Exhibit 96.5

SEC Technical Report Summary
Pre-Feasibility Study
Coimolache
Department of Cajamarca, Peru

Effective Date: March 15, 2022
Report Date: May 11 2022

Report Prepared for

Compañía de Minas Buenaventura S.A.A.

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Report Prepared by

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CONSENT OF SRK CONSULTING (PERU) SA

SRK Consulting (Peru) SA ("SRK"), a "qualified person" for purposes of Subpart 1300 of Regulation S-K as promulgated by the U.S. Securities and Exchange Commission ("S-K 1300"), in connection with Compañia de Minas Buenaventura S.A.A.'s (the "Company") Annual Report on Form 20-F for the year ended December 31, 2021 and any amendments or supplements and/or exhibits thereto (collectively, the "Form 20-F"), consent to:

- the public filing by the Company and use of the technical report titled " SEC Technical Report Summary Pre-Feasibility Study for Coimolache" (the "Technical Report Summary"), with an effective date of March 15th, 2022, which was prepared in accordance with S-K 1300, as an exhibit to and referenced in the Annual Report;

- the use of and references to SRK, including the status as an expert "qualified person" (as defined in Sub-Part S-K 1300), in connection with the Form 20-F and any such Technical Report Summary; and

- the use of information derived, summarized, quoted or referenced from those sections of Technical Report Summary, or portions thereof, for which SRK is responsible and which is included or incorporated by reference in the Annual Report.

SRK is responsible for authoring, and this consent pertains to, the following sections of the Technical Report Summary:

- 1.1, 1.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.3.6, 1.3.7, 1.3.8, 1.3.9, 1.3.10, 1.3.12, 1.3.13, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.1.1, 13.2, 13.3, 13.4, 13.5, 14, 15.1, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 15.10, 15.11, 15.12, 15.13, 15.14, 15.15, 17, 18, 19, 20, 21, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.8, 23, 24, 25.

Dated this May 11th, 2022

Angel Mondragón
SRK Consulting (Peru) S.A. - Director

Antonio Samaniego
SRK Consulting (Peru) S.A. - Director

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CONSENT OF DAVID ARCOS BOSCH

I, David Arcos Bosch, in connection with the filing of Compañía de Minas Buenaventura S.A.A.'s (the "Company") Annual Report on Form 20-F for the year ended December 31, 2021 (the "Annual Report"), consent to:

- the public filing and use of the technical report summary titled "SEC Technical Report Summary Pre-Feasibility Study for Coimolache" with an effective date of March 15, 2022 (the "Technical Report Summary"), as an exhibit to and referenced in the Annual Report;
- the use of and reference to our name, including our status as an expert or "qualified person" (as defined in S-K 1300), in connection with the Annual Report and the Technical Report Summary; and
- the information derived, summarized, quoted or referenced from those sections of the Technical Report Summary, or portions thereof, for which David Arcos Bosch is co-responsible that is included or incorporated by reference in the Annual Report.

This consent pertains to the following sections of the Technical Report Summary:

- Section 13.1.2

Dated this 6 day of May, 2022.

Name: David Arcos Bosch, PhD. Geological Engineer, EurGeol (Reg. 1186)
Title: Qualified Person, Senior Geologist and Geochemist consultant

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CONSENT OF EDUARDO RUIZ DELGADO

I, Eduardo Ruiz Delgado, in connection with the filing of Compañía de Minas Buenaventura S.A.A.'s (the "Company") Annual Report on Form 20-F for the year ended December 31, 2021 (the "Annual Report"), consent to:

- the public filing and use of the technical report summary titled "SEC Technical Report Summary Pre-Feasibility Study for Coimolache" with an effective date of March 15, 2022 (the "Technical Report Summary"), as an exhibit to and referenced in the Annual Report;
- the use of and reference to our name, including our status as an expert or "qualified person" (as defined in S-K 1300), in connection with the Annual Report and the Technical Report Summary; and
- the information derived, summarized, quoted or referenced from those sections of the Technical Report Summary, or portions thereof, for which Eduardo Ruiz Delgado is co-responsible that is included or incorporated by reference in the Annual Report.

This consent pertains to the following sections of the Technical Report Summary:

- Section 13.1.2

Dated this 6 day of May, 2022.

Name: Eduardo Ruiz Delgado, MSc Geological Engineer, EurGeol (Reg. 1234)
Title: Qualified Person, Senior Water Resources Consultant

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CONSENT OF SCOTT CAMERON ELFEN.

I, Scott Elfen, in connection with the filing of Compañía de Minas Buenaventura S.A.A.'s (the "Company") Annual Report on Form 20-F for the year ended December 31, 2021 (the "Annual Report"), consent to:

- The public filing and use of the technical report summary titled "SEC Technical Report Summary Pre-Feasibility Study for Coimolache" with an effective date of March 15, 2022 (the "Technical Report Summary"), as an exhibit to and referenced in the Annual Report;

- Pre-Feasibility Study for Coimolache" with an effective date of March 15, 2022 (the "Technical Report Summary"), as an exhibit to and referenced in the Annual Report;

- The use of and reference to our name, including our status as an expert or "qualified person" (as defined in S-K 1300), in connection with the Annual Report and the Technical Report Summary; and

- The information derived, summarized, quoted or referenced from those sections of the Technical Report Summary, or portions thereof, for which Scott Elfen is responsible that is included or incorporated by reference in the Annual Report.

This consent pertains to the following sections of the Technical Report Summary:

- Section 15.2

Dated this 6th day of May, 2022.

Signature of Authorized Person for Ausenco
Name:Scott Cameron Elfen, (P.E.)
Title: Global Lead Geotechnical Services

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CONSENT

I, Manuel A. Hernández, a "qualified person" for purposes of Subpart 1300 of Regulation S-K as promulgated by the U.S. Securities and Exchange Commission ("S-K 1300"). In connection with Compañía de Minas Buenaventura S.A.A.'s (the "Company") Annual Report on Form 20-F for the year ended December 31, 2021 and any amendments or supplements and/or exhibits thereto (collectively, the "Form 20-F"), consent to:

- the public filing and use of the technical report summary titled "SEC Technical Report Summary Pre-Feasibility Study for Coimolache" (the "Technical Report Summary"), with an effective date of March 15, 2022, as an exhibit to and referenced in the Company's Form 20-F;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in S-K 1300), in connection with the Form 20-F and any such Technical Report Summary; and
- the use of information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 20-F.

I am a qualified person responsible for authoring, and this consent pertains to, the following sections of the Technical Report Summary:

- Section 1.3.11, 16 and 22.7

Signature of Authorized Person
Name: Manuel A. Hernández Fellow AusIMM - Member 306576
Title: Civil Mining Engineer

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Abbreviations

[Metric]

The metric system has been used throughout this report. Tonnes are metric of 1,000 kg, or 2,204.6 lb. All currency is in U.S. dollars (US$) unless otherwise stated.

[US System]

The US System for weights and units has been used throughout this report. Tonnes are reported in short tonnes of 2,000lbs. All currency is in U.S. dollars (US$) unless otherwise stated.

To facilitate the reading of large numbers, commas are used to group the figures three by three starting from the comma or decimal point.

Abbreviation	Unit or Term
%	Percent
°	Degree (degrees)
°C	Degrees Centigrade
µm	Micron or microns
A	Ampere
A/m²	Amperes per square meter
AA	Atomic absorption
AASP	Atomic Absorption Spectroscopy -Perchloric digestion Perchloric digestion
ABA	Acid-base Accounting
acQuire	Systematic database program
ADI	Area of direct influence
Ag	Silver
ANA	National water authority
ANFO	Ammonium nitrate fuel oil
ARDML	Acid Rock Drainage Metal Leaching
Au	Gold
AuEq	Gold equivalent grade
AWTP	Acid Water Treatment Plant
Buenaventura	Cía de Minas Buenaventura S.A.A.
BVN	Cía de Minas Buenaventura S.A.A.
CCD	Counter-current decantation
CCE	Closure Cost Estimate
cfm	Cubic feet per minute
CFW	Close footwall
CHW	Close hanging wall
CIL	Carbon-in-leach
CIRA	A certificate of non-existence of archeological remains
cm	Centimeter

cm^2	Square centimeter
cm^3	Cubic centimeter
CMC	Compañía Minera Coimolache S.A.
CoG	Cut-off grade
Coimolache	Compañía Minera Coimolache S.A.
CONENHUA	Consorcio Energetico de Huancavelica S.A., a 100% subsidiary of Buenaventura).
ConfC	Confidence code
CRec	Core recovery
CSS	Closed-side setting
CTW	Calculated true width
Cu	Copper
DCR	Design change request
DDH	Diamond drill holes
dia.	Diameter
DMO	Deposit of Organic Material
EDA	Exploratory Data Analysis
EIS	Environmental impact statement
El Brocal	Sociedad Minera El Brocal S.A.A.
ELOS	Equivalent linear overbreak/slough
EMP	Environmental management plan
FA	Fire assay
FAAAS	Fire Assay - Atomic Absorption Spectroscopy finish
FCF	Free Cash Flow
FI	Field instructions
FOS	Factor of Safety
ft	Foot (feet)
ft2	Square foot (feet)
ft3	Cubic foot (feet)
FW	Footwall
g	Gram
g/L	Gram per liter
g/t	Grams per tonne
gal	Gallon
g-mol	Gram-mole
gpm	Gallons per minute
GSI	Geological strength index
GWI	Ground water international
ha	Hectares
HDPE	Height density polyethylene
hp	Horsepower
HTC	Humidity cell leaching

HTW	Horizontal true width
HVACR	Heating,ventilation, air conditioning & refrigeration
HW	Hanging wall
ICP	Induced couple plasma
ID2	Inverse-distance squared
ID3	Inverse-distance cubed
IFC	International finance corporation
ILS	Intermediate leach solution
Ingemmet	Institute of Geology, Mining and Metallurgy
IRA	Inter-ramp angles
IW	Intermediate wall
kA	Kiloamperes
kg	Kilograms
km	Kilometer
km^2	Square kilometer
koz	Thousand troy ounce
kt	Thousand tonnes
kt/d	Thousand tonnes per day
kt/y	Thousand tonnes per year
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt-hour
kWh/t	Kilowatt-hour per metric tonne
L	Liter
L/sec	Liters per second
L/sec/m	Liters per second per meter
lb	Pound
LHD	Long-Haul Dump truck
LIMS	Laboratory information management system
LLDDP	Linear low density polyethylene plastic
LME	London metal exchange
LOI	Loss on ignition
LOM	Life of the mine
m	Meter
m.y.	Million years
m^2	Square meter
m^3	Cubic meter
MARN	Ministry of the Environment and Natural Resources
MASL	Metes above sea level
MCE	Maximum credible earthquake
MCP	Mine closure plan

MDA	Mine development associates
mg/L	Milligrams/liter
MINAM	Ministry of Environment
MINEM	Ministry of Energy and Mines
MJ	Megajoules
mm	Millimeter
mm²	Square millimeter
mm³	Cubic millimeter
MME	Mine & mill engineering
Moz	Million troy ounces
Mt	Million tonnes
MTW	Measured true width
MW	Million watts
NCR	Non - conformities
NGO	Non-governmental organization
NI 43-101	Canadian National Instrument 43-101
NSR	Net Smelter Return
NYSE	New York Stock Exchange
OEFA	Environmental Evaluation and Oversight Agency
OP	Open pit
ORE	Orebody
OSC	Ontario securities commission
Osinergmin	Supervisory Agency for Investment in Energy and Mining
oz	Troy ounce
PAG	Potentially Acid Generating
PAMA	Environmental Adjustment and Management Program
Pb	Lead
PLC	Programmable logic controller
PLS	Pregnant leach solution
PMF	Probable maximum flood
ppb	Parts per billion
ppm	Parts per million
PTARD	Domestic wastewater treatment plants
Q	Quaternary deposits
QA/QC	Quality assurance/quality control
Q-al	Alluvial deposits
Q-bo	Wetland deposits
Q-co	Colluvial deposits
Q-fg	Fluvio-glacial Deposits
Q-g	Glacial deposits
R&P	Room & pillar

RC	Rotary circulation drilling
RCs	Refining costs
RDC	Ruta de Cobre
RFI	Request for information
RMR	Rock mass rating
ROM	Run-of-Mine
RQD	Rock quality description
SEC	U.S. securities & exchange commission
sec	Second
SENACE	National environmental certification authority
SFE	Short-term leaching by shake flask extraction
SG	Specific gravity
SMEB	Sociedad Minera El Brocal S.A.A.
SPT	Standard penetration testing
SR	Stripping ratio
SRK	Srk consulting (peru) s.a.
st	Short tonne (2,000 pounds)
SVR	Surveillance reports
t	Tonne (metric tonne) (2,204.6 pounds)
t/d	Tonnes per day
t/h	Tonnes per hour
t/y	Tonnes per year
TC	Treatment charge
TCs	Treatment costs
Time Domain EM	The geophysical methods used included electromagnetism
tpd	Tons per day
TSF	Tailing’s storage facility
TSP	Total suspended particulates
UG	Underground
UIT	One tax unit
V	Volts
VFD	Variable frequency drive
W	Watt
WRA	Total rock chemical analysis
WTP	Water Treatment Plant
WWTPI	Industrial wastewater treatment plant
XRD	X-ray diffraction
y	Year
Zn	Zinc

1 Executive Summary

This report was prepared by SRK Consulting (Peru)S.A. (SRK) as a PFS Technical Report Summary in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 until 1305) for Compañía de Minas Buenaventura S.A.A. (NYSE: BVN) and related to the SK 1300 Technical Report Summary Project.

1.1 Summary

This report was prepared by SRK Consulting (Peru)S.A. (SRK) as a PFS Technical Report Summary in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 until 1305) for Compañía de Minas Buenaventura S.A.A. (NYSE: BVN) and related to the SK 1300 Technical Report Summary Project.

The purpose of this Technical Report Summary is to report mineral resources, mineral reserves, and exploration results.

This report is based in part on internal Company technical reports, previous prefeasibility studies, maps, published government reports, company letters and memoranda, and public information as cited throughout this report and listed in the References Section 24.

Reliance upon information provided by the registrant is listed in the Section 25 when applicable.

The Tantahuatay mine (mining unit) is the property of Compañía Minera Coimolache S.A. (CMC). The ownership structure is as follows: 44,20% Southern Copper Corp., 40.10% Compañía de Minas Buenaventura S.A. (Buenaventura) and 15.70% Espro S.A.

CMC is a subsidiary of Buenaventura and is an open pit mine that produces gold and silver. The ore deposit was discovered by Buenaventura and operations began in 2011. At present, the mine is being operated by Buenaventura.

Tantahuatay is located in the districts of Chugur and Hualgayoc, province of Hualgayoc, region of Cajamarca, in the Andes Mountains of northern Peru, in the continental divide of the basins of the Pacific Ocean (Chancay River Basin) and Atlantic Ocean (Llaucano River Basin). It is located 15 km west of the city of Bambamarca and 85 km northwest of the city of Cajamarca. The property is located at an average elevation of 3900 MASL. The center of this project has the following geographic coordinates: Latitude 6°44’25’’ S y Longitude 78°41’50’’ W.

Compañía Minera Coimolache S.A. (CMC) conducts its mining operations using the open pit method at five pits, where surface mining of economic ore takes place. The processing facilities consist of a run-off-mine (ROM) leaching operation, an adsorption-desorption-recovery plant, and a smelter to produce a dore bar containing approximately 98% precious metals.

The open pit mining operation uses haul trucks to deliver ROM ore to two leaching pads, namely Tantahuatay and Cienaga, which are located approximately 1 km apart. The Tantahuatay leach pad receives ore from multiple open pits including:

- Tantahuatay 2,
- Tantahuatay 2 North-West Expansion
- Tantahuatay 5
- Mirador Sur
- Mirador Norte.

Between 2017 and 2020, total production was 20.8 million grams of gold and 109 million grams of silver from the two ROM lech pads mentioned above. When assuming 365 day/year of operation, ore was loaded at a rate of 32,900 tonnes/day and production averaged 367 oz/day of gold and 1,928 oz/day of silver.

1.1.1 Conclusions

a. Geological Setting, Mineralization, and Deposit

- Geology and mineralization are well understood through years of active mining, and SRK has used relevant available data sources to incorporate long-term projections in the modeling effort for public reporting.
- The main exploration method in Tantahuatay has been diamond drilling. However, other exploration methods have been used in different stages, including geological mapping and surface geochemical sampling.
- Protocols for drilling, sampling preparation and analysis, verification, and security meet industry-standard practices and are appropriate for a Mineral Resource estimate.
- The geological models are reasonably constructed using available geological information and are appropriate for Mineral Resource estimation.
- The assumptions, parameters, and methodology used for the Tantahuatay Mineral Resource estimate are appropriate for the style of mineralization and proposed mining methods.

- The mineral resources have been estimated by Buenaventura and supervised by SRK.
- In SRK's opinion, the mineral resources set forth herein are appropriate for public disclosure and meet the definitions of indicated and inferred resources established by SEC guidelines and industry standards (SK-1300).

b. Sample Preparation, Analysis and Security

- Sample preparation, chemical analysis, quality control, and security procedures are sufficient to provide reliable data to support the estimation of Mineral Resources and Mineral Reserves.

c. Data Verification

- The database has some minor findings or inconsistencies but most of this data corresponds to historical information obtained from data migration; and the database is consistent and acceptable for Mineral Resource Estimation.

d. Mineral Processing and Metallurgical Testing

- Coimolache counts with a well-equipped, self-sufficient metallurgical testing facilities to support its current operation and new project development. A new optical microscopy station is being installed that will allow the company to independently support investigation and optimization.
- During SRK’s visit to the Coimolache site, it observed that both Tantahuatay and Cienaga leach pad’s interlift slopes were not leached. SRK is of the opinion that a good practice that has a major impact on the economics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad.
- The Tantahuatay leach pad receives most of the ore mined at Coimolache . Long term metal recovery in the Tantahuatay circuit reached 85% for gold and 18% for silver.
- The Cienaga leach pad receives a minor portion of the total ore mined at Coimolache (approximately less than 10%). Long term metal recovery in the Cienaga circuit reached 22% for gold and 26% for silver.
- SRK was informed that Coimolache applies a threshold of 500 ppm Cu; any material above this threshold is automatically classified as waste, which means that its precious metal grade is discarded. It is SRK’s experience that these thresholds are the result of multiple technical and economical parameters, and as such, they need to be constantly evaluated and adjusted based on the varying composition of the mined material, the company’s current operating cost, and market prices. Failing to regularly perform this evaluation unnecessarily risks compromising the company’s value.
- The ore’s head grade data available to SRK includes base metals only in 8 composites. The rest samples only have assays for silver and gold. This would have better supported understanding of the leaching kinetics and consumption of the key cost driver reagents, such as cyanide and lime, which are critical to maximize metal extraction kinetics, safety, and ultimately the profitability of the business.

e. Mineral Reserve Estimates

In the SRK's opinion, the mineral reserves estimation is reasonable in the context of available technical studies, the information provided by Buenaventura and the assessment developed by SRK. However, SRK strongly recommends monitoring the following risks that it has identified:

- Currency exchange rate
- Geotechnical parameters
- Local politics

f. Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

- Tantahuatay MU possess statutory Environmental Certification. SRK determined that ancillary components also comply with this requirement.
- A Mine Closure Plan has been developed for all the Mine components within the context of Peruvian legislation and is periodically updated.
- The available geochemistry test work data indicates that the majority of mine waste materials at Tantahuatay are PAG.
- The lack of inclusion of a water treatment provision in the Amphos21 CCE is a significant omission. As water treatment is required for operations, SRK has assumed that it will be required post-closure.
- Because post-closure water treatment was omitted from the current closure and post-closure costs, and the available data indicate that this will be required, SRK has prepared an estimate of the capital costs to update the existing water treatment plant to a HDS plant and build a second HDS water treatment plant to treat water from the TSF after closure. Operating costs are included as a post-closure cost and they are used in the Cash Flow.

g. Capital and Operating Cost

In the SRK's opinion, the operating cost estimation is reasonable in the context of LoM plan, premises, operational conditions, the information provided by Buenaventura and the assessment developed by SRK. SRK considers that the use of historical record provides a good approximation of the reality of the operation and allows for adequate projection of future costs.

Capital cost expenditure was estimated by Buenaventura and in SRK's best understanding, was estimated following best practices and in accordance with conditions at Tantahuatay. SRK finds the amounts reasonable for the type and size of Tantahuatay's operation. However, SRK didnot be able to develop a detailed analysis of the capital costs or provide support for the same.

SRK recommends monitoring the following aspects:

- Additional engineering studies related to the mine closure process,
- Monitor the currency exchange rate;
- Evaluate the distribution of the cost of the existing water treatment plant.
- Prepare support for the capital cost expenditure.

h. Economic Analysis

Based on the assumptions detailed in this report, the operation is forecasted to generate positive cashflow over the life of the reserves. This estimated cashflow is inherently forward-looking and dependent upon numerous assumptions and forecasts, such as macroeconomic conditions, mine plans and operating strategy, all of which are subject to change.

This yields an after-tax LoM NPV@ 7.01% of US$157M, of which US$63M is attributable to Buenaventura.

The analysis performed for this report indicates that the operation's NPV is most sensitive to variations in commodity prices, ore grades and plant performance.

1.1.2 Recommendations

a. Mineral Processing

- SRK is of the opinion that a good practice that has a major impact on the economics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad. Maintaining an ore inventory, such as unleached ore in the interlift' slopes, negatively impacts the company's economics.
- The metallurgical testing regularly carried out at Coimolache adequately addresses the needs to optimize the day-to-day operation. It is SRK's opinion that the metallurgical control should include tracking of all sulfide minerals in the fresh feed and their relationship to cyanide consumption, lime consumption, the irrigation rate (m^2/tonne) and ultimately metal extraction of precious metals and cyanicides.

b. Mineral Resource Estimates

- SRK suggests that Tantahuatay improves its geological interpretation to increase confidence in the geological models and to provide support for the same with alteration, mineralization and lithology geological mapping. In addition, estimation domains for gold and silver must be reviewed in detail to improve their construction and definition given that grade interpolation can be locally improved in some areas.
- No measured resources are reported due to several factors, including geological variability in high gold grade zones within the estimation domains that cannot be supported by the current drill pattern (50 m to 60m), mainly in sectors with higher variability for high gold grades. SRK recommends conducting several drill spacing studies to define and classify measured resources.
- SRK recommends implementing a reconciliation program that includes the different types of resource models, reserves, mine plans and plant results.

c. Sample Preparation, Analysis and Security

- SRK recommends including a greater Ag standard quantity in future re-sampling campaigns and/or diamond drills to improve the accuracy of the Ag evaluation.
- SRK recommends validating the protocols used for recollecting and preparing drilling samples with a heterogeneity study, focusing on the geological domains that will be prioritized during the production phase.

d. Data Verification

- SRK recommends conduct internal validations of the database; verifying the data export process; and issuing chemical analysis reports from the Internal Laboratory for future reviews and/or internal audits.

e. Mineral Reserve Estimates

- Improve metallurgical recovery estimation through on-going performance control of plant operations and the execution of additional metallurgical tests. SRK finds that proposed percentages are coherent with the current and future processing plant operations; however, it is necessary to complete additional analysis.
- Review of costs associated with the water treatment process to evaluate implications for operating costs
- Improvement of "unit value" calculation by means the parameters traceability and adding some level of differentiation in the commercial terms, separating commercial terms related to the metal or payable content and commercial terms related to the dore bar.
- Geotechnical monitoring of open pit slopes and implement feedback process to incorporate monitoring results into the geotechnical model used for pit design purposes.
- Implement a policy for optimal pit shell selection which allow improvements in the financial results;
- Implement a reconciliation process, following best practices in the industry. This process should involve personnel of the following areas: mine operations, geology, mine planning and processing plant under a structured plan of implementation.

f. Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

- The cover systems proposed need to be reassessed, particularly Cover I, which will use over acid generating materials. The unit rates for this cover system in the current closure plan seem to be on the low end, considering that some of the cover components will need to be transported over a distance of 250 km.
- The need for, and cost of water treatment should be investigated in future studies to optimize closure activities related to water management.
- Once the closure and post-closure activities are reviewed and updated in the closure plan, the requirements and length of time needed for post-closure monitoring and maintenance should be reviewed to incorporate changes.
- Review and revise FOS criteria based on selected guideline for demonstrating long-term closure stabilization.
- Review and revise closure designs, construction materials, and slope stability analyses to ensure the long-term stability of all construction components.
- Evaluate phreatic conditions within WRDs and HLPs and develop a sitewide water balance model that incorporates all predicted flows to inform the potential need for post-closure water treatment.

- Complete geochemical characterization of waste rock and heap leach pads and prepare a sitewide model of predicted water chemistry to facilitate determination of post-closure water management requirements.
- A comprehensive sitewide stormwater management system for the closed site configuration should be developed and documented in a design report. The details of the comprehensive stormwater design should be used to develop accurate construction costs using local or regional contractors to update the pricing and cost estimate.

g. Capital and Operating Cost

- Development of additional technical studies for the mine closure process and to improve the accuracy of cost estimation. SRK believes that there are opportunities to improve and reduce the closure costs supported by technical studies;
- Continuous monitoring of cost results (yearly, quarterly); these results should be used as feedback for the operating and capital cost estimation;

1.2 Economic Analysis

Tantahuatay's operation consists of an open pit mine and processing facilities. The operation is expected to have a 6-year life.

The economic analysis metrics are prepared on an annual after tax basis in US$. The results of the analysis are presented in Table 11. The results indicate that the operation returns an after-tax NPV@7.01% of US$157M (US$63M attributable to Buenaventura). Note that because the mine is operating and is valued on a total project basis where prior costs are treated as sunk, IRR and payback period analysis are not relevant metrics.

Table 1-1: Indicative Economic Results

	Units	Value
LoM Cash Flow (Unfinanced)		
Total Net Sales	M US$	1,167.70
Total Operating cost	M US$	497.39
Total Operating Income	M US$	361.08
Income Taxes Paid	M US$	58.73
EBITDA		
Free Cash Flow	M US$	635.75
NPV @ 7.01%	M US$	459.02
After Tax		
Free Cash Flow	M US$	198.95
NPV @ 7.01%	M US$	157.41

Source: Buenaventura

1.3 Technical Summary

This Technical Report Summary was prepared by SRK Consulting (Peru) S.A. (SRK) in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 through 1305) for Compañía de Minas Buenaventura S.A.A, (40.1% owner of Compañia Minera Coimolache) and relative to the Tantahuatay project.

1.3.1 Property Description

Tantahuatay is located in the districts of Chugur and Hualgayoc, province of Hualgayoc, region of Cajamarca, in the Andes Mountains of northern Peru. The center of this project has the following geographic coordinates: Latitude 6°44'25'' S y Longitude 78°41'50'' W.

Access to Tantahuatay is by air from Lima (Jorge Chávez International Airport) travel to the city of Cajamarca (Armando Revoredo Iglesias International Airport), which is located 568km north of Lima. Hualgayoc can be accessed from the city of Cajamarca by traveling northwest approximately 85 km. By land, the project can be accessed from Lima by traveling the Panamericana Norte highway; taking the detour to the city of Cajamarca; and continuing from Cajamarca to the project (a total of 1,006 km).

1.3.2 Land Tenure

There are 33 mining concessions and 1 beneficiation concession (beneficiation plant). These 33 concessions cover the area of the mines and the exploration projects. The area of the concessions in which CMC performs exploitation and beneficiation activities cover approximately 22,400 ha. and the titleholder is Compañía Minera Coimolache S.A. Another 149.12 ha. correspond to a mining assignment owned by Southern Legacy Peru S.A.C.

1.3.3 History

In the Tantahuatay Project, initial exploration took place from 1991 to 1998 by Southern Peru and in 1992 Compañía Minera Coimolache S.A. (CMC) was established

The first work in the area was conducted in 1969-1971 by the British Geological Survey (BGS), which engaged in sediment sampling in the region and the district and identified seven anomalies in the Tantahuatay and Sinchao creeks.

The ore deposit was discovered by Buenaventura and operations began in 2011.

CMC began the pre-feasibility stage in 2007. The EIA was completed with a public hearing in Hualgayoc in 2008, and construction began in 2009. The oxide operation began in June 2011.

1.3.4 Geological Setting, Mineralization, and Deposit

The geology is characterized by the occurrence of mostly volcanic units that are found overlying the limestones of the Cretaceous Pulluicana Group, which outcrops east of Tantahuatay, where they are cut by a felsic, granodioritic to dioritic intrusive.

Tantahuatay is a high-sulfidation epithermal deposit. It presents Au-Ag mineralization in oxides, which are associated with silicified breccias that present mainly silica alteration. Below the oxide level, there is a predominant Cu mineralization with the presence of As, and in smaller quantities, covellite and supergene chalcocite.

1.3.5 Exploration

SRK notes that the property is an active mining operation with a long history and that results and interpretation from exploration data are generally supported in more detail by extensive drilling and by active mining exposure of the orebody in open-pits works.

The area around the Tantahuatay Operations has been extensively mapped, sampled, and drilled over several years of exploration work. For this report, active mining, and extensive exploration drilling, should be considered the most relevant and robust exploration work for the current mineral resource estimation.

1.3.6 Mineral Processing and Metallurgic Exploration testing

Coimolache's processing facilities consists of a run-off-mine (ROM) leaching operation, an adsorption-desorption-recovery plant, and a smelter to produce a dore bar containing approximately 98% precious metals.

The open pit mining operation uses haultrucks to deliver ROM ore to two leaching pads, namely Tantahuatay and Cienaga, which are located approximately one kilometer apart. The Tantahuatay leach pad receives ore from multiple open pits including:

- Tantahuatay 2,
- Tantahuatay 2 North-West Expansion
- Tantahuatay 5
- Mirador Sur
- Mirador Norte.

Between 2017 and 2020 the total production was 20.8 million grams of gold and 109 million grams of silver from two ROM lech pads, namely Tantahuatay leach pad and Cienaga leach pad. When assuming 365 day/year of operation, ore was loaded at a rate of 32,900 tonnes/day and production averaged 367 oz/day of gold and 1,928 oz/day of silver.

As part of metallurgical testing process, Coimolache collected a total of eight (8) samples for metallurgical characterization, including mineralogy and leaching testing. The samples represented six different mineralized areas that are within the current and future mineable areas.

1.3.7 Mineral Resource Estimates

The 2021 Mineral Resource Model was based on drill hole information obtained by Buenaventura since 2005. Buenaventura generated a 3D geological model informed by drilling to constrain and control the mineralization bodies that host the gold and silver. In some cases, Buenaventura used grade shells to control high grades and prevent overestimation. Drilling data was composited within geological wireframes. Alteration domains identifying potentially economically mineable material were modeled for each zone and used to code drill holes for geostatistical analysis, block modeling, and grade interpolation by ordinary kriging. Results were validated visually, statical comparison (near neighbor vs ordinary kriging interpolate) and swath plots.

Net smelter return (NSR) values for each mining block take into account expected terms of trade, average metallurgical recovery, the average grade in concentrate and projected long-term metal prices. Mineral Resources take into account operating costs and have been reported above a differentiated NSR cut-off value.

The resource classification considers several aspects that affect the confidence in the resource estimate, including geological continuity and complexity; data density and orientation; and continuity of grade. Mineral resources are classified as indicated or inferred. The criteria used for the classification include the number of samples, the spatial distribution, the distance from the block centroid and the confidence limits methodology. Subsequently, to avoid the "Spotted Dog" effect, Buenaventura smoothed the classification by manually contouring to improve the continuity of the classification.

Mineral Resources excluding Mineral Reserves of the Tantahuatay Mine are reported as of December 31, 2021 and are detailed in Table 1-2.

Table 1-2: Summary of Mineral Resources

Deposit	Category	Tonnes	Gold (grade)	Silver grade
		(Mt)	(g/t)	(g/t)
Tantahuatay	Indicated	30,79	0.23	16.31
	Inferred	3,17	0.17	12.63
Cienaga	Indicated	1,38	0.46	1.60
	Inferred	1,10	0.37	0.51
Mirador	Indicated	5,92	0.29	2.70
	Inferred	8,81	0.29	5.95
Total		51,16	0.25	11.99

Source: Buenaventura, 2021

Notes on mineral resources:

Mineral Resources are defined by the SEC Definition Rules (SK-1300) for Mineral Resources and Mineral Reserves.

Mineral Resources are exclusive of Mineral Reserves

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability

Mineral Resources were estimated as of December 31, 2021 and reported as of October 31, 2021 taking into account production-related depletion for the period through December 31, 2021.

Mineral Resources are reported above a differentiated NSR cut-off grade for structures based on actual operating costs:

Metal prices used in the NSR assessment are US$25/oz for silver and US$1,600/oz for gold.

Mining processing and administrative costs used to determine NSR cut-off values were estimated based on operating costs data of the period 2018-2020.

SRK Consulting Peru is the Qualified Person for the mineral resources.

Tons are rounded to the nearest thousand

Factors that may affect estimates include metal price and exchange rate assumptions; changes in the assumptions used to generate the cut-off grade; changes in local interpretations of the geometry of mineralization and continuity of mineralized zones; changes in geological form and mineralization and assumptions of geological and grade continuity; variations in density and domain assignments; geo-metallurgical assumptions; changes in geotechnical, mining, dilution and metallurgical recovery assumptions; switch to design and input parameter assumptions of conceptual stope designs that constrain estimates; and assumptions as to the continued ability to access the site, retain title to surface and mineral rights, maintain environmental and other regulatory permits, and maintain the social license to operate.

There are no other known environmental, legal, title, tax, socioeconomic, marketing, political or other factors that could materially affect the estimate of Mineral Resources or Mineral Reserves that are not discussed in this Report.

1.3.8 Mineral Reserve Estimates

Mineral reserves Estimation for Tantahuatay mine considers the uses of conventional open pit methods to extract mineral reserves and process the ore using a heap leach process.

Probable mineral reserves are converted from measured and indicated mineral resources. Conversion is based on pit optimization results, mine design, mine sequence and economic evaluation. The in-situ value is calculated from the estimated grade and certain modifying factors.

The LoM plans and resulting mineral reserves stated in this report are based on pre-feasibility level studies.

Mineral reserves effective date is December 31st, 2021

Cost estimation are based on the historic cost database of years 2018-2020. Forecast cost estimated considers criteria for future operational conditions and an additional 10% contingency.

Mineral reserves are reported above internal NSR cut-off value for open pit materials.

Metallurgical recovery is estimated and assigned to a block model attribute using the percentage defined for each element, location and leach pad.

SRK identified risks related to currency exchange rate, water treatment plant cost, geotechnical parameters, selection of pit shell for final pit design and local politics. However, to the best of SRK's knowledge and based on available technical studies and information provided by Buenaventura, no fatal flaw exists. In the QP's opinion, the mineral reserves estimation is reasonable.

Summary mineral reserves are shown in the Table 1-3

Table 1-3: Tantahuatay Open Pit Summary Mineral Reserve Statement as of December 31st, 2021

Destination	Confidence category	Tonnage (kt)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
Tantahuatay 2	Probable	12,275	0.20	16.40
Cienaga Norte	Probable	3,511	0.49	2.06
Tantahuatay 2 EXT NW	Probable	29,157	0.29	11.02
Mirador	Probable	20,512	0.34	1.04
TOTAL	**Probable**	**65,454**	**0.30**	**8.42**

Source: SRK, 2021

(1) Buenaventura's attributable portion of mineral resources and reserves is 40.10% (Amounts reported in the table correspond to the total mineral reserves)

(2) The reference point for the mineral reserve estimate is the point of delivery to the leach pad.

(3) Mineral reserves are current as of December 31st, 2021 and are reported using the mineral reserve definitions in S-K 1300. The Qualified Person Firm responsible for the estimate is SRK Consulting (Peru) SA

(4) Key parameters used in mineral reserves estimate include:

- *(a) Average long term prices of gold price of 1,600 US$/oz, silver price of 25.00 US$/oz*
- *(b) Variable metallurgical recoveries are accounted for in the NSR calculations and defined according to recovery functions, that average 72% for gold and 16% for silver*
- *(c) Mineral reserves are reported above a internal net smelter return cut-off of 4.08 US$/t for Tantahuatay 2 open pit, 3.85 US$/t for Cienaga Norte open pit, 5.46 US$/t for Tantahuatay* 2 EXT NW *open pit and 5.67 US$/t for Mirador open pit*
- *(d) Open pit ore will be processed using a heap leach process*

(5) Mineral reserves tonnage, grades and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding

1.3.9 Mining Methods

The Tantahuatay mine, extracts ore by open pit mining (5 pits), where surface mining of economic ore takes place. For this purpose, pits are designed considering geotechnical parameters, which are inherent to the rock mass quality and ensure the stability of pit slopes. Design parameters are established by sectors and the configuration of double or single bench, bench height, berm length, inter-ramp angle and bench face angle are defined for each sector.

The mining process is conducted with 22 m^3 dump trucks (haultrucks), DML 7 7/8” drills and a 4.6 m^{32} excavators. The ore is hauled to the leaching pads for final delivery to the recovery plant.

