actuals and from base principals for equipment, consumables, supplies, services and manpower requirements based on the mine schedule. Equipment fuel requirements were calculated based on required operating hours for each unit and haulage route profiles for the trucks. Diesel costs were estimated at US$1.10/L. Mine operating costs total US$2.47/t mined, or US$10.40/t mineralized material.

Table 1-3: Total LOM Capital Costs

LOM Capital Costs	Initial (US$M)	Sustaining (US$M)	Total LOM (US$M)
Mine area	4.36	5.00	9.36
General and administrative infrastructure	72.26	20.50	92.76
Processing	12.81	0.00	12.81
Total direct costs	***89.43***	***25.50***	***114.93***
Owner costs and reclamation	5.00	17.31	22.31
Project indirect costs	16.51	0.00	16.51
Contingency	20.35	5.80	26.16
Total indirect costs	***41.86***	***23.11***	***64.97***
Total	***131.28***	***48.62***	***179.90***

Process operating costs were estimated by KCA from first principles, with no contingency allocations. Included in the estimates were: staffing requirements; power usage; doré processing costs at the La Colorada Mine including transport costs from the proposed San Antonio operation to that plant; operating supplies estimated based upon unit costs and consumption rates predicted by metallurgical testwork; estimates of heap leach and recovery plant consumables; wear, overhaul and maintenance costs; fuel costs; and mobile and support equipment costs.

General and administrative costs were included, totalling US$1.18/t mineralized material.

The LOM average cash operating cost is projected to be US$803/oz of gold sold. The LOM average base case total operating cost (including royalties and production taxes) is expected to be US$898/oz Au. The total AISC summary per tonne of mill feed and per ounce of gold is expected to be US$21.15/t and US$1,063/oz Au respectively, as shown in Table 1-4.

1.19 Economic Analysis

1.19.1 Forward-Looking Information Note

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented herein.

Table 1-4: Total Operating Cost Estimate

Operating Costs	Operating Cost (US$/oz Au)	Operating Cost (US$/t mineralized material)	Operating Cost (US$/t mined)
Total mining	522.78	10.40	2.06
Total processing	204.24	4.06	
Total site general and administrative	59.26	1.18	
Refinery and transport	16.85	0.34	
Cash operating costs	***803.13***	***15.97***	
Production taxes	76.22	1.52	
Royalties	19.00	0.38	
Total cash costs	***898.34***	***17.87***	
Capital costs	165.04	3.28	
Total AISC	***1,063.39***	***21.15***	

Information that is forward-looking includes:

- Mineral Resource and Mineral Reserve estimates;
- Assumed commodity prices and exchange rates;
- Mine production plans;
- Projected recovery rates;
- Sustaining and operating cost estimates;
- Inputs to the economic analysis that supports the Mineral Reserve estimate
- Assumptions as to closure costs and closure requirements;
- Assumptions as to environmental, permitting and social risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed;
- Unrecognized environmental risks;
- Unanticipated reclamation expenses;
- Unexpected variations in quantity of mineralized material, grade, or recovery rates;
- Geotechnical and hydrogeological considerations during mining being different from what was assumed;
- Failure of plant, equipment, or processes to operate as anticipated;

- Accidents, labour disputes and other risks of the mining industry.

1.19.2 Economic Analysis

The 2024 PEA is preliminary in nature and includes Inferred Mineral Resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realized.

The Project was evaluated using a constant US dollar, after-tax discounted cashflow methodology based on a 5% discount rate. For personnel costs, and material sourced in Mexico, an exchange rate of 19 pesos per US dollar was assumed. This valuation method requires projecting material balances estimated from operations and calculating economic analysis. Cashflows are calculated from sales of metal, less cash outflows such as operating costs, capital costs, working capital changes, royalties, any applicable taxes and reclamation costs. Resulting annual cash flows are used to calculate the net present value (NPV) and internal rate of return (IRR) of the Project. Tax calculations involve complex variables that can only be accurately determined during operations, and as such, the actual post-tax results may differ from those estimated.

The economic analysis was performed assuming a base case gold selling price of US$1,900/oz. The economic analysis also used the following assumptions:

- The construction period will be two years;
- The mine life will be 14 years, with residual leaching of gold continuing into Year 15;
- Cost estimates are in constant Q4 2024 US dollars for capital and operating costs, with no inflation or escalation factors considered;
- Results are based on 100% ownership with a 1% government NSR on revenue from gold production;
- Capital costs are funded with 100% equity (no financing assumed);
- All cash flows are discounted to the start of the construction period using a mid-period discounting convention;
- All metal products will be sold in the same year they are produced;
- Project revenue will be derived from the sale of gold doré.

The Project was assumed to be subject to the following tax regimes:

- The Mexican corporate income tax system (Federal Income Tax) consists of 30% income tax. Federal income tax is applied on Project income after deductions of eligible expenses including depreciation of assets, earthworks and indirect construction costs, exploration costs, special mining tax, extraordinary mining duty and any losses carried forward;

- Mining tax in Mexico (Special Mining Tax) consists of 8.5% on earnings before interest, taxes, depreciation, and amortization. The special mining duty is applied on Project income after deduction of eligible exploration, earthworks and indirect costs expenses. Income subject to the special mining tax does not allow deductions for depreciation or allow losses carried forward.

At the assumed metal price, total payments are estimated to be US$362.1 M over the LOM. For the economic model, value-added taxes are not considered in the capital or operating cost estimate as it is assumed that value-added taxes paid versus value-added tax credits will be a net zero value during the period in which they occur.

Mexican tax law allows for the carry-forward of operating losses for the development of a property. The historic loss carry-forward is almost used up and is currently estimated at US$50,000 for the Mexican subsidiary company.

Royalties payable for the San Antonio Project include a 1.0% royalty due to the Mexican government as an “Extraordinary Mining Duty”. The 1.0% extraordinary mining duty represents US$20.7 M over the LOM and is included in the Project economics.

The financial analysis for the Project shows an after-tax net present value at a discount rate of 5% of US$398.66 M, an after-tax internal rate of return of 40.7%, and a payback period of 2.05 years.

Table 1-5 summarizes the projected cashflow; net present value at varying rates; internal rate of return; years of positive cash flows to repay the negative cash flow (payback period); multiple of positive cash flows compared to the maximum negative cash flow (payback multiple) for the project on both an after-tax and before-tax basis.

The projected total lifespan of the Project is 15 years with two years of construction. Approximately 1.67 M oz of gold is projected to be mined, with 1.10 M oz recovered and produced for sale.

1.19.3 Sensitivity Analysis

A sensitivity analysis was performed on the base case to determine Project sensitivity to gold price and grade, operating costs and capital costs.

The Project, like almost all precious metals projects, is very responsive to changes in the price of its chief commodity, gold. From the base case price of US$1,900/oz Au, a change in the average gold price of US$200/oz Au would change the NPV at a 5% discount rate by 22.7%, or approximately US$90.4 M (Figure 1-3).

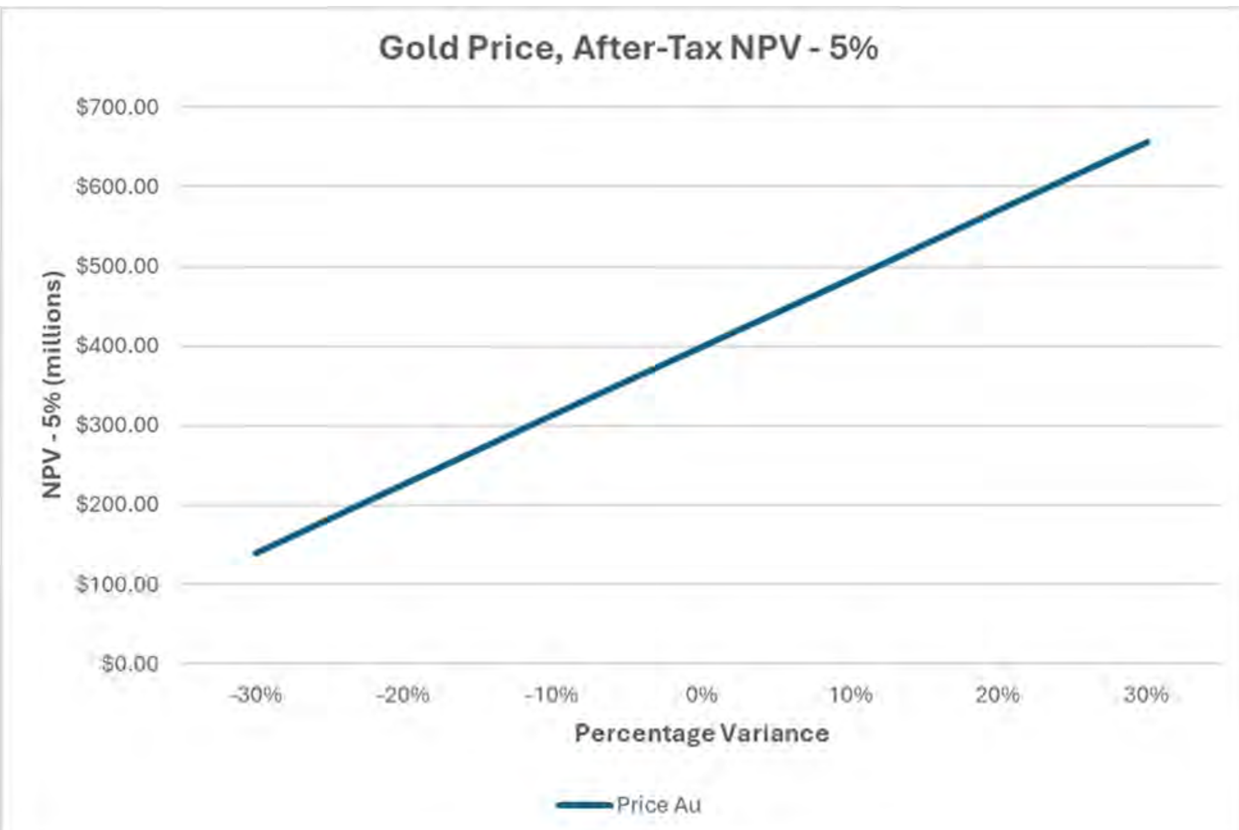
The Project is most sensitive to changes in the gold grade, experiencing an approximate 23.6% change in the NPV at a 5% discount rate for each 10% increase or decrease in grade.

The Project is very sensitive to the cost of operations, incurring an approximately 8.9% decline in the NPV at a 5% discount rate for each increase of 10% in the operating costs.

Table 1-5: Summary Economic Results

Project Valuation Overview	Units	After Tax	Before Tax
Total cashflow	US$ M	651.21	1,013.36
NPV @ 5.0% (base case)	***US$ M***	***398.66***	***635.33***
NPV @ 7.5%	US$ M	315.09	509.96
NPV @ 10.0%	US$ M	250.14	412.36
Internal rate of return	***%***	***40.7***	***53.7***
Payback period	Years	2.05	1.71
Payback multiple		5.24	7.65
Total initial capital	US$ M	138.59	138.59

Figure 1-3: Metal Price Sensitivity Analysis



Note: Figure prepared by Hard Rock Consulting, 2024.

The Project is less sensitive to variances in the cost of capital, experiencing an approximate 2.5% decline in the NPV at a 5% discount rate for each increase of 10% in the capital costs, as shown in Figure 1-4.

1.20 Risks and Opportunities

1.20.1 Risks

1.20.1.1 Mining

The Intermediate and Las Colinas pits are intersected by two major arroyos. When more detailed costs and permitting information is available for these diversions, this could result in the two pits having to be removed from the mine plan.

1.20.1.2 Process

Even though a significant metallurgical testing program was conducted, additional testing is required to confirm past results and to ensure that areas of the mine are reasonably represented in the testwork. There are risks associated with ultimate recoveries being lower than estimated and reagent requirements being higher.

Acid generation testwork is required. There is a risk that oxidation of any transition or sulphide material processed may increase lime and cyanide requirements and eventually adversely affect recoveries.

Capital costs were estimated based preliminary engineering, on data in KCA’s files and on inflation factors. There is a risk that the capital costs may be higher than indicated.

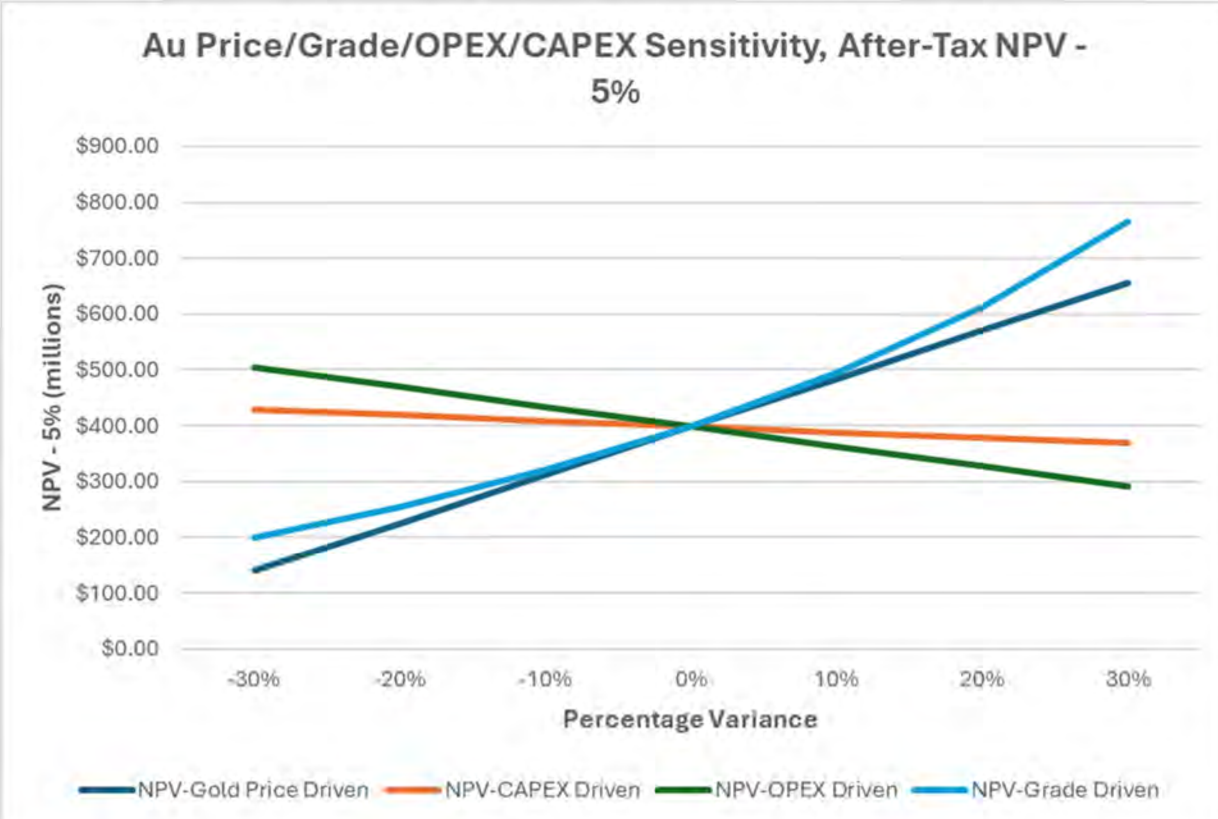
1.21 Opportunities

Since additional testing is required, there are also opportunities with ultimate recoveries being higher than estimated and reagent requirements being lower. Capital costs were estimated based preliminary engineering, on data in KCA’s files and on inflation factors. There is an opportunity that the capital costs may be lower than indicated.

1.22 Interpretation and Conclusions

An economic analysis was performed in support of the 2024 PEA; this indicated a positive cash flow using the assumptions detailed in this Report.

Figure 1-4: Project Grade, Gold Price, Operating Cost & Capital Cost Sensitivity Analysis



Note: Figure prepared by Hard Rock Consulting, 2024. CAPEX = capital cost estimate; OPEX = operating cost estimate.

1.23 Recommendations

A single phase work program is proposed for all disciplines other than exploration, where a two-phase program is recommended, and provided by discipline area. The total budget required to complete the suggestions is approximately US$7–US$7.7 M, depending on whether the work is completed internally or a consultant is used. The majority of the work can be conducted concurrently. The second work phase proposed for exploration would depend on the results of the proposed regional, grassroots exploration program in the first phase.

Recommended exploration activities are divided into two work phases. The first work phase consists of drilling known prospects (drilling to identify near-surface oxide mineralization, down plunge and depth extension drilling) and regional, grassroots exploration activities (systematic stream sediment sampling, geological mapping and rockchip/soil sampling), and totals approximately US$4.9 M. The second work phase would consist of drill testing any areas of significant anomalism identified from the regional grassroots exploration program. The recommended budget is US$0.9 M.

Mining-related recommendations include a trade-off study to determine the optimal production rate for the deposit, evaluation of inclusion of the La Colpa Mineral Resource in future mine plans, trade-off studies evaluating Owner versus contract mining and owned versus leased equipment fleets, alternative operating scenarios using a mill and floatation plant should be investigated at a scoping level to see if the improved metallurgical recoveries will cover the additional capital and operating costs of a floatation plant, and additional studies determine the nature of the waste rock and to classify it as potentially or non-acid generating. These activities are suggested to cost from US$0.15–US$0.2 M.

The process recommendations comprise additional characterization, bottle roll and column leach testing be conducted on core samples; and column leach tests on compacted permeability material should be repeated. These activities are estimated to require a budget of US$0.24 M.

Recommendations in the environmental and social discipline area include studies (inflow hydrogeologic model, closure plan and closure cost update, social program updates) and investigations and data collection (new environmental data for baseline studies, geochemistry study update, on-site meteorological station installation, updated hydrology study and collection of water level data). These items are estimated to cost approximately in the range of US$0.8–US$1.5 M.

2.0 INTRODUCTION

2.1 Introduction

Mr. Todd Wakefield, RM SME, Mr. Richard Schwering, RM SME, Mr. Jeffrey Choquette, P.E., Mr. Carl Defilippi, RM SME, and Ms. Dawn Garcia, CPG, prepared this technical report (the Report) for Heliostar Metals Ltd. on the San Antonio Project, located in Baja California Sur, Mexico (Figure 2-1).

The San Antonio Project is owned and operated by Minera Pitalla, S.A. de C.V. (Minera Pitalla), which is a wholly-owned Heliostar subsidiary.

Heliostar announced notice of the acquisition of the Project on July 17, 2024, from Florida Canyon Gold Inc., an interim successor to the former operator Argonaut Gold Inc. (Argonaut), and completed the acquisition on November 8, 2024.

The Report summarizes the results of a preliminary economic assessment (the 2024 PEA) on the Project. The Project includes the Los Planes, Intermediate, Las Colinas and La Colpa deposits and a number of prospects. Mineral Resources are reported for the Los Planes, Intermediate, Las Colinas, and La Colpa deposits.

2.2 Terms of Reference

The Report was prepared to support Heliostar's news release dated 13 January 2025 entitled "Heliostar Files Technical Reports on Mines and Development Project Recently Acquired in Mexico".

Mineral Resources are classified using the 2014 edition of the Canadian Institute of Mining and Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (the 2014 CIM Definition Standards).

All measurement units used in this Report are metric, and currency is expressed in United States (US) dollars unless stated otherwise. The Mexican currency is the peso (MXN$). The Report uses Canadian English.

Figure 2-1: Project Location Plan

Note: Figure prepared by MTS, 2024.

2.3 Qualified Persons

The following serve as the qualified persons (QPs) for this Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in compliance with Form 43-101F1:

- Mr. Todd Wakefield, RM SME, Manager and Principal Geologist, Mine Technical Services Ltd. (Mine Technical Services or MTS);
- Mr. Richard Schwering, RM SME, Principal Resource Geologist, Hard Rock Consulting LLC (Hard Rock Consulting);
- Mr. Jeff Choquette, P.E., Principal Mining Engineer, Hard Rock Consulting;
- Mr. Carl Defilippi, RM SME, Senior Engineer and Project Manager, Kappes, Cassiday & Associates (KCA);
- Ms. Dawn Garcia, CPG, Senior Associate, Hydrogeologist, Stantec Consulting Services Inc. (Stantec).

2.4 Site Visits and Scope of Personal Inspection

2.4.1 Mr. Todd Wakefield

Mr. Wakefield visited the San Antonio Project site on November 22, 2024. During his site visit Mr. Wakefield reviewed drill hole collar locations, trenches, and outcrops; reviewed drill core and RC cuttings; and reviewed standard reference samples (SRMs) used in quality assurance.

2.4.2 Mr. Richard Schwering

Mr. Schwering visited the San Antonio Project site on November 22, 2024. During his site visit Mr. Schwering confirmed drill hole collar locations, was shown outcrops, checked drill hole logs against core, and took check samples for gold assay from quarter core splits.

2.4.3 Mr. Jeff Choquette

Mr. Choquette visited the Project site on November 22, 2024. During his site visit he reviewed drill hole collar locations, trenches, and outcrops; reviewed the proposed general site layout and arroyos within the Project area.

2.4.4 Mr. Carl Defilippi

Mr. Defilippi has conducted three site visits to the Project area, with the latest being on November 22, 2024. For the November visit, Mr. Defilippi spent one day at the site, inspecting drill core and reviewing the proposed general site layout.

2.4.5 Ms. Dawn Garcia

Ms. Garcia visited the site on September 12, 2024. During the site visit, she met with the local Minera Pitalla representatives and the company land manager. She visited the town of San Antonio, the Project site, and a local water supply well.

2.5 Effective Dates

The Report has a number of effective dates including:

- Close-out date for the database used in Mineral Resource estimation: August 29, 2024;
- Date of Mineral Resource estimates: November 30, 2024;
- Date of the economic analysis that supports the 2024 PEA estimates: November 30, 2024;

The overall Report effective date is the of the date economic analysis that supports the 2024 PEA, and is November 30, 2024.

2.6 Information Sources and References

The reports and documents listed in Section 2.7 and Section 27 of this Report were used to support the preparation of the Report.

Additional information was sought from Heliostar personnel where required.

2.7 Previous Technical Reports

Heliostar has not previously filed a technical report on the Project.

Prior to Heliostar's Project interest, the following technical reports had been filed:

- Mach, L., Willow, M., Rhoades, R., and Defilippi, C., 2012: NI 43-101 Technical Report on Resources San Antonio Project: report prepared by SRK Consulting for Argonaut Gold, Inc., effective date 1 September, 2012;
- Orbock, J.C., Gormely L., and Long, S., 2011: Argonaut Gold Inc., San Antonio Gold Project, Baja California Sur, Mexico, NI 43-101 Technical Report: report prepared by AMEC E&C Services Inc. for Argonaut Gold, Inc., effective date 20 June, 2011;
- Hanson, K., Orbock, E.J.C., Long, S., and Gormely, L, 2010: Pediment Gold Corporation San Antonio Project, Baja California Sur, Mexico NI 43-101 Technical Report on Preliminary Assessment: technical report prepared by AMEC E&C Services Inc. on behalf of Pediment Gold Corp., effective date 2 August 2010.
- Herdrick, M.A. and Giroux, G.H., 2009: Technical Report and Resource Update, San Antonio Gold Project, Baja California Sur: technical report prepared on behalf of Pediment Gold Corp., effective date 29 November, 2009.

- Thompson, I.S., and Laudrum, D., 2008: Technical Report and Mineral Resource Estimate San Antonio Gold Project Baja California Sur, Mexico: technical report prepared by Derry, Michener, Booth & Wahl Consultants Ltd. for Pediment Exploration Ltd., effective date 31 December 2007.
- Wallis, C.S., 2004: Technical Report on the Pitalla Properties, Mexico: technical report prepared by Roscoe Postle Associates for Skinny Technologies Ltd.; re-addressed to Pediment Exploration Ltd., effective date 30 June 2004, revised date 29 June 2005.

3.0 RELIANCE ON OTHER EXPERTS

3.1 Introduction

The QPs have relied upon the following other expert reports, which provided information on mineral tenure, taxation and marketing assumptions.

3.2 Mineral Tenure, Surface Rights, and Royalties

The QPs have not independently verified the information on mineral tenure, surface rights, royalties. They have fully relied upon and disclaim responsibility for information derived from the following expert reports:

- ALN Abogados, 2024: Legal Opinion on Compañía Minera Pitalla, S.A. de C.V. concession titles: legal opinion prepared by ALN Abogados for Heliostar, 6 November, 2024, 27 p.
- ALN Abogados, 2024b: Update on Non-Possessory Pledge Agreement: opinion prepared for ALN Abogados for Heliostar, 12 January 2025.
- Heliostar, 2025: Surface Rights, Royalties and Agreements Information, San Agustin Technical Report: letter prepared for the Qualified Persons, 12 January 2025, 7 p.

This information is used in Section 4 of the Report and supports the Mineral Resource estimates in Section 14, and the economic analysis in Section 22.

3.3 Taxation

The QP has not independently verified the information on taxation and royalties applied in the financial model. He has fully relied upon and disclaim responsibility for information derived from the following expert report:

- Heliostar, 2025: Contracts and Taxation Information, San Antonio Technical Report: letter prepared for Mr. Jeffrey Choquette, 10 January, 2025, 2 p.

This information is used in Section 22 of the Report.

3.4 Contracts

The QP has not independently verified the information on taxation and royalties applied in the financial model. He has fully relied upon and disclaim responsibility for information derived from the following expert report:

- Heliostar, 2025: Contracts and Taxation Information, San Antonio Technical Report: letter prepared for Mr. Jeffrey Choquette, 10 January, 2025, 2 p.

This information is used in Section 19 of the Report, and supports the economic analysis in Section 22.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Introduction

The Project is centred on longitude 110º 02’ west and latitude 23º48’ north, adjacent to the historic mining town of San Antonio, about 40 km southeast by paved Highway No.1 from the port city of La Paz, and about 160 km north of the resort town of Cabo San Lucas.

4.2 Project Ownership

4.2.1 Ownership History

The Cirio and Emily mineral concessions located in Baja California Sur area east of La Paz were the first acquired in the area by Compañía Minera Pitalla SA de CV (Minera Pitalla) in 2003.

In 2004, Skinny Technologies Inc. changed its name to Pediment Exploration Ltd., (Pediment Exploration) and in 2005, acquired all of the outstanding shares of El Dragon Minerals LLC, a private Mexican company that owned all the outstanding shares of Minera Pitalla.

Five concession fractions (Triunfo Este Fracc. I, II and III, Triunfo Oeste Fracc. I and II) were obtained by Pediment Exploration from Cortez Resources S. de R.L. de C.V., a Mexican company, by purchase on March 17, 2008.

The El Triunfo–Valle Perdido concession group (El Triunfo Ampliación, the Reducción El Triunfo Uno Fracc. Uno, Reducción El Triunfo Uno Fracc. Dos, and Valle Perdido) held by the federal government as part of the National Zone of Mineral Reserve for more than 40 years, was acquired by Minera Pitalla in 2008 through a competitive bid process.

In 2009, Pediment Exploration changed its name to Pediment Gold Corp. (Pediment Gold).

Argonaut acquired Pediment Gold in 2010, with the transaction completed in early 2011.

4.2.2 Current Ownership

The San Antonio Project is 100% owned by Compañía Minera Pitalla S.A. de C.V. (Minera Pitalla), a wholly-owned Heliostar subsidiary.

4.3 Mineral Tenure

The Project comprises 15 mineral concessions totalling 23,283.86 ha. Concessions are held in the name of Minera Pitalla. The concessions were granted for a duration of 50 years, and were in good standing at the Report effective date.

As per Mexican requirements for grant of tenure, the concessions have been surveyed on the ground by a licensed surveyor. The QPs were advised by Heliostar that duty payments for the concessions have been made, as required. Payments typically increase annually, based on a scale determined by the Mexican Government.

Annual exploration reports (Reporte de Comprobación de Obras) are required to be lodged with the Mexican Government, detailing the work performed and costs associated with the exploration programs to ensure minimum exploration commitments are met. The QPs were advised by Heliostar that such reports were lodged as required.

At the date of the legal opinion, selected concessions were subject to a non-possessory pledge agreement executed between Minera Pitalla and Bank of Montreal. Subsequent to that opinion date, Heliostar's legal counsel advised that the executed non-possessory pledge agreements with the Bank of Montreal had been terminated in their entirety, and the termination registry has been recorded with the Public Mining Registry.

Mineral tenure is summarized in Table 4-1, and shown on Figure 4-1.

The Mineral Resource estimates are fully within the Cirio concession.

4.4 Surface Rights

Heliostar owns 2,636.3240 ha of surface rights in the Project area (Table 4-2). An additional 290 ha is leased under occupation and exploration agreements (Table 4-3). Surface rights are shown on Figure 4-2.

Additional surface rights may be required to support any planned infrastructure locations, depending on the infrastructure type and location.

4.5 Eijidos

There are two ejidos that pertain to Project activities: the San Antonio ejido and the San Luis ejido. The San Antonio ejido is a very old farm holding dating from 1919 and comprising 10,846 ha. San Luis comprises about 1,000 ha of surface rights in the exploration area and is owned mainly by one family group. The San Luis ejido has more extensive irrigation-farmed areas southeast of Los Planes pueblo. There are no work commitments and all types of exploration are permitted except mining. Exploration companies are encouraged to use ejido workers whenever possible. Former operator Argonaut, as well as Heliostar, have endeavoured to hire all local staff from the ejidos and have consulted with the local village councils on all aspects of exploration; jobs are relatively high-paying for the local communities and are thus sought after.

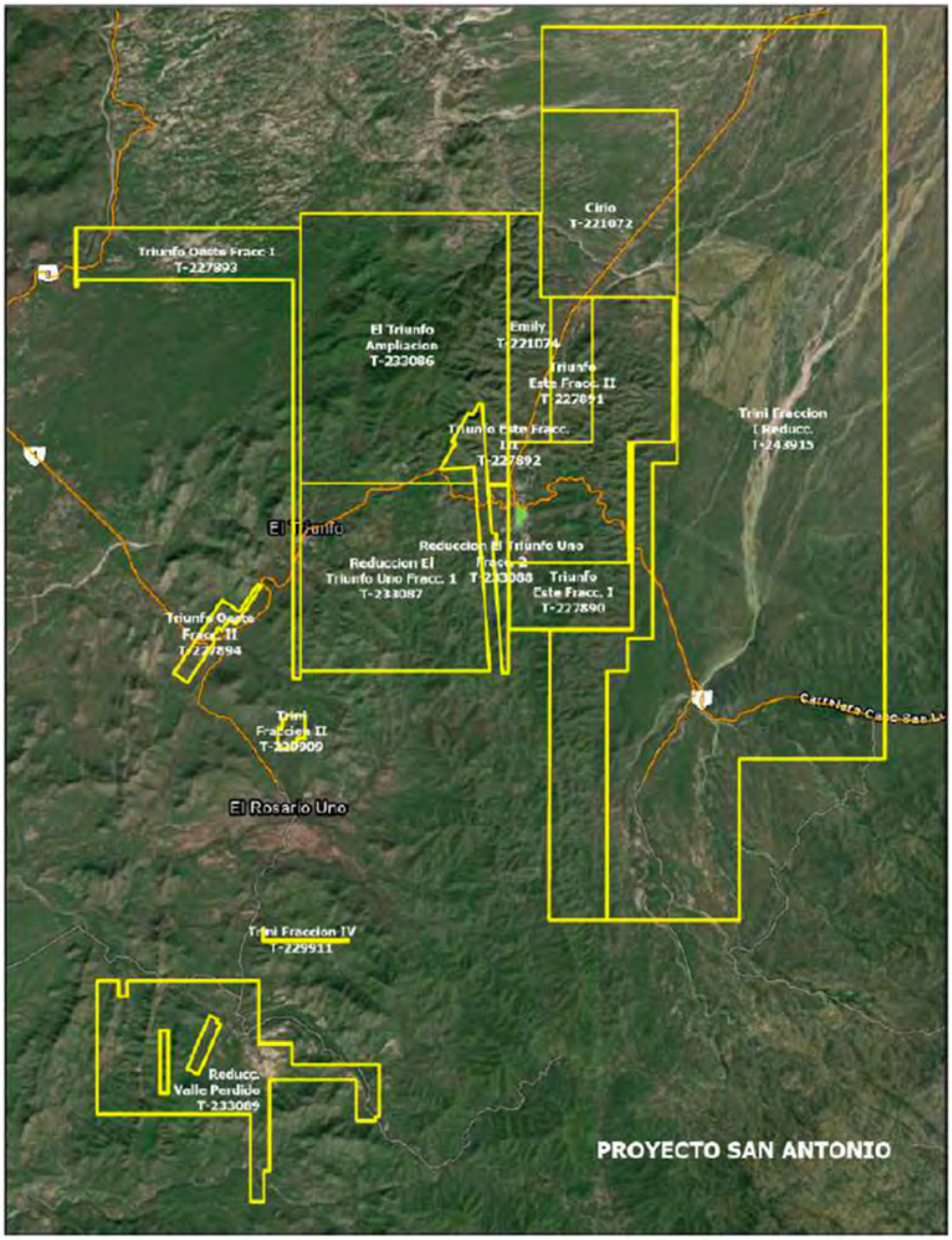
Table 4-1: Mineral Tenure Table

Concession	Title No.	Area (ha)	Valid Date		Title Holder	Note
			From	To		
Cirio	221072	2,789.94	19 November, 2003	18 November, 2053	Minera Pitalla	
Emily	221074	518.28	19 November, 2003	18 November, 2053	Minera Pitalla	
Trini fracción II	229909	41.26	28 June, 2007	27 June, 2057	Minera Pitalla	
Trini fracción III	229910	5.68	28 June, 2007	27 June, 2057	Minera Pitalla	
Trini fracción IV	229911	7.51	28 June, 2007	27 June, 2057	Minera Pitalla	
Triunfo Este fracción I	227890	495.37	8 September, 2006	7 September, 2056	Minera Pitalla	
Triunfo Este fracción II	227891	350.00	8 September, 2006	7 September, 2056	Minera Pitalla	
Triunfo Este fracción III	227892	0.30	8 September, 2006	7 September, 2056	Minera Pitalla	
Triunfo Oeste fracción I	227893	848.69	8 September, 2006	7 September, 2056	Minera Pitalla	
Triunfo Oeste fracción II	227894	95.00	8 September, 2006	7 September, 2056	Minera Pitalla	
El Triunfo Ampliación	233086	3,140.01	9 December, 2008	8 December, 2058	Minera Pitalla	This concession is also subject to a 1–3% NSR royalty payable to the Mexican Geological Service
Reducción El Triunfo Uno fracción 1	233087	1,974.67	9 December, 2008	8 December, 2058	Minera Pitalla	This concession is also subject to a 1–3% NSR royalty payable to the Mexican Geological Service
Reducción El Triunfo Uno fracción 2	233088	136.92	9 December, 2008	8 December, 2058	Minera Pitalla	This concession is also subject to a 1–3% NSR royalty payable to the Mexican Geological

Concession	Title No.	Area (ha)	Valid Date		Title Holder	Note
			From	To		
						Service
Reducción Valle Perdido	233089	1,473.84	9 December, 2008	8 December, 2058	Minera Pitalla	This concession is also subject to a 1–3% NSR royalty payable to the Mexican Geological Service
Trini fracción I reducción	243915	11,406.39	16 January, 2015	27 June, 2057	Minera Pitalla	

Notes: Minera Pitalla = Compañía Minera Pitalla, S.A. de C.V. Mineral concession areas have been rounded.

Figure 4-1: Mineral Tenure Location Map



Note: Figure prepared by Heliostar, 2024.

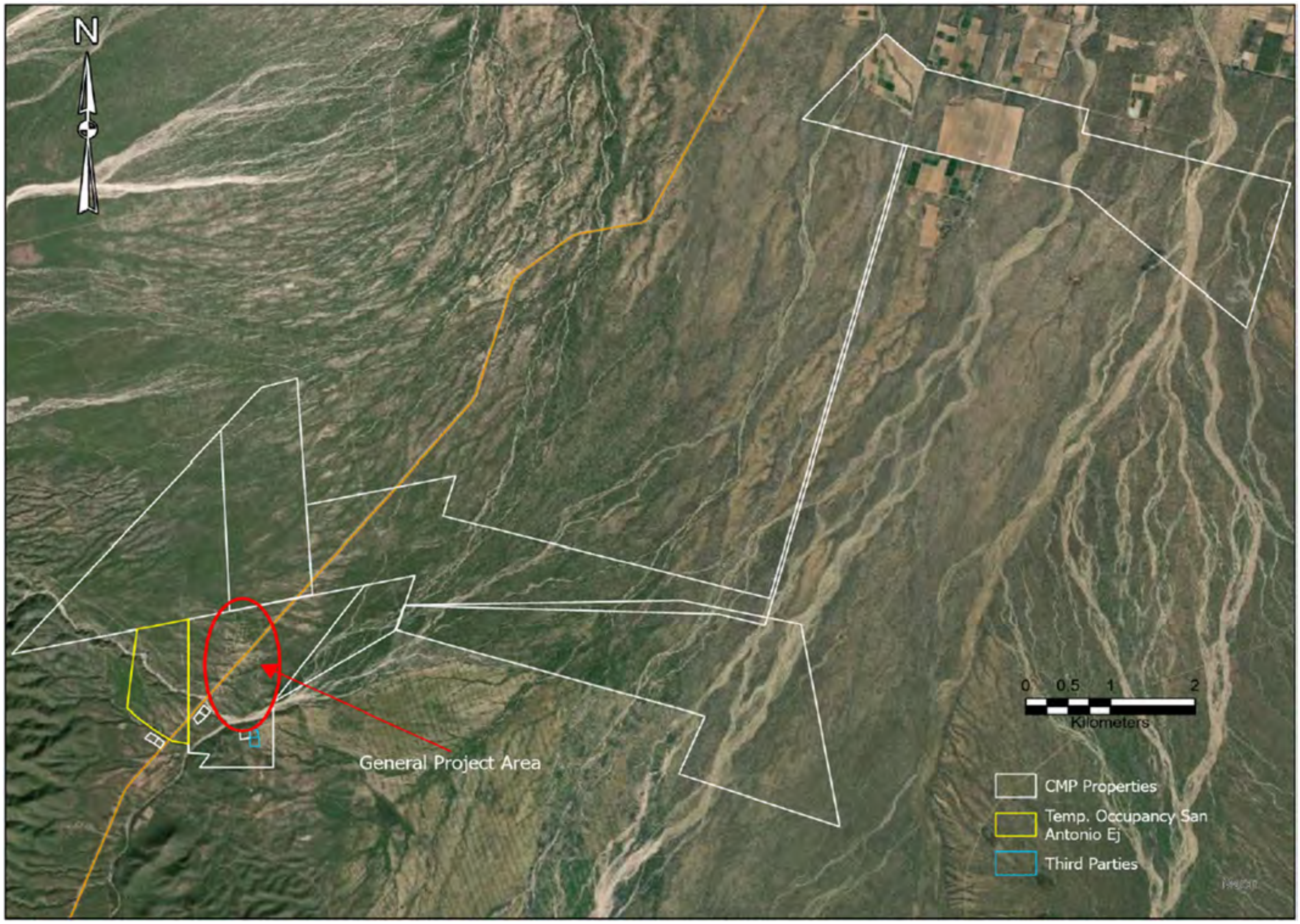
Table 4-2: Surface Rights Ownership

Location	Surface (ha)
Bodega El Consejo	0.4389
Valdemar Ibarra - La Pimientilla	533.7113
Ejido San Antonio - Parcel 156	78.4716
Paulino Hernández - Innominado	608.6982
Flor Guadalupe Amao - La Picota	8.0000
Sucesión Guadalupe - La Picota	290.0000
Fam. Amao Trasviña - La Picota	150.0000
Fam. Gaume Geraldo - La Picota	200.0000
Roberto Flores Amador - Parcel 29	0.9204
Jesus Flores - Parcel 30	1.1176
Jose Luis Manriquez - Parcel 32	1.3272
Adolfo de la Peña - Parcel 35	1.1255
Adolfo de la Peña - Parcel 36	1.0023
Ejido San Antonio - Parcel 155	259.3217
Ejido San Luis - Parcel 194	500.0000
Teófilo Manríquez - Parcel 31	1.1329
Ricardo Hernández - Parcel 143	1.0564
	2,636.3240

Table 4-3: Surface Leases

Leased Property	Area (ha)	Expiry Date	Comments
Ejido San Antonio	200	22 November 2039	Temporary occupancy; 5% annual increase exploration enforced for 30 years.
Ejido San Antonio	90	5 June 2026	Temporary occupation; exploitation: 15 years with fixed terms throughout contract.

Figure 4-2: Surface Rights Map



Note: Figure prepared by Heliostar, 2024.

4.6 Access and Compensation Agreements

4.6.1 San Antonio Ejido Land Occupation Agreement

The San Antonio ejido has granted to Minera Pitalla, for a term of 30 years in a Land Occupation Agreement dated November 22, 2009:

- Prospecting rights to 8,000 ha of land-in-common-use of the San Antonio ejido, on receipt of a one-time payment of MXN$200,000;
- Occupation rights to 200 ha of land-in-common-use of the San Antonio ejido for exploration and exploitation activities, on payment of an annual exploration fee per hectare of MXN$3,000 s for exploration activities and MXN$10,000 for exploitation activities (adjusted annually by 5%).

Under the terms of the Land Occupation Agreement, the San Antonio ejido has also granted to Minera Pitalla its authorization to obtain all environmental permitting required by applicable laws to carry out exploration and exploitation activities on the San Antonio Project. The Land Occupation Agreement was subsequently approved by a meeting of the San Antonio ejido.

The Land Occupation Agreement and Approval has been certified by the National Agrarian Registry (NAR).

4.6.2 Aguajito Residents Compensation Agreement

A compensation agreement, signed December 8, 2009, was entered into by Minera Pitalla and certain residents of Aguajito, La Paz, B.C.S. Under the agreement, Minera Pitalla indemnifies the Aguajito residents for land impact resulting from mining exploration and exploitation activities in Aguajito a, as follows:

- $36,000 Mexican Pesos per month, for a term of 30 years;
- The remediation of 50 ha of ejido land;
- 85% of costs of electrification of the Aguajito town (as quoted by the Federal Utilities Commission);
- Preferential rights on employment vacancies.

4.6.3 Mexican Geological Survey Agreement

In July 2008, Pediment Gold acquired the El Triunfo–Valle Perdido concessions from the Mexican Geological Survey and committed to a variable 1–3% net smelter return (NSR); payable to the Mexican Geological Survey.

As a guarantee for the payment of NSR, Argonaut has to provide a bond to the Mexican Geological Survey for the amount of MXN$506,853; which the Mexican Geological Survey could cash should Argonaut produce and not make its NSR payment. The bond is renewed annually, so the amount of the bond is held in trust for as long as the Mexican Geological Survey has its NSR active. Minera Pitalla, and therefore Heliostar, will remain responsible for payment of royalties on this material to the Mexican Geological Survey, as non-payment of the royalty will result in concession cancellation.

4.7 Water Rights

4.7.1 Basin Usage

Water usage is controlled by the government water agency, (Comisión Nacional del Agua, or CONAGUA), for allocation and management of water rights. The San Antonio basin is subscribed for about 12 Mm3 of water per year.

4.7.2 Water Rights Agreements

All of the water rights agreements that Minera Pitalla has entered into are required to be filed and approved for registration by CONAGUA; the application for registration still has to be filed with CONAGUA at the effective date of this Report. Applications will be dependent on the location of the extraction point; this will not be determined until the hydrological studies that are underway are completed.

4.7.2.1 San Vicente de los Planes Ejido

Minera Pitalla and San Vicente de los Planes ejido entered into a water access agreement on October 31, 2009, whereby the ejido transferred to Minera Pitalla all rights and obligations to 128,000 m^3 of water per year attached to water rights concession number 01BCS102404/06IMGR97. The transfer of the water rights was formally approved by the ejido.

In December 2010, Argonaut and Ejido San Vincente de Los Planes terminated the contract for 128,000 m^3, and signed a new contract for 138,500 m^3 with respect to concession number 01BCS101798/061MOC08.

4.7.2.2 Mendoza Family

In November 2010, Pitalla and members of the Mendoza family entered into an agreement for water rights, whereby the Mendoza family transferred and assigned to Minera Pitalla all rights and obligations to 31,000 m^3 of water per year that were attached to water rights concession number 01BCS104411/06IMDL09.

4.7.2.3 Rancho la Pimientilla

In November 2010, Argonaut acquired 300,000 m^3 of water rights from Rancho la Pimientilla. These rights were attached to water rights concession number 01BCS100177/06AMDL12.

4.7.2.4 Bañaga Geraldo Family

In March 2011, Argonaut acquired 30,000 m^3 of water rights from the Bañaga Geraldo Family that were attached to water rights concession number 01BCS101165/06AMDL08.

4.7.2.5 Jorge Geraldo Geraldo

In June 2011, Argonaut acquired 14,000 m^3 of water rights from Jorge Geraldo Geraldo attached to water rights concession number 01BCS104669/06AMDL10.

4.7.2.6 Ejido Juan Dominguez

In October 2011, Argonaut acquired 167,400 m^3 of water rights from the Ejido Juan Dominguez that were attached to water rights concession number 01BCS101504/06AMDL11.

4.8 Royalties and Encumbrances

The Mexican Government imposes a mining duty of 8% of taxable earnings before interest and depreciation. In addition, precious metal mining companies must pay a 1% duty on revenues from gold, silver, and platinum.

The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on four of the concessions (refer to Table 4-1). The sliding scale is based on fluctuations in gold price. The royalties do not apply to the Mineral Resource estimate in this Report.

No other royalties apply to any other concession, including the concessions within which the Mineral Resources are located.

4.9 Permitting Considerations

Permitting considerations in support of the 2024 PEA are discussed in Section 20.

4.10 Environmental Considerations

Environmental considerations in support of the 2024 PEA are discussed in Section 20.

4.11 Social License Considerations

Social licence considerations in support of the 2024 PEA are discussed in Section 20.

4.12 QP Comments on Section 4

Information from legal and Heliostar experts support that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources.

To the extent known to the QP, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Project that are not discussed in this Report.

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

5.1 Accessibility

The Project is within the San Antonio–Triunfo mining district located about 40 km southeast of La Paz (area pop. 200,000), the principal sea port and the capital city of the state of Baja California Sur, Mexico. The closest towns are San Antonio, 8 km west of the Project, Triunfo, 10 km northwest of the Project, and Los Planes, 15 km east of the Project. Travel time from San Antonio is about 10 minutes.

Access to the site is generally from the port city of La Paz, 45 km to southeast or 160 km to the north, from the resort town of Cabo San Lucas; both along Federal Highway 1. Alternatively, the site can be accessed from the northeast along a two-lane, paved road from San Juan de Los Planes. This road connects State Highway 286 with Federal Highway 1 in San Antonio, and passes directly through the proposed Project site. As such, a portion of this road will require relocation as part of Project development.

Access within the Project area is provided by good gravel and dirt roads.

La Paz is served by the Manuel Márquez de León International Airport that has flights to the most important cities of Mexico such as Mexico City, Guadalajara, and Monterrey, and has direct flights to Los Angeles in the United States.

The main regional sea port of La Paz is a principal supply point from mainland Mexico and international sources for the state of Baja California Sur. Minor historic shipping activity has taken place at the port of Ventana which is closer to the Project area; however, no current port facilities are available there to support mining activities. Current port infrastructure only supports fishing enterprises and provides for local beach access.

5.2 Climate

In the Project area, data from the San Antonio Sur meteorological station (3049) of the National Meteorological Service (Servicio Meteorológico Nacional), located in San Antonio, was used as a reference. The average annual temperature is 23.2°C, with the warmest months being May to August and the coldest months from December to February. Maximum temperatures can reach 36.8°C in May, while the coldest temperature recorded is 8.6°C in January.

The average wind speed is 4.45 km/hr from the south, and the maximum wind speed is 18.09 km/hr from the east.

Precipitation in the area is strongly influenced by the California current and the semi-permanent Pacific high-pressure cell, resulting in scarce rainfall throughout the year. Additionally, varying elevations from 26–1,000 masl in the upper Agua Blanca area cause precipitation patterns to vary across the study area. Annual precipitation averages 175 mm, much of it associated with the hurricane systems that are most likely to occur during August and September.

The average annual relative humidity in the project area is 67.2% (1970–2009), but varies from month to month. The highest humidity levels occur in January, November, and December, while the driest months are April, May, and June. Daily relative humidity varies inversely with temperature, being lower in the afternoon and higher at night and early morning. During the driest months, midday humidity can occasionally drop below 10%.

It is expected that any future mining operations will be able to be conducted year-round. Minor interruptions may occur to activities if hurricane conditions develop.

5.3 Local Resources and Infrastructure

The closest town is San Antonio, a former mining hub.

There is no existing Project infrastructure. Exploration crews stay in San Antonio and travel to site as required. Cell coverage in the area is available. Roads and powerlines pass directly through the Project area.

Mexico has sufficient experienced and skilled professionals to run the proposed San Antonio operation. The mining centres of San Antonio and Triunfo have inhabitants who have previously been involved in mining, although the operations are primarily closed. Workforce for any future mining activity could be sourced from the local area; however, the workforce would require dedicated training programs.

Infrastructure assumptions in support of the PEA are discussed in Section 18.

5.4 Physiography

The northern part of the Project is characterized by rounded hills rising from the pediment with elevations ranging from 200–250 m above sea level. The southern part is more rugged with elevations from 400 m to 600 masl.

Vegetation consists of numerous varieties of thorny desert cacti, small shrubs and bushes, including manzanilla, mesquite, and palo verde.

The closest biosphere reserve is the Sierra La Laguna Biosphere Reserve. The Project is situated 19 km from the nearest border of the buffer zone of the biosphere reserve, and approximately 25 km from the nearest border of the core of the reserve. A major highway and the village of San Antonio are located between the biosphere reserve and the Project, as is the semi-active La Testera mining/milling operation that is conducted by third-parties (refer also to Section 6.1).

The Project site and the biosphere reserve are also separated by a major divide, and so surface drainage in the Project area flows north–northeast towards the Gulf of California, in the opposite direction from the waters draining into the biosphere reserve.

5.5 Seismicity

The Project is located in a medium earthquake hazard zone, with a 10% chance of a damaging earthquake in the next 50 years. The region is located in an active tectonic zone, west of the boundary between the North American and Pacific plates. The area is also near the southern extension of California's San Andreas fault, where the two plates grind past each other.

5.6 QP Comments on Section 5

Surface rights are discussed in Section 4.5, Section 4.6, and Section 4.7.

In the opinion of the QPs, the existing and planned infrastructure, availability of staff, the existing power, water, and communications facilities, the methods whereby goods could be transported to any proposed mine, and any planned modifications or supporting studies are well-established, or the requirements to establish such, are well understood by Heliostar, and can support the estimation of Mineral Resources.

6.0 HISTORY

6.1 Exploration History

The Project exploration history is summarized in Table 6-1.

6.2 Production

District-wide production in the period 1862–1915 is estimated at over 3,580 kg of gold (115,000 oz) and 661 tons of silver (21,250,000 oz Ag), plus lead and zinc (Consejo De Recursos Minerales Baja California Sur Monograph, 2000). There is no record of how much, if any, of this production came from the current Project area.

There has been no modern production from the Project area.