1.3.10 Infrastructure

- The in-situ and operating infrastructure at Tantahuatay includes the following:
- Five open pit mines (5 pits).
- Four waste dump (DME CN, DME 1 THY, DME 2 THY, DME 3 THY)
- Two leach pad (Cienaga, Tantahuatay)
- One recovery plant. (close circuit)
- Main site power supply.
- Site access roads.
- Haul roads (19.1 m width)
- Two truck workshops (Mirador Norte, Cienaga Norte)
- Mine shops, offices, warehouse facilities.
- Two Mine camps.
- Four Water treatment plants (for industrial, acid, potable and domestical water)

Power to the mine is supplied by the 22.9 kV primary transmission line from the Cerro Corona substation fed by the 220 kV Cajamarca-Cerro Corona transmission line. Starting from the Tantahuatay substation, a 10 kV primary network is presented to the mine facilities. There are two types of energy: electrical and chemical (oil). The installed electrical energy power for all the mine facilities is 5,520 kW, with a maximum demand of 3,180 kW.

The water supply is generated by pumping water from Puente de la Hierba steam from 2 wells. This source of water is used for industrial and domestic purposes.

1.3.11 Market Studies

This chapter has been prepared based on the documents "Market input for S-K 1300: Coimolache" (June, 2021) and "Buenaventura prices update" (February, 2022) prepared by CRU Consulting for BVN.

The principal commodities that are produced at the Tantahuatay mine – gold and silver - in form of doré bars (85% gold and 15% silver), so we can say Coimolache's doré has high levels of both silver and gold in it.

Generally speaking, given Coimolache's product quality, its doré production should be acceptable in all of the customary markets. Going forward, Buenaventura has contracts in place securing sales for 100% of Coimolache's doré production for 2022, 2023 and 2024.

1.3.12 Environmental Studies, Permitting, and Plans, Negotiations or agreements with Local individuals or Groups

Tantahuatay's activities were subject to an Environmental Impact Assessment (EIA) as the primary environmental management instrument, and subsequently several preventive environmental studies were approved for various areas of the mining activity, as well as amendments to these (either through modifications or Supporting Technical Reports -STR).

SRK found that the Tantahuatay MU has an initial EIA from 2009, and approved an EIA to expand the operation (2013), as well as the amendments to these studies (2014, 2016), and obtained conformity for minor or environmentally insignficant STR variations (2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021).

A review of the descriptive scope of the documents identified above led SRK to the conclusion that the main activities and components for mining and beneficiation relative to Tantahuatay MU possess statutory Environmental Certification. SRK determined that ancillary components also comply with this requirement.

Tantahuatay MU's activities comply with the legal requirement of having presented measures for the progressive, final, and post-closure of its existing and planned components. Thus, the approval of an initial MCP in 2011 has been corroborated, as well as its modification in 2014, the first update in 2015, and a second update in 2021. According to the current MCP, the final closure activities are projected to begin in 2027.

It has also been confirmed that the semiannual reports for the years 2012 to the second half of 2021 have been submitted to the authorities

1.3.13 Capital and operating costs

SRK has estimated the capital and operating cost based on the review and analysis of:

- Historical operating costs from 2018 to 2020, including a detailed analysis of the cost database and compilation of costs for forecast estimation;
- Projected capital cost for the LoM of Tantahuatay, including sustaining CAPEX
- Closure cost estimation developed by SRK

The summary estimated cost is shown in the Table 1-4

Table 1-4: Summary of estimated cost

Item **	Units	Forecast Cost	Estimated cost * (Inc. 10% Contingency)
Mining Open Pit			
Tantahuatay 2 - Ore	US$ / t ore	1.95	2.14
Tantahuatay 2 - Waste	US$ / t waste	1.75	1.92
Cienaga Norte - Ore	US$ / t ore	2.93	3.23
Cienaga Norte - Waste	US$ / t waste	2.94	3.24
Tantahuatay 2 EXT NW - Ore	US$ / t ore	1.92	2.11
Tantahuatay 2 EXT NW - Waste	US$ / t waste	1.83	2.01
Mirador - Ore	US$ / t ore	2.4	2.64
Mirador - Waste	US$ / t waste	2.42	2.66
Plant Processing			
Plant	US$ / t processed	1.32	1.46
Plant (with dynamic pad)	US$ / t processed	1.35	1.49
G&A Mine Operations	US$ / t processed	1.57	1.73
Sustaining CAPEX			
Tantahuatay 2	US$ / t processed	0.22	0.24
Cienaga Norte	US$ / t processed	0.22	0.24
Tantahuatay 2 EXT NW	US$ / t processed	1.6	1.76
Mirador	US$ / t processed	1.88	2.07
Off Site Cost (Corporate) ***	M US$ / year	2	2
Other costs			
Incremental cost ****	US$ / bench - t rock	0.013	0.014
Rehandle *****	US$ / t ore	0.73	0.73
Rinsing costs ******	M US$ / year	7.2	7.92
	US$ / oz Au recovered	65	71.5

The capital cost estimated by Buenaventura totals 101.43 MUS$ for the LoM. No further details on concepts or infrastructure are added to the amount received from Buenaventura.

SRK estimated the closure cost (additional details can be found in Section **¡Error! No se encuentra el origen de la referencia.**) for all three stages of the closure process and has included capital and operating cost estimation for a water treatment plant. A summary of total closure costs is shown in Table 1-5.

Table 1-5: Summary closure costs

Period	Progressive closure	Final Closure	Post Closure	Water treatment

	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)
2022-2027	54.65	6.60						
2028-2030			30.89	9.50				
2031-2051					2.30	0.36		
2022-2051							12.72	52.39

Source: SRK

** Amounts do not include 15% contingency*

2 Introduction

2.1 Registrant for Whom the Technical Report Summary was Prepared

This Technical Report Summary was prepared in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 through 1305) for Compañía de Minas Buenaventura S.A.A, (40.1% owner of Compañia Minera Coimolache) by SRK Consulting (Peru) S.A. (SRK) on the Tantahuatay project.

2.2 Terms of Reference and Purpose of the Report

The quality of information, conclusions, and estimates contained herein are consistent with the services provided by SRK's services, based on: i) information available at the time of preparation and ii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Buenaventura subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits Buenaventura to file this report as a Technical Report Summary with regulatory authorities in the USA pursuant to the SEC S-K regulations, more specifically Title 17, Subpart 229.600, item 601(b)(96) - Technical Report Summary and Title 17, Subpart 229.1300 - Disclosure by Registrants Engaged in Mining Operations. Except for the purposes regulated under provincial securities law, any other uses of this report by any third party is at said party's sole risk. Buenaventura continues to be liable for this disclosure.

The purpose of this Technical Report Summary is to report mineral resources, mineral reserves and exploration results.

The effective date of this report is March 15, 2022.

2.3 Sources of Information

This report is based in part on internal Company technical reports, previous feasibility studies, maps, published government reports, company letters and memoranda, and public information as cited throughout this report and listed in the References Section 24.

Reliance upon information provided by the registrant is listed in the Section 25 when applicable.

2.4 Details of Inspection

Table 2-1 summarizes the details of the property inspections conducted by each qualified person or, if applicable, indicates reason why a personal inspection has not been completed.

Table 2-1: Site Visits

Expertise	Date(s) of Visit	Details of Inspection	Reason why a personal inspection has not been completed
Metallurgy	February, 2022	All process areas from the delivery of ROM ore to the final product ready for shipment- Chemical metallurgical laboratory Precious metals smelter and refinery area	
Mining	February, 2021	Visit the open-pit operations zones (Tantahuatay 2 and Cienaga Norte) and surface ground inspection of the zones to be mined in the future (Mirador, Cienaga Sur, Tantahuatay 2 EXT NW). The visit includes the inspection of a bench in production (drilling/blasting stage) and the sequence of activities of the mining cycle. Visual inspection of slope stability condition, water presence in the open-pit zones and route of surface infrastructure Meeting with planning and operations mine staff to review the current mine operations, short term and long term plans	
Other Areas			Site Visit not completed due to Covid-19 travel restrictions

Source: SRK

2.5 Report Version Update

The user of this document should ensure that this is the most recent Technical Report Summary for the property.

This Technical Report Summary is not an update of a previously filed Technical Report Summary.

3 Property Description

The Tantahuatay mine (mining unit) is the property of Compañía Minera Coimolache S.A. (CMC). The ownership structure is as follows: 44,20% Southern Copper Corp., 40.10% Compañía de Minas Buenaventura S.A. (Buenaventura) and 15.70% Espro S.A.

CMC is a subsidiary of Buenaventura and is an open pit mine that produces gold and silver. The ore deposit was discovered by Buenaventura and operations began in 2011. At present, the mine is being operated by Buenaventura.

3.1 Property Location

Tantahuatay is located in the districts of Chugur and Hualgayoc, province of Hualgayoc, region of Cajamarca, in the Andes Mountains of northern Peru, in the continental divide of the basins of the Pacific Ocean (Chancay River Basin) and Atlantic Ocean (Llaucano River Basin).

It is located 15 km west of the city of Bambamarca and 85 km northwest of the city of Cajamarca. The property is located at an average elevation of 3900 MASL. The location is shown in Figure 3-1.

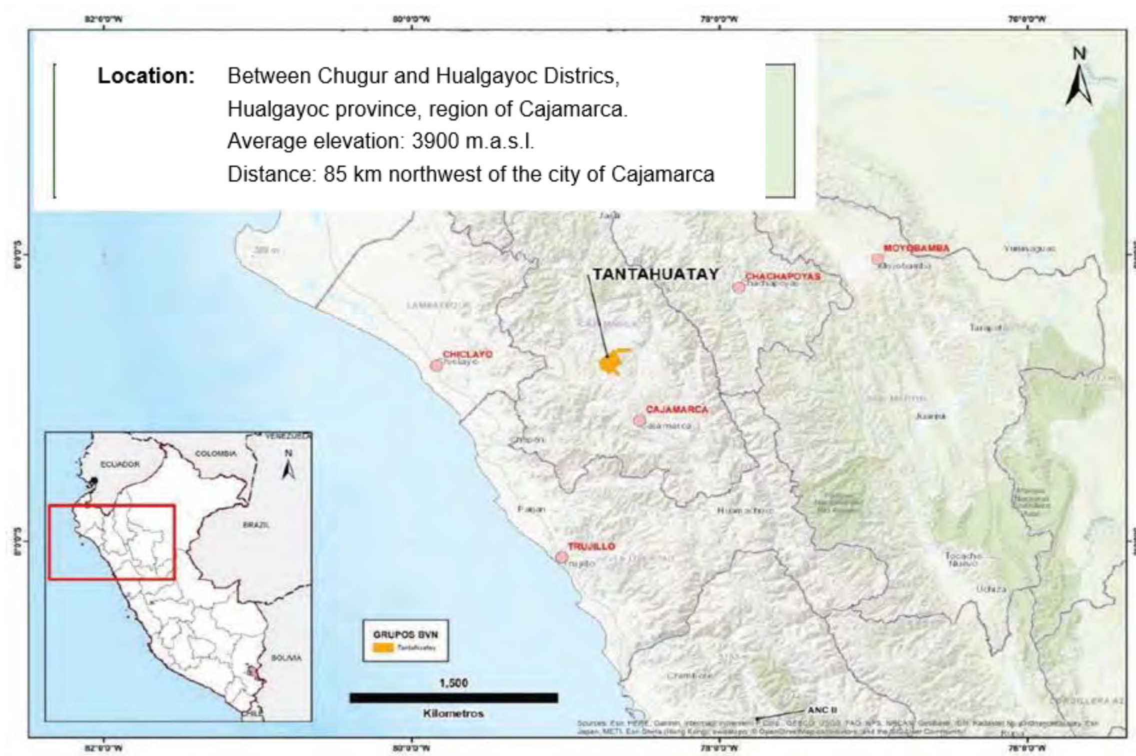


Figure 3-1: Tantahuatay Location Map
Source: (Buenaventura, 2021)

3.2 Property Area

At present, the mining unit covers an area of 17,742 ha (Figure 3-2). This orebody is an Au-Ag.Cu high-sulphidation epithermal deposit located in northern Peru. It is composed of the following deposits: Tantahuatay 2, Tantahuatay 4 (or Tantahuatay 2 EXT. NW), Cienaga Norte, Cienaga Sur, Mirador Norte, Mirador Sur and Tantahuatay 5 (Figure 3-3).

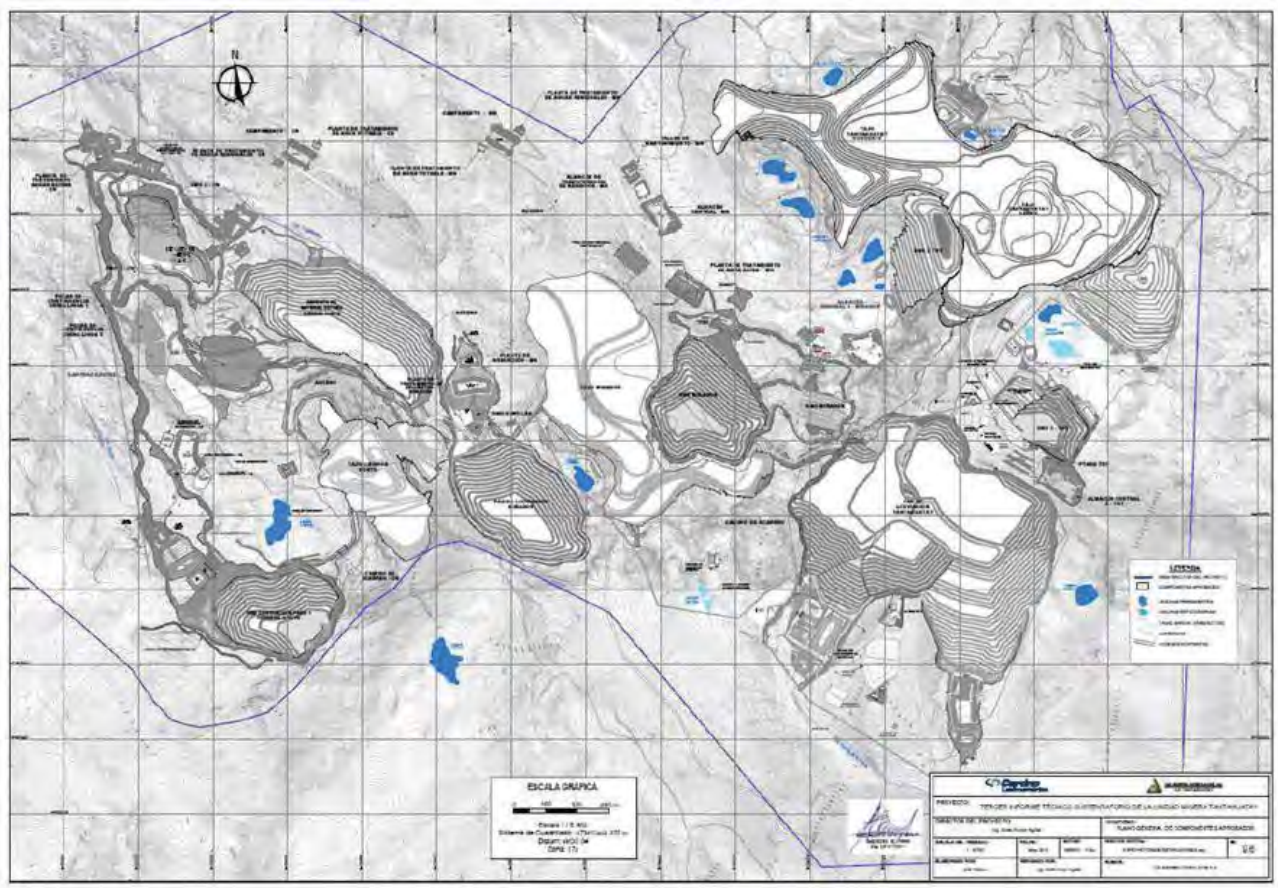


Figure 3-2: Property Area
Source: (Buenaventura, 2021)

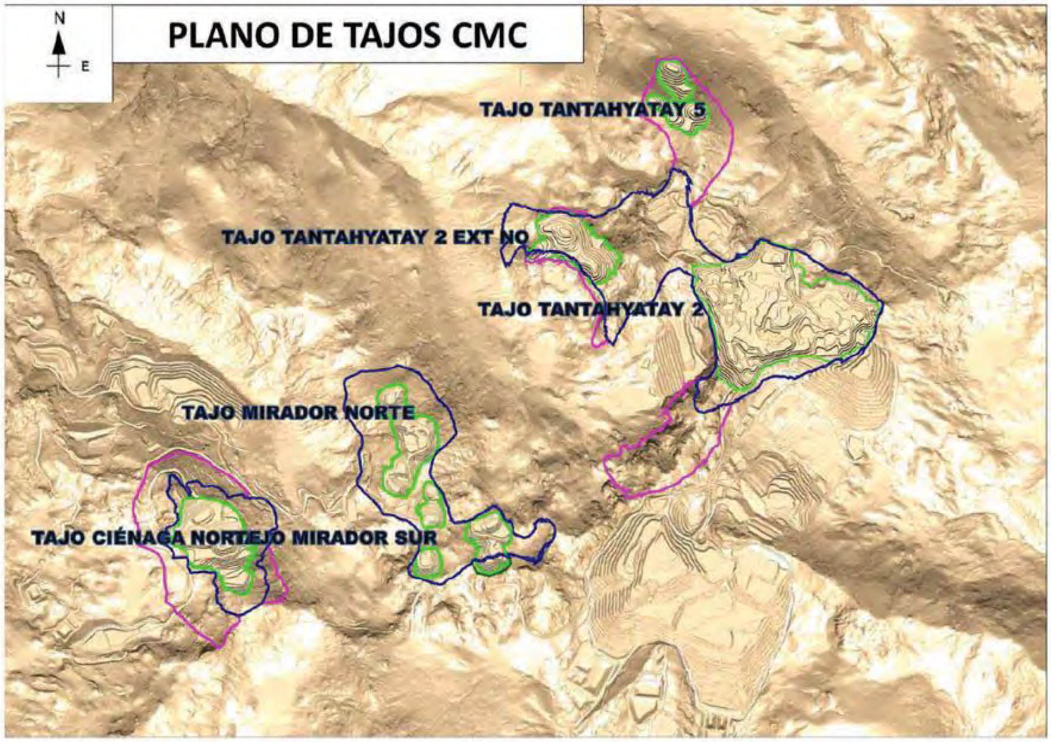


Figure 3-3: CMC open pits
Source: (Buenaventura, 2021)

3.3 Mineral Title, Claim, Mineral Right, Lease or Option Disclosure

The area of the concessions in which CMC performs exploitation and beneficiation activities covers approximately 22,400 ha. and the titleholder is Compañía Minera Coimolache S.A. Another 149.12 ha. correspond to a mining assignment owned by Southern Legacy Peru S.A.C.

There are 33 mining concessions and 1 beneficiation concession (beneficiation plant). These 33 concessions cover the area of the mines and the exploration projects. The mining operation and exploration are conducted within the mining concessions. SRK indicates that all the mining reserves and resources presented in this report are located within concessions controlled by CMC.

Table 3-1: Mineral Tenure Table

Claim ID	Claim Name	Owner	As reported Type	Status	Date Granted	Expiry Date	Area (Ha)
010000510L	ACUMULACION TANTAHUATAY	Compañía Minera Coimolache S.A.	Mining Lease	Active	26/07/2010	Does not expiry as long as statutory duties are paid	9,799.96
010160893	MUKI N°1	Compañía Minera Coimolache S.A.	Mining Lease	Active	23/08/1993		200.00
010160993	MUKI N° 2	Compañía Minera Coimolache S.A.	Mining Lease	Active	23/08/1993		700.00
010129794	MUKI N° 8	Compañía Minera Coimolache S.A.	Mining Lease	Active	11/03/1994		800.00
010320394	MUKI N° 10	Compañía Minera Coimolache S.A.	Mining Lease	Active	27/05/1994		100.00
010320494	MUKI N° 11	Compañía Minera Coimolache S.A.	Mining Lease	Active	27/05/1994		100.00
03003690X01	PERLA NEGRA 15	Compañía Minera Coimolache S.A.	Mining Lease	Active	03/06/1991		967.76
0302945AX01	PROVEEDORA N° 1-F-A1	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/09/1981		1.40
0302962AX01	PROVEEDORA N° 1-I	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/09/1981		13.66

Claim ID	Claim Name	Owner	As reported Type	Status	Date Granted	Expiry Date	Area (Ha)
03002958X01	PROVEEDORA N° 1-K	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/09/1981		0.04
0302958AX01	PROVEEDORA N° 1K-A-2	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/09/1981		1.03
0302958BX01	PROVEEDORA N° 1K-A-3	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/09/1981		36.89
03003647X01	TANTA HUATAY N° 1	Compañía Minera Coimolache S.A.	Mining Lease	Active	13/12/1990		0.39
03003651X01	TANTA HUATAY N° 5	Compañía Minera Coimolache S.A.	Mining Lease	Active	13/12/1990		374.91
03003696X01	TANTA HUATAY N° 7	Compañía Minera Coimolache S.A.	Mining Lease	Active	07/06/1991		999.75
03003699X01	TANTA HUATAY N° 10	Compañía Minera Coimolache S.A.	Mining Lease	Active	07/06/1991		999.76
03003700X01	TANTA HUATAY N° 11	Compañía Minera Coimolache S.A.	Mining Lease	Active	07/06/1991		999.75
03003703X01	TANTA HUATAY N° 14	Compañía Minera Coimolache S.A.	Mining Lease	Active	07/06/1991		999.76
03003704X01	TANTA HUATAY N° 15	Compañía Minera Coimolache S.A.	Mining Lease	Active	07/06/1991		624.85
010174815	TANTAHUATAY 30-2015	Compañía Minera Coimolache S.A.	Mining Lease	Active	23/02/2015		731.47
010011213	TANTAHUATAY 31	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/01/2013		900.00
010011113	TANTAHUATAY 32	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/01/2013		900.00
010011013	TANTAHUATAY 33	Compañía Minera Coimolache S.A.	Mining Lease	Active	02/01/2013		600.00
010274313	TANTAHUATAY 35	Compañía Minera Coimolache S.A.	Mining Lease	Active	01/08/2013		600.00
010336794	TANTAHUATAY N° 24	Compañía Minera Coimolache S.A.	Mining Lease	Active	03/04/1994		600.00
010336994	TANTAHUATAY N° 26	Compañía Minera Coimolache S.A.	Mining Lease	Active	03/06/1994		200.00
03000474X01	MARIA EUGENIA Nº 2	Southern Legacy Peru S.A.C.	Mining Assignment	Active	27/07/1960		4.14
03000352X01	MINA VOLARE	Southern Legacy Peru S.A.C.	Mining Assignment	Active	19/05/1959		23.99
03001219X01	NAPOLEON	Southern Legacy Peru S.A.C.	Mining Assignment	Active	06/08/1948		10.00
03000134X01	RITA MARGOT	Southern Legacy Peru S.A.C.	Mining Assignment	Active	16/07/1954		8.00
03000055X01	SINCHAO Nº 1	Southern Legacy Peru S.A.C.	Mining Assignment	Active	10/02/1953		1.00
03000057X01	SINCHAO Nº 3	Southern Legacy Peru S.A.C.	Mining Assignment	Active	10/02/1953		2.00
010048298	VALLE SINCHAO 3	Southern Legacy Peru S.A.C.	Mining Assignment	Active	03/03/1998		100.00

Source: (Buenaventura, 2021)

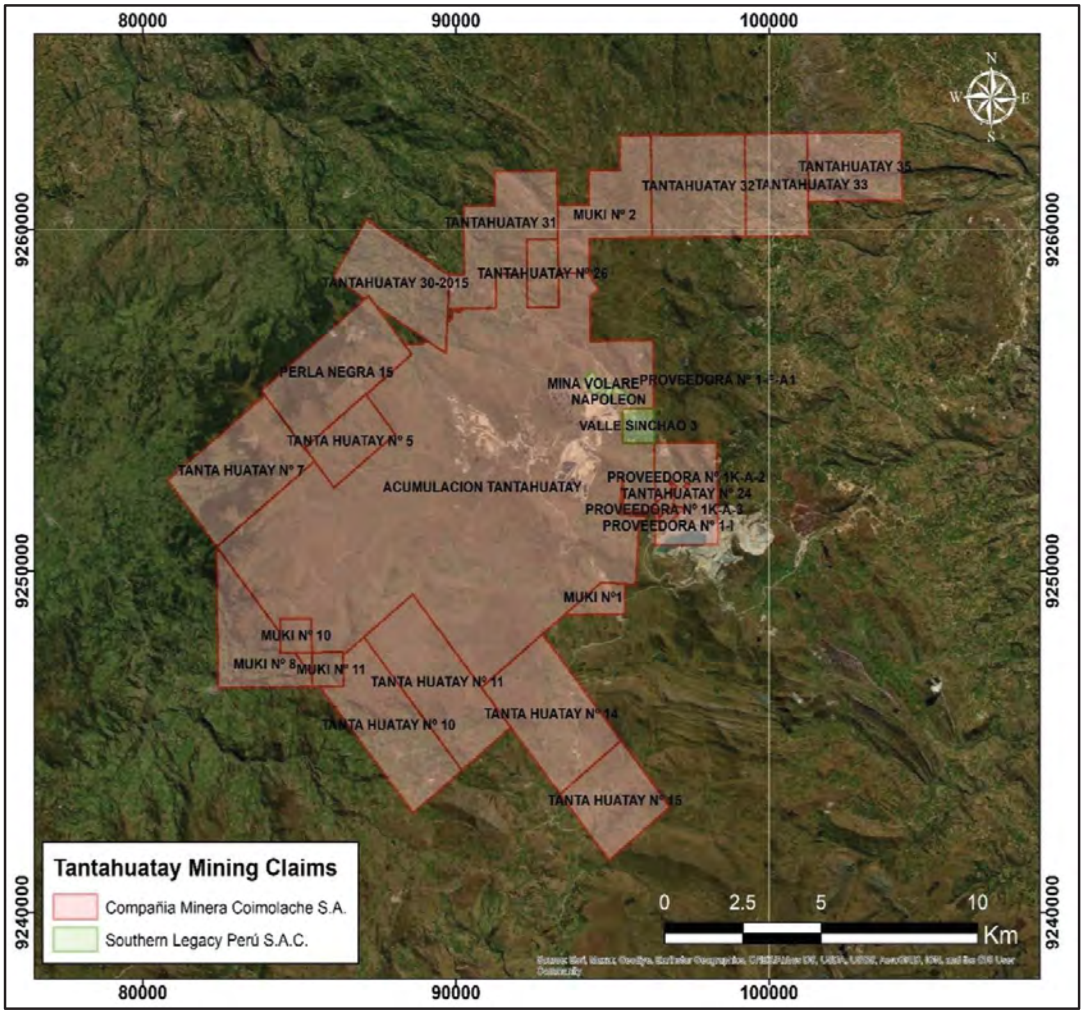


Figure 3-4: Mineral Tenure Claims
Source: (Buenaventura, 2021)

3.4 Mineral Rights Description and How They Were Obtained

Property and Title in Peru (INGEMMET, 2021)

Overview

The right to explore, extract, process and/or produce minerals in Peru is primarily regulated by mining laws and regulations enacted by Peruvian Congress and the executive branch of government, under the 1992 Mining Law. The law regulates nine different mining activities: reconnaissance; prospecting; exploration; exploitation (mining); general labor; beneficiation; commercialization; mineral transport; and mineral storage outside a mining facility.

The Ministry of Energy and Mines (MINEM) is the authority that regulates mining activities. MINEM also grants mining concessions to local or foreign individuals or legal entities, through a specialized body called The Institute of Geology, Mining and Metallurgy (Ingemmet).

Other relevant regulatory authorities include the Ministry of Environment (MINAM), the National Environmental Certification Authority (SENACE), and the Supervisory Agency for Investment in

Energy and Mining (Osinergmin). The Environmental Evaluation and Oversight Agency (OEFA) monitors environmental compliance.

Mineral Tenure

Mining concessions can be granted separately for metallic and non-metallic minerals. Concessions can range in size from a minimum of 100 ha to a maximum of 1,000 ha.

- A granted mining concession will remain valid providing the concession owner:
- Pays annual concession taxes or validity fees (derecho de vigencia), currently US$3/ha, are paid. Failure to pay the applicable license fees for two consecutive years will result in the cancellation of the mining concession
- Meets minimum expenditure commitments or production levels. The minimum are divided into two classes:
  - Achieve "Minimum Annual Production" by the first semester of Year 11 counted from the year after the concession was granted, or pay a penalty for non-production on a sliding scale, as defined by Legislative Decree N° 1320 which became effective on 1 January 2019. "Minimum Annual Production" is defined as one tax unit (UIT) per hectare per year, which is S/4,200 in 2019 (about US$1,220)
  - Alternatively, no penalty is payable if a "Minimum Annual Investment" is made of at least 10 times the amount of the penalty.

The penalty structure sets out that if a concession holder cannot reach the minimum annual production on the first semester of the 11th year from the year in which the concessions were granted, the concession holder will be required to pay a penalty equivalent to 2% of the applicable minimum production per year per hectare until the 15th year. If the concession holder cannot reach the minimum annual production on the first semester of the 16th year from the year in which the concessions were granted, the concession holder will be required to pay a penalty equivalent to 5% of the applicable minimum production per year per hectare until the 20th year. If the holder cannot reach the minimum annual production on the first semester of the 20th year from the year in which the concessions were granted, the holder will be required to pay a penalty equivalent to 10% of the applicable minimum production per year per hectare until the 30th year. Finally, if the holder cannot reach the minimum annual production during this period, the mining concessions will be automatically expired.

The new legislation means that title-holders of mining concessions which were granted before December 2008 will be obligated to pay the penalty from 2019 if the title-holder did reach either the Minimum Annual Production or make the Minimum Annual Investment in 2018.

Mining concessions will lapse automatically if any of the following events take place:

- The annual fee is not paid for two consecutive years.
- The applicable penalty is not paid for two consecutive years.
- The Minimum Annual Production Target is not met within 30 years following the year after the concession was granted.

Beneficiation concessions follow the same rules as for mining concessions. A fee must be paid that reflects the nominal capacity of the processing plant or level of production. Failure to pay such processing fees or fines for two years would result in the loss of the beneficiation concession.

Permits

In order to start mineral exploration activities, a company is required to comply with the following requirements and obtain a resolution of approval from MINEM, as defined by Supreme Decree No. 020-2012-EM of 6 June 2012:

- Resolution of approval of the Environmental Impact Declaration
- Work program
- A statement from the concession holder indicating that it is owner of the surface land, or if not, that it has authorization from the owners of the surface land to perform exploration activities
- Water License, Permission or Authorization to use water
- Mining concession titles
- A certificate of non-existence of archeological remains (CIRA) whereby the Ministry of Culture certifies that there are no monuments or remains within a project area. However, even with a CIRA, exploration companies can only undertake earth movement under the direct supervision of an onsite archeologist.

Other Considerations Producing mining companies must submit, and receive approval for, an environmental impact study that includes a social relations plan, certification that there are no archaeological remains in the area, and a draft mine closure plan. Closure plans must be accompanied by payment of a monetary guarantee.

In April 2012, Peru's Government approved the Consulta Previa Law (prior consultation) and its regulations approved by Supreme Decree Nº 001-2012-MC. This requires prior consultation with any indigenous communities as determined by the Ministry of Culture, before any infrastructure or projects, in particular mining and energy projects, are developed in their areas.

Mining companies also have to separately obtain water rights from the National Water Authority and surface lands rights from individual landowners.

3.5 Encumbrances

SRK is not aware of any material encumbrance that might affect the current resources or reserves as shown in this report. Potential modifications to infrastructure to expand or develop current mineral resources or reserves are explained in more detail in section 15 of this report.

3.6 Other Significant Factors and Risks

SRK is not aware of any other significant factor or risk that might affect access; the title; right; or capacity to conduct works on the mine's property.

3.7 Royalties or Similar Interest

- **Beneficiary: Regulus Resources**

  Status: Active

  Type of contract: Assignment

  Royalty: 5.0% NSR

  Term: 2022

  Comments: At this time there is no production and the royalty is not being paid

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Topography, Elevation and Vegetation

Physiographically, the project area is located in the Central Andes. This area is characterized by the presence of high plains, which are located 3,500 meters above sea level, and has been named the Puna or Altiplano Region (INGEMMET, 1987).

Four (04) physiographic systems have been identified: mountainous, slopes, hills and valleys. These physiographic units can be described as follows: moderately sloping to moderately steep mountain relief; slightly sloping to moderately sloping hillside and hill relief; and almost level to slightly sloping flat valley relief. The aforementioned types of relief occur between altitudes of 3,700 to 4,100 MASL.

In the project area, six (6) types of vegetation cover have been identified at the local level: the Andean Pajonal; high Andean areas with little and no vegetation; forest plantations; Andean agriculture; shrubby scrub; and Andean wetland (Ministerio del Ambiente, 2019)..

4.2 Means of Access

Access to Tantahuatay is by air (Table 4-1) from Lima (Jorge Chávez International Airport) travel to the city of Cajamarca (Armando Revoredo Iglesias International Airport), which is located 568km north of Lima. Hualgayoc can be accessed from the city of Cajamarca by travelling northwest approximately 85 km.

By land, the project can be accessed from Lima by traveling the Panamericana Norte highway; taking the detour to the city of Cajamarca; and then continuing on to the project as shown in (Table 4-2).

Table 4-1: Acceso Aéreo y Terrestre al Área del Proyecto

Section	Distance (km.)	Status
Lima – Cajamarca	568	568 (Via air)
Cajamarca – Proyecto	85	Paved road
Distancia Total (km)	**85**	

Source: Environmental Management CMC

Approximate time by air 1 hour.

Road travel time 2 hours.

Table 4-2: Land Access of the Project Area

Section	Distance (km.)	Road status
Lima – Cajamarca detour	741	Paved
Cajamarca detour – Cajamarca	180	Paved
Cajamarca – Project	85	unpaved
Distancia Total (km.)	**1,006**	

Source: Environmental Management CMC

Approximate travel time 14 hours.

4.3 Climate

The Tantahuatay Mine is located in an area with two (2) types of climate according to the classification map issued by the National Meteorology and Hydrology Service (SENAMI): a semi-dry and cold climate and a temperate and rainy climate.

The average temperatures recorded from 2007 to 2017 at different monitoring stations (Exploraciones, Campamento Definitivo, Campamento Mirador) fluctuated between 3.9 ° C and 8.1 ° C. The mining unit operates during year-round (Ministerio del Ambiente, 2019).

4.4 Infrastructure Availability and Sources

4.4.1 Water

Currently, the water supply comes from the following sources:

Table 4-3: Water supply

Source	Name	Resolution number	Volume Annual authorized (m³)	Volume Of water Used (m³) 2019
Well	PW 1A	Resolución Administrativa N° 567-2010-ANA-ALA-CAJ	63,072.00	30,699.00
Well	PW 2A	Resolución Administrativa N° 567-2010-ANA-ALA-CAJ	189,216.00	63,976.00
Spring	Amalia Spring	Resolución Administrativa N° 427-2007-AG-INRENA/ATDRCH-L	1,576.80	-

Source: (CMC, 2021)

Water consumption is approximately 33.2% of the total authorized volume; of this total, 62% is for domestic use (camps and offices). It is important to mention that in 2019, 97% of the water used in the process came from recirculation and / or from the water storage pools generated in the rainy season.

4.4.2 Electricity

CMC has a 22.9 kV transmission line, run by CONENHUA (Consorcio Energetico de Huancavelica S.A., a 100% subsidiary of Buenaventura). The power supply is delivered through a bypass that connects with a transmission line that feeds the Process Plant and the powerhouse; subsequently, electricity is transferred to the power line that feeds complementary services.

4.4.3 Personnel

Most of the staff working on the Project live in the camp and in nearby communities. Skilled labor comes from different provinces in the region and the country. As of December 31, 2020, the total workforce of the project, counting both Coimolache Company's personnel and contractors' employees, totaled 1,832 people (Buenaventura, 2021)

4.4.4 Supplies

Supplies are provided by the company's vendors. Providers are both local and from other regions of the country.

5 History

In the Tantahuatay Project, initial exploration took place from 1991 to 1998 by Southern Peru and in 1992 Compañía Minera Coimolache S.A. (CMC) was established with the following shareholder structure: 40.09% held by Compañia de Minas Buenaventura S.A.A. (BVN); 44.24% by Southern Cooper Corporation (SPCC); and 15.67% by ESPRO S.A.C.

5.1 Background

Tantahuatay's history is intertwined with the origins of the Hualgayoc Mining District, a fruitful mining center in northern Peru. The first work in the area was conducted in 1969-1971 by the British Geological Survey (BGS), which engaged in sediment sampling in the region and the district and identified seven anomalies in the Tantahuatay and Sinchao creeks. In 1970-1991, Cia. Minera Colquirrumi S.A. developed exploration and exploitation work in the Hualgayoc district.

The first works during SPCC's administration involved geological mapping, rock and soil geochemistry in trenches and test pits. In 1994-1998, the company conducted 27,411 m of diamond drilling in the sectors of Tantahuatay, Mirador, Cienaga and Peña de las Águilas as Calera Orbamas S.A. (the company's name was CMC at that time).