Table 6-1: Exploration History Summary Table

Year	Operator	Comment
1748	Unknown	Gold and silver mineralization was reportedly discovered in the Triunfo area with limited small-scale production occurring mainly in the Triunfo area and south of San Antonio.
1862–1915	Unknown	Approximately 25 small-scale mining operations. After 1895, due to a large cyclone-hurricane, water problems and prices led to a steady decline to 1915, after which the district was no longer active.
1970s	Consejo De Recursos Minerales	Exploration, including mapping, trenching and limited magnetic and induced polarization (IP) surveys which covered portions of the Project area.
1990	Viceroy Resource Corp. (Viceroy)	Began investigation of the San Antonio district which led to acquisition of the Paredones Amarillos area, 20 km south of the Project
1992–1998	Echo Bay Exploration Inc. (Echo Bay)	Acquired the Paredones Amarillos area from Viceroy through joint venture (JV) and expanded concession holdings in the district to cover a large area outside the JV in the mid-1990s. This area included the Project area. Carried out detailed geological mapping, stream sediment, soil and rock chip sampling, trenching, ground electromagnetics, airborne radiometrics, magnetic and very-low frequency electromagnetic (VLFEM) surveys, RC and core drilling, a first-time mineral resource estimate in 1996, and metallurgical studies. The radiometric survey is reported to have indicated a weakly anomalous potassium and K/Th ratio response associated with the Las Colinas mineralization within the Project (Brown, Reynolds, and Hauck, 1998). The Los Planes zone however was not recognized due to sand and gravel cover although several Echo Bay drill holes were completed in the deposit area.
2005–2010	Pediment Gold	Completed data review, rock chip and grab sampling of old trenches and workings, soil sampling, reconnaissance IP geophysical surveys, RC and core drilling, mineral resource estimation, and metallurgical testwork. Initiated third-party socio-economic, hydrogeology and geotechnical studies. Completed a preliminary assessment in 2010 (2010 PA), which indicated positive Project economics were likely from the mine plan envisaged in the 2010 PA, which consisted of a conventional truck-and-shovel open pit operations feeding a heap leach pad. Following completion of the 2010 PA, Pediment Gold commenced an infill core and RC drill program primarily to support potential upgrades in Mineral Resource confidence categories and step-out drill holes along strike to delineate additional mineralization. Additional work encompassed by the program included drilling for metallurgical samples, oriented-core drilling for geotechnical information, exploration drilling at the La Colpa zone and condemnation drilling. A subsequent program consisted of RC drilling at the Intermediate Zone and Las Colinas. Overall, Pediment Gold completed a total of 13,600 m in 82 RC holes and 57,802 m in 317 core holes.
2011–2024	Argonaut	Argonaut completed 117 RC drill holes (17,746 m) and 24 core holes (4,819 m) for deposit delineation, exploration, condemnation, and water well purposes.

Year	Operator	Comment
		Additional work included metallurgical and environmental testwork, updated Mineral Resource estimates, updated PEA (2012 PEA), re-initiated baseline environmental studies and surveys, and reviewed permitting processes in Baja California.
2024	Heliostar	Completed data review and verification in support of the 2024 PEA.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The basement of the Baja Sur comprises a chain of Mesozoic granitic bodies and accompanying metasedimentary roof pendants structurally sutured by the La Paz fault to a western belt of oceanic crustal rocks. The crystalline complex west of the La Paz fault that includes the San Antonio district is composed of two separate intrusive complexes hosted in sediment-derived schists and gneisses (Figure 7-1). A hornblende-rich intrusive complex ranges in composition from gabbro to quartz-diorite, locally shows foliation, and typically hosts mineralization in the San Antonio area. The biotite granodiorite batholith that hosts mineralization at the Concordia (Paredones Amarillo) gold deposit (held by third parties) is considered to be a younger intrusive event.

Cretaceous marine sedimentary rocks of the Eugenia and Valle Formations overlie the basement assemblage. In turn, the Cretaceous rocks are overlain by lower Tertiary marine sediments of the Tepetate Formation. Possibly contemporaneous volcanism represented by tuffs and sandstones of the Salto Formation may have accompanied deposition of the shales, sandstones and tuffs of the Oligocene San Gregorio Formation that overlies the Tepetate Formation. The San Gregorio Formation is in turn overlain by tuffs, conglomerates, siltstones and sandstones of the earliest Miocene Isidro Formation. The widespread early to middle Miocene Comondu Formation, a series of interbedded volcanic sandstones, siltstones, rhyolite ash-fall tuffs, and andesitic lahars and flows, overlies the Isidro Formation. Unconformably overlying the Comondu Formation is a series of mid-Miocene to Holocene basalt flows.

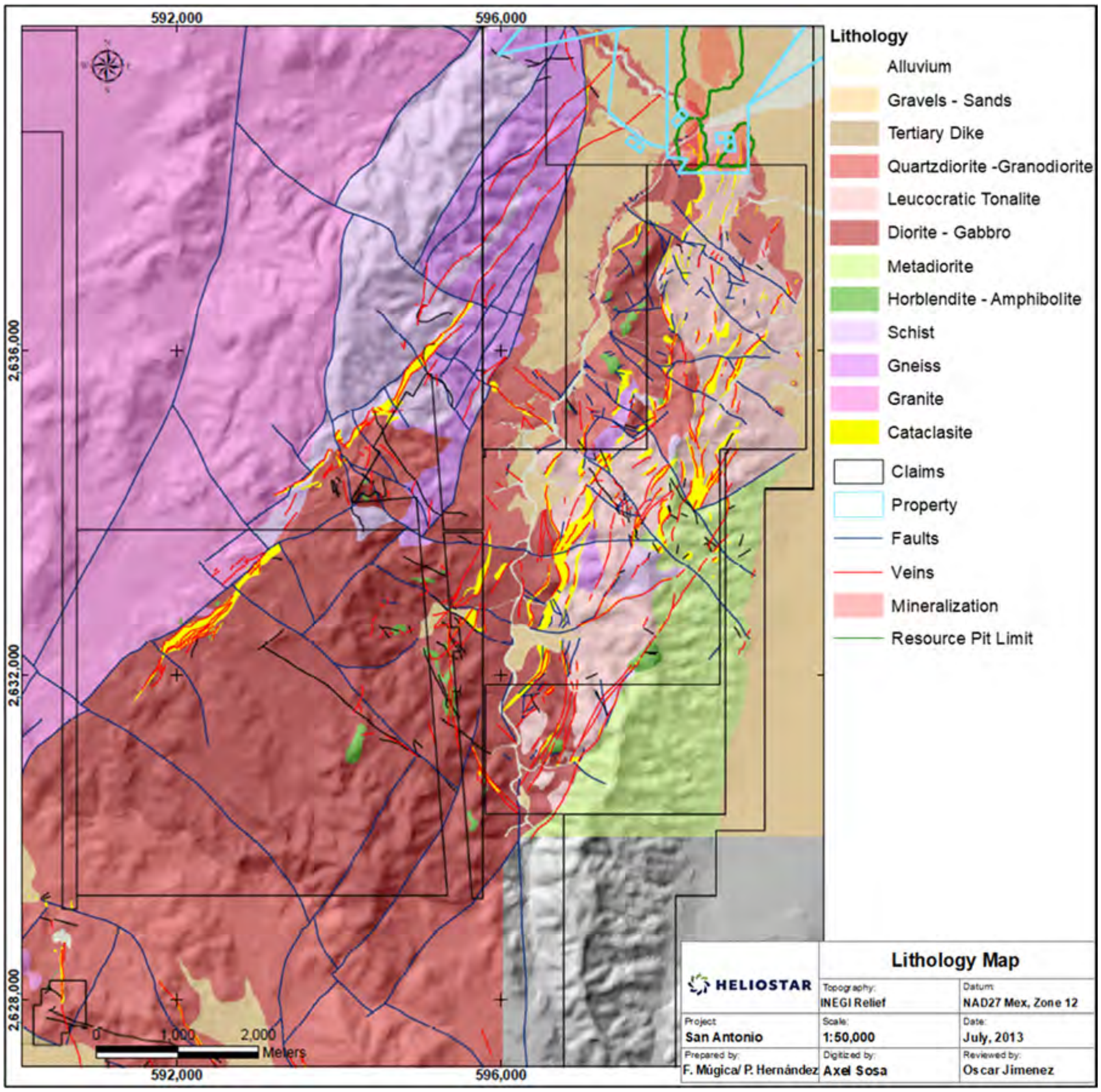
7.2 Project Geology

7.2.1 Lithologies

Due to the limited outcrop within the Project, geological interpretations are primarily based on drill data.

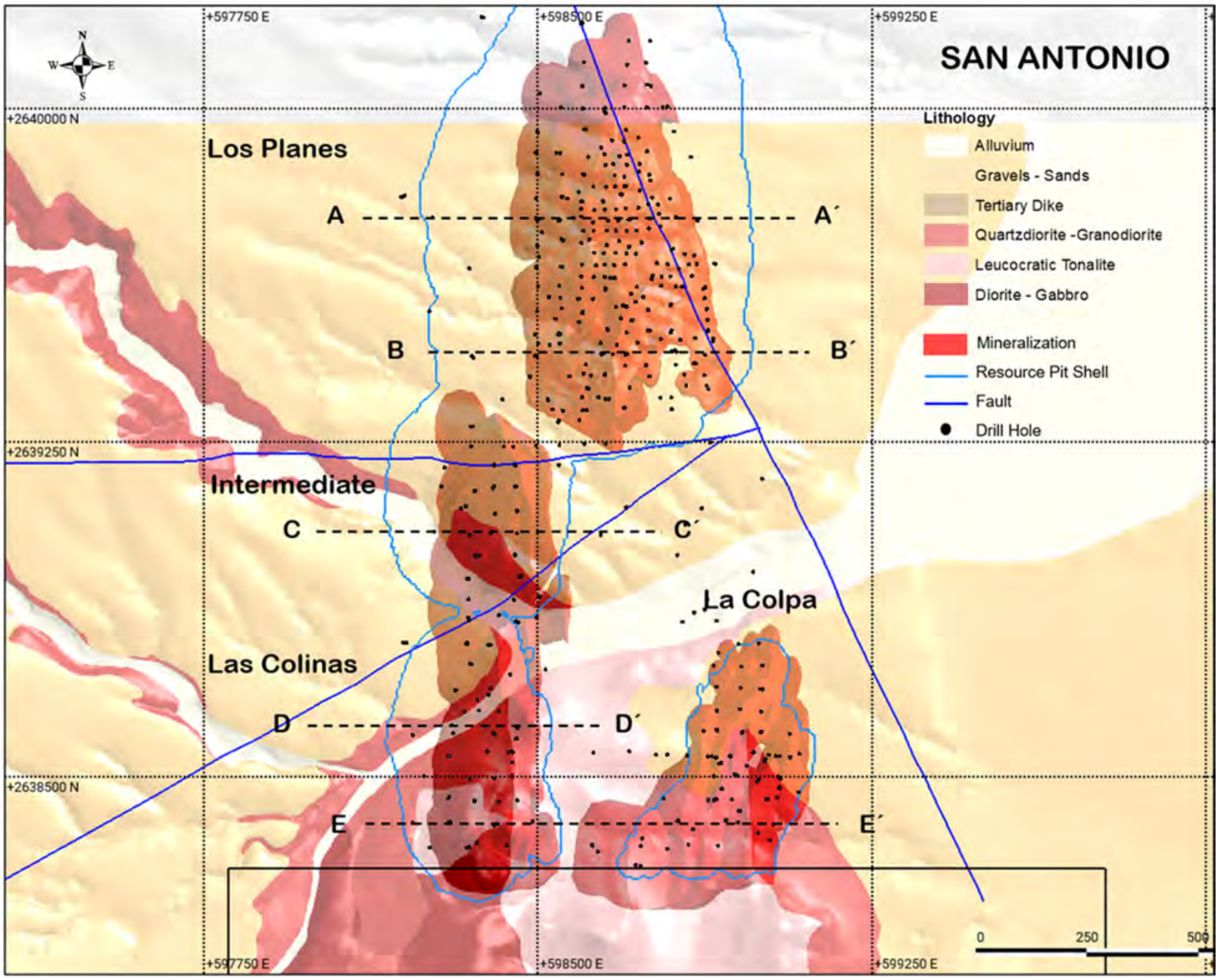
The primary rock units within the Project belong to the basement of the Baja Sur (Figure 7-2).

Figure 7-1: Regional Geology Plan



Note: Figure prepared by Heliostar, 2024.

Figure 7-2: Project Geology Map



Note: Figure prepared by Heliostar, 2024.

Major lithologies include:

- Diorites and gabbros: usually coarse grained, contain abundant hornblende or augite and are dark-coloured. Common in the southern portion of the Las Colinas area, and near the historic La Colpa mine. Minor fine-grained variants were noted in the La Colpa area;
- Biotite–hornblende quartz diorites: abundant hornblende and minor quantities of magnetite; commonly have ilmenite as the dominant opaque mineral. Quartz diorite is common in both the hanging-wall and footwall of the Los Planes deposit, and coarse-grained biotite–hornblende quartz diorite is the most common rock type present in the Los Planes deposit. Las Colinas has a mix of diorite and quartz diorite;

- Biotite granodiorite–granite: The intrusion has a weakly porphyritic character with fine grained biotite of a brownish coffee color. It is present as a medium-grained quartz-rich intrusive beneath the Los Planes deposit and is seen mainly in the drill holes which penetrate deeper into the hanging-wall of the large thrust fault shear zone. Rocks of similar texture crop out south of the Las Colinas deposit and adjacent to the southeast of the La Colpa mine area.

Post-mineralization northwest-trending andesite dykes were noted in the Las Colinas area and the Arroyo Fandango.

Overlying the basement material are poorly consolidated arkosic sands to gravels attributed to the locally important Pliocene to Pleistocene Salada Formation. The sediments appear to be a deltaic deposit formed in a relatively rapidly subsiding basin.

A thin mantling along the top planar alluvial surface of the pediment contains numerous scattered exotic cobbles and occasional boulders of schist and gneiss. The same schist and gneiss rock units are more common in the adjacent ridges and mountains located immediately to the west and these fragments were probably carried down by erosion.

7.2.2 Metamorphism and Alteration

The biotite granodiorite–granite intrusive rocks may display a weak pervasive sericitic alteration.

Surface oxidation of the sulphide-bearing deposits may extend to depths of 100 m in the Los Planes zone and about 25–30 m in the Las Colinas zone.

7.2.3 Structure

Mineralized zones are contained in a large mega-shear structure, possibly a Mesozoic-age thrust fault, which is dipping at about 45º to the west. This mega-shear appears to be regional in extent, with strands and splays that may have been more favourable loci for mineralization.

Drilling at Los Planes and Las Colinas shows the thickness of the shear zone to be more than 200 m, and to be hosted in mid-level intrusive rocks of similar age to the shearing episode. The presence of the structure for 40 km to the south, suggest the shear zone is a thrust fault-related structure.

Drilling has also revealed that a small northwest-trending graben basin, probably Pleistocene age with true listric faulting, drops the northeastern part of the Los Planes deposit in domino like fault segments to sequentially more than 200 m deeper to the northeast. These listric faults range from 20 m of movement up to 100 m of movement dropping the blocks down on the northeast side along N40W-trending faults. The movement appears sequential with older faults to the southwest that have been planed by pediment erosion on both sides of the faults, with the more northeastern blocks having gravel-sand filling only on the northeast side of the fault.

7.2.4 Mineralization

Mineralization has preferentially developed in zones of stockworking, cataclasite and mylonite within the shear zones.

The proximity of the Triunfo and San Antonio districts, both of which are localized in similar shear zones settings and in similar host rocks, suggests a possible similar age and origin.

However the geochemical signature characterizing the two districts is very different.

San Antonio is a gold-only mineralized district with average silver to gold ratios of 1:1 or less, whereas Triunfo is silver dominated with average silver to gold ratios of around 250:1 and associated lead, zinc, and antimony.

In addition, the orientations of the mineralized zones are different. The Triunfo zone strikes generally N20–30E and dips to the east. The San Antonio shear zones have a persistent north–south strike and the shears generally dip at about 45ºW.

7.3 Deposit Descriptions

Mineralization has been identified over approximately 1.8 km of strike length within the Project area, and was subdivided into four fault-bounded zones referred to as Los Planes, Intermediate, Las Colinas, and La Colpa.

Local normal and listric faulting displaces and truncates the mineralized zones (Herdrick, 2009). Drilling suggests that a northwest-trending graben basin has displaced the Los Planes deposit by more than 200 m, over increments of 20–100 m. These blocks are bounded by listric faulting and are dropped en echelon down to the northeast along N40W-trending structures.

Much of the outcrop is covered by pediment that thickens to the east, featuring cobbles and boulders of schist and gneiss.

7.3.1 Los Planes

7.3.1.1 Deposit Dimensions

Mineralization extends along a north–south strike length of approximately 975 m. Drilling has encountered continuous mineralization to depths of 400 m from the surface. Mineralized lenses average 90 m in thickness. Mineralization thickness is highly variable due to the stockwork-style of mineralization, and zones can locally coalesce into broader intervals >100 m in thickness. Mineralization is interpreted to remain open along strike to the north and at depth.

7.3.1.2 Lithologies

The current geological model for Los Planes consists of two large units interpreted based on structure, alteration and mineralization.

The units are separated by a east-dipping gouge zone and consist of a hanging wall unit and a footwall unit. The shear zone is broken into subunits that are defined by their structure, alteration, and degree of mineralization (Table 7-1).

7.3.1.3 Structure

The shear zone strikes southeast–northwest and dips at 55º to the northeast. An east-west striking fault dips at 50º to the north and separates the Los Planes deposit from the Intermediate deposit to the south.

7.3.1.4 Alteration

Alteration progresses from chlorite-dominant around the cataclasite units (distal) and to sericite-dominant within the cataclasite unit (proximal).

7.3.1.5 Mineralization

Typically, the cataclasite contains a zone where sulphides increase with abundance to as much as 20%. Pyrite appears more commonly throughout the system; however the more intense development of mineralization is accompanied by an increase of arsenopyrite and pyrite in addition to pyrrhotite. Sulphides are present in brittle structures including cracks, faults, joints and micro-fractures. Pyrite lines the walls of many fractures and joints as observed from drill core and outcrop. Quartz veining is also common (Coyan et al. 2007).

Chemically, the system has low silver relative to gold, having silver:gold ratios of approximately 0.4. Gold is also accompanied by anomalous arsenic, copper, and bismuth.

7.3.1.6 Oxidation

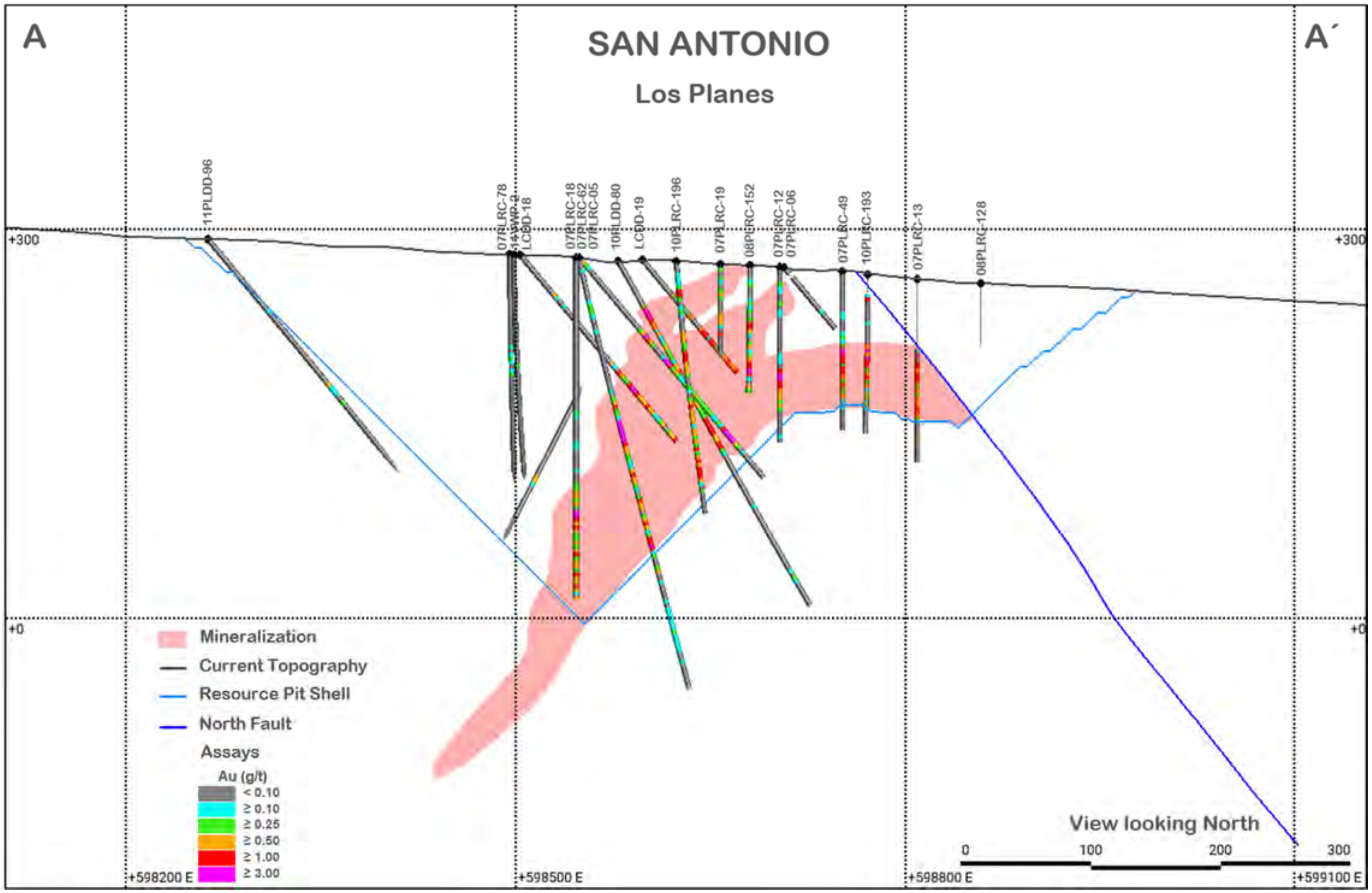
Although mineralization is intimately associated with the presence of sulphides, the Los Planes zone also contains well-oxidized areas, which include pure oxide and oxide–transition material. The oxidized zone can reach up to 100 m in depth from surface and appears to be related the Quaternary Los Planes fault. Oxidation at Los Planes is much stronger and deeper than in the Intermediate and Las Colinas zones. When the stockwork sub-zone appears oxidized, it has a physical appearance of hematite-rich rubble.

A cross-section through the Los Planes Zone is provided in Figure 7-3.

Table 7-1: Major Units, Los Planes

Unit	Description
Hanging wall 1 (HW1)	Contains the most deformed rocks in the deposit area, varying from foliated intrusive to levels of microbreccia, cataclasite, or pseudotachylite. Varies in dip from subvertical (in the west end) to subhorizontal (towards the east) and has strong sericite–chlorite alteration. Mineralization closely associated with arsenopyrite and pyrite, which occur as disseminations or within small fractures and veinlets.
Stockwork	Breccia zones of variable dip (from -75º to the west to sub-horizontal) that are about 15 m thick, and are cemented by pervasive arsenopyrite and pyrite. Typically contain higher gold grades and are interpreted as feeder zones for HW1.
Hanging wall 2 (HW1)	Structural transition from hanging wall 1 to the west and has similar characteristics to those of HW1. HW2 is less deformed overall as deformation tends to occur in more localized zones, and has less alteration and fewer sulphides. In some areas the contact between HW1 and HW2 has been described as gouge.
Footwall	Below a gouge zone, to the east of HW1. The rock in the footwall unit is much less deformed than in the hanging wall unit and is typically unmineralized.

Figure 7-3: Geological Cross-Section, Los Planes Zone



Note: Figure prepared by Heliostar, 2024.

7.3.2 Las Colinas

7.3.2.1 Deposit Dimensions

The mineralized zone has a roughly north–south strike and dips at about 50º to the west. The zone is 675 m long, averages 40 m thick, and extends to a depth of 250 m. The zone remains open at depth, but is limited to the north, where it is interpreted to end where a northwest-trending fault intercepts the strike of the mineralization.

7.3.2.2 Lithology

Diorite to gabbro is found irregularly in both the hanging wall and footwall portions of the mega-shear zone. The main shear zone is a dense, competent rock composed of fragments of potassium feldspar and quartz in a matrix of sericite, chlorite, and quartz.

7.3.2.3 Structure

A southwest–northeast striking fault dips at 57º to the southeast and separates the Las Colinas deposit from the Intermediate deposit to the north.

7.3.2.4 Alteration

Alteration is zoned, from chlorite-dominant around the cataclasite margins to sericite dominant within the cataclasite unit.

7.3.2.5 Mineralization

The Las Colinas deposit consists of gold and arsenic occurring with disseminated and veinlet sulphides associated with cataclasite and locally extending into the wall rocks.

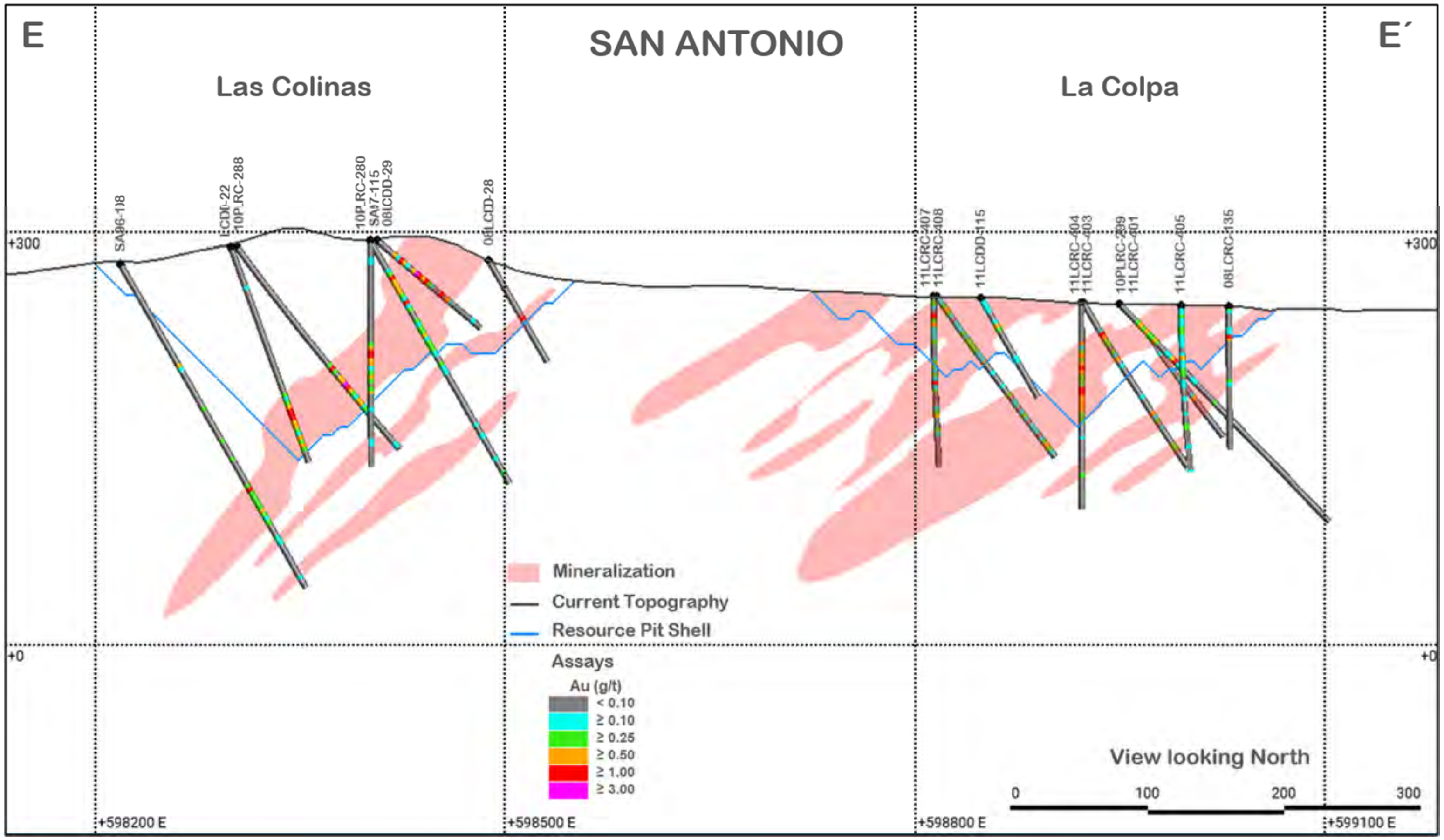
Where high-angle structures intersect open flat-lying thrust faults, mineralization is developed over 1 m to 50 m thicknesses. The mineralized zone averages 20–40 m in thickness and grades into strongly fractured and altered gabbro or diorite. The wall rock may locally be extensively sheared.

The gold mineralization is interpreted to consist of two stages, the first being disseminated gold–arsenic deposition during mylonitization, and a second stage gold–silver–bismuth mineralization hosted by crosscutting, high-angle, northeast-trending structures.

The primary alteration assemblage consists of sericite, 2–5% sulphides including pyrite, arsenopyrite, pyrrhotite, and minor quartz and K-feldspar.

Figure 7-4 shows a geological cross-section through the Las Colinas deposit.

Figure 7-4: Geological Cross-Section, Las Colinas and La Colpa



Note: Figure prepared by Heliostar, 2024. Figure looks north.

7.3.2.6 Oxidation

The level of oxidation at Las Colinas extends only a few metres vertically from surface.

7.3.3 Intermediate

7.3.3.1 Deposit Dimensions

The zone is hosted within a shear zone that strikes approximately north–south and dips at about 50º to the west. Mineralization extends along strike for about 900 m in this fault block and zones are 45 m in thickness on average. Drilling has intercepted continuous mineralization to about 325 m depth. Mineralization is truncated to the north and south by west–northwest-trending faults that that separate the zone from the Los Planes and Las Colinas zones, respectively. Despite being limited on strike, the Intermediate zone remains open down dip to the west.

7.3.3.2 Lithologies

Diorite to gabbro is found irregularly in both the hanging wall and footwall portions of the mega-shear zone. The main shear zone is a dense, competent rock composed of fragments of potassium feldspar and quartz in a matrix of sericite, chlorite, and quartz.

7.3.3.3 Structure

An east–west striking fault dips at 50º to the north and separates the Intermediate deposit from the Los Planes deposit. A southwest–northeast striking fault dips at 57º to the southeast and separates the Intermediate deposit from the Las Colinas and La Colpa deposits to the south.

7.3.3.4 Alteration

Alteration is zoned, from chlorite-dominant around the cataclasite margins to sericite dominant within the cataclasite unit.

7.3.3.5 Mineralization

Gold mineralization in the Intermediate zone is transitional between Las Colinas and Los Planes. In the southern part of the zone, mineralization tends to occur as more narrow and lower-grade intercepts. Gold grades are higher in the stockwork zones (typically 1+ g/t Au) and decrease away into the cataclasite to <1 g/t Au.

Similarly to both Los Planes and Las Colinas, silver values in the Intermediate zone are very low and Ag/Au ratios range from 0.3 to 1 in low-gold-grade zones, to 0.8 to 1 in zones with higher gold grades.

Between cross sections 39,100mN and 39,200mN, mineralization is in clear, sharp contact with the footwall, and demarcated by a gouge/fault zone that is sub-parallel to the west-dipping mineralized zone.

A geological cross-section through the Intermediate zone is provided in Figure 7-5.

7.3.3.6 Oxidation

Oxidation depths are similar to those at Las Colinas; however, very little of the gold mineralization is oxidized in the Intermediate zone.

7.3.4 La Colpa

7.3.4.1 Deposit Dimensions

The mineralized zone has a roughly north–south strike and dips at about 35º to the west. The zone is 625 m long, averages 60 m thick, and extends to a depth of 250 m. The zone remains open down dip and along strike to the south.

7.3.4.2 Lithologies

Mineralization at La Colpa is interpreted to be a sheeted vein complex with intermediate stockwork zones. Due to the unpredictable nature of this mineralization, the number of parallel veins varies within the zone from two to six sequential structures. Stockwork zones are hosted in cataclastic units with a schist footwall.

7.3.4.3 Structure

Mineralization is hosted by sheeted veins and intermediate stockwork zones. Originally, the mineralization was interpreted to be hosted in a shear zone; however, no significant faults are mapped or modeled in the La Colpa area.

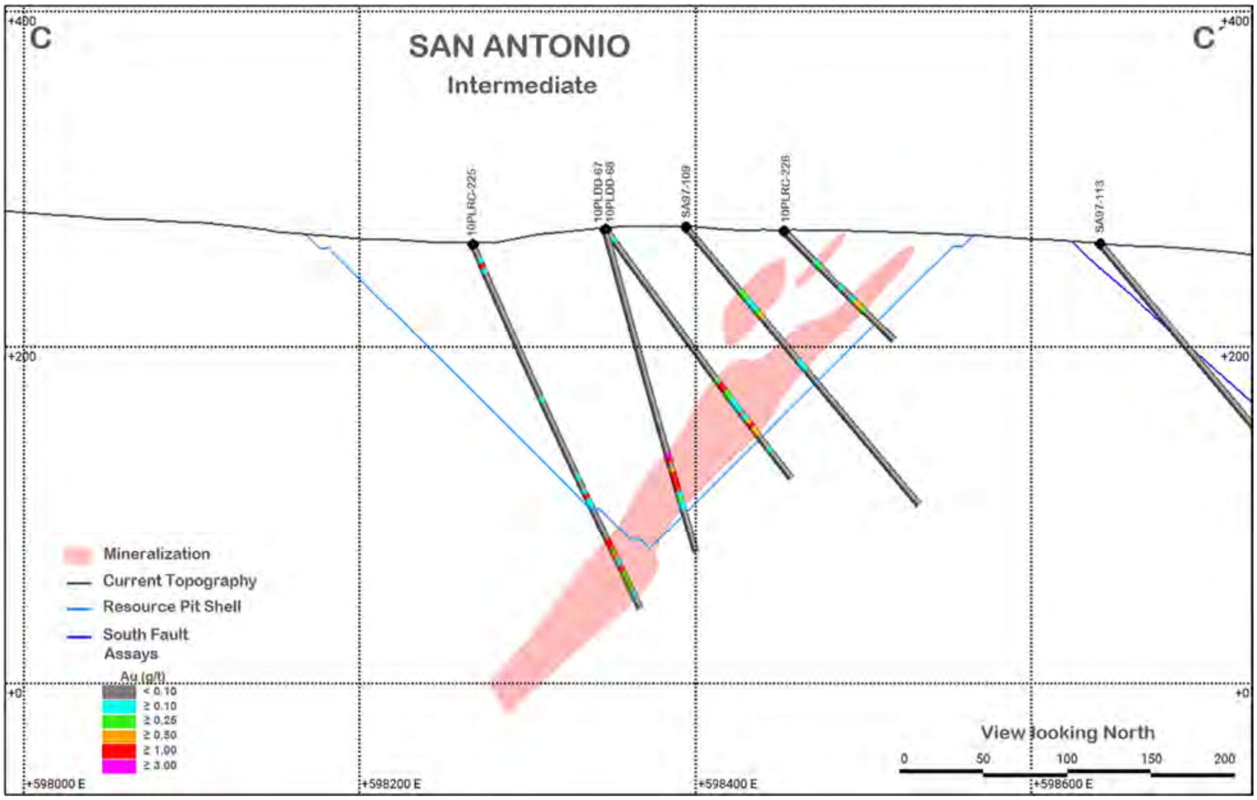
7.3.4.4 Alteration

Minor chlorite-sericite alteration, silicification, and local K-feldspar has been noted in drill logs.

7.3.4.5 Mineralization

Pyrite is the dominant sulphide and arsenopyrite is less common than in Las Colinas.

Figure 7-5: Geological Cross-Section, Intermediate Zone



Note: Figure prepared by Heliostar, 2024.

Mineralization is hosted in less-deformed, subhorizontal shear bands that occur on the footwall zone of the main mineralized zone of Las Colinas and is dominated by pyrite as disseminations and veinlets. Bands of mineralization vary from 8–25 m. A geological cross-section through the La Colpa zone was included in Figure 7-4.

8.0 DEPOSIT TYPES

8.1 Overview

The Project mineralized zones are considered to be typical of mesothermal vein-style, or orogenic-style gold deposits.

The following discussion is sourced from Moritz (2000), Goldfarb et al., (2005), and Groves et al., (1998; 2003). Orogenic deposits have many synonyms, including mesozonal and hypozonal deposits, lode gold, shear zone-related deposits, or gold-only deposits.

Orogenic gold deposits occur in variably deformed metamorphic terranes formed during Middle Archaean to younger Precambrian, and continuously throughout the Phanerozoic. The host geological environments are typically volcano–plutonic or clastic sedimentary terranes, but gold deposits can be hosted by any rock type. There is a consistent spatial and temporal association with granitoids of a variety of compositions. Host rocks are metamorphosed to greenschist facies, but locally can achieve amphibolite or granulite facies conditions.

Gold deposition occurs adjacent to first-order, deep-crustal fault zones. These first-order faults, which can be hundreds of kilometres long and kilometres wide, show complex structural histories. Economic mineralization typically formed as vein fill of second- and third-order shears and faults, particularly at jogs or changes in strike along the crustal fault zones. Mineralization styles vary from stockworks and breccias in shallow, brittle regimes, through laminated crack-seal veins and sigmoidal vein arrays in brittle-ductile crustal regions, to replacement- and disseminated-type orebodies in deeper, ductile environments.

Mineralization can be disseminated, or vein hosted, and displays a timing that is structurally late, and is syn- to post-peak metamorphic. Quartz is the primary constituent of veins, with lesser carbonate and sulphide minerals. In volcano-plutonic settings, pyrite and pyrrhotite are the most common sulphide minerals in greenschist and amphibolite grade host rocks, respectively.

Gold is usually associated with sulphide minerals, but can occur as free gold. Gold to silver ratios typically range from 5:1 to 10:1 and, less commonly, the ratios can reach 1:1.

Alteration intensity is related to distance from the hydrothermal fluid source, and typically displays a zoned pattern. Scale, intensity, and mineralogy of the alteration are functions of wall rock composition and crustal level. The main alteration minerals can include carbonate (calcite, dolomite, and ankerite), sulphides (pyrite, pyrrhotite or arsenopyrite), alkali-rich silicate minerals (sericite, fuchsite, albite, and less commonly, K-feldspar, biotite, paragonite), chlorite, and quartz.

The larger examples of orogenic deposits are generally 2 km to 10 km long, about 1 km wide, and can persist over 1 km to 2 km vertical extents.

8.2 QP Comments on Section 8

The QP considers that exploration programs that use an orogenic deposit model are appropriate to the Project area.

9.0 EXPLORATION

9.1 Introduction

All of the exploration activity discussed in this Report section was completed prior to Heliostar's Project interest. Subsequent to acquisition, Heliostar has focused on verification and validation of the data provided by Argonaut.

9.2 Grids and Surveys

The datum currently being used for the Project is NAD-27.

An Intrasearch topographic survey was flown in the late 1990s, and covers the majority of the Project area. In addition, topographic data are available from INEGI as 1:50,000-scale sheets, with topographic contours at 20 m intervals. These sheets cover the entire Project area and beyond in all directions. Data are provided in WGS-84 datum and can be easily converted to NAD-27 using a conversion factor provided by INEGI.

9.3 Geological Mapping

During 2008, Pediment performed prospect-scale geological mapping of the Las Colinas and Intermediate zones as well as the Fandango prospect. The mapping of this area was essentially abandoned due to the paucity of outcrop, and drilling was designated the preferred method of exploration.

In 2010, the area from Los Planes through Las Colinas including the La Colpa zone was mapped in detail by consulting geologist Thomas Chapin. During 2010, 1:2,000 scale mapping over the Triunfo area was completed by geologists Tom Chapin and Héctor Córdova on Pediment Gold's behalf. Chapin focused primarily on detailed geology and Córdova on detailed mapping of mine showings and old dumps. The program was conducted primarily on the northeast end of the Triunfo trend and identified general areas of alteration, structure, and mineralization at outcrop level.

9.4 Geochemical Sampling

Geochemical sampling performed by Echo Bay and Consejo De Recursos Minerales included rock chip, grab, and soil sampling. Rock and trench samples were collected by qualified Mexican geologists/prospectors with data, including UTM coordinates, lithology and mineralization recorded in field books.

Soil samples were collected mainly in 2007 and the results are not contoured. A total of 3,600 samples were collected every 50 m east–west across the trend of the mineralized zones, on 200 m spaced north–south lines. The sample depth was about 10–30 cm, so samples tested the B zone of the pediment cover.

The surveys identified two gold anomalous trends that were related to the northern extent of the Las Colinas trend and the northern trend from Mina La Colpa. A large western zone, Fandango, showed anomalous gold values. The La Virgen zone also returned a broad low-level gold anomaly.

Anomalous arsenic, silver, antimony, and lead, characteristic of El Triunfo-style mineralization, occurred in a zone with no outcrop, called the 602 anomaly, near the east side of the Trini concession.

A small number of trial pits were reportedly dug in areas of anomalous IP response, stronger sulphide mineralization, or shearing. Other than LCOT-19 in 2006, results were not compiled by Minera Pitalla.

9.5 Geophysical Surveys

During the mid-1990s, Echo Bay completed an IP survey over the Las Colinas deposit, using 100 m dipole spacing on lines spaced 200 m apart. Additional lines to the north were run using 50 m dipoles on 200 m line spacing. Results of the survey indicated continuation of the Las Colinas mineralization to the north of the then-existing drilling.

Reconnaissance IP was completed by Pediment Gold in 2006, comprising 16 east–west lines, with 100 m dipoles stationed along lines that were 3–5 km in length. Results of the survey showed two large polarization anomalous areas which extended off the Cirio concession north and east. The central RIP anomaly was concluded to probably connect to the Las Colinas deposit area, while the eastern chargeable anomaly was located out east of the concession in the 602,000 east UTM coordinate. The Los Planes zone could be traced in the IP data a distance of 600 m further north from Line 2639800N.

In 2011, Argonaut commissioned Zonge Engineering of Tucson, Arizona to conduct a controlled source audio-frequency magneto tellurics (CSAMT) geophysical survey to provide a better understanding of structure and the depth to bedrock below the alluvial sediments in the area northeast of the Los Planes deposit. CSAMT data were acquired at 31 stations along a single 3.1 km northwest-southeast oriented line and at three off-line sounding locations (Figure 9-1).

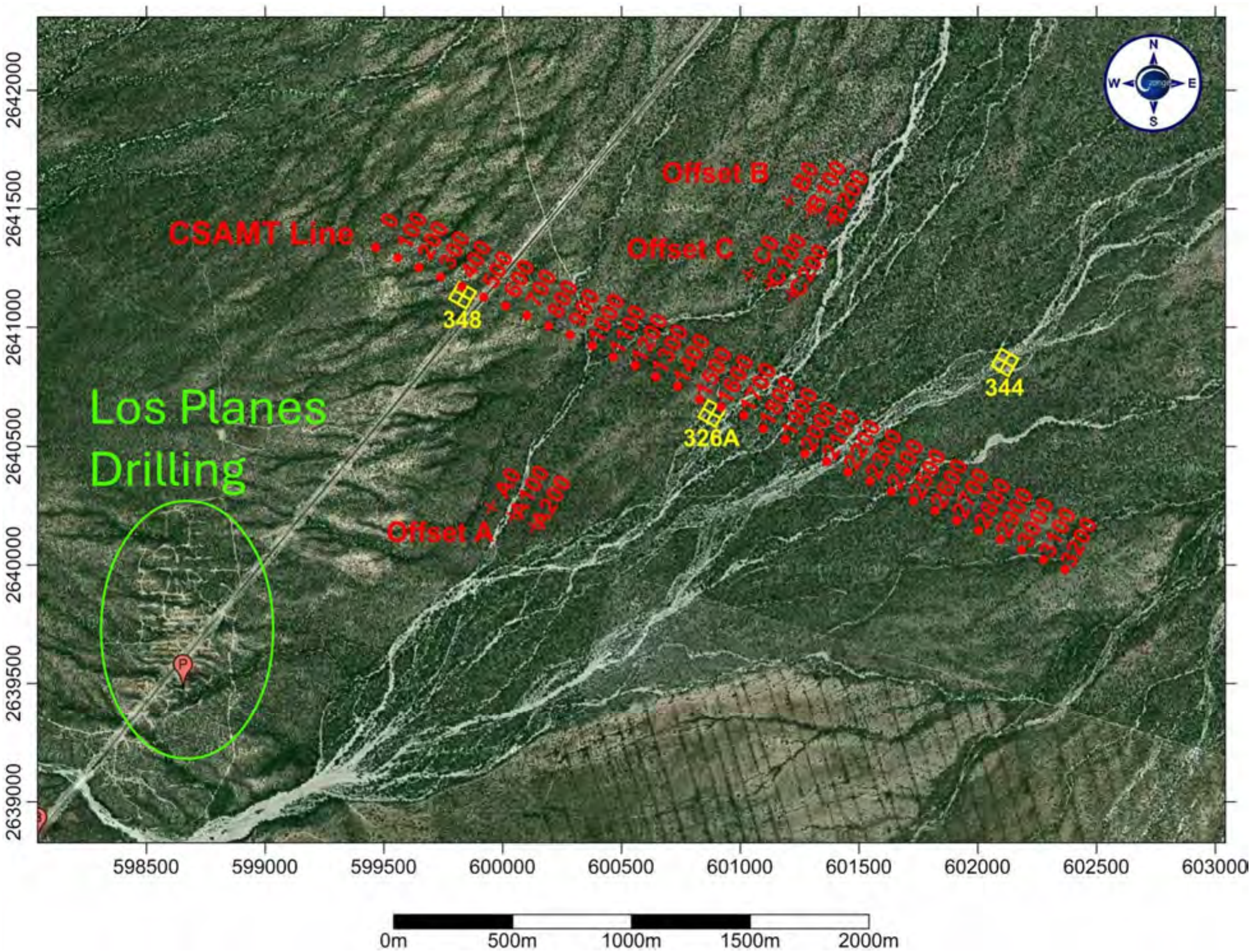
Results showed a moderately resistive layer to a depth of 150–200 m, interpreted to be alluvium, conglomerates, and sandstones overlying a high resistivity basement. At depth there is a change in the high resistivity basement layer which correlates well with an interpreted fault.

9.6 Trenching and Pitting

Trenches were excavated by Echo Bay; however, there is limited information on this program.

In 2006 Pediment Gold completed a resampling program of four Echo Bay trenches and widespread rock chip sampling over an area 550 m north–south by 700 m east–west. Results confirmed gold mineralization in the trenches.

Figure 9-1: CSAMT Geophysical Survey



Note: Figure prepared by Zonge Engineering, 2011.

Two additional trenches of about 40 m length each were dug and bulk sampled in 2008 to provide samples of gold mineralization averaging about 1 g/t Au for leach testing.

9.7 Geotechnical and Hydrological Studies

Geotechnical studies of the Project have been performed by Golder to examine Quaternary seismicity, pit slope stability, and proposed heap-leach facility location selected during the PA and PEA studies in 2010–2012.

Hydrological studies of the Project have been performed by Schlumberger to evaluate and develop the water resources, quality, and groundwater control methods that could be implemented over the life of the Project. A subsequent study was recently completed to develop a groundwater flow model for the Los Planes basin.

9.8 Petrology, Mineralogy, and Research Studies

Research suggests that two thesis studies have been undertaken in the general Project area.

One PhD study, through the University of Arizona, commenced on the Project area in 2007, and although a preliminary report is available, it is not clear if the thesis was ever submitted.

A second PhD study, through the same university, was on the Quaternary faulting regime in the area. One district-scale Quaternary fault was identified in the Project area.

9.9 Exploration Potential

Heliostar recognizes a range of exploration opportunities at the San Antonio Project.

9.9.1 Deposit Definition

Opportunities exist to expand the known limits of mineralization at San Antonio by exploring along strike of key structures defined by drilling and by testing other subsidiary mineralized trends where they appear to extend beyond the deposit limits. Prospects include:

- Las Colinas South, where mineralization remains open at the surface to the south;
- Los Planes West, where the hanging wall mineralization to the west is poorly defined;
- Los Planes East, where mineralization is open on the eastern margin of the apparent fold axial plane;
- La Colpa, where multiple mineralized corridors with varying orientations are open and untested by drilling beyond the current deposit limits.

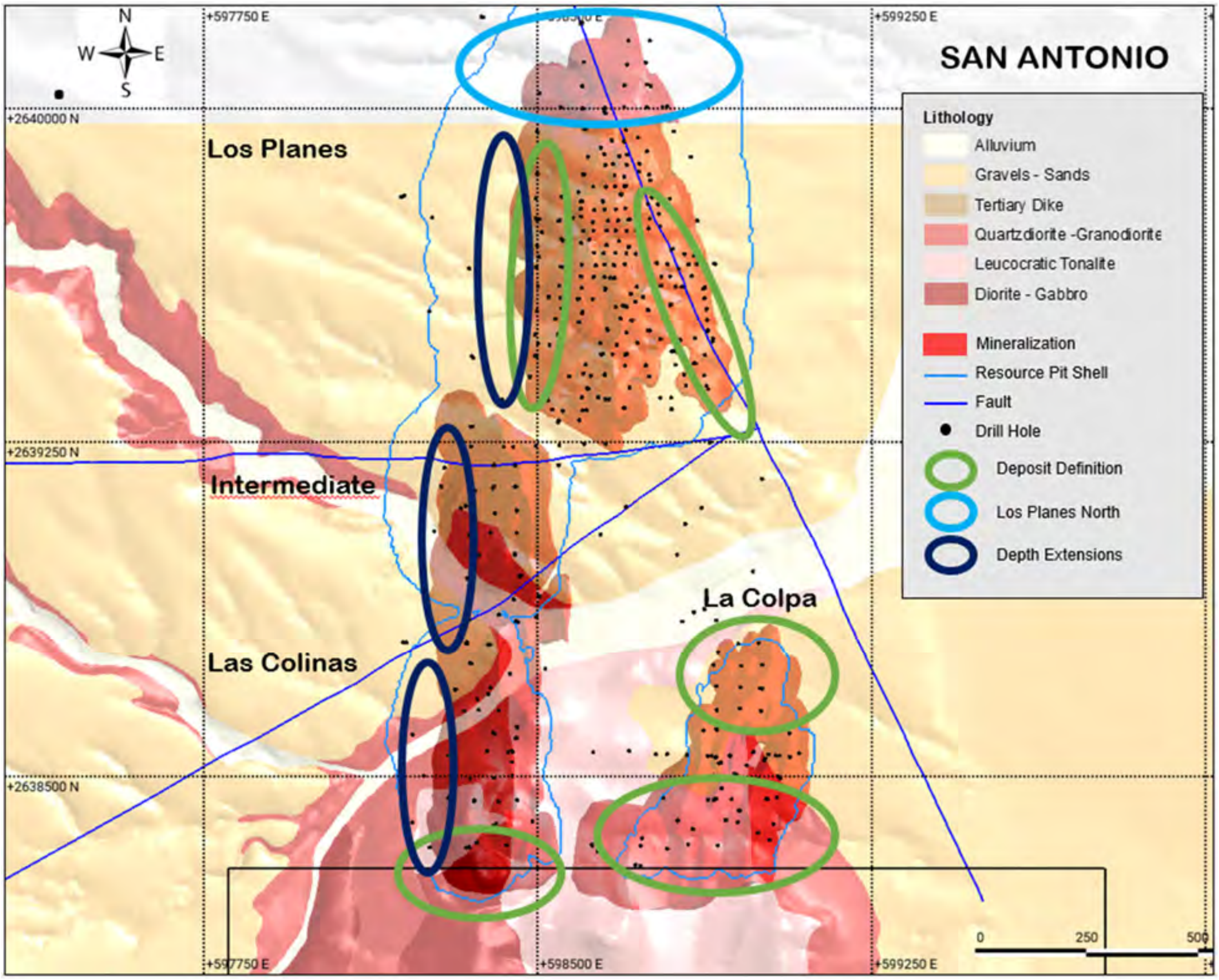
These areas are shown on Figure 9-2.

Note: Figure prepared by Heliostar, 2024.

9.9.1 Los Planes North

Mineralization remains open to the north and down plunge at Los Planes. Mineralization hosted in an apparent fold hinge, and the main shear structure hosting the cataclasite, are unconstrained by drilling down plunge to the north (refer to Figure 9-2).