BVN took over administration in 1999 and conducted underground exploration for oxides through two tunnels in the deposits of Tantahuatay 2 and Cienaga Norte respectively (BISA) and carried out diamond infill drilling in the deposits of Tantahuatay 2 (BISA) and Cienaga Norte, Mirador Norte (CEDIMIN) in 2002 and later in 2006-2007 for a total of 6,063 meters. The project is part of the final exploration plans of Cia. Minera Colquirrumi of the Buenaventura group.

CMC began the pre-feasibility stage in 2007. The EIA was completed with a public hearing in Hualgayoc in 2008, and construction began in 2009. The oxide operation began in June 2011; the reserve inventory was 658 KOz Au between the Tantahuatay 2 and Cienaga Norte deposits at a cut-off grade of 0.3 g/t Au.

5.2 Exploration History

The exploration history of the Tantahuatay Project can be divided into several phases, which combined ultimately led to the discovery and development of the mine's resources. A summary of these exploration phases is presented below (Figure 5-1).

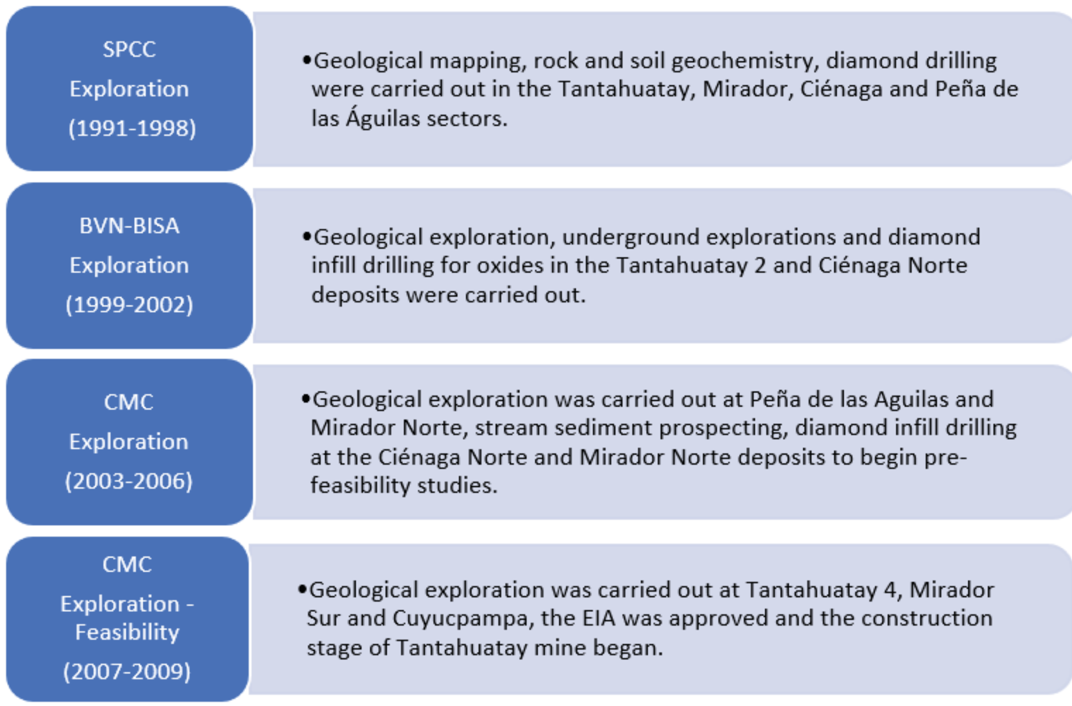


Figure 5-1: Main exploration stages throughout the development of the Tantahuatay project; the Regional and District exploration stage before Buenaventura's administration

Source: (Buenaventura, 2021)

6 Geological Setting, Mineralization, and Deposit

6.1 Regional Geological Framework

The project is located in the Hualgayoc mining district, within the Chicama-Yanacocha corridor, in the Cajamarca-Cutervo deflection of the Cordillera Occidental of northern Peru (Domain VI, INGEMMET) (Lecaros et al., 2000; Carlotto et al., 2009, 2010), sector corresponding to metallogenic belt XXI, related to Miocene epithermal Au-Ag deposits (INGEMMET, 2021).

Regionally, it is mainly formed by Mesozoic sedimentary rocks and Cenozoic volcanic/volcano-sedimentary sequences deposited on a Paleozoic basement (Figure 6-1). The base of the stratigraphic column is defined by Lower Cretaceous siliciclastic rocks corresponding to the Goyllarisquizga Group. Overlying sequences of limestones and siliciclasts of the Inca, Chulec, Pariatambo Formations and the Pulluicana Group of the Upper Cretaceous are evident. Diorites, porphyritic monzonites, subvolcanic stocks and andesitic sills of the Eocene, intrude the Cretaceous sedimentary rocks, such as the porphyritic diorite of San Miguel, Puente de la Hierba Creek and the Coimolache sill, prior to the Miocene magmatism (Paredes, 1956; Ericksen et al. 1956; Macfarlane et al.,1994).

The main mineralization systems in the Tantahuatay-Hualgayoc region are associated with bimodal Miocene magmatism-volcanism events, such as porphyritic diorite stocks as in Cerro Corona of 14.4 Ma (Macfarlane et al., 1994), dacitic-andesitic domes as in Cerro Jesús, San José and Hualgayoc of 9.1 Ma (Macfarlane et al., 1994) (Figure 6-2). Crowning the column are Upper Miocene to Pleistocene tuffs and ignimbrites as well as recent colluvial and eluvial deposits.

The lithology/stratigraphy of Cordillera Occidental in the region (Cajamarca) is summarized based on the work of Wilson (1984) and his references included, as described below.

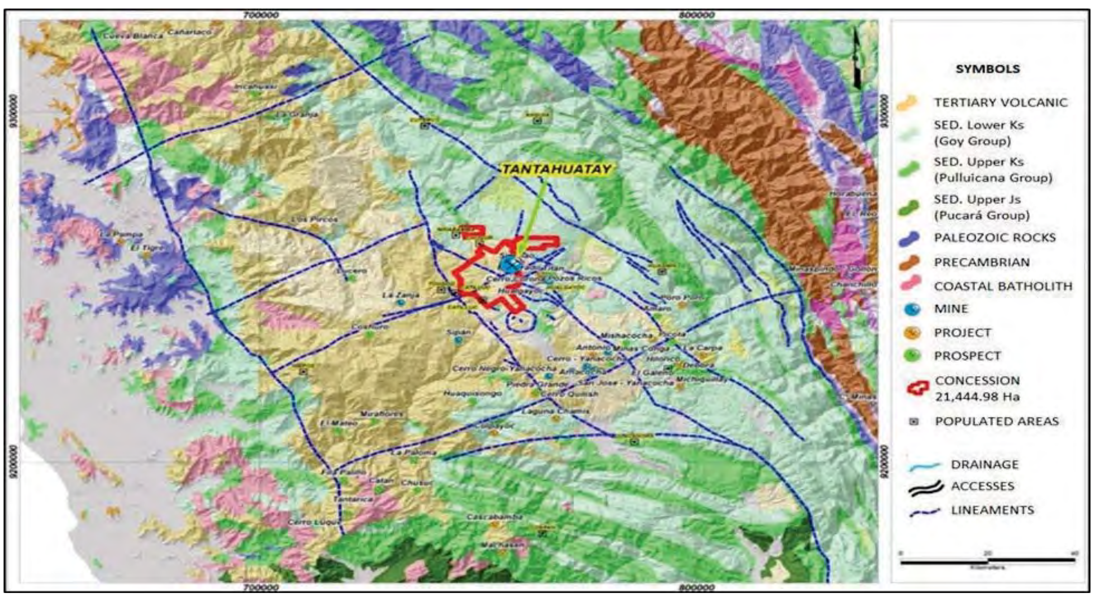


Figure 6-1: Regional geologic map.

Source: CMC

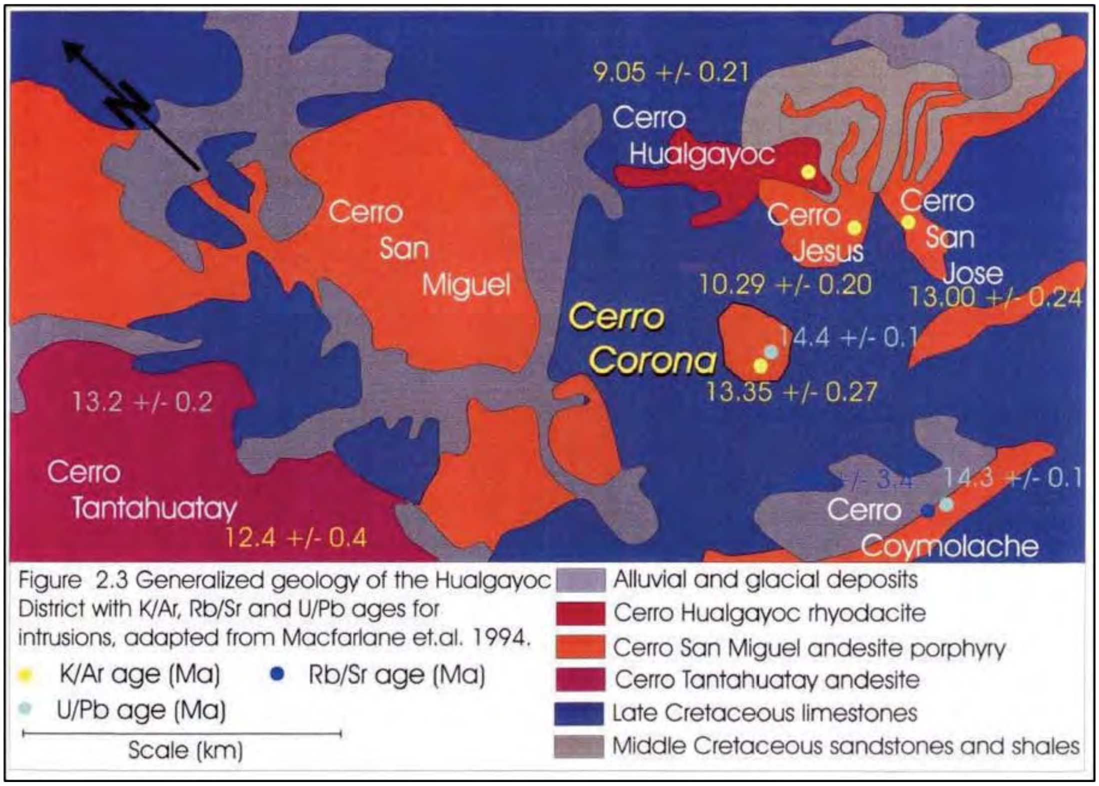


Figure 6-2: Plan view of the simplified geology of Hualgayoc district.

Source: James, 1998

6.2 Stratigraphy

Excerpted from Auditoría de Estimación de Recursos y Reservas de la Mina Tantahuatay, Región Cajamarca, Peru. (SRK, 2020)

6.2.1 Goyllarisquizga Group

The oldest rocks in the region belong to the Goyllarisquizga Group, mainly composed of sandstone and quartzite sequences with shale intercalations; this group is divided into the following formations: Chimú, Santa, Carhuaz, and Farrat.

The Chimú Formation consists of sandstones, quartzites and shales with an estimated thickness of 600 m. The Santa Formation consists of gray shales with intercalations of marly limestones and dark gray sandstones, and conformably overlies the Chimú Formation. The Carhuaz Formation consists of brown and grayish shales, sandstones and quartzites, which are stratified in thin and medium layers with variable thicknesses. The Carhuaz Formation overlies the Santa or Chimú Formation. The Farrat Formation consists of medium to coarse grained white quartzites and sandstones, which present cross-bedding. The base of this formation conformably overlies the Carhuaz Formation.

6.2.2 Inca Formation

The Inca Formation is composed of brown to reddish to orange-colored sandstones and shales, with calcareous intercalations (i.e., massive sandy limestones); it varies in thickness to more than 100 m, and unconformably overlies the clastic sediments of Goyllarisquizga Group.

6.2.3 Chúlec Formation (Crisnejas HH.)

The Chúlec Formation consists of nodular shales, marls and limestones of cream or yellowish-gray colors with an average thickness of 250 m. The Chúlec Formation conformably overlies the Inca Formation.

6.2.4 Pariatambo Formation (Crisnejas Fm.)

The Pariatambo Formation consists of thin layered sequences of thin black limestones, with intercalations of shales and tuffs. Generally, this formation is uniformly stratified with a thickness between 100 to 300 m. The Pariatambo Formation conformably overlies the Chúlec Formation.

6.2.5 Pulluicana Group

The Pulluicana Group is composed of Yumagual and Mujarrún formations, which consist of approximately 800 to 1,100 m of sequences of grayish clayey limestones, brown marls, grayish or greenish shales and sandstone. This group lies conformably and unconformably parallel to the Pariatambo Formation.

6.2.6 Quilquiñán Group

The Quilquiñán Group is composed of the Romirón and Cóñor formations, which generally consist of 100 to 200 m of dark gray friable shales and bluish marls with calcareous intercalations. The Quilquiñán Group conformably overlies the Pulluicana Group.

6.2.7 Cajamarca Formation

The Cajamarca Formation consists of 100 to 400 m of thin and pure limestones of grayish or whitish color, with regular and uniform bedding. The Cajamarca Formation overlies the Quilquinán Group.

6.2.8 Celendín Formation

The Celendín Formation consists predominantly of thin layers of yellowish or dark cream to brown nodular clayey limestone, with intercalations of gray or bluish-gray marls and shales. The thickness of the Celendín Formation is variable, but it is estimated to reach up to 400 m and conformably overlies the Cajamarca Formation.

6.2.9 Chota Formation

The Chota Formation consists of a sequence of conglomerates interbedded with clays and red sandstones. The Chota Formation lies unconformably parallel to the Cajamarca and Celendín formations.

6.2.10 Calipuy Group

The Calipuy Group is composed of up to 3,000 m of volcanic sequences, mainly andesitic (80%) (i.e., tuff breccias, lahars or flow breccias), with intercalations of basaltic and rhyolitic flows, dacitic tuffs and sedimentary rocks that are widespread in the Cordillera Occidental and deposited between 54.8 ± 1.8 Ma and 8.2 ± 0.2 Ma; this includes several informal sequences, for example: Llama, Porculla, Huambos, Chilete and Tembladera volcanics (Hollister and Sirvas, 1978; Benavides, 1999; Navarro et al., 2008 - and references therein).

The volcanic centers/events (Figure 6-3) show a NW-SE trend, coinciding with regional fault/fracture patterns, and five (5) stages of volcanism, which migrate progressively in an easterly direction.

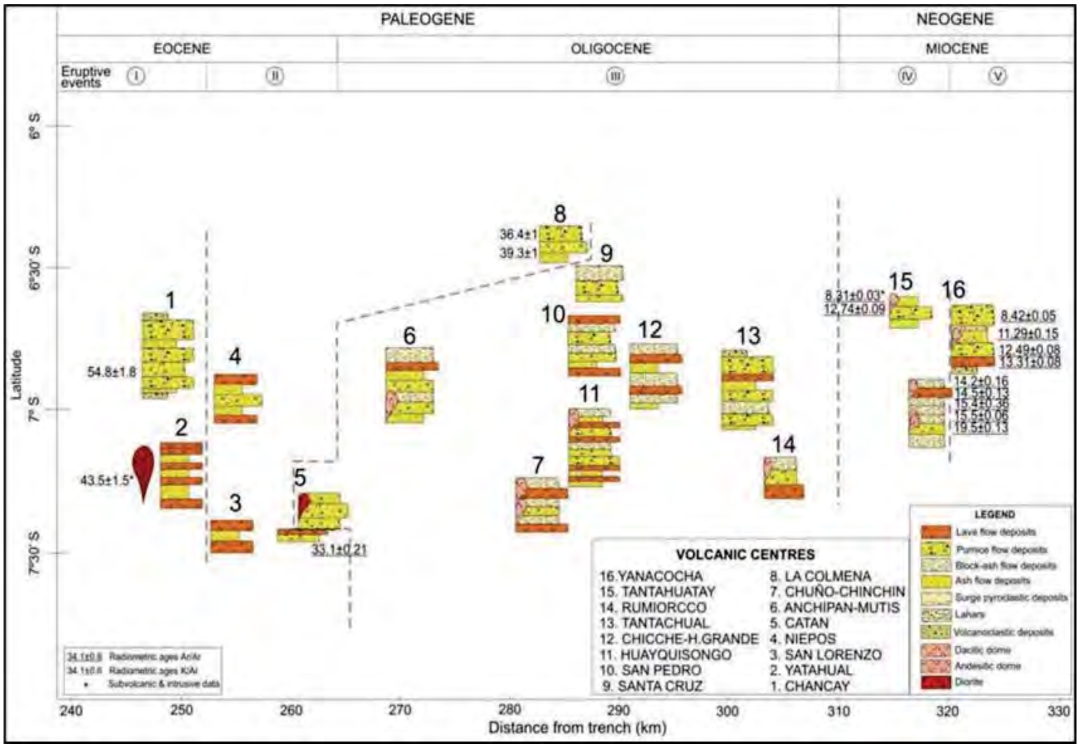


Figure 6-3: Schematic diagram showing the spatial and temporal evolution of Calipuy Group volcanics in the Cajamarca area.

Source: Navarro et al., 2008 (SRK, 2020)

Quaternary

The fluvioglacial deposits are exposed in the Hualgayoc river valley, on top of the Cretaceous rocks and partially covering the surface of the intrusive (granodiorite). A small fluvioglacial deposit has been located in the foothills of Cerro Coimolache and in the pampas of Quilcate, as well as in Cuyucpampa. The recently formed wetlands are originated by the accumulation of organic matter in a humid reducing environment. In the work area, deposits are located in the pampas of Cuyucpampa, Muyoc and Quilcate.

6.3 Intrusives

Several small to sub-volcanic Tertiary stocks and intrusive bodies (4) are recognized in the Cordillera Occidental (i.e., Hualgayoc, La Granja, Cerro Corona, Chailhuagon, and El Galeno). Their composition is generally dacitic, but varies to dioritic and some are associated with polymetallic and copper mineralization.

Intrusives in the Hualgayoc district are divided into 2 groups: Lower Tertiary and Middle to Upper Tertiary. Lower Tertiary intrusives have a granodioritic to dioritic composition and include: Cerro San Miguel, Cerro San José (13.00 ± 0.24 Ma (K/Ar)), Cerro Jesús (10.29 ± 0.20 Ma (K/Ar)), Cerro Corona (13.35 ± 0.27 Ma (K/Ar) and 14.4 ± 0.1 Ma (U/Pb)) and Cerro Coimolache (45 ± 3.4 Ma (Rb/Sr) and 14.3 ± 0.1 Ma (U/Pb) (Macfarlane et al., 1990; Macfarlane et al., 1994; James, 1998), see Table 6-1 for a dating summary.

Middle to upper Tertiary intrusives are smaller in volume than those of the lower Tertiary with a dioritic to monzonite composition and include Cerro Hualgayoc (9.05 ± to 0.21 Ma (K/Ar)) and Cerro

Tantahuatay (12.4 ± 0.4 Ma (K/Ar) and 13.2 ± 0.2 Ma (U/Pb)). Other smaller bodies (at least 4) are mapped within the Coimolache concessions.

Table 6-1: Radiogenic dating of intrusives in the Hualgayoc district.

Sample	Location	Sample Type	Mineral	Age (Ma)	Reference[1]	Method
87009	Yanacancha Sill	Propylytized andesite	K-feldspar	16.8 ± 0.4	1	K-Ar
86027	Cerro Hualgayoc	Rhyodacite	Biotite (magmatic)	9.05 ± 0.21	1	K-Ar
86039	Cerro Corona	Potassically altered felsic pluton	Biotite (hydrothermal)	13.35± 0.27	1	K-Ar
85019	Cerro San Jose	Seriticized andesite	Muscovite	13.00 ± 0.4	1	K-Ar
86011	Atahualpa mine	argillically altered felsic sill	Muscovite	13.48 ± 0.19	1	K-Ar
87007	Cerro Jesus	Argillically altered andesite	Muscovite	10.29 ± 0.20	1	K-Ar
	Cerro Tantahuatay	Acid-sulphate alteration	Coarse hypogene alunite	12.4 ± 0.4	1	K-Ar
	Cerro Hualgayoc	Rhyodacite	Biotite (magmatic)	7.9 ± 0.3	1	K-Ar
	Cerro Jesus	Argillically altered andesite	Whole-rock	14.3 ± 0.7	2	K-Ar
	Cerro Coymolache	Propylytized andesite	Whole-rock	11.8 ± 0.6	2	K-Ar
	Los Mantos	Argillically altered andesite	Whole-rock	10.5 ± 0.5	2	K-Ar
	Cerro Hualgayoc	Rhyodacite	Whole-rock	7.2 ± 0.35	2	K-Ar
9602	Cerro Corona	Quartz dioirte	Zircon	14.4 ± 0.1	3	U-Pb
9605	Cerro Coymolache	Andesite	Zircon	14.3 ± 0.1	3	U-Pb
9699	Cerro Tantahuatay	Anedsite	Zircon	13.2 ± 0.2	3	U-Pb

[1]References are: 1 = Macfarlane (1989), 2 = Borredon (1982), and 3 = Mortensen (1997).

Source: James, 1998

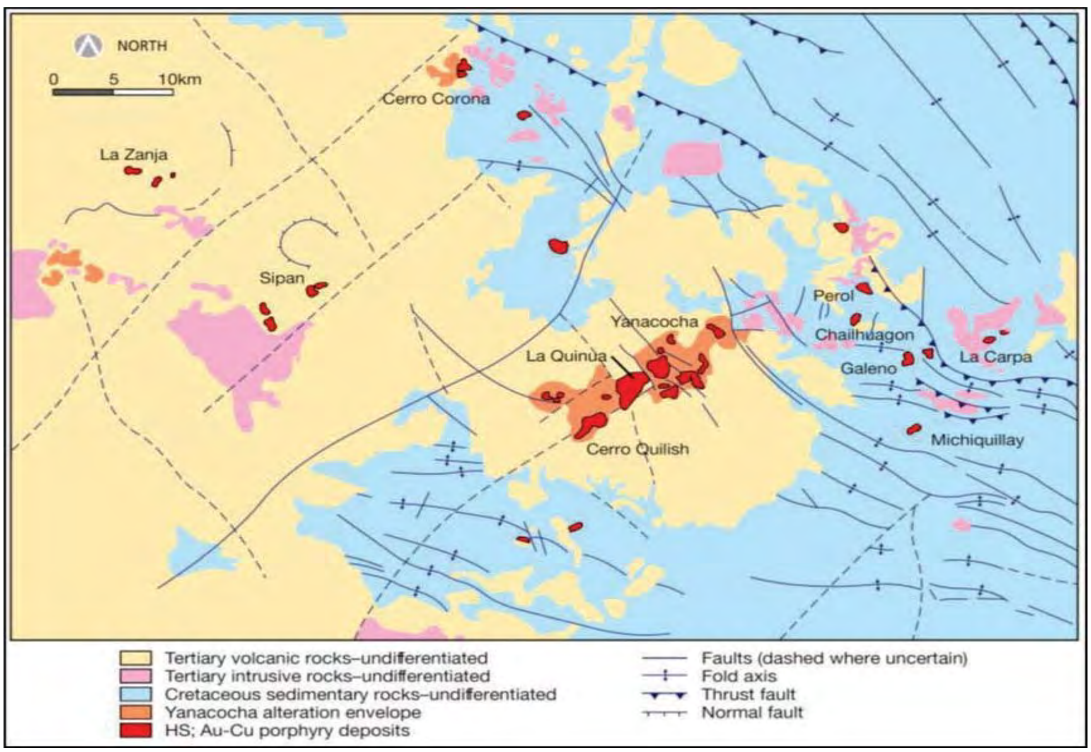


Figure 6-4: Regional geology around Yanacocha (Teal and Benavides, 2010). Notes the presence and distribution of Tertiary intrusives (pink) and porphyry (Au-Cu) deposits (red).

Source: Teal and Benavides, 2010 (SRK, 2020)

6.4 Regional Tectonic Framework

Excerpted from Auditoría de Estimación de Recursos y Reservas de la Mina Tantahuatay, Región Cajamarca, Peru. (SRK, 2020)

The deformation events/phases described below are summaries based mainly on authors such as Megard (1984), Jaillard and Soler (1996), Benavides (1999) and their included references.

6.4.1 Inca Deformation (I & II)

The deformation events of Inca I (59-55 Ma) and II (43-42 Ma) phases were focused in the Cordillera Occidental domain (i.e., between the MTFB and the Coast batholith) associated with upright folds and convergence to the east, concentric or angular (Inca belt of folds and reverse faults). Due to geological contrasts, folds were generated by flexural movements and are disharmonic (Benavides, 1999). Some reverse faults, dipping to the west, were generated within the anticline axis. This phase of deformation represents significant compression, shortening and sub-horizontal displacement. Benavides (1999) considers that the curvature of the Andean trend from NW-SE to E-W (Chimu Andean trend) in Cajamarca is associated with the movement of the Coastal Domain to the north-northeast. In contrast, Mitouard (1992) states that the NW-SE to E-W Andean trend curvature would be associated with the closed geometry of Chicama basin, bounded, to the east, by the N160-trending western edge of the Marañón geanticline and, at Cajamarca latitude, by a NE-SW paleogeographic boundary (Figure 6-5).

6.4.2 Quechua I Deformation

The Quechua I phase deformation (17 Ma) represents another significant compression event, which includes the reactivation of NNW-SSE oriented faults (Paleozoic normal faults), which is overprinted over the Inca belt area of folds and reverse faults (Benavides, 1999).

6.4.3 Post-Quechua I, Exhumation

Since the middle Miocene, after the Quechua I deformation phase, an extension and uplift event, associated with the formation of inter-mountain basins, is recognized. Exhumation occurred with a rate between 0.2 to 0.3 mm/a (i.e., Laubacher and Naeser, 1994; Gregory-Wodzicki, 2000; Michalak, 2013).

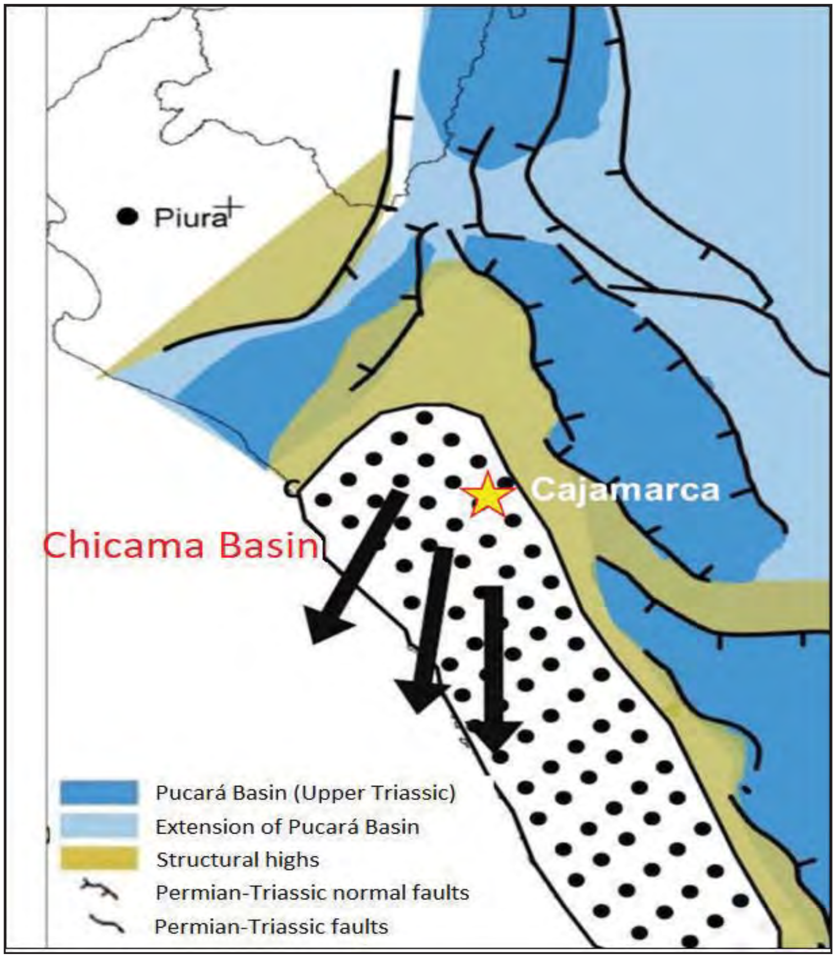


Figure 6-5: Paleogeographic map of the Chicama basin bounded eastward by the N160-trending western edge of the Marañón geanticline and, at Cajamarca latitude, by a NE-SW paleogeographic boundary.

Source: Modified from Carlotto, V. et al, 2009 (SRK, 2020).

6.5 Local Geology

Excerpted from Auditoría de Estimación de Recursos y Reservas de la Mina Tantahuatay, Región Cajamarca, Peru. (SRK, 2020)

The Tantahuatay deposit is conformed by four main sectors: Tantahuatay, Mirador (Mirador Norte and Mirador Sur), Cienaga (Cienaga Norte and Cienaga Sur) and Peña de Las Aguilas (Figure 6-6).

The oldest rocks in Tantahuatay area belong to the Inca, Chúlec, Pariatambo and Yumagual formations (part of Pulluicana group), which mainly consist of limestones, and there is a minor presence of marls, shales, and sandstones (Figure 6-7). The Cretaceous sedimentary rocks are folded, oriented NW-SE to E-W, due to Inca I and II deformation phases (i.e., Inca belt of folds and reverse faults).

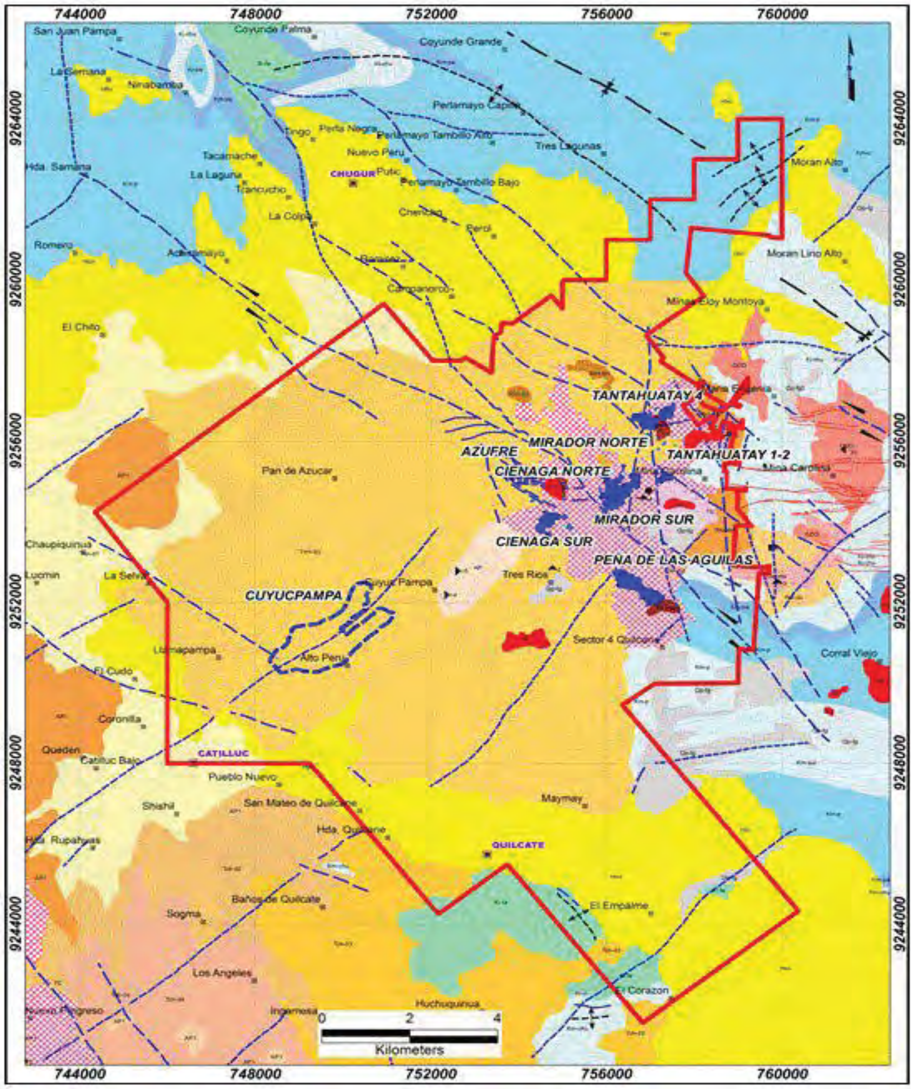


Figure 6-6: Location of the main sectors of Tantahuatay deposit.

Source: (Buenaventura, 2021)

The area's geology is characterized by the occurrence of mostly volcanic units that are found overlying the limestones of the Cretaceous Pulluicana Group, which outcrops east of Tantahuatay, where they are cut by a felsic, granodioritic to dioritic intrusive.

A thick volcanic sequence has developed in the central part of the project, consisting of aphanitic to hornblende basaltic andesites towards the base. This is followed by a sequence of porphyritic andesitic lavas, which are crowned by an andesitic pyroclastic sequence and lithic tuffs of dacitic composition that outcrop very discontinuously. No Quaternary tuffs and ignimbrites have been recognized.

These sequences of volcanic units are intruded by hydrothermal breccia bodies, and locally by dacitic-rhyodacitic domes found as erosion remnants. Breccias in particular originate diverse zones and types of hydrothermal alterations considerably.

The main lithological units described in the project are:

Andesite (And)

Lava andesites are dark gray to blackish in color (Unaltered), generally present medium grain porphyritic texture with finer textural variations, composed of up to 20 or 30% of plagioclase phenocrysts and up to 5% of mafics (Hornblendes, pyroxenes), with scarce primary quartz, in a dark aphanitic matrix. Phenocryst casts are commonly altered to chlorites, carbonates, or clay. Andesitic rocks are characterized by their flow direction, which is determined by the plagioclase orientation. Effusive rocks are, in general, porous and permeable.

These rocks are widely distributed in the deposit area and are usually highly altered by advanced argillic alteration, or host zones of massive or vuggy silica.

Crystal Tuff (T-Xs)

T-Xs; medium to fine granular txt whitish to pinkish, contain weak to strong injection of silica in the mtx (depending on the alteration intensity), with broken feldspar crystals, and minor content of augite, biotite, leucite, contain weak to moderate development of quartz eyes (Dacitic).

Crystal-lithic Tuff (T-Cl)

Lithic tuffs vary in color from light brown to pinkish. The rock mineralogy is formed by irregular fragments of plagioclase crystals (subhedral to anhedral), with variable amounts of biotite, quartz (1-3%), in a moderately solidified aphanitic matrix. The lithics present are siliceous fragments, quartzites, sandstones, andesites, argillaceous fragments, whose sizes vary from 2 mm to 2 cm. These lithics are heterogeneously distributed and for the moment do not show a preferential distribution horizontally or vertically in the deposit; the lithics are also accompanied by silica - pyrite - enargite veinlets and are generally of dacitic composition.

Early Porphyries (PTEe)

Characteristics: Intrusives of dacitic composition dominated by A-type quartz veinlets, with strong to intense alteration; the mineralization developed is arsenical copper with grade values > 0.4%; the porphyry may contain early veinlets.

Early Intramineral Porphyries (PITEe)

Characteristics: These porphyries are generally dacitic in nature dominated by somewhat sinuous sutured quartz veinlets (Type B), with sporadic Mo halos and truncate A-type quartz veinlets; additionally they often exhibit xenoliths of A-type quartz veinlets (refractory Qz). They show moderate advanced argillic alteration with muscovite relicts and arsenical Cu mineralization with grades between 0.2-0.5 %.

Late Intramineral Porphyries (PITAe)

Characteristics: They are dacitic or andesitic in nature, with advanced argillic alteration development of weak to moderate intensity, contain straighter and thinner quartz veinlets with suture (Type B), and moderate sulfide veinlets content (py), with alunite, pyrophyllite or sericite halo (Type D); mineralization is arsenical Cu (vnlts, diss), with grade values between 0.1 - 0.2 % Cu.

Dacite / Andesite (LATE)

Porphyritic intrusives that are emplaced or intrude pre-existing rocks, such as volcanic sequences (Coherent-fragmental) or porphyry systems, are greenish to whitish in color, and occur in irregular bodies or dikes.

They present phaneritic to porphyritic textures, with development of plagioclase crystals, biotite, hornblendes and quartz eyes in the case of dacites. The intensity of hydrothermal alteration is weak to null with development of propylitic or argillic alteration. Alteration style is generally selective. Sometimes they present xenoliths from another type of rock and lack economic mineralization (barren); they only contain py (Diss - vnlts) with less than 2 % contents.

Hydrothermal Breccias (BxH)

These hydrothermal breccias carry the mineralization; they are located in weakness zones and are constituted by angular to subrounded polymictic fragments in a fine-grained quartz matrix, containing cavities that are filled by metallic hydrothermal minerals, post brecciation.

For the oxide zone, the matrix is enriched in iron oxides and invaded by quartz, alunite, pyrophyllite and barite in minor proportion.

Also in some breccias the best mineralization is linked to fragments, the hydrothermal alteration is advanced argillic with associations of alunite, pyrophyllite, dickite, diaspore or they are usually siliceous. Breccia geometries are generally tabular and deepen sub-vertically and are spatially arranged in the form of an inverted cone.

BxH-Oxidized: its best representation is in Tajo Tantahuatay 2; these are matrix-supported breccias, with angular to subrounded clasts cemented by quartz, plus goethite 10%, jarosite 5%. It registers average grades of: 0.5 g/t Au, 15 g/t Ag.

Phreatic Breccias

Occurs as tabular, semicircular and elliptical bodies at surface, varying in texture from clast-supported to matrix-supported poorly sorted, may contain angular to subrounded polymictic fragments of massive silica, quartzite, siltstones, volcanics, T-Xs, vuggy silica or porphyry clasts, which are embedded in a rock dust matrix, commonly altered to advanced argillic, silicified or argillic.

Sedimentary Rocks.

Limestone (Clz). Rock of chemical origin formed mainly by calcite. They are rocks composed by: fossils, etc. It may or may not present calcium carbonate cement of chemical origin by supersaturated precipitations of calcium carbonate. The rock matrix may have calcium carbonate entirely or a variable percentage of other minerals such as clays, quartz and feldspar. These rocks are mostly originated in marine sedimentary environments such as: carbonate platforms, reefs, atolls and also in deep marine environments and fed by the accumulation of shells and skeletal parts of planktonic organisms.

Sandstones (Arn). Sandstones are rocks made up of sand-sized sediments, ranging from 2 mm to 0.06 mm. They are formed by minerals such as: quartz, feldspars and rock fragments as main constituents. Their color varies from white, in the case of sandstones made up of pure quartz, to almost black, in the case of ferro-magnesian sandstones.

Regarding the percentages of quartz, feldspar and rock fragments, sandstones are divided into: quartzose when they have more than 95% quartz. Arkosic with more than 25% of feldspars; lithic sandstones with more than 25% of rock fragments and greywackes, all of them containing: quartz, feldspars and/or rock fragments, but in their matrix they have more than 15% clays.

Metamorphic Rocks.

Marble (Ma). Metamorphic rock that results from the transformation of rocks such as limestone and dolomite by an increase in temperature and pressure. Generally, this type of rock does not present foliation and its structure varies between massive and banded, which is conformable with the regional metamorphic structure. The Marble texture is typically granoblastic and its color varies from white, gray, pink to green; it reacts when in contact with hydrochloric acid. When the rock's granules are tiny, it is called saccharoidal marble.

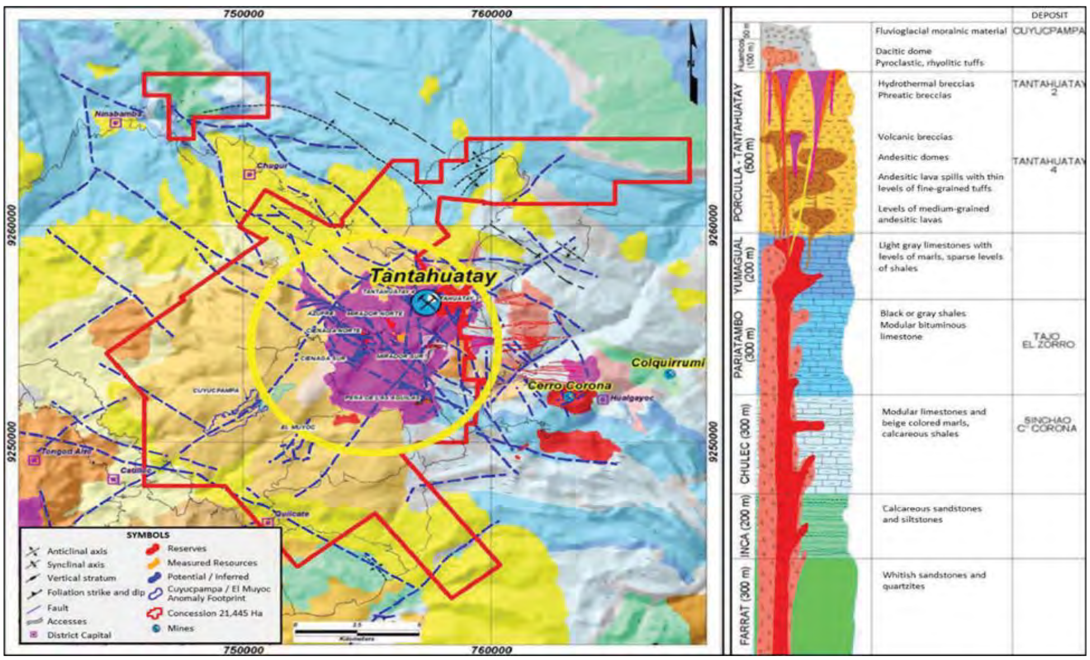


Figure 6-7: Geological and lithostratigraphic map of Tantahuatay volcanic complex.
Source: (CMC, 2021)

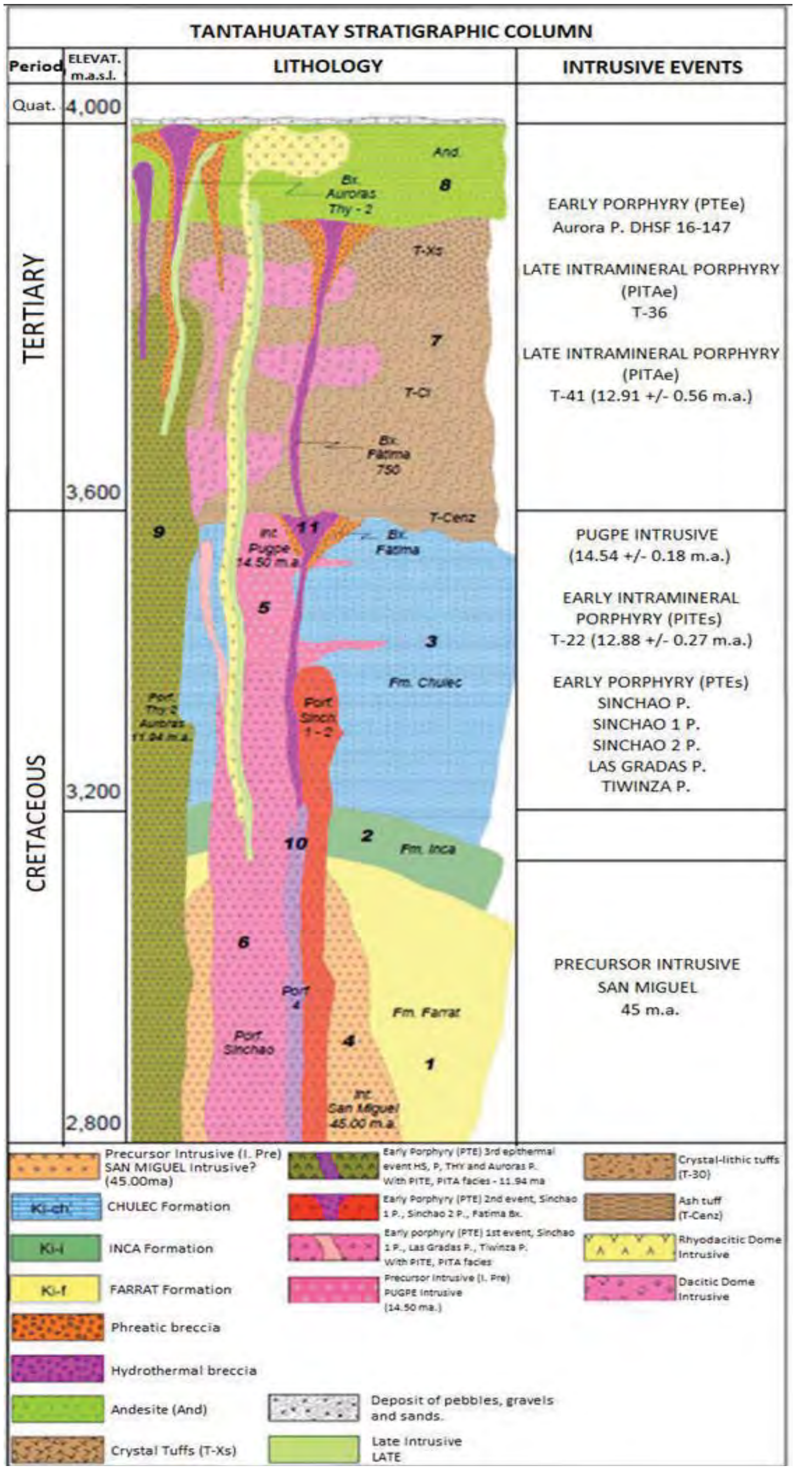


Figure 6-8: Stratigraphic column of Tantahuatay volcanic complex.

Source: (CMC, 2021)

6.6 Alteration

Tantahuatay presents four of the alteration assemblages of typical high-sulfidation epithermal systems, including an increase in the order of intensity, propylitic, quartz - kaolin (argillic), quartz - alunite - pyrophyllite (advanced argillic), and vuggy silica (Figure 6-9). The areas of

Au anomalies at C° Tantahuatay, C° Mirador, C° Cienega and C° Peña de las Águilas are associated with vuggy silica alteration and early hydrothermal breccias. Hydrothermal breccias of various types are common and form throughout the life of the hydrothermal system. The late stage dominated by the vapor phase and post-mineral supergene oxidation has been superimposed on hypogene assemblages (Tosdal, 1996).

6.6.1 Hypogene Alteration

Excerpted from (SRK, 2020)

The alteration or hypogene alteration in Tantahuatay deposit is typical of a high sulfidation (HS) system. This alteration is intense, and the deposit boundaries are defined by the extent of altered rocks. There is a zonal pattern, with granular-vuggy silica (Photo 6-1 and Photo 6-2) and massive silica in the central part (silicification) that grades away from the center to silica-alunite±pyrophyllite (advanced argillic); then, further away from the center, the kaolinite-illite±dickite±py (argillic) alteration assemblage is emplaced, which according to the original texture preservation of the rock or degree of alteration, can be classified into three types of argillic alteration; and finally, the most peripheral zone has the epidote-chlorite±pyrite (propylitic) alteration assemblage, which is completely sterile. The latter is also associated with the late dikes that cut the hydrothermal system.

In terms of volume, the most abundant type of alteration is argillic, but silicic and advanced argillic alteration are the most important for gold mineralization.

The Figure 6-10 show the alteration paragenesis of the deposits in order to plot the deposit's mineralization/alteration system.

6.6.2 Supergene Alteration

The supergene alteration (oxides/sulfides) has a vertical zoning with a mineralization of oxides such as goethite, jarosite, limonites and silica (Photo 6-3) that goes from 30 m to approximately 100-150 m deep*; then at depth it is intercepted by a level of mixed mineralization of oxides with presence of sulfides, and deeper there is a zone of only sulfides (chalcocite, pyrite, enargite, covellite, tenantite). Supergene alteration consists of porphyritic andesites, followed by a sequence of pyroclastic rocks of crystal tuffs and lithic tuffs of andesitic composition. The subvolcanic environment is cut by hydrothermal breccias and late, slightly magnetic andesite dikes; the volcanic edifice is cut by breccia bodies related to the interceptions of Andean (300-330°) and Trans-Andean (025-050°) structural lineaments.*

Photo 6-1: Vuggy silica alteration – Cienaga DDH C57, 85.8m, 0.75g/t Au & 2.7g/t Ag.

Source: (Corbett, 2014)

Photo 6-2: Leached granular silica altered wall rock, Cienaga

Source: (Corbett, 2014)

Photo 6-3: Granular silica with strong FeO derived from oxidized sulfides - Cienaga 0.4g/t Au.

Source: (Corbett, 2014)

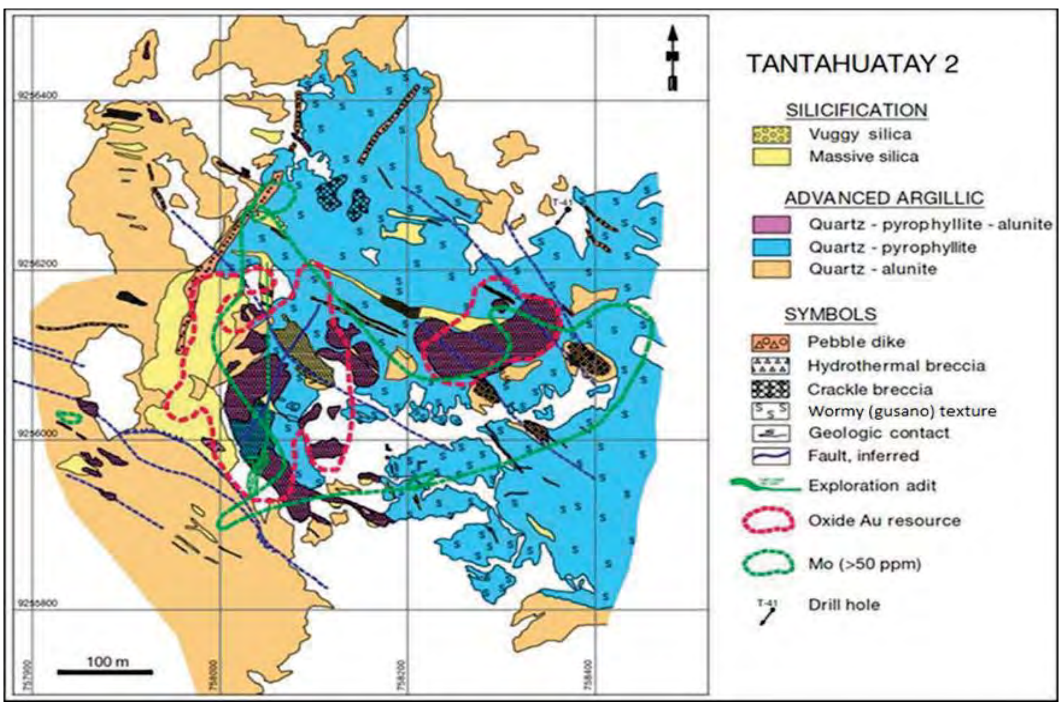


Figure 6-9: Map of hydrothermal alterations and structures of Tantahuatay 2 deposit.

Source: Gustafson et al., 2004 (SRK, 2020)

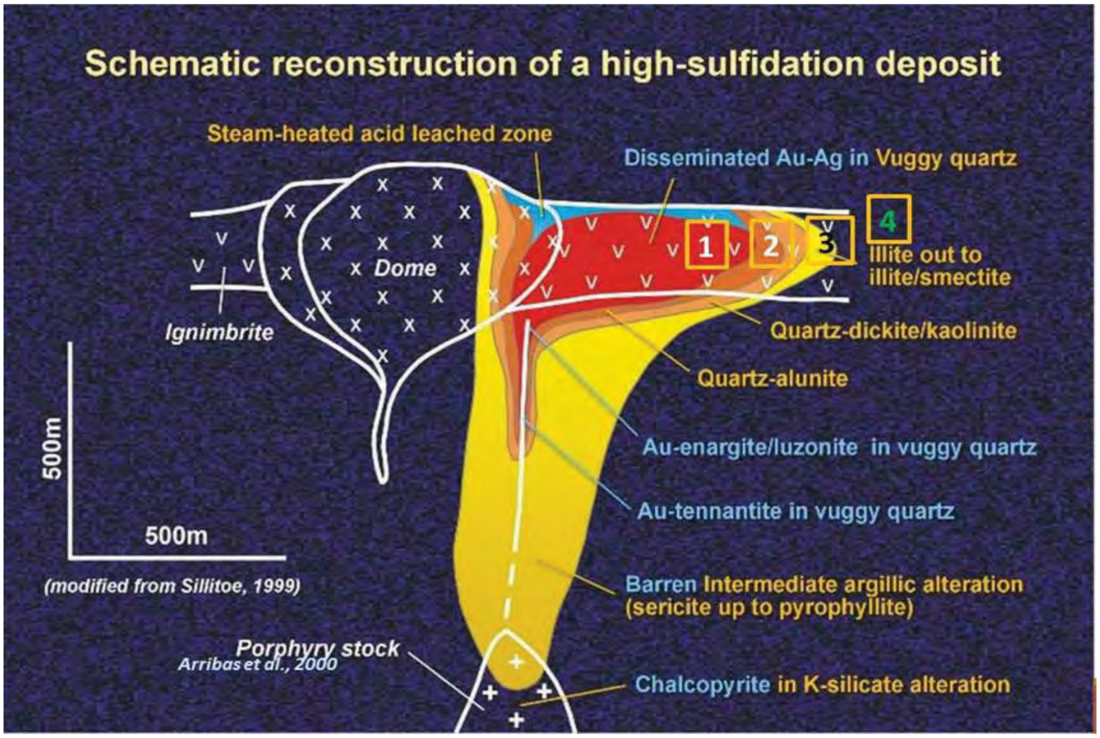


Figure 6-10: Schematic of a high-sulfidation system. Paragenetic sequence is shown in numbers, with 4 being propylitization.

Source: Arribas et al., 2000 (SRK, 2020)

6.7 Mineralization

Excerpted from (SRK, 2020)

Tantahuatay andesitic volcanic complex hosts a series of high-sulfidation epithermal deposits. It consists of five areas of Au-Ag mineralization, which are found in the supergene oxidation zones (Mirador Norte, Mirador Sur, Cienaga Norte, Cienaga Sur and Tantahuatay). It was also discovered that below the oxide level of Cerro Tantahuatay area, there is a significant Cu-Au-Ag resource in pyrite-enargite minerals (sulfides), which presents as disseminations and fracture fillings associated with advanced argillic alteration and breccia bodies (Figure 6-9).

The porphyry Cu-Au deposit at Cerro Corona has been explored, and at least five other occurrences of porphyry-type mineralization are known elsewhere in the district. Au is generally associated with pyrite and enargite (Photo 6-4), which is related to intense quartz-pyrophyllite-alunite alteration and vuggy to massive quartz, concentrated in secondary permeability zones (Gustafson et al., 2004).

Resources for some oxide and sulfide zones have been defined at Tantahuatay (CIR,1998; Miguel Miranda, pers. Comm.,2008). As for the hypogene mineralization, it has been divided into:

Porphyry Mineralization

A significant style of porphyry mineralization has not been found at Tantahuatay. At Peña de las Aguilas, covellite and Au mineralization (2-4g/t) has been recognized locally. Chalcopyrite veinlets associated with Cu grades from 0.09% to 0.69 % (DDH T44 drill hole from 424 to 500m). Porphyry-type quartz veinlets *were observed; no chalcopyrite or bornite veinlets have been found. Quartz-molybdenite veinlets have been found in Tantahuatay 2.*

High-sulfidation Epithermal Mineralization

At Tantahuatay 2, 3 and 4, the primary Cu-Au resource is associated with high-sulfidation enargite-pyrite mineralization (*Photo 6-4). The ore bodies generally occur as: a) brecciated cement (Photo 6-5) and b) fine-grained quartz, enargite-pyrite veinlets, and are typically associated with pervasive silicification of the wall rock, characterized by fine-grained quartz. Sulfides and sulfosalts also occur in small amounts as disseminations along the margin of pyrophyllite-diaspore-alunite patches (gusano texture).*

Molybdenite

Three molybdenite styles have been observed. Probably formed in at least two stages. Molybdenite occurs disseminated in the porphyry as B-type veinlets (*Photo 6-6) with central lines of pyrite. Molybdenite occurs as molybdenite+pyrite veinlets cutting quartz altered rocks. Molybdenite occurs disseminated in pyrophyllite-diaspore-alunite patches with pyrite. The last two molybdenite types formed after the porphyry molybdenite and AA alteration.*

Supergene Oxidation

A*lthough glacial erosion has removed most of the oxide cover, enough residual oxide remains for Au-bearing oxide resources to be calculated in two sectors, Cienaga and Tantahuatay 2. Alunite from a hydrothermally altered dome was dated at 12.4 ± 0.4 Ma (K/Ar), inferred as the age of hydrothermal mineralization; also biotite from a post-mineral dike was dated at 8.6 ± 0.3 Ma (K/Ar) (Noble and McKee, 1999), determining the field of the Tantahuatay dome and associated mineralization, slightly younger than the mineralization at Hualgayoc.*

Other types of mineralization in the district

In addition to the high-sulfidation and porphyry type mineralization, there are other types of mineralization in the District, such as Pb-Zn-Ag veins in Cretaceous carbonates east of the Rio Colorado fault. Further east, Nicola Mine also has several Pb-Zn-Ag veins. On the west side of the Rio Colorado fault, an RCD drill hole north of Tantahuatay 5 intercepts 54 m of mineralization averaging 1.73% Zn and 0.45% Pb. Some mineralization was reported as skarn type, e.g.: T28 at 554-556m (0.7g/t Au, 37 g/t Cu; CMC drill core assay).

Photo 6-4: Fresh high-sulfidation epithermal Au mineralization comprising vuggy silica, pyrite and enargite - Tantahuatay DDH T36, 140m, 0.4g/t Au.

Source: (Corbett, 2014)

Photo 6-5: Limonite matrix breccia with vuggy silica altered clasts – Cienaga DDH C57, 65m, 4 g/t Au.

Source: (Corbett, 2014)

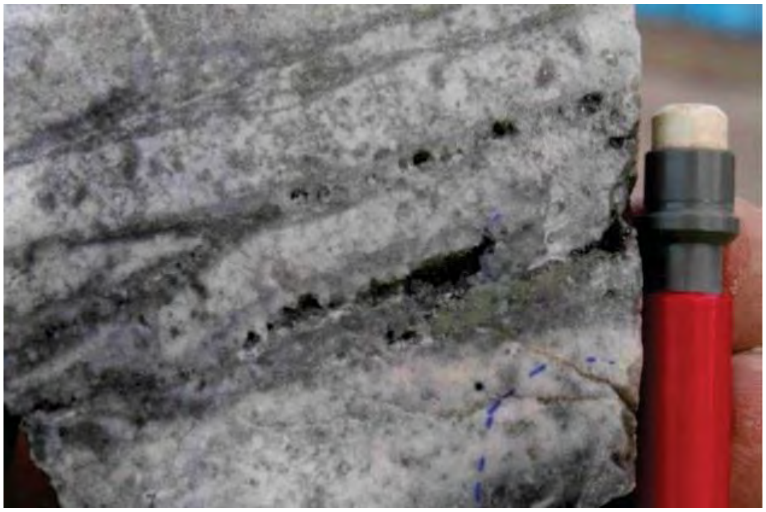


Photo 6-6: Sheeted open porphyry B style quartz veins, with fill of later enargite (next to pencil) - Tantahuatay DDH T36, 136.5m, 0.14g/t Au, 1.06% Cu & 0.31% As.

Source: (Corbett, 2014)

6.8 Deposit Type

Tantahuatay is a high-sulfidation epithermal deposit. It presents Au-Ag mineralization in oxides, which are associated with silicified breccias that present mainly silica alteration. Below the oxide level, there is a predominant Cu mineralization with the presence of As, and in smaller quantities, covellite and supergene chalcocite.

Several researchers have presented genetic models for high-sulfidation deposits. Thus, we have the conceptual models of Sillitoe (1989), Berger and Henley (1989), Giggenbach (1992a), Rye (1993) and Hedenquist et al. (1994a, incorporating White 1991). These models are all characterized by the reaction of hot acidic fluids with the host rock to form hydrothermal alteration, which generates external zoning as mineral assemblages dominated by vuggy silica, silica alunite, diaspore-pyrophyllite and, more marginally, dikite-kaolin (Corbett, 2009).

A characteristic of high-sulfidation deposits is the change over time from a hydrothermal system to a less reactive and oxidized fluid. To explain this observation, Berger and Henley (1989) suggested that precious metal mineralization in high-sulfidation deposits is introduced by the subsequent transit of low-sulfidation geothermal-type fluids into previously formed high-sulfidation alteration zones of magmatic origin.

The initial requirement for the formation of a HS deposit is the emplacement of an oxidized calc-alkaline magma, typically intermediate, within a few kilometers from surface. (Figure 6-11)

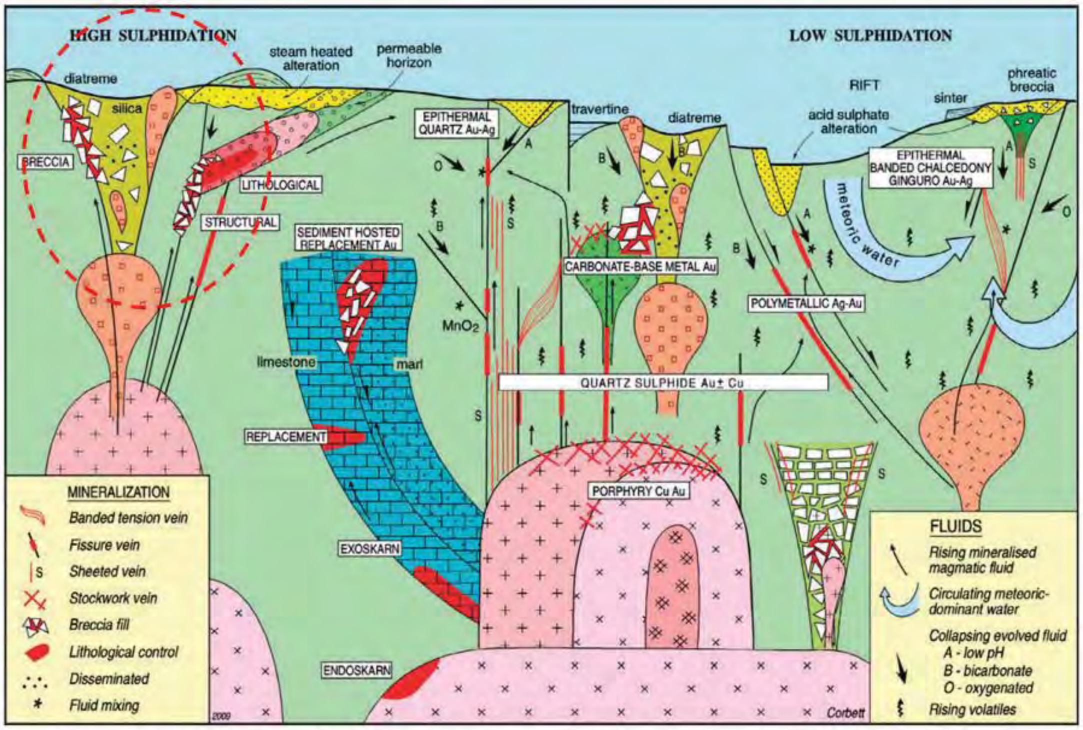


Figure 1. Conceptual model for the styles of Au-Ag-Cu mineralization developed within magmatic arcs (from Corbett, 2009).

Figure 6-11: Conceptual model of Au-Ag-Cu mineralization styles developed within magmatic arcs.

Source: Corbett, 2009

At Tantahuatay, a conceptual geological model (Figure 6-12) derived from analysis of overlying alteration and mineralization suggests that two targets for blind porphyry-style Cu-Au mineralization occur at depth (Corbett, 2014).

The current Tantahuatay open pit (TH1 and TH2) mines Au mineralization within high-sulfidation epithermal alteration and mineralization structures comprising silicified breccias with extensive silica alteration, and laterally grading to pervasive silicification and local alteration of marginal silica alunite. Enargite mineralization is locally discernible within the vughs in the pit and undoubtedly contributed to the high FeO content, becoming more evident below the oxidation base. Wall rocks in the open pit and drill holes consist of volcanic andesite, a subvolcanic andesite dome and a pre-alteration porphyry with stockwork veins, all showing predominant silica-pyrophyllite alteration varying to silica-alunite in the uppermost portions (Figure 6-12). Fracture-controlled enargite-pyrite mineralization cuts the pyrophyllite alteration in the volcanic rocks and porphyry, as well as quartz stockwork veins, so the porphyry must predate the pervasive pyrophyllite alteration and also the epithermal event (Figure 6-13). The presence of dickite instead of the usual alunite deposited with enargite is indicative of a lower temperature high-sulfidation epithermal event (Corbett, 2014).

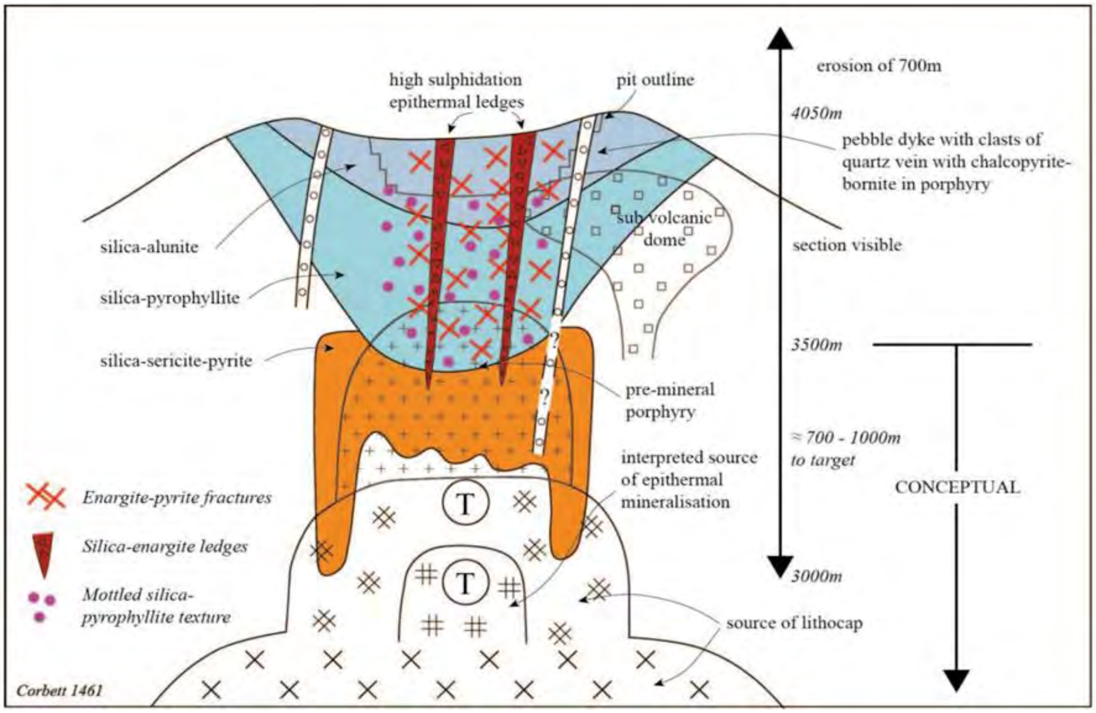


Figure 6-12: Conceptual model of Tantahuatay showing a hydrothermal system which is strongly weathered and extends to greater depth.

Source: (Corbett, 2014).

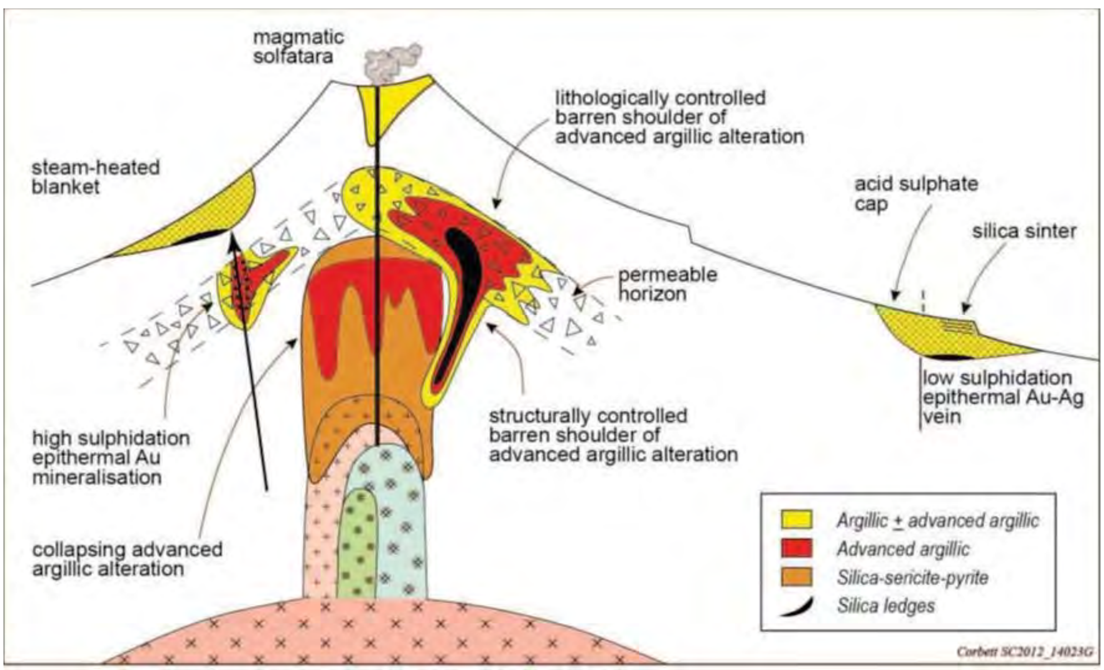


Figure 6-13: Conceptual model for the different types of lithocaps.

Source: Corbett, 2008

7 Exploration

The main exploration method in Tantahuatay has been the diamond drilling. However, other exploration methods in different stages, including geological mapping, surface geochemical sampling, and geophysics, have also been applied on the project. The concessions that are located in Tantahuatay area and its surroundings were mapped and sampled many years ago. Other exploration targets were identified and evaluated throughout the years but were not included in the mineral resource estimation in this document as they were considered irrelevant for this report.

7.1 Exploration Work (Other Than Drilling)

Tantahuatay's history is intertwined with that of the Hualgayoc Mining District, a historic center for mining in northern Peru.

The first works conducted in the zone were in 1969 and 1971 by the British Geological Survey (BGS) which executed sediment sampling in the region and the district, identifying 7 anomalies in the Tantahuatay and Sinchao streams. From 1970 to 1991, Cía. Minera Colquirrumi S.A., conducted mineral exploration and exploitation works in the district of Hualgayoc.

The first explorations in Tantahuatay Project starts from 1991 to 1998 by Southern Perú, and in 1992 Compañía Minera Coimolache S.A. (CMC) was established, which company interest is as follows: 40.09% of Cía. Minera Buenaventura S.A.A. (BVN), 44.24% of Southern Cooper Corporation (SPCC) and 15.67% ESPRO S.A.C.

The first works during the SPCC administration involved geological mapping and rock and soil geochemistry in trenches and test pits. From 1994 to 1998, 27,411 m of diamond drillings were conducted in the zones of Tantahuatay, Mirador, Cienaga and Peña de las Águilas as Calera Orbamas S.A. (former name of CMC at that time)

BVN starts the administration from 1999 and performs underground explorations for oxides with two tunnels in Tantahuatay 2 and Cienaga Norte deposits, respectively (BISA). In addition, performs infill diamond drillings in the deposits of Tantahuatay 2 (BISA) and Cienaga Norte, Mirador Norte (CEDIMIN) in 2002 and 2006-2007, making a total of 6,063 m. This project includes the exploration plans of Cía. Minera Colquirrumi of Buenaventura group.

CMC starts the pre-feasibility stage in 2007, and the EIA is approved with public hearing in Hualgayoc in 2008, starting the construction in 2009. The oxide operation starts in June 2011 with a reserve inventory of 658 Koz Au for Tantahuatay 2 and Cienaga Norte deposits with a cut-off grade of 0.3 g/t Au.

7.2 Significant Results and Interpretation

SRK notes that the property is not at an early stage of exploration, and that results and interpretation from exploration data is generally supported in more detail by extensive drilling and by active mining exposure of the orebody in pits.

7.3 Exploration Drilling

Buenaventura has executed different drilling campaigns in the Tantahuatay mine. According to the drillhole database provided to SRK (Table 7-1 and Figure 7-1), the drilling campaigns were as follows:

- Cienaga Norte pit, from 1994 to 2019,
- Tantahuatay 2 pit, from 1995 to 2019,

- Mirador Norte pit, from 1994 to 2018,
- Mirador Sur pit, from 1995 to 2014,
- Tantahuatay 4 (Tantahuatay 2 NW extension), from 1997 to 2016,
- Tantahuatay 5, from 2017 to 2018.

In 2018, diamond drilling within the oxide domain totaled 9,187.43 m and was conducted within the Tantahuatay 2, Cienaga Norte, Tantahuatay 3, Tantahuatay 5 and Azufre projects (Figure 6-6).

In 2019, the 3,376.2 m. of diamond drilling testing oxide material was completed in Tantahuatay 2, Cienaga Norte, and to Azufre and Mirador Nor-Oeste operations.

Table 7-1: Registro histórico de la perforación en Tantahuatay

Year	Tipo 1	Operator	Number of Drillholes	Metres Drilled (m)
1994	DDH	Buenaventura	19	2,388.70
1995	DDH	Buenaventura	19	3,002.80
1996	DDH	Buenaventura	32	6,244.35
1997	DDH	Buenaventura	43	12,002.65
2000	DDH	Buenaventura	2	400.10
2002	DDH	Buenaventura	25	3,169.20
2006	DDH	Buenaventura	28	3,235.60
2007	DDH	Buenaventura	60	6,334.10
2011	DDH	Buenaventura	38	4,687.50
2012	DDH	Buenaventura	41	6,174.80
2013	DDH	Buenaventura	108	14,442.55
2014	DDH	Buenaventura	170	16,407.15
2015	DDH	Buenaventura	135	13,364.80
2016	DDH	Buenaventura	79	12,038.45
2017	DDH	Buenaventura	77	8,650.80
2018	DDH	Buenaventura	73	9,187.43
2019	DDH	Buenaventura	28	3,376.20
TOTAL			**977**	**125,107.18**

Source: Buenaventura

No drilling within sulphide zones was conducted in 2019. Work was focused on validating and standardizing the information supporting the updated models.