Figure 9-2: Exploration Potential Areas Location Map



9.9.1 Depth Extensions

Much of the mineralization at the Los Planes, Intermediate, and La Colpa deposits is hosted in a north-striking, moderately west-dipping, structural zone (refer to Figure 9-2). This structural zone and the accompanying mineralization remain open at depth in several areas. The first exploration concept would target areas where existing drill hole grades and intercept widths, if extended at depth, are significant enough to potentially impact the ultimate pit designs. The second target concept is to test areas along the structural zone where elevated gold grades have been intersected in drilling, with the goal of identifying mineralization that may potentially be amenable to underground mining.

9.9.2 District Exploration

The San Antonio land package includes 26,328 ha of mineral concessions. The majority of the exploration has focused on the areas immediately around the San Antonio deposits. Much of the Project area remains underexplored, and hosts numerous historical mining centres that should be evaluated.

10.0 DRILLING

10.1 Introduction

Heliostar has completed no drilling at the Report effective date.

10.2 Project Drilling

Argonaut, Pediment Gold and Echo Bay conducted drill programs from 1995 to 2012. Drilling totals 602 holes for 103,820.41 m, consisting of 476 RC drill holes (83,110.39 m) and 126 core holes (20,710.02 m).

Echo Bay completed 31 RC holes totalling 6,187.0 m, but no record of the drill contractors, chip trays, logging methods or other data were available at the Report effective date.

During 2010, 27 of the drill holes at Los Planes, Las Colinas and the Intermediate zone were specifically completed to provide additional material for metallurgical testwork.

A project drill summary table is provided as Table 10-1, and a drill collar location plan in Figure 10-1.

10.3 Drilling Used in Mineral Resource Estimates

Drilling used in estimation consisted of 525 holes for 89,176.68 m, consisting of 427 RC drill holes (73,796.03 m) and 98 core holes (15,380.65 m).

Drill hole locations were reviewed and excluded from estimation support for the following reasons:

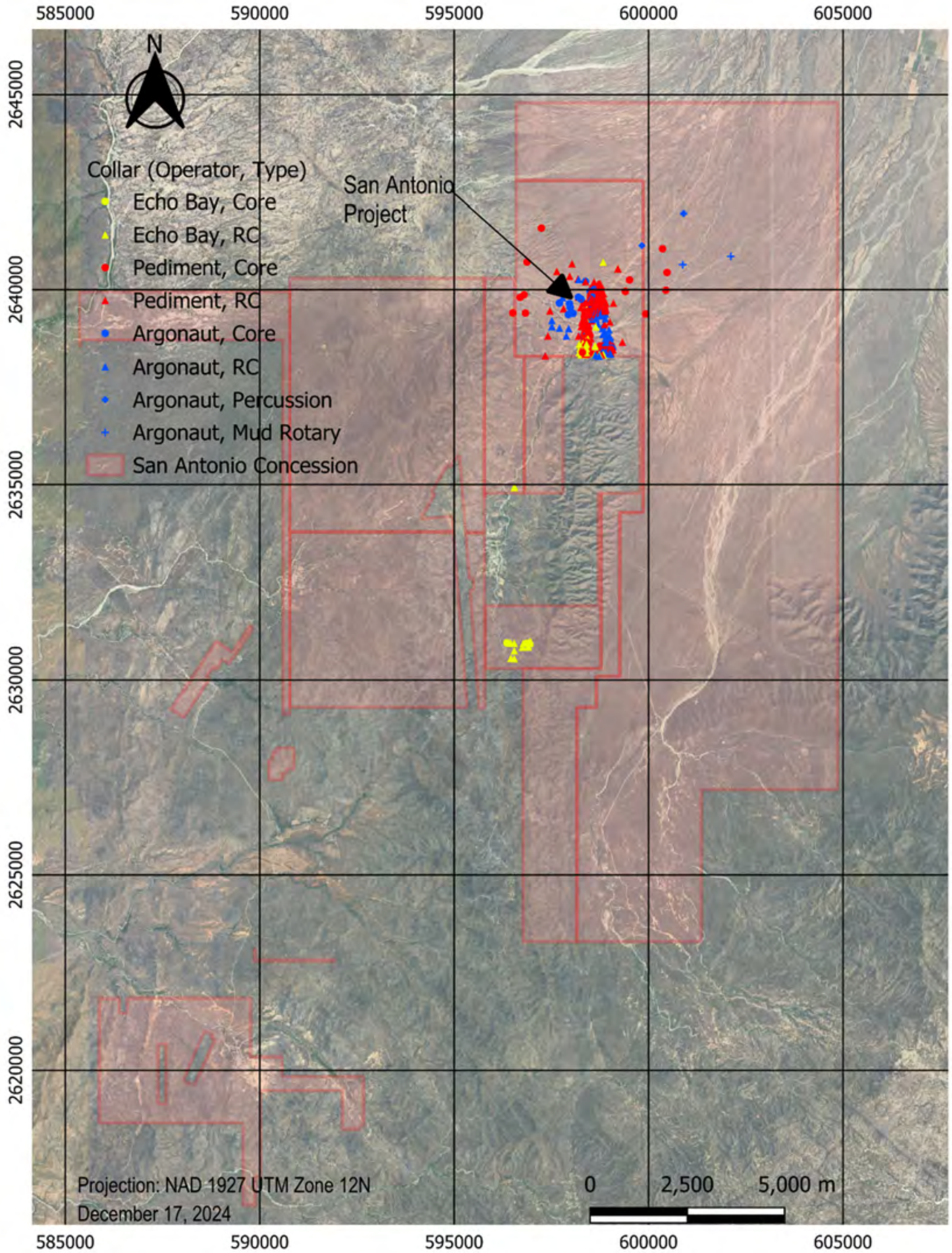
- A total of 84 collars were found to be beyond the Project extent; of these, 82 collars were drill holes completed by Echo Bay, and two drill holes were monitoring wells completed by Argonaut in 2011;
- Eleven Echo Bay collars within the Project extent did not contain any interval information. Five of those were found to have zero depth in the collar table. The remaining six drill holes were found to be outside the extent of modeled Mineral Resources;
- A total of 42 drill holes were found to be beyond the extent of modeled Mineral Resources and excluded from estimation support;
- Sixteen drill holes were found to be confirmation, or twins of existing drilling and were excluded from estimation. The determination of whether a twin or original hole was used for estimation depended on the depth of the drill hole, where greater depth was preferred over shallower depths;

Table 10-1: Project Drill Summary Table

Year	Company	RC Drill Holes		Core Drill Holes	
		Number	Metres	Number	Metres
1995–1997	Echo Bay	43	7,635.50	2	546.20
2007–2010	Pediment Gold	317	57,802.55	100	15,345.50
2011–2012	Argonaut	116	17,672.34	24	4,818.32
Total	***n/a***	***476***	***83,110.39***	***126***	***20,710.02***

Note: Six Argonaut mud rotary and percussion drill holes included as RC drill holes

Figure 10-1: Project Drill Collar Location Plan



Note: Figure prepared by MTS, 2024.

Table 10-2: Drilling Used In Mineral Resource Estimation

Year	Company	RC Drill Holes		Core Drill Holes	
		Number	Metres	Number	Metres
1995–1997	Echo Bay	26	4,982.50	—	—
2007–2010	Pediment Gold	300	54,279.97	80	12,171.10
2011–2012	Argonaut	101	14,533.56	18	3,209.55
Total	***n/a***	***427***	***73,796.03***	***98***	***15,380.65***

- Four drill holes were excluded for individual reasons:
  - One drill hole, 07PLRC-35 was excluded because it did not reach target depth, 08PLDD-23 was drilled as a replacement;
  - The drill hole 11VWP-3AA was not assayed, was likely drilled for hydrological purposes, and is surrounded by close spaced drilling;
  - SA96-90 was excluded because it was intermittently sampled;
  - SA96-91 did not have a reliable collar location.

A drill summary table for the drilling used in estimation is provided as Table 10-1, and a drill collar location plan in Figure 10-2.

10.4 Drill Methods

A summary of the drill contractors, where known is provided in Table 10-3.

Core sizes were drilled at HQ size (63.5 mm core diameter) for exploration and resource drilling, and PQ (85 mm) for metallurgical purposes.

10.5 Logging

10.5.1 RC

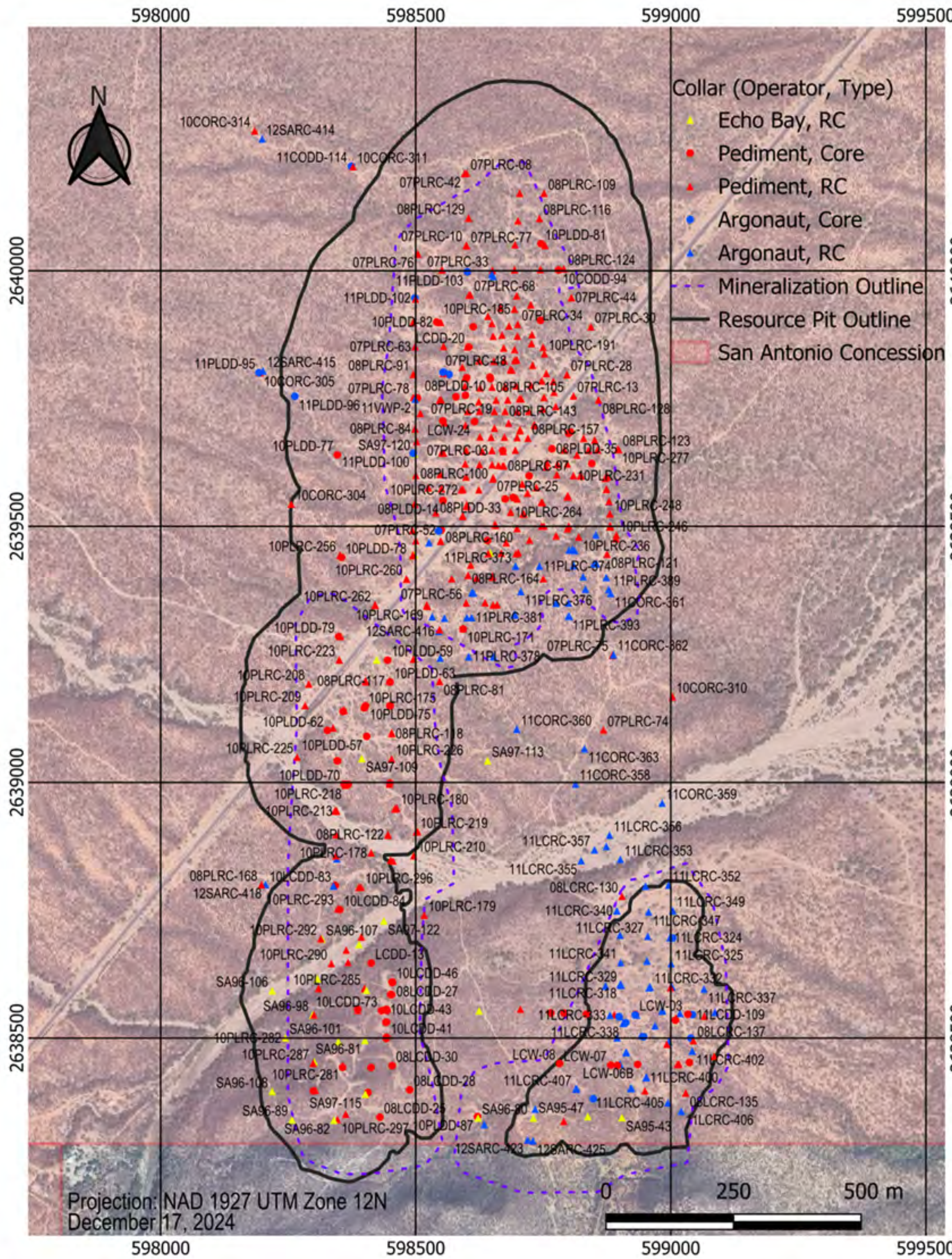
RC chips were logged at the drill site on paper, and where required, geological interpretations checked by viewing chips under a binocular microscope.

10.5.2 Core

Core was washed initially to remove drilling fluids, and then logged and photographed and recovery noted by measuring the net amount received between drillers wooden markers, which were marked in feet and metres.

Logging used standard procedures, and was subsequently transferred to Microsoft Excel spreadsheet files. Standardized logging forms and geological legends were developed for the Project. The geological legend was partly built on historical observations of the local geology.

Figure 10-2: Drill Collar Location Plan, Drilling Used In Mineral Resource Estimation



Note: Figure prepared by MTS, 2024.

Table 10-3: Drill Contractors

Year/Program	Contractor	Rig Type	Note
2007	Diamond Drilling Specialists, New Mexico	Longyear 44	5 HQ core drill holes, LCDD 9, 11, 12, 13, and 22, totalling 823 m
			3 holes; LCDD18, 19, and 20 (398.2 m)
		JKS 300 skid-based drill machine	9 BTW thin-wall (4.7 cm) Hydro-Winke holes
2007, 2008, 2010, 2011, 2012	Layne Christiansen Drilling Co., Hermosillo	Truck-mounted Schramm drill	
		Becker Hammer AP 1000	About 25 drill holes were pre-collared with this machine that would move off the drill hole for the Schramm RC machine to complete drilling RC in rock, and then the Becker Hammer machine would return to reclaim the casing set.
		Atlas Copco CS 1500 skid based setup capable of drilling PQ, HQ, and smaller core sizes	

Unique features not accounted for in the geological legends were addressed using written comments.

Geotechnical logs were completed in sequence prior to the geological logging. These logs include digital photo records, estimations of core recovery (REC), rock quality designations (RQD), fracture types, fracture counts and frequencies, dips of structures, measurements of rock strength and weathering alteration indices.

Six oriented geotechnical drill holes were subject to more detailed logging by Golder personnel, which included total and solid core recovery, RQD, joint condition ratings, strength and weathering indices, collection of detailed discontinuity data, and logging of gouge and rubble.

10.6 Recovery

Drilling recovery measurement were not recorded for the RC drilling.

Core drilling recovery measurements from Pediment Gold drill logs within consolidated lithologies range from zero to 100% with a median measurement of 91%, indicating that the recovery is high and acceptable for resource estimation.

10.7 Collar Surveys

Pre-numbered drill sites were laid out by Brunton compass and chain, working off the surveyed grid. All drill holes were marked with permanent flat cement monuments with identification scribed into the wet cement after completion during the drill pad cleanup. All drill holes were GPS located in NAD 27 grid datum.

All drill hole collars were GPS surveyed by Mario Alberto Moyron, a contracted professional surveyor, working from La Paz, in February 2007. Moyron was also able to accurately tie the old Echo Bay drill hole locations to the INEGI National Survey monuments near Los Planes, although Echo Bay had, in their program, continued to use an established local grid in their exploration and mine development program.

From 2008–2012, drill collar surveys were completed by Jorge Montaño, a professional surveyor from La Paz, using a Z-Max surveying system from Thales Navigation equipment.

In 2012, Argonaut contracted Aztec Servicios de Ingenieria y Topogafia of Hermosillo, Sonora, Mexico to establish fixed base stations and control points on the Project and survey drill hole collars from each of the drilling campaigns as a check on the accuracy of the original collar surveys (Aztec, 2012). A total of 77 Echo Bay drill holes, 25 Pediment Gold drill holes, and six Argonaut drill holes were surveyed using Trimble 4700, 4800, and 5800 GPS receiver units. The average difference in Easting and Northing values between the original surveys and the 2012 Aztec resurveys was minimal (less than 1.0 m).

In 2013, Argonaut contracted Geo Digital Imaging of Hermosillo, Sonora, Mexico to compile corrected collar locations for the project, combining the original collar surveys with the Aztec surveys and rectifying the collar elevations using available digital orthophotos (Geo Digital Imaging, 2013). The resulting table of 682 drill hole collar locations was used for resource modeling.

10.8 Downhole Surveys

Down-hole surveys were carried out for dip and deviation using a Reflex Easy Shot instrument.

10.9 Sample Length/True Thickness

Drilling at San Antonio was oriented vertically or oriented to the east and variable inclination to intersect the west dipping mineralized zones. Multiple drill holes were drilled from some drill sites.

Generally, widths reported in the drill holes at San Antonio represent about 80–100% of the actual width.

Cross sections showing drilling related to mineralization at Los Planes, Intermediate, Las Colinas, and La Colpa are provided as Figure 7-3, Figure 7-4, and Figure 7-5.

10.10 QP Comments on Section 10

In the QP's opinion the quantity and quality of the lithological, collar, and down- hole survey data collected in the exploration and infill drill programs from 2009 to 2012 are sufficient to support Mineral Resource estimation.

There are no known sampling or recovery factors with these programs that could materially impact the accuracy and reliability of the results.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling

Heliostar had completed no analytical programs at the Report effective date.

11.1.1 Geochemical Sampling

Geochemical samples were collected during early-stage exploration.

All trench sampling consisted of chip samples of 3 m length along the trench bottom, with the exception of trench LCOT-19 where three 10 m samples were taken.

Grab and representative chip samples were placed in standard plastic rock sample bags, tagged and the locations recorded in a master database. The plastic bags are sealed using plastic pull ties. All geochemical samples were taken to the core logging facility at San Antonio prior to laboratory despatch.

11.1.2 RC Sampling

Cuttings were sampled in 5 ft (1.52 m) increments regardless of lithology, alteration, or mineralization. In the sample recovery process, a cyclone was set up to initially split the material in half using a vertical and a lateral discharge. When normal samples were collected, material from the vertical discharge (50%) was disposed and the side discharge went through a second splitter to obtain two samples, each representing 25% of the total discharge. These two samples were collected and sealed with plastic pull ties in pre-numbered cloth bags (for wet material) or plastic bags (for dry material). One of the bags was later weighed and stored in large rice sacks in the fenced yard at the core logging facility as a duplicate, while the other was weighed and sent to the ALS Chemex preparation laboratory in Hermosillo.

All samples were taken by Minera Pitalla staff in a pickup truck at the end of the shift to the core logging facility at San Antonio (about 10 minutes drive), where they were stored under lock and key in a gated and fenced compound (finca) with security guards watching the premises 24 hours per day.

The samples were packaged in rice sacks and trucked to the city of La Paz by bonded carrier and then by truck ferry (8 hours) to the Mexican mainland in Sinaloa State. The truck then proceeded to Hermosillo, Sonora (8 hours) and to the ALS Chemex preparation facility.

11.1.3 Core Sampling

All sampling was carried out at 1.52 m intervals. In a few areas of poor recovery, core samples were combined into lengths >1.52 m. The 1.52 m sample intervals were not tied to lithology, alteration, or structure.

Core was split using a diamond saw. Fault zones (clay gouge) and other alteration, or small rubble zones were split with a spoon. Oxide core was normally solid clay and was cut in half (lengthwise) using a butcher knife; solid lumps are split with a hammer splitter.

One half of the core was put into individual sample bags while the other remaining half was retained in the core boxes and stored on site in San Antonio. The plasticized cardboard core boxes, standard in Mexico, can store four runs of 1.52 m.

11.2 Density Determinations

A total of 124 pieces of drill core from the Los Planes and Las Colinas domains were submitted to Oestec de Mexico S.A. de C.V. in Hermosillo, Mexico for specific gravity tests. Samples were coated in wax and weighed both dry and in water.

The samples were grouped into mineralized oxide, mineralized sulphide, unmineralized oxide, and unmineralized sulphide, and statistics were calculated. Lower specific gravity values were measured in mineralized oxide material, and similar densities were measured for all other material.

Results of the tests are summarized in Table 11-1.

11.3 Sample Preparation and Analytical Laboratories

The primary analytical laboratory for the Argonaut and Pediment Gold drill programs has been ALS Chemex, Vancouver, Canada. ALS Chemex is an independent, privately-owned analytical laboratory group. The Vancouver laboratory holds ISO 17025 accreditation. The ALS Chemex preparation facility in Mexico is ISO-9000 accredited.

in Reno, Nevada, USA, and a subsidiary of Bureau Veritas Group of Companies, was used as the secondary laboratory. Inspectorate was not an accredited testing laboratory in 2010. Inspectorate is an independent laboratory.

11.4 Sample Preparation

A standard sample preparation procedure was used for all drill samples, consisting of:

- Crushing: >70% of crushed sample passes through a 2 mm screen;
- Pulverizing: >85% of the ring pulverized sample passes through a 75 µm screen (Tyler 200 mesh);
- Samples received as pulps: >80% of the sample passes through a 75 µm screen.

Table 11-1: Density Determinations

Grouped Zone	Count	Mean	Std. Dev.	CV	Minimum	Median	Maximum
Mineralized oxide	39	2.61	0.12	0.05	2.32	2.62	2.87
Mineralized sulphide	37	2.70	0.10	0.04	2.41	2.72	2.93
Unmineralized oxide	12	2.71	0.09	0.03	2.59	2.70	2.86
Unmineralized sulphide	36	2.69	0.08	0.03	2.50	2.70	2.88
Total	***124***	***2.67***	***0.11***	***0.04***	***2.32***	***2.69***	***2.93***

For the 2010 drill program, Inspectorate America Corporation Laboratories (Inspectorate), based Analysis

Gold was analyzed by fire assay of a 30 g subsample with atomic absorption (AA) finish (ALS code Au-AA23). An additional 35 elements were determined by aqua regia digestion and inductively-coupled plasma (ICP) analysis (ALS code ME-ICP41).

When needed, over-limit gold analysis (>10 g/t Au) was completed using fire assay of a 30 g subsample and a gravimetric finish (ALS code Au-GRA21).

11.5 Quality Assurance and Quality Control

In general, the exploration geologists inserted one control sample (i.e. duplicate, standard reference material (standard), or blank) every 10 drilled samples. Thus each mineralized interval, normally >30 m, typically contained two to three control samples.

All standard and blank materials were obtained from RockLabs Limited, a standards provider located in New Zealand, and consisted of sulphide and oxide pulverized material with different certified gold content values.

From November 7, 2007 to January 3, 2008, sample pulps from the Chemex Hermosillo preparation laboratory were air freighted to the ALS Chemex assay laboratory in Reno. This was done to speed up assay turn around since the Vancouver facility was seriously over-booked. This practice was discontinued immediately following this date, as the assays from the Reno laboratory were found to be consistently 10% lower in gold grade than the assays from Vancouver. Samples from a total of 18 holes were sent. Upon Minera Pitalla identifying this problem the samples pulps were re-directed to Vancouver. ALS Chemex have resolved this problem and those pulp assays meeting the QA/QC protocols are now included in the final database.

11.6 Databases

The Project data are stored in a MS Access database.

All geological and geotechnical data for the Pediment Gold drill programs were entered electronically directly into the system following paper logging in the field or at the core shack. Argonaut continued this practice.

11.7 Sample Security

Sample security is reliant upon the fact that the samples were always attended or locked at the sample dispatch facility. Sample collection and transportation have always been undertaken by company or laboratory personnel using corporately-owned vehicles.

Drill samples were prepared to a pulp at a sample preparation facility operated by ALS Chemex, and pulps were transported by laboratory personnel to the Vancouver analytical facility.

Chain of custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory.

11.8 Sample Storage

Half-cores are stored in the San Antonio core storage warehouse.

11.9 QP Comments on Section 11

In the opinion of the QP, the sample preparation, security and analysis are appropriate to support Mineral Resource estimation.

12.0 DATA VERIFICATION

12.1 Heliostar Data Verification

Heliostar staff surveyed the drill hole coordinates for 55 historical drill holes in the field in October 2024 to confirm drill hole coordinates in the database.

12.2 Third-Party Consultant Data Verification

Over the Project history, a number of third parties have completed data verification in support of technical reports and mining studies (Table 12-1).

The QPs reviewed the findings of, and information in, these reports and studies as part of their data verification steps.

12.3 Data Verification Performed by the QPs

12.3.1 Mr. Todd Wakefield

A site visit was performed, see Section 2.4.1.

Mr. Wakefield conducted an audit of the drilling database used to estimate mineral resources at San Antonio. A total of 55 drill holes were randomly selected from a list of 525 drill holes material to resource estimation in the Los Planes, Intermediate, Las Colinas and La Colpa areas and database entries were checked against original records.

Collar coordinates in the database matched the Geo Digital Imaging rectified collar coordinates values exactly. Apex noted significant differences between the original coordinates and the resurveyed coordinates for three Echo Bay drill holes. In October 2024, Heliostar staff resurveyed nine of the 21 Echo Bay drill holes not surveyed by Apex. All of the drill holes collar coordinates surveyed were very similar to the rectified coordinates except for one. This drill hole was not used for resource estimation purposes.

Downhole surveys in the database were compared to original records for 29 drill holes. Of the remaining 26 audit drill holes, 14 were not surveyed downhole and original downhole surveys are not available to Heliostar for 12 of the drill holes. Five data entry errors out of 151 downhole surveys checked were found. All the errors were minor and will not have a material impact on the location of the drill hole.

Table 12-1: Third-Party Data Verification

Year	Company/Author	Purpose	Notes
2004	Roscoe Postle Associates	Presence of mineralization verification sampling	Eight samples taken from various dumps and trenches from the area explored by Echo Bay. In addition, three samples were taken from old workings within several hundred metres of the highway on the south part of the Cirio concession south of San Antonio. Although direct comparisons with the Echo Bay sample results were not possible as Minera Pitalla did not have access to the detailed Echo Bay data, the samples indicated the presence of gold and silver and substantiated the general tenor of the mineralization.
2009	Herdrick and Giroux	Technical report	Duplicate, standard and blank sample submissions were examined and found to indicate no concerns with sample preparation. Five RC holes were twinned by core drill holes. The cored holes had an offset of about 5 m and the intersections were approximately 10 m deeper; however, the zone continuity was confirmed by geology, mineralization, and the average gold content–length products (gram–metre results).
2010	AMEC	Database review in support of the 2010 PA	Reviewed drill collars, down hole surveys, drill sample coverage, RC and core sample intervals, 10% of assay data, QA/QC, RC down hole contamination evaluation, specific gravity checks.
2011	AMEC	Technical report	Reviewed QA/QC data, RC down hole contamination evaluation
2012	SRK	Technical report	Spot-checked 10 assay certificates from various stages of the project; reviewed 333 assay certificates (approximately 15% of the assays) against database entries;

Lithology values for 6,539 logged intervals from 55 drill holes were checked against the original log files. Only two data entry errors were observed, and the errors will have no material impact on the geological model.

Gold and silver assay values for 6,629 samples from 55 drill holes were checked against the original assay certificates. Three data entry errors were observed.

The QP finds the San Antonio database to be acceptably free of errors to support Mineral Resource estimation.

12.3.2 Mr. Richard Schwering

A site visit was performed, see Section 2.4.2.

Mr. Schwering completed a mechanical audit of the drill hole database using Leapfrog Geo software version 2023.2.3. The mechanical audit checks for interval overlaps, interval gaps, duplicate intervals, intervals exceeding the maximum collar depth, missing information, nonnumeric and negative assay values, etc. The mechanical audit did not identify significant issues within the drill hole database and the few errors identified were corrected prior to gold grade estimates.

Gold grade statistics by operator, drill hole type, bore hole diameter, and assay laboratory were reviewed, and no significant biases were identified in the gold assays.

Prior to the QP's site visit, Heliostar staff took GPS measurements of 55 drill hole collars, approximately 10% of the collars on the Project, using a handheld Trimble device. Mr. Schwering checked these collar locations against the locations in the database and found 46 of the 55 were within ±6 m in the easting and northing directions. The other nine drill holes were flagged for re-checking. During his site visit, Mr. Schwering personally took readings with his own handheld GPS and found eight of the nine drill hole collars were within ±6 m of the easting and northing locations in the database. In total, out of the 55 drill hole collars checked, 54 were within ±6 m of the collar locations in the database.

Outcrop exposures are limited on the site. However, one particular exposure in an arroyo located in La Colpa confirmed the interpretation of mineralization for that deposit (Figure 12-1). The outcrop shows a shallowly-dipping structure with clear contacts between mineralized and unmineralized material. The notebook shown for scale is 14.0 cm wide by 21.5 cm high.

The QP reviewed 120 m of core and compared them to key logging parameters that inform the geologic model including lithology, structure, oxidation, and sulphide content. The intervals, presented in Table 12-2, were selected based on location and mineralization style. The review of selected core intervals did not show significant differences from the information contained in the drill hole logs.

During his review of core intervals, Mr. Schwering collected six witness samples for gold assay. The intervals were selected to confirm a wide rage of gold grades across the extent of the property. The requested intervals were sent to Heliostar prior to the site visit. Heliostar staff then quartered the half core. The QP confirmed the quartered intervals match the requested intervals and then personally placed the quarter sample into plastic bags. He filled out sample tags, noted the sample number for his records, placed one copy in the sample bag, and gave another copy to Heliostar staff. The bags were then sealed using a zip tie and the sample number was written on the bag by the QP. The samples were then sent by Heliostar staff to ALS Chemex in Hermosillo Sonora Mexico for gold assay. The results from the witness sampling, presented in Table 12-2, confirmed the tenor of gold mineralization at the San Antonio Project.

Figure 12-1: La Colpa Outcrop

Note: Photograph taken by Richard Schwering, 2024. The notebook shown for scale is 14.0 cm wide by 21.5 cm high.

Table 12-2: Selected Core Intervals for Review

Hole ID	Easting	Northing	Elevation	Azimuth (º)	Dip (º)	Total Depth (m)	From (m)	To (m)	Length (m)	Model Area	Mineralization Style
10PLDD-78	598354.82	2639439.30	280.36	90.00	-50.00	349.50	210	230	20	Los Planes	Contact between waste and mineralization
							260	270	10	Los Planes	Contact between mineralization and waste
10PLDD-80	598579.02	2639753.46	275.11	90.00	-60.00	303.50	95	105	10	Los Planes	Internal waste
							40	55	15	Los Planes	High-grade mineralization
LCDD-09	598386.29	2638556.19	264.54	90.00	-50.00	117.65	45	60	15	Las Colinas	Contact between waste and mineralization
							70	85	15	Las Colinas	Contact between mineralization and waste
10PLDD-87	598621.24	2638346.27	259.18	90.00	-50.00	251.00	140	160	20	La Colpa	Complete mineralized interval
10PLDD-57	598404.04	2639090.14	272.43	90.00	-80.00	170.50	115	130	15	Intermediate	Contact between mineralization and waste

Table 12-3: Witness Sampling Results

Hole ID	From (m)	To (m)	Description	Sample ID	Original Assay (g/t Au)	Witness Sample ID	Witness Assay (g/t Au)	Difference (Witness to original; g/t Au)
10PLDD-80	44.60	47.20	High-grade mineralization	254856	29.800	726002	21.000	-8.800
	103.00	105.00	Internal waste	254892	0.048	726003	0.193	0.145
10PLDD-78	223.00	225.30	Low-grade mineralization	254609	0.438	726001	0.646	0.208
LCDD-09	55.47	57.30	Mid-grade mineralization	LCDD-09-23478	0.969	276004	0.614	-0.355
10PLDD-87	148.00	150.00	Low-grade mineralization	255737	0.209	726005	0.283	0.074
10PLDD-57	124.50	125.80	Mid-grade mineralization	446674	1.565	726006	2.250	0.685

Note: drill hole collar locations provided in Table 12-2.

12.3.3 Mr. Jeff Choquette

Mr. Choquette performed a site visit, see Section 2.4.3.

During those site visits he inspected core intervals and reviewed the site topography for mine planning purposes. He also checked the geotechnical studies to make sure they met industry standards and practices. As a result of the data verification, Mr. Choquette concluded that the data were acceptable for use in the mine planning for the preliminary economic assessment and in the cashflow analysis.

12.3.4 Mr. Carl Defilippi

Mr. Defilippi performed site visits with the most recent in 2024 (refer to Section 2.4.4).

During those site visits he inspected core intervals and reviewed available area for site processing and infrastructure facilities Mr. Defilippi also reviewed procedures and results of laboratory test results.

As a result of the data verification, Mr. Defilippi concluded that the metallurgical test procedures and results at San Antonio met industry standards for a preliminary economic assessment. Metallurgical sample locations were reviewed and even though the material came from the mineralized area, additional drilling for metallurgical sampling purposes and test work are required. However, there are sufficient results to support this Report and the current processing method and assumptions regarding metallurgical recoveries.

12.3.5 Ms. Dawn Garcia

Ms. Garcia performed a site visit, see Section 2.4.5.

During the site visit, she received copies of key historic baseline characterization studies, a conceptual closure plan, an environmental permitting document, and information related to social initiatives.

The studies and documents received were selectively reviewed and used to support the environmental, permitting and social conditions descriptions.

Should the mine plan be advanced to execution, a variety of permits will be required. There has been historic and recent opposition to mining in the region and on a state level, although locally the community of San Antonio is supportive of mining. The opposition to mining may influence the permitting process. There is no certainty on when, or if, the permitting will be successful under the current government administration. Inability to obtain the required permits would be a material risk to the mine plan.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Heliostar had performed no metallurgical testwork at the Report effective date.

Testwork was completed from 1997–2012 by the Colorado Mineral Research Institute; SGS Metallurgical Laboratory, Durango, Mexico (SGS Durango); and the Metcon Research laboratory, Tucson, Arizona (Metcon).

Testwork included: gravity concentration, flotation and bottle leach cyanidation; column and bottle roll; bulk leach extractable gold (BLEG); Bond work index (Wi), abrasion index (Ai), bulk density and specific gravity; locked cycle column leach; and acid-base accounting (ABA) testwork.

13.2 Metallurgical Testwork

13.2.1 1997 Testwork Program

In 1997, two RC samples were submitted by Echo Bay to the Colorado Mineral Research Institute for metallurgical testing. The sample source, location and depth from which the samples were collected were not noted. The samples were assayed and found to contain 1.07 and 1.6 g/t Au. The samples contained pyrite and other sulphides, along with very fine- grained gold.

Gold recovery was tested by gravity concentration, flotation and bottle leach cyanidation.

Gravity concentration testing was poor, recovering only 9% and 16% of the contained gold respectively.

Direct cyanidation of the drill cuttings, nominally 7–10 mm in size, resulted in gold recoveries ranging from 48 to 63%. Cyanide consumption was 1 kg/t. The samples responded well to flotation and cyanidation of the reground concentrate, yielding 98% and 99% of the contained gold. Cyanide consumption for the reground concentrates was higher at 2.7–2.8 kg/t of material processed due to the presence of copper sulphides in the concentrate.

13.2.2 2008 SGS Durango Testwork Program

Nine composites were prepared from 99 individual samples, representing oxide, oxide–sulphides, and sulphide mineralization.

Conventional bottle roll leach tests were conducted on the as-received samples. The particle size of the samples tested was approximately 80% minus 10 mesh. The sodium cyanide concentration at the start of each test was 3,000 ppm while the pH was maintained at approximately 11. The tests were conducted on 500-g composites at 33% solids for 96 hours. The conventional bottle roll leach test results are presented in Table 13-1.

Table 13-1: SGS Durango Metallurgical Testing Bottle Roll Leach Tests, 2008

Composite	Type	Residue		Extraction		Reagent Consumption	
		Au (g/t)	Ag* (g/t)	Au (%)	Ag * (%)	NaCN (kg/t)	CaO (kg/t)
SATM-001	Oxides	1.26	<3.0	88.63	N/A	2.24	6.22
SATM-002	Oxides	0.465	<3.0	78.07	N/A	1.66	4.79
SATM-003	Oxides	0.119	<3.0	85.02	N/A	1.37	3.63
SATM-004	Oxides/sulphides	2.83	<3.0	79.27	N/A	7.06	8.12
SATM-005	Oxides/sulphides	0.448	<3.0	76.27	N/A	2.24	5.71
SATM-006	Oxides/sulphides	0.144	<3.0	86.29	N/A	2.12	4.78
SATM-007	Sulphides	5.25	<3.0	67.74	N/A	3.14	3.38
SATM-008	Sulphides	0.765	<3.0	73.61	N/A	2.38	3.57
SATM-009	Sulphides	0.179	<3.0	71.72	N/A	2.7	3.05

Note: N/A = not applicable. * Silver recovery was not documented due to the low silver head grade.

Gold recoveries on oxide, oxide/sulphide and sulphide composites averaged 84%, 81% and 71%, respectively. Sodium cyanide and lime consumptions were variable and can be considered to be moderate to high.

BLEG testing was conducted on each composite. A 3-kg sample was agitated by rolling for 96 hours with 6 L of 3,000 ppm NaCN solution. After rolling the leach solution was assayed for gold and silver. The collected solutions each contained gold in relative proportion to the head grade of the composites. All of the solutions returned <3 g/t Ag in solution. The composite tails were not assayed; no gold recovery percentages could be calculated from the testwork.

13.2.3 2008 Metcon Testwork Program

Oxide material from Los Planes split drill core was column leach tested at two crush sizes: P_{80} 9.5 mm (3/8 inch) and P_{80} 38 mm (1½ inch). Transition and sulphide material was tested at a crush size of P_{80} 9.5 mm. The results are presented in Table 13-2.

Prior to testing, a screen analysis was conducted on the test material. The material was then reconstituted and the column leach tests run. Following testing, the column residue was then re-screened and the resulting screen portions assayed and compared to pre-test assay results. Gold recovery on oxides increased as particle size decreased. Oxidized material types had a higher gold recovery compared to the transition and sulphide materials.

Cyanide consumption was low for all material types tested, but higher for transition and sulphide types as compared to oxidized types.

CaO consumption was moderate for all material types tested.

Table 13-2: Metcon Column Leach Tests, 2008

Test no.	Sample ID	Crush Size	Extraction		Reagent Consumption	
			Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
CL-01	Oxide	P80 9.5 mm	80.7	64.1	0.06	1.8
CL-02	Oxide	P80 38 mm	75.2	61.4	0.06	1.58
CL-03	Transition	P80 9.5 mm	71.9	35.6	0.33	1.84
CL-04	Sulphide	P80 9.5 mm	47.1	26.2	0.45	0.92

13.2.4 2010 Metcon Testwork Program

Seven composites were prepared by compositing by samples taken from 26 PQ drill core holes, either oxide, mixed or sulphide, and by location, from the Los Planes, Las Colinas and Intermediate zones.

The composites were submitted for physical testing, with a summary of the results provided in Table 13-3. In that table, the “starter pit” refers to material within the proposed Los Planes pit that was considered easily-accessible. The Intermediate zone is located between Las Colinas and Los Planos.

Bottle roll cyanidation testing was conducted on the composite samples at four sizes: P_{100} 10 mesh, P_{80} 149 µm, P_{80} 105 µm, and P_{80} 74 µm. The tests were conducted for 72 hours at 45% solids, 2 g/L NaCN and a pH of 10.5–11. The results are summarized in Table 13-4.

Gold extraction in bottle roll leach testing increased as particle size decreased. Sodium cyanide consumptions were moderate while lime requirements were generally low.

Locked cycle column leach testing was conducted, and each composite was subjected to three column leach tests at various crush sizes. The particle sizes for each composite were P_{100} 102 mm (4 inch), P_{80} 19 mm (0.75 inches) and P_{80} 9.5 mm (0.375 inches) except for the Los Planes sulphide composite which was tested at P_{80} 19.1 mm (0.75 inches) and P_{80} 9.5 mm (0.375 inches) only.

The column leach tests were conducted in 100-mm (4-inch) and 300-mm (12-inch) diameter and 6 m tall PVC columns.

Prior to loading each column, an aliquot of CaO equal to the consumption of the 72 hr bottle roll leach test was mixed with the sample for protective alkalinity. Samples were loaded into the columns and a leaching solution with a 10.5–11.0 pH containing 1.0 g of NaCN/L of solution was administered at a constant rate equal to 7.3 L/hr/m^2 for 99 days of leaching followed by 14 days of tap water rinsing and at least four days of draining. The results are presented in Table 13-5.

Table 13-3: Comminution Testwork Results

Zone	Oxidation State	Bond Work Index (kW-hr/t)	Abrasion Index	Bulk Density (g/cm³)	Specific Gravity
Starter pit	Oxide, mixed	5.16	0.0744	2.56	2.82
	Sulphide	9.32	0.1439	2.52	2.80
Las Colinas	Oxide, mixed	4.05	0.0569	2.45	2.72
	Sulphide	3.94	0.0198	2.49	2.79
Los Planes	Oxide, mixed	3.88	0.0642	2.62	2.75
	Sulphide	8.09	0.0732	2.48	2.80
Intermediate	Oxide, mixed, sulphide	7.00	0.0799	2.49	2.85

Table 13-4: Metcon Bottle Roll Leach Testing Results, 2010

Composite ID	Test No.	Grind Size	Extraction		Reagent Consumption	
			Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
Starter pit, oxide, mixed	BR-01	P100 10 mesh	67.82	40.82	1.03	1.21
	BR-02	P80 149 µm	77.61	46.87	0.60	1.23
	BR-03	P80 105 µm	85.34	80.58	0.71	1.29
	BR-04	P80 74 µm	88.30	82.89	1.48	1.85
Starter pit, sulphide	BR-05	P100 10 mesh	52.04	38.75	1.86	0.64
	BR-06	P80 149 µm	84.14	46.10	1.29	0.65
	BR-07	P80 105 µm	85.54	47.17	1.79	0.74
	BR-08	P80 74 µm	88.08	51.56	1.56	0.93
Los Planes, oxide, mixed	BR-09	P100 10 mesh	79.57	32.12	1.00	1.22
	BR-10	P80 149 µm	93.07	35.28	0.66	1.24
	BR-11	P80 105 µm	93.63	41.64	0.58	1.42
	BR-12	P80 74 µm	92.32	36.02	0.69	1.51
Los Planes, sulphide	BR-13	P100 10 mesh	63.15	38.17	1.37	0.72
	BR-14	P80 149 µm	86.71	58.80	0.78	0.63
	BR-15	P80 105 µm	87.41	58.93	0.75	0.94
	BR-16	P80 74 µm	89.84	61.30	0.52	0.98
Las Colinas, oxide, mixed	BR-17	P100 10 mesh	66.28	24.63	0.66	2.17
	BR-18	P80 149 µm	74.81	49.26	0.26	2.15
	BR-19	P80 105 µm	74.94	28.27	0.46	2.32

Composite ID	Test No.	Grind Size	Extraction		Reagent Consumption	
			Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
	BR-20	P80 74 µm	77.00	48.42	0.45	2.90
Las Colinas, sulphide	BR-21	P100 10 mesh	58.53	24.03	1.17	0.67
	BR-22	P80 149 µm	81.26	32.49	0.45	1.19
	BR-23	P80 105 µm	81.33	41.61	0.57	1.19
	BR-24	P80 74 µm	85.18	53.23	0.44	1.49
Intermediate, oxide, mixed, sulphide	BR-25	P100 10 mesh	62.77	27.41	1.30	0.67
	BR-26	P80 149 µm	84.14	34.72	0.33	0.95
	BR-27	P80 105 µm	87.74	45.91	0.28	1.15
	BR-28	P80 74 µm	89.44	37.54	0.30	1.15

Table 13-5: Metcon Column Leach Testwork Results, 2010

Composite ID	Test No.	Grind Size	Calculated Head		Extraction		Reagent Consumption	
			Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
Starter Pit - Oxide ,Mixed	CL-01	P_{100} 101 mm	1.06	0.88	74.70	11.25	0.46	1.18
	CL-07	P_{80} 19.1 mm	1.14	0.71	83.75	18.61	0.47	1.29
	CL-08	P_{80} 9.5 mm	1.19	0.93	91.43	18.71	0.32	1.30
Starter Pit - Sulphide	CL-02	P_{100} 101 mm	1.74	1.37	18.21	07.67	0.35	0.54
	CL-09	P_{80} 19.1 mm	1.84	1.18	51.49	19.26	0.55	0.76
	CL-10	P_{80} 9.45 mm	1.97	1.50	51.70	24.56	0.65	0.79
Las Colinas - Oxide, Mixed	CL-04	P_{100} 101 mm	0.70	0.94	36.46	7.06	0.78	1.85
	CL-15	P_{80} 19.1 mm	0.74	0.89	37.16	10.34	0.45	2.08
	CL-16	P_{80} 9.5 mm	0.77	0.85	58.36	16.81	1.42	2.04
Las Colinas - Sulphide	CL-05	P_{100} 101 mm	0.86	1.04	13.13	3.96	0.53	0.54
	CL-17	P_{80} 19.1 mm	0.83	1.15	31.97	9.51	0.58	0.63
	CL-18	P_{80} 9.5 mm	0.91	0.87	46.59	13.94	0.46	2.25
Los Planes - Oxide, Mixed	CL-03	P_{100} 101 mm	0.86	1.04	54.62	11.70	0.51	1.19
	CL-11	P_{80} 19.1 mm	0.73	0.99	87.13	17.87	0.42	1.26
	CL-12	P_{80} 9.5 mm	097	1.07	87.05	20.85	0.34	1.29
Los Planes- Sulphide	CL-13	P_{80} 19.1 mm	0.93	1.36	63.75	18.98	0.49	1.28
	CL-14	P_{80} 9.5 mm	0.86	1.32	72.51	16.70	0.41	1.28

Composite ID	Test No.	Grind Size	Calculated Head		Extraction		Reagent Consumption	
			Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
Intermediate – Oxide, Mixed, Sulphide	CL-06	P_{100} 101 mm	1.06	1.00	23.31	14.06	0.41	0.61
	CL-19	P_{80} 19.1 mm	0.80	1.15	37.68	13.98	0.46	0.76
	CL-20	P_{80} 9.5 mm	0.94	1.03	57.28	25.01	0.46	0.74

Gold recovery in the column leach tests increased with decreasing particle size; this was similar to the bottle roll tests. The average recovery of all material crushed to P_{100} 101 mm was 36.7%; the average recovery of all material when crushed to P_{80} 19.1 mm was 56.1%; and the average recovery for all material when crushed to P_{80} 9.5 mm was 66.4%. Considering all tests, gold recovery increased by 19.4% when decreasing the particle size from P_{100} 101 mm to P_{80} 19.1 mm, and by 29.7% when decreasing the particle size from P_{100} 101 mm to P_{80} 9.5 mm.

The oxide portions of the Starter and Los Planes pit composites when crushed to P_{80} 9.5 mm gave recoveries of 91% and 87% respectively. Silver recovery was low in all cases, but generally increased as the testing particle sizes decreased. The average silver recovery for all composites when crushed to P_{80} 9.5 mm was 19.5%.

13.2.5 2010 Metcon Environmental Testwork Program

During the column leach testing conducted by Metcon, daily samples were collected and composited weekly for each column test and submitted for ICP scans. Mercury and cadmium were not detected in any of the pregnant solution samples. Arsenic was detected in the pregnant solution composites ranging from 1–19 ppm.

After the column leach test was complete, approximately 150 g of the leach residue was collected and submitted for acid-base accounting (ABA) testing. Based on the results of the ABA testing, indicating the potential for acid generation, five of the columns were selected for kinetic testing. A 5 kg aliquot was split from the residue and submitted to SGS for testing, and a 25 kg aliquot was split from selected column leach resides and submitted to Golder for geotechnical testing.

A review of the kinetic testing results generally shows low metal content, low sulphate and near neutral pH, leading to the conclusion that future drainage from the spent leach pad residue will not be overly detrimental to surface and ground waters assuming the samples tested represent material to be stacked on the leach pad, and that the leach pad has been constructed and managed in a responsible manner. However, drinking water quality will not be achieved in the effluent produced as a result of meteoric events and mitigation measures such as regrading, contouring and capping to minimize infiltration will be required.

13.2.6 2012 Metcon Testwork Program

Testwork in 2012 was completed on samples that included Los Planes deep sulphides; Los Planes massive sulphides; La Colpa oxide and transition; and La Colpa sulphides.

Samples were submitted for head assays including ICP scans, bottle roll leach testing and locked cycle column leach testing. The composites were stage crushed to P_{80} 9.5 mm, screened then portions were reconstituted for head analysis, bottle roll leach testing and locked cycle column leach testing.

The ICP assays showed:

- Arsenic was detected and ranged from approximately 44–31,000 ppm;
- Mercury was not detected in the head composite samples;
- Aluminum content in the head composite samples ranged from 19,390–28,850 ppm;
- Iron and magnesium were present in significant amounts in all samples.

Bottle roll testing was conducted on each composite at P_{100} 1.7 mm over a 72 hr period at 45% solids. Sodium cyanide consumptions were moderate while lime requirements were low. Gold and silver recoveries averaged 59% and 20%, respectively. The results are presented in Table 13-6.

Locked cycle column leach tests were conducted on the composites at a size of P_{80} 9.5 mm. All composites were agglomerated using 2.0 kg/t of Portland cement (0.32 kg/t equivalent CaO per kilogram) and 100% of the CaO consumption of the 72 hr bottle roll leach tests. The columns were irrigated with leach solution at a rate of 7.3 L/hr/m^2. The tests continued for 95 days of leaching followed by a six-day wash cycle and at least three days of draining. The results are presented in Table 13-7.

Gold and silver recoveries averaged 53.3% and 12.5%, respectively. Sodium cyanide and lime requirements were generally low.

13.3 Recovery Estimates

For study purposes, KCA normally discounts laboratory gold recovery by two to three percentage points when estimating field recoveries, assuming the material to be processed will be similar to the samples tested. KCA normally discounts silver by five percentage points when estimating field recoveries. KCA normally discounts field cyanide consumption as compared to laboratory results by 33%. CaO consumption for field is 100% of laboratory results. This assumes a well-managed heap leach operation, and if agglomeration is required, it is assumed that this process is completed correctly.

Table 13-8 presents estimated field recoveries of gold and silver by pit and material type when crushed and heap leached at P_{80} 9.5 mm particle sizes.

Table 13-6: Metcon Bottle Roll Leach Test Results, 2012

Leach Test No.	Composite Sample ID	NaCN Consumption (kg/t)	CaO Consumption (kg/t)	Leach Time (hr)	Extraction	
					Au (%)	Ag (%)
BR-01	SA-2011-01, Los Planes, Deep Sulphide	1.15	0.71	72	68.1	20.8
BR-02	SA-2011-02, Los Planes, Deep Sulphide	1.15	0.89	72	40.3	11.2
BR-03	SA-2011-03, Los Planes, Deep Sulphide	0.74	0.65	72	65.2	12.3
BR-04	SA-2011-04, Los Planes, Deep Sulphide	0.64	0.58	72	50.7	12.7
BR-05	SA-2011-05&06, Los Planes, Deep Sulphide	1.06	0.67	72	56.8	19.6
BR-06	SA-2011-07, Los Planes, Massive Sulphide	1.15	0.78	72	71.9	39.9
BR-07	SA-2011-08, La Colpa Oxide Transition	0.77	1.35	72	73.4	16.0
BR-08	SA-2011-09, La Colpa Sulphide	0.99	0.69	72	43.8	27.4

Table 13-7: Metcon Column Leach Tests, 2012

Test No.	Sample ID	Leach Days	Head Assay Screen		Calculated Head		Extraction		Reagent Consumption	
			Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	NaCN (kg/t)	CaO* (kg/t)
CL-01	SA-2011-01, Los Planes, Deep Sulphide	95	0.79	1.12	0.83	1.12	54.8	14.6	0.79	0.85
CL-02	SA-2011-02, Los Planes, Deep Sulphide	95	0.43	1.15	0.48	1.22	32.6	7.7	0.63	0.96
CL-03	SA-2011-03, Los Planes, Deep Sulphide	95	0.35	1.19	0.4	1.12	57.7	8.3	0.50	0.76
CL-04	SA-2011-04, Los Planes, Deep Sulphide	95	0.62	1.17	0.65	1.20	43.1	8.9	0.61	0.71
CL-05	SA-2011-05&06, Los Planes, Deep Sulphide	95	2.50	1.68	2.62	1.71	68.7	16.2	0.60	0.71
CL-06	SA-2011-07, Los Planes, Massive Sulphide	95	5.03	1.79	5.76	2.06	46.6	28.3	1.00	0.86
CL-07	SA-2011-08, La Colpa Oxide Transition	95	0.36	1.04	0.46	0.85	75.4	11.7	0.60	0.84
CL-08	SA-2011-09, La Colpa Sulphide	95	0.35	0.92	0.41	0.95	47.9	4.4	0.53	0.89

Note: * CaO consumption does not include Portland cement addition, 0.64 kg/tonne CaO equivalent

Table 13-8: Metallurgical Recovery and Reagent Consumption Forecasts

Mineralization Type/Area	Extraction (%)		Reagent Consumption (kg/t)	
	Au	Ag	NaCN	CaO
Los Planes oxide, mixed	86	14	0.11	1.3
Las Colinas oxide, mixed	55	11	0.47	2.0
Los Planes sulphide	55	9	0.20	1.3
Las Colinas sulphide	44	9	0.15	2.3
Intermediate oxide, mixed, sulphide	54	20	0.15	0.7
La Colpa oxide transition	72	6	0.20	1.5
La Colpa sulphide	44	0	0.17	1.5

13.4 Metallurgical Variability

Gold and silver recoveries were generally crush size and degree of oxidation dependent. There was also variability between the different pits with Los Planes oxides and mixed material achieving significantly higher recoveries than similar sample types from the other pits. Estimated field recoveries for sulphides were generally low ranging from 44% to 55% for all the pits.