In 2020, 100 m out of 700 m of the oxide development drilling program in Tantahuatay 2 pit began classifythe inferred resources to measured/indicated resources; this program was delayed because of pandemic.

In 2020, work in the sulphide domains was focused on re-interpreting the geological model in the high-grade copper-gold zone, including re-logging 13,854 m of core to support an infill drilling program

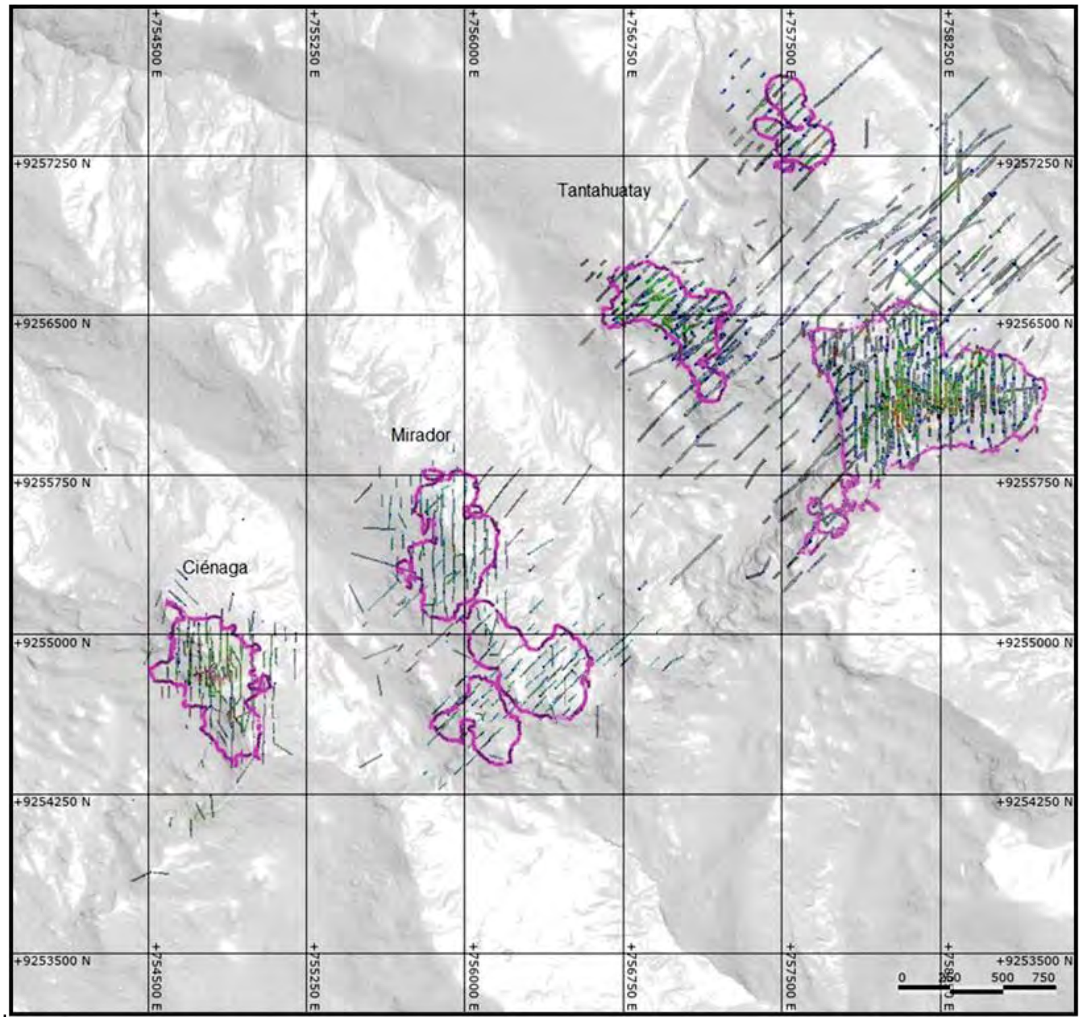


Figure 7-1: Distribution of diamond drilling in the three deposits of Tantahuatay mine

Source: (Buenaventura, 2021)

7.3.1 Collar Surveys

Buenaventura's survey department is responsible for surveying the collar locations using a total station or a differential GPS instrument. Upon completion, a monument is used to mark the collar location.

7.3.2 Sampling Methods and Sample Quality

Core size is either NQ and HQ. Prior to splitting, samples are selected for density measurements, Terraspec (Pima), point load testing and petrography.

Core samples are cut or split into two equal parts using diamond saws or splitters. One half of the core is sent for analysis and the other half is stored in the core box.

During logging, the geologist assigned to the drill hole marks sample intervals on the core box. The sampling interval is nominally 1.5 meters, but samples are broken at major contacts by lithology and mineralization type. Samples are divided so that the minimum sample length is approximately 0.3 m. The drill core is washed in the core box and dried in open air prior to photography.

7.3.3 Downhole Surveying

Buenaventura downhole surveys holes using a Reflex (magnetic) survey instrument or a gyroscope which may also be used to validate the Reflex measurements.

SRK observed that the measurements were conducted every 70-90 m, and in some cases every 5m (using Reflex). Vertical drillholes (90°) with depths of less than 50 m were not downhole surveyed.

7.3.4 Geological Logging

All the cores were logged by Minera Coimolache Geologists. All information was collected through GVMapper softwar, which utilizes a customized library of lithology as well as alteration and mineralization codes. This data is then imported to AcQuire.

7.3.5 Diamond Drilling Sampling

Diamond drillholes are considered the most reliable and representative data. The samples of these drillholes are collected in trays, which indicate the corresponding drillhole ID and the drillhole depths at the start and end of each run.

The drill core recovery is appropriate, generally over 95%. A symmetrical line is drawn along the core for the cutting.

The drillhole intervals are marked and sampled by Minera Coimolache's Geologist. The samples have variable length (minimum: 0.3 m and maximum: 1.5 m). The sampling procedure of Buenaventura considers the following:

- Each core section is marked by little wooden milestones.
- The recovery is measured in each section.
- A sampling card is completed for each sample. The sampling cards have two parts: one part is used when sending the sample to the laboratory, and the other segment remains in the core box.
- A unique sample value is assigned to each sample. This allows its identification throughout the sampling process, assay, and validation processes (in case of duplicates).
- A photographic record of each drillhole section is kept.
- The collection of the geological information is conducted in a detailed logging form.
- The core is cut by using an electric saw.
- Samples are divided into two halves: one of them is sent to the laboratory for assay, and the other is stored in the box.
- Blank, standard, and duplicate samples are inserted systematically.
- Samples are packed in sacks (with the corresponding coding) and sent to the laboratory. All the samples arrive to the laboratory with a list generated in the geology department, describing the sample quantity and the assay type are described.
- Pulps are returned to the laboratory and stored by the Geology team.

SRK is of the opinion that core recovery and sampling are appropriate for resource estimation purposes.

7.3.6 Drilling Type and Extent

Diamond drilling is the main method used; both azimuth and inclinations varied.

7.3.7 Drilling, Sampling, or Recovery Factors

The drill core recovery is appropriate, generally over 95%. SRK is not aware of any material factor of the drilling that might affect the results.

SRK considers that the quality of the information collected by Buenaventura through drilling is adequate and is most robust for drilling conducted after 2012. Although information is available for years prior to 2012, no QA/QC program or deviation data registration during these periods. These drilling areas, however, are generally located in zones that have already been mined or are currently in operation.

7.3.8 Drilling Results and Interpretation

SRK used available geological and drill hole data to review geological models with Leapfrog software..

SRK believes that the procedures used by the Tantahuatay team for drilling; logging; drillhole sampling; and information gathering are adequate and follow the best practices of the international codes.

8 Data Verification

The procedures for drill core sampling, sample preparation, analysis, and QA/QC for diamond drilling and channel sampling are described in this section.

8.1 Sample Preparation Methods and Quality Control Measures

8.1.1 Sampling

Sampling is performed under the supervision of the Field Geologist and/or Ore Control Geologist. Core was removed from core barrels at the rig and placed into core boxes and transported to the logging facility at the end of each drilling shift.

Drill hole sampling is performed at the core storage facility located in the mining unit. Prior to sampling, the core is cut lengthwise into two halves by an automatic core saw, following the cutting line that has been marked by the geologist. The cut core is placed back in the core box.

Next, the core boxes are placed on the sampling tables in an orderly fashion. Each sample ticket has three tags, and the sample interval and QA/QC codes are noted on the ticket. Two sample tags and the sawn core sample are placed in a polyethylene bag, and the other tag is stapled to the outside of the polyethylene bag. The other half of the sample remains in the core box. After completing the sampling of each drill hole, samples are placed in sacks for their transportation to an internal laboratory or sent to a sample preparation facility in Cajamarca.

The channel sampling is performed in the mine with the following steps: The sampling area is washed, and the channels are located by measuring the distance from a reference point and then the location of the channels are marked with red paint. Then, the individual channel samples are marked the samples have a minimum thickness of 0.1m and minimum sample length of 0.3 m and are collected with a with a sledgehammer and chisel. Subsequently, the fragments are placed in the sampling bag and the sample is tagged, bagged, and sealed. Finally, the samples are placed in sacks and transferred to the sample preparation internal laboratory.

For density sampling, representative samples based on geology and mineralization units are selected.

Density samples have a length of 15 to 20 cm from and are taken at 5m intervals along the drill hole regardless of whether the interval is a mineralized zone. The samples are wrapped in plastic film and then tagged. The geologist creates a database with all tagged samples collected and this information is sent to the geology database manager and subsequently recorded on the density sample form. The technician in charge of density measurement, photographs the sample outside the core box and then it is sent to the internal or external laboratory for density determination. Once the results are obtained, the samples are saved in their respective locations, the results are uploaded to the database and the reports are stored.

In mining channels density sampling, the geologist determines the sampling plan, including the tentative location and sampling frequency. The sampling personnel collect the samples from the mineralized structure or gangue, the samples must be representative, intact and compact and have 15 to 20 cm of length. The sample is wrapped in a plastic film and placed in a sampling bag where is tagged indicating the level and location. Later, these samples are placed in a wooden container to keep them intact and tidy. The responsible geologist will create a database of the collected samples and send the information to the geology database administrator. The samples are sent to the internal or external laboratory for the density determination.

8.1.2 Sample Preparation

Coimolache Internal Laboratory performs the following processes for sample preparation (Figure 8-1): First, the tagged samples are received and placed in trays. The samples are dried in the furnace at a temperature ranging from 60°C to 100°C. Subsequently, samples are transported to the crusher, which was previously cleaned by crushing a barren material such as quartz. The sample is crushed until 90% passing -10 mesh (2mm). Then, samples are homogenized by using the Jones riffle splitter, and are reduced through successive divisions until obtaining a sample of approximately 400 g. After, the pulverizing equipment and discs are cleaned using barren quartz sand and compressed air. Samples are pulverized until 95% passing -140 mesh (106 µm). Finally, the pulverized sample is divided into two subsamples of 200 g each; one of them is sent for chemical analysis and the other one is stored as pulp to be returned to the geology department for its storage.

The ALS Laboratory (last external laboratory), located in Cajamarca, performs the following sample preparation processes: The supervisor receives, orders and check the samples (quantity, state of containers, codes) according to the analysis request. After that a bar code is affixed, and the samples are logged in the LIMS (Laboratory Information Management System). Then, the received sample weight is recorded. If required, the sample are dried to a maximum of 120°C. Subsequently, the rock chip and drill samples are crushed to better than 90 % passing a -10 mesh (2 mm). After that, the samples are split using a riffle splitter to obtain a sample weight of approximately 250 g. (The rest of the sample is stored as reject.). The samples are then pulverized until 85% passing -200 mesh (75 µm). A QC test of pulverizing efficiency is conducted on random samples, if the results are satisfactory the pulp is retained for the respective chemical analysis.

Density samples preparation includes the following processes: First, the electronic balance is calibrated, then the weight of the initial sample is taken. The samples are placed in the drying oven at a temperature of 105°C. The samples are weighed every 30 minutes until a constant weight is obtained (thus obtaining the drying time). Buenaventura uses the wax-coated water immersion method (paraffin method) to determine density in the geological units. In argillic areas with crumbly material or in highly fractured areas, the density will be determined using the pycnometer.

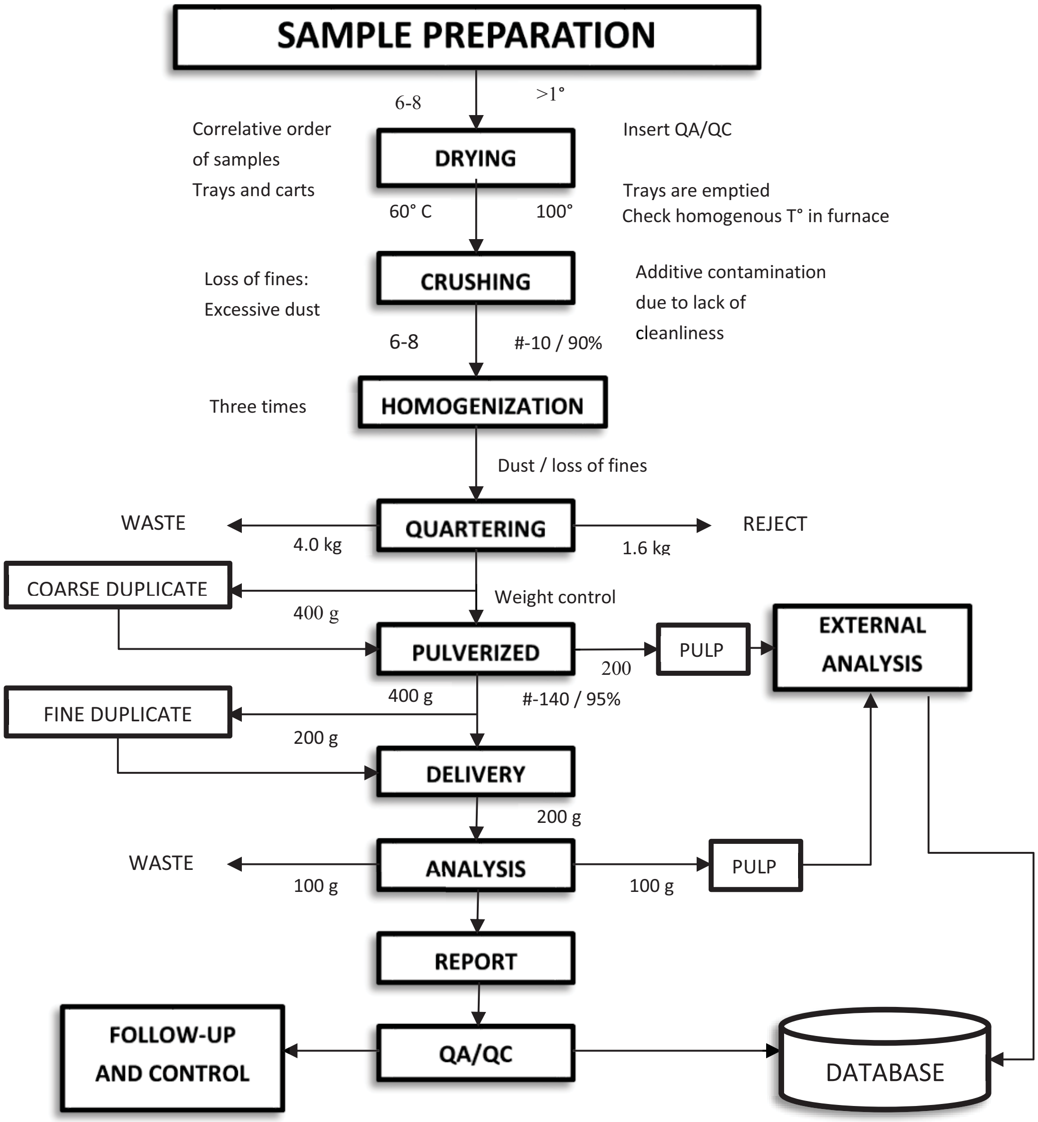


Figure 8-1: Sample Preparation Chart

Source: Buenaventura – Sampling Manual

8.1.3 Chain of Custody

The chain of custody is supervised by the mine geologists and consists of the following procedure: samples are grouped in consecutive order and placed into sacks, then they are transported to the internal laboratory, where the dispatch order is provided (which includes the analysis method to be used, sample quantity, etc.) and the receipt of samples is entered in the database.

In case of deliveries outside the mining unit, there is permanent communication with the carrier (transporter) to monitor the sample transfer. The vehicle will have a security personnel. After the delivery of the samples to the external laboratory, the sample submission and chain of custody forms will be provided, and these documents shall be signed by the person responsible for receiving the samples. The results are issued by the laboratory through digital reports and are received by the database administrator of the mining unit, who will validate the information.

8.2 Sample Preparation, Assaying and Analytical Procedures

The samples from Tantahuatay were analyzed in the Coimolache Internal Laboratory (onsite) and in the SGS and ALS external laboratories, as summarized in the Table 8-1:

Table 8-1: Distribution of samples according to the laboratory and sampling period.

Laboratory	Sample Type	1994 - 2000	2002 - 2007	2011 - 2017	2018	2019	Total of Samples
SGS	Drill hole	3,806	5,337	28,042	1,430	0	38,615
ALS	Drill hole	10,216	2,409	0	100	1,102	13,827
Coimolache	Channel	0	0	3,924	0	87	4,011
	Drill hole	0	31	11,255	3,285	664	15,235
						Total	**71,688**

Source: SRK, 2021

Coimolache Internal Laboratory is located in Tantahuatay mining unit (Cajamarca) and started operations in 2007. It has the following certifications: ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

Samples sent to SGS external laboratory (Peru) are prepared at the SGS preparation laboratory in Cajamarca (SGS Cajamarca). Subsequently, the samples are sent for chemical analysis in its headquarters located in Lima (SGS Lima). This laboratory is internationally recognized and has the following certifications: ISO 9001:2015, ISO 14001:2015, OSHAS 18001:2007 and ISO/IEC 17025:2017.

Samples sent to ALS external laboratory (Peru) are prepared the ALS preparation laboratory in Cajamarca (ALS Cajamarca). Subsequently, the samples are sent for chemical analysis in its headquarters located in Lima (ALS Lima). This laboratory is internationally recognized and has the following certification: ISO/IEC 17025:2017.

Both laboratories (SGS Perú and ALS Perú) were external and are independent of Compañía Minera Coimolache and Buenaventura.

8.2.1 Sample Analysis

The analytical procedures followed by the various laboratories are shown in Table 8-2 through Table 8-4.

Table 8-2: Analytical Methods Used in the Internal Laboratory of Coimolache

Element	Method	Lower limit	Upper limit	Method description
Au	FAAAS	0.01 ppm	5 ppm	Fire Assay - Atomic Absorption Spectroscopy finish
Au	FAG	5 ppm	100 ppm	Fire Assay - Gravimetric finish
Ag	AASR	0.3 ppm	500 ppm	Atomic Absorption Spectroscopy - Aqua regia digestion
Cu		0.0002%	50%	

Source: SRK, 2021

Table 8-3: Analytical Methods Used in External Laboratory ALS

Element	Method	Lower limit	Upper limit	Method description
Au	Au-AA23	0.005 ppm	10 ppm	Fire Assay - Atomic Absorption Spectroscopy finish
Au	Au-GRA21	0.05 ppm	10,000 ppm	Fire Assay - Gravimetric finish
Ag	ME-ICP41	0.2 ppm	100 ppm	Multielemental Analysis ICP-AES - Aqua regia digestion
Cu		1 ppm	10,000 ppm	
Pb		2 ppm	10,000 ppm	
Zn		2 ppm	10,000 ppm	

Source: SRK, 2021

Table 8-4: Analytical Methods used in External Laboratory SGS

Element	Method	Lower Limit	Upper Limit	Method Description
Au	FAA515	0.005 ppm	10 ppm	Fire Assay - Atomic Absorption Spectroscopy finish
Ag	ICP12B	0.2 ppm	100 ppm	Multielemental Analysis ICP-OES - Aqua regia digestion
Cu		0.5 ppm	10,000 ppm	
Pb		2 ppm	10,000 ppm	
Zn		0.5 ppm	10,000 ppm	

Source: SRK, 2021

8.3 Quality Control Procedures/Quality Assurance

QA/QC procedures included the sample insertion, blank control, duplicates and standard reference materials for sampling monitoring, sample preparation and analytical processes.

8.3.1 Insertion Rate

Buenaventura started a QA/QC program by inserting control samples in drill holes (1994-2020) and in channels (2012-2020). The control sample insertion program performed in channel and drill hole samples hads an overall insertion rate between 6.9 % and 16.5 %. The insertion rate based on sample type, period and laboratories are summarized in the Table 8-5:

Table 8-5: Tantahuatay Sample Control Insertion Rate

Period	Sample Type	Laboratory	# Primary Samples	Blanks		Duplicates		Standard		# Control Samples	Insertion Rate (%)
				#	(%)	#	(%)	#	(%)		
1994	Drill hole	ALS	**12,625**	There was not control samples insertion							
2011-2012		SGS	**3,540**								
		Total	**16,165**								
2012-2019	Channel	Coimolache	4,011	242	6.0%	18	0.4%	17	0.4%	277	6.9%
		Sub Total Channels	**4,011**	**242**	**6.0%**	**18**	**0.4%**	**17**	**0.4%**	**277**	**6.9%**
2006-2018	Drill hole	SGS	35,075	1,956	5.6%	1,442	4.1%	1,562	4.5%	5,591	15.9%
2013-2019	Drill hole	Coimolache	15,235	885	5.8%	708	4.6%	836	5.5%	2,671	17.5%
2018-2019	Drill hole	ALS	1,202	66	5.5%	53	4.4%	74	6.2%	216	18.0%
		Sub Total Drill holes	**51,512**	**2,907**	**5.6%**	**2,203**	**4.3%**	**2,472**	**4.8%**	**8,478**	**16.5%**

Source: SRK, 2021

8.3.2 Evaluation of Control Samples

To evaluate the control samples (QC), SRK used the following criteria:

1. To evaluate sample contamination (blank samples), SRK considers the presence of blank samples with assay results exceeding 10 times the minimum detection limit (10 LLD). The acceptance limit for SRK is 90% of samples under 10 x LLD.
2. To evaluate the accuracy (standards), SRK uses the limit conventionally accepted by the industry. This means that all the standard control samples that are not within the Best Value range (BV) ± 3 Standard Deviation (SD), or adjacent samples between the limits of BV+3SD and BV+2SD, or between BV-3SD and BV-2SD, are considered as samples outside the acceptable limits. For SRK, 90% of the samples must be within the acceptance limits; and
3. To evaluate the precision (duplicates), SRK compares and uses the HARD index (the half of the relative absolute difference) to each original-duplicate sample pair. SRK considers acceptable the precision evaluation, as follows:
   a) For twin samples, the acceptable HARD value is < 30%
   b) For coarse duplicate samples, the acceptable HARD value is < 20%

c) For pulp duplicate samples or check assay, the acceptable HARD value is < 10 %

The observations found in the QC analysis are summarized in the Table 8-6.

Table 8-6: Observations Found in the QC Analysis

Laboratory	Period	Sample Type	QC Type	Findings
SGS	2006-2018	Drill hole	Blanks	No evidence of cross contamination in Au. Ag results are outside the acceptable limits.
			Standards	The Au accuracy is close to the acceptance limits and in Ag is acceptable. The bias in Au is positive in low grade standards, and negative in intermediate grade standards.
			Duplicates	Au results are within the SRK acceptable limit.
CMC	2012-2019	Mining Channel	Blanks	No evidence of cross contamination in Au. The results of Ag coarse blanks are located close to the acceptable limits.
			Standards	The Au accuracy and bias is generally within the acceptable limits.
			Duplicates	The precision of coarse duplicates is within the acceptable limits. However, the accuracy of twin samples is close to the acceptable limits.
	2013-2019	Drill hole	Blanks	No evidence of cross contamination in Au. Ag results are outside the acceptable limits.
			Standards	The results are close to the SRK's acceptable limits. In general, the bias is acceptable.
			Duplicates	The results are within the SRK's acceptable limit.
ALS	2018-2019	Drill hole	Blanks	No evidence of cross contamination.
			Standards	The high-grade standard results are close to the acceptable limit, while the results of the other grade types are within the acceptable limits. The bias is acceptable.
			Duplicates	The results of fine duplicates in Au are close to the acceptable limit. The coarse and twin duplicates are within the SRK's acceptable limit.

Source: SRK, 2021

8.4 Opinion on Adequacy

As part of the revision of the preparation, analysis and security of the samples, SRK has fully revised the available QA/QC data. SRK considers that QA/QC protocols are consistent with the best practices accepted in the industry.

SRK is of the opinion that the sample preparation, the chemical analysis, the quality control and the security procedure are enough to provide reliable data to support the resource estimation and mineral reserve estimation.

The insertion of control samples to validate the contamination, accuracy and precision of the database is being performed from 2011. SRK found that the rate of control samples in channels was less than that indicated by Buenaventura. However, the control sample rate in drill holes is adequate according to Buenaventura's protocol.

Based on the SRK's criteria for QA/QC revision, the following observations are provided:

There are no indications of evident cross contamination in the Au results; however, Ag results were outside acceptable levels in the period 2014 – 2017 for SGS and Coimolache laboratories (internal laboratory).

In the duplicate analysis, the accuracy reflects good results in general for Au and Ag; however, the results for Ag fine duplicates (analysis in SGS laboratory) for 2006, 2007 and 2014 are not acceptable.

In general, the accuracy of the Au analysis in ALS and Coimolache laboratories is acceptable and in the SGS laboratory setting, the results were close to the acceptable limits.

SRK recommends including a larger Ag standard quantity in future re-sampling campaigns and/or diamond drills r to improve the Ag accuracy evaluation.

SRK believes that the small number of inconsistencies found in the data have no significant impact on the trust classifications of the mineral resources.

SRK recommends validating the protocols used for recollecting and preparing drilling samples with a heterogeneity study, focusing on the geological domains that will be the most important during production. At present, there is no heterogeneity that supports the sample mass; particle size; mineral; and grade and there is not enough available information to calculate the fundamental sampling error. SRK is of the opinion that, even if the statistical results are acceptable, without a heterogeneity test it is not possible to know whether it might be improved.

SRK recommends to carefully monitor the behavior of analytical results obtained in quality control samples in order to inform the internal/external laboratory of problems detected, if any, for immediate correctionNon-Conventional Industry Practice

Does not apply

9 Data verification

Buenaventura uses systematic database software (ACQUIRE) to store data and ensure its integrity. Buenaventura provided SRK information regarding to Collars, surveying, tests, samples, density, lithology, alteration and geotechnical data in editable formats (csv, xls) for input into database software for verification procedures.

The data verification consists of:

- Reception of the information provided by Buenaventura
- Information organization in a database in Ms Access
- Data modelling (relations among tables)
- Tracker Table Construction (dispatch information)
- Compilation of the laboratory assay reports and link of the BD samples
- Generation of table of occurrences in the assay across validation
- For the logging information, the following is validated:
    - Overlapping intervals
    - Negative intervals
    - Intervals greater than the total depth (“Td”) of the drill hole
    - The data are reaching Td of the drill hole
    - Incomplete collar coordinates
    - Downhole survey depths greater than the Td
    - Drill holes lacking downhole surveys
    - Drill holes lacking collar survey
    - No Td recorded
    - The downhole survey data deviates greater than 20 degrees (azimuth) or 10 degrees (inclination)

9.1 Internal Data Validation

Buenaventura uses a systematic database software (acQuire) that ensures the data integrity, reduces data entry errors by meeting requirements and applying procedures to record data by SIGEO (BVN internal database software) and GVMapper. The Buenaventura’s Geologist conducts visual validation before the data entry. However, Buenaventura does not have an internal verification database procedure. SRK suggests developing a procedure that restricts the data entry to allowable codes and to identify inconsistencies or errors.

9.2 External Data Validation

The external validation was performed by SRK at the start of 2021, which consisted in the revision of the drillhole locations, their deviation, and the comparison of the grades versus the original assay certificates from their internal and external laboratories. SRK uses data check routines for the validation of the overlapping intervals, negative intervals, drillholes missing important information such as lithology, recovery or sampling, and intervals that are greater than the total depth of the drillhole.

9.3 Data Verification Procedures

SRK has checked the information provided by Buenaventura, which consists of 977 drillholes (67,677 samples) and 141 mining channels (4,011 samples) totalizing 1,118 collars and 71,688 samples (Table 9-1).

Table 9-1: Summary of the Drilling Information Provided by Buenaventura.

Type	No. Collars	Total length (m)	Samples
Mining channels	141	19,521.45	4,011
Diamond drilling	977	125,090.27	67,677
Total	**1,118**	**144,611.72**	**71,688**

Source: SRK, 2021

9.4 Database Validation

SRK validated the main tables of the database. The procedures applied in the database validation and the observations found are summarized in the Table 9-2.

Table 9-2: Database Validation Summary

Tables	Comments
Collar	SRK plotted the drillholes and channels to check their spatial location and it was verified that there are no drillholes located very far from the zone of influence of the mine. All data is adequate, no observations were found.
Survey	SRK verified that there are no collars with inverted inclination or azimuth variations and important inclination: 7 drillholes with azimuth deviation greater than 20° and 3 drillholes with inclination deviations greater than 10° were found.
Samples	SRK verified that the samples do not overlap in intervals and that samples do not have intervals greater than the total depth of the drillhole. All data is adequate, no observations were found.
Density	There is a total of 5,652 density samples analyzed in the SGS and Coimolache laboratories through the paraffin method. Certificates were provided with the 87.8% of the total of these samples. All provided data is adequate.
Lithology	SRK checked to see if there are overlapping intervals, negative intervals, or intervals greater than the hole depth and the data is adequate. SRK found 28 drillholes do not have lithology information, this drillholes date from 1995-1997, 2007 and 2015.
Recovery and RQD	SRK checked to see if there are missing intervals of RQD information, overlapping intervals, intervals with RQD information greater or less than the drillhole length and the data is adequate. SRK found that 163 drillholes do not have recovery information, mainly in years 1995-2012.

Source: SRK, 2021

9.4.1 Assay Validation

In order to perform the assay cross validation, SRK linked the database with the compilation of the test certificate of the laboratories (ALS, SGS and Coimolache) in CSV format. The observations found are summarized in the Table 9-3.

Table 9-3: Observations Found in the Assay Cross Validation

Laboratory	Total of Samples	% Total Database	Assay Cross Validation	
			Verification (Database vs Certificate Grades)	Observations
ALS	13,827	19.3%	SRK verified **8.7%** of the samples.	No laboratory certificates were available in order to perform the assay cross validation. (Year: 1994)
SGS	38,615	53.9%	SRK verified **70.2%** of the samples.	It was found 13 samples with results in the database but not in the certificate.
				It was found 214 samples in Cu in which the certificate value does not coincide with the database value.
Coimolache	19,246	26.8%	SRK verified **97.8 %** of the samples.	It was found 476 samples in Ag which decimals differ ± 0.01 in the database with the value of the certificate, but this deemed immaterial.
				There are 39 samples in Au, 53 samples in Ag, and 16 samples in Cu in which the value of the certificate does not coincide with regard to the value of the database.
Total	**71,688**	**100.0%**		

Source: SRK, 2021

In the assay cross validation, SRK found that certain values that are present in the database do not agree with the values of the laboratory test certificates; however, these were 324 samples (0.45% of the total samples) which is considered insignificant and do not have a material impact on the Mineral Resource Estimation.

SRK found 7,706 samples (10.7% of the total) with Laboratory Certificates in PDF/JPG format (SGS Laboratory – Period: 2006, 2007, 2011 and 2016), which not were included in the assay cross validation.

9.5 Limitations

SRK performed the cross validation of 8.7% of the assay results of ALS laboratory, 70.2% of the SGS Laboratory and 97.8% of the assay results of Coimolache Internal Laboratory as the original assay certificates were not available at the time of the cutoff date of the delivery of information by Buenaventura and/or because the certificates were not in the appropriate format for the cross validation (.csv).

9.6 Opinions and Recommendations in the Database Quality

SRK believes that the database is consistent and acceptable for the Mineral Resource Estimation.

SRK observed that the database has a small number of findings or minor inconsistencies, which are mainly related to historical information obtained from data migration. Although a complete reconciliation of the certificate information to the digital database could not be completed, SRK notes that most of the current resource is supported by modern information that could be compared to original certificate information. The incidence of error for the data that could be compared was limited and deemed immaterial to the disclosure of mineral resources.

For the next estimate, SRK recommends that an internal validation procedure be performed on Buenaventura's Database Management System (SIGEO System); additionally, a checklist should be made for the data export process as well as for internal laboratory reports. SRK recommends improving the internal data management system for auditing purposes to ensure the availability of sufficient information for data traceability.

10 Mineral processing and metallurgical testing

Coimolache's processing facilities consists of a run-off-mine (ROM) leaching operation, an adsorption-desorption-recovery plant, and a smelter to produce a dore bar containing approximately 98% precious metals.

Data made available to SRK was monthly based only, as such, the level of variability of the key operating performance parameters is unknown.

For the 2017 to 2020 November period, see Table 10-01, Coimolache's total ore processed reached approximately 60 million tonnes grading 0.5 g/t gold and 11.14 g/t silver. Total production was 20.8 million grams of gold and 109 million grams of silver from two ROM lech pads, namely Tantahuatay leach pad and Cienaga leach pad. When assuming 365 day/year of operation, ore was loaded at a rate of 32,900 t/day and production averaged 367 oz/day of gold and 1,928 oz/day of silver.

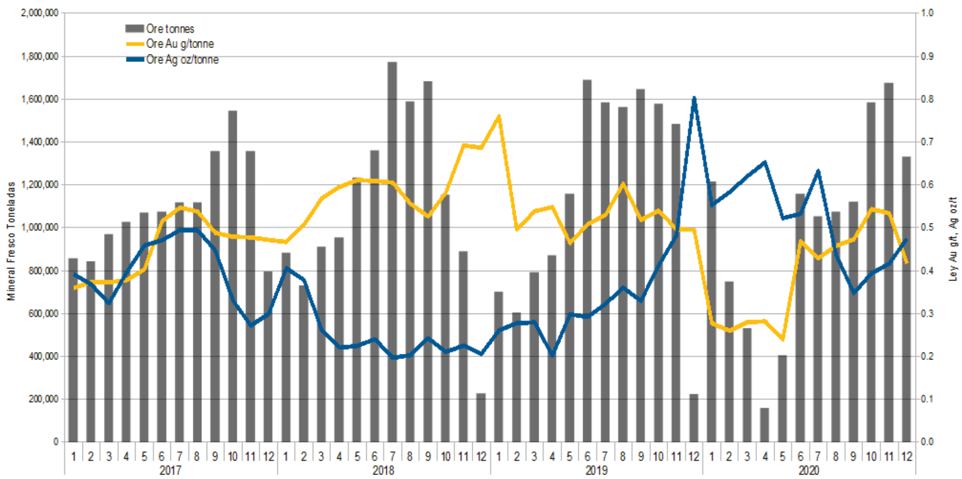


Figure 10-1: Coimolache, Ore Supply 2017 to 2021

The Tantahuatay leach pad was loaded with approximately 53 million tonnes of ore grading 0.46 g/t of gold and 11.98 g/t of silver, achieved an average recovery of 77.7% gold and 16.4% silver. Total production from Tantahuatay during the period reached 18.9 million grams of gold equivalent to 608,969 ounces or an average of 121,794 ounces per year. Silver' total production reached 105 million grams which is equivalent to 3.3 million ounces or an average of 673,833 ounces per year.

The Cienaga leach pad was loaded with approximately 6.8 million tonnes of ore grading 0.80 g/t of gold and 4.53 g/t of silver, achieved an average recovery of 34.7% gold and 15.59% silver. Total production from Cienaga during the period reached 1.9 million grams of gold equivalent to 608,969 ounces averaging 121,794 ounces per year.

In relative terms, Tantahuatay received approximately 89% of the ore and produced 91% of the gold and 96% of the silver.

Table 10-1: Coimolache, Overall Performance 2017 to 2020 Period

Area	Parameter	2017	2018	2019	2020	2021	Total
Tantahuatay	Ore, tonnes	11,936,420	12,070,732	13,201,391	10,164,299	5,871,374	53,244,216
	Ore Au g/t	0.37	0.56	0.47	0.44	0.43	0.46
	Ore Ag g/t	13.55	8.06	11.72	16.11	10.33	11.98
	Recovery Au	106.7%	78.0%	67.8%	67.7%	68.3%	77.7%
	Recovery Ag	15.4%	25.1%	14.3%	12.8%	19.9%	16.4%
	Production Au g	4,710,758	5,261,147	4,231,647	3,005,540	1,731,956	18,941,048
	Production Ag g	24,912,105	24,465,737	22,175,262	21,007,436	12,076,662	104,637,202
Cienaga	Ore, tonnes	1,413,966	1,149,937	1,044,289	1,320,647	1,868,987	6,797,826
	Ore Au g/t	1.18	0.83	1.21	0.41	0.53	0.80
	Ore Ag g/t	1.89	1.00	0.84	6.21	9.58	4.53
	Recovery Au	0.0%	13.1%	64.5%	54.3%	65.8%	34.7%
	Recovery Ag	0.0%	12.4%	146.2%	9.1%	14.7%	15.59%
	Production Au g	0	125,717	813,203	291,989	647,914	1,878,823
	Production Ag g	0	142,759	1,286,285	745,490	2,626,775	4,801,309
Global	Consumption CN Kg	1,917,300	2,993,600	4,436,400	3,966,960		13,314,260
	Ore, tonnes	13,350,386	13,220,669	142,454,680	11,484,947	7,740,360	60,042,042
	Ore Au g/t	0.46	0.58	0.53	0.43	0.45	0.50
	Ore Ag g/t	12.31	7.45	10.92	14.97	10.15	11.14
	Recovery Au	77.4%	69.9%	67.3%	66.2%	67.7%	69.9%
	Recovery Ag	15.2%	25.0%	15.1%	12.7%	18.7%	16.4%
	Production Au g	4,710,758	5,386,865	5,044,849	3,297,528	2,379,870	20,819,871
	Production Ag g	24,912,105	24,608,497	23,461,546	21,752,926	14,703,438	109,438,511

Source: BVN

10.1 Coimolache Processing Facilities

Coimolache's processing facilities include a conventional run-off-mine leach pad loaded with mine haul trucks that on its route to the leach pad also receive CaO for pH control purposes. The pregnant leach solutions (PLS) bearing a relative high metal concentration is sent for metal recovery in a Merrill-Crowe stage, and the low concentration PLS is processed in a carbon adsorption-desorption stage before feeding the same Merrill-Crowe stage. Barren solutions from the Merrill-Crowe are recirculate to the leach pads, and the precious metal bearing precipitate is smelted to produce a dore bar with approximately grade of 98% precious metals. A simplified block flow diagram is shown in Figure 10-2.

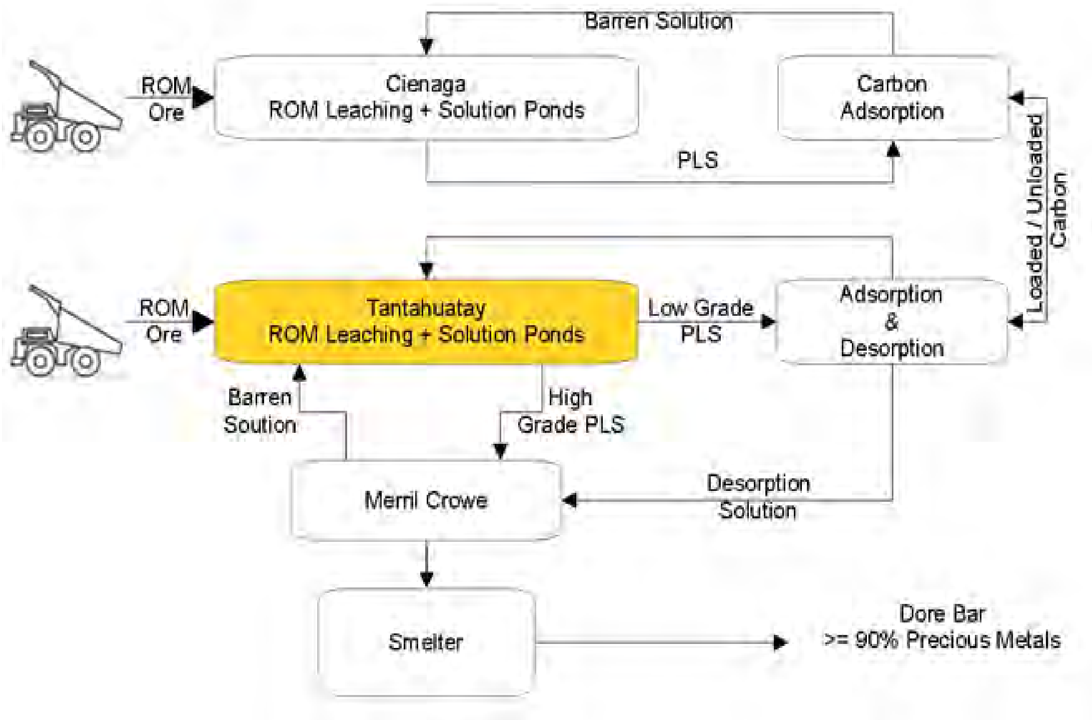


Figure 10-2: Coimolache, Block Flow Diagram

Coimolache's life time precious metals production is shown in Table 10-2 and Figure 10-3. Production started in 2011 and as of 2020 the total gold produced has accumulated 42,369 kg or 1.36 million ounces. Accumulated silver production is at 225,659 kg or 7.26 million ounces. Gold's peak production reached 5,387 kg or 173,192 ounces in 2018. Overall, historical precious metals production has been reasonably steady with some downwards trend starting in 2019.

Table 10-2: Coimolache's Historical Dore Bar Production

Year	# bars	Weight Kg	Weight average kg	Au kg	Ag Kg	Au Oz	Ag Oz	Au%	Ag%	Dore Bar % Precious Metal	Au kg Accumulated	Ag Kg Accumulated
2011	n.a.	n.a.	n.a.	1,436	8,089	46,164	260,073				1,436	8,089
2012	1,520	33,353	21.94	4,394	28,595	141,268	919,343	13.2%	85.7%	98.9%	5,830	36,684
2013	1,174	26,022	22.17	4,437	21,286	142,659	684,359	17.1%	81.8%	98.9%	10,267	57,970
2014	1,301	28,456	21.87	4,468	23,463	143,643	754,357	15.7%	82.5%	98.2%	14,735	81,433
2015	1,499	32,361	21.59	4,503	27,366	144,782	879,832	13.9%	84.6%	98.5%	19,238	108,799
2016	1,250	27,150	21.72	4,691	22,125	150,816	711,337	17.3%	81.5%	98.8%	23,929	130,924
2017	1,411	29,924	21.21	4,711	24,912	151,454	800,942	15.7%	83.3%	99.0%	28,640	155,836
2018	1,445	30,503	21.11	5,387	24,628	173,192	791,181	17.7%	80.7%	98.3%	34,027	180,445
2019	1,307	29,369	22.47	5,045	23,462	162,196	754,306	17.2%	79.9%	97.1%	39,071	203,906
2020	1,147	25,536	22.26	3,298	21,753	106,018	699,372	12.9%	85.2%	98.1%	42,369	225,659
Total	12,054	262,675	21.79	40,933	217,570	1,316,028	6,995,029	15.6%	82.8%	98.4%		

Source: BVN

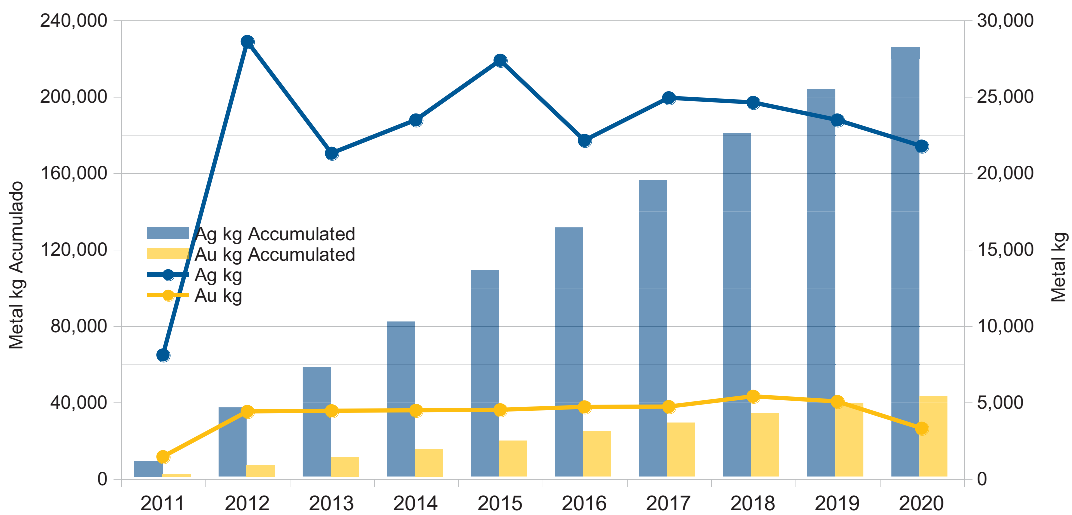


Figure 10-3: Coimolache's Historical Dore Bar Production

Source: BVN

10.2 Metallurgical Testing

Coimolache performs regular metallurgical leaching tests, including bottle rolls and column testing. Evaluation of multiple ores, and key leaching performance indicators are constantly investigated with the purpose of optimizing results.

Metallurgical Testing, 2020 Sampling Campaign

Coimolache collected a total eight (8) samples to metallurgical characterization including mineralogy and leaching testing. The samples represented six different mineralized areas that are within the current and future mineable areas, namely Tantahuatay North-West Extension, Mirador Sur, Mirador Norte, Tantahuatay 2, Cienaga Norte, and Tantahuatay 5, see Table 10-03. The sample's gold grade range from 0.195 g/t up to 0.751 g/t. All samples also contain sulfides, as represented by Cu, Pb, Zn, Mo, Fe, and As assays in combined concentrations high enough (approximately 2% to 5.7%) to likely impact the performance of the leaching operation.

Table 10-3: 2020 Sample's Chemical Characterization

Deposit	Sample ID	Au g/t	Ag g/t	Cu ppm	Pb ppm	ZN ppm	Mo ppm	Fe ppm	As ppm	Metal Au+Ag g/t	Metal in Sulfides equiv. Ppm
Tantahuay2 ExNO	MET-10144	0.316	23.77	464	1588	16	31	42,696	2243	24.09	47,038
Tantahuay2 ExNO	MET-10145	0.268	13.94	521	979	17	14	33,530	694	14.21	35,755
Mirador Sur	MET-10146	0.751	0.41	364	186	24	211	55,617	171	1.16	56,573
Mirador Sur	MET-10147	0.255	0.31	183	292	42	63	37,125	83	0.57	37,788
Mirador Norte	MET-10148	0.376	1.78	974	200	32	40	29,288	138	2.16	30,612
Tantahuay2	MET-10149	0.195	15.69	468	465	20	57	22,648	2500	15.89	26,158
Cienaga Norte	MET-10150	0.671	3.77	102	147	58	36	23,934	221	4.44	24,498
Tantahuatay5	MET-10151	0.467	26.5	95	424	14	10	18,234	509	26.97	19,286

Source: BVN

The mineralogical analysis of the samples is presented in Table 10-04 and Figure 10-4 shows that all samples have a predominant content of quartz o 60% up to 85%, and additional clay-like minerals that may interfere with the efficiency of the leaching process.

Table 10-4: 2020 Sample's Mineralogical Composition

Mineral	Chemical Formula	MET -10144	MET -10145	MET -10146	MET -10147	MET -10148	MET-10149	MET-10150	MET-10151
Pyrophyllite	$Al_2Si_4O_{10}(OH)_2$	6	12	-	11	9	25	-	13
Kaolinite	$Al_2Si_2O_5(OH)_4$	<L.D	<L.D.	-	5	2	-	-	-
Quartz	SiO_2	67	67	84	63	68	58	84	65
Alunite	$(K,Na)Al_3(SO_4)_2(OH)_6$	16	9	3	13	12	5	9	10
Goethite	FeO(OH)	6	5	9	3	5	-	3	-
Diaspore	AlO(OH)	<L.D	2	-	-	-	7	-	6
Total		100	100	100	100	100	100	100	100

Source: BVN

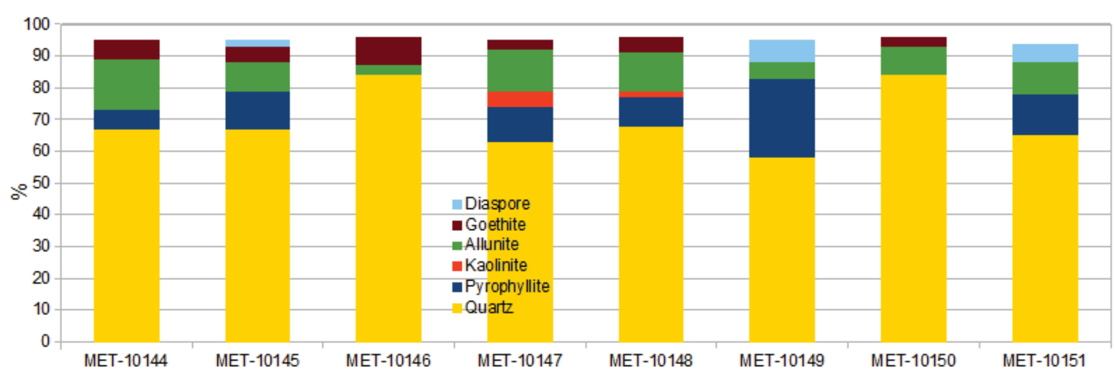


Figure 10-4: 2020 Sample's Mineralogical Composition

Source: BVN

Test leaching testing results for all samples are show in Figure 10-5. The following observations can be made:

- At 45 days of leaching, accumulated gold recovery ranged from approximately 67% up to 93% for all samples excepting sample MET-10150 from Cienaga Norte which achieved 28.71%. The sample with the higher accumulated recovery was MET-10145 from Tantahuatay 2 North-West Extension, which was also showed the second fasted kinetics at 10 days with 69.3%. The sample with the fastest kinetics was MET-10146 from Mirador Sur.
- At 45 days of leaching, accumulated silver recovery ranged from approximately 20% up to 41% for all samples excepting sample MET-1048 from Mirador Norte that achieved 10.78%.
- At 45 days of leaching, accumulated copper recovery ranged from approximately 0% up to 12% for all samples.

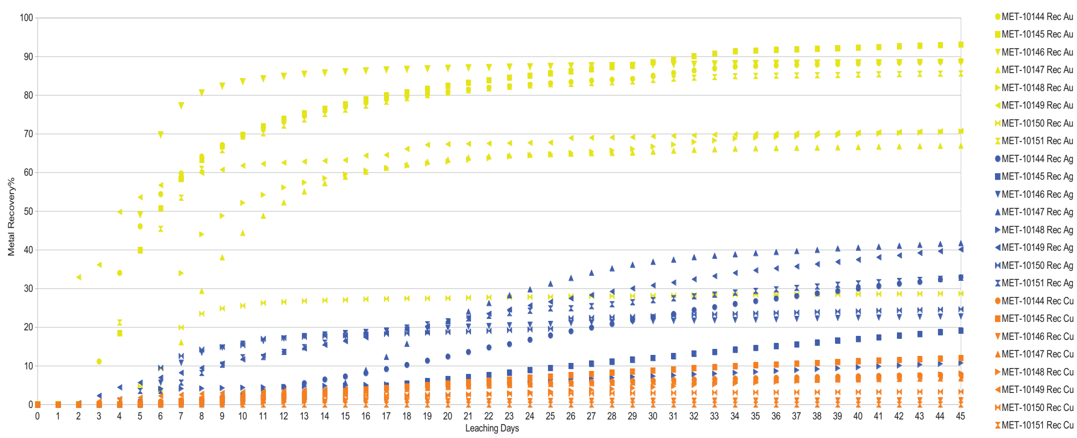


Figure 10-5: 2020 Samples, Recovery v/s Leaching Time

Source: BVN

Additionally, the relationship between gold recovery and contained base metals can be observed in Figure 10-6, and Figure 10-7, the following comments can be made:

- Gold recovery at 45 days of leaching shows a high correlation coefficient with Zinc's head grade. The ultimate gold recovery show a negative relationship with zinc's head grade, in other words, samples with lower zinc content like Tantahuatay achieve higher gold recovery than those samples with higher zinc grade like Cienaga Norte. Mirador Sur and Mirador Norte samples show a performance in-between of that achieved by Tantahuatay and Cienaga Norte samples.
- Gold recovery also show a positive relationship with copper recovery, which suggest that a fraction of the gold is associated with copper minerals. In other words, higher copper recovery translate in higher the gold recovery.

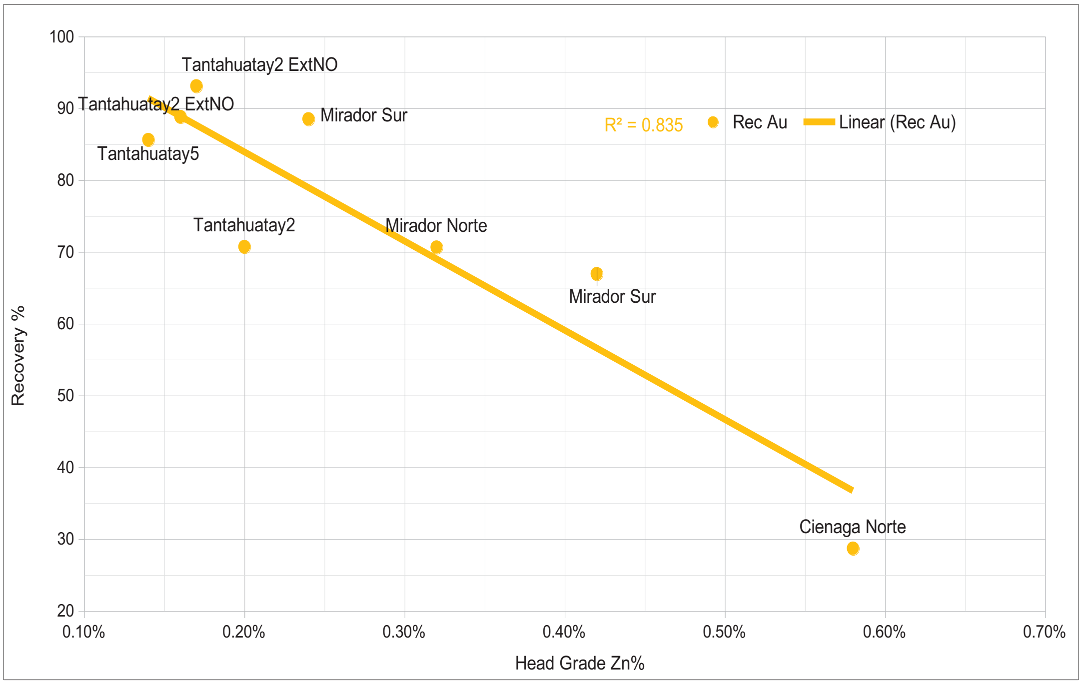


Figure 10-6: Gold Recovery v/s Zinc Head Grade

Source: BVN

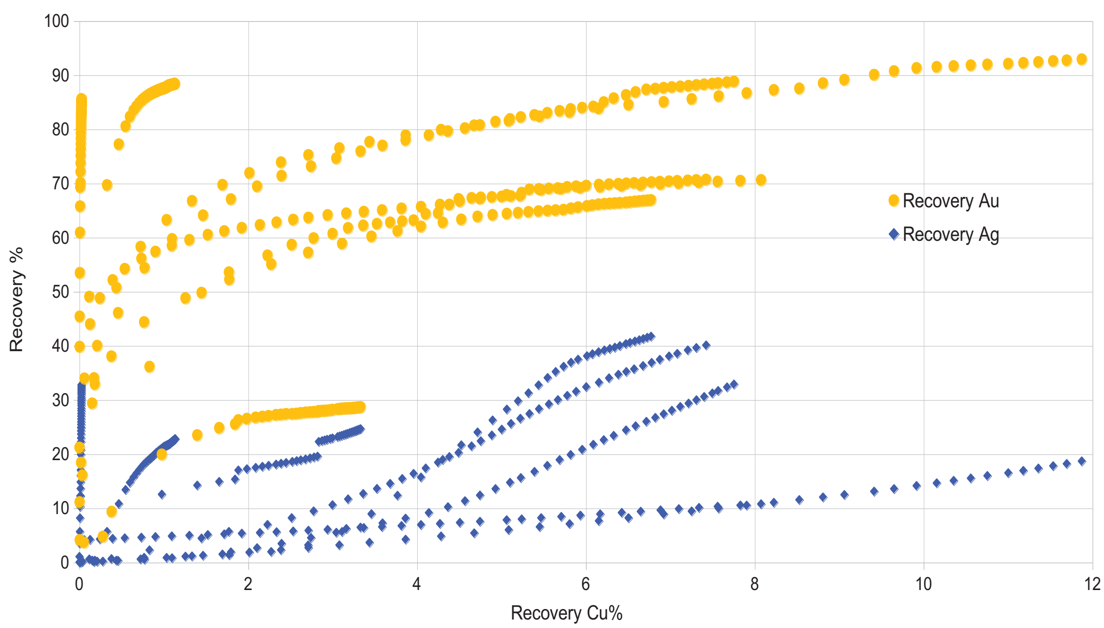


Figure 10-7: Precious Metals Recovery v/s Copper Recovery

Source: BVN

10.3 Conclusions and Recommendations

During SRK's visit to Coimolache site it was observed that both Tantahuatay and Cienaga leach pad's interlift slopes were not leached. At the time of issuing this report the quantification of tonnage and grade and therefore the total potentially recoverable ounces were not available. SRK is the opinion that a good practice that has a major impact on the economics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad. Maintaining an ore inventory, like the unleached ore in the interlift' slopes negatively impacts the company's economics. It is SRK's opinion that the reviewed figures will have a positive and material impact on the calculations and economics of Coimolache presented in this report.

Coimolache operates a conventional run-off-mine leaching operation that processes gold-silver ores in order to produce dore bars.

Coimolache started operating Tantahuatay, its first leach pad in 2011, and in 2015 incorporated Cienaga, its second leach pad. To this date, Coimolache has produced a total of 42.3 million grams or 1.36 million ounces of gold, and 226 million grams or 7.26 million ounces of silver, equivalent to an overall 73.8% gold recovery and 17.6% silver recovery.

Coimolache counts with a well equipped, self sufficient metallurgical testing facilities to support its current operation, and new projects development. A new optical microscopy station is being installed that will allowed them to independently support investigation and optimization.

The metallurgical testing regularly carried out at Coimolache adequately addresses the needs to optimize the day-to-day operation. The 2021 testing campaign results suggest that future ore can be expected to match or exceed historical metallurgical performance, and also suggest opportunities to further optimized metal extraction. It is SRK's opinion that the metallurgical control should include tracking of all sulfide minerals in the fresh feed and its relationship to cyanide consumption, lime consumption, irrigation rate (m^3/tonne), and ultimately metal extraction of precious metals and cyanicides.

11 Mineral Resource Estimates

11.1 Introduction

Buenaventura has estimated the Mineral Resources as of database closure date on May 31, 2021. The effective date for reporting Mineral Resources is October 31, 2021.

The Tantahuatay mine contains three deposits: Tantahuatay, Cienaga and Mirador (Figure 11-1), which are open pit mine operations. Three independent block models were prepared to support the Mineral Resource Estimation (MRE).

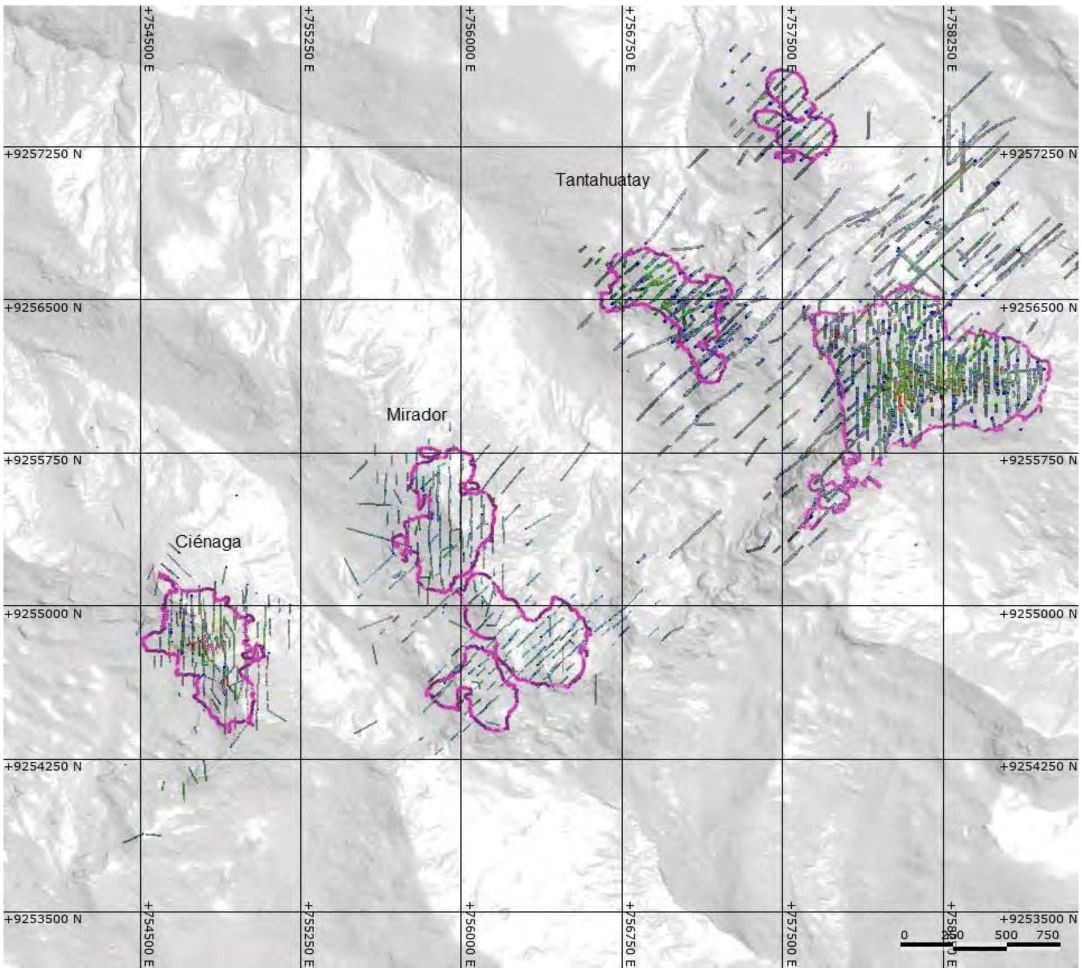


Figure 11-1: Location of the three deposits that are part of Tantahuatay mine.

Source: Buenaventura (2021)

This section describes the mineral resource estimation methodology and summarizes the key assumptions that were considered by Tantahuatay for each deposit.

Buenaventura used Minesight ©, Supervisor® and Leapfrog Geo® software to develop the geological model, perform geostatistical analysis, block model construction, the estimation of gold and silver grades, and the reporting of Mineral Resources.

For each resource model, Buenaventura followed the steps below, each of which was reviewed by SRK:

- Compilation and verification of database,
- Review of interpretation and construction of the geological models or wireframes.
- Domain definition,
- Compositing and capping for geostatistical analysis and interpolation.
- Data modeling and grade interpolation, and
- Resource classification and validation.

The following sections describe the procedures used and assumptions Buenaventura has applied to estimate the mineral resources.

11.2 Tantahuatay Deposit

11.2.1 Resource Database

The database used to support the geological model and mineral resource estimate contains 568 diamond drill holes (11,277 m) and includes collar, survey, assay, lithology, density, mineralization, alteration and minzone information. Table 11-1 summarizes the basic statistics for Au and Ag samples from Tantahuatay.

Table 11-1: Summary statistics for raw sample data from the Tantahuatay deposit.

Deposit	Element	Samples	Mean	Minimum	Maximum	CV	Std. Dev
Tantahuatay	Au gpt	70,651	0.21	0.01	52.87	2.44	0.50
	Ag gpt	70,651	9.30	0.01	1048.57	2.06	19.20

Source: Buenaventura (2021)

11.2.2 Geological Modeling and Interpretation

The geological models developed at Tantahuatay were built to better understand the deposit geology, integrate information, and support the mineral resource model. The modeling includes an ore zone model to characterize oxidized, transition and sulfide material, a lithology model to characterize the geological domains, an alteration model, a structural model, and grade shells to identify and segregate domains by cut-off grades.

The models were developed in Leapfrog Geo software (v 6.3) and incorporate a variety of geological information including:

- Geological logging (alteration, lithology, and mineralization).
- Geological cartography
- Interpreted cross sections
- Diamond drill cores / surface structural observations
- Interpreted polylines (3D surface and subsurface)

All models were developed and updated by the Tantahuatay geology and resource team, except for the structural model which was developed by SRK in 2020.

The estimation domains were grouped and defined primarily by gold grade within the alteration domains, where a relatively homogeneous distribution of grade in terms of mean grade and spatial variability is expected. These domains can be determined deterministically, i.e. through geological knowledge; or probabilistically, i.e. using statistical tools; or a combination of both. Based on this, four estimation domains were defined. Domain 1 is made up of massive silica; the advanced argillic zone constitutes domain 2; barren zones such as argillic, phyllic, skarn and marble are grouped in domain 3; and finally propylitic alteration is considered as domain 4. In domain 1, a high-grade envelope (cut-off 0.5 g/t Au) was generated to control high-grade zones and to avoid overestimation of gold grades during interpolation.

Alteration units, domain integration and their respective codes are summarized in Table 11-2.

Table 11-2: Coding by type of alteration in the Tantahuatay deposit

<table>
<tr><th>Item</th><th>Alteration</th><th>Code</th><th>Domain</th></tr>
<tr><td>1</td><td>Massive Silica</td><td>301</td><td>1</td></tr>
<tr><td>2</td><td>Advanced Argillic</td><td>302</td><td>2</td></tr>
<tr><td>3</td><td>Argillic</td><td>303</td><td rowspan="4">3</td></tr>
<tr><td>4</td><td>Phyllic</td><td>304</td></tr>
<tr><td>5</td><td>Skarn</td><td>305</td></tr>
<tr><td>6</td><td>Marble</td><td>306</td></tr>
<tr><td>7</td><td>Propylitic</td><td>307</td><td>4</td></tr>
</table>

Source: Buenaventura (2021)

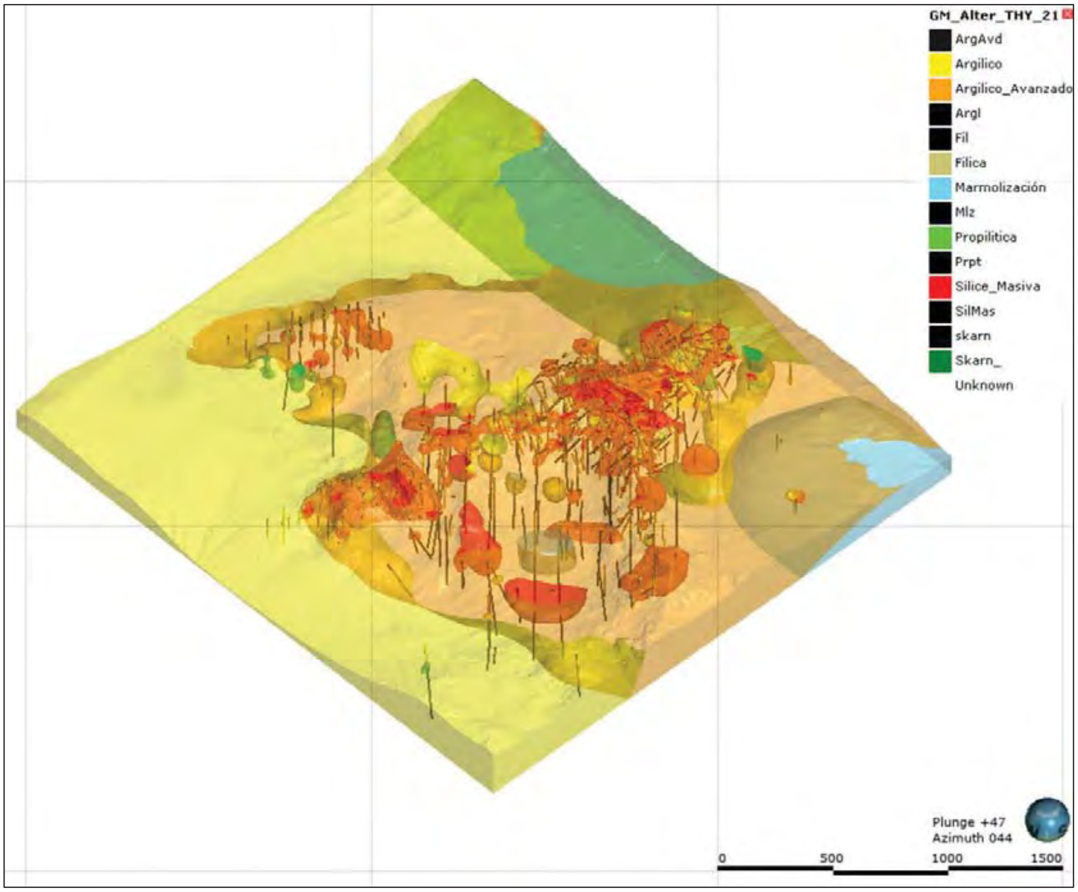


Figure 11-2: Alteration model of Tantahuatay deposit.

Source: Buenaventura (2021)

11.2.3 Bulk Density

3,768 samples were taken from the drill core and bulk density was determined by paraffin wax method (samples are coated in parffin wax prior to being immersed in water). These data are reviewed and outliers (identified as outside the mean value ± 2 std deviations) are excluded from further analysis. Table 11-3 summarizes the bulk density data. The average density values are assigned to blocks based on alteration domain.

Table 11-3: Densities by estimation domain at the Tantahuatay deposit.

Domain	Samples	Min	Max.	Average
1	320	2.26	2.78	2.53
2	3300	2.25	2.83	2.53
3	121	2.14	2.90	2.49
4	27	1.82	3.02	2.44

Source: Buenaventura (2021).

11.2.4 Compositing and Capping

Compositing is performed on diamond drill hole samples within each modeled alteration. The size defined for compositing is 2 m down the hole. Buenaventura performed an analysis to identify which composite size best suits the deposit, evaluating values proportional to bench height (2, 4, and 8 m), choosing 2 m for having less variability and less bias with the length-weighted average (Table 11-4).

Table 11-4: Summary of statistics of composited data with alternative to define the best composite value option.

Statistics	Uncomposited	2 m composite	4 m composite	8 m composite
Count	70,651	32,891	28,575	14,892
Mean	0.21	0.21	0.21	0.22
Std. Dev	0.500	0.330	0.400	0.350
CV	2.44	1.38	1.88	1.61
Variance	0.25	0.11	0.16	0.12
Minimum	0.005	0.005	0.005	0.005
Maximum	52.87	12.520	27.080	14.860

Source: Buenaventura (2021)

SRK evaluated the compositing by comparing the original sample interval (without weighing) gold (gpt) statistics and the compositing-length-weighted gold statistics. SRK verified that there is no significant bias in the mean value after compositing. Table 11-5 summarizes statistics of composited data in Tantahuatay.

Table 11-5: Summary of statistics of composited data of grades per domain at the Tantahuatay deposit.

Deposit	Domain	Element	Samples	Mean	Minimum	Maximum	Std. dev	CV
Tantahuatay	1	Au gpt	3056	0.40	0.01	8.70	1.29	0.52
		Ag gpt	3056	15.95	0.20	297.70	19.77	1.24
	2	Au gpt	28288	0.23	0.01	12.52	1.32	0.30
		Ag gpt	28288	11.34	0.10	542.10	16.32	1.44
	3	Au gpt	1232	0.09	0.01	1.84	1.39	0.13
		Ag gpt	1232	3.87	0.20	121.23	8.29	2.14
	4	Au gpt	315	0.07	0.01	1.40	1.99	0.14
		Ag gpt	315	2.87	0.20	71.30	5.86	2.04

Source: SRK Consulting (2021)

After compositing, an evaluation of outliers and their influence on mean grades within each domain was carried out using cumulative probability plots. This analysis was based on the visual interpretation of the probability curve structure, noting the appropriate inflection points at the end of populations, and that this does not generate a loss of more than 5% of metal content. Figure 11-3 shows the Au evaluation probability plot for domain 1 and domain 2, while Table 11-6 and Table 11-7 summarizes the capping values used for each element and domain, and statistical comparison after and before capping, respectively.