13.5 Deleterious Elements

There were no deleterious elements detected in the testwork and analyses that could have a significant impact on potential economic extraction of gold and silver. The processing of mixed and sulphide materials could have an impact on long-term leaching and on closure requirements due to potential future acid generation issues.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Introduction

The mechanical audit of the database was completed using Leapfrog Geo software version 2023.2.3 (refer to discussion in Section 12.3.2). The geological model, estimation domains, and mineral resource estimate were all completed using Leapfrog software 2024.1.0 in conjunction with Leapfrog EDGE, an extension of Leapfrog.

14.2 Database

The drill hole database initially contained 682 holes totaling 112,786.31 m. The final drill hole database used in estimation, following data review, contains 525 drill holes totaling 89,177 m (refer to Section 10).

The assay database contains 55,554 valid gold assays totaling 87,516.20 m, approximately 98.14% of the total drill hole length.

A total of 194.77 m of core was not sampled, presumably due to lack of mineralization indicators, and those intervals were assigned a below detection limit (BDL) gold grade of 0.0025 g/t.

The drill hole database contained 87 gold assays with a value of -1. These -1 values were reviewed and 61 intervals totaling 1,354.11 m had a code of “no assay”, and were assigned a below detection limit grade. The remaining 26 intervals with a gold grade of -1 totaling 111.60 m had a code of “no recovery”, and those intervals were omitted from estimation support.

14.3 Block Model

The block model created to convert wireframe shapes to discrete volumes is unrotated and oriented north/south along the Y-axis and east/west along the X-axis. The model uses a block size of 6 x 6 x 6 m in the X, Y, and Z directions.

14.4 Modelling

The geological model is divided into five model areas: Los Planes, Intermediate, Las Colinas, La Colpa, and NE Waste.

Figure 14-1 shows a plan view of the fault blocks and modeled mineralized domains and section locations. Figure 14-2 shows the domain model through Section 2639800N and Figure 14-3 shows the oxidation model on the same section.

Figure 14-1: Plan View of Model Areas, Mineralized Domains, and Section Locations

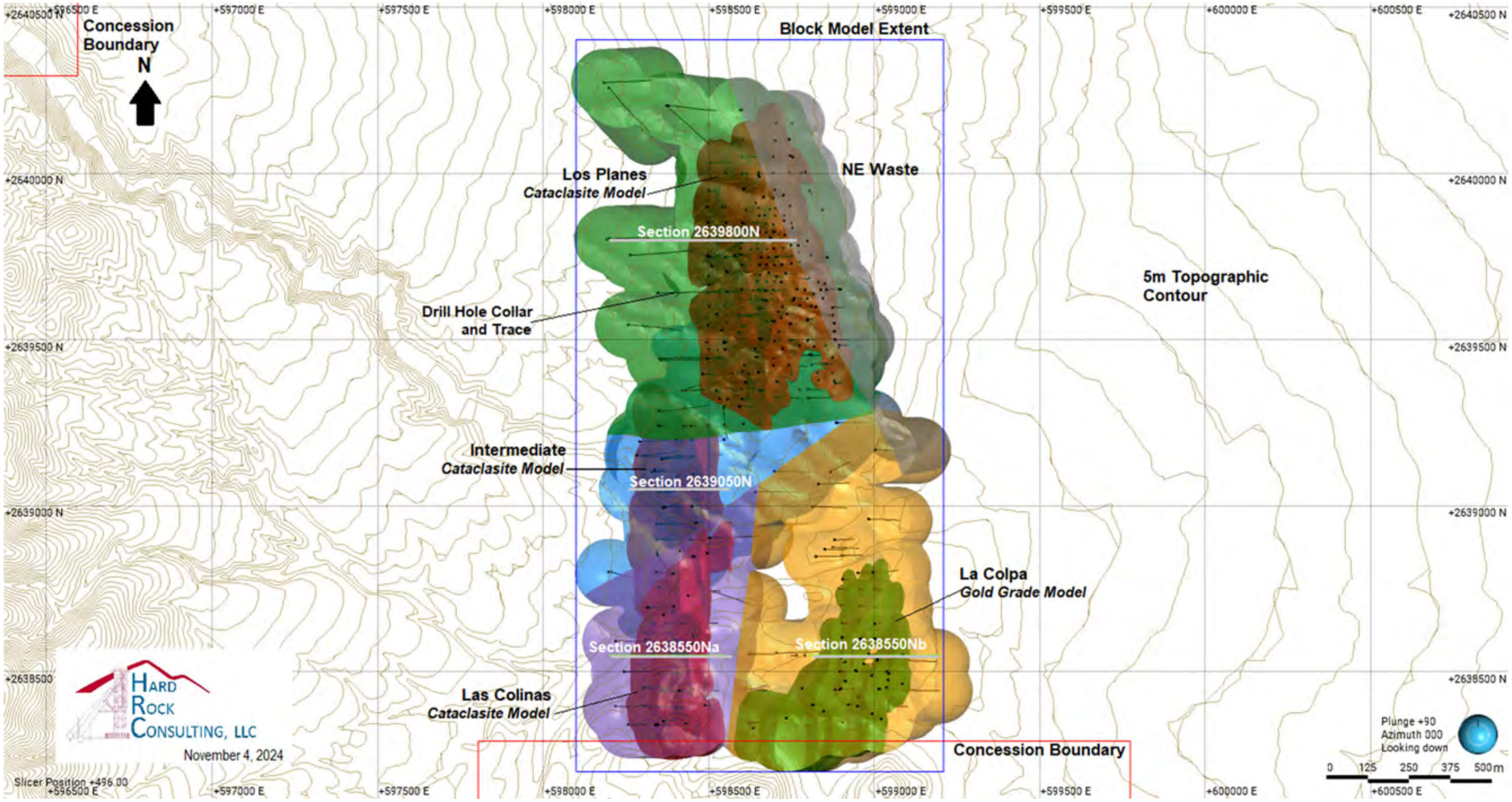


Figure 14-2: Domain Model through Section 2639800N Looking North

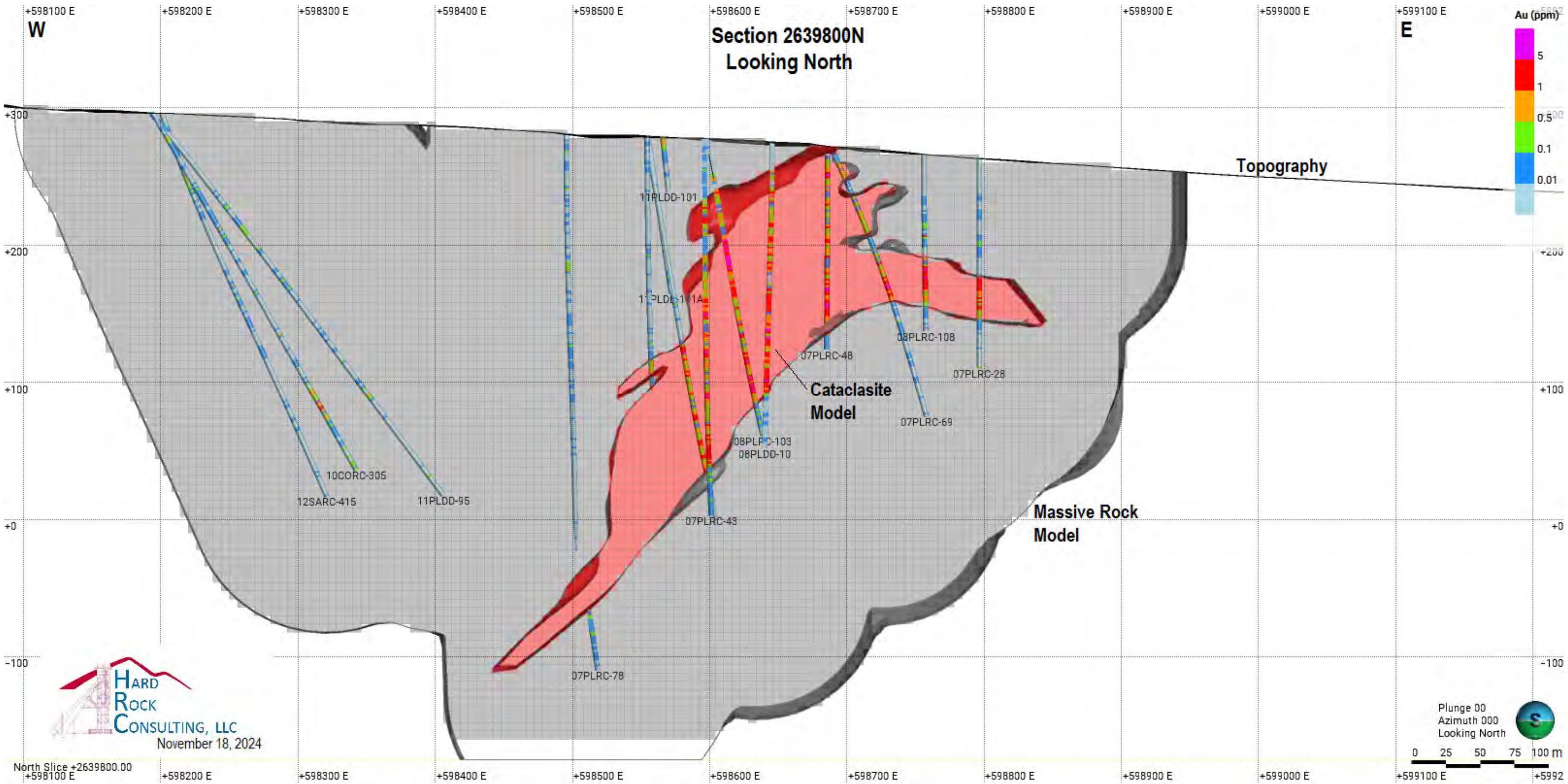
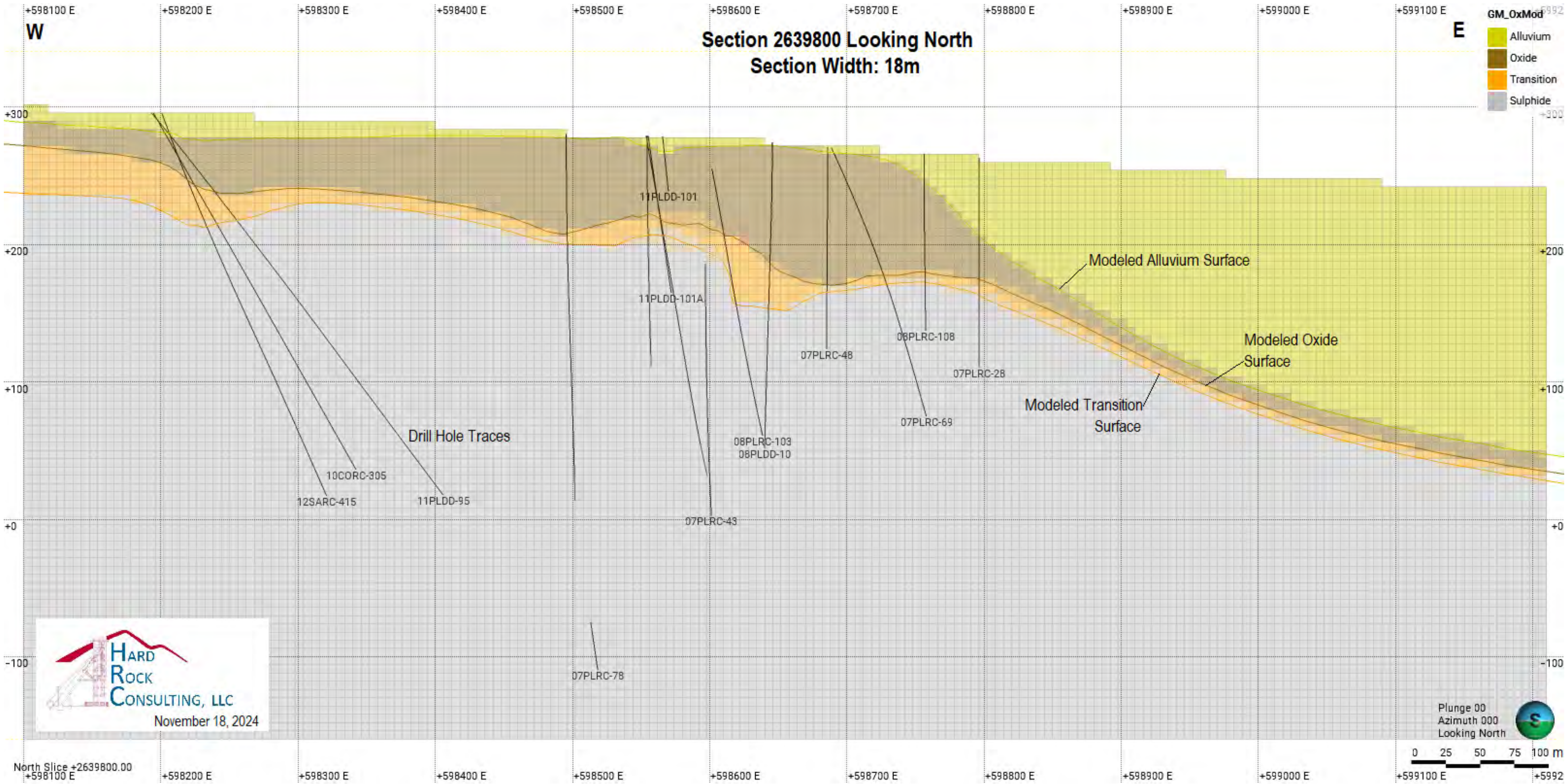


Figure 14-3: Oxidation Model through Section 2639800N Looking North



14.4.1 Fault Models

There are three significant faults modeled. The north fault strikes southeast–northwest, dips at 55º to the northeast, and separates the NE Waste domain from the other model areas. The middle fault strikes east–west, dips at 50º to the north, terminates against the north fault, and separates the Los Planes domain from the Intermediate domain. The south fault strikes southwest–northeast, dips at 57º to the southeast, terminates against the north fault, and separates the Intermediate domain from the Las Colinas and La Colpa domains. There is no physical boundary between the Las Colinas and La Colpa domains.

14.4.2 Cataclasite Models

Review of gold grades against structure logs showed a significant increase in gold grades in material logged as cataclasite. The cataclasite modeling methodology was completed using the following steps for each modelled area:

- Determine structural control on mineralization using maximum intensity projection of gold grades;
- Create a structural model in Leapfrog to guide the wireframe modeling;
- Create preliminary wireframes based on logged cataclasite alone;
- Refine cataclasite wireframes using gold grades at a nominal 0.10 g/t cut-off.

The final cataclasite domains at Los Planes, Intermediate, and Las Colinas can generally be described as a gold grade model with an underlying geologic support.

At La Colpa, there was insufficient logged cataclasite to create a reliable model. A gold grade model was created using an approximate 0.10 g/t Au cut-off. Material outside the modeled cataclasite is identified as massive rock. At La Colpa, material outside the gold grade model was identified as waste.

The end result was eight estimation domains for the Project limited to within 100 m of the drilling included in the Mineral Resource estimate.

14.4.3 Oxidation Model

An oxidation state model was created from logged geological information and was divided into four volumes using three surfaces.

- The base of the alluvium surface was modeled using logged lithology and a minimum 1 m offset from the topographic surface;
- The base of oxide material modeled using logged sulphide content, wherein log sulphide was 0%, or no observed sulphides, and a minimum 6 m offset from the alluvium surface;

- The base of the transition material was modeled using logged oxidation intensity (weak to intense) and a minimum 6 m (one bench) offset from the oxide surface.

Material below the transition zone surface was modeled as sulphide material.

The oxidation model was not constrained by distance to drill holes.

14.5 Data Analysis

Assay statistics were back tagged to the domain model. The mean grades within the mineralized domains are higher than the global means by model area suggesting the modeled domains accurately capture the mineralization. Similarly, statistics for intervals selected to model the wireframes, were then compared to the back tagged statistics and the mean difference is < ±0.05 g/t Au. The comparison shows that the final modeled wireframes follow the interval selection.

Histograms for the mineralized domains show log normal distributions with a single population suitable for mineral resource estimation.

Analysis of contact plots for the mineralized domains supports treating the estimation domains as hard boundaries.

14.6 Compositing

The average sample interval length is 1.52 m. Downhole compositing in 3.0 m intervals, split by estimation domain, was selected. If the residual length of the last composite was <1.50 m, then the composite lengths were distributed equally throughout the drill hole.

14.7 Grade Restrictions, Top-Cuts, and Outlier Evaluation

Histograms, log probability plots, and total metal calculations were reviewed by estimation domain to identify outliers. Capping and restriction grade limits by domain are presented in Table 14-1.

All mineralized domains have a coefficient of variation of <2.0, which is acceptable for the estimation of gold grades using ordinary kriging.

14.8 Variography

Variograms were modeled for all mineralized domains using the 3 m composites. Variograms were oriented along strike and down dip with the pitch determined from the radial diagrams. Nuggets were determined from down hole plots. The total sill is set at the variance and was normalised to equal one.

Most of the estimation domains have a single dominant orientation, but this is not true for Los Planes cataclasite which has a distinctive fold geometry. To model that variogram, only composites in the west limb of the fold were used. This assumes mineralization continuity across the fold is similar.

Table 14-1: Grade Caps

Model Area	Domain	Cap Value (Au g/t)	Restricted Value (Au g/t)	Number Capped/ Restricted	% Reduction in Mean	% Reduction in CV
Los Planes	Cataclasite	20.000	N/A	8	-1.30	-9.30
	Massive Rock	1.500	0.400	187	-5.63	-25.21
Intermediate	Cataclasite	10.000	N/A	3	-4.57	-19.23
	Massive Rock	0.700	0.200	73	-5.31	-18.57
Las Colinas	Cataclasite	N/A	N/A	0	0.00	0.00
	Massive Rock	N/A	0.600	13	0.00	0.00
La Colpa	Au	2.100	N/A	1	-0.64	-5.31
	Waste	0.400	N/A	12	-3.06	-15.15

Note: N/A = not applicable

The modeled variograms are similar for the Los Planes, Intermediate, and Las Colinas cataclasite domains with nuggets between 10–20%. The average maximum range is 91 m along the major axis, 49 m along the semi-major axis, and 15 m along the minor axis, a 6:3:2 anisotropy.

The variogram for the La Colpa gold domain was different with a 40% nugget, shorter ranges, and a 3:3:1 anisotropy.

14.9 Density

Specific gravity values were assigned to blocks using the median density by oxidation model and mineralized or unmineralized domain as shown in Table 14-2.

The specific gravity value for alluvium was assumed to be 2.00. Transition material was assumed to have a specific gravity value more similar to sulphide material than oxide.

14.10 Estimation Methodology

The interpolation of gold grades was completed by estimation domain using an ordinary kriging algorithm. The estimation was completed in three passes:

- The search ellipse range of the first pass was approximately two-thirds of the average variogram range, used a minimum of five composites, a maximum of 12 composites, with no more than two composites from a single drill hole;
- The second estimation pass had the ellipsoid ranges roughly at the average variogram range using a minimum of three composites, a maximum of 12 composites, with no more than two composites from a single drill hole;

Table 14-2: Specific Gravity Values Assigned by Oxidation State

Oxidation State	Specific Gravity
Alluvium	2.00
Mineralized oxide	2.62
Waste oxide	2.70
Mineralized transition	2.70
Waste transition	2.70
Mineralized sulphide	2.70
Waste sulphide	2.70

- The third estimation pass was roughly twice the average variogram range using a minimum of two composites, a maximum of 12 composites, with no more than two composites from a single drill hole.

The estimation method required three drill holes to estimate a block in the first pass, two drill holes in the second pass, and single drill holes were allowed to estimate blocks in the third pass.

The search ellipse was oriented using a variable orientation which allowed for the search ellipse to follow the curvature of the estimation domains. These variable orientations followed the same structural model controls that were used to generate the domain wireframes. The variogram was also applied to orient the search ellipse down plunge. Figure 14-4 shows a visual representation of the variable orientation for the Los Planes cataclasite.

The anisotropy of the search ellipse was based on the variograms. The variograms and variable orientations from the mineralized domains were applied to their corresponding unmineralized domains with the assumption that any mineralization outside of the mineralized domains followed similar controls.

In cases where outliers were handled using a restricted distance methodology, grades were allowed to be unrestricted to within a constant distance of 45 x 22.5 x 7.5 m which corresponded to 75% of the search ellipse in the first pass, 50% of the search ellipse in the second pass, and 25% of the search ellipse in the third pass.

Table 14-3 summarizes the estimation parameters by domain.

Figure 14-4: Visual Representation of the Variable Orientation Applied to the Los Planes Cataclasite Estimate

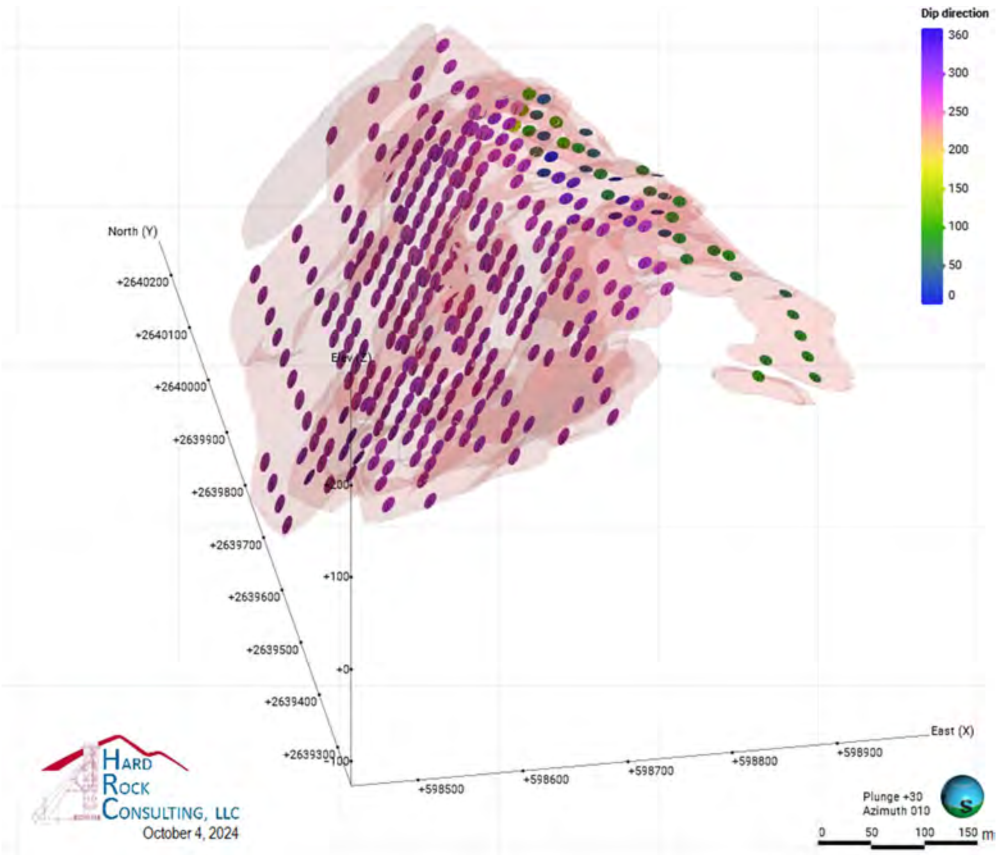


Table 14-3: Estimation Parameters by Estimation Domain

Model Area	Domain	Est. Pass.	Search Ellipse						Grade Cap (g/t Au)	Outlier Restriction		Composite Selection		
			Max.	Int.	Min.	Dip	Dip Azi.	Pitch		Value	Distance (% of Search Ellipse)	Min.	Max.	Max/DH
Los Planes	Cataclasite	1	60	30	10	Variable orientation + variogram (Los Planes cataclasite)			20	N/A		5	12	2
		2	90	45	15							3	12	2
		3	180	90	30							2	12	2
	Massive Rock	1	60	30	10	Variable orientation + variogram (Los Planes cataclasite)			2	0.4	75.0	5	12	2
		2	90	45	15						50.0	3	12	2
		3	180	90	30						25.0	2	12	2
Intermediate	Cataclasite	1	60	30	10	Variable orientation + variogram (Intermediate cataclasite)			10	N/A		5	12	2
		2	90	45	15							3	12	2
		3	180	90	30							2	12	2
	Massive Rock	1	60	30	10	Variable orientation + variogram (Intermediate cataclasite)			1	0.2	75.0	5	12	2
		2	90	45	15						50.0	3	12	2
		3	180	90	30						25.0	2	12	2
Las Colinas	Cataclasite	1	60	30	10	Variable orientation + variogram (Las Colinas cataclasite)			N/A	N/A		5	12	2
		2	90	45	15							3	12	2
		3	180	90	30							2	12	2
	Massive Rock	1	60	30	10	Variable orientation + variogram (Las Colinas cataclasite)			N/A	0.6	75.0	5	12	2
		2	90	45	15						50.0	3	12	2
		3	180	90	30						25.0	2	12	2
La Colpa	La Colpa Au	1	30	25	10	Variable orientation + variogram (La Colpa Au)			2	N/A		5	12	2
		2	50	40	15							3	12	2

Model Area	Domain	Est. Pass.	Search Ellipse						Grade Cap (g/t Au)	Outlier Restriction		Composite Selection		
			Max.	Int.	Min.	Dip	Dip Azi.	Pitch		Value	Distance (% of Search Ellipse)	Min.	Max.	Max/DH
		3	100	80	30							2	12	2
	La Colpa Waste	1	30	25	10	Variable orientation + variogram (La Colpa Au)			0	N/A		5	12	2
		2	50	40	15							3	12	2
		3	100	80	30							2	12	2

Note: N/A = not applicable.

14.11 Model Validation

The OK interpolant was validated using both visual and statistical methods.

Visual inspection of the gold estimate shows good correlation between block and composite grades. Gold grade continuity is evident in the direction of the modeled variograms, and no high-grade blowouts are observed within the mineralized domains.

Inverse distance weighting to the 2.5 power (ID2.5) and nearest neighbor (NN) interpolants were run as a validation of the ordinary kriged interpolant. Statistical validation of the ordinary kriged interpolant was completed by individual domain, model area, and for all estimated blocks.

A global bias check was performed where the difference in the mean from NN interpolant to the ID2.5 and ordinary kriged interpolant means is calculated. An interpolant passes the global bias check if the calculated difference is within ±5% of the NN mean. Review of the statistics showed the ordinary kriged interpolant passed the global bias check with only one low-grade massive rock domain in Los Planes outside the ± 5% tolerance. Additionally, the ordinary kriged interpolant consistently showed the largest reduction in the co-efficient of variation from the NN interpolant. The lower co-efficient of variation indicates more smoothing exists in the ordinary kriged interpolant than the ID2.5 interpolant. More smoothing is desired in open pit models where bulk tonnage grade is preferable over local variability.

Finally, a total number of 64 blocks were assigned a negative grade in the ordinary kriged interpolant. Review of these blocks show the NN model predicted low gold grades for these blocks. Only two of those blocks occurred inside a mineralized domain, the remaining 62 block were located outside of the mineralized domains. The estimation of negative grades did not have a significant impact on the overall estimate, and those blocks were assigned a gold grade of 0.005 g/t Au prior to pit optimization.

Swath plots were generated to compare average estimated gold grade from the ordinary kriged method to the two validation model methods (ID2.5 and NN). The results from the ordinary kriged model, plus those for the validation ID2.5 model method were compared using the swath plot to the distribution derived from the NN model. Deviations from the NN model typically occurred on the edges of the swath plots where sample density is low.

Quantile–quantile plots were constructed comparing the ordinary kriged gold grade (Y-axis) against the NN (X-axis) gold grade interpolants for each of the mineralized domains. Review of the quantile–quantile plots showed that the ordinary kriged interpolant is not overly smooth and the ordinary kriged and NN means are similar.

14.12 Mineral Resource Confidence Classification

Classification of the Mineral Resource estimates reflected the relative confidence of the grade estimates. The classification of blocks was primarily based on the confidence of the domain model, and the calculated average distance between three drill holes.

No blocks were classified as Measured.

Blocks within the modeled cataclasites were classified as Indicated if three drill holes were within 45 m, the block was estimated in the first two passes, and had at least two drill holes estimating the blocks.

Blocks were classified as Inferred if the drill spacing was within 100 m. Blocks classified as Inferred also included the following domain and geological considerations:

- Estimated blocks within the Los Planes vein model which sits above the main cataclasite model;
- Estimated blocks within the modeled alluvium;
- Estimated blocks in the massive rock domains;
- Estimated blocks in the La Colpa Model area.

Figure 14-5 shows the Mineral Resource confidence classifications for the mineralized domains

14.13 Reasonable Prospects of Eventual Economic Extraction

Mineral Resources at the Project are constrained within an optimized pit shell that meet the requirements for reasonable prospects of eventual economic extraction. Parameters used to generate the conceptual pit are presented in Table 14-4.

Small surfaces from the conceptual pit and any mineralization beyond the mineral tenure boundaries were excluded from the Mineral Resource estimates (Figure 14-6).

14.14 Cut-off Grades

Cut-off grades were calculated by model area, and by material type. Cut-off grade calculations are presented in Table 14-5.

14.15 Mineral Resource Statement

Mineral Resources are reported insitu, using the 2014 CIM Definition Standards. The Mineral Resource estimates have an effective date of 30 November, 2024.

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The Qualified Person for the estimate is Mr. Richard Schwering, RM SME, an employee of Hard Rock Consulting.

Mineral Resources are summarized in Table 14-6.

Figure 14-5: Oblique View of Mineral Resource Confidence Classification within the Mineralized Domains

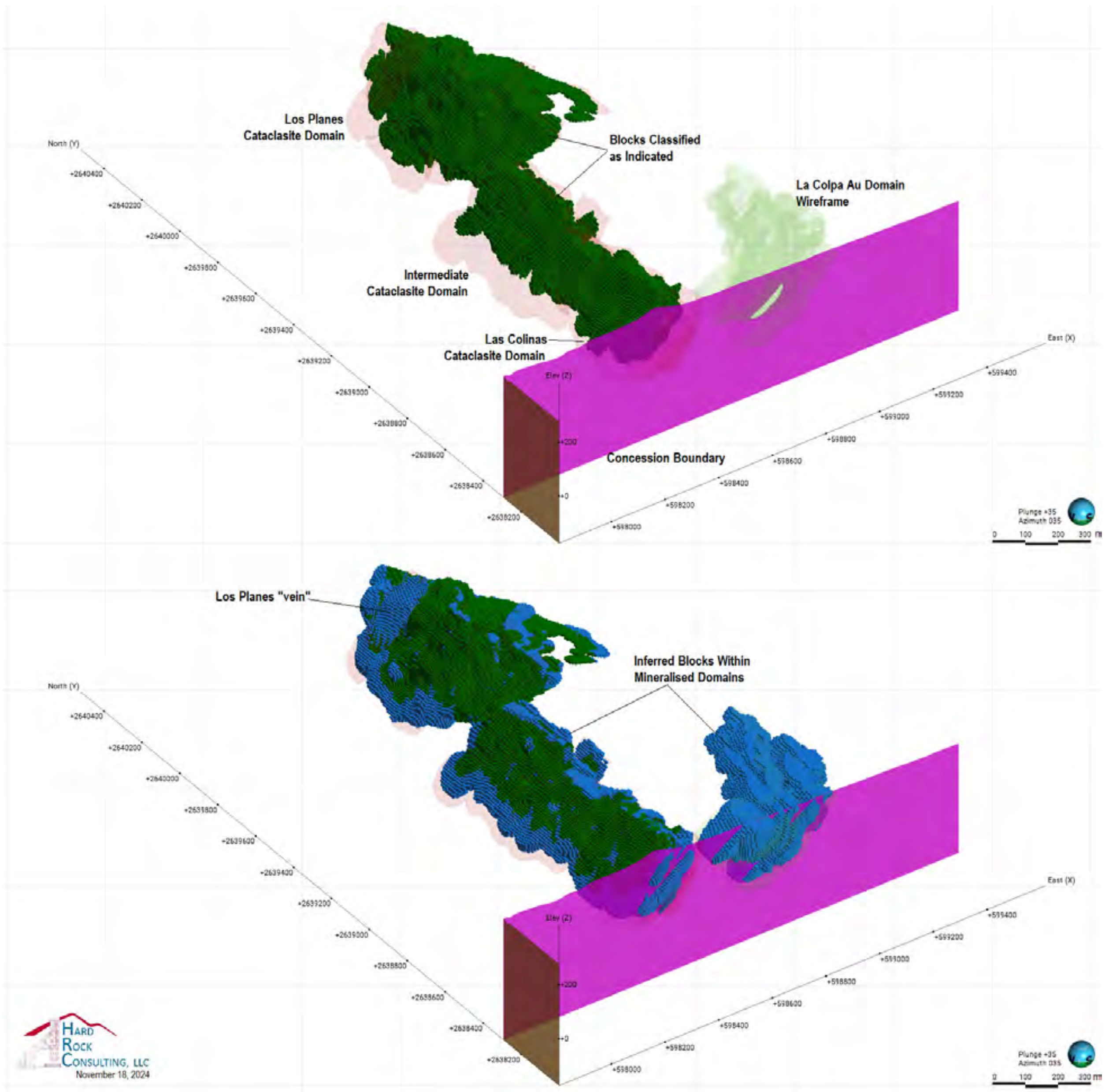


Table 14-4: Input Parameters, Constraining Pit Shell

Pit Optimization Parameter	Unit	Value
Metal Prices		
Gold price	US$/oz	2,150
Costs		
Mining alluvium cost reduction	%	87.5
Processing Los Planes oxide, mixed	US$/t processed	3.88
Processing Los Planes sulphide	US$/t processed	4.18
Processing Las Colinas oxide, mixed	US$/t processed	5.26
Processing Las Colinas sulphide	US$/t processed	4.30
Processing Intermediate all	US$/t processed	3.84
Processing La Colpa oxide, mixed	US$/t processed	4.24
Processing La Colpa sulphide	US$/t processed	4.15
General and administrative	US$/t processed	1.00
Selling/finishing	US$/t processed	0.75
Process Gold Recoveries		
Recovery Los Planes oxide, mixed	%	86
Recovery Los Planes sulphide	%	55
Recovery Las Colinas oxide, mixed	%	55
Recovery Las Colinas sulphide	%	44
Recovery Intermediate all	%	54
Recovery La Colpa oxide, mixed	%	72
Recovery La Colpa sulphide	%	44
Mining Costs		
Mining cost surface	US$/t mined	2.00
Mining cost incremental increase for each 6 m depth	US$/t mined	0.017
Pit Slope Angles		
Pit slopes alluvium	º	35
Pit slopes rock	º	41–45

Figure 14-6: Plan View of the Conceptual Pit and Exclusions

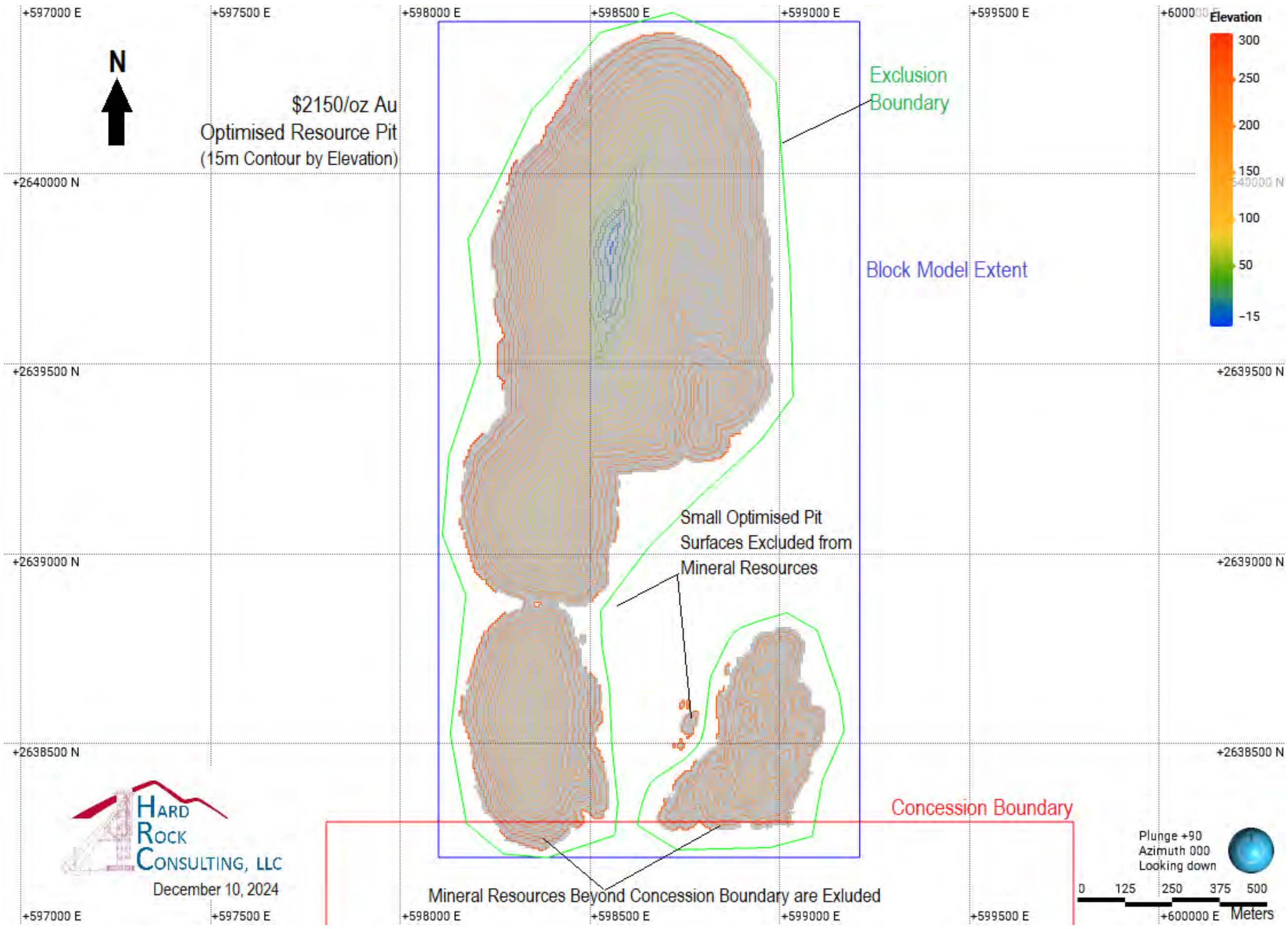


Table 14-5: Gold Cut-off Grade Calculations

Area/Type	Unit	Los Planes Oxide, Mixed	Los Planes Sulphide	Las Colinas Oxide, Mixed	Las Colinas Sulphide	Intermediate All	La Colpa Oxide, Mixed	La Colpa Sulphide
Processing	US$/t mineralization	3.88	4.18	5.26	4.30	3.84	4.24	4.15
General and administrative	US$/t mineralization	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Selling/finishing	US$/t mineralization	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Recoveries	tonne	86.0	55.0	55.0	44.0	54.0	72.0	44.0
Total cost	US$/t mineralization	5.63	5.93	7.01	6.05	5.59	5.99	5.90
Gold selling price	US$/oz Au	2,150	2,150	2,150	2,150	2,150	2,150	2,150
Cut-off grade	g/t Au	0.095	0.156	0.184	0.199	0.150	0.120	0.194

Table 14-6: Mineral Resource Statement

Confidence Classification	Area	Oxidation State	Cut-off Grade (g/t Au)	Tonnage (kt)	Gold Grade (g/t Au)	Contained Metal (koz Au)
Indicated	Los Planes	Oxide and transition	0.095	15,839	0.91	461.2
		Sulphide	0.156	26,607	1.10	943.7
	Intermediate	Oxide, transition, and sulphide	0.150	5,239	0.87	146.3
	Las Colinas	Oxide and transition	0.184	1,430	0.69	31.9
		Sulphide	0.199	6,407	0.77	158.1
	Total	***Oxide, transition, and sulphide***	***0.095–1.99***	***55,522***	***0.98***	***1,741.3***
Inferred	Los Planes	Oxide and transition	0.095	5,479	0.34	59.1
		Sulphide	0.156	1,319	0.71	30.2
	Intermediate	Alluvium, oxide, transition, and sulphide	0.150	660	0.43	9.2
	Las Colinas	Alluvium, oxide, and transition	0.184	689	0.49	10.9
		Sulphide	0.199	579	0.59	11.0
	La Colpa	Alluvium, oxide, and transition	0.120	4,635	0.29	43.9
		Sulphide	0.194	1,597	0.39	19.9
	Total	***Alluvium, oxide, transition, and sulphide***	***0.095–1.99***	***14,957***	***0.38***	***184.4***

Notes to Accompany Mineral Resource Table:

1. Mineral Resources are reported insitu, using the 2014 CIM Definition Standards.
2. Mineral Resources have an effective date of 30 November, 2024. The Qualified Person for the estimate is Mr. Richard Schwering, RM SME, a Hard Rock Consulting employee.
3. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. Mineral Resources are constrained within a conceptual open pit shell that used the following input parameters: gold price of US$2,150/oz; a mining cost of US$2/t mined, incremental mining cost of US$0.017/t mined for each 6 m depth; variable processing costs by oxidation state, ranging from US$3.84–5.26/t processed; general and administrative costs of US$1.00/t processed; finishing and selling costs of US$0.75/t processed; variable metallurgical recoveries by oxidation state, ranging from 44–86%; and variable pit slope angles ranging from 35–45º. Mineral Resources are reported above variable cut-off grades, ranging from 0.095–1.99 g/t Au.
5. Numbers have been rounded.

14.16 Factors that May Affect the Mineral Resource Estimates

Factors that may affect the Mineral Resource estimates include changes to:

- Metal price and exchange rate assumptions;
- Assumptions used to generate the estimation domains;
- Local interpretations of mineralization geometry and continuity of mineralized zones;
- Geological and mineralization shape and geological and grade continuity assumptions;
  - Structural modeling assumptions in the Los Planes area where additional faulting is suspected but not confirmed;
  - The modeling of post-mineralization dikes. Drill hole intersections are erratic, accounting for <0.5% of the logged drilling length in the estimates. Such a small percentage does not allow for consistent geological modeling;
- Treatment of high-grade gold values;
- Density assignments;
- Changes to the assumptions used to generate the gold cut-off grades;
- Geotechnical assumptions used for assumed pit slope angles;
- Metallurgical recovery assumptions;
- Input and design parameter assumptions that pertain to the open pit shell used to constrain the estimates;
- Assumptions as to the ability to access the site, retain mineral and surface rights titles, obtain environment and other regulatory permits, and obtain the social license to operate.

The San Antonio Project lies within a separate hydrologic watershed from the Sierra de La Laguna Biosphere Reserve, so Minera Pitalla anticipates no impacts to water usage or quality in the biosphere reserve. There have been concerns with mining projects that are within the hydrologic watershed of the biosphere reserve. There has been generalized opposition based in La Paz against all mining activities in the region, based on water concerns.

14.17 QP Comments on Section 14

There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the QP that would materially affect the estimation of Mineral Resources that are not discussed in this Report.

There is upside potential for the estimates if mineralization that is currently classified as Inferred can be upgraded to higher-confidence Mineral Resource categories.

15.0 MINERAL RESERVE ESTIMATES

This section is not relevant to this Report.

16.0 MINING METHODS

16.1 Overview

The 2024 PEA is preliminary in nature and includes Inferred Mineral Resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realized.

The San Antonio Project contains mineralization at or near the surface that is amenable to open pit mining methods. The 2024 PEA mine plan includes sending mineralized material to a 11,000 t/d crushed heap leach facility for processing.

The 2024 PEA is based on mining the Los Planes, Intermediate and Las Colinas deposits.

Open pit mining is planned to be conducted using 12 m^3 front end loaders as the main loading units. The open pit mineralized material will be loaded into 100 t haul trucks, and transported to the crushing site next to the leach pad; waste material will be transported to a designated WRSF.

16.2 2024 PEA Pit Optimization

The Mineral Resources for the deposit were evaluated using a Lerchs–Grossmann (L–G) pit optimizer to generate optimized pit shells. Pit shells were generated based on varying metal prices with a base gold price of US$1,900/oz Au. Starting with the current topography, a total of 51 pit shells were generated to determine optimal break points for developing pit phases and for determining the ultimate final pit phases for the deposit.

Table 16-1 shows the cost and slope parameters used for each optimization. The operating costs were determined based on historical costs provided by Heliostar and Hard Rock Consulting's and KCA's industry knowledge and prior experience.

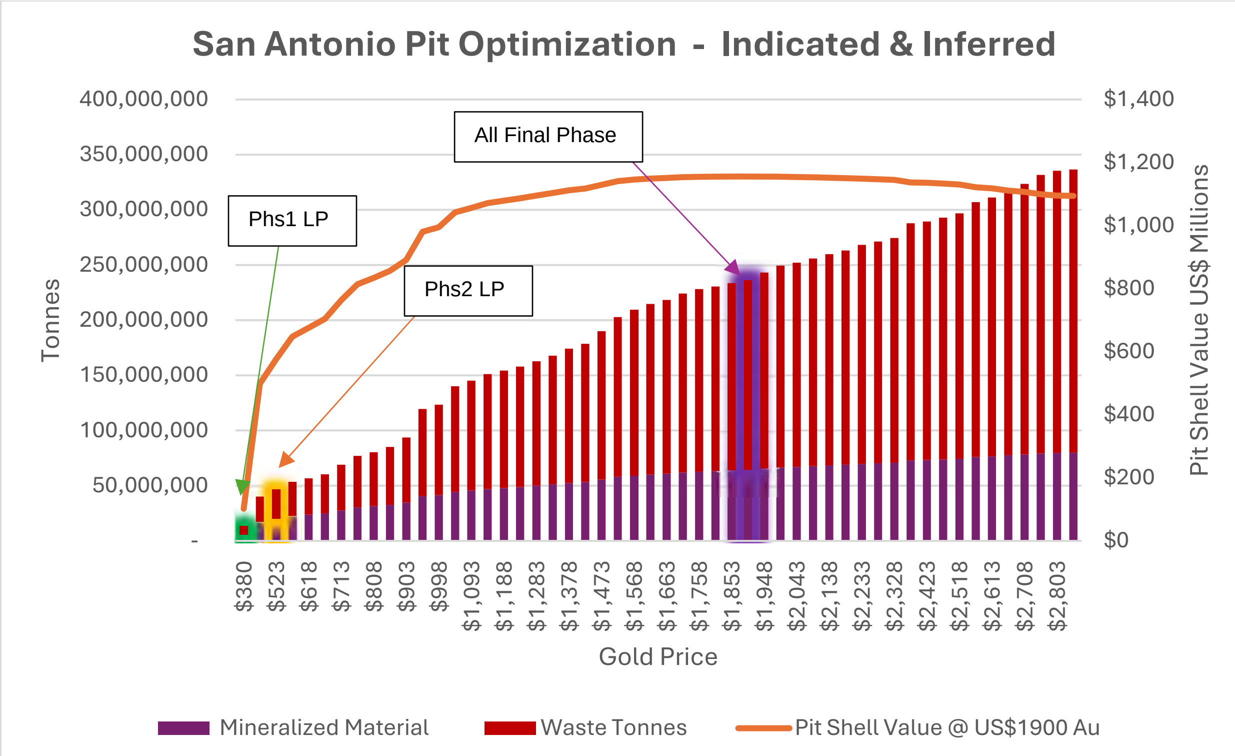
Pit slopes follow recommendations by Golder Associates Inc. (Golder) and were limited to 41° in the oxide zones, 45° in the sulphide zones and 35° in the alluvium (refer to discussion in Section 16.2).

Figure 16-1 shows the optimization results for the Indicated and Inferred material within the resource model. Values in the figures are based on optimized pit shells before the design process and do not include the haulage ramps and catch benches.

Table 16-1: PEA Pit Optimization Parameters

Pit Optimisation Parameter	Unit	Value
Metal Prices		
Gold price	US$/oz	1,900
Costs		
Mining alluvium cost reduction	%	87.5
Processing Los Planes oxide, mixed	US$/t processed	3.88
Processing Los Planes sulphide	US$/t processed	4.18
Processing Las Colinas oxide, mixed	US$/t processed	5.26
Processing Las Colinas sulphide	US$/t processed	4.30
Processing Intermediate all	US$/t processed	3.84
Processing La Colpa oxide, mixed	US$/t processed	4.24
Processing La Colpa sulphide	US$/t processed	4.15
General and administrative	US$/t processed	1.00
Selling/finishing	US$/t processed	0.75
Process Gold Recoveries		
Recovery Los Planes oxide, mixed	%	86
Recovery Los Planes sulphide	%	55
Recovery Las Colinas oxide, mixed	%	55
Recovery Las Colinas sulphide	%	44
Recovery Intermediate all	%	54
Recovery La Colpa oxide, mixed	%	72
Recovery La Colpa sulphide	%	44
Mining Costs		
Mining cost surface	US$/t mined	2.00
Mining cost incremental increase for each 6 m depth	US$/t mined	0.017
Pit Slope Angles		
Pit slopes alluvium	º	35
Pit slopes rock	º	41–45

Figure 16-1: 2024 PEA Pit Optimization Results



Note: Figure prepared by Hard Rock Consulting, 2024. "LP" = Los Planes.

The final Los Planes, Intermediate and Las Colinas pit designs were limited to the US$1,900/oz Au pit shell. The Los Planes pit was designed to have three separate phases with the first phase being based on a US$380/oz Au pit and the second phase on a US$523/oz Au pit.

16.2.1 Geotechnical Considerations

For the PEA pit designs the slopes follow Golder's recommendations. Golder completed a slope design report for the Project in April 2011. The study included a field investigation and involved drilling eight oriented core holes to intersect the ultimate pit walls. These holes were logged by Golder personnel for geotechnical information and fracture orientation measurements were collected. Point-load testing was also conducted on the core collected from the oriented core holes. Samples were collected for laboratory testing that included unconfined compressive strength testing, direct shear testing of joint surfaces, and triaxial shear testing.

The pits were grouped into a single structural domain, based on observation of similar orientation of small-scale geologic structures logged in core holes located in Las Colinas, Intermediate, and Los Planes. The geotechnical model provided the basis for the analysis of potential modes of inter-ramp and overall slope instability, including rock-mass controlled instability and planar and wedge sliding mechanisms. Table 16-2 summarizes the bench face angle, catch bench width, and the inter-ramp slope angle.

For each pit wall design sector, slope orientations that gave rise to potential inter-ramp-scale planar or wedge failure mechanisms, which involved the structural features identified in each domain, were analyzed through kinematic analyses of stereographic projections of the structural data. Limit equilibrium analyses were carried for the identified failure mechanisms and slope angles were reduced if low factors of safety were indicated. At the bench scale, small-scale, kinematically viable wedges were assumed to be loosened and removed by blasting and excavation. For slope orientations where the important small-scale structures identified in each domain formed viable wedges or daylighting planes, greater backbreak was predicted. For these slope orientations, the ability to safely develop steep bench face angles will be reduced and a reduced inter-ramp angle will be necessary in these areas. The design sectors and recommend inter-ramp slope angles are shown in Figure 16-2 for the Los Planes pit. The Intermediate and Las Colinas pits were split into an east and west sector.