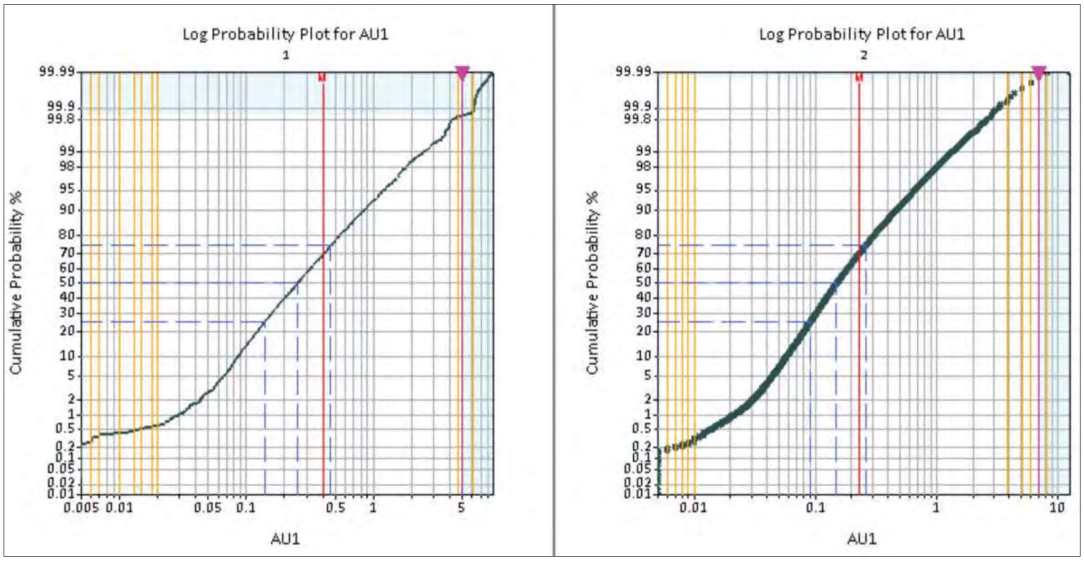


Figure 11-3: Cumulative probability curves evaluating capping in domain 1 and 2.

Source: Buenaventura (2021)

Table 11-6: Capping values for each element applied in Tantahuatay

Deposit	Domain	Au gpt	Ag gpt
Tantahuatay	1	5	130
	2	7	100
	3	1	80
	4	0.8	20

Source: Buenaventura (2021)

Table 11-7: Statistical comparison after and before capping

Domain	Statistics	Comp_Au	Top Cut_Au	Comp_Ag	Topcut_Ag
1	**Samples**	3056	3051	3056	3051
	Mean	0.40	0.40	15.95	15.85
	Mínimum	0.01	0.01	0.20	0.20
	Maximum	8.70	5.00	297.70	130.00
	Std Dev	0.52	0.49	19.77	18.93
	CV	1.29	1.22	1.24	1.19
2	**Samples**	28288	28284	28288	28159
	Mean	0.23	0.23	11.34	11.16
	Mínimum	0.01	0.01	0.10	0.10
	Maximum	12.52	7.00	542.10	100.00
	Std Dev	0.30	0.29	16.32	14.23
	CV	1.32	1.27	1.44	1.27
3	**Samples**	1232	1226	1232	1225
	Mean	0.09	0.09	3.87	3.80
	Mínimum	0.01	0.01	0.20	0.20
	Maximum	1.84	1.00	121.23	80.00
	Std Dev	0.13	0.11	8.29	7.53

Domain	Statistics	Comp_Au	Top Cut_Au	Comp_Ag	Topcut_Ag
	CV	1.39	1.25	2.14	1.98
4	**Samples**	315	313	315	310
	Mean	0.07	0.07	2.87	2.65
	Mínimum	0.01	0.01	0.20	0.20
	Maximum	1.40	0.80	71.30	20.00
	Std Dev	0.14	0.12	5.86	4.26
	CV	1.99	1.79	2.04	1.61

Source: Buenaventura (2021)

11.2.5 Variography and Estimation Parameters

Buenaventura performed varoiography analysis using Minesight software for each element within each estimation domain. The analysis was performed based on a conventional semi-variogram following the visual interpretation of mineralization trends together with variogram maps showing orientations of the best continuity.

Variograms were constructed using two spherical type structures. Sufficient data exist to model directional variograms in domain 1, domain 2, and domain 3. There is insufficient data for domain 4, so the variogram is modeled as an omnidirectional variogram.

SRK reviewed the grade variograms of the estimation domains and found the modeling to be adequate.

Figure 11-4 and Figure 11-5 show the variograms resulting from the continuity analysis for gold in domain 1 and domain 2, respectively.

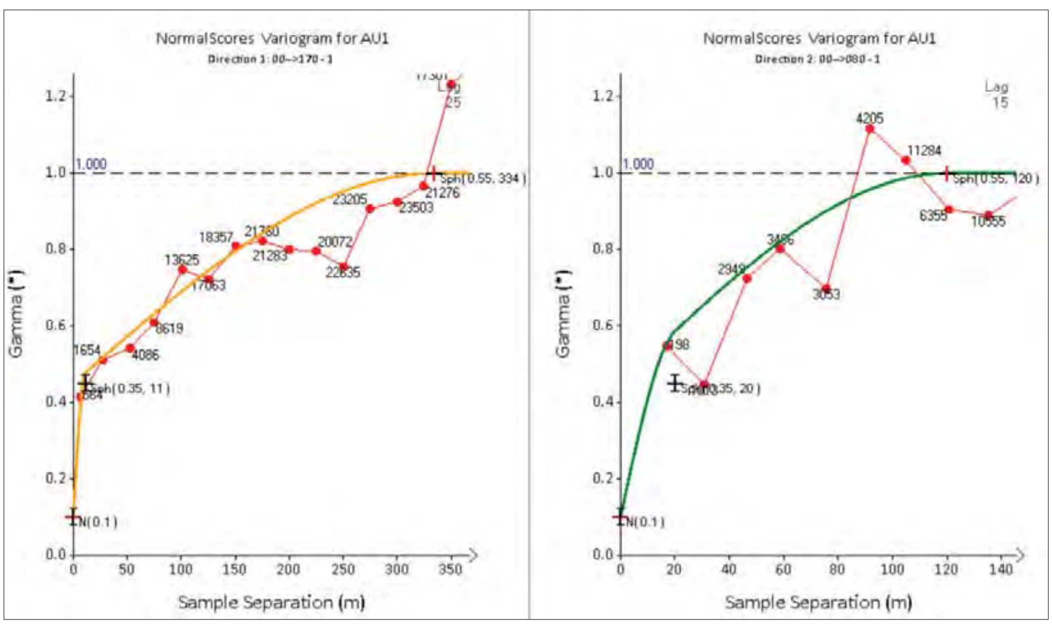


Figure 11-4: Variogram model for gold within domain 1.

Source: Buenaventura (2021)

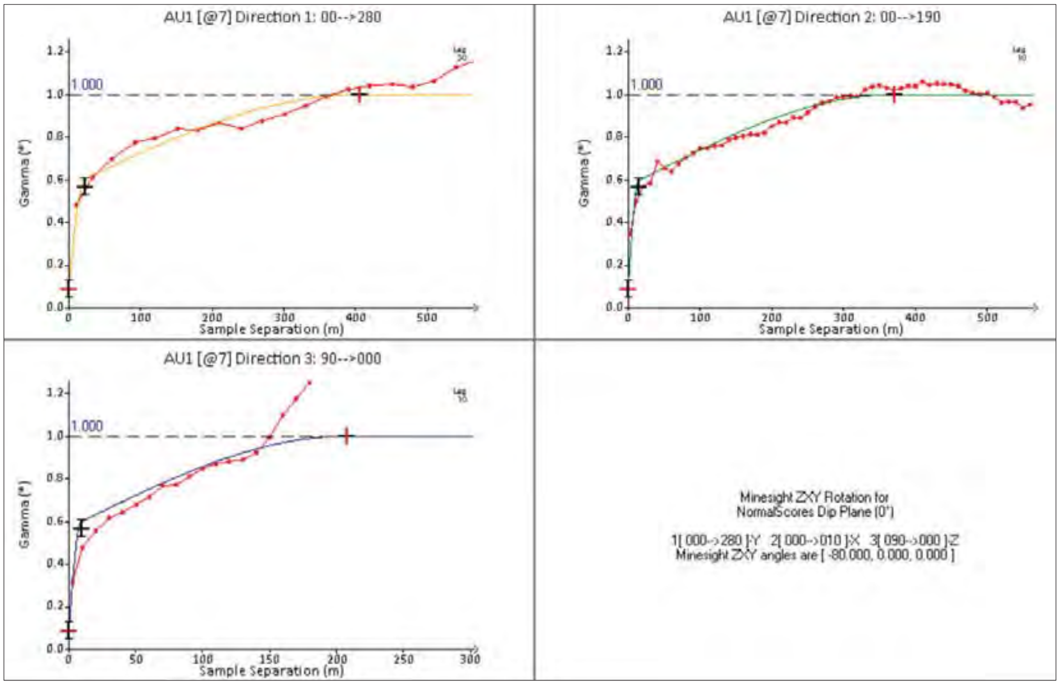


Figure 11-5: Variogram model for gold within domain 2.

Source: Buenaventura (2021)

Table 11-8 summarizes the variogram models that were used in resource estimation.

Table 11-8: Tantahuatay Variogram Models

Domain	Nugget effect	Structure	Type	Sill	Minesight rotation (ZXY)			Range		
					ROT	DIPN	DIPE	Major Axis	Minor Axis	Vertical Axis
1	0.148	1	Sph.	0.422	170	0	0	11	20	7
		2	Sph.	0.430	170	0	0	334	120	180
2	0.149	1	Sph.	0.567	-80	0	0	22	14	9
		2	Sph.	0.285	-80	0	0	405	370	207
3	0.064	1	Sph.	0.48	80	0	-60	110	9	49
		2	Sph.	0.455	80	0	-60	289	251	90
4	0.111	1	Sph.	0.304	0	90	-90	8	46	13
		2	Sph.	0.585	0	90	-90	156	54	58

Source: Buenaventura (2021)

11.2.6 Block Model

Buenaventura created a block model for grade interpolation in Minesight. The block model is based on the alteration model and covers the extents of the current pits. The model is blocked with 10x10x8 parent cells. A summary of the data used to build the block model can be found in Table 11-9.

Table 11-9: Parameters used in the Tantahuatay block model.

Coordinate	Minimum	Maximum	Block Size (m)	No. of blocks
East	756000	759000	10	300
North	9255000	9258000	10	300
Elevation	2908	4060	8	144

Source: Buenaventura (2021)

11.2.7 Estimation Method and Parameters

Estimation parameters were defined based on quantitative kriging neighborhood analysis (QKNA) using Supervisor© software. Gold (Au ppm) and Silver (Ag ppm) grade estimation for each domain was run in Minesight© software. The estimation method used was Ordinary Kriging.

The estimation process was run in two passes, both for the Ordinary Kriging (OK) interpolation and the Nearest Neighbor (NN) interpolation, which was run for validation purposes.

The QKNA analysis included a study to determine the maximum number of samples to avoid excessive smoothing of estimates and to minimize the screening effect, which increases the number of negative weights assigned to data. Generally, a starting point of 2 samples as minimum and 24 samples as maximum, with a maximum of 2 samples per drillhole, was used. From this configuration, the appropriate parameters for each domain were determined. In Tantahuatay a minimum of 3 samples and maximum of 20 were used for Domains 1, 2 and 3; and a minimum of 3 samples and maximum of 18 samples was used for the Domain 4.

The rotation convention follows the Minesight © software format with GSLib-MS rotation. (ZL - First Rotation: ROT), XR - Second Rotation: DIPN, YR - Third Rotation: DIPE), with left rotation around the Z axis, and right rotation around the X and Y axes. Y is the Major Axis, X is the Minor Axis, and Z is the Vertical Axis.

Outlier restriction is implemented based on an 8 m constraint. Within 8m, the uncapped grade is used for block estimation, beyond 8 m, the capped grade is applied. This outlier restriction value was based on bench size and visual confirmation that this distance adequately controlled the influence of high grades.

Estimation parameters extracted from the Minesight © software are shown in Table 11-10 and Table 11-11.

Table 11-10: Estimation parameters for Au.

Domain	Pass.	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max # Comp per DDH
1	2 1	200 100	150 60	140 70	170 170	0 0	0 0	3	20	2
2	2 1	210 70	150 50	90 30	-80 -80	0 0	0 0	3	20	2
3	2 1	200 80	150 60	120 40	80 80	0 0	-60 -60	3	12	2
4	2 1	120 60	60 30	80 40	0 0	90 90	-90 -90	3	18	2

Source: Buenaventura (2021)

Table 11-11: Estimation parameters for Ag.

Domain	Pass.	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max # Comp per DDH
1	2 1	200 100	200 100	140 70	107.49 107.49	-9.84 -9.84	-38.25 -38.25	3	24	2
2	2 1	200 100	160 80	100 50	-38.25 -38.25	-12.7 -12.7	15.57 15.57	3	24	2
3	2 1	200 100	160 80	100 50	-85.72 -85.72	29.5 29.5	101.5 101.5	3	18	3
4	2 1	160 80	80 40	40 20	0 0	90 90	-90 -90	3	18	3

Source: Buenaventura (2021)

11.2.8 Model Validation

Buenaventura applied the following validation methods in Tantahuatay: swath plots were used to evaluate local bias, global bias checks, and visual inspection comparing block estimates to the supporting composite data.

11.2.9 Local Estimation Validation

SRK checked for local biases by creating a series of swaths using the Tantahuatay grade models (for the three pits) by columns (easting), rows (northing) and levels (elevation), comparing the average grade average of the capped composites, the OK grades, and the nearest neighbor (NN) grades.

In general, SRK considers that the gold estimation model provides reasonable agreement in the three directions. Figure 11-6, Figure 11-7 and Figure 11-8 show examples of Tantahuatay swath.

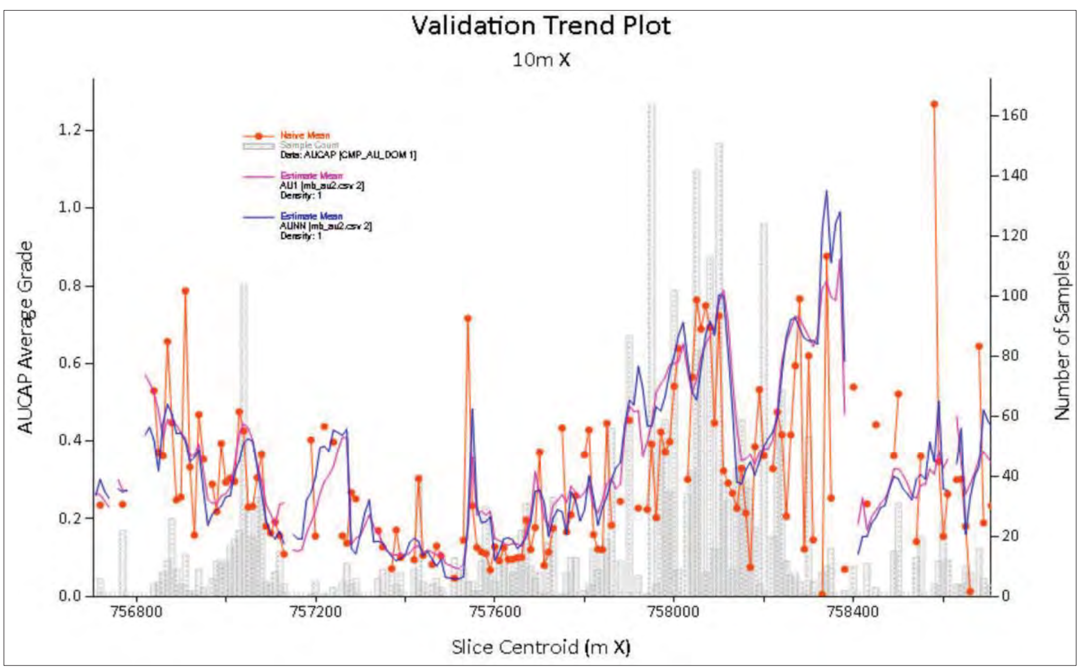


Figure 11-6: Tantahuatay swath plots for Au (gpt) on the X-axis. OK interpolation in magenta, NN interpolation in blue, and Au (gpt) samples in red.

Source: SRK Consulting (2021)

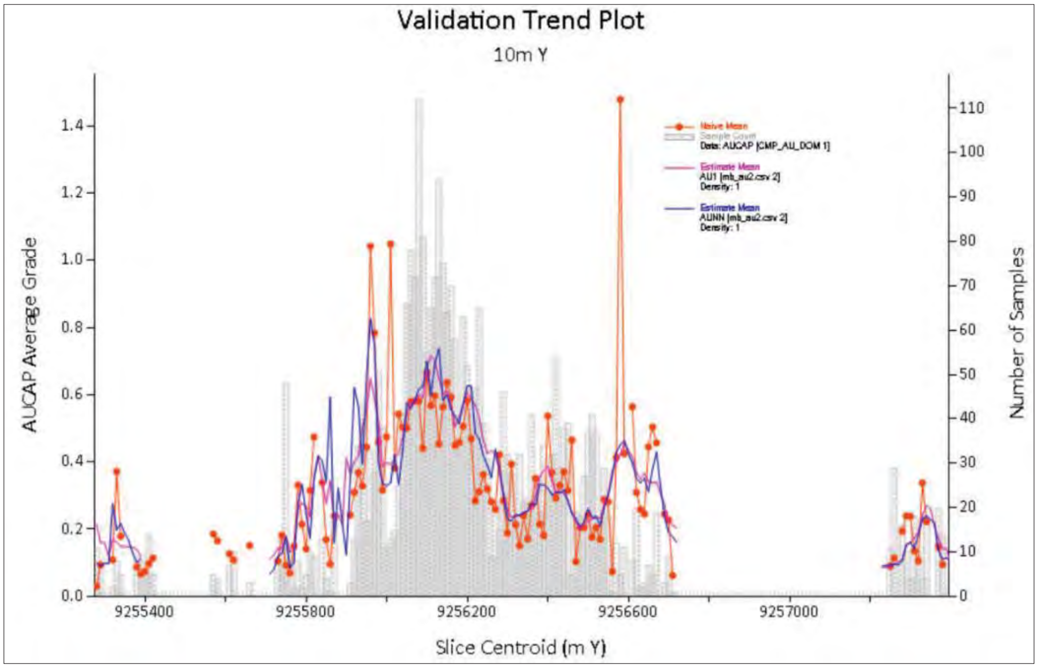


Figure 11-7: Tantahuatay swath plots for Au (gpt) on the Y axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

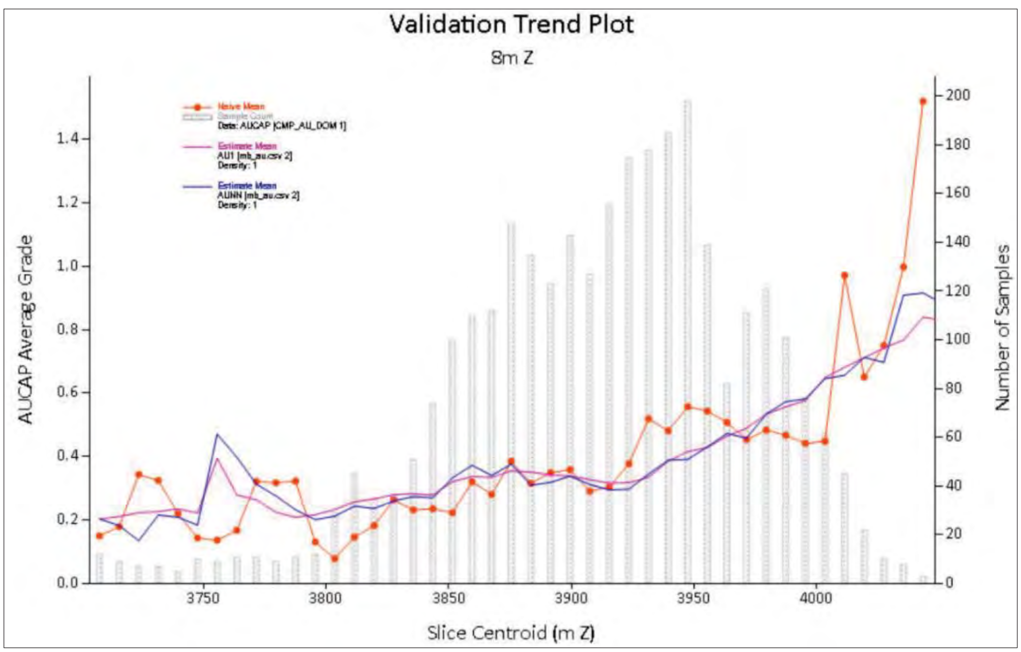


Figure 11-8: Tantahuatay swath plots for Au (gpt) on the Z axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

11.2.10 Visual Validation

The estimated Au models have been inspected in E-W sections, N-S sections, and plan views. The blocks have been visually compared with the composites used in the estimation, showing acceptable agreement. Figure 11-9 and Figure 11-10 show two examples. SRK noted some area of local high-grade blowouts for both Au and Ag.

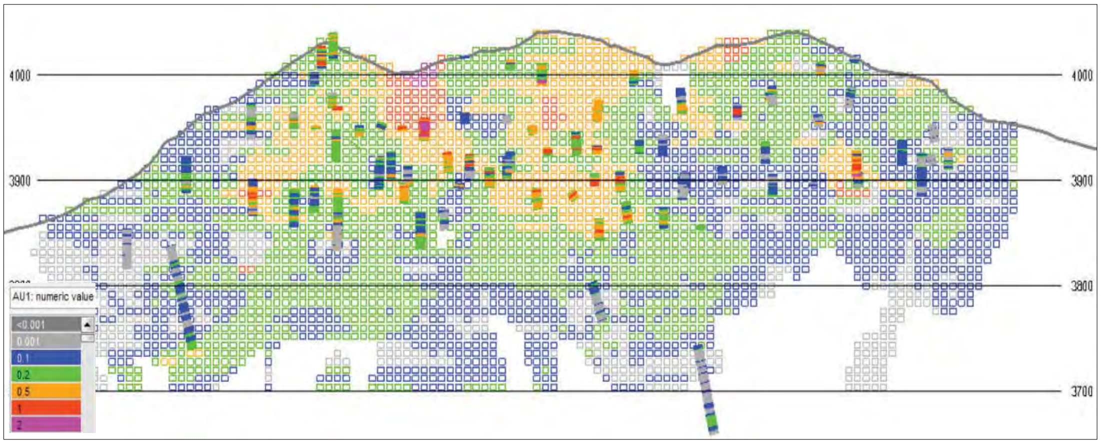


Figure 11-9: Vertical section N 9256120. Comparing Au block model with the composited Au data.

Source: Buenaventura (2021).

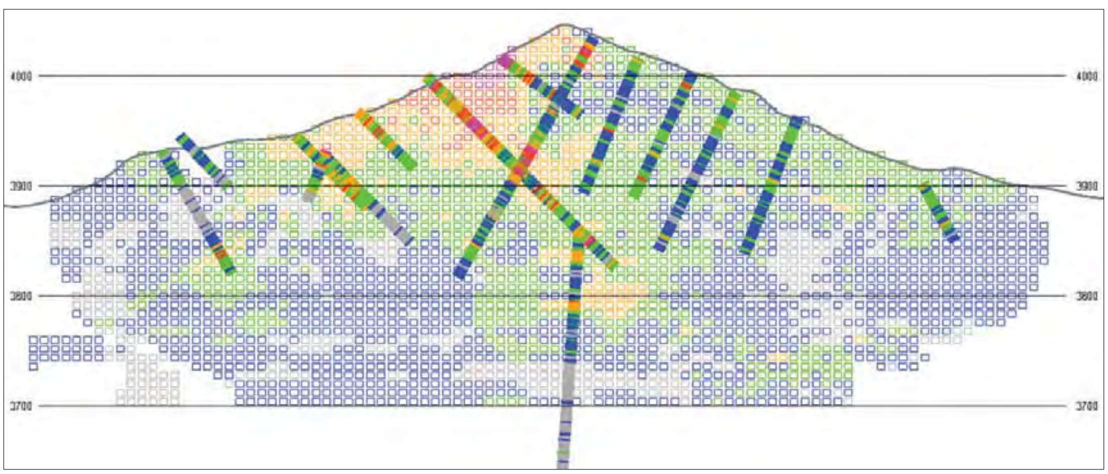


Figure 11-10: Vertical section E-758095. Comparing Au block model with the composited Au data.

Source: Buenaventura (2021).

11.2.11 Global Validation

Finally, the statistics of the block model grades interpolated by OK and NN were compared. The table below (Table 11-12) shows the comparison between the global means of OK vs NN. In general, the differences produced are minimal and are within the generally accepted ±5%

Table 11-12: Analysis of global means by each domain for the Au element.

Domains	OK	NN	Diff
1	0.39	0.388	0.5%
2	0.202	0.198	2.0%
3	0.088	0.091	-3.3
4	0.06	0.058	3.8%

Source: Buenaventura (2021).

11.2.12 Mineral Resource Categorization

Industry best practice guidelines suggest classification of Mineral Resources should consider confidence in the geological continuity of mineralized structures, the quality and quantity of data supporting the estimate, and confidence in the geostatistical processing of tonnage and grade estimates. Appropriate classification criteria should aim to integrate these concepts to outline regular areas in a similar resource classification.

In this context, Buenaventura considered various aspects to determine the classification including the representativeness and quality of the data used for estimation; the alteration and mineral zone controls, the continuity of mineralization, the number of samples close to the estimated block, the number of drillholes used in the estimate and the quality of the estimation.

Buenaventura conducted confidence limit analyses to define the drill spacing required to meet the requirements described below. .

SRK and Buenaventura defined the mineral resource classification strategy based on the following criteria for each estimation domain:

Measured:

- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of quarterly production.
- Drill spacing of 25 m
- Estimation supported by at least 3 drillholes

Indicated:

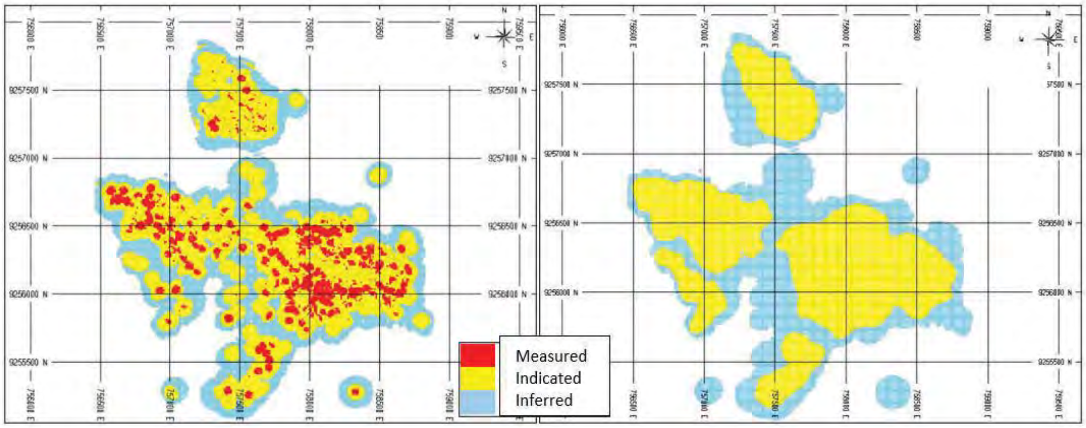
- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of annual production.
- Drill spacing of 60 m
- Estimation supported by at least 2 drillholes

Inferred:

- Average distance greater than 60 m to 120 m.
- Greater than or equal to 1 drillhole

Subsequently, to avoid the "Spotted Dog" and to remove any artifacts from the classification, produced, Buenaventura manually smoothed the classification. Figure 11-11 shows the model before smoothing and after smoothing.

Figure 11-11: Plan view of the Tantahuatay resource model before and after smoothing.



Source: Buenaventura (2021).

Reasonable Potential for Economic Extraction (RPEE), Cut-off estimated, Statement and Sensitivity of Mineral Resources and Uncertainty summary in the final items (11.5, 11.6, 11.7, 11.8 and 11.9)

11.3 Cienaga Deposit

11.3.1 Resource Database

The database used to support the geological model and mineral resource estimate contains 204 diamond drillholes (22,883 m) and includes collar, survey, assay, lithology, density, mineralization, alteration and minzone data. Table 11-13 summarizes the basic statistics for Au and Ag samples from Cienaga.

Table 11-13: Summary statistics for raw sample data from Cienaga deposit.

Deposit	Element	Samples	Mean	Minimum	Maximum	Std. Dev	CV
Cienaga	Au gpt	13,497	0.34	0.01	26.62	2.22	0.76
	Ag gpt	13,497	0.80	0.20	65.49	2.17	1.73

Source: Buenaventura (2021)

11.3.2 Geological Modeling and Interpretation

Modeling at the Cienaga deposit includes a mineral zone model to characterize oxide, transition and sulfide material, a lithology model, an alteration model, a structural model and a grade shells model to identify and segregate domains by cut-off grades. The models were developed in Leapfrog Geo software (v 6.3) and are based on: geological logging (alteration, lithology and mineralization), geological mapping, interpreted cross sections, diamond drill cores / surface structural observations and interpreted polylines (3D surface and subsurface).

All models were developed and updated by the Tantahuatay geology and resource team, except for the structural model which was developed by SRK in 2020.

The estimation domains were defined primarily by gold grade within each alteration domain, where a relatively homogeneous distribution of grade in terms of mean grade and spatial variability is expected. Based on the above, four domains were defined at Cienega: Domain 1 constitutes massive, vuggy and granular silica, domain 2 is constituted by advanced argillic alterations, domain 3 comprises argillic and intermediate argillic alterations; and finally, domain

4 is defined by propylitic alteration. In domain 1 and domain 2, high-grade envelopes (cut-off 1 g/t Au) were generated to control high-grade zones and to avoid smearing high-grade gold samples during interpolation.

Alteration units, domain integration and their respective codes are summarized in Table 11-14. Figure 11-12 shows an isometric view of the domains included in the alteration model.

Table 11-14: Coding by type of alteration in the Cienaga deposit.

Item	Alteration	Code	Domain
1	Massive Silica	301	1
2	Vuggy Silica	302	
3	Granular Silica	303	
4	Advanced Argillic	304	2
5	Argillic	305	3
6	Intermediate Argillic	306	
7	Propylitic	307	4

Source: Buenaventura (2021)

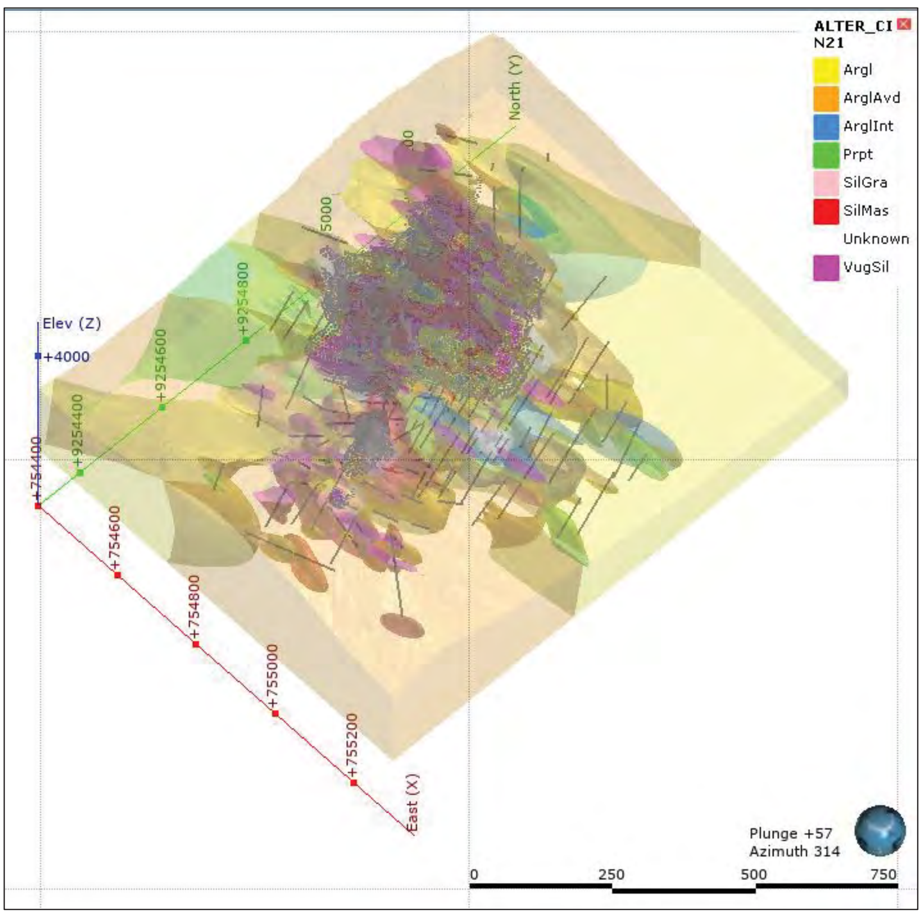


Figure 11-12: Alteration model of the Cienaga deposit.

Source: Buenaventura (2021)

11.3.3 Bulk Density

644 samples were taken from the drill core and bulk density was determined by paraffin wax method (samples are coated in parffin wax prior to being immersed in water). These data are reviewed and outliers (identified as outside the mean value ± 2 std deviations) are excluded from further analysis. Table 11-15 summarizes the density sample statistics. The average density values are assigned to blocks based on alteration ~~type~~ domain.

Table 11-15: Densities by estimation domain at the Cienaga deposit.

Domain	Samples	Min	Max	Average
1	168	1.60	2.59	2.10
2	218	1.82	2.78	2.26
3	245	1.84	2.70	2.25
4	13	2.26	2.78	2.52

Source: Buenaventura (2021)

11.3.4 Compositing and Capping

Compositing is performed on diamond drill hole samples within each modeled alteration. The size defined for compositing is 2 m down the hole. Buenaventura performed an analysis to identify which composite size best suits the deposit, evaluating values proportional to bench height (2, 4, and 8 m), choosing 2 m for having less variability and less bias with the length-weighted average (Table 11-16).

Table 11-16: Summary of statistics of composited data with alternative to define the best composite value option in Cienaga.

Statistics	Uncomposited	2 m composite	4 m composite	8 m composite
Count	13,497	11,445	6,022	3,335
Mean	0.341	0.330	0.340	0.350
Std. Dev	0.757	0.750	0.720	0.740
CV	2.221	2.240	2.130	2.110
Variance	0.573	0.560	0.530	0.550
Minimum	0.005	0.010	0.010	0.010
Maximum	26.624	25.450	28.840	24.840

Source: Buenaventura (2021)

SRK evaluated the compositing by comparing the original sample interval (without weighing) gold (gpt) statistics and the compositing-length-weighted gold statistics. SRK verified that there is no significant bias in the mean value due to the compositing process.

Table 11-17: Summary statistics of the grades composited data per domain at the Cienaga deposit.

Deposit	Domain	Element	Samples	Mean	Minimum	Maximum	Std. Dev	CV
Cienaga	1	Au gpt	3012	0.64	0.01	25.45	1.28	2
		Ag gpt	3012	1.52	0.2	48.36	2.54	1.67
	2	Au gpt	2501	0.19	0.01	9.76	0.38	1.93
		Ag gpt	2501	0.57	0.2	16.2	0.96	1.68
	3	Au gpt	4152	0.3	0.01	6.21	0.4	1.33
		Ag gpt	3755	0.5	0.2	32.14	0.79	1.58
	4	Au gpt	30	0.09	0.01	0.56	0.1	1.13
		Ag gpt	30	0.34	0.2	1	0.16	0.46

Source: Buenaventura (2021)

After compositing, an evaluation of outliers and their influence on mean grades within each domain was carried out using cumulative probability plots. This analysis was based on the visual interpretation of the probability curve structure, noting the appropriate inflection points at the end of populations, and that this does not generate a loss of more than 5% of metal content. Figure 11-13 shows the Au evaluation probability plot for domain 1 and domain 2, while Table 11-18 summarizes the capping values used for each element and domain, and Table 11-19 summarizes the statistical comparison after and before capping, respectively.

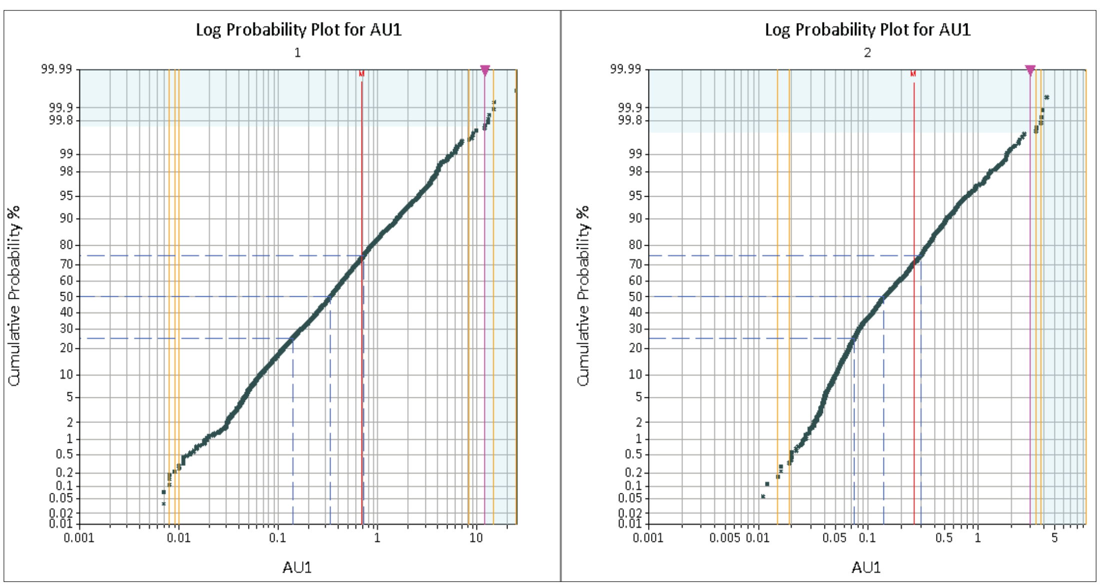


Figure 11-13: Cumulative probability curves evaluating the capping for domain 1 and 2.