16.2.2 Hydrogeological Considerations

Golder noted that the average measured water levels recorded in the reverse-circulation (RC) drill holes is approximately 150 m amsl in Los Planes. Depth to groundwater data is apparently scattered and based on first water occurrence in drill holes rather than measurements of static water level (Schrauf, 2010), and accordingly, this average estimate of the depth to groundwater is preliminary. Groundwater appears shallower at Las Colinas, typically occurring at a depth of 30–40 m. This is perhaps due to water infiltration that occurs from the two arroyos that converge immediately north of the Las Colinas, as there is no significant thickness of alluvium overlying bedrock in this area. The merged arroyo then extends northeast from the Project area.

The preliminary data suggest that the mineralized zone and faults may exhibit significantly lower permeability than the non-mineralized bedrock within the hanging wall and footwall. The structure of the mineralized zones may compartmentalize the groundwater within the fractured rock to some degree.

For the pit stability analyses the pit slopes were assumed to be fully depressurized by natural drawdown or through groundwater pumping and installation of horizontal drains, if necessary.

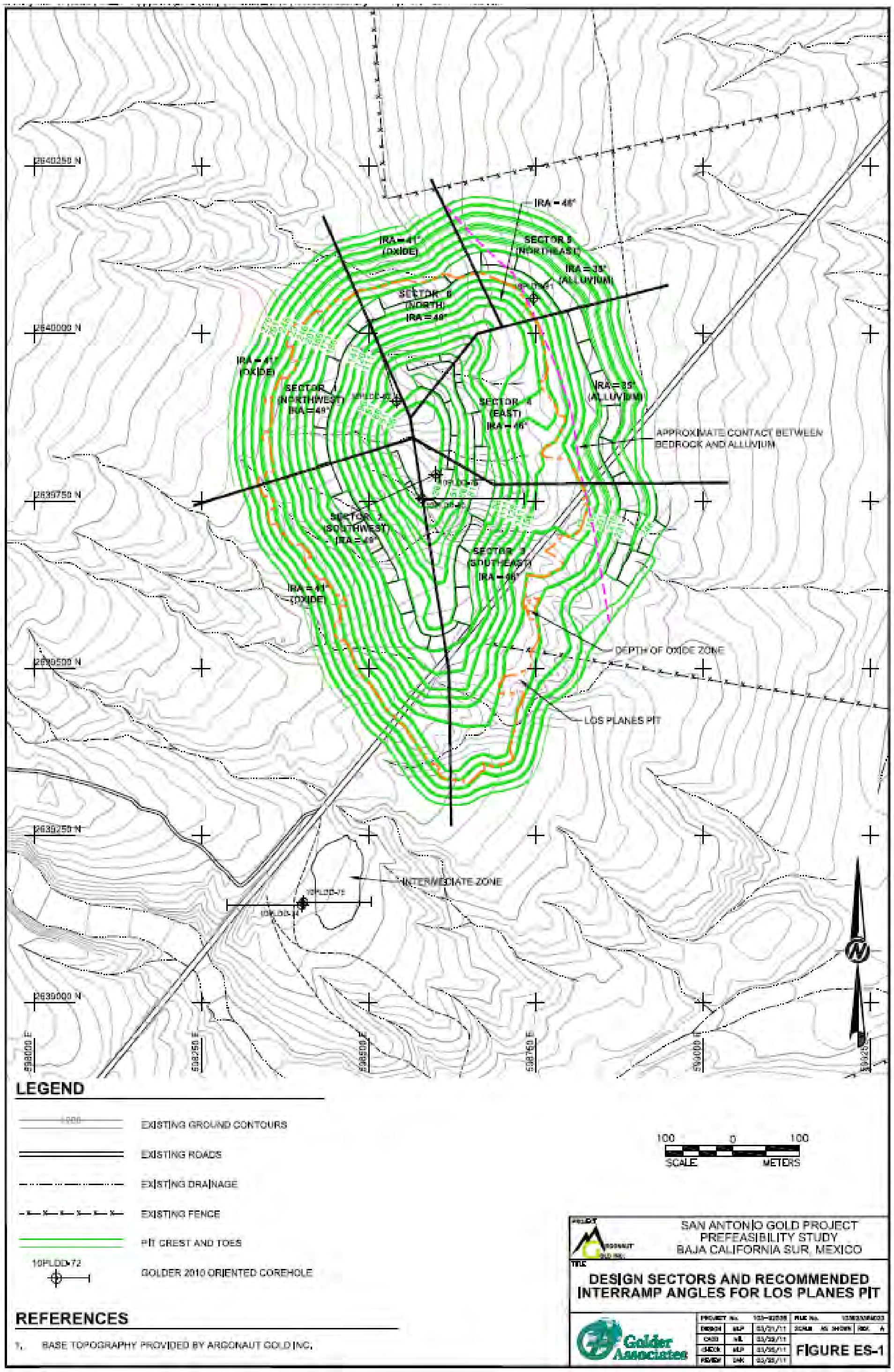
Drainage diversions ditches will be established around the upper crest of the open pits and waste rock storage facilities (WRSFs) to divert storm water. There are two major arroyos that merge just to the southeast of the Intermediate pit. The 2024 PEA assumes that these arroyos will be diverted in between the Intermediate and Las Colinas pits.

Table 16-2: Pit Slope Design Parameters

Pit Sector		Bedrock Unit	BFA (°)	Bench Width (m)	IRA (°)
Number	Area				
1	Los Planes, northwest	Oxide hanging wall intrusive	63.5	6.5	41
		All other	70	7.5	49
2	Los Planes, southwest	Oxide hanging wall intrusive	63.5	6.5	41
		All other	70	7.5	49
3	Los Planes, southeast	All	65	7.5	46
4	Los Planes, east	All	65	7.5	46
5	Los Planes, northeast	All	65	7.5	46
6	Los Planes, north	Oxide hanging wall intrusive	63.5	6.5	41
		All other	70	7.5	49
1	Las Colinas, west	All	70	7.0	50
2	Las Colinas, east	All	65	7.0	47

Note: BFA = bench face angle, IRA = inter-ramp slope angle.

Figure 16-2: Design Sectors and Inter-Ramp Angles



Note: Figure prepared by Golder, 2011

Diesel power portable pumps will be used in the pit to capture ground and storm water that will be pumped to settling ponds for use in the process plant.

16.2.3 Phase Designs

For the pit designs, haul roads were designed at a width of 25 m, which provides a safe truck width (6.7 m wide for Caterpillar 777 size truck) to running surface width ratio of 1:3 with an additional 5 m for a berm and a drainage ditch. Maximum grade of the haul roads was 10%, except for the lower benches where the grade was increased to 12%, and the ramp width was narrowed to 15 m to minimize excessive waste stripping. Mining levels were planned on 6 m benches and the pit slope parameters followed the recommendation in Table 16-2. The pit design criteria are presented in Table 16-3.

The Los Planes pit was deigned into three separate phases with the first phase being based on a US$380/oz Au pit and the second phase on a US$523/oz Au pit. Figure 16-3 to Figure 16-5 show the Los Planes pit phases.

The final Los Planes, Intermediate and Las Colinas pit designs were limited to the US$1,900/oz Au pit shell and are shown in Figure 16-6.

The final Los Planes pit will be approximately 0.75 km wide (east–west) by 1.2 km long (north–south) and up to 290 m deep.

The Intermediate pit will be approximately 0.45 km wide (east–west) by 0.45 km long (north–south) and up to 170 m deep.

The Las Colinas pit will be approximately 0.41 km wide (east–west) by 0.5 km long (north–south) and up to 152 m deep. The Las Colinas pit was limited to the south by the property boundary.

16.3 Mine Production Schedule

16.3.1 Dilution and Mining Losses

The Mineral Resource estimates are considered to be internally diluted by compositing. For the 2024 PEA mine plan no external or mining loss factors were added in to the mine schedule. As the Project advances, dilution and mining loss factors should be investigated further to determine the appropriate amounts for the deposit.

16.3.2 Cut-off

Cut-off grades were calculated by open pit area, and by material type. The internal cut-off grade calculation includes the estimated plant operating costs, all general and administrative costs, and refining and selling costs during pit operations and metallurgical recoveries. The cut-off calculation is shown in Table 16-4, and ranges from 0.11–0.23 g/t Au depending on the material type and area.

Table 16-3: Pit Design Criteria

Item	Unit	Parameter
Ramp widths	m	25
Ramp grade	%	10
Ramp widths pit bottom	m	15
Ramp grade pit bottom	%	12
Mining level heights	m	6

Figure 16-3: Los Planes Phase 1 Pit

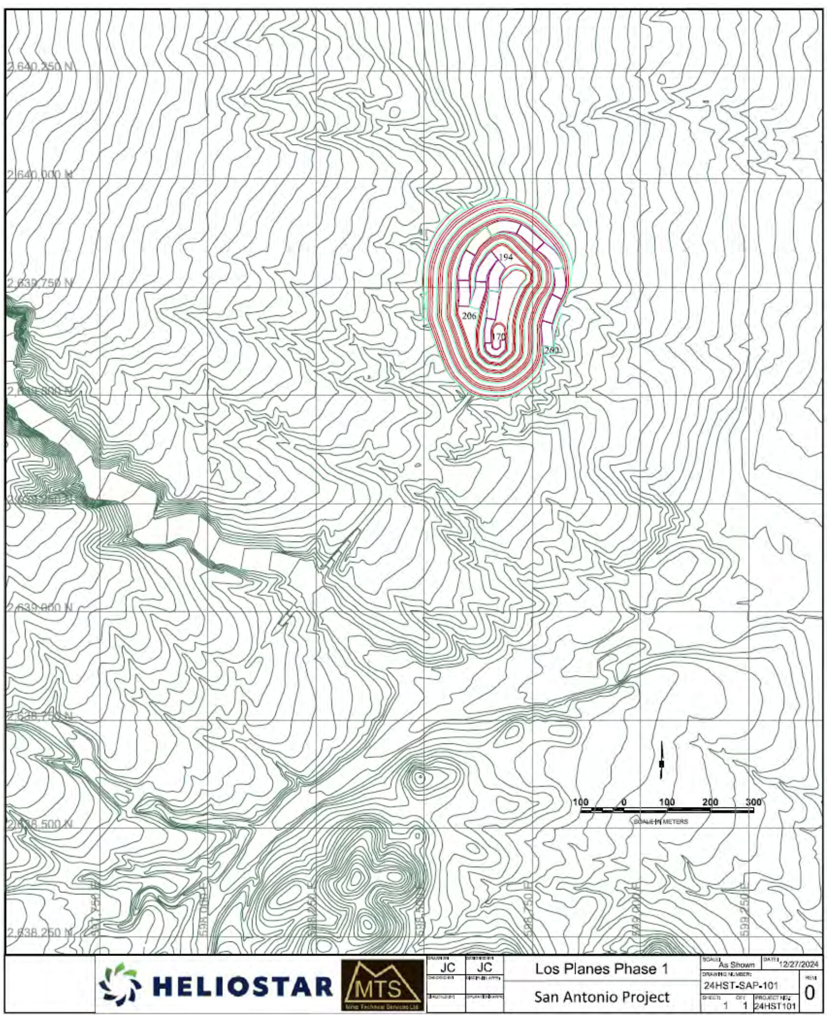


Figure 16-4: Los Planes Phase 2 Pit

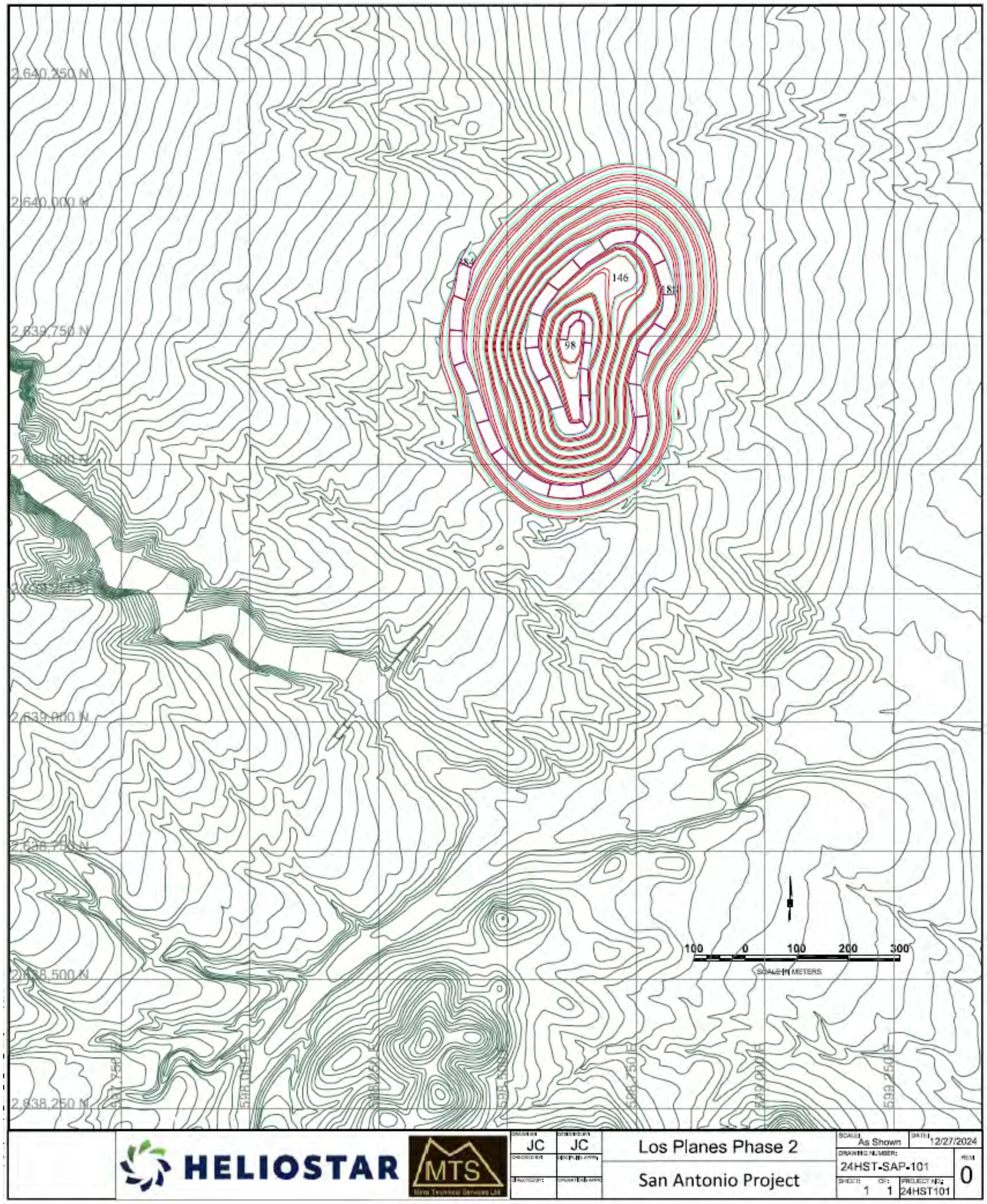


Figure 16-5: Los Planes Phase 3 Pit

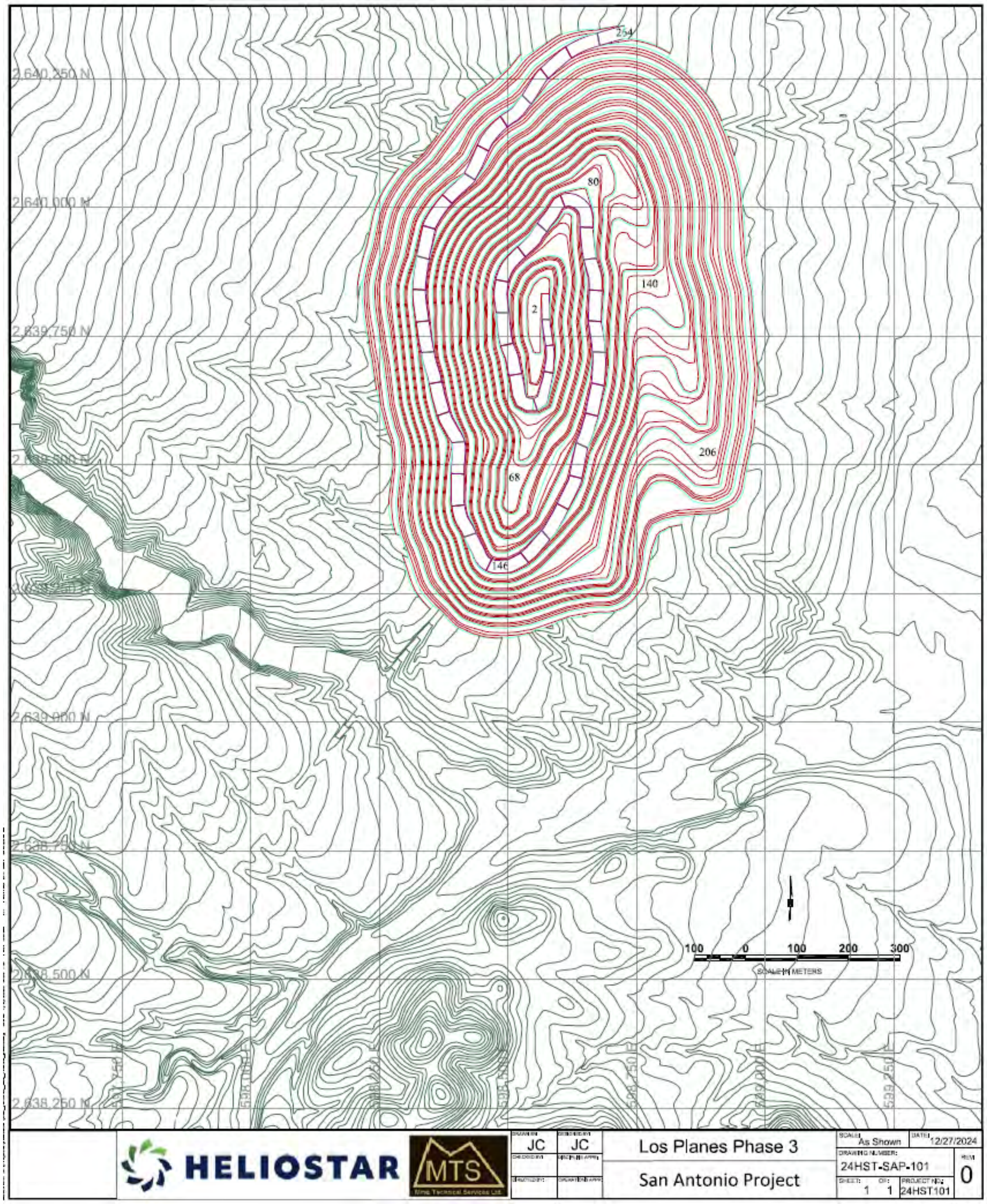


Figure 16-6: Los Planes, Intermediate and Las Colinas Pits

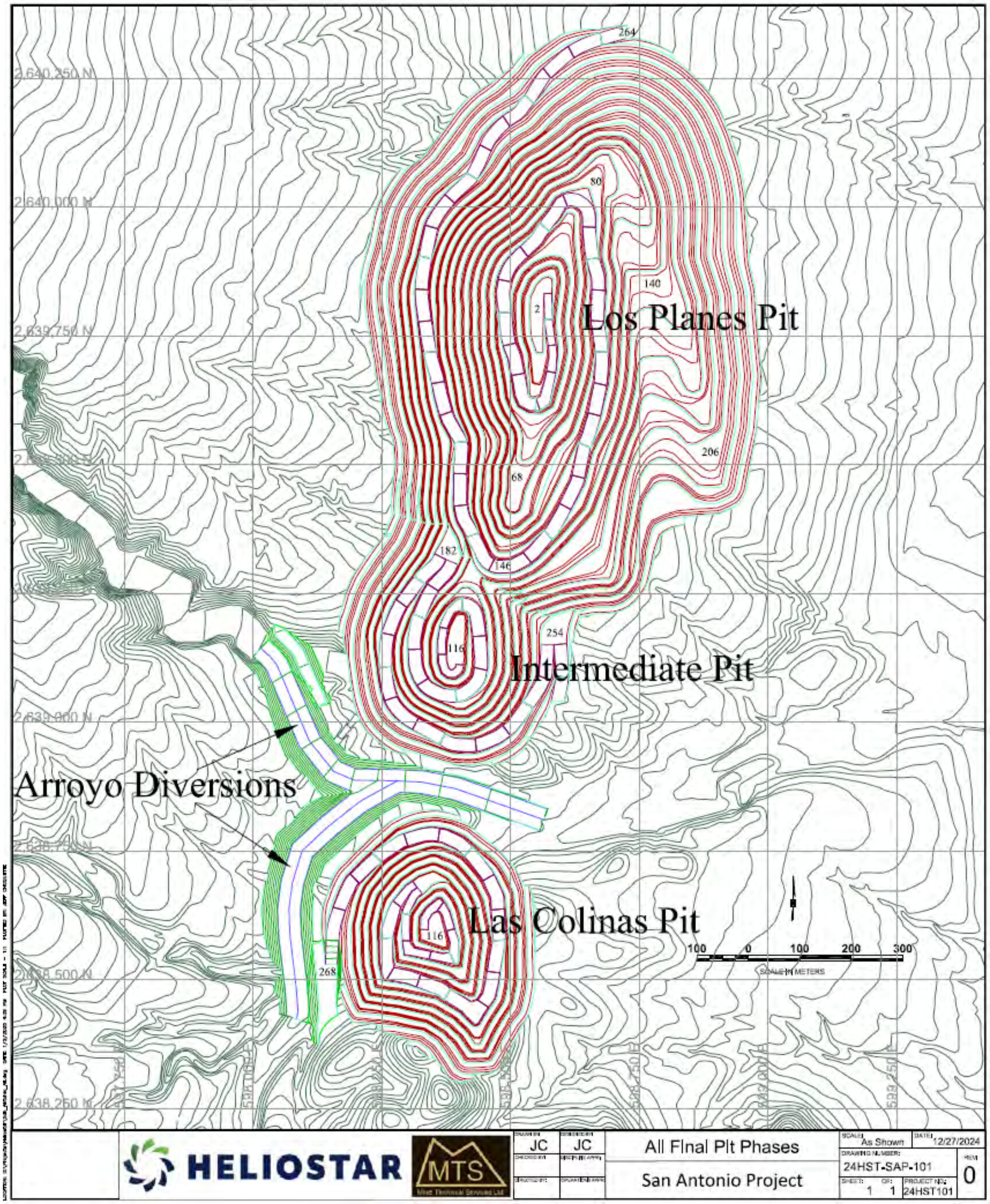


Table 16-4: 2024 PEA Cutoff by Area and Material Type

Area/Type	Unit	Los Planes Oxide, Mixed	Los Planes Sulphide	Las Colinas Oxide, Mixed	Las Colinas Sulphided	Intermediate All
Processing	US$/t mineralization	3.88	4.18	5.26	4.30	3.84
General and administrative	US$/t mineralization	1.00	1.00	1.00	1.00	1.00
Selling/finishing	US$/t mineralization	0.75	0.75	0.75	0.75	0.75
Recoveries	%	86.0%	55.0%	55.0%	44.0%	54.0%
Total cost	US$/t mineralization	5.63	5.93	7.01	6.05	5.59
Gold selling price	US$/oz Au	1,900	1,900	1,900	1,900	1,900
Cutoff Grade Au	***g/t Au***	***0.11***	***0.18***	***0.21***	***0.23***	***0.17***

Table 16-5 displays a summary of the sub-set of the Mineral Resource estimate used for the crusher feed material within the mine plan.

Table 16-6 displays a summary of material mined by type and pit phase over the 2024 PEA LOM plan.

16.3.3 Pre-Production Development

The mine pre-production requirements at the project are minimal given the presence of mineable mineralization near the bedrock surface. The first pit phase is planned near the crusher area, so the haul distances will be relatively short at the beginning of the mine life. Waste material from the pit areas will be required for construction of the heap leach pad, crusher area and other infrastructure. Further studies should evaluate how much material will be required and determine if the first pit phases will provide sufficient waste, or if waste may have to be obtained from future phases.

16.3.4 Production Schedule

Production of mineralized material from the open pits are driven by the nominal ore crusher capacity rate of 11,000 t/d, which is equivalent to 4.0 Mt/a, and results in a mine life of approximately 14 years with one year of residual leaching.

A total of 54.8 Mt of mineralized material is scheduled to be sent to the crusher and 176 Mt of waste rock and alluvium is scheduled to be sent to the WRSF for an average strip ratio of 3.2:1.

Peak mineralized material and waste production is estimated at 86,000 t/d.

Table 16-5: Mineral Resources Scheduled Within 2024 PEA Mine Plan

Material Type	Indicated			Inferred		
	Tonnes (kt)	Gold Grade (g/t Au)	Contained Gold (koz Au)	Tonnes (kt)	Gold Grade (g/t Au)	Contained Gold (koz Au)
Los Planes; oxide, mixed	15,566	0.92	458.0	3,569	0.40	46.3
Los Planes; sulphide	25,276	1.13	918.9	968	0.76	23.7
Intermediate; oxide, mixed	478	0.58	8.9	204	0.40	2.6
Intermediate; sulphide	3,242	0.88	91.3	120	0.44	1.7
Las Colinas; oxide, mixed	1,275	0.69	28.3	313	0.42	4.2
Las Colinas; sulphide	3,574	0.74	84.8	223	0.42	3.0
Total	***49,410***	***1.00***	***1,590.2***	***5,397***	***0.47***	***81.6***

Table 16-6: Summary of Schedule Material by Pit Phase

Pit Area	Material Type	AuEq Cutoff (g/t AuEq)	Tonnes (kt)	Gold Grade (g/t)	Contained Gold (koz)
Los Plane Phase 1	Los Planes, oxide, mixed	0.11	5,065.4	0.89	144.2
	Los Planes, sulphide	0.18	346.6	1.70	19.0
	Alluvium		1,621.0		
	Waste		6,558.1		
Los Plane Phase 1 total			*13,591.1*		
Los Plane Phase 2	Los Planes oxide, mixed	0.11	6,340.7	0.93	190.1
	Los Planes sulphide	0.18	6,035.0	1.36	263.5
	Alluvium		4,988.6		
	Waste		15,373.7		
Los Plane Phase 2 total			*32,738.1*		
Los Plane Phase 3	Los Planes oxide, mixed	0.11	7,728.5	0.68	170.1
	Los Planes sulphide	0.18	19,862.8	1.03	660.2
	Intermediate oxide, mixed	0.17	108.6	0.60	2.1
	Intermediate sulphide	0.17	224.3	0.63	4.5
	Alluvium		21,397.7		
	Waste		88,523.1		
Los Plane Phase 3 total			*137,845.0*		

Pit Area	Material Type	AuEq Cutoff (g/t AuEq)	Tonnes (kt)	Gold Grade (g/t)	Contained Gold (koz)
Intermediate	Los Planes sulphide	0.18	0.1	0.20	0.0
	Intermediate oxide, mixed	0.17	572.8	0.51	9.4
	Intermediate sulphide	0.17	3,137.8	0.88	88.5
	Alluvium		2,097.7		
	Waste		17,075.9		
Intermediate total			*22,884.3*		
Las Colinas	Las Colinas oxide, mixed	0.14	1,588.2	0.64	32.6
	Las Colinas sulphide	0.22	3,796.4	0.72	87.7
	Alluvium		859.3		
	Waste		17,507.5		
Las Colinas total			*23,751.4*		
Total			***230,809.9***		

The yearly mine production schedule is presented in Table 16-7. Figure 16-7 and Figure 16-8 respectively show the yearly mineralized material schedule by area and the yearly waste schedule by area.

A total of 157 Mt of waste and alluvium from the Los Planes and Intermediate pit are scheduled to be sent to the North WRSF and 18.3 Mt of waste and alluvium from the Las Colinas pit is scheduled to be sent to the Colinas WRSF. The WRSF designs are of sufficient size for disposal of the waste material defined in the 2024 PEA LOM plan. Additional information on the WRSFs is provided in Section 18.4.

Year 6 is the peak year for total tonnes mined per annum at 31.5 Mt. As the Project advances, alternative mine schedules should be investigated to better balance the strip ratio around this time. Moving up the start date for the Phase 3 Los Planes stripping or possibly adding a fourth phase to Los Planes are options to be investigated.

16.4 Mining Equipment

The mining equipment for the 2024 PEA mine plan is planned to be supplied by a mining contractor. All loading, hauling, drilling, basting and support services are planned to be included within the mining contract.

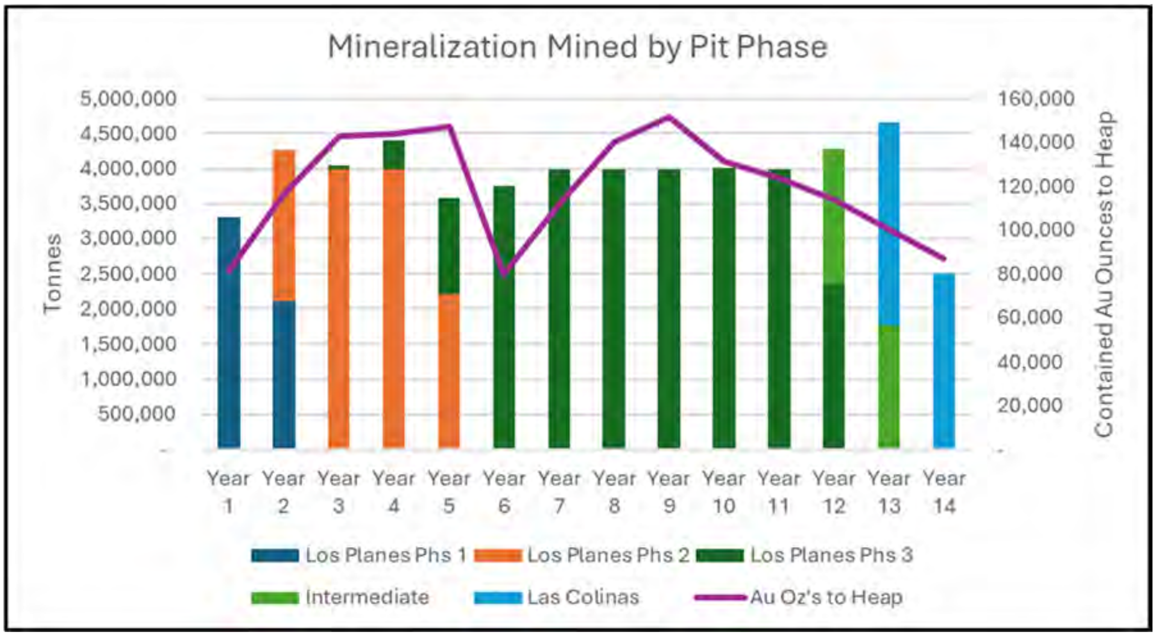
Based on the size of mine and production requirements, it is likely Caterpillar 777 (100 t or equivalent) size trucks will be used along with Caterpillar 992 (or equivalent) front-end loaders. The current designs have been developed, assuming this sized mining fleet will be used for the 2024 PEA LOM plan.

Table 16-7: Yearly Production Schedule

Item	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	LOM
Open pit mine production																
Los Planes																
Oxide/trans mined	kt	3,306	3,929	3,157	1,457	1,335	3,328	1,925	667	139	1	—	—	—	—	19,243
Gold grade	g/t	0.77	0.84	1.07	0.92	0.48	0.57	0.90	1.11	1.28	1.25	0.00	0.00	—	—	0.82
Sulphide mined	kt	—	347	889	2,941	2,240	434	2,072	3,333	3,861	4,010	4,000	2,343	—	—	26,469
Gold grade	g/t	—	1.70	1.26	1.22	1.57	0.67	0.83	1.09	1.18	1.02	0.96	1.09	—	—	1.11
Alluvium	kt	1,621	4,394	3,704	3,600	5,674	6,070	2,379	551	13	—	—	—	—	—	28,007
Waste	kt	6,091	10,806	7,465	11,138	14,114	21,348	15,435	9,381	6,244	4,392	3,206	836	—	—	110,455
Total mined	kt	11,018	19,475	15,215	19,137	23,363	31,180	21,810	13,932	10,257	8,403	7,206	3,179	—	—	184,174
Intermediate																
Oxide/trans mined	kt	—	—	—	—	—	—	—	—	—	—	—	573	—	—	573
Gold grade	g/t	—	—	—	—	—	—	—	—	—	—	—	0.51	0.00	—	0.51
Sulphide mined	kt	—	—	—	—	—	—	—	—	—	—	—	1,365	1,773	—	3,138
Gold grade	g/t	—	—	—	—	—	—	—	—	—	—	—	0.70	1.01	—	0.88
Alluvium	kt	—	—	—	—	—	—	—	—	—	—	—	2,098	—	—	2,098
Waste	kt	—	—	—	—	—	—	—	—	—	—	—	13,519	3,556	—	17,076
Total mined	kt	—	—	—	—	—	—	—	—	—	—	—	17,555	5,330	—	22,884
Las Colinas																
Oxide/trans mined	kt	—	—	—	—	—	—	—	—	—	—	—	—	1,588	—	1,588
Gold grade	g/t	—	—	—	—	—	—	—	—	—	—	—	—	0.64	—	0.64
Sulphide mined	kt	—	—	—	—	—	—	—	—	—	—	—	—	1,295	2,501	3,796

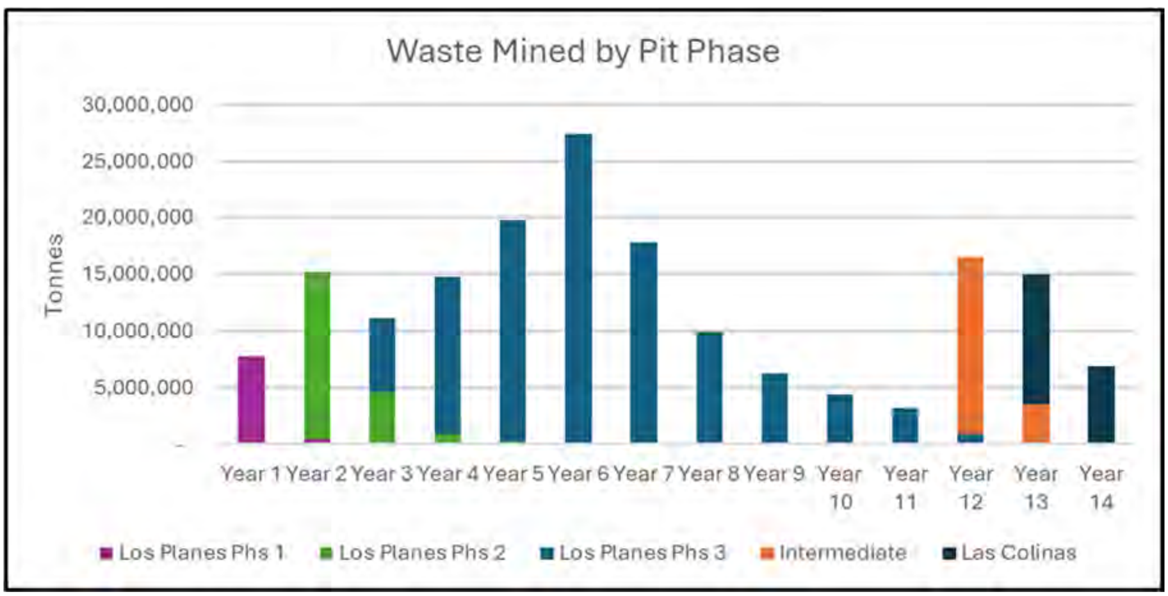
Gold grade	g/t	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.77	0.72
Alluvium	kt	—	—	—	—	—	—	—	—	—	—	—	—	859	—	859
Waste	kt	—	—	—	—	—	—	—	—	—	—	—	—	10,598	6,910	17,507
Total mined	kt	—	—	—	—	—	—	—	—	—	—	—	—	14,340	9,411	23,751
Total oxide/trans mined	***kt***	***3,306***	***3,929***	***3,157***	***1,457***	***1,335***	***3,328***	***1,925***	***667***	***139***	***1***	***—***	***573***	***1,588***	***—***	***21,404***
Gold grade	***g/t***	***0.77***	***0.84***	***1.07***	***0.92***	***0.48***	***0.57***	***0.90***	***1.11***	***1.28***	***1.25***	***—***	***0.51***	***0.64***	***—***	***0.80***
Total sulphide mined	***kt***	***—***	***347***	***889***	***2,941***	***2,240***	***434***	***2,072***	***3,333***	***3,861***	***4,010***	***4,000***	***3,708***	***3,068***	***2,501***	***33,403***
Gold grade	***g/t***	***—***	***1.70***	***1.26***	***1.22***	***1.57***	***0.67***	***0.83***	***1.09***	***1.18***	***1.02***	***0.96***	***0.94***	***0.85***	***0.77***	***1.05***
Total alluvium	***kt***	***1,621***	***4,394***	***3,704***	***3,600***	***5,674***	***6,070***	***2,379***	***551***	***13***	***0***	***0***	***2,098***	***859***	***—***	***30,964***
Total waste	***kt***	***6,091***	***10,806***	***7,465***	***11,138***	***14,114***	***21,348***	***15,435***	***9,381***	***6,244***	***4,392***	***3,206***	***14,355***	***14,154***	***6,910***	***145,038***
Total mined	***kt***	***11,018***	***19,475***	***15,215***	***19,137***	***23,363***	***31,180***	***21,810***	***13,932***	***10,257***	***8,403***	***7,206***	***20,734***	***19,670***	***9,411***	***230,810***
Strip ratio	Ratio	2.3	3.6	2.8	3.4	5.5	7.3	4.5	2.5	1.6	1.1	0.8	3.8	3.2	2.8	3.2
Other tonnes	kt	120	250	120	120	890	370	124	120	120	120	120	120	120	1,087	3,800
Total moved	***kt***	***11,138***	***19,725***	***15,335***	***19,257***	***24,252***	***31,549***	***21,934***	***14,052***	***10,377***	***8,523***	***7,326***	***20,854***	***19,790***	***10,498***	***234,610***
Process Production																
Tonnes to heap	***kt***	***3,306***	***4,011***	***4,000***	***4,000***	***4,000***	***4,011***	***4,000***	***4,000***	***4,000***	***4,011***	***4,000***	***4,000***	***4,000***	***3,469***	***54,808***
Gold grade	***g/t***	***0.77***	***0.90***	***1.11***	***1.12***	***1.15***	***0.62***	***0.87***	***1.09***	***1.18***	***1.02***	***0.96***	***0.89***	***0.78***	***0.78***	***0.95***
Au ounces	oz Au	81.6	116.5	143.0	144.2	147.4	79.6	111.6	140.4	151.6	131.3	123.6	114.1	99.9	87.2	1,671.8

Figure 16-7: Annual Mineralized Material Forecast



Note: Figure prepared by Hard Rock Consulting, 2024. Phs = phase.

Figure 16-8: Annual Waste Schedule



Note: Figure prepared by Hard Rock Consulting, 2024. Phs = phase.

The haul profiles are calculated by bench elevation form each pit to the material type destination and form the basis for the truck and loader fleet requirements for the 2024 PEA LOM plan shown in Table 16-8. The haul profiles are also used to calculate the required diesel fuel requirements, assumed to be supplied by the Owner together with the explosives.

Table 16-8: Mine Equipment

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Production Equipment														
100 t trucks	5	9	8	10	13	19	15	10	8	7	6	15	11	8
12 m^3 loaders	1	2	2	2	3	4	3	2	1	1	1	3	3	2
DM45 size drills	1	2	2	2	3	4	3	2	2	1	1	3	3	2
Pre-shear drills	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Support Equipment														
Cat D8 dozer	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Cat D9 dozer	2	2	2	2	2	2	2	2	2	2	2	2	2	2
16' grader	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Water truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Note: Cat = Caterpillar

17.0 RECOVERY METHODS

17.1 Introduction

The process design was based on existing technologies and proven equipment. The design included crushing, agglomeration and heap leaching, and off-site production of doré.

The process assumption is to process 4 Mt of material per year or 10,595 t/d. Leach-grade material will be crushed, stockpiled, reclaimed, and stacked on the leach pads with a stacking system at a nominal rate of 456 t/hr. The stacked material will be leached with a low-grade cyanide solution and the pregnant solution will be processed in a carbon adsorption circuit to extract gold and silver. The final metal recovery from the loaded carbon (desorption) will be processed off-site at Heliostar's La Colorada mining operation.

17.2 Process Design Criteria

A summary of the major design criteria is provided in Table 17-1.

17.3 Process Flow Sheet

The proposed process flowsheet is shown in Figure 17-1.

17.4 Plant Design

17.4.1 Primary Crushing

The following major equipment is included in the primary crushing circuit:

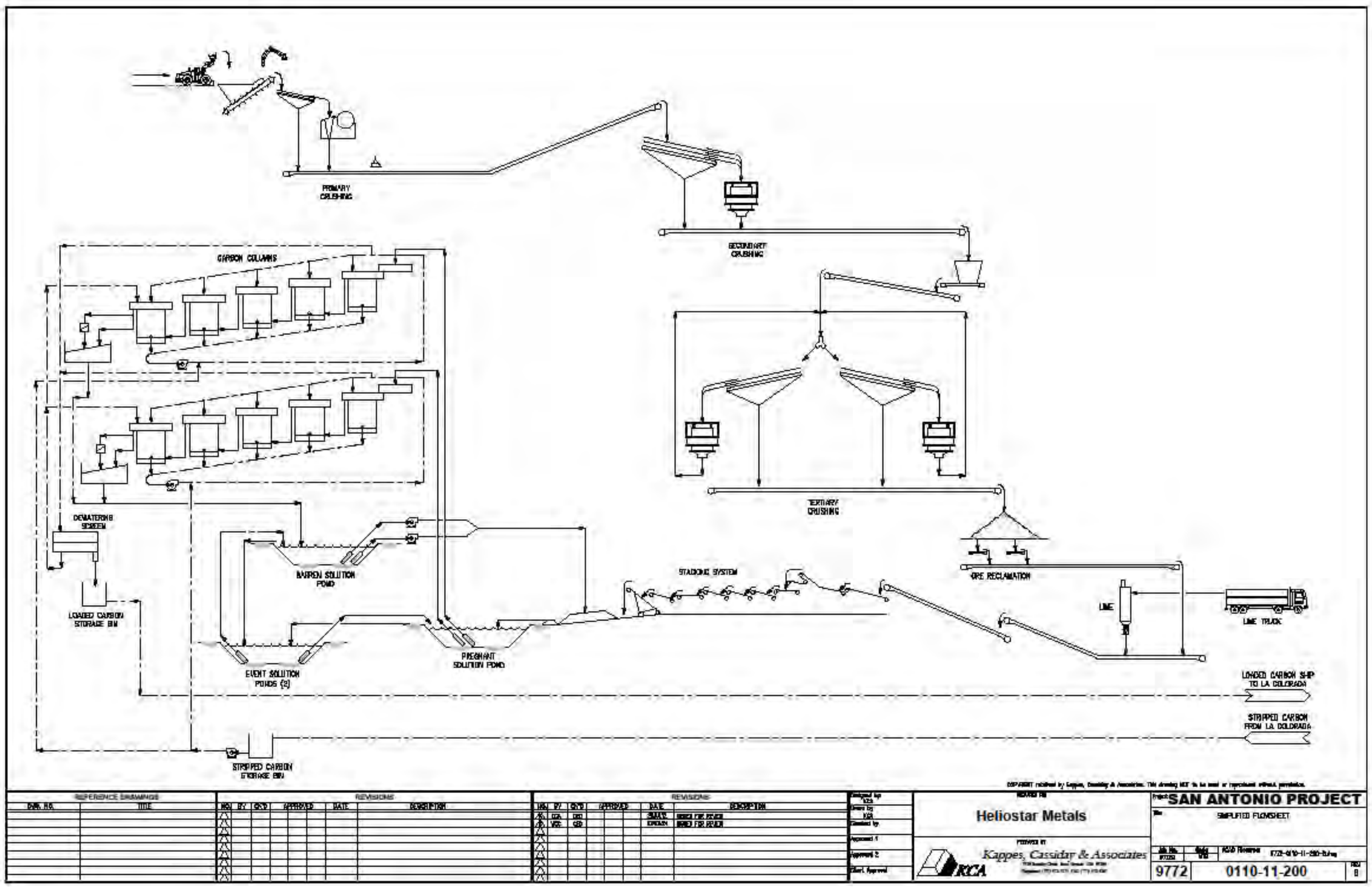
- 1 each 200-t dump hopper;
- 1 each vibrating grizzly feeder, 1.1 m wide x 6.1 m length, 89 mm opening;
- 1 each pedestal mounted hydraulic rock breaker;
- 1 each primary jaw crusher, 1300 mm x 1000 mm opening, 250HP;
- Associated transfer conveyors and chutes.

The primary crushing will be by a single Metso C130 jaw crusher or equivalent. The 200-t dump hopper will be designed to be fed by directly dumping 100 t dump trucks or reclaimed by front-end loader into the dump hopper situated above the variable speed apron feeder. The apron feeder will feed material to a vibratory grizzly with openings of 65mm, the oversize being directed to the jaw crusher, the undersize directed to the secondary screen. The jaw will have a closed size setting of 137 mm. Oversize rocks will be reduced in size with a stand-mounted hydraulic hammer. Dust control will be by water spray. A magnet will be installed to retrieve any tramp metal that might be fed to the secondary crushing circuit. Transfer conveyors will be 914 mm wide.

Table 17-1: Process Design Criteria Summary

Item	Design Criteria
Annual design tonnage	4,000,000 tonnes
Crushing production rate	11,000 tonnes/day average
Crushing operation	12 hours/shift, 2 shifts/day, 7 days/week
Crusher availability	75%
Crushing product size	100% -19 mm
Conveyor stacking system availability	80%
Leaching Cycle, days (Total)	100
Design solution application rate	10 $L/h/m^2$
Heap lift height	10 m
Recovery plant type	Carbon adsorption with offsite treatment

Figure 17-1: Process Flow Sheet



Note: Figure prepared by KCA, 2014.

17.4.2 Secondary Crushing

The following major components are included in the secondary crushing circuit:

- 1 each secondary triple deck vibrating screen (75 mm, 55 mm, 22 mm deck apertures), 2.5 m wide x 6.1 m length, 60 HP;
- 1 each 400 HP standard cone crusher (Metso HP400 or equivalent);
- Associated transfer conveyors, chutes and bins.

The primary crushing discharge conveyor with both grizzly undersize and crushed material will be directed to a three-deck Metso FS403 vibratory screen or equivalent. All material larger than 22 mm will be directed to the cone crusher, Metso HP400 std coarse or equivalent, with a closed screen setting of 35 mm. Material less than 22 mm in size will be directed to tertiary crushing. The secondary crushing circuit will operate in an open circuit. Transfer points will be covered and dust control will be by water sprays.

17.4.3 Tertiary Crushing

The following major components are included in the tertiary crushing circuit:

- 2 each tertiary double deck vibrating screen (24 mm and 19 mm deck apertures), 1.5 m wide x 5 m length, 20 HP;
- 2 each 400 HP standard cone crusher (Metso HP400 or equivalent);
- Associated transfer conveyors, chutes and bins.

Material from the secondary crushing circuit will be transferred by a 762 mm wide conveyor to a surge bin. A variable speed feeder on the surge bin will feed material to a 50:50 splitter chute with each stream directed to one of the two tertiary two-deck Mesto TS2.2 vibratory screens. All material greater than 19 mm will be directed to tertiary cone crushers, which will have a closed screen setting of 25 mm. The discharge from the tertiary Metso HP400 std coarse cone crushers or equivalent will be recirculated back to the tertiary screens (closed circuit). Material less than 19 mm will be directed to the 914 mm final product conveyor. Automatic samplers will sample the stream periodically to collect a sample for metallurgical purposes. A belt conveyor weigh scale will record production statistics. Transfer points will be covered and dust control will be by water sprays.

17.4.4 Heap Stacking and Lime Addition

The following major equipment is included in the heap stacking and lime addition systems:

- 1 each 100 t lime silo with associated dust control and feeding equipment;
- 3 each overland conveyors, 914 mm belt width;
- 23 each grasshopper transfer conveyors, 914 mm belt width;

- 1 each index feed conveyor, 914 mm belt width;
- 1 each horizontal index conveyor, 914 mm belt width;
- 1 each radial stacker with extendable stinger, 914 mm belt width.

Lime will be added to the crushed material on the conveyor and the material will be transported via conveyor directly to the leach pad for stacking via 914 mm overland conveyors. The overland conveyors will transfer the crushed material to a series of grasshopper transfer conveyors to a horizontal indexing conveyor. The horizontal indexing conveyor will feed the material to a 914 mm wide radial stacker. The heap will be constructed retreating up the slope of the pad. As the stacker retreats, grasshopper conveyors will be removed from the transfer train and relocated to an adjacent cell, so that the heap will be constructed from the down slope toe in an upslope direction.

17.4.5 Heap Leaching

The leach pads will be a multiple-lift, single-use type pad designed for 100 days of leaching. Leaching solution will be supplied to the material with drip emitters and or sprinklers depending on the water balance within the system. Solution will be applied at a rate of 10 L/hr/m^2. The dilute cyanide leach solution will percolate through the stack and collect on the geomembrane liner at the base of the heaps. A series of drainage pipes below the heap and above the liner, in place before stacking, will collect and deliver the solution to the pregnant solution pond. The pregnant and barren solution ponds were identically sized at 35,000 m^3 each.

17.4.6 Adsorption

Solution collected in the pregnant pond will be pumped to the adsorption circuit with submersible pumps. Two 500 m^3/hr pumps will be operating simultaneously. The pregnant pumps will have a fully-operational back-up plumbed and wired should there be a pump failure.

The absorption circuit is designed to process 1,000 m^3/hr of pregnant solution. The adsorption plant will consist of two-trains of five each cascade style adsorption vessels containing 3.5 t of activated carbon per vessel. Each train will be capable of processing 500 m^3/hr of pregnant solution.

The columns in each train will be plumbed in series. Each train will have one static discharge screen (65 mesh screen openings) and one solution feed box. Carbon transfer between vessels will be by recessed impellor type pumps.

Following adsorption, the now-barren solution will gravity flow to the barren pond. The barren solution will be refortified with NaCN and pumped back to the leach pad. The barren pump will have a fully functional backup plumbed and wired should there be a pump failure.

17.4.7 Carbon Treatment

The carbon treatment process, including desorption, acid washing and thermal regeneration, will be performed off-site at the La Colorada Project. Approximately 21 t batches of loaded carbon will be transported to the La Colorada Mine for processing.

Transport of the loaded carbon will be accomplished by first loading the carbon into super sacks, and then the sacks will be allowed to drain for a few days. The drained, loaded carbon sacks will then be loaded into steel transport bins. The transport bins were sized to allow double wide and double high stacking in a 12 m standard shipping container. The transport bins will have removable lockable tops to provide some security during transport.

Stripped carbon will be shipped back to the Project from La Colorada in a similar manner and placed back into the adsorption circuit. Each batch of stripped carbon will be acid washed at the La Colorada facility. Approximately every third batch of carbon will be thermally regenerated at La Colorada before being returned to San Antonio.

Precious metals will be stripped and electroplated onto cathodes at the La Colorada Mine. The cathodes will be washed, dried and smelted in batches.

17.5 Heap Leach Facilities

The pad will be constructed on a prepared surface with 0.3 m deep clay underliner or a geosynthetic clay liner underliner. The prepared surface will be covered with a single 60 mil linear low-density polyethylene liner. The leach pad will be graded to drain to the pregnant pond. The pregnant pond will be double lined with a 60 mil high-density polyethylene underliner and an 80 mil high-density polyethylene overliner. Geogrid will be placed between the liners. A leak detection system will be installed in each of the process ponds. The pregnant pond will have a storage capacity of 35,000 m^3. It was designed to contain the design maximum flow of 1,000 m^3/hr for 24 hours in case of pump shutdown, to provide 1 m of dead storage, and a freeboard allowance at the top of the pond of 1 m.

Excessive solution during high rainfall events will overflow by gravity to an event pond. The first phase of construction at the Project will include a leach pad approximately 50% of the ultimate size, pregnant and barren ponds and only one event pond. The remainder of the leach pad and a second event pond will be constructed approximately five years after project start up.

The sum of the volumes contained in the pregnant, barren and excess ponds are sized to contain the sum of the normal operating volume, heap drain down during a 24-hour pump or power outage and precipitation from the modeled random 13-year climate periods selected from daily precipitation records for the San Antonio meteorological station from 1954–2009. Solution will be pumped out of the event pond(s) with submersible pumps to the pregnant pond as the solution balance allows. The event ponds will have a capacity of 966,000 m^3.

17.6 Energy, Water, and Process Materials Requirements

17.6.1 Energy

Power will be supplied to the project via a 34.5 kV line that passes through the project. Portions of the line will have to be upgraded to handle the increase load. Additionally, portions of the transmission line will have to be relocated to allow for Project construction.

The total attached power is estimated to be 5,343 kW at the Project. Additional power will be consumed at the La Colorada for the benefit of San Antonio.

Additional details on power are presented in Section 18.

17.6.2 Water

Water will be used to wet new material stacked on the leach pad, replace evaporation losses on the heap leach pad facilities, provide dust-control for haul roads, access roads, crushing, and construction activities. Peak water requirements for San Antonio will be approximately 64.4 m^3/hr (17.8 L/s) and average consumption due to material uptake will be approximately 31 m^3/hr (8.6 L/s).

Additional details on water supply are presented in Section 18.

17.6.3 Consumables

Reagent consumption is based on metallurgical testing and Project design criteria (Table 17-2).

Cyanide and lime consumption will be material-type dependent.

The cyanide mix and metering circuit will include two cyanide addition pumps (one as standby, one as spare), a cyanide transfer pump, a cyanide mix tank, a cyanide mix tank dust box, a cyanide storage tank, cyanide bag hoist, and steel supports and grating for a monorail type hoist for loading super sacks of cyanide briquettes into the cyanide mix tank. Cyanide is assumed to be delivered in super sacks and stored in the enclosed, locked and lighted reagent storage facility.

Lime will be added to the crushed material stream by a variable-speed feeder receiving instructions from the weigh scale from the final product conveyor belt from the crushing circuit. Lime is assumed to be delivered in a bulk truck and blown into a lime silo adjacent to the final crushed product conveyor belt.

Table 17-2: Reagents Average Annual Consumption

Reagent	Consumption/Unit	Annual Consumption
Cyanide	0.26 kg/mineralization tonne	1.04 Mkg
Lime	1.3 kg/mineralization tonne	5.2 Mkg
Carbon	4% carbon fines loss/strip cycle	26 t
Antiscalant	10 ppm/flow stream	97,000 L
Hydrochloric acid	150 L/acid wash cycle	81,600 L
Caustic	105 kg/acid wash cycle	11,424 kg
Fluxes	0.075 kg/oz produced	7,720 kg

Carbon is assumed to be delivered in 1,000 kg super sacks and stored in the reagent storage facility. Carbon will be added to the adsorption tanks as needed to replace carbon lost through attrition.

Antiscalant is assumed to be delivered in 500 L carboys. Antiscalant will be added to the barren and pregnant pump inlets via chemical addition pumps to mitigate pipe scale formation. The usual dosage required will be 10 ppm.

Hydrochloric acid will be used to acid wash the carbon which will be performed at the La Colorada Mine. Approximately 150 L will be required to adequately wash a 3.5 t batch of carbon. The caustic will be used to neutralize the acid washed carbon before being returned to the adsorption circuit. These chemicals will be used at the La Colorada Mine for the benefit of the San Antonio carbon to be processed there.

Fluxes will be used to mix with the dried gold and silver collected from the stripped San Antonio carbon processed at the La Colorada Mine. The mixture of flux, gold and silver will be smelted periodically at the La Colorada Mine for the benefit of the Project.

18.0 PROJECT INFRASTRUCTURE

18.1 Introduction

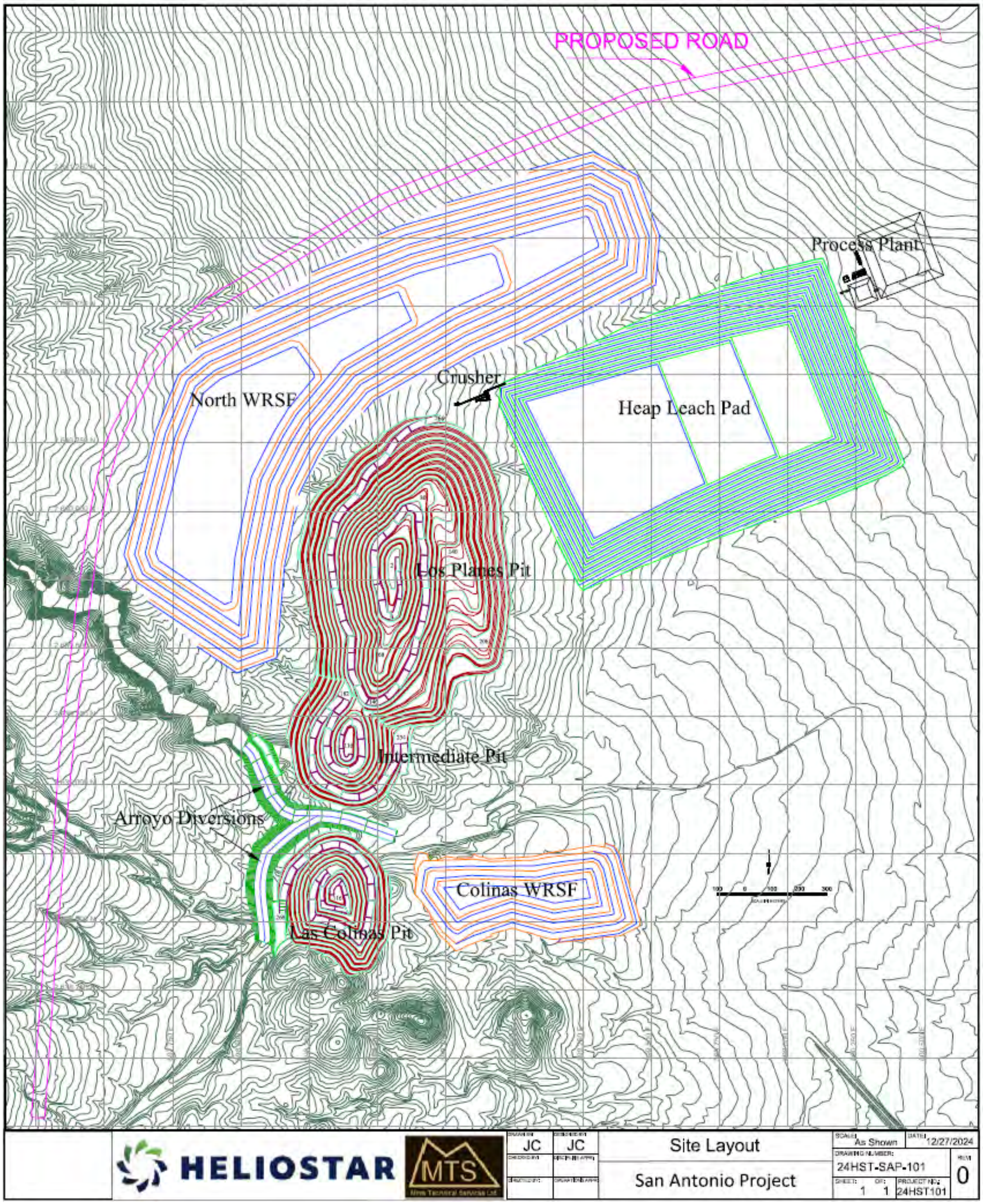
The following infrastructure will be required as the proposed mine is a greenfields site:

- Access roads to the site, including the relocation of a portion of the highway that crosses the facility;
- Power supply lines from an existing power line and relocation of a portion of the powerline that crosses the facility;
- Diesel-fired generators for back-up power supply to critical areas;
- Water supply;
- Water distribution from the storage tank, including a fire water system;
- Sewage treatment for black and gray water;
- Project buildings for:
  - Mine administration;
  - Laboratory;
  - Warehouse;
  - Process and metallurgical services;
  - Crusher office, workshop and warehouse;
  - Change room;
  - Guard house;
- Diesel fuel delivery systems for the plant and generators;
- Miscellaneous site services such as:
  - Security;
  - First aid clinic;
  - Communications;
  - Employee transport.

It was assumed that the proposed mining contractor would supply their own fuel storage and distribution systems, truck shop and change room/lunch facilities.

A site layout plan for the infrastructure contemplated in the 2024 PEA is shown in Figure 18-1.

Figure 18-1: Proposed Site Layout Plan



18.2 Road and Logistics

The current access and road routes to the Project are discussed in Section 5.

Highway 1 passes through the Project, and intersects a portion of the area planned for the Las Planes open pit. As a result, the highway will need to be rerouted around the proposed area for mining activities. About 1.6 km would be left in place for mine access, with another 1.6 km removed. State highway No. 1 would ultimately be relocated along a 4 km corridor that would also contain the power line and fiber optic cable.

Existing national and provincial roads are planned to be used during construction and operation. These roads will require minimum improvements to accommodate transport of special oversized or heavy parts during the construction stage. Reliance on existing site access routes means that limited site improvements will be required for mine development. The site plan calls for ancillary facilities, including maintenance and warehouse structures, administrative offices, and an assay and metallurgical laboratory, to be located near the proposed site entrance.

18.3 Stockpiles

No stockpiles are envisaged for the Project.

18.4 Waste Rock Storage Facilities

Two WRSFs planned.

The North WRSF will receive all of the waste from the Los Planes and Intermediate pits, and has a capacity of 157 Mt. The Las Colinas WRSF will receive all of the waste from the Las Colinas pit, and has a capacity of 18.5 Mt. Both facilities have sufficient capacity to meet the 2024 PEA LOM plan requirements.

Figure 18-1 shows the layouts of the WRSFs.

18.5 Tailings Storage Facility

No tailings storage facilities are envisaged for the Project.

18.6 Water Sources

The San Antonio Project is located within the Los Planes hydrologic basin that is bounded by the Gulf of California to the north, the Sierra La Salecita to the south, the Sierra La Gata to the east and the Sierra La Trinchera to the west. The basin has an approximate area of 930 km^2. Water resources within this basin and Project area include creeks with intermittent flows during the year and a generally unconfined aquifer.

Groundwater has been detected in drill holes at the site as shallow as 30 m from surface. Wells in the area have been tested in the past by the National Water Commission responsible for managing Mexico’s water resources (CONAGUA). Groundwater quality in the Los Planes basin has historically been degraded by agricultural runoff containing nitrate, naturally-occurring arsenic in the mineralized zones, and geothermal activity.

Allocation and management of water rights and water usage is controlled by CONAGUA. The Los Planes aquifer has been considered over-exploited since 1954, having been used heavily for agriculture purposes; approximately 11 Mm^3 is withdrawn per year. No additional water rights can be licensed and all groundwater users must have a water right.

During early technical studies, Pediment Gold was told by CONAGUA that water rights obtained from agricultural users lower in the Los Planes basin could be transferred nearer to the site and that new wells could provide water needed for the Project.

Pediment Gold contracted Schlumberger Water Services (SWS) to commence a baseline delineation and characterization of the potential water resources available for any future development. At the end of July, 2010, SWS had met with CONAGUA officials, reviewed area well and mine shaft data, and conducted site surveys. This work confirmed that Los Planes basin had no new water rights available, and that any water rights would have to be purchased from existing users. SWS also noted that the most likely sources of water needed for the Project would be groundwater wells that could be sited in the alluvium east of the Project. There could also be some potential contribution from surface runoff that could be captured and, later in the mine life, pit dewatering could supply some of the water needs for operations. The next phase of study will require the drilling of test wells to determine potential locations in the basin for production water wells.

Other potential water supply alternatives that may be reviewed during future studies could include the direct use of sea water, use of desalinated water, or the construction of reservoirs to capture run-off during the rainy season.

18.7 Water Supply

18.7.1 Raw Water

Raw water will be pumped to a tank in the crusher area. The raw/fire water tank will have 820 m^3 total capacity; the bottom 623 m^3 will be dedicated to fire water use while the remaining 197 m^3 will provide raw water to the process facilities, domestic uses and dust control. From the raw/fire water tank, raw water needs will be met using pumps and gravity flow. Two dedicated fire water pumps, one electric and one diesel powered, will deliver fire water should a fire event occur.

18.7.2 Potable Water

Bottled water will be provided as drinking water for the mine employees.

18.8 Water Management

Two arroyo diversions and one diversion berm will be constructed to manage surface water flows through the Project site. In total, 1.6 km of diversion berm will be constructed to channel water around the Las Colinas pit and to channel water between the Los Planes WRSF and the heap leach pad. About 225 m of diversion berm is planned to be built adjacent to the proposed Las Colinas pit to divert surface water away from that pit.

Arroyo diversion will require federal approval from SEMARNAT and CONAGUA.

18.9 Camps and Accommodation

No accommodations camp is envisaged.

Personnel buses will be provided to transport workers to the Project site. It is expected that most personnel will be transported form La Paz, a 60-minute bus commute each way.

18.10 Power and Electrical

Power for any mining operation would be available from an upgraded 34.5 kV line that crosses over the Project, originating from the Triunfo substation, which is located approximately 10 km northwest of the Project area. The current route of the powerline will require relocation, as it intersects a portion of the area planned for the Los Planes open pit. About 3.2 km of line will need to be moved to the proposed road corridor.

Although the substation has capacity, the existing 34.5 kV line will require upgrading to service the Project. The 2042 PEA assumes that CFE, the local power supplier, would take on any costs required to upgrade the El Triunfo substation capacity.

The total attached power required at site is 5,343 kW. Additional power will be consumed at the La Colorada Mine for the benefit of San Antonio. The connected power by area is presented in Table 18-1. Average annual power consumption is estimated to be 30 M kWh.

In the event of a power failure, diesel-fired backup generators will be used to supply emergency power for safety and security. Emergency generators will be located adjacent to the process facility. The San Antonio site will have one 1,650 kW emergency generator. The emergency generator is required to maintain a critical solution balance in the solution storage system during power outages. The fuel tank for the generator will be sized for three days of operation.

Backup electric power will be supplied to the following facilities:

- Critical process equipment;
- Site offices;
- First aid clinic;
- Communications facilities.

Critical process equipment will be energized by the emergency power system to maintain proper solution balances in the process ponds and process plant should the power supply be interrupted. Fire water will be supplied by diesel powered pumps.

Table 18-1: Attached Power Forecast

Area	Attached (kW)
Truck shop, mine general	20
Site and utilities general	51
Power generation	15
Plant water distribution	549
Air and fuel	44
Laboratory	242
Crushing	1,776
Lime	3
Heap leach conveying and stacking	1,599
Heap Leach pads and ponds	1,037
Reagents	17
Total San Antonio	*5,343*
Heap leach recovery plant (La Colorada)	254
Refining (La Colorada)	102
Total La Colorada	*356*
Grand Total	***5,699***

18.11 Solid Waste Disposal

Waste will be managed in dumpsters or other appropriate waste containers. All containers will be covered (or covered and weighted, if covers are not attached) to reduce the potential for blowing trash. Containers used on site will be labeled. Trash from office and lunch areas will be bagged. Municipalities and/or waste disposal companies will be contracted as necessary for off-site transportation and disposal.

On-site burning of any waste materials, vegetation, domestic waste, etc. will not be allowed. No waste will be disposed of or buried on site. Illegal dumping on site, along public roads or in the surrounding areas will not be allowed.

18.12 Sewage Treatment Systems

Two sewage treatment systems will be installed. One will be constructed in the process area and the other constructed near the crusher facility to treat non-toxic wastes generated on the site. Sewage will be collected and directed to a septic tank with a biological filter to process both black and grey water. Laboratory metallurgical wastes will be directed to the process ponds.

18.13 Built Infrastructure

Infrastructure requirements are summarized in Table 18-2.

18.14 Communications

A satellite communication system will be installed at the general office. The system will include data, voice and internet connections. The site system will link via the satellite to the National Mexican telecom grid for off-site communication.

On-site communications will be by network computer e-mail system and both fixed and portable FM radios. The radios will be used for communications between the operators, security personnel, and supervisors of the various production departments. Cell phone coverage is good in the area.

Table 18-2: Required Built Infrastructure

Infrastructure	Design	Note
Administration building	Will consist of a complex of four modular office trailers. Each will be 3.5 m wide and 12 m in length. The building will be sized to accommodate key administration, supervisory, engineering, geology, and accounting personnel	Will include office space for key personnel, a conference and training area, and men's and women's toilet facilities.
Laboratory	Will be housed in two modular trailers, each 3.5 x 12 m, and a covered 20 x 20 m concrete slab. The sample preparation facility will be contained in the open-air covered slab. The fire assay furnaces will be placed in the open air covered facility adjacent to the sample preparation facility. The laboratory will be designed to process up to 150 rock samples per day from the mine, and all process metallurgical samples as required.	Will have men's and women's toilet facilities
Warehouse	A 36 m by 17 m building; will serve as the central receiving area for incoming repair parts and consumables. An uncovered fenced area with a concrete slab floor will be constructed adjacent to the building for heavier items.	Will be an office area for warehouse supervision, a break area for warehouse personnel and men's and women's toilet facilities.
Heap leach process facilities	Will comprise a modular office trailer, 3.5 m wide and 12 m in length. Adjacent to the process and metallurgical services office will be a covered concrete slab and fenced service area. The area will be used as a workshop for the process components, and small warehouse for high use consumables.	Will serve as the process and metallurgical services office. The facility will have men's and women's toilet facilities
Crusher office, workshop and warehouse facility	Will be housed in a single 19 x 18 m metal building with an adjacent fenced area for storage	Office space will be provided for crusher management personnel, a break area for the workers, a workshop area for component repairs and a warehouse for consumables. The facility will have men's and women's toilet facilities.
Change room	Two modular change rooms, 3.5 m wide and 12 m in length, will be located near the entrance to the proposed San Antonio operations.	The change room will include a set of "clean clothes" lockers, showers, washrooms and "work lockers." Segregated change facilities will be provided.
Guard house	A 6 m^2 guard house will be erected at the entrance to the property.	Entrance to the property will be continuously monitored.
Security	The San Antonio site will be fenced to provide for the safety and security of the workers and the general public. A livestock fence will surround the property	A guardhouse will be staffed at the property entrance and will be manned 24 hours per day. In

Infrastructure	Design	Note
	and chain link fences will surround the carbon plant and process pond areas.	addition, roaming guards will be assigned to patrol the facilities.
First aid	A first aid clinic will be housed in a 3.5 x 6 m modular trailer. An ambulance will be available for emergency transport of workers.	
Diesel	Diesel fuel will be delivered to the mine site via tanker trucks and stored in a tank adjacent to the emergency generators. The storage tank will be placed in a lined basin to ensure that no fuel is leaked to the environment.	Since mining will be by contract miners, it was assumed that they would handle their own fuel storage and dispensing.

19.0 MARKET STUDIES AND CONTRACTS

19.1 Market Studies

Gold markets are mature: global markets with reputable smelters and refiners located throughout the world. Markets for doré are readily available.

Loaded carbon will be shipped from San Antonio to Heliostar's La Colorada project, located near Hermosillo, Sonora, Mexico, which possesses a gold room for the production of doré

The final decision on metal refining was not made at the Report effective date. Heliostar has refining and purchase and sale agreements in place for the doré from its two other operations in Mexico and expects to be able to put in place a contract with similar terms and conditions on the doré material produced from the San Antonio material.

19.2 Commodity Price Projections

Assumed metal prices for estimation of Mineral Resources and the 2024 PEA economic analysis took into consideration current market, historical prices, values used in other recent projects, and forecasts in the public domain.

On 30 November 2024, according to the London Bullion Market Association (LBMA), the average daily AM Fix gold price for 2024 was US$2,364/oz. The three-year and five-year rolling average prices through the end of 30 November 2024 were US$2,020/oz and US$1,920/oz, respectively.

Although the metal prices can be volatile, a gold price of US$1,900/oz was used for the development of the 2024 PEA mine plan and economic analysis to reflect a long-term conservative price forecast.

Figure 19-1 presents the historical gold prices. As can be seen in the graph, gold prices have been on a steep upward trend during 2024 and have reached record highs.

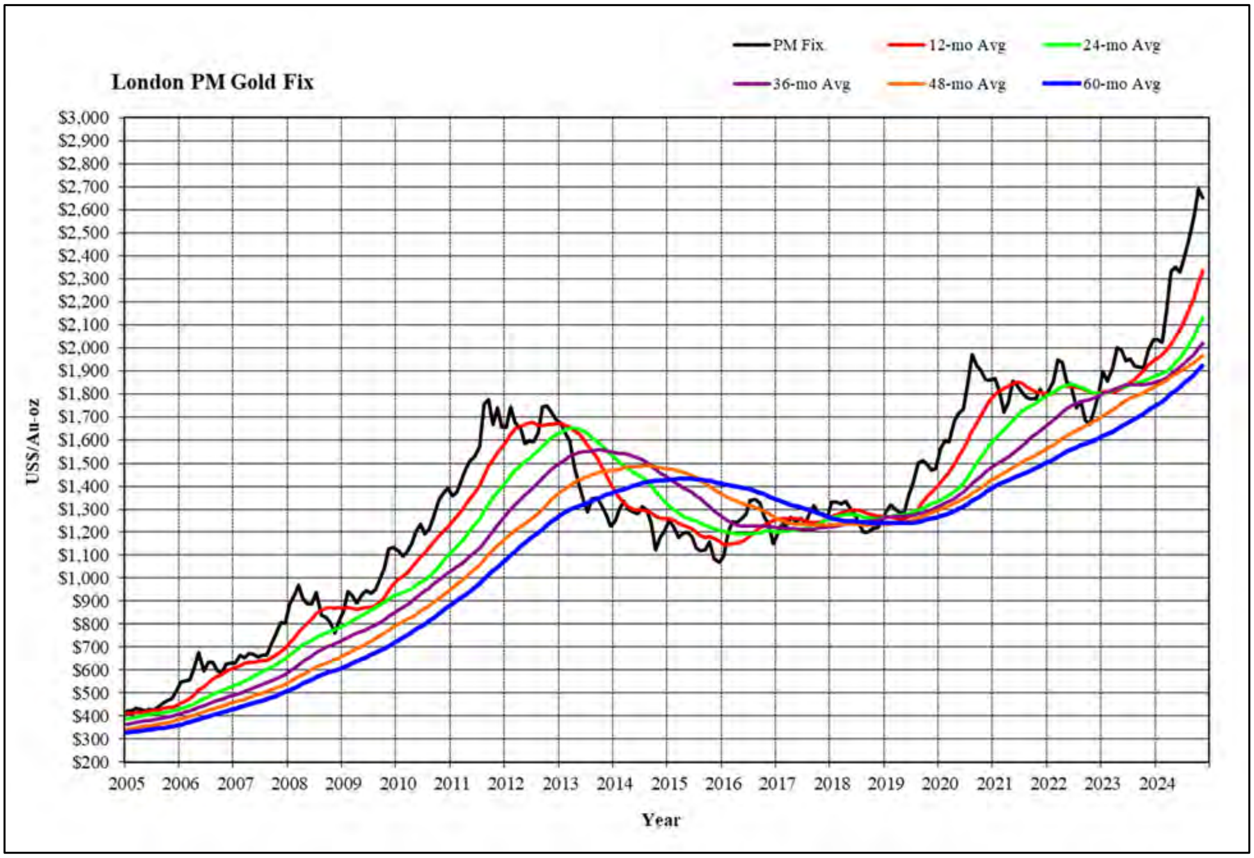
A higher metal price of US$2,150/oz Au was used for the Mineral Resource estimates in accordance with industry-accepted practice.

19.3 Contracts

No contracts are in place. The 2024 PEA assumes that San Antonio will be a contract mining operation with an Owner-operated process facility. Contracts would be entered into with third parties, where required, and could cover areas such as diesel and fuel; reagents; catering; explosives and blasting; mine grade control, RC and core drilling; oils and lubricants.

Contracts would be negotiated and renewed as needed. Contract terms are expected to be typical of similar contracts in Mexico that predecessor company Argonaut had entered into on its active mining operations.

Figure 19-1: Historical Gold Prices



Note: Figure prepared by Hard Rock Consulting, 2024, based on London Bullion Market Association prices.

19.4 QP Comments on Item 19 “Market Studies and Contracts”

The QP notes the following.

- The doré to be produced by the Project would be readily marketable;
- The QP reviewed commodity pricing assumptions, marketing assumptions and the current major contract areas, and considers the information acceptable for use in estimating Mineral Resources and in the economic analysis that supports the 2024 PEA.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Introduction

The Project is in a late exploration phase. Although it is in a historic mining district, the Project has had no known extraction activities. Surface disturbance at the site is primarily associated with exploration such as roads and drill pads. Limited data and documents are available for this stage of the Project.

No known environmental factors exist to preclude a successful permitting effort; however, the length and effort of the permitting process can be difficult to predict due to the political regime in Mexico. Although the site is located outside of any developed areas, the proximity of the city of La Paz will bring greater social scrutiny due to concerns over water usage and availability. The permitting process could be impacted by stakeholders outside of the Mexican environmental agency.

20.2 Environmental Studies and Background Information

The Project is located 8 km north of the historic mining town of San Antonio in the lower, transitional foothills leading to the Sierra de La Laguna mountain range. The Sierra de la Laguna lies at the southern end of the peninsula in the state of Baja California Sur, and was designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a global biosphere reserve. It includes a core area centred on the higher-elevation oak-pine forests, with transitions buffer zones at lower elevations. The Project site is located 18 km from the biosphere buffer zone, and in a completely separate hydrographic basin from the biosphere reserve.

Environmental baseline studies were carried out to document the conditions in the Project area, as well as any potential seasonal variations. Baseline studies are required as part of the permitting process. A summary of the environmental conditions is presented in the following sub-sections.

20.2.1 Hydrology

The regional environmental system covers an area of 28,720.121 ha, and is part of the Administrative Hydrological Region I-Península de Baja California, within the Hydrological Region (RH06) Baja California Sureste (La Paz). It is in the La Paz–Cabo San Lucas Hydrological Basin and the Las Palmas Sub-basin.

Based on vector data from the Hydrographic Network edition 2.0 (INEGI, 2010) and topographic maps F12B13 and F12B14 series III (INEGI, 2016), there are 22 intermittent streams in the area. According to the Municipal Geographic Information Handbook of the United Mexican States (2009), intermittent streams in Baja California Sur include Apanctezalco, El Carrizal, Huajoyucan, La Villa, and Tepecapa.

There are five registered water storage bodies (dams) in the state, mainly used for agricultural irrigation, with a combined storage volume of 78.4 mm³ (State Water Program of Baja California Sur 2013–2018). The San Antonio deposit is located within the San Juan de Los Planes watershed, characterized by a north–south valley with elevations from sea level to 1,300 m. The micro-watershed is structurally controlled by north–south normal faults, creating a tectonic depression (graben) in the valley centre, surrounded by high-elevation rock (Schlumberger, 2010).

The central northern part of the micro-watershed is an alluvial zone with gentle slopes, significantly reducing surface runoff. The quaternary alluvial micro-watershed consists of unconsolidated sand, gravel, silt, and clay. Surface runoff from the upper micro-watershed is greatly reduced upon reaching the alluvial plain due to infiltration losses, with minimal flow reaching the Gulf of California.

Surface runoff potential depends on precipitation magnitude and distribution, as well as soil infiltration, which varies by morphological location. The drainage network in the baseline study area ranges from dendritic in higher elevations to subparallel near the plain, consisting of ephemeral streams that flow torrentially during significant rainfall, primarily in the summer rainy season (July to September), and discharging into the Gulf of California. Key micro-watersheds include Los Ángeles–Los Planes, San Antonio–El Fandango–Texcalama, and Agua Fría or Agua Blanca. Some runoff infiltrates the plain before reaching the sea, but the San Antonio–El Fandango–Texcalama micro-watershed discharges into La Bocana estuary and then the Gulf of California. The Project site is in the upper part of this watershed, and does not interfere with major surface runoff.

There are no data on significant ephemeral runoff volumes in the baseline study area due to erratic and torrential precipitation, making hydrometric station installation impractical. The Soil Moisture Accounting (SMA) method in hydrological modeling system software was used to simulate natural infiltration and evaporation losses, providing preliminary runoff volume estimates for five watersheds.

Non-infiltrated water or evapotranspiration losses are calculated as direct runoff. There is no significant groundwater recharge to maintain base flow, as streams are dry except during the rainy season. A small dam, approximately 3 km south-southeast of the Project site, is used for pasture irrigation. The dam intercepts 2.4 km² of drainage area and has only filled once in 49 years, lacking sufficient storage for pumping.

Another water body, La Bocana, 17 km downstream from the Project site, receives most surface runoff reaching the coast, forming a 30 ha salt flat with halophytic vegetation due to seawater exchange.

20.2.2 Surface Water Quality

The analytical results of the surface water baseline, compared with Mexican Official Standards for drinking water (NOM-127-SSA1-1994) and World Health Organization (WHO) guidelines, indicated nearly neutral pH levels. Water samples collected from Creek Texcalama, located upstream of the project, generally met the NOM-127 limits and the WHO guidelines, except for total dissolved solids, hardness, and manganese. However, arsenic levels exceeded WHO standards (Terra, 2019). A location map was not provided to the QP.

20.2.3 Groundwater Quality

The baseline groundwater sample results were compared with the NOM-127-SSA1-2021 permissible limits and the World Health Organization (WHO) guidelines. A total of 10 sampling sites were included in the monitoring program, comprising three monitoring wells installed by Minera Pitalla and seven existing water supply wells (Figure 20-1).

All samples exhibited nearly neutral pH levels. The pH was slightly higher in wells located upstream and lower in those downstream. Groundwater samples generally met the NOM-127-SSA1-2021 permissible limits, except total dissolved solids, hardness, sodium, chlorides, sulphates, nitrates, nitrites, ammonium, total and fecal coliforms, and arsenic (SLR, 2013).

The QP notes that the upstream and downstream locations refer to surface water flow directions, and that the upgradient and downgradient directions of groundwater flow have not been established.

20.2.4 Air Quality

Minera Pitalla conducted air quality sampling from April 25–28, 2017, to measure concentrations of PM_{10} and $PM_{2.5}$ particles in ambient air, following the U.S. Code Federal Regulations. All sample results were within permissible limits established in NOM-025-SSA1-2014. Sampling locations are shown on Figure 20-2.

20.2.5 Fauna

To determine the fauna of the area, direct sampling and interviews with local residents were conducted to gather information on commonly sighted species. Additionally, a literature review and examination of available databases (previous studies) were performed to identify reported animals in the area.

Based on the field sampling information, a list of each faunal group was created, including scientific name, common name, conservation status (NOM-059-SEMARNAT-2010), seasonality, sociability, and diet.

Using the data from the sampling sites on the property, a list of amphibians, reptiles, birds, and mammals for the matorral sarco-crasicaule (sarco-crasicaule shrubland) ecosystem was generated.

The individuals found included six amphibians, 260 reptiles, 217 birds and 42 mammals. From the fauna identified on the property, seven reptile species are classified as at risk, and two are classified as threatened per NOM-059-SEMARNAT-2010.

Figure 20-1: Groundwater Monitoring Points

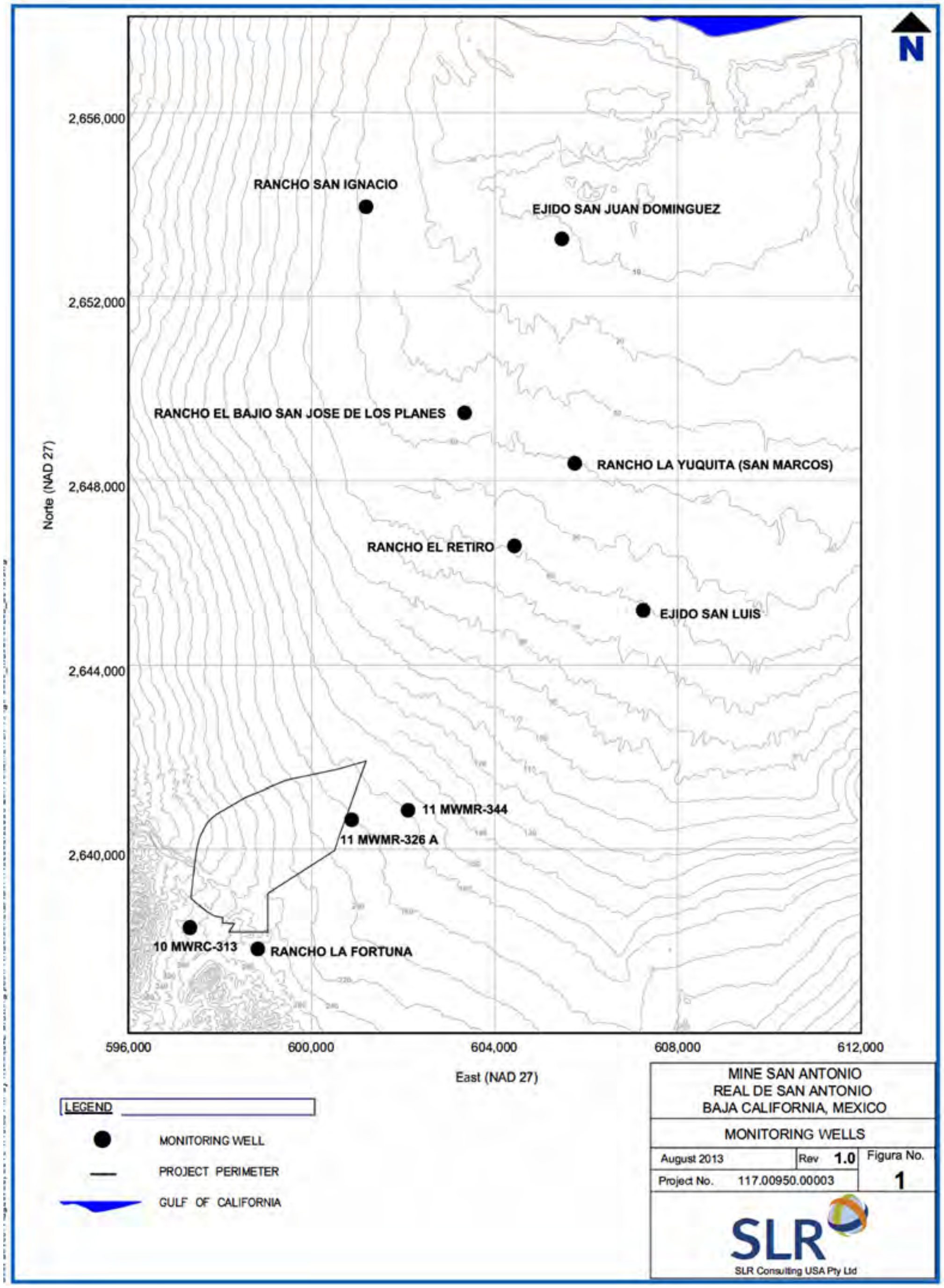
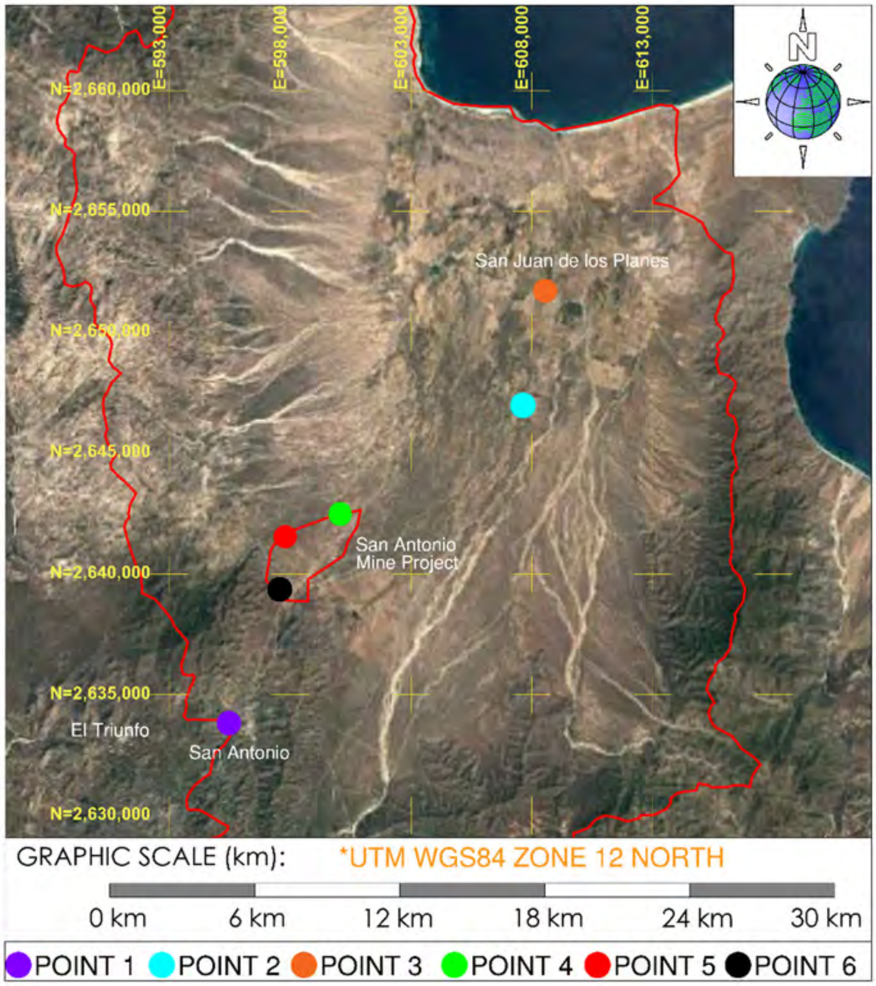


Figure prepared by SLR Consulting, 2013.

Figure 20-2: Air Quality Monitoring Points



Note: Figure prepared by Heliostar 2024.

20.2.6 Flora

The baseline study was conducted to determine the physical boundaries of the property or study area and to delineate the types of vegetation or plant associations present. This information was used to obtain the respective stratification in digital cartography for the creation of photogrammetric maps, with the support of thematic maps. The processed information indicated the total populations and densities of the species present. It was concluded that the populations in the study area correspond to the sarco-crasicaule shrubland ecosystem.

A total of 67 species were identified on the property (577.415 ha), including 22 tree species, 30 shrub species, 10 cactus species, and five herbaceous species. Of these, only one species, the

Black Cat's Claw (Olneya tesota), is listed in NOM-059-SEMARNAT-2010 under the category of special protection.

20.3 Waste Management

Planned operations at San Antonio would generate waste rock and spent mineralization from the mining operations, as well as hazardous, non-hazardous and regulated wastes. There could be wastewater generated that would be discharged from the site. All wastes and discharges would be subject to environmental permitting and management requirements under the Mexican environmental authority. Environmental regulations are discussed in more detail in Section 20.4. No tailings would be generated by the mineral processing method envisaged in this Report.

20.3.1 Preliminary Characterization of Mining Wastes

Preliminary geochemical characterization was conducted to evaluate the environmental stability of future mining wastes; that is, waste rock and spent mineralization (Golder, 2011a and 2011b).

Project waste rock was analyzed, based on 90 samples selected from drill core to represent lithologic types and spatial distribution in the mine plan. The samples represented lithologies that would be encountered in exposed pit walls and within the open pits, such as granodiorite, quartz diorite and mafic dikes.

The focus of the program was on the potential for generation of acid rock drainage (ARD) and metal leaching (ML). The program included the following components:

- Elemental analysis of solids;
- Mineralogical analysis;
- Acid base accounting (ABA);
- Net acid generation (NAG) testing;
- Short-term leach test.

Based on the results of the study, the waste rock was classified as non-acid forming material with only two of 90 samples indicated as acid-generating. Leach testing indicated that trace metal concentrations in leachates are generally low. However, NAG pH values are lower than observed in the short-term leach test results, and metal leaching over the long term may increase. These results are consistent with those for low-sulphide, gold-quartz vein deposits such as the Project. It was noted that arsenopyrite was not identified in the mineralogical analysis but may be present.

The study concluded that may not be necessary to distinguish between rock types or sample location from a waste rock ARD management perspective; however, further testing and evaluation of arsenic leaching potential was recommended to fully evaluate this operational management strategy.

Residue from metallurgical testing was composited into 20 samples to represent spent mineralization, and predict the water quality in the heap leach facility after closure. The analytical characterization was similar to the waste rock geochemical testing, except mineralogical analysis was omitted. The study concluded that 25% of the samples were acid-generating and 30% of the samples had uncertain results. The short-term leach test results indicated that the concentrations of soluble metals were low under neutral pH conditions, but the concentrations will increase if the pH becomes lower. The test results did not exceed the Mexican permissible limits.

The QP notes that the preliminary geochemistry studies were based on an earlier version of the mine plan and that changes to the mine plan may result in the need to update the geochemistry to reflect the mine plan for the current Mineral Resource. The preliminary studies did not include predictions of long-term water quality, or water management requirements after closure. The QP concurs that additional assessment, including kinetic testing, is needed.

20.3.2 Site Monitoring

Although baseline studies were conducted as part of a permitting effort, no follow up environmental monitoring has been conducted since that time. Additional studies will be required to update the environmental conditions. The timing to plan and collect baseline data that reflect seasonal variations may take several years, with a minimum of one to two years of data collection. There can be an overlap in the collection of baseline data and proceeding with the preparation of permit submittals.

20.3.3 Water Resources

The Project is located within the Los Planes hydrologic basin that is bounded by the Gulf of California to the north, the Sierra La Salecita to the south, the Sierra La Gata to the east and the Sierra La Trinchera to the west (Figure 20-3).

The basin has an approximate area of 1,013 km^2 (CONAGUA, 2024). Water resources within this basin and Project area include creeks with intermittent flows during the year and a generally unconfined aquifer.

Groundwater has been detected in drill holes at the site as shallow as 30 m below ground surface (bgs), and a water supply well located in a nearby field was reported to have a water level of about 96 m in 2023. Minera Pitalla owns the field and currently rents it out for agricultural purposes.

An initial water supply study for Los Planes basin concluded that limited information was available regarding the upper alluvial aquifer and possible deeper aquifer (Schlumberger Water Services, 2012). The study indicated that groundwater quality in the basin has been degraded by nitrates in runoff from agricultural and livestock operations, naturally-occurring arsenic in the mineralized zones, historic mining activities and saltwater intrusion. The aquifer is classified as over-exploited by CONAGUA (2024) with an annual deficit of 2,337,747 m^3.

Figure 20-3: Los Planes Aquifer Map

Note: Figure prepared by CONAGUA, 2024.

The mine plan layout will impact existing arroyos, which will require the construction of surface water diversions. The impacts to arroyos and mitigation actions will require federal approval from SEMARNAT and CONAGUA.

It is anticipated that future open pits will encounter groundwater that will require dewatering, and that pit lakes will form in any open pits when mining operations cease.

20.4 Environmental Regulatory Framework

20.4.1 Mining Law and Regulations

The Mexican Constitution contains provisions for the regulation of natural resources in Article 27, which is regulated by the Mexican Mining Law for mining activities such as exploration, mining, and processing activities. The Mexican Mining Law was updated into 2023, and interpretation of the law into a regulation is pending.

The primary environmental law is the General Law on Ecological Equilibrium and Environmental Protection (Ley General de Equilibrio Ecológico y Protección al Ambiente or LGEEPA), which provides a general legal framework for environmental legislation.

Key related Federal statutes include:

- General Law on Sustainable Forest Development (Ley General de Desarrollo Forestal Sustentable);
- General Law on Wildlife (Ley General de Vida Silvestre);
- National Waters Law (Ley de Aguas Nacionales);
- General Law on Climate Change (Ley General de Cambio Climático);
- General Law on the Prevention and Comprehensive Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos);
- General Law of Environmental Responsibility (Ley General de Responsabilidad Ambiental).

The Morena political party in Mexico, under President Claudia Sheinbaum, is currently reevaluating the bill prohibiting open-pit mining that was proposed and approved by the Mexican Congress in August 2024. President Sheinbaum has emphasized the need for a thorough review due to its significant economic and environmental impacts. No schedule for the review had been publicly announced at the Report effective date.

20.4.2 Water Resources

Water resources are regulated under the National Water Law, December 1, 1992, and its regulation, January 12, 1994 (amended by decree, December 4, 1997). In Mexico, ecological criteria for water quality are set forth in the regulation by which the ecological criteria for water quality are established, CE-CCA-001/89, dated December 2, 1989. These criteria are used to classify bodies of water for suitable uses including drinking water supply, recreational activities, agricultural irrigation, livestock use, aquacultural use and for the development and preservation of aquatic life. The quality standards listed in the regulation indicate the maximum acceptable concentrations of chemical parameters and are used to establish wastewater effluent limits.

Discharge limits for wastewater have been established according to the receiving waters (NOM-001-SEMARNAT-2021). No groundwater environmental criteria have been established for naturally occurring groundwater. Permissible limits for potable water parameters have been established in NOM-127-SSA1-2021.

20.4.3 Ecological Resources

In 2000, the National Commission of Natural Protected Areas (CONANP) (formerly CONABIO, the National Commission for Knowledge and Use of Biodiversity) was created as a decentralized entity of SEMARNAT.

Ecological resources are protected under the Ley General de Vida Silvestre (General Wildlife Law). (NOM)-059-ECOL-2000 specifies protection of native flora and fauna of Mexico. It also includes conservation policy, measures and actions, and a generalized methodology to determine the risk category of a species.

Other applicable laws and regulations include: the Forest Law, December 22, 1992, amended November 31, 2001, and the Forest Law Regulation, September 25, 1998.

20.4.4 Environmental Permitting

SEMARNAT is the main regulatory body in charge of enacting and enforcing environmental regulations throughout Mexico, including the issuance of environmental permits. SEMARNAT comprises multiple autonomous agencies with administrative, technical, and advisory functions, which are summarized in Table 20-1.

SEMARNAT regulates permitting or licenses under the regulations and standards derived from LGEEPA, divided in the following main topics:

- Hazardous materials and wastes: registration of generators, management plans, authorization to manage hazardous waste, contaminated soil remediation, import/export permits, environmental risk assessments and approval of accident prevention plans;
- Forest management: authorizations, notices, reports, inscriptions and records regarding timber and non-timber forest exploitation, commercial forest plantations, collection of forest biological resources, phytosanitary certificates, land use change in forest land, forest product transportation, storage and transformation centres of forest products, forestry technical services and national forest register;
- Wildlife: CITES certificates for import and export, management units for wildlife conservation, extractive and non-extractive usage, authorizations, licenses for hunting, animal specimen register, scientific collections and wildlife conservation;
- Air: authorizations and procedures for operation and environmental compliance, as well as alternative methodologies for air care and quality improvement;
- Environmental impact and risk: environmental impact evaluation is a management instrument that guarantees, when approved, the sustainable development of investment projects, establishing the measures to protect the environment and for rational use of natural resources;

Table 20-1: Overview of SEMARNAT Agencies

SEMARNAT Unit	Function
National Water Commission (Comisión Nacional del Agua, or CONAGUA)	Responsible for the management of national water, including issuing water concessions, water extraction permits (both surface water and groundwater), and wastewater discharge permits.
National Forestry Commission (Comisión Nacional Forestal, or CONAFOR)	Mandate is to develop, support, and promote the conservation and restoration of Mexico's forests.
Attorney General for Environmental Protection (Procuraduría Federal de Protección al Ambiente, or PROFEPA)	Monitors compliance with environmental regulations and responsible for the enforcement of environmental law.
National Commission for Natural Protected Areas (Comisión Nacional de Areas Naturales Protegidas, or CONANP)	Oversees the management and protection of 192 protected areas throughout Mexico.
The Safety, Energy and Environment Agency (Agencia de Seguridad, Energía y Ambiental, or ASEA)	Regulates and oversees industrial safety and environmental protection, and integrated waste management specifically with respect to hydrocarbon-related activities.
Instituto Nacional de Ecologia y Cambio Climatico (National Institute of Ecology and Climate Change or INECC)	Responsible for the coordination of technological and scientific research and development with a focus on environmental protection and conservation. This institute provides technical and scientific support to SEMARNAT for the instrumentation of the national environmental policy, so to promote and diffusion of criteria, methods and technologies for environmental conservation and sustainable use of natural resources. It also evaluates compliance of the goals and actions of the Climate Change National Strategy.
General Directorate of Environmental Impact and Risk (Subsecretaría de Gestión para la Protección Ambiental con la Dirección General de Impacto y Riesgo Ambiental, or DGIRA)	Responsible for issuing environmental permits and authorizations.

- Maritime and terrestrial: permit procedures for this zone are the instruments to give the rights to use and exploit beaches, federal zones and land gained to the sea, guaranteeing the organized and sustainable protection, conservation and exploitation for integral development of this zones.

SEMARNAT oversees the Official Mexican Standards (Normas Oficiales Mexicanas, or NOMs), which are mandatory technical regulations that establish the rules, specifications, and/or requirements. Key NOMs anticipated to be relevant to future mining operations are listed in Table 20-2.

20.4.5 Free Trade Agreement

Canada, the United States and Mexico participate in a free trade agreement. The initial agreement, the North American Free Trade Agreement or NAFTA, was replaced in 2020 by the United States-Mexico-Canada Agreement (USMCA). NAFTA addressed the issue of environmental protection, but each country was responsible for establishing its own environmental rules and regulations. The USMCA retains many of NAFTA's provisions but introduces new rules and updates in areas such as digital trade, intellectual property and labour rights.

20.5 Permitting Process

Environmental permitting in Mexico requires four primary documents to be reviewed and approved by SEMARNAT:

- Manifestación de Impacto Ambiental (MIA): Mexican Environmental Impact Assessment, including MIA Modifications for any changes to project planning and operations. MIAs describe potential environmental and social impacts that may occur in all stages of the operation as well as the measures to prevent, control, mitigate or compensate for these impacts;
- Estudio Técnico Justificativo (ETJ): technical justification study for the Change in Land Use (Cambio de Uso de Suelo or CUS), that allows the land use to be changed to mining;
- Estudio de Riesgo Ambiental: Environmental risk assessment;
- Programa para la Prevención de Accidentes (PPA): accident prevention plan.

Federal environmental licenses (Licencia Ambiental Unica, or LAUs) are issued, which set out the acceptable limits for air emissions, hazardous waste, and water impacts, as well as the environmental impact and risk of the proposed operation. Figure 20-4 summarizes the environmental permitting process for the authorization of mining operations in Mexico.

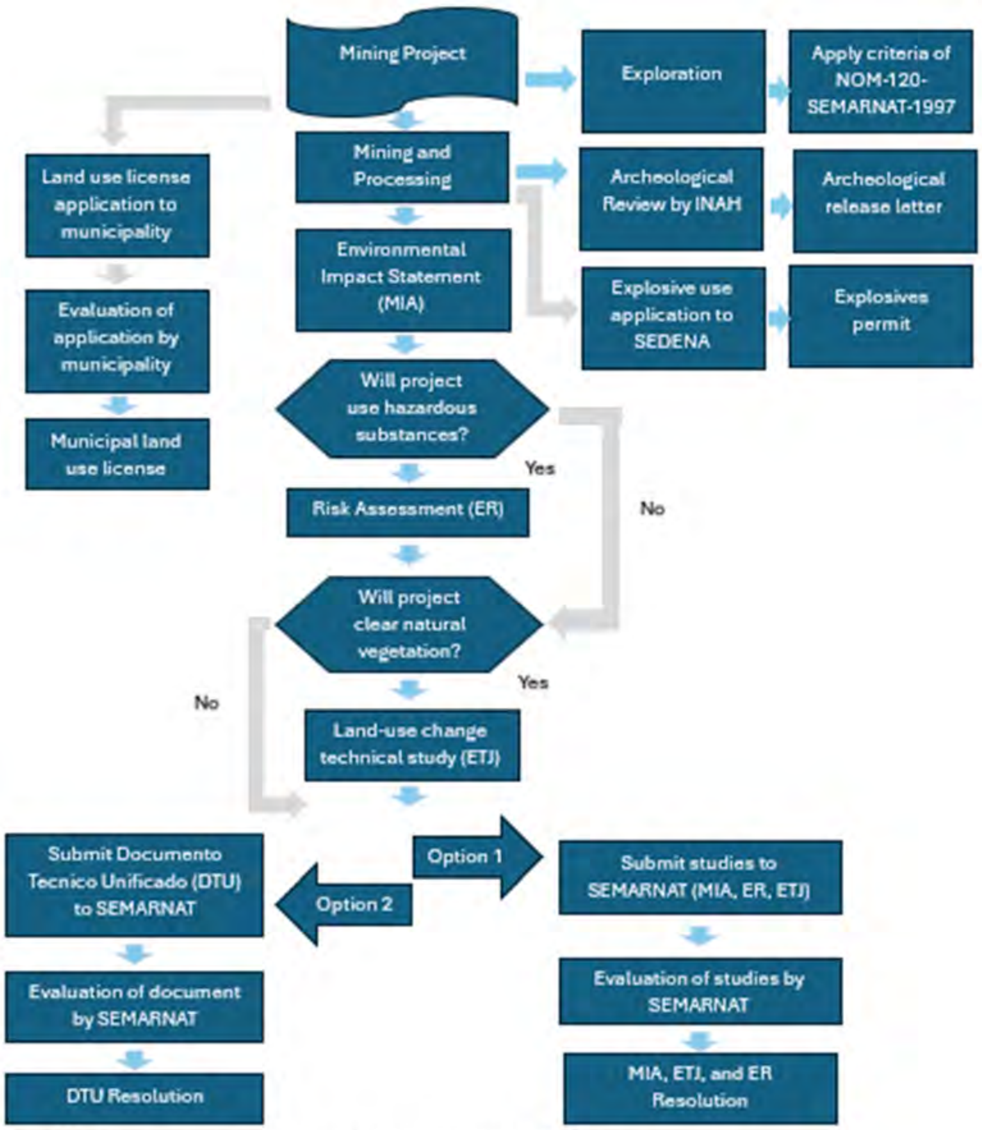
20.6 Required Permits and Status

Previous phases of exploration activity were permitted under an exploration permit; however, the last exploration phase was conducted in 2011. Permitting for mining exploitation was initiated based on the environmental baseline studies, but not completed. A Documento Tecnico Unificado (DTU), which combined the MIA, risk assessment (ER), and land-use change technical study (ETJ) application into a single document, was received by SEMARNAT on February 5, 2019, but was not subsequently approved. SEMARNAT cited the reasons for not approving the MIA as requiring additional information regarding potential identification, description and impacts to the environment; additional information on the construction, operation and closure plans for the project; and additional information regarding the impact on the local aquifer. Argonaut filed a lawsuit challenging the local zoning plan, which they argued was not validly constituted and should not have been an obstacle to the permitting process. The lawsuit is still ongoing.

Table 20-2: List of Key Official Mexican Standards

NOM	Description
NOM-001-SEMARNAT-2021	Wastewater discharges
NOM-003-CONAGUA-1996	Water extraction and well construction
NOM-011-CNA-2000	Water conservation and evaluation of water availability
NOM-035-SEMARNAT-1993	Methodology to measure total suspended particles in air
NOM-043-SEMARNAT-1993	Maximum permissible limits of solid particles from fixed source emissions
NOM-045- SEMARNAT-1996	Maximum permissible limits for opacity of exhaust from vehicles
NOM-052-SEMARNAT-2005	Identification, classification and lists of hazardous waste
NOM-054-SEMARNAT-1993	Procedure to determine hazardous waste segregation
NOM-059-SEMARNAT-2010	Flora and fauna protection, including at-risk species
NOM-080-SEMARNAT-1994	Maximum permissible limits for noise from vehicle emissions
NOM-081-SEMARNAT-1996	Noise emissions
NOM-083-SEMARNAT-2003	Urban solid waste management
NOM-087-SEMARNAT-1995	Medical (biological and infectious) hazardous waste management requirements
NOM-120-SEMARNAT-2011	Environmental protection specifications for mining exploration activities
NOM-138-SEMARNAT/SS-2003	Hazardous waste management requirements
NOM-147-SEMARNAT/SSA-2004	Soil metal contamination management and remediation
NOM-155-SEMARNAT-2007	Environmental protection specifications for gold and silver heap leach facilities
NOM-157-SEMARNAT-2009	Mine waste management plans
NOM-161-SEMARNAT-2011	Special handling waste and management plans

Figure 20-4: Overview of Environmental Permitting Process for Mining Operations in Mexico



1 SEMARNAT: Mexican Secretariat of Environment and Natural Resources
2 INAH: Mexican National Institute of Anthropology and History
3 SEDENA: Mexican Secretariat of National Defense
4 DTE: Document that integrates the MIA, ER, and ETJ application in a single submittal, as an optional procedure

Note: Figure prepared by Stantec, 2024.

The Project maintains land occupation permits negotiated with the ejidos of San Antonio and San Luis. Minera Pitalla holds a water concession granted by CONAGUA, which allows for an annual extraction volume of 731,000 m^3. The QP notes that the water concession usage would need to be changed from agricultural to industrial usage.

Despite the ongoing lawsuit, due to changes in the mine planning , project advancement will require that environmental permit documents be updated and/or developed and submitted to SEMARNAT for approval. The QP notes that due to the presence of ephemeral flows in arroyos at the site, CONAGUA will be included in the permit review process. It is anticipated that a construction permit is required from the local municipality (Municipality of La Paz) along with an archaeological release letter from the National Institute of Anthropology and History (INAH). An explosives permit will be required from the Ministry of Defense (SEDENA). Power supply operational authorization will be required from the federal electrical commission.

Site access is discussed in Section 5.1. The two-lane, paved road from San Juan de Los Planes that connects State Highway 286 with Federal Highway 1 in San Antonio passes directly through the proposed Project site. As such, a portion of this road will require relocation as part of Project development.

In Mexico, the agency responsible for authorizing the relocation of a road is typically the Secretariat of Communications and Transportation, as well as environmental authorization from SEMARNAT. Road relocation is anticipated to also involve authorization from both state and municipal authorities.

20.7 Social Management Plan and Community Relations

A social baseline study was conducted in 2010 (DS Dinamica, 2011). Throughout the summer of 2010, a team of interviewers went house-to-house conducting surveys in villages near the project site. In addition, several key government and community leaders were interviewed. Results of the baseline study, and updated information provided by Minera Pitalla are summarized below.

Approximately 2,500 people inhabit the communities of San Antonio, El Triunfo and San Juan de Los Planes, which are the three communities closest to the Project (Figure 20-5).

The nearest town to the project is San Antonio, which is a small town in La Paz Municipality in the Mexican state of Baja California Sur, located near El Triunfo on Federal Highway 1. It has a population of 470 inhabitants as of the 2020 census.

The city of La Paz is the largest urban centre in the region and is about 60 km from San Antonio. The Municipality of La Paz has its government headquarters in the city of La Paz.

San Antonio is the government headquarters of a delegation that oversees six sub-delegations: El Agua de San Antonio, El Triunfo, El Rosario, Los Palos Verdes, Palo de Arco and Valle Perdido.

The area of influence includes seven ejidos, which each have a separate “Comisariado Ejidal”, which is the governing body or committee responsible for managing the affairs of the communal land used for agriculture (that is, the “ejido”).

The economic development of the area began with mineral exploration and mining activities in the mid-1700s. Most metallic mining operations were ceased in the 1950s, although some sea salt and gypsum production and artisan mining continues. In the 1940s, agriculture became more common with field irrigation using deep water wells in the Valley Los Planes. The area’s main agricultural products are cereals and vegetables for export to North America.

As of the time of the baseline study, there were 17 schools within the area of influence, including seven preschools, seven primary schools, two secondary schools and a high school. There is a health centre in San Antonio.

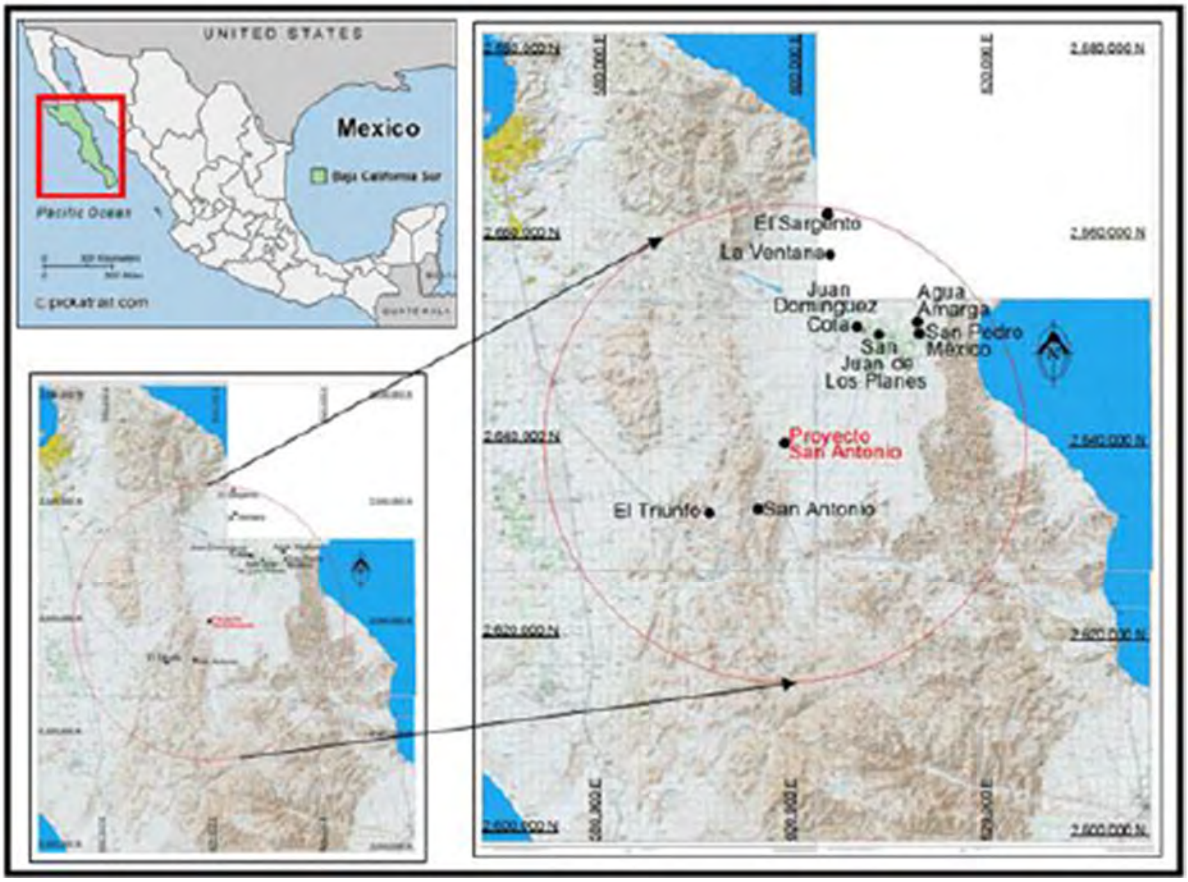
Minera Pitalla personnel have indicated that, for the most part, local community leaders and residents in the San Antonio, El Triunfo and San Juan de Los Planes areas appear to be in favour of Project development as of the Report effective date. Minera Pitalla’s summary of the key stakeholders included government agencies, non-governmental organizations, and media representatives.

Of the 13 key stakeholders identified, three were against mining activities and 10 were favourable to the Project. None of the three stakeholders against mining activities were from the local communities.

Minera Pitalla has a permanent office in San Antonio with two employees who participate in social programs for the local communities, including:

- Educational assistance and scholarship programs for primary and secondary school-aged students;
- Guiding visitors to the Minera Pitalla office in San Antonio to see the mineral collection and exhibit about mining;
- Medical assistance, including providing a medical doctor to travel to the local rural communities without direct access to a licensed physician;
- Financial support of other programs to benefit various community, educational and sport activities and groups.

Figure 20-5: Area of Influence



Note: Figure prepared by DS Dinamica, 2011.

Regionally, there has been significant opposition from well-organized groups from the population centres of Todos Santos, La Paz and Los Cabos against the Concordia Gold Project (formerly the Paredones Amarillos Project) which is located approximately 30 km from the Project. The Concordia Gold Project has faced significant opposition due to environmental concerns, particularly its potential impact on the Sierra de La Laguna Biosphere Reserve. In early 2024, the anti-mining group “Medio Ambiente y Sociedad” (Environment and Society) conducted various events focused on protecting the Sierra de La Laguna Biosphere Reserve. The San Antonio Project lies within a separate hydrologic watershed from the Sierra de La Laguna Biosphere Reserve, so Minera Pitalla anticipates no impacts to water usage or quality in the biosphere reserve. There has been generalized opposition based in La Paz against all mining activities in the region, due to water concerns.

20.8 Closure and Reclamation Plan

Current regulations in México require that a preliminary closure program be included in the MIA and a definite program be developed and submitted to the authorities during the operation of the mine (generally accepted as three years into the operation). A closure plan was prepared by Strategic Engineering & Science, Inc. and SRK (2012) as a supplemental submission to the project MIA, using a risk-based approach, which involves characterizing the existing concentrations of metals (e.g., arsenic) in the soils and of metals and salts in the groundwater, and designing a closure plan to ensure the risks to human health and the environment after closure are acceptable and that they are no higher than the current pre-mining baseline conditions.

In addition to ensuring risks to human health and the environment are managed, the current closure plan conforms to the requirements set for in the MIA as well as NOM-052-SEMARNAT-2007, which applies to the closure of precious metal leach piles. It is anticipated that the post-closure site uses could be wildlife or grazing, and possibly some remaining materials could be used for construction or other purposes.

The site will be inspected for 20 years post-closure. During the first 10 years, the surface water and groundwater will be monitored annually.

The QP notes that the closure plan appears to erroneously refer to NOM-052-SEMARNAT-2007. The contents of the closure plan appear similar to the closure criteria in NOM-155-SEMARNAT-2007, which is the Mexican regulation that applies to heap leach facilities.

The estimated closure cost is provided in Table 20-3.

The closure activities would include:

- Closure permitting, design, procurement, project administration and construction management. These costs were calculated based on percentages of Item 3000 (see Table 20-3). Permitting was calculated as 1%; closure engineering designs as 2%; project administration as 1.5%; procurement as 2%; and construction management as 4%;
- Plant and surface facilities demolition and disposal. The aboveground concrete will be removed, but the below ground concrete will be left in place, covered with soil 1 m thick and the surface revegetated. Some of the buildings or installations may be left in place should the ejido desire to take ownership; however, the decision about the transfer of facilities will be made in the future.;
- North Pit closure. A pit lake is expected to form after dewatering ceases. The water balance study (Schlumberger, 2012) indicated that it will take more than 100 years to reach a stable water level of about 140 masl. The pit lake water quality is predicted to be similar to background conditions and will not exceed ecological criteria but will not meet Mexican drinking water permissible limits. A perimeter fence with signage will be constructed to prevent access;

Table 20-3: Closure Cost Estimate

Element Description	Item No.	Estimated Cost (US$)
Permitting, engineering and construction administration	2000	
Capital costs	*3000*	
Demolition and decommissioning plant and infrastructure		$1,614,000
North pit		$90,000
West waste rock		$0
North waste rock		$688,000
Heap leach facility		$5,343,000
Process and emergency ponds		$3,890,000
Areas of crushing, heap leach facility, roads and material		$940,000
Revegetation		$134,000
Total capital cost		$12,699,000
Contingency	4000	$1,376,572
Operation and maintenance (escalated at 3% per year)	9000	$3,499,132
Total closure cost		***$17,574,704***

Notes: Compiled by Stantec (2024), based on Strategic Engineering & Science, Inc. and SRK (2012). Item 3000: Cost estimate assumed that transportation and disposal costs are covered by the value obtained from equipment and materials resold. Item 3000: The majority of closure for the North Waste Rock Facility will be done during operations. Item 3000: Closure of the West Waste Rock Facility will be completed during operations and no costs for earth movements are included in the closure cost estimate. Item 4000: Contingency estimated at 10% of capital costs plus 8% of permitting, engineering and construction administration. Item 9000: Cost assumed to account for 10 years of water sampling and 20 years of inspections.

- North and West WRSF closure will include final grading, soil cover placement and vegetation. The waste rock is not anticipated to produce acidic water or elevated metals, so no geochemical management of future runoff or leachate is included. The flat tops of the facilities will be graded or left at 2% slope to promote runoff. The tops will be covered with 60 cm of organic soil and revegetated. The lower slopes will be left at 3V:1H and covered with 60 cm of organic soil and revegetated. The benches will be sloped at 1% to convey runoff. The benches will be covered with 1–2 m of organic soil and replanted with trees and bushes;
- Heap leach pad closure will include rinsing, water evaporation, grading, cover construction and vegetation. The rinsing would be carried out during the final two years of operations plus one year during closure. After rinsing, the facility would be drained gradually by gravity. An evaporation system will be installed to reduce the volume of leachate and is predicted to operate for three years. The flat areas will be graded at 2% to allow for runoff of surface water. Two drainage conveyances will be constructed to convey rainfall from the top to the natural drainage system south of the facility. A side channel will also be constructed to

direct runoff around the facility. The side slopes will be graded at 3H:1V to 4H:1V to achieve a minimum factor of safety of 1.5, based on a seismic analysis and stability analysis. Due to the elevated concentration of arsenic in the leachate, the heap leach facility area will be covered with a low permeability cover (possibly 60 cm of silty material) to minimize water infiltration;

- Closure of process and event ponds. When the ponds are no longer required to manage drainage from the heap leach facility, contaminated material will be transferred to the heap leach facility; the liner will be folded within the pond; and the pond will be backfilled. Surfaces will be graded for drainage, covered with 30 cm of soil and revegetated;
- Revegetation of disturbed areas with native plants. Fertilizer and organic material will be applied to the soil as needed.
- Contingency. Contingency was calculated based on 8% of Item 2000 and 10% of Item 3000 (see Table 20-3).

The estimated closure cost was US$17.6 million, based on 2012 costs. The total cost included an escalation of 3% annually for the activities carried out post-closure. The cost estimate assumed that grading of the waste rock facilities would be carried out during operations, and no costs for that activity was included in the closure cost estimate. The closure costs also assumed that mine site personnel and equipment would be used to earth movements (hauling and grading), as opposed to third-party contractors.

While Mexico requires the preparation of a reclamation and closure plan, as well as a commitment on the part of the operator to implement the plan, no financial surety (bonding) has thus far been required of mining companies. Environmental damages, if not remediated by the owner/operator, can give rise to civil, administrative and criminal liability, depending on the action or omission carried out. PROFEPA is responsible for the enforcement and recovery for those damages, or any other person or group of people with an interest in the matter. Also, recent reforms introduced class actions as a means to demand environmental responsibility from damage to natural resources.

The QP notes that the closure of the pit includes only a fence. A berm of at least 2 m in height is also recommended. International closure guidance requires the use of a third-party contractor to develop unit rates for closure planning and bonding. The use of internal personnel and equipment to carry out closure activities is not restricted.

21.0 CAPITAL AND OPERATING COSTS

21.1 Introduction

The capital and operating cost estimates presented in the 2024 PEA provide substantiated costs that can be used to assess the preliminary economics for the San Antonio Project.

The estimates are based on an open pit mining operation, as well as the construction of a crushing and agglomeration circuit, heap leach pad, gold recovery plant, and infrastructure. The estimates include Owner's costs and provisions.

All capital and operating cost estimates are reported in US dollars (US$ or USD), with no allowance for escalation or exchange rate fluctuations. For material sourced in Mexico an exchange rate of 19 pesos per US dollar was assumed.

21.2 Capital Cost Estimates

21.2.1 Basis of Estimate

Capital cost estimates were derived from Heliostar's other mining operations in Mexico, Hard Rock Consulting's and KCA's in-house database of projects and studies including experience from similar operations and recent quotes. KCA also used historical inputs from Golder for heap leach earthworks and liner requirements, URBICON for highway relocation costs and Aa Electrificaciones for powerline relocations costs.

21.2.2 Initial Capital

Initial capital in the 2024 PEA included items purchased in the first two years before production, production is estimated to start in month 1 of Year 1. Initial capital costs were developed for all of the required processing and infrastructure facilities required before production can begin.

Total initial capital including contingency was estimated at US$138.6 M.

21.2.3 Initial Capital Contingency

A contingency of 20–25% was allocated for all direct and indirect plant costs and mine infrastructure and equipment. The overall contingency for the process and infrastructure estimate is approximately 23% of direct pre-production plant and spare parts costs.

Total initial contingency costs were estimated to be US$20.3 M.

21.2.4 Mine Initial Capital Costs

Initial capital costs for the mine were minimal, based on the assumption that mining will be executed by a mining contractor.

Costs were included for a mine truck shop, survey and slope monitoring equipment and the contractor mobilization (Table 21-1).

21.2.5 Process and Infrastructure Initial Capital Costs

Process and infrastructure costs were estimated by KCA with historical inputs from Golder for heap leach earthworks and liner requirements, URBICON for highway relocation costs and Aa Electrificaciones for powerline relocations costs. All equipment and material requirements were based on the design information described in previous sections of this Report. Budgetary capital costs were estimated primarily based on recent quotes in KCA's files for all major and most minor equipment as well as recent contractor quotes for all major construction contracts. Where quotes were not available, a reasonable estimate or allowance was made based on KCA's experience with similar projects. All capital cost estimates were based on the purchase of equipment quoted new from the manufacturer or to be fabricated new.

Each area in the process cost build-up was separated into the following disciplines, as applicable:

- Major earthworks and liner;
- Civil (concrete);
- Structural steel;
- Platework;
- Mechanical equipment;
- Piping;
- Electrical;
- Instrumentation;
- Infrastructure and buildings;
- Supplier engineering;
- Commissioning and supervision.

Freight, customs fees and duties, and installation costs were also considered for each discipline. Freight costs were based on loads as bulk freight and were estimated at 8% of the equipment supply cost.

Installation costs were based on contractor rates from recent projects with an hourly installation rate of approximately US$45. Estimated installation hours were based on supply costs.

Table 21-1: Initial Mine Capital Costs

Area	Description	Total (US$M)
Mine	Mine truck shop	3.5
Mine	Slope radar system	0.5
Mine	Mine survey equipment	0.2
Mine	Contractor mobilization	0.2
Contingency	Contingency @ 25%	1.0
Total Initial Mine Capital		***5.4***

Engineering, procurement, and construction management (EPCM), indirect costs, and initial fills inventory were included in the capital cost estimate. The following costs were excluded:

- Finance charges and interest during construction;
- Escalation costs;
- Currency exchange fluctuations;
- Penalties or incentives.

The process and infrastructure pre-production costs by discipline are summarized in Table 21-2.

Major earthworks and liner quantities were estimated by Golder based on the preliminary site design and reviewed by KCA. The leach pad area was later increased and KCA increased the pad and pond earthworks volumes as required. This category only includes the major earthworks for leach pads and ponds, and for providing level areas for the various facilities and interconnecting roads. Detailed earthworks for concrete slabs, footings, etc. are included in the civils cost. The pre-production earthworks costs are estimated at US$10.1 M. Pre-production liner costs are estimated at US$16.7 M.

Civils include detailed earthworks and concrete. Concrete quantities were estimated based on similar installations. Concrete supply and installation costs for cement with gravel and rebar were estimated by KCA based on recent similar KCA installations in Mexico. Concrete costs include supply of cement, gravel and rebar, delivery, all installation labor, forms, rebar bending and tie-ins, placement and all other tasks and necessary equipment.

Costs based on concrete compressive strength are as follows:

- Concrete compressive strength: 300 at US$498/$m^3$;
- Concrete compressive strength: 250 at US$429/$m^3$;
- Concrete compressive strength: 200 at US$408/$m^3$.

Pre-production concrete costs are estimated at US$1.4 M.

Table 21-2: Process and Infrastructure Pre-Production Capital Cost Summary by Discipline

	Cost at Source (US$ M)	Freight (US$ M)	Customs Fees & Duties (US$ M)	Total Supply Cost (US$ M)	Install (US$ M)	Grand Total (US$ M)
Major earthworks	—	—	—	0.00	10.11	10.11
Liner, GCL and miscellaneous	16.71	—	—	16.71	0.00	16.71
Civils (supply and install)	1.37	—	—	1.37	—	1.37
Structural steelwork (supply and install)	0.05	—	—	0.05	—	0.05
Platework (supply and install)	0.00	—	—	0.00	—	0.00
Mechanical equipment	31.97	1.77	0.64	34.38	2.20	36.58
Piping	2.11	0.09	0.02	2.23	0.44	2.67
Electrical	3.63	0.12	0.02	3.78	0.64	4.41
Instrumentation	0.53	0.03	0.01	0.58	0.14	0.72
Commissioning and supervision	0.20	—	—	0.20	—	0.20
Infrastructure	7.70	0.15	0.03	7.88	2.73	10.60
Spare parts	1.63	—	—	1.63	0.00	1.63
Contingency	19.36	—	—	19.36	—	19.36
Plant Total Direct Costs	***85.26***	***2.17***	***0.73***	***88.15***	***16.26***	***104.42***
Indirect costs incl. contingency	—	—	—	—	—	4.05
Initial fills	—	—	—	—	—	0.97
EPCM costs	—	—	—	—	—	11.49
Plant Total Costs	—	—	—	—	—	***120.92***

Note: GCL = geosynthetic clay liner; EPCM = engineering, procurement, construction management.

Structural steel requirements for the various major equipment items and buildings were primarily included as part of supplier packages. Structural steel items not included as part of supply packages were estimated by KCA based on file data of similar installations. Unit costs for steel supply fabrication and installation labour were estimated by KCA based on similar installations in Mexico. Unit costs vary depending on the type, size and quantity of structural steel to be installed. The installed costs used were as follows:

- Heavy steel: US$4.42/kg;
- Medium steel: US$4.65/kg;
- Light steel: US$4.83/kg.

Pre-production structural steel costs not included as part of other supply packages were estimated at US$55,500.

Costs for all major and most minor items of new equipment are based on budget quotes from vendors from projects recently completed by KCA or are from KCA's in-house database. Installation estimates were based on equipment type and include installation labour and equipment usage. A 40-ton rough terrain crane, telehandler, forklift, backhoe and other support equipment were budgeted for purchase and would be used during construction. Pre-production mechanical equipment costs are estimated at US$36.6 M.

Except for major pipelines, piping, fittings, and valve costs are estimated based on a percentage of the mechanical equipment costs. A piping supply rate varying from 1–25% of the mechanical equipment cost, depending on the complexity of the particular system, was used to estimate piping purchase costs for each area. Costs for major pipelines were estimated based on material take-offs and recent piping costs from recent similar projects. Piping installation hours are estimated based on a factor of instrumentation equipment costs. Pre-production piping costs are estimated at US$2.7 M.

Electrical costs are estimated based on a percentage of the mechanical equipment cost. A rate varying from 1–25% of the equipment cost was used to estimate electrical purchase costs for each area. Electrical installation hours are estimated based on a factor of instrumentation equipment costs. Pre-production electrical costs are estimated at US$4.4 M.

Instrumentation costs are also estimated based on a percentage of the mechanical equipment costs. A rate ranging from 1% to 10% of the equipment cost was used to estimate instrumentation purchase costs for each area based upon recent KCA experience on similar projects. Instrumentation installation hours are estimated based on a factor of instrumentation equipment costs. Pre-production instrumentation costs are estimated at US$722,000.

Project buildings will include a modular administrative complex, a laboratory, a warehouse, a heap leach process office, a crusher office and workshop facility, a change room, and a guardhouse. Costs were a combination of recent quotations and estimates based on recent KCA experience with similar projects.

A portion of Highway 1, a bitumen highway, passes directly through the Project, and will require realignment of the highway prior to project construction. An estimated cost of US$4.1 M was included, based on a prior quote from URBICON for the highway realignment, and which was inflated to Q4 2024 dollars.

Water will be sourced near the site. An allowance of US$438,000 was made for a near-Project water well pump and pipeline. No allowance was made for water well drilling and testing. Capital costs were included for a raw water storage tank, on-site distribution, and a fire water system with both electrically powered pumps and diesel powered pumps in case of power failure.

The perimeter of the entire site will be fenced with animal fencing. The process ponds and process facility will be fenced with 2 m high chain link fencing.

A fibre-optic cable currently passes through the Project, and intersects a portion of the area planned for the Las Planes open pit. About 3.2 km of fiber optic cable will need to be removed and then rebuilt around the Project site through the proposed road corridor. An allowance was made for the cost of the relocation.

Phones will be installed in all buildings and facilities. Cellular telephone coverage is currently available in the Project area. An internet protocol telephone system will be used for off-site communications. On-site communications will be by hand held and base-station radios.

21.2.6 Indirect Capital Costs

Indirect costs included costs for items such as temporary construction facilities and support, surveying, temporary communication systems, temporary warehousing, temporary power and water, quality control and survey support, fenced yards, construction office, support equipment, security, vendor representatives, etc., and are based on KCA recent experience with similar projects. Indirect costs are based on a 12 months of field construction and are estimated at US$4.0 M, including a 25% contingency.

Spare parts were budgeted at 6% of the mechanical equipment costs, based on KCA experience, unless specific recommendations by vendor were received. The allocations for spare parts inventory for the laboratory, crushing system and the conveying and stacking system were based on vendor recommendations, and were 13.1%, 4.5% and 2.4%, respectively.

Working capital was calculated to be two months operating costs for mining, processing and G&A for the Project, based upon the operating costs provided in this Report. This was calculated assuming full annual production of 4,000,000 t per year at the average unit operating cost/t processed for a two month period. Working capital for the project is estimated at US$8.1 M.

The initial fills inventory will consist of a 30-day supply of consumable items stored on site at the outset of operations, excluding lime. The allocation for initial fills included the costs of the initial charge to fill the system and storage facilities to capacity. The 100 t lime silo will hold only a seven-day supply based on metallurgical testing. The list of consumables includes cyanide, lime, antiscalant, activated carbon, and diesel fuel (for crushing, stacking and processing uses only). The allocation for carbon is adequate to completely charge the carbon columns and four off-site shipments of two vessels or 7,000 kg each to La Colorada for stripping. An allowance was made for hydrochloric acid, caustic and smelting fluxes to be used at the La Colorada Project for the benefit of the Project. Initial fills for San Antonio were estimated at US$972,000.

The estimated cost for EPCM for the development of the Project was calculated based on KCA's experience with similar projects. The EPCM was approximately 11% of the pre-production direct costs including contingency. The EPCM included:

- Detailed engineering: 30%;
- Procurement and accounting assistance: 15%;
- Construction management: 40%;
- Commissioning: 15%.

The EPCM costs total US$11.5 M.

21.2.7 Owner's Capital Costs

The Owner's costs are estimated to be US$4.5 M. These costs were intended to cover the following items:

- Owner's costs for labor, offices, vehicles, and travel during construction;
- Owner's start-up and commissioning crew;
- Permits, minor taxes (not regional or corporate);
- Work place health and safety costs during construction;
- Additional studies, (geotechnical, hydrology, metallurgical, feasibility, etc.).

21.2.8 Working Capital

Working capital was calculated to be two months operating costs for mining, processing and general and administrative for the Project, based upon the operating costs provided in this Report. The working capital was estimated to be US$7.3 M.

21.2.9 Sustaining Capital

Sustaining capital costs included the costs to construct the second phase of the leach pad and to construct a second event pond. Sustaining capital costs for the leach pad were estimated at US$20.5 M.

Construction of the second phase should start in Year 5 based on currently assumed production rates.

The arroyo diversions around the Intermediate and Las Colinas pits are also included as part of the sustaining capital, together with the estimated closure costs. Table 21-3 shows the estimated sustaining capital for the Project at US$48.6 M with a 23% contingency on the infrastructure items.

21.2.10 Capital Cost Summary

The total capital cost estimate is provided in Table 21-4.

The total LOM capital is estimated to be US$179.90 M with US$131.28 M in initial capital costs and US$48.6 M in sustaining capital costs.

Working capital is excluded from the totals as the costs are credited back to the operation at the end of the mine life.

Table 21-3: Sustaining Capital Costs

Area	Description	Total (US$M)
Plant	Heap leach expansion	20.5
Mine	Water diversion around pits	5.0
Contingency	Contingency @ 23%	5.8
Reclamation/closure		17.3
Total Sustaining Capital		***48.6***

Table 21-4: Total LOM Capital Costs

LOM Capital Costs	Initial (US$M)	Sustaining (US$M)	Total LOM (US$M)
Mine area	4.36	5.00	9.36
General and administrative infrastructure	72.26	20.50	92.76
Processing	12.81	0.00	12.81
Total direct costs	***89.43***	***25.50***	***114.93***
Owner costs and reclamation	5.00	17.31	22.31
Project indirect costs	16.51	0.00	16.51
Contingency	20.35	5.80	26.16
Total indirect costs	***41.86***	***23.11***	***64.97***
Total	***131.28***	***48.62***	***179.90***

21.3 Operating Cost Estimates

21.3.1 Basis of Estimate

The operating costs include the ongoing cost of operations related to mining, processing, and general administration activities. Operating cost estimates were derived from a from Heliostar's other mining operations in Mexico and their mining contract quotes, and Hard Rock Consulting's and KCA's in-house database of projects and studies including experience from similar operations.

Operating cost estimates use terms that are non-International Financial Reporting Standards measures:

- All-in sustaining costs (AISC): as set out in the World Gold Council in its 2018 guidance note. AISC are the sum of operating costs (as defined and calculated above), royalty expenses, sustaining capital, corporate expenses and reclamation cost accretion related to current operations. Corporate expenses include general and administrative expenses, net of transaction related costs, severance expenses for management changes and interest income. AISC excludes growth capital expenditures, growth exploration expenditures, reclamation cost accretion not related to current operations, interest expense, debt repayment and taxes;

- Cash operating costs: include mine site operating costs such as mining, processing and administration, but exclude royalty expenses, depreciation and depletion and share based payment expenses and reclamation costs.

21.3.2 Mine Operating Costs

Mine operating costs are calculated using recent mining contracts and quotes from Heliostar's operations in Mexico. Support services are estimated from historic actuals and from base principals for equipment, consumables, supplies, services and manpower requirements based on the mine schedule. Equipment fuel requirements are calculated based on required operating hours for each unit and haulage route profiles for the trucks. Diesel costs were estimated at US$1.10/L.

The costs details by department over the life of the mine are shown in Table 21-5 and Figure 21-1 shows the distribution of these costs by department.

21.3.3 Process and Infrastructure Operating Costs

Process operating costs were estimated by KCA from first principles. Labour costs were estimated using staffing and wage requirements based on typical rates in the Mexican mining industry. Most unit consumptions of materials, supplies, power, and water were based on testwork. Other values were based on information for similar operations, or generally-accepted industry standards.

Process operating costs were based upon information obtained from the following sources:

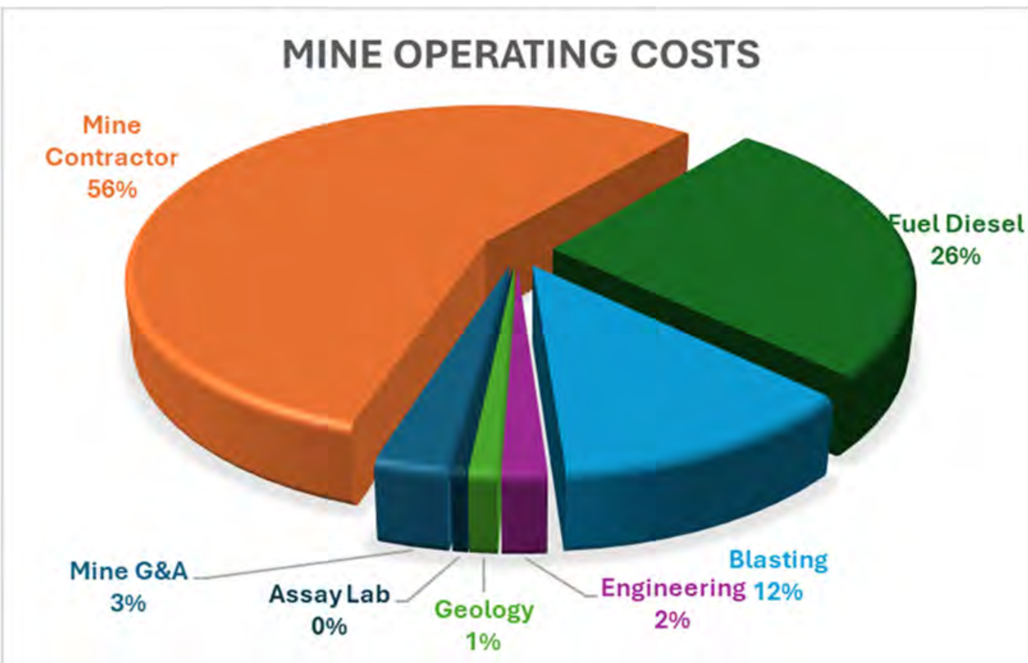
- Project metallurgical test work and process engineering;
- Reagent and fuel costs based on recent quotes in KCA's files and costs from Heliostar based on cost data from their other Mexico mining operations;
- Labour rates based on KCA experience with similar project sites in Mexico;
- KCA file data from recent and similar project operating, materials and maintenance supplies;
- Advice from suppliers.

Operating costs were estimated based on fourth quarter 2024 US dollars and presented with no contingency allowance. Where costs were provided in Mexican pesos, an exchange rate of 19 MXN to 1 US$ was used. The operating costs are considered to have an accuracy range of ±25%.

Table 21-5: Mine Operating Costs

Department	Operating Cost (US$/t mined)	US$/t Mineralized Material
Mine general and administrative	0.07	0.29
Mine contractor	1.38	5.82
Fuel diesel	0.65	2.72
Blasting	0.29	1.23
Engineering	0.04	0.18
Geology	0.03	0.11
Assay laboratory	0.01	0.06
Grand Total	***2.47***	***10.40***

Figure 21-1: Mine Operating Cost Distribution



Note: Figure prepared by Hard Rock Consulting, 2024.

The average annual process and support services operating costs for the San Antonio Project are summarized by area in Table 21-6.

Staffing requirements for process personnel were estimated by KCA based on experience with similar sized operations and prevailing wages for similar operations in Mexico. Total process personnel was estimated at 103 persons including 11 laboratory workers and 18 recovery plant operators at Heliostar's La Colorada Mine and working for the benefit of San Antonio. Process labour costs are summarized in Table 21-7.

Power usage for the process and process-facilities was derived from estimated connected loads assigned to powered equipment from the mechanical equipment list. Equipment power demands under normal operation were assigned and coupled with estimated on-stream times to determine the average energy usage and cost. The total attached power for the process and process infrastructure is estimated to be 5.3 MW, with an average draw of 3.5 MW. Line power is assumed to be used to supply the site at rate of US$0.11/kWh.

The 2024 PEA assumes that loaded carbon will be processed at the La Colorada Mine and that some of the estimated power consumption will be incurred at La Colorada for the benefit of San Antonio and these poser costs are considered as part of the process operating cost estimate.

Operating supplies were estimated based upon unit costs and consumption rates predicted by metallurgical tests and have been broken down by area. Reagent unit costs were based on recent supplier quotes in KCA's files and reagent pricing at La Colorada from Heliostar for processing carbon. Freight costs were included in all operating supply and reagent estimates. Reagent consumptions were derived from testwork and historic usage. Other consumable items were estimated by KCA based on KCA's experience with other similar operations. Operating costs for consumable items were distributed based on tonnage and gold production/carbon batches, as appropriate.

Heap leach consumables will include:

- Pipes, fittings and emitters: costs included expenses for broken pipe, fittings and valves, and abandoned tubing;
- Sodium cyanide (NaCN): primarily consumed in the heap leach and was estimated to be consumed at a rate pf 0.26 kg/t processed. Sodium cyanide costs were estimated at US$3.25/kg based on recent project information in KCA's files;
- Pebble lime (CaO): consumed as needed for pH control at the heap and will be added at a rate of 1.3 kg/t. Lime costs were estimated at US$0.29/kg based on recent project information in KCA's files;
- Antiscale agent (scale inhibitor): will be added to the barren and pregnant pumping systems to prevent the buildup of scale within the process piping systems. Approximately 10 ppm of antiscalant was assumed to be added at a cost of US$3.47/kg based on recent project information in KCA's files.

Table 21-6: Process and Support Services Operating Costs (US$/t processed)

Description	Los Planes, Oxide, Mixed	Las Colinas, Oxide, Mixed	Los Planes, Sulphide	Las Colinas, Sulphide	Intermediate, Oxide, Mixed, Sulphide	La Colpa, Oxide Transition	La Colpa, Sulphide	Average
Labor	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689
Power	0.828	0.828	0.828	0.828	0.828	0.828	0.828	0.828
Reagents and consumables	1.096	2.099	1.270	1.431	0.980	1.347	1.246	1.476
Wear and maintenance	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666
Support services	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309
Carbon transport	0.286	0.286	0.286	0.286	0.286	0.286	0.286	0.286
Total	***3.873***	***4.876***	***4.047***	***4.208***	***3.757***	***4.124***	***4.023***	***4.253***

Table 21-7: Process Labour Requirements

Description	Number of Workers	Cost (US$,000/yr)
Process supervision	19	913.7
Crushing and reclaim	15	329.2
Heap leach	24	539.2
Recovery plant (at La Colorada)	18	273.4
Process maintenance	16	407.9
Subtotal process	*92*	*2,463.3*
Laboratory	11	291.0
Total	***103***	***2,754.3***

Recovery plant consumables will include:

- Carbon: used for the adsorption of gold from pregnant solution for the heap circuit. Carbon consumption was estimated at 4% per tonne of carbon processed due to attrition at a cost of US$5.83/kg based on cost information provided by Heliostar;
- Sodium cyanide: consumed as part of the stripping process and is based on a 0.5% NaCN strip solution and approximately one third of the strip solution being discarded each strip. Stripping of carbon will be performed at Heliostar's La Colorada mine for the benefit of San Antonio and a cost of US$2.90/kg NaCN was assumed based on cost information provided by Heliostar;

- Caustic: consumed in the acid wash and strip circuits at Heliostar's La Colorada Mine. Caustic will be delivered in 25 kg bags and consumption was based on a 2% caustic strip solution with approximately one third of the strip solution being discarded each strip. Cost for caustic was estimated at US$0.65/kg based on information provided by Heliostar.

Diesel fuel will be consumed in the process by the carbon regeneration kiln and smelting furnace at Heliostar's La Colorada Mine, as well as being used for mobile process support equipment. The cost for diesel fuel at San Antonio is estimated at US$1.36/L based on information from recent projects in KCA's files and US$1.10/L at La Colorada based on information provided by Heliostar.

Wear, overhaul and maintenance costs for equipment along with miscellaneous operating supplies for each area were estimated as allowances based on tonnes of mineralized material processed. The allowances for each area were developed based on published data as well as from KCA's experience with similar operations.

Costs for mobile and support equipment, such as fork lifts, heap dozer, trucks, etc. that are required to support processing activities were estimated based on equipment requirements for other similar operations. The costs to operate and maintain each piece of equipment were estimated primarily using published information and site-specific fuel costs.

Carbon transportation costs for transporting loaded carbon to the La Colorada Project and transporting stripped, acid washed and thermally-regenerated carbon back to the Project were estimated based on shipping rates in Mexico. The carbon would be moved in secured transport containers. It is assumed that carbon would be packaged and transported weekly at a cost of approximately US$22,000 per shipment.

21.3.4 General and Administrative Operating Costs

The general and administrative costs were developed from KCA's and Hard Rock Consulting's knowledge and experience as well as historical costs from past operations. The major general and administrative cost component is staff and labor, but general and administrative also covers such items as security, office equipment, heat and lighting, communications, overtime, property insurance, office supplies, computer system license fees, admin building maintenance, janitorial services, outside services and allowances for travel and meetings.

The costs details by department over the LOM are shown in Table 21-8. Figure 21-2 shows the distribution of these costs by department.

Table 21-8: General and Administrative Operating Costs

Department	US$/t Mineralized Material
Administration	0.57
Human relations	0.13
Security and safety	0.17
Accounting	0.07
Purchasing	0.06
Environmental	0.18
Grand Total	***1.18***

Figure 21-2: General and Administrative Cost Distribution

Note: Figure prepared by Hard Rock Consulting, 2024.

21.3.5 Operating Cost Summary

The LOM average cash operating cost is projected to be US$803/oz of gold sold.

The LOM average base case total operating cost (including royalties and production taxes) is expected to be US$898/oz Au.

The total AISC summary per tonne of mill feed and per ounce of gold is expected to be US$21.15/t and US$1,063/oz Au respectively, as shown in Table 21-9.

Table 21-9: Total Operating Cost Estimate

Operating Costs	Operating Cost (US$/oz Au)	Operating Cost (US$/t mineralized material)	Operating Cost (US$/t mined)
Total mining	522.78	10.40	2.06
Total processing	204.24	4.06	
Total site general and administrative	59.26	1.18	
Refinery and transport	16.85	0.34	
Cash operating costs	***803.13***	***15.97***	
Production taxes	76.22	1.52	
Royalties	19.00	0.38	
Total cash costs	***898.34***	***17.87***	
Capital costs	165.04	3.28	
Total AISC	***1,063.39***	***21.15***	

22.0 ECONOMIC ANALYSIS

22.1 Forward-Looking Information Note

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented herein.

Information that is forward-looking includes:

- Mineral Resource and Mineral Reserve estimates;
- Assumed commodity prices and exchange rates;
- Mine production plans;
- Projected recovery rates;
- Sustaining and operating cost estimates;
- Inputs to the economic analysis that supports the Mineral Reserve estimate
- Assumptions as to closure costs and closure requirements;
- Assumptions as to environmental, permitting and social risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed;
- Unrecognized environmental risks;
- Unanticipated reclamation expenses;
- Unexpected variations in quantity of mineralized material, grade, or recovery rates;
- Geotechnical and hydrogeological considerations during mining being different from what was assumed;
- Failure of plant, equipment, or processes to operate as anticipated;
- Accidents, labour disputes and other risks of the mining industry.

22.2 Cautionary Statement

The 2024 PEA is preliminary in nature and includes Inferred Mineral Resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realized.

22.3 Methodology Used

The Project was evaluated using a constant US dollar, after-tax discounted cashflow methodology based on a 5% discount rate. For personnel costs, and material sourced in Mexico, an exchange rate of 19 pesos per US dollar was assumed. This valuation method requires projecting material balances estimated from operations and calculating economic analysis. Cashflows are calculated from sales of metal, less cash outflows such as operating costs, capital costs, working capital changes, royalties, any applicable taxes and reclamation costs. Resulting annual cash flows are used to calculate the net present value (NPV) and internal rate of return (IRR) of the Project. Tax calculations involve complex variables that can only be accurately determined during operations, and as such, the actual post-tax results may differ from those estimated.

22.4 Financial Model Parameters

The economic analysis was performed assuming a base case gold selling price of US$1,900/oz. Gold metal prices are conservative relative to recent actual prices in order to reflect a long-term conservative price forecast.

No price inflation or escalation factors were taken into account. Commodity prices can be volatile, and there is the potential for deviation from the forecast.

The economic analysis also used the following assumptions:

- The construction period will be two years;
- The mine life will be 14 years, with residual leaching of gold continuing into Year 15;
- Cost estimates are in constant Q4 2024 US dollars for capital and operating costs, with no inflation or escalation factors considered;
- Results are based on 100% ownership with a 1% government NSR on revenue from gold production;
- Capital costs are funded with 100% equity (no financing assumed);
- All cash flows are discounted to the start of the construction period using a mid-period discounting convention;
- All metal products will be sold in the same year they are produced;
- Project revenue will be derived from the sale of gold doré.

22.5 Taxes

22.5.1 Taxes and Duties

The Project has been evaluated on a post-tax basis to provide an approximate value of potential economics. The Project was assumed to be subject to the following tax regimes:

- The Mexican corporate income tax system (Federal Income Tax) consists of 30% income tax. Federal income tax is applied on Project income after deductions of eligible expenses including depreciation of assets, earthworks and indirect construction costs, exploration costs, special mining tax, extraordinary mining duty and any losses carried forward;
- Mining tax in Mexico (Special Mining Tax) consists of 8.5% on earnings before interest, taxes, depreciation, and amortization. The special mining duty is applied on Project income after deduction of eligible exploration, earthworks and indirect costs expenses. Income subject to the special mining tax does not allow deductions for depreciation or allow losses carried forward.

At the assumed metal price, total payments are estimated to be US$362.1 M over the LOM.

The Mexican value-added tax (Impuesto al Valor Agregado) is outside the economic valuation of this Project. The value-added tax is a 16% value added tax applied to all goods and services and is considered to be fully refundable. For the economic model, value-added taxes are not considered in the capital or operating cost estimate as it is assumed that value-added taxes paid vs. value-added tax credits will be a net zero value during the period in which they occur.

Mexican tax law allows for the carry-forward of operating losses for the development of a property. The historic loss carry-forward is almost used up and is currently estimated at US$50,000 for the Mexican subsidiary company.

22.5.2 Royalties

Royalties payable for the San Antonio Project include a 1% royalty due to the Mexican government as an “Extraordinary Mining Duty”.

The 1.0% extraordinary mining duty represents US$20.7 M over the LOM and is included in the Project economics.

22.6 Economic Analysis

The financial analysis for the Project shows an after-tax net present value at a discount rate of 5% of US$398.66 M, an after-tax internal rate of return of 40.7%, and a payback period of 2.05 years.

Table 22-1 summarizes the projected cashflow; net present value at varying rates; internal rate of return; years of positive cash flows to repay the negative cash flow (payback period); multiple of positive cash flows compared to the maximum negative cash flow (payback multiple) for the project on both an after-tax and before-tax basis.

The projected total lifespan of the Project is 15 years with two years of construction. Approximately 1.67 M oz of gold is projected to be mined, with 1.10 M oz recovered and produced for sale. The economic analysis was completed on an annual cashflow basis. The production schedule and cashflow output is shown in Table 22-2 and Table 22-3.

Table 22-1: Summary Economic Results

Project Valuation Overview	Units	After Tax	Before Tax
Total cashflow	US$ M	651.21	1,013.36
NPV @ 5.0% (base case)	***US$ M***	***398.66***	***635.33***
NPV @ 7.5%	US$ M	315.09	509.96
NPV @ 10.0%	US$ M	250.14	412.36
Internal rate of return	***%***	***40.7***	***53.7***
Payback period	Years	2.05	1.71
Payback multiple		5.24	7.65
Total initial capital	US$ M	138.59	138.59

Table 22-2: 2024 PEA Cashflow Analysis on an Annual Basis (Year-2 to Year 9)

Item	Units	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Open Pit Mine Production												
Los Planes												
Oxide/trans mined	kt	—	—	3,306	3,929	3,157	1,457	1,335	3,328	1,925	667	139
Au grade	g/t	—	—	0.77	0.84	1.07	0.92	0.48	0.57	0.90	1.11	1.28
Sulphide mined	kt	—	—	—	347	889	2,941	2,240	434	2,072	3,333	3,861
Au grade	g/t	—	—	—	1.70	1.26	1.22	1.57	0.67	0.83	1.09	1.18
Alluvium	kt	—	—	1,621	4,394	3,704	3,600	5,674	6,070	2,379	551	13
Waste	kt	—	—	6,091	10,806	7,465	11,138	14,114	21,348	15,435	9,381	6,244
Total mined	kt	—	—	11,018	19,475	15,215	19,137	23,363	31,180	21,810	13,932	10,257
Intermediate												
Oxide/trans mined	kt	—	—	—	—	—	—	—	—	—	—	—
Au grade	g/t	—	—	—	—	—	—	—	—	—	—	—
Sulphide mined	kt	—	—	—	—	—	—	—	—	—	—	—
Au grade	g/t	—	—	—	—	—	—	—	—	—	—	—
Alluvium	kt	—	—	—	—	—	—	—	—	—	—	—
Waste	kt	—	—	—	—	—	—	—	—	—	—	—
Total mined	kt	—	—	—	—	—	—	—	—	—	—	—
Las Colinas												
Oxide/trans mined	kt	—	—	—	—	—	—	—	—	—	—	—
Au grade	g/t	—	—	—	—	—	—	—	—	—	—	—
Sulphide mined	kt	—	—	—	—	—	—	—	—	—	—	—
Au grade	g/t	—	—	—	—	—	—	—	—	—	—	—
Alluvium	kt	—	—	—	—	—	—	—	—	—	—	—

Item	Units	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Waste	kt	—	—	—	—	—	—	—	—	—	—	—
Total Mined	kt	—	—	—	—	—	—	—	—	—	—	—
Total oxide/trans mined	***kt***	—	—	***3,306***	***3,929***	***3,157***	***1,457***	***1,335***	***3,328***	***1,925***	***667***	***139***
Au grade	***g/t***	—	—	***0.77***	***0.84***	***1.07***	***0.92***	***0.48***	***0.57***	***0.90***	***1.11***	***1.28***
Total sulphide mined	***kt***	—	—	—	***347***	***889***	***2,941***	***2,240***	***434***	***2,072***	***3,333***	***3,861***
Au grade	***g/t***	—	—	—	***1.70***	***1.26***	***1.22***	***1.57***	***0.67***	***0.83***	***1.09***	***1.18***
Total alluvium	***kt***	—	—	***1,621***	***4,394***	***3,704***	***3,600***	***5,674***	***6,070***	***2,379***	***551***	***13***
Total waste	***kt***	—	—	***6,091***	***10,806***	***7,465***	***11,138***	***14,114***	***21,348***	***15,435***	***9,381***	***6,244***
Total mined	***kt***	—	—	***11,018***	***19,475***	***15,215***	***19,137***	***23,363***	***31,180***	***21,810***	***13,932***	***10,257***
Strip ratio	ratio	—	—	2.3	3.6	2.8	3.4	5.5	7.3	4.5	2.5	1.6
Other tonnes	kt	—	—	120,000	250,057	120,000	120,000	889,540	369,611	123,601	120,000	120,000
Total tonnes moved	***kt***	***0***	***0***	***11,138***	***19,725***	***15,335***	***19,257***	***24,252***	***31,549***	***21,934***	***14,052***	***10,377***
Process Production												
Tonnes to heap	kt	—	—	3,306	4,011	4,000	4,000	4,000	4,011	4,000	4,000	4,000
Au grade	g/t	—	—	0.77	0.90	1.11	1.12	1.15	0.62	0.87	1.09	1.18
Income Statement												
Revenue												
Au ozs placed on pad	koz	—	—	81.6	116.5	143.0	144.2	147.4	79.6	111.6	140.4	151.6
Au ozs recovered	koz	—	—	49.5	101.1	108.0	96.6	99.5	67.4	73.7	83.1	88.6
Au cumulative recovery	%	60.6	76.0	75.8	73.2	71.9	73.3	72.3	70.4	68.8	68.2	67.2
Gross revenue	US$ x 1,000	—	—	93,973	192,010	205,126	183,496	189,032	128,058	140,048	157,982	168,343
Au refining and shipping	US$ x 1,000	—	—	(826)	(1,688)	(1,803)	(1,613)	(1,661)	(1,126)	(1,231)	(1,389)	(1,480)
Net revenue	US$ x 1,000	—	—	93,147	190,322	203,323	181,883	187,370	126,932	138,817	156,593	166,864
Royalties	US$ x 1,000	—	—	(931)	(1,903)	(2,033)	(1,819)	(1,874)	(1,269)	(1,388)	(1,566)	(1,669)
Net revenue	***US$ x 1,000***	—	—	***92,215***	***188,419***	***201,290***	***180,064***	***185,497***	***125,663***	***137,429***	***155,027***	***165,195***

Item	Units	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Operating expenses												
Mining												
Mine general and administrative	US$ x 1,000	—	—	1,090	1,140	1,110	1,138	1,160	1,215	1,162	1,115	1,092
Mine contractor	US$ x 1,000	—	—	12,081	23,461	19,082	24,439	31,575	45,279	32,834	20,777	15,091
Fuel diesel	US$ x 1,000	—	—	6,877	11,037	9,256	11,381	13,572	17,921	14,020	10,055	8,283
Blasting	US$ x 1,000	—	—	3,436	5,053	4,061	5,185	5,722	7,767	6,226	4,570	3,711
Engineering	US$ x 1,000	—	—	661	704	676	705	720	775	733	689	667
Geology	US$ x 1,000	—	—	413	442	424	443	453	489	461	432	417
Assay laboratory	US$ x 1,000	—	—	494	639	605	658	79	79	79	79	79
Total mining	US$ x 1,000	—	—	25,052	42,475	35,214	43,950	53,282	73,526	55,515	37,718	29,341
Processing												
Plant general and administrative	US$ x 1,000	—	—	741	743	741	741	741	743	741	741	741
Crushing	US$ x 1,000	—	—	3,201	3,726	3,716	3,716	3,716	3,726	3,716	3,716	3,716
Reclaim and stacking	US$ x 1,000	—	—	1,425	1,640	1,635	1,635	1,635	1,640	1,635	1,635	1,635
Heap	US$ x 1,000	—	—	1,434	1,627	1,622	1,622	1,622	1,627	1,622	1,622	1,622
Reagents	US$ x 1,000	—	—	2,475	3,063	3,171	3,531	3,485	3,122	3,414	3,669	3,776
Recovery plant	US$ x 1,000	—	—	896	1,032	1,005	930	940	1,020	954	901	879
Electrowinning and refinery	US$ x 1,000	—	—	1,182	1,416	1,412	1,410	1,410	1,416	1,411	1,410	1,409
Water supply and distribution	US$ x 1,000	—	—	262	318	317	317	317	318	317	317	317
Support services/plant maintenance.	US$ x 1,000	—	—	789	872	869	869	869	872	869	869	869
Assay laboratory	US$ x 1,000	—	—	1,296	1,325	1,321	1,321	1,321	1,325	1,321	1,321	1,321
Total processing	US$ x 1,000	—	—	13,702	15,762	15,810	16,093	16,057	15,808	16,001	16,202	16,286

Item	Units	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Site general and administration												
Administration	US$ x 1,000	—	—	2,223	2,229	2,223	2,223	2,223	2,229	2,223	2,223	2,223
Human relations	US$ x 1,000	—	—	498	499	498	498	498	499	498	498	498
Security and safety	US$ x 1,000	—	—	645	647	645	645	645	647	645	645	645
Accounting	US$ x 1,000	—	—	279	279	279	279	279	279	279	279	279
Purchasing	US$ x 1,000	—	—	245	246	245	245	245	246	245	245	245
Environmental	US$ x 1,000	—	—	696	698	696	696	696	698	696	696	696
Total general and administrative	US$ x 1,000	—	—	4,586	4,598	4,586	4,586	4,586	4,598	4,586	4,586	4,586
Special mining tax	US$ x 1,000	—	—	492	7,722	9,961	8,594	8,027	1,595	4,377	7,568	9,286
Cash operating costs	***US$ x 1,000***	—	—	***43,833***	***70,558***	***65,571***	***73,222***	***81,951***	***95,527***	***80,479***	***66,073***	***59,498***
EBITDA	***US$ x 1,000***	—	—	***48,383***	***117,861***	***135,719***	***106,842***	***103,546***	***30,136***	***56,950***	***88,954***	***105,697***
Depreciation	US$ x 1,000	—	—	33,082	24,733	18,495	13,833	16,640	12,461	9,333	6,990	5,236
Reclamation deduction	US$ x 1,000	—	—	—	—	—	—	—	—	—	—	—
Income - before net operating loss and percent depletion	***US$ x 1,000***	—	—	***15,301***	***93,128***	***117,224***	***93,009***	***86,906***	***17,675***	***47,617***	***81,964***	***100,461***
Net operating loss adjustment	US$ x 1,000	—	—	(50)	0	0	0	0	0	0	0	0
Corporate income tax	US$ x 1,000	—	—	492	7,722	9,961	8,594	8,027	1,595	4,377	7,568	9,286
Taxable income, less tax	***US$ x 1,000***	—	—	***43,833***	***70,558***	***65,571***	***73,222***	***81,951***	***95,527***	***80,479***	***66,073***	***59,498***
Cash flow calculation												
Adjustments for non-cash items												
Depreciation/reclamation/ salvage	US$ x 1,000	—	—	33,082	24,733	18,495	13,833	16,640	12,461	9,333	6,990	5,236
Net operating loss adjustment	US$ x 1,000	—	—	50	—	—	—	—	—	—	—	—

Item	Units	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Total adjustments for non-cash items	***US$ x 1,000***	—	—	***33,132***	***24,733***	***18,495***	***13,833***	***16,640***	***12,461***	***9,333***	***6,990***	***5,236***
Capital												
Investment, mine	US$ x 1,000	0	4,362	—	—	—	—	—	—	—	—	—
Investment, plant	US$ x 1,000	36,128	36,128	—	—	—	—	—	—	—	—	—
Investment, general and administrative	US$ x 1,000	6,404	6,404	—	—	—	—	—	—	—	—	—
Capital indirects and contingency	US$ x 1,000	19,694	22,166	—	—	—	—	—	—	—	—	—
Total capital	***US$ x 1,000***	***62,226***	***69,059***	—	—	—	—	—	—	—	—	—
Sustaining capital, mine	US$ x 1,000	—	—	—	—	—	—	—	—	—	—	—
Sustaining capital, plant	US$ x 1,000	—	—	—	—	—	—	20,502	—	—	—	—
Sustaining capital – indirects and contingency	US$ x 1,000	—	—	—	—	—	—	4,665	—	—	—	—
Reclamation	US$ x 1,000	—	—	—	—	—	—	—	—	—	—	—
Total capital and sustaining	***US$ x 1,000***	***62,226***	***69,059***	—	—	—	—	***25,167***	—	—	—	—
Working capital	US$ x 1,000	—	—	7,305	—	—	—	—	—	—	—	—
Total capital and working capital	***US$ x 1,000***	***62,226***	***69,059***	***7,305***	—	—	—	***25,167***	—	—	—	—
Beginning cash	***US$ x 1,000***	***—***	***(62,226)***	***(131,285)***	***(94,783)***	***(4,860)***	***95,692***	***174,632***	***226,939***	***251,772***	***294,437***	***358,802***
Period net cash flow	***US$ x 1,000***	***(62,226)***	***(69,059)***	***36,502***	***89,923***	***100,552***	***78,940***	***52,307***	***24,833***	***42,665***	***64,365***	***75,559***
Ending cash	***US$ x 1,000***	***(62,226)***	***(131,285)***	***(94,783)***	***(4,860)***	***95,692***	***174,632***	***226,939***	***251,772***	***294,437***	***358,802***	***434,361***

Note: EBITDA = earnings before interest, taxes, depreciation and amortization.

Table 22-3: 2024 PEA Cashflow Analysis on an Annual Basis (Year 10 to Year 15 and LOM)

	Units	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	LOM
Open Pit Mine Production								
Los Planes								
Oxide/trans mined	kt	1	0	0	—	—	—	19,243
Au grade	g/t	1.25	0.00	0.00	—	—	—	0.82
Sulphide mined	kt	4,010	4,000	2,343	—	—	—	26,469
Au grade	g/t	1.02	0.96	1.09	—	—	—	1.11
Alluvium	kt	—	—	—	—	—	—	28,007
Waste	kt	4,392	3,206	836	—	—	—	110,455
Total mined	kt	8,403	7,206	3,179	—	—	—	184,174
Intermediate								
Oxide/trans mined	kt	—	—	573	—	—	—	573
Au grade	g/t	—	—	0.51	—	—	—	0.51
Sulphide mined	kt	—	—	1,365	1,773	—	—	3,138
Au grade	g/t	—	—	0.70	1.01	—	—	0.88
Alluvium	kt	—	—	2,098	—	—	—	2,098
Waste	kt	—	—	13,519	3,556	—	—	17,076
Total mined	kt	—	—	17,555	5,330	—	—	22,884
Las Colinas								
Oxide/trans mined	kt	—	—	—	1,588	—	—	1,588
Au grade	g/t	—	—	—	0.64	—	—	0.64
Sulphide mined	kt	—	—	—	1,295	2,501	—	3,796
Au grade	g/t	—	—	—	0.63	0.77	—	0.72
Alluvium	kt	—	—	—	859	—	—	859
Waste	kt	—	—	—	10,598	6,910	—	17,507

	Units	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	LOM
Total mined	kt	—	—	—	14,340	9,411	—	23,751
Total Oxide/trans mined	***kt***	***1***	—	***573***	***1,588***	***0***	—	***21,404***
Au grade	***g/t***	***1.25***	***0.00***	***0.51***	***0.64***	***0.00***	—	***0.80***
Total sulphide mined	***kt***	***4,010***	***4,000***	***3,708***	***3,068***	***2,501***	—	***33,403***
Au grade	***g/t***	***1.02***	***0.96***	***0.94***	***0.85***	***0.77***	—	***1.05***
Total alluvium	***kt***	—	—	***2,098***	***859***	***0***	—	***30,964***
Total waste	***kt***	***4,392***	***3,206***	***14,355***	***14,154***	***6,910***	—	***145,038***
Total mined	***kt***	***8,403***	***7,206***	***20,734***	***19,670***	***9,411***	—	***230,810***
Strip ratio	ratio	1.1	0.8	3.8	3.2	2.8	—	3.2
Other tonnes	kt	120,000	120,000	120,000	120,000	1,087,032	—	3,799,840
Total tonnes moved	***kt***	***8,523***	***7,326***	***20,854***	***19,790***	***10,498***	—	***234,610***
Process Production								
Tonnes to heap	kt	4,011	4,000	4,000	4,000	3,469	—	54,808
Au grade	g/t	1.02	0.96	0.89	0.78	0.78	—	0.95
Income Statement								
Revenue								
Au ozs placed on pad	koz	131.3	123.6	114.1	99.9	87.2	0.0	1,671.8
Au ozs recovered	koz	82.7	70.9	65.5	57.8	50.4	5.0	1,099.7
Au cum. recovery	%	66.4	65.9	65.5	65.8	65.8	65.8	65.8
Gross revenue	US$ x 1,000	157,199	134,646	124,539	109,736	95,760	9,438	2,089,386
Au refining and shipping	US$ x 1,000	(1,382)	(1,183)	(1,095)	(965)	(842)	(83)	(18,365)
Net revenue	US$ x 1,000	155,817	133,463	123,444	108,771	94,918	9,355	2,071,021
Royalties	US$ x 1,000	(1,558)	(1,335)	(1,234)	(1,088)	(949)	(94)	(20,710)
Net revenue	***US$ x 1,000***	***154,259***	***132,128***	***122,210***	***107,683***	***93,969***	***9,261***	***2,050,311***
Operating expenses								

	Units	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	LOM
Mining								
Mine general and administrative	US$ x 1,000	1,082	1,071	1,156	1,154	953	—	15,637
Mine contractor	US$ x 1,000	12,486	10,557	30,560	25,359	15,203	—	318,784
Fuel diesel	US$ x 1,000	7,211	7,013	13,484	12,068	7,072	—	149,251
Blasting	US$ x 1,000	3,210	2,880	6,026	6,098	3,302	—	67,247
Engineering	US$ x 1,000	656	645	727	729	582	—	9,670
Geology	US$ x 1,000	410	403	458	459	364	—	6,069
Assay laboratory	US$ x 1,000	79	79	79	79	68	—	3,175
Total mining	***US$ x 1,000***	***25,133***	***22,647***	***52,490***	***45,944***	***27,545***	—	***569,833***
Processing								
Plant general and administrative	US$ x 1,000	743	741	741	741	643	133	10,419
Crushing	US$ x 1,000	3,726	3,716	3,716	3,716	3,222	—	51,040
Reclaim and stacking	US$ x 1,000	1,640	1,635	1,635	1,635	1,418	—	22,480
Heap	US$ x 1,000	1,627	1,622	1,622	1,622	1,407	—	22,323
Reagents	US$ x 1,000	3,814	3,804	3,279	4,683	3,831	—	49,117
Recovery plant	US$ x 1,000	875	873	870	854	717	—	12,747
Electrowinning and refinery	US$ x 1,000	1,413	1,409	1,409	1,409	1,221	41	19,378
Water supply and distribution	US$ x 1,000	318	317	317	317	275	—	4,344
Support services/plant maintenance.	US$ x 1,000	872	869	869	869	754	86	12,070
Assay laboratory	US$ x 1,000	1,325	1,321	1,321	1,321	1,145	407	18,711
Total processing	***US$ x 1,000***	***16,352***	***16,308***	***15,781***	***17,168***	***14,632***	***667***	***222,629***
Site general and administration								
Administration	US$ x 1,000	2,229	2,223	2,223	2,223	1,927	217	31,059
Human relations	US$ x 1,000	499	498	498	498	432	140	7,049
Security and safety	US$ x 1,000	647	645	645	645	559	230	9,179

	Units	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	LOM
Accounting	US$ x 1,000	279	279	279	279	242	169	4,034
Purchasing	US$ x 1,000	246	245	245	245	213	49	3,454
Environmental	US$ x 1,000	698	696	696	696	604	161	9,819
Total general and administrative	***US$ x 1,000***	***4,598***	***4,586***	***4,586***	***4,586***	***3,976***	***967***	***64,593***
Special mining tax	US$ x 1,000	8,819	7,152	3,856	3,134	1,886	606	83,075
Cash operating costs	***US$ x 1,000***	***54,902***	***50,692***	***76,713***	***70,832***	***48,039***	***2,240***	***940,130***
EBITDA	***US$ x 1,000***	***99,357***	***81,436***	***45,497***	***36,851***	***45,930***	***7,022***	***1,110,180***
Depreciation	US$ x 1,000	3,923	3,949	3,484	2,611	7,820	0	162,590
Reclamation deduction	US$ x 1,000	0	0	0	0	17,311	0	17,311
Income - before net operating loss and percent depletion	***US$ x 1,000***	***95,434***	***77,487***	***42,013***	***34,240***	***20,799***	***7,022***	***930,280***
Net operating loss adjustment	US$ x 1,000	0	0	0	0	0	0	(50)
Corporate income tax	US$ x 1,000	(28,630)	(23,246)	(12,604)	(10,272)	(6,240)	(2,106)	(279,069)
Taxable income, less tax	***US$ x 1,000***	***66,804***	***54,241***	***29,409***	***23,968***	***14,560***	***4,915***	***651,161***
Cash Flow Calculation								
Adjustments for non-cash items								
Depreciation/reclamation/salvage	US$ x 1,000	3,923	3,949	3,484	2,611	25,130	—	179,900
Net operating loss adjustment	US$ x 1,000	—	—	—	—	—	—	50
Total adjustments for non-cash items	***US$ x 1,000***	***3,923***	***3,949***	***3,484***	***2,611***	***25,130***	—	***179,950***
Capital								
Investment, mine	US$ x 1,000	—	—	—	—	—	—	4,362
Investment, plant	US$ x 1,000	—	—	—	—	—	—	72,256
Investment, general and administrative	US$ x 1,000	—	—	—	—	—	—	12,807
Capital indirects and contingency	US$ x 1,000	—	—	—	—	—	—	41,860
Total capital	***US$ x 1,000***	—	—	—	—	—	—	***131,285***

	Units	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	LOM
Sustaining capital, mine	US$ x 1,000	—	3,291	1,709	—	—	—	5,000
Sustaining capital, plant	US$ x 1,000	—	—	—	—	—	—	20,502
Sustaining capital, indirects and contingency	US$ x 1,000	—	749	389	—	—	—	5,803
Reclamation	US$ x 1,000	—	—	—	—	17,311	—	17,311
Total capital and sustaining	***US$ x 1,000***	—	***4,039***	***2,098***	—	***17,311***	—	***179,900***
Working capital	US$ x 1,000	—	—	—	—	(7,305)	—	—
Total capital and working capital	***US$ x 1,000***	—	***4,039***	***2,098***	—	***10,006***	—	***179,900***
Beginning cash	***US$ x 1,000***	***434,361***	***505,087***	***559,238***	***590,032***	***616,612***	***646,296***	—
Period net cash flow	***US$ x 1,000***	***70,727***	***54,150***	***30,795***	***26,579***	***29,684***	***4,915***	***651,211***
Ending cash	***US$ x 1,000***	***505,087***	***559,238***	***590,032***	***616,612***	***646,296***	***651,211***	***651,211***

Note: EBITDA = earnings before interest, taxes, depreciation and amortization.

22.7 Sensitivity Analysis

A sensitivity analysis was performed on the base case to determine Project sensitivity to gold price and grade, operating costs and capital costs.

22.7.1 Metal Price Sensitivity Analysis

The Project, like almost all precious metals projects, is very responsive to changes in the price of its chief commodity, gold. From the base case price of US$1,900/oz Au, a change in the average gold price of US$200/oz Au would change the NPV at a 5% discount rate by 22.7%, or approximately US$90.4 M (Figure 22-1).

Table 22-4 shows the economic sensitivities, due to the change in gold price, in the net cash flow, the net present value at 5%, the internal rate of return, the payback period, and the payback multiple.

22.7.2 Grade, Operating and Capital Costs Sensitivity Analysis

The Project is most sensitive to changes in the gold grade, experiencing an approximate 23.7% change in the NPV at a 5% discount rate for each 10% increase or decrease in grade.

The Project is very sensitive to the cost of operations, incurring an approximately 8.9% decline in the NPV at a 5% discount rate for each increase of 10% in the operating costs.

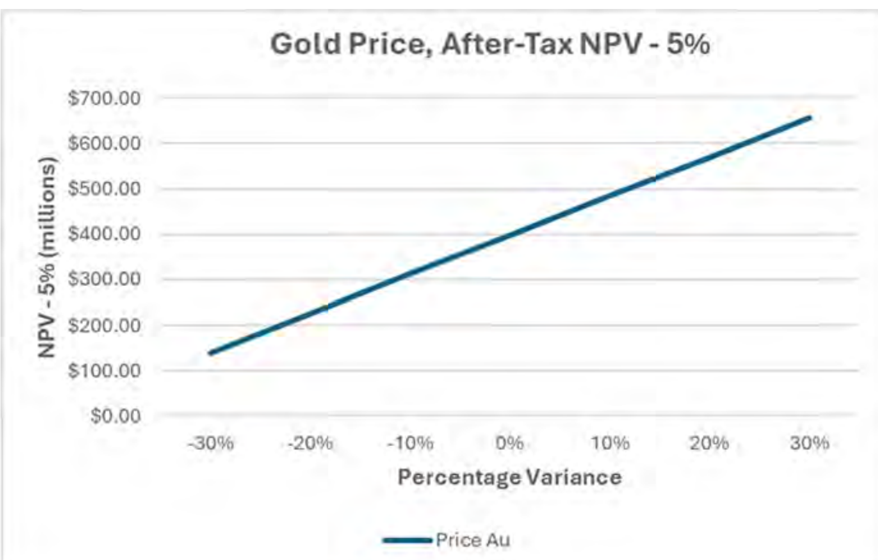
The Project is less sensitive to variances in the cost of capital, experiencing an approximate 2.5% decline in the NPV at a 5% discount rate for each increase of 10% in the capital costs, as shown in Figure 22-2.

Table 22-4: Gold Price Sensitivity Analysis

Au Price (US$/oz Au)	Net Cash Flow (US$ M)	After-Tax NPV @ 5% (US$ M)	IRR (%)	Payback Period (years)	Payback Multiple
1,000	11.34	-20.14	1.5	5.3	1.1
1,200	162.93	78.70	15.0	3.5	2.0
1,400	303.75	171.10	23.8	2.8	3.0
1,600	443.11	262.51	31.2	2.4	3.9
1,800	582.04	353.46	37.7	2.2	4.8
1,900	***651.21***	***398.66***	***40.7***	***2.0***	***5.2***
2,000	720.38	443.86	43.5	2.0	5.7
2,200	858.73	534.26	49.0	1.8	6.6
2,400	997.07	624.66	54.0	1.7	7.5
2,600	1,135.42	715.05	58.8	1.5	8.3
2,800	1,273.76	805.45	63.4	1.5	9.2
3,000	1,412.10	895.85	67.8	1.4	10.1

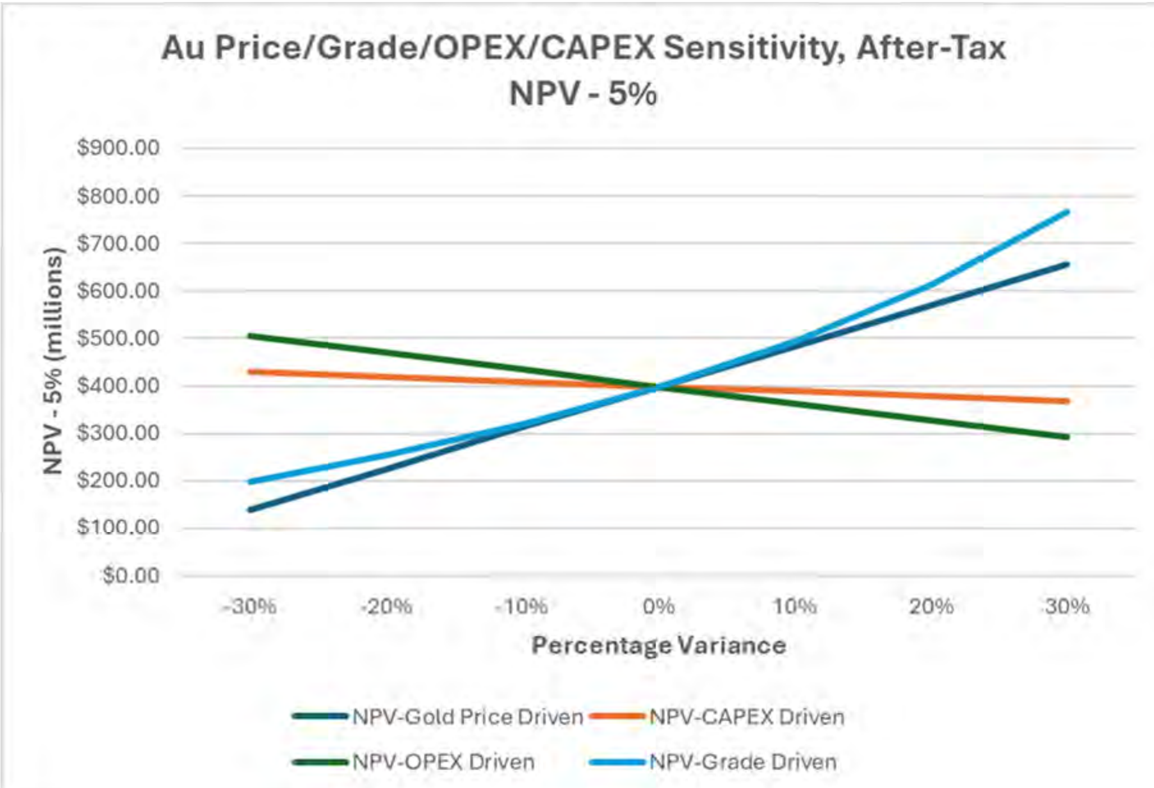
Note: Base case is bolded.

Figure 22-1: Metal Price Sensitivity Analysis



Note: Figure prepared by Hard Rock Consulting, 2024.

Figure 22-2: Project Grade, Gold Price, Operating Cost & Capital Cost Sensitivity Analysis



Note: Figure prepared by Hard Rock Consulting, 2024. CAPEX = capital cost estimate; OPEX = operating cost estimate.

23.0 ADJACENT PROPERTIES

This section is not relevant to this Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not relevant to this Report.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the reviews and interpretations of data available for this Report.

25.2 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The mineral tenure held is valid, based on legal opinion.

Heliostar holds a number of granted surface rights. Additional surface rights may be required to support any planned infrastructure locations, depending on the infrastructure type and location.

There are two ejidos that pertain to Project activities: the San Antonio ejido and the San Luis ejido.

There are agreements in place with the San Antonio ejido.

All of the water rights agreements that Minera Pitalla has entered into are required to be filed and approved for registration by CONAGUA; the application for registration still has to be filed with CONAGUA at the effective date of this Report. Applications will be dependent on the location of the extraction point; this will not be determined until the hydrological studies that are underway are completed. Heliostar has a number of water rights agreements signed with local landowners.

The Mexican Government imposes a mining duty of 8.5% of taxable earnings before interest and depreciation. In addition, precious metal mining companies must pay a 1% duty on revenues from gold, silver, and platinum. The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on four of the concessions. The sliding scale is based on fluctuations in gold price. The royalties do not apply to the Mineral Resource estimate in this Report.

25.3 Geology and Mineralization

The mineralized zones are considered to be typical of mesothermal vein-style, or orogenic-style gold deposits.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization in the different zones is sufficient to support estimation of Mineral Resources. The geological knowledge of the area is also considered sufficiently acceptable to reliably inform mine planning.

The mineralization style and setting are sufficiently well understood and can support declaration of Mineral Resources.

Opportunities exist to expand the known limits of mineralization at San Antonio by exploring along strike of key structures defined by drilling and by testing other subsidiary mineralized trends where they appear to extend beyond the deposit limits.

Mineralization remains open to the north and down plunge at Los Planes. Mineralization hosted in an apparent fold hinge, and the main shear structure hosting the cataclasite, are unconstrained by drilling down plunge to the north. Much of the mineralization at the Los Planes, Intermediate, and La Colpa deposits is hosted in a north-striking, moderately west-dipping, structural zone. This structural zone and the accompanying mineralization remain open at depth in several areas.

The majority of the exploration has focused on the areas immediately around the San Antonio deposits. Much of the wider Project area remains underexplored, and hosts numerous historical mining centres that should be evaluated.

25.4 Exploration, Drilling and Analytical Data Collection in Support of Mineral Resource Estimation

The exploration programs completed to date are appropriate for the deposit style.

Sampling methods are acceptable for Mineral Resource estimation.

The sample preparation, security and analysis are appropriate to support Mineral Resource estimation.

The quantity and quality of the lithological, collar and down-hole survey data collected during the exploration and delineation drilling programs are sufficient to support Mineral Resource. The collected sample data adequately reflect deposit dimensions, true widths of mineralization, and the deposit style. Sampling is representative of the gold grades in the deposits, reflecting areas of higher and lower grades.

The data verification programs concluded that the data collected adequately support the geological interpretations and constitute a database of sufficient quality to support the use of the data in Mineral Resource estimation and preliminary technical studies.

25.5 Metallurgical Testwork

Column leach tests indicate that the material is amenable to cyanidation by heap leaching techniques.

Gold recoveries are based on multiple column tests on multiple composites conducted at the Metcon Laboratory in Tucson, Arizona. Recoveries for gold ranged from 46–86% at a 9.5 mm crush size depending on the type and location of the mineralized material tested.

Reagent consumption was low with cyanide being 0.26 kg/t of material processed and lime being 1.3 kg/t of material processed.

25.6 Mineral Resource Estimates

Mineral Resources are reported insitu, using the 2014 CIM Definition Standards, and are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Factors that may affect the Mineral Resource estimates include changes to: metal price and exchange rate assumptions; assumptions used to generate the estimation domains; local interpretations of mineralization geometry and continuity of mineralized zones; geological and mineralization shape and geological and grade continuity assumptions, including structural modeling assumptions in the Los Planes area where additional faulting is suspected but not confirmed, and the modeling of post mineralization dikes; treatment of high-grade gold values; density assignments; the assumptions used to generate the gold cut-off grades; geotechnical assumptions used for assumed pit slope angles; metallurgical recovery assumptions; input and design parameter assumptions that pertain to the open pit shell used to constrain the estimates; assumptions as to the ability to access the site, retain mineral and surface rights titles, obtain environment and other regulatory permits, and obtain the social license to operate.

The San Antonio Project lies within a separate hydrologic watershed from the Sierra de La Laguna Biosphere Reserve, so Minera Pitalla anticipates no impacts to water usage or quality in the biosphere reserve. There have been concerns with mining projects that are within the hydrologic watershed of the biosphere reserve. There has been generalized opposition based in La Paz against all mining activities in the region, based on water concerns.

25.7 Mine Plan

A conventional open pit mine and truck and shovel operation is envisaged. The mine plan assumes mining of the Los Planes, Intermediate and Las Colinas deposits.

Pit design slopes follow recommendations provided by Golder. For the pit stability analyses the pit slopes were assumed to be fully depressurized by natural drawdown or through groundwater pumping and installation of horizontal drains, if necessary.

Drainage diversions ditches will be established around the upper crest of the open pits and WRSFs to divert storm water. There are two major arroyos that merge just to the southeast of the Intermediate pit. The 2024 PEA assumes that these arroyos will be diverted in between the Intermediate and Las Colinas pits.

The Mineral Resource estimates are considered to be internally diluted by compositing. For the 2024 PEA mine plan no external or mining loss factors were added in to the mine schedule. As the Project advances, dilution and mining loss factors should be investigated further to determine the appropriate amounts for the deposit.

Cut-off grades were calculated by open pit area, and by material type, and range from 0.11–0.23 g/t Au.

The mine pre-production requirements at the project are minimal given the presence of mineable mineralization near the bedrock surface. Further studies should evaluate how much material will be required and determine if the first pit phases will provide sufficient waste, or if waste may have to be obtained from future phases.

Production of mineralized material from the open pits are driven by the nominal ore crusher capacity rate of 11,000 t/d, which is equivalent to 4.0 Mt/a, and results in a mine life of approximately 14 years with one year of residual leaching. A total of 54.8 Mt of mineralized material is scheduled to be sent to the crusher and 176 Mt of waste rock and alluvium is scheduled to be sent to the WRSF for an average strip ratio of 3.2:1. Peak mineralized material and waste production is estimated at 86,000 t/d.

The mining equipment for the 2024 PEA mine plan is planned to be supplied by a mining contractor. All loading, hauling, drilling, basting and support services are planned to be included within the mining contract.

25.8 Recovery Plan

The 2024 PEA assumed an open-pit mine with a heap leach operation utilizing a multiple-lift, single-use, leach pad. Leach-grade material will be crushed, stockpiled, reclaimed, and stacked on the leach pads with a stacking system at a nominal rate of 456 t/hr. The process design includes a three-stage crushing circuit to produce a ⅜ inch size material. This material will be transported to heap leach pads via conveyors. The stacked material will be leached with a low-grade cyanide solution and the pregnant solution will be processed in a carbon adsorption circuit to extract gold and silver. The loaded carbon will be shipped to Heliostar's La Colorada facility, where the final metal recovery from the loaded carbon (desorption) will be processed.

25.9 Infrastructure

There is currently no existing Project infrastructure. Infrastructure sufficient to support an open pit operation with associated heap leach pads was designed as part of the 2024 PEA.

25.10 Environmental, Permitting and Social Considerations

Certain revisions were made in 2023 to Mexican laws affecting the mining sector. The current and revised laws are subject to ongoing interpretation and in many instances the revised laws require implementing regulations. The regulations have not been promulgated and impacts are unknown;

Environmental studies were carried out for the initial MIA submittal and subsequently halted. The permitting process was not successfully completed;

Naturally-occurring arsenic is present in the soils at the site. Management of arsenic-bearing soils and sediment, plus contact water, will be an important consideration for construction, operation and closure;

A hydrogeologic model that predicts inflow to the open pit will be required to advance to a prefeasibility level;

The Project has a water concession. No work has been done to identify the location or design of water supply well(s) for the Project;

The closure cost estimate is supported by studies to estimate times and volumes of water that will be produced by the heap leach facility after operations cease. No detailed engineering designs have been produced. The costs are based on 2012 information and unit rates;

San Antonio and the nearby village of El Triunfo, while now largely agricultural communities, were important gold and silver producing centres, respectively, over the last two centuries. A resurgence of mine exploration focused activities has occurred over the last 20 years. There is a strong community interest in the benefits of resuming mining activity;

Opposition to mining is present in the region, primarily based on water issue concerns and the proximity of a federally protected biosphere reserve, Sierra de La Laguna;

The presence of a Minera Pitalla office in the town of San Antonio has allowed a continued relationship with local stakeholders, generating various collaborative efforts between local government and the Minera Pitalla. Collaborative efforts that require stakeholders to share responsibility for the projects will support sustainability of the initiatives;

The social program had not been formally adopted and budgeted internally at the Report effective date.

25.11 Markets and Contracts

Markets for doré are readily available.

A gold price of US$1,900/oz was used for the economic analysis in the 2024 PEA.

A higher metal price of US$2,150/oz Au was used for the Mineral Resource estimates, in accordance with industry-accepted practice.

No contracts are in place. The 2024 PEA assumes that San Antonio will be a contract mining operation with an Owner-operated process facility. Contracts would be entered into with third parties, where required

25.12 Capital Cost Estimates

Capital cost estimates were derived from Heliostar’s 2024 operating budget, mining contract quotes, Hard Rock Consulting’s and KCA’s in-house database of projects and studies including experience from similar operations.

The total LOM capital is estimated to be US$179.90 M with US$131.28 M in initial capital costs and US$48.6 M in sustaining capital costs.

Working capital is excluded from the totals as the costs are credited back to the operation at the end of the mine life.

25.13 Operating Cost Estimates

The operating costs include the ongoing cost of operations related to mining, processing, and general administration activities. Operating cost estimates were derived from Heliostar's other mining operations in Mexico and their mining contract quotes, and Hard Rock Consulting's and KCA's in-house database of projects and studies including experience from similar operations.

The LOM average cash operating cost is projected to be US$803/oz of gold sold. The LOM average base case total operating cost (including royalties and production taxes) is expected to be US$898/oz Au. The total AISC summary per tonne of mill feed and per ounce of gold is expected to be US$21.15/t and US$1,063/oz Au respectively.

25.14 Economic Analysis

The projected total lifespan of the Project is 15 years with two years of construction.

The financial analysis for the Project shows an after-tax net present value at a discount rate of 5% of US$398.66 M, an after-tax internal rate of return of 40.7%, and a payback period of 2.05 years.

The Project is most sensitive to changes in the gold price and grade. It is less sensitive to operating cost changes, and least sensitive to changes in capital costs.

25.15 Risks

25.15.1 Mining

The Intermediate and Las Colinas pits are intersected by two major arroyos. When more detailed costs and permitting information is available for these diversions, this could result in the two pits having to be removed from the mine plan.

25.15.2 Process

Even though a significant metallurgical testing program was conducted, additional testing is required to confirm past results and to ensure that areas of the mine are reasonably represented in the testwork. There are risks associated with ultimate recoveries being lower than estimated and reagent requirements being higher.

Acid generation testwork is required. There is a risk that oxidation of any transition or sulphide material processed may increase lime and cyanide requirements and eventually adversely affect recoveries.

Capital costs were estimated based preliminary engineering, on data in KCA's files and on inflation factors. There is a risk that the capital costs may be higher than indicated.

25.16 Opportunities

Since additional testing is required, there are also opportunities with ultimate recoveries being higher than estimated and reagent requirements being lower. Capital costs were estimated based preliminary engineering, on data in KCA's files and on inflation factors. There is an opportunity that the capital costs may be lower than indicated.

25.17 Conclusions

An economic analysis was performed in support of the 2024 PEA; this indicated a positive cash flow using the assumptions detailed in this Report.

26.0 RECOMMENDATIONS

26.1 Introduction

A single phase work program is proposed for all disciplines other than exploration, where a two-phase program is recommended, and provided by discipline area. The total budget required to complete the suggestions is approximately US$7–US$7.7 M, depending on whether the work is completed internally or a consultant is used. The majority of the work can be conducted concurrently. The second work phase proposed for exploration would depend on the results of the proposed regional, grassroots exploration program in the first exploration work phase.

26.2 Exploration

The exploration activities are divided into two work phases.

The first work phase consists of drilling known prospects and regional, grassroots exploration activities, and totals approximately US$4.9 M.

The San Antonio Project contains numerous drill-ready targets that should be evaluated and drill tested. Deposit definition drilling should be carried out as a priority as it has the potential to increase identify additional near-surface oxide mineralization. Down plunge and depth extension drilling should be initiated in conjunction with deposit definition exploration. In many cases, these programs will be complimentary, and one drill hole can be used to test multiple concepts. District exploration should also be undertaken and would involve systematic stream sediment sampling, geological mapping and rockchip/soil sampling.

The second work phase would consist of drill testing any areas of significant anomalism identified from the regional grassroots exploration program. The recommended budget is US$0.9 M.

A proposed budget for these activities is provided in Table 26-1. The all-in cost for core drilling, (including drilling, surveying, logging, and assaying) was estimated at US$225/m. The district mapping and geochemical sampling program is based on two geologists mapping and sampling for six months and collecting and assaying approximately 2,250 rock, soil, and stream sediment samples.

Table 26-1: Proposed Exploration Program

Program Phase	Exploration Program	Budget (US$)	Drilling (m)
Recommendations phase 1	Deposit definition drilling	787,500	3,500
	Los Planes North drilling	1,687,500	7,500
	Depth extension drilling	2,250,000	10,000
	District exploration (geological mapping and geochemical sampling)	200,000	—
	Subtotal	*4,925,000*	*21,000*
Recommendations phase 2	District exploration drilling	900,000	4,000
	Subtotal	*900,000*	*4,000*
Total		***5,825,000***	***25,000***

26.3 Mining

The following mining-related studies and analyses should be completed as the Project advances to the next study phase. The studies can be performed concurrently. The recommendations include:

- The mineralized material production rate to the crusher at 4 Mt/year should be evaluated in a trade-off study to determine the optimal production rate for the deposit. The La Colpa Mineral Resource is currently not part of the mine plan but should be evaluated to be included as part of this analysis;
- The current mining scenario is the use of contract mining. Additional studies are recommended to be completed to verify the cost benefit of this approach versus an owner operated fleet with either a purchased or leased mining equipment fleet;
- Almost 50% of the Mineral Resource is sulphide material, alternative operating scenarios using a mill and floatation plant should be investigated at a scoping level to see if the improved metallurgical recoveries will cover the additional capital and operating costs of a floatation plant;
- Further study is required to determine the nature of the waste rock and to classify it as potentially-acid generating or non-acid generating. The results may require a change in storage strategy.

These activities are estimated to cost approximately in the range of US$150,000 to US$200,000.

26.4 Process

All of the work proposed can be completed concurrently.

Column leach tests indicate that the material is amenable to cyanidation by heap leaching techniques. Best recoveries are achieved when crushing to P80 9.5 mm.

The composites tested are fairly representative of the mineralized material but additional test work is recommended to confirm earlier results and to obtain additional information from all areas of mineralization. A future testing program should be developed between the site geologists and the metallurgical consultant and additional characterization, bottle roll and column leach testing be conducted on core samples. The cost of this program, not including drilling, is estimated to cost US$200,000.

The Metcon tests conducted in 2010 were not agglomerated. The Metcon tests conducted in 2012 were agglomerated with 2 kg/t Portland cement. Golder conducted compacted permeability testing on spent material samples from the Metcon 2010 column leach test samples, simulating an equivalent heap height of 70 m, and reported that solution flows over 100 times the projected field flow rates could be achieved through the compacted material. It is recommended that in future column leach tests the compacted permeability tests be repeated. KCA recommends that four composite samples be tested at a cost of about US$35,000.

26.5 Environmental

Recommendations have been divided into two sections, depending on whether they are aimed at general improvements, or require investigation and data collection. All of the recommendations can be completed in concurrent work programs.

26.5.1 Studies

An inflow hydrogeologic model should be developed based on an updated hydrogeological study.

The closure plan and closure cost estimate should be updated to reflect the updated LOM plan and unit rates. The post-closure monitoring period should be extended to a minimum of 20 years to align with industry standards. The closure planning should be advanced with supporting studies and engineering designs.

The social program should be aligned with the corporate environmental and social policies, and subsequently be formally approved and budgeted. The social program should include measures to build positive relationships with regional and state stakeholders. A grievance system should be established.

These activities are estimated to cost approximately in the range of US$230,000 to US$500,000.

26.5.2 Investigations and Data Collection:

New environmental data should be collected and incorporated into the baseline studies.

An environmental geochemistry study that includes representative sampling from all areas and lithologies in the mine plan should be completed. These data would be used to assess long-term conditions, be used to guide mine designs and to support closure planning.

A meteorological station should be installed at the site.

Additional hydrogeological data should be collected. The hydrology study should be updated with more recent climate data, and a climate change analysis should be carried out. The results should be applied to designs of water conveyances and ponds.

The next phase of drilling should include installation of vibrating wire piezometers or monitor wells equipped with transducers. The water level data should be collected routinely and a relational database developed.

These activities are estimated to cost approximately in the range of US$610,000 to US$1,000,000.

27.0 REFERENCES

Aztec, 2012: Memoria Técnica Y Descriptiva De Levantamiento Topográfico Con Equipo GPS Para El Proyecto San Antonio, Ubicado En San Antonio, La Paz, BCS: report prepared for Argonaut Gold Inc. July 2012.

Bustamante-Garcia, Jorge, 2000: Geology Mining Monograph of the State of Baja California Sur: Consejo Recursos Minerales Monograph M24 e, 232 p., 3 plates.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2019: Estimation of Mineral Resources and Mineral Reserves – Best Practice Guidelines: adopted by CIM Council on November 29, 2019.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2014: CIM Definition Standards – for Mineral Resources and Mineral Reserves: prepared by the CIM Standing Committee on Reserve Definitions, adopted by CIM Council, May, 2014.

Canadian Securities Administrators (CSA), 2011: National Instrument 43-101, Standards of Disclosure for Mineral Projects: Canadian Securities Administrators.

Comisión Nacional del Agua, 2024: Actualización de la Disponibilidad Media Anual de Agua en El Acuífero Los Planes (0323), Estado de Baja California Sur: 30 p.

DS Dinámica, 2011: Estudio de Línea De Base Social, Proyecto San Antonio, Baja California Sur: report prepared for Pediment Gold Corp., 2 February, 2011, 153 p.

Geo Digital Imaging, 2013: Rectificación de Coordenadas de Barrenos, Proyecto San Antonio: report prepared for Argonaut Gold Inc., 28 August 2013.

Geo Digital Imaging de Mexico, 2014a: Análisis Hidrológico E Hidráulico En El Proyecto San Antonio, Afectación Por Eventos Pluviales: report prepared for Argonaut Gold, 26 November, 2014, 18 p.

Geo Digital Imaging de Mexico, 2014b: Análisis De Afectación Por Eventos Meteorgologicos En El Proyecto San Antonio (Análisis De Imágenes De Satélite De Alta Resolución Pre y Post Evento Odile, Septiembre 2014): report prepared for Argonaut Gold, 27 November 2014, 19 p.

Golder Associates, 2011a: San Antonio Gold Project, Pre-feasibility Pit Slope Design: report prepared for Argonaut Gold Inc., 7 April 2011.

Golder Associates, 2011b: Estudio de Caracterización De Estériles – Proyecto San Antonio: technical memorandum prepared for Argonaut Gold Inc./Minera Pitalla, 23 September, 2011, 19 p.

Golder Associates, 2011c, Estudio De Caracterización De Minerales Y Residuos De Lixiviación-Proyecto San Antonio: technical memorandum prepared for Argonaut Gold Inc./Minera Pitalla, 30 November, 2011, 29 p.

Goldfarb, R.J., Baker, T., Dube, B., Groves, D.I., Hart, C.J.R. and Gosselin, P., 2005: Distribution, Characters and Genesis of Gold Deposits: *in* Metamorphic Terranes: Economic Geology 100th Anniversary Volume, Society of Economic Geologists, Littleton, Colorado, USA, pp.407–450.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G., and Robert, F. 1998: Orogenic gold deposits: A Proposed Classification: *in* The Context of their Crustal Distribution and Relationship to Other Gold Deposit Types: Ore Geology Review, Special Issue, Vol. 13, pp.7–27.

Groves, D.I., Goldfarb, R.J., Robert, F., and Hart, C.J.R., 2003: Gold Deposits in Metamorphic Belts: Overview of Current Understanding, Outstanding Problems, Future Research, and Exploration Significance: Economic Geology, Vol. 98, pp. 1–29.

Hanson, K., Orbock, E.J.C., Long, S., and Gormely, L, 2010: Pediment Gold Corporation San Antonio Project, Baja California Sur, Mexico NI 43-101 Technical Report on Preliminary Assessment: technical report prepared by AMEC E&C Services Inc. on behalf of Pediment Gold Corp., effective date 2 August 2010.

Herdrick, M.A. and Giroux, G.H., 2009: Technical Report and Resource Update, San Antonio Gold Project, Baja California Sur: technical report prepared on behalf of Pediment Gold Corp., effective date 29 November, 2009.

Mach, L., Willow, M., Rhoades, R., and Defilippi, C., 2012: NI 43-101 Technical Report on Resources San Antonio Project: report prepared by SRK Consulting for Argonaut Gold, Inc., effective date 1 September, 2012;

Moritz, R., 2000: What Have We Learnt About Orogenic Lode Gold Deposits Over The Past 20 Years?: article posted to University of Geneva, Switzerland, website, 7 p. http://www.unige.ch/sciences/terre/mineral/publications/onlinepub/moritz_gold_brgm_2000.doc.

Orbock, J.C., Gormely L., and Long, S., 2011: Argonaut Gold Inc., San Antonio Gold Project, Baja California Sur, Mexico, NI 43-101 Technical Report: report prepared by AMEC E&C Services Inc. for Argonaut Gold, Inc., effective date 20 June, 2011;

Schlumberger Water Services, 2012: Pediment Gold, Fase 1-Delimitacion Y Caracterizacion De Recursos De Agua, Proyecto San Antonio, Baja California Sur, Mexico: report prepared for Pediment Exploration Ltd., September, 90 p.

SEMARNAT, 2019: Resolución DTU San Antonio. Oficio No. SGPA/DGIRA/DG/08421: letter to Minera Pitalla, 23 October, 2019, 66 p.

Simmons, S.F.; White, N.C. and John, D.A., 2005: Geologic Characteristics of Epithermal Precious and Base Metal Deposits: Economic Geology 100th Anniversary Volume, pp. 485–522.

SLR, 2013: Proyecto San Antonio, Monitoreo de Línea Base de Agua Subterránea: technical memorandum prepared for Minera Pitalla, 30 August, 2013, 60 p.

Strategic Engineering & Science, Inc. and SRK Consulting (Mexico), 2012: Proyecto Mineral San Antonio, Plan De Cierre: report prepared for Argonaut Gold, Inc., May 2012, 177 p.

Terra, 2019: Documento Tecnico Unificado, Modalidad B-Regional, Proyecto: “Unidad Minera San Antonio”: document prepared for Minera Pitalla, 12 appendices, February, 2019.

Thompson, I.S., and Laudrum, D., 2008: Technical Report and Mineral Resource Estimate San Antonio Gold Project Baja California Sur, Mexico: technical report prepared by Derry, Michener, Booth & Wahl Consultants Ltd. for Pediment Exploration Ltd., effective date 31 December 2007.

Wallis, C.S., 2004: Technical Report on the Pitalla Properties, Mexico: technical report prepared by Roscoe Postle Associates for Skinny Technologies Ltd.; re-addressed to Pediment Exploration Ltd., effective date 30 June 2004, revised date 29 June 2005.

World Gold Council, 2018: Gold All-In Sustaining Costs: posted to https://www.gold.org/about-gold/gold-supply/responsible-gold/all-in-costs#from-login=1.

Zonge Engineering, 2011: Geophysical Surveys, San Antonio Project: report prepared for Minera Pitalla, 2 August, 2011.