Source: Buenaventura (2021)

Table 11-18: Capping values for each element applied in Cienaga.

Deposit	Domain	Au gpt	Ag gpt
Cienaga	1	12	27
	2	3	8
	3	4.5	NC
	4	0.15	NC

Source: Buenaventura (2021)

Note: NC = not capped

Table 11-19: Statistical comparison after and before capping in Cienaga.

Domain	Statistics	Comp Au	Topcut Au	Comp Ag	Topcut Ag
1	**Samples**	3012	3004	3012	3008
	Mean	0.64	0.63	1.52	1.51
	Mínimum	0.01	0.01	0.2	0.2
	Maximum	25.45	12	48.36	27
	Std Dev	1.28	1.12	2.54	2.38
	CV	2	1.78	1.67	1.58
2	**Samples**	2501	2494	2501	2494
	Mean	0.19	0.19	0.57	0.56
	Mínimum	0.01	0.01	0.2	0.2
	Maximum	9.76	3	16.2	8
	Std Dev	0.38	0.31	0.96	0.83
	CV	1.93	1.63	1.68	1.48
3	**Samples**	4152	4145	3755	-
	Mean	0.3	0.3	0.5	-
	Mínimum	0.01	0.01	0.2	-
	Maximum	6.21	4.5	32.14	-
	Std Dev	0.4	0.39	0.79	-
	CV	1.33	1.28	1.58	-
4	**Samples**	30	27	30	-

Domain	Statistics	Comp Au	Topcut Au	Comp Ag	Topcut Ag
	Mean	0.09	0.07	0.34	-
	Mínimum	0.01	0.01	0.2	-
	Maximum	0.56	0.15	1	-
	Std Dev	0.1	0.04	0.16	-
	CV	1.13	0.54	0.46	-

Source: Buenaventura (2021)

11.3.5 Variography and Estimation Parameters

Buenaventura performed varoiography analysis using Minesight software for each element within each estimation domain. The analysis was performed based on a conventional semi-variogram following the visual interpretation of mineralization trends together with variogram maps showing orientations of the best continuity.

Variograms were constructed using two spherical type structures. Sufficient data exist to model directional variograms in domain 1, 2, and 3. There is insufficient data in domain 4, so the variogram was modeled as an omnidirectional variogram.

SRK reviewed the grade variograms of the estimation domains and found the modeling to be adequate, although some adjustments to the variogram models can be made. Figure 11-14 and Figure 11-15 show the variograms resulting from the continuity analysis for gold in domain 1 and domain 2, respectively.

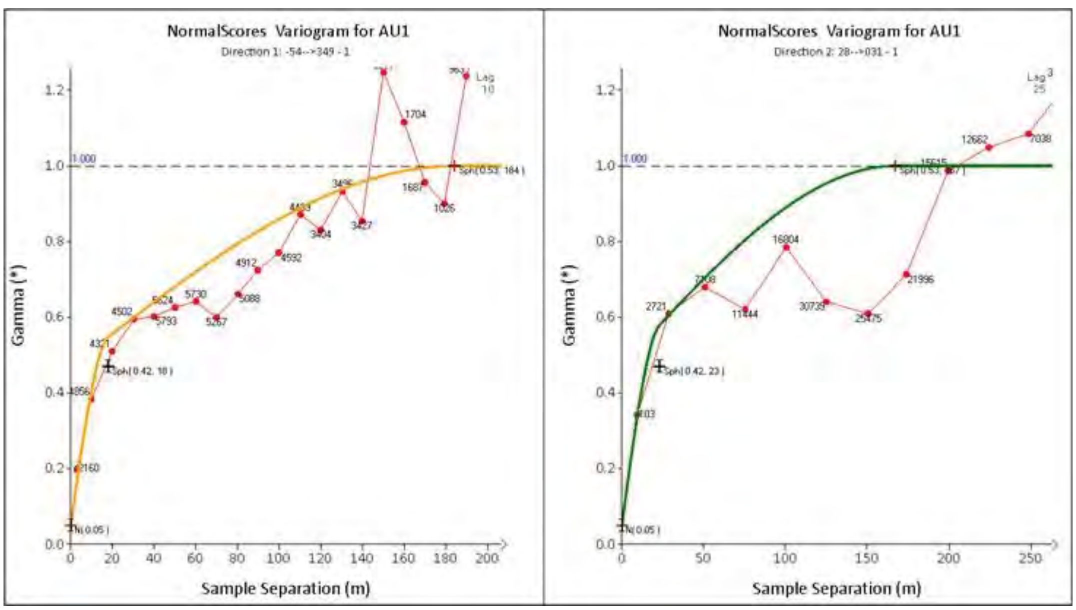


Figure 11-14: Variogram model within domain 1 for the Au element.

Source: Buenaventura (2021)

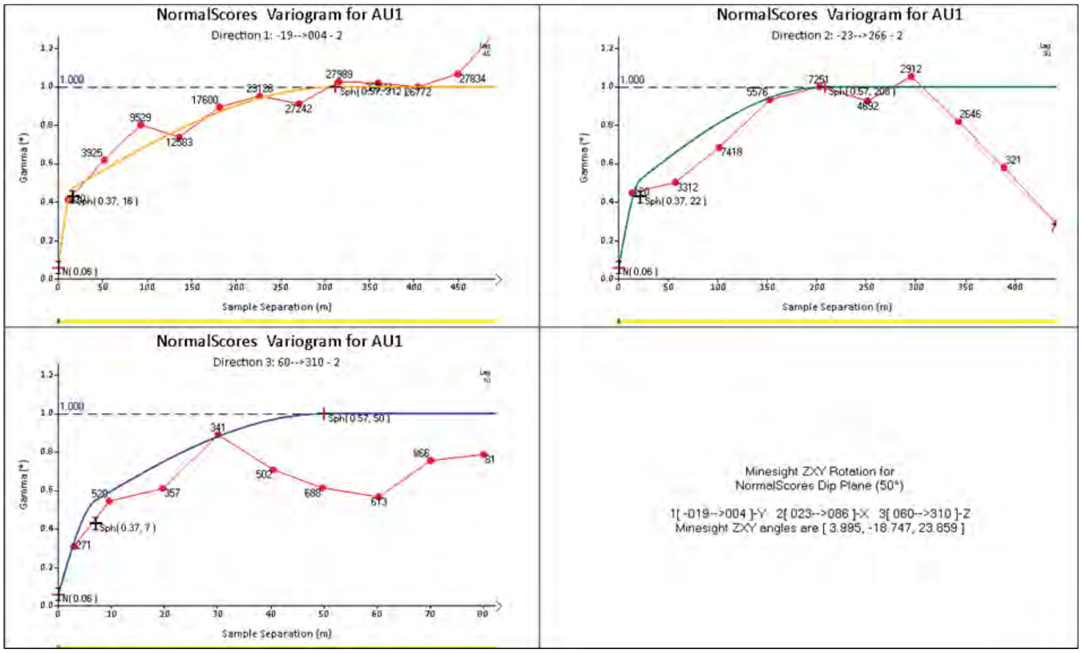


Figure 11-15: Variogram model within domain 2 for the Au element.

Source: Buenaventura (2021)

Table 11-20 summarizes the variogram models that were used in the Cienaga estimation.

Table 11-20: Cienega Variogram Models

Domain	Nugget effect	Structure	Type	Sill	Minesight rotation (ZXY)			Range		
					ROT	DIPN	DIPE	Major Axis	Minor Axis	Vertical Axis
1	0.085	1 2	Sph. Sph.	0.55 0.36	-10.64 -10.64	-54.46 -54.46	-126.05 -126.05	18 184	23 167	41 296
2	0.096	1 2	Sph. Sph.	0.47 0.43	3.99 3.99	-18.74 -18.74	23.85 23.85	16 312	22 208	7 50
3	0.097	1 2	Sph. Sph.	0.46 0.43	130 130	0 0	-50 -50	57 207	85 331	23 236
4	0.09	1 2	Sph. Sph.	0.62 0.27	0 0	90 90	-90 -90	5 41	5 41	5 41

Source: Buenaventura (2021)

11.3.6 Block Model

Buenaventura created a block model for grade interpolation in Minesight. The block model is based on the alteration model and covers the extents of the current pits. The model is blocked with 10x10x8 parent cells. A summary of the data used to build the block model can be found in Table 11-21.

Table 11-21: Parameters used in the Cienaga block model.

Coordinate	Minimum	Maximum	Block Size (m)	No. of blocks
East	754000	755400	10	140
North	9253600	9256000	10	240
Elevation	3612	4060	8	56

Source: Buenaventura (2021)

11.3.7 Estimation Method and Parameters

Estimation parameters were defined based on quantitative Kriging neighborhood analysis (QKNA) using Supervisor© software. Gold (Au ppm) and Silver (Ag ppm) grade estimation for each domain was run in Minesight© software. The estimation method used was Ordinary Kriging.

The estimation process was run in two passes, both for the Ordinary Kriging (OK) interpolation and the Nearest Neighbor (NN) interpolation, which was run for validation purposes.

The QKNA analysis included a study to determine the maximum number of samples to avoid excessive smoothing of estimates and to minimize the screening effect, which increases the number of negative weights assigned to data. Generally, a starting point of 2 samples as minimum and 24 samples as maximum, with a maximum of 2 samples per drillhole, was used. From this configuration, the appropriate parameters for each domain were determined. In Cienaga a minimum of 3 samples and maximum of 12 were used for 1 and 4 domains, a minimum of 3 and 16 samples was used for the 2 domain; and a minimum of 3 samples and 17 samples was used for domain number 3.

The rotation convention follows the Minesight © software format with GSLib-MS rotation. (ZL - First Rotation: ROT), XR - Second Rotation: DIPN, YR - Third Rotation: DIPE), with left rotation around the Z axis, and right rotation around the X and Y axes. In addition, Y is the Major Axis, X is the Minor Axis, and Z is the Vertical Axis.

Outlier restriction is implemented based on a 5 m constraint in domain 2. It is applied to control high grades and avoid over estimation in the grade interpolation. Outlier restriction is implemented as described in Table 11-22.

Estimation parameters extracted from the Minesight © software are shown in Table 11-22 and Table 11-23.

Table 11-22: Estimation parameters for Au.

Domain	Pass.	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max # Comp per DDH	Au (g/t) Outliers	Outliers Distance (m)
1	2 1	120 60	100 50	160 80	-10.6 -10.6	-54.5 -54.5	-126.0 -126.0	3	12	2	-	-
2	2 1	200 80	160 60	80 30	3.9 3.9	-18.8 -18.8	23.9 23.9	2	16	2	3	-5
3	2 1	70 45	90 60	50 30	130 130	0 0	-50 -50	2	17	2	-	-
4	2 1	80 40	80 40	80 40	0 0	90 90	-90 -90	2	12	2	-	-

Source: Buenaventura (2021)

Table 11-23: Estimation parameters for Ag.

Domain	Pass.	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max # Comp per DDH	Ag (g/t) Outliers	Outliers Distance (m)
1	2 1	120 60	140 70	100 50	-48.7 -48.7	4.9 4.9	-29.6 -29.6	2	10	2	-	-
2	2 1	160 80	120 60	140 70	20 20	50 50	0 0	2	16	2	-	-
3	2 1	120 60	160 80	80 40	-22.8 -22.8	33.826 33.826	-52.9 -52.9	2	18	2	-	-
4	2 1	120 60	140 70	140 70	0 0	90 90	-90 -90	2	18	2	-	-

Source: Buenaventura (2021)

11.3.8 Model Validation

Buenaventura applied the following validation methods in Cienaga: swath plots were used to evaluate local bias, global bias checks, and visual inspection comparing block estimates to the supporting composite data.

11.3.9 Local Estimation Validation

SRK checked for local biases by creating a series of swaths using the Cienaga grade models by columns (easting), rows (northing) and levels (elevation) comparing the average grade average of the capped composites, the OK grades, and the nearest neighbor (NN) grades.

In general, SRK considers that the gold estimation model provides reasonable agreement in the three directions, but some improvement could be attempted in future models. Figure 11-16, Figure 11-17, and Figure 11-18 show an example of Cienega swath plots.

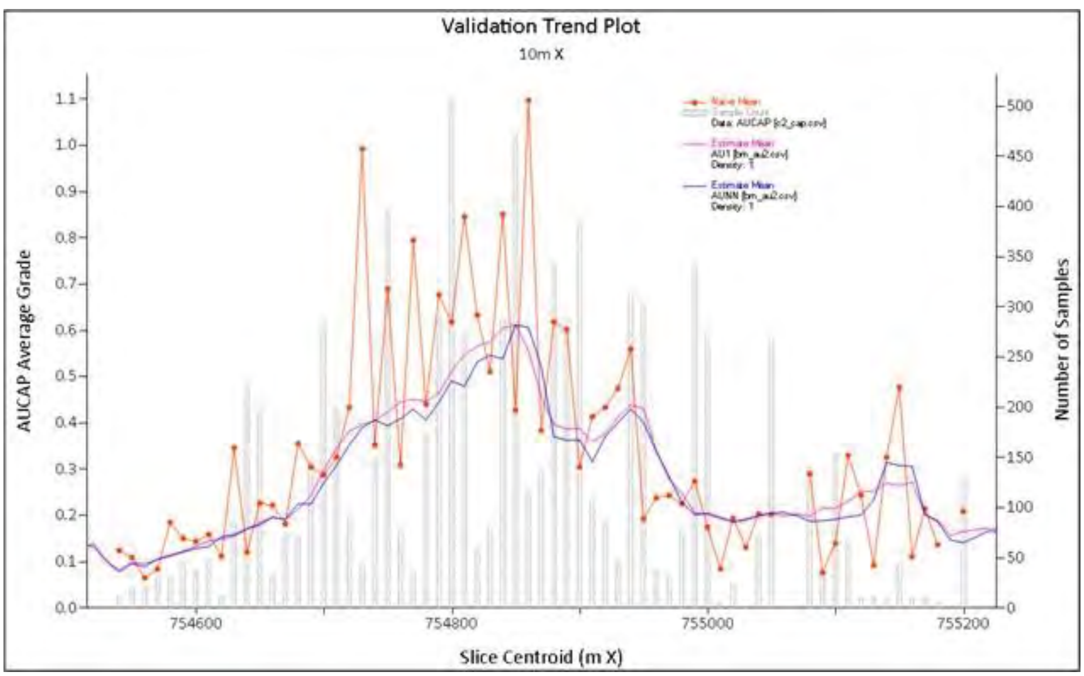


Figure 11-16: Tantahuatay swath plots for Au (gpt) on the X-axis. OK interpolation in magenta, NN interpolation in blue, and Au (gpt) samples in red.

Source: SRK Consulting (2021)

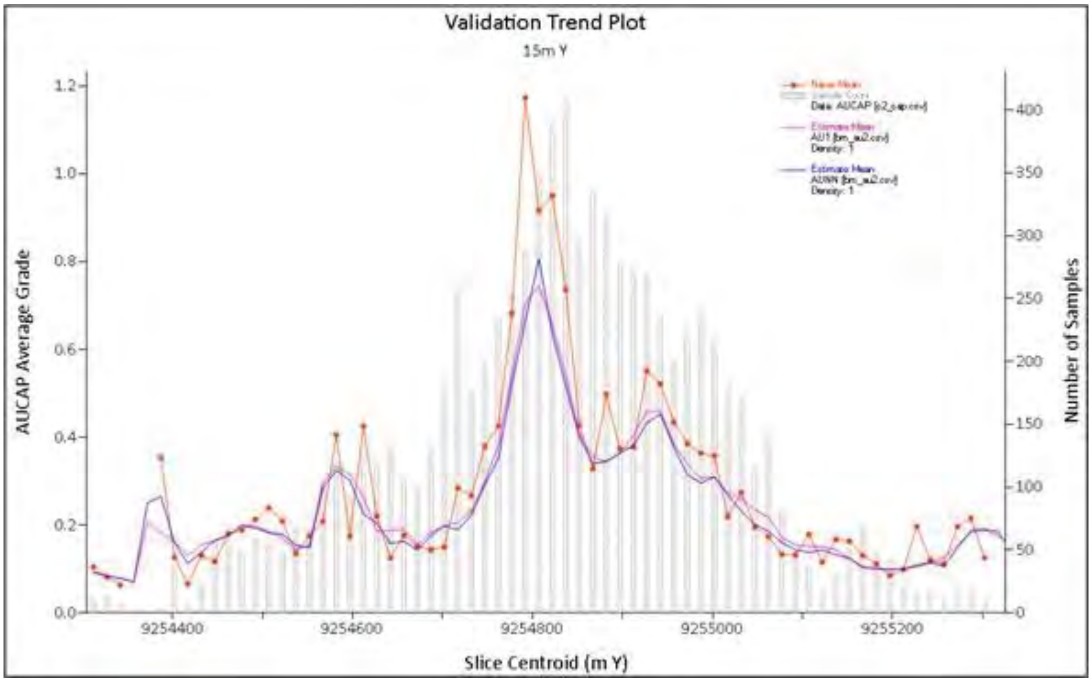


Figure 11-17: Tantahuatay swath plots for Au (gpt) on the Y axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

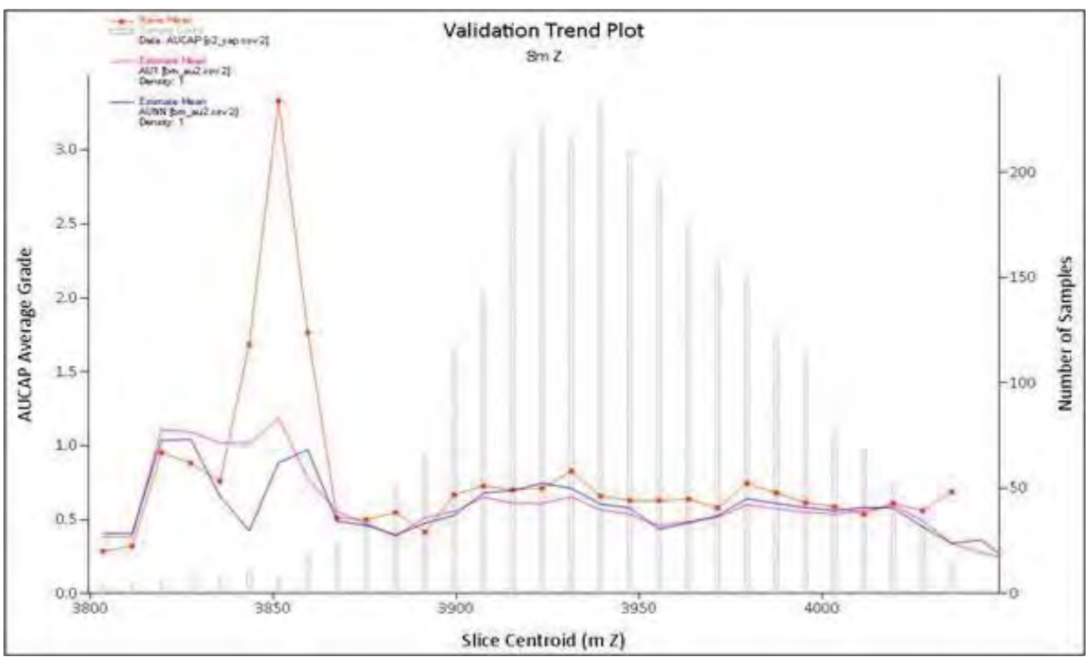


Figure 11-18: Tantahuatay swath plots for Au (gpt) on the Z axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

11.3.10 Visual Validation

The estimated Au models have been inspected in E-W sections, N-S sections, and plan views. The blocks have been visually compared with the composites used in the estimation, showing acceptable agreement. Figure 11-19 and Figure 11-20 show two examples.

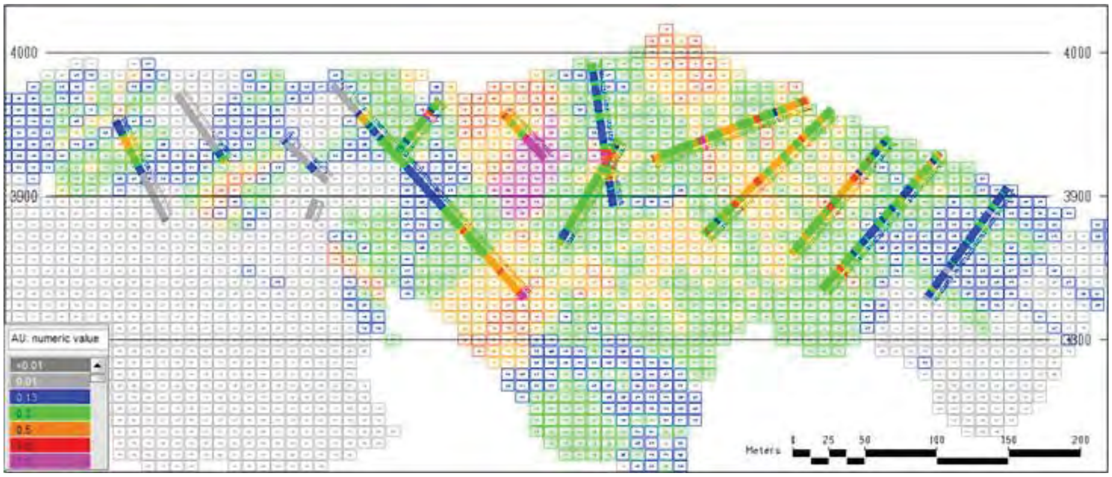


Figure 11-19: Vertical section NS 754850. Comparing the Au block model with the composited Au data.

Source: Buenaventura (2021)

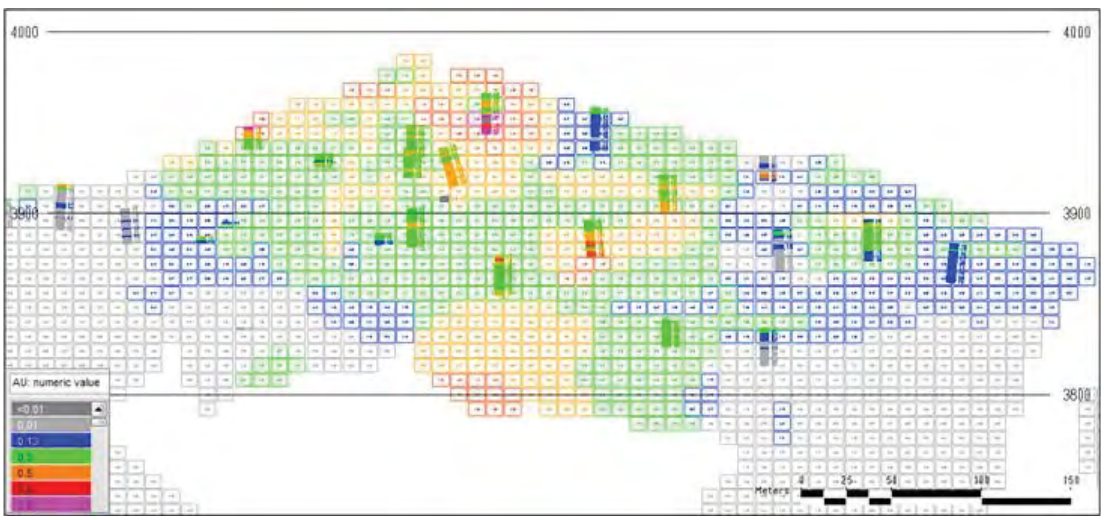


Figure 11-20: Vertical section N 9254750. Comparing the Au block model with the composited Au data.

Source: Buenaventura (2021)

11.3.11 Global Validation

Finally, the statistics of the block model grades interpolated by OK and NN were compared. The table below (Table 11-24) shows the comparison between the global means of OK vs NN. In domain 1 and 2, the differences produced shown a good grade interpolation.

Table 11-24: Analysis of global means by domain for the Au element.

Domain	OK	NN	Diff
1	0.622	0.603	3.2%
2	0.217	0.212	2.4%
3	0.298	0.278	7.2%
4	0.072	0.067	7.5%

Source: Buenaventura (2021).

11.3.12 Resources Classification

Industry best practice guidelines suggest classification of Mineral Resources should consider confidence in the geological continuity of mineralized structures, the quality and quantity of data supporting the estimate, and confidence in the geostatistical processing of tonnage and grade estimates. Appropriate classification criteria should aim to integrate these concepts to outline regular areas in a similar resource classification.

In this context, Buenaventura considered various aspects to determine the classification including the representativeness and quality of the data used for estimation; the alteration and mineral zone controls, the continuity of mineralization, the number of samples close to the estimated block, the number of drillholes used in the estimate and the quality of the estimation.

Buenaventura conducted confidence limit analyses to define the drill spacing required to meet the requirements described below.

SRK and Buenaventura defined the mineral resource classification strategy based on the following criteria for each estimation domain:

Measured:

- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of quarterly production.
- Drill spacing of 25 m
- Greater than or equal to 3 drillholes

Indicated:

- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of annual production.
- Drill spacing of 60 m
- Greater than or equal to 2 drillholes

Inferred:

- Average distance greater than 110
- Greater than or equal to 1 drillhole

After reviewing the criteria to classify the mineral resources in Cienaga, SRK suggested adding a variable to aid in classification as follow:

The variable was calculated as the average distance to the nearest three drillholes. The distance is divided for 0.7 to obtain the equivalent regular drill spacing for each block. The final classification was made according to the next table (Table 11-25). It is important to note that there is no Measured Resources discussed in this table.

Table 11-25: Classification parameters for Cienaga deposit

Class	Distance (m)	Drillholes
Indicated	65	<= 3
Inferred	110	<= 1

Source: Buenaventura, 2021

Subsequently, to avoid the "Spotted Dog" and to remove any artifacts from the classification, produced, Buenaventura manually smoothed the classification. Figure 11-21 shows the model before smoothing and after smoothing.

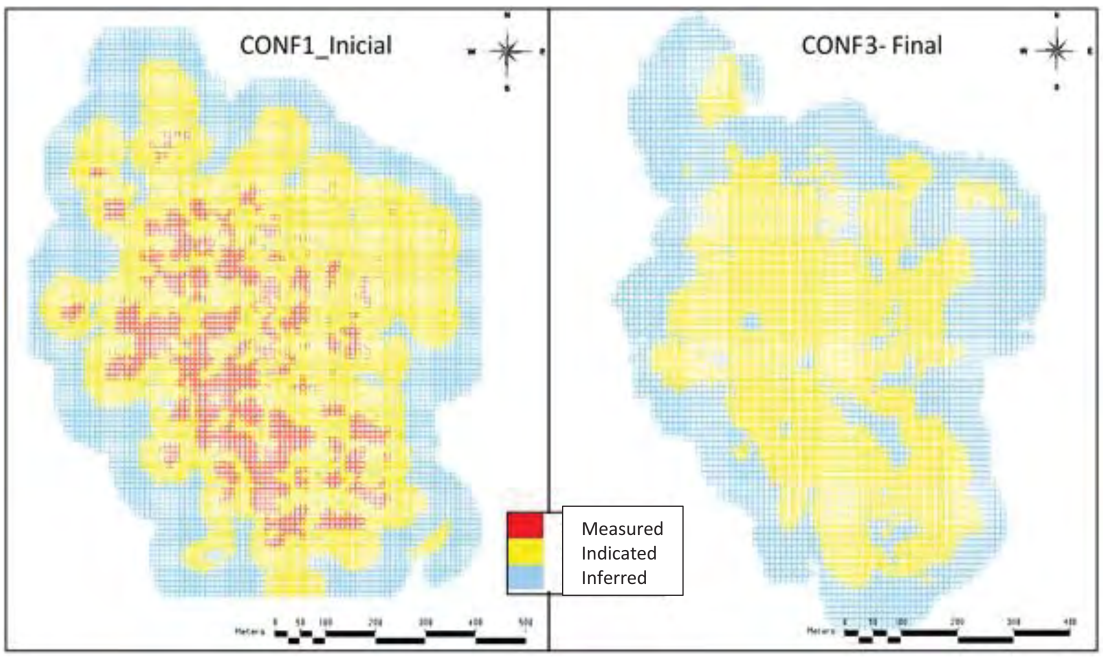


Figure 11-21: Plan view of the Cienaga resource model, before and after contour smoothing.

Source: Buenaventura (2021).

Reasonable Potential for Economic Extraction (RPEE), Cut-off estimated, Statement and Sensitivity of Mineral Resources and Uncertainty summary in the final items (11.5, 11.6, 11.7, 11.8 and 11.9)

11.4 Mirador Deposit

11.4.1 Resource Database

The database used to support the geological model and mineral resource estimate contains 300 diamond drillholes (35,892 m) and includes collar, survey, assay, lithology, density, mineralization, alteration and minzone information. Table 11-26 summarizes the basic statistics for Au and Ag samples from Mirador.

Table 11-26: Summary statistics for raw data from the Mirador deposit.

Deposit	Element	Samples	Mean	Minimum	Maximum	CV	Std. Dev
Mirador	Au gpt	22,969	0.18	0.01	11.42	2.10	0.37
	Ag gpt	22,969	0.58	0.01	493.00	12.47	7.25

Source: Buenaventura (2021)

11.4.2 Geological Modeling and Interpretation

Modeling at the Mirador deposit includes a mineral zone model to characterize oxide, transition and sulfide material, a lithology model, an alteration model and a structural model. The models were developed in Leapfrog Geo software (v 6.3) and are based on: geological logging (alteration, lithology and mineralization), geological mapping, interpreted cross sections, diamond drill cores / surface structural observations and interpreted polylines (3D surface and subsurface).

All models were developed and updated by the Tantahuatay geology and resource team, except for the structural model which was developed by SRK in 2020.

The estimation domains were grouped and defined mainly by gold grade alteration domains and lithological domains, where a relatively homogeneous distribution of grade in terms of mean grade and spatial variability is expected. This analysis was performed for five lithology domains corresponding to: Hydrothermal breccia (BxH), Pyroclastic (Pyro), Diorite (Dio), Phreatic breccia (BxP), Hypabyssal (Hypa) and for five alteration domains which are: Silica (Sil), Advanced Argillic (ArglAvd), Argillic (Arg), Intermediate Argillic (ArgInt) and Propylitic (Prpt).

Alteration units, domain integration and their respective codes are summarized in Table 11-27. Figure 11-22 shows an isometric view of the domains included in the alteration model.

Table 11-27: Coding by type of alteration in Mirador deposit.

Lithology	Alteration			
	Sil	ArglAvd	Argl + ArgInt	Prpt
BxH	Domain 1 (401)	Domain 2 (402)	Domain 3 (403)	Domain 4 (404)
Pyro		Domain 5 (405)	Domain 6 (406)	Domain 7 (407)
Dio				
BxP	Domain 8 (408)	Domain 9 (409)	Domain 10 (410)	Domain 11 (411)
Hypa				

Source: Buenaventura (2021)

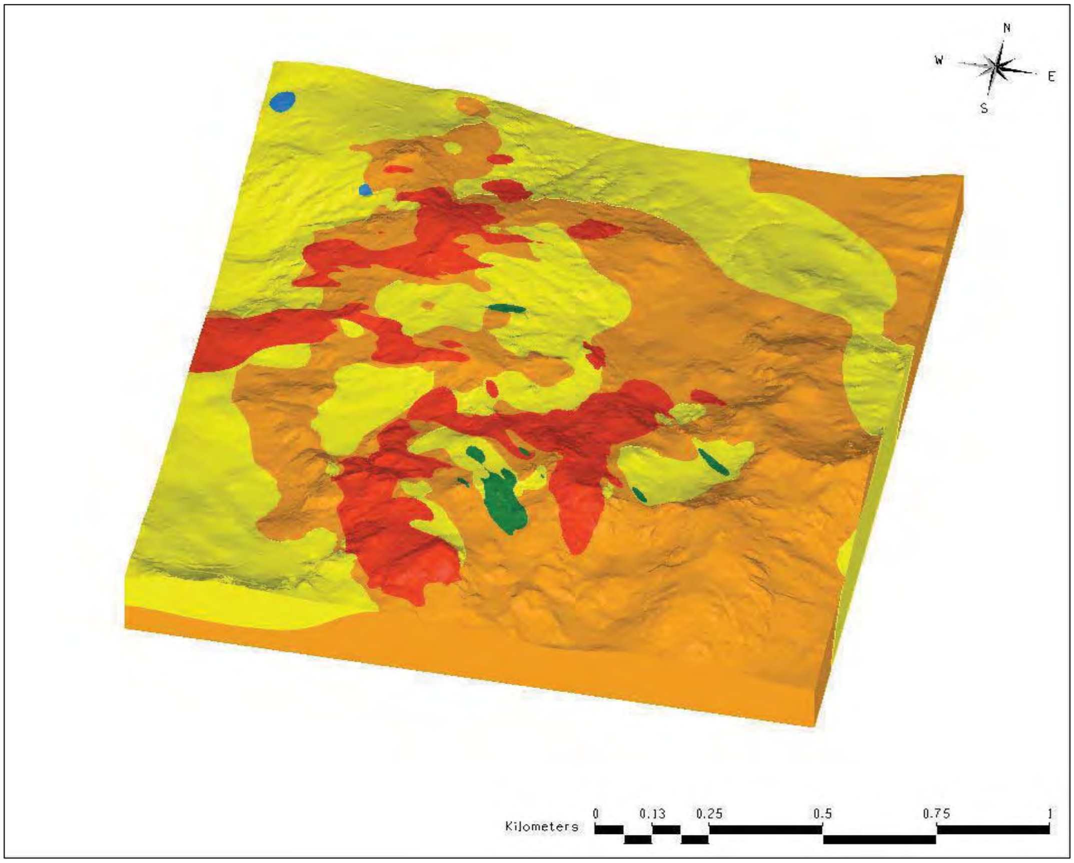


Figure 11-22: Alteration model of Mirador deposit.

Source: Buenaventura *(2021)*.

11.4.3 Bulk Density

1,372 samples were taken from the drill core and bulk density was determined by paraffin wax method (samples are coated in parffin wax prior to being immersed in water). These data are reviewed and outliers (identified as outside the mean value ± 2 std deviations) are excluded from further analysis. Density sample statistics are summarized in Table 11-28. The average density values are assigned to blocks based on alteration type domain.

Table 11-28: Densities by estimation domain at the Mirador deposit.

Domain	Samples	Min	Max	Average
401	297	1.85	2.57	2.20
402	109	1.97	2.63	2.28
403	6	2.01	2.46	2.23
405	533	1.89	2.67	2.28
406	278	1.83	2.69	2.26
407	3	2.23	2.61	2.48
408	3	1.71	2.21	1.95
409	34	1.96	2.64	2.31
410	91	1.80	2.54	2.17
411	18	1.51	2.73	2.17

Source: Buenaventura (2021)

11.4.4 Compositing and Capping

Compositing is performed on diamond drill hole samples within each modeled alteration. The size defined for compositing is 2 m down the hole. Buenaventura performed an analysis to identify which composite size best suits the deposit, evaluating values proportional to bench height (2, 4, and 8 m), choosing 2 m for having less variability and less bias with the length-weighted average (Table 11-29).

Table 11-29: Summary of statistical composited data with alternative to define the best composite value option in Mirador.

Statistics	Uncomposited	2 m composite	4 m composite	8 m composite
Count	22,969	16,230	8,583	4,768
Mean	0.176	0.197	0.199	0.203
Std. Dev	0.370	0.311	0.290	0.289
CV	2.098	1.575	1.459	1.420
Variance	0.137	0.097	0.084	0.083
Minimum	0.005	0.005	0.005	0.005
Maximum	11.420	9.135	6.749	6.749

Source: Buenaventura (2021)

SRK evaluated the compositing by comparing the original sample interval (without weighing) gold (gpt) statistics and the compositing-length-weighted gold statistics. SRK verified that there is no significant bias in the mean value due to the compositing process.

Table 11-30: Summary statistics of the grades composited data per domain at Mirador deposit.

Deposit	Domain	Element	Samples	Mean	Minimum	Maximum	Std. Dv	CV
Mirador	401	Au gpt	3301	0.33	0.01	9.14	0.57	1.74
		Ag gpt	3244	1.25	0.20	4.93	15.63	12.46
	402	Au gpt	1372	0.28	0.03	4.51	0.30	1.07
		Ag gpt	1345	0.42	0.20	10.40	0.58	1.39
	403	Au gpt	76	0.17	0.02	0.56	0.09	0.54
		Ag gpt	73	0.71	0.20	6.20	1.35	1.90
	404	Au gpt	4	0.04	0.01	0.11	0.04	0.97
		Ag gpt	-	-	-	-	-	-
	405	Au gpt	5533	0.18	0.02	3.82	0.17	0.97
		Ag gpt	4955	0.44	0.20	90.04	1.50	3.45
	406	Au gpt	2706	0.18	0.01	2.43	0.17	0.98
		Ag gpt	2706	0.48	0.20	100.00	2.75	5.72
	407	Au gpt	16	0.07	0.02	0.13	0.03	0.43
		Ag gpt	16	0.22	0.20	0.40	0.05	0.23
	408	Au gpt	44	0.11	0.04	0.30	0.06	0.54
		Ag gpt	42	0.26	0.20	0.70	0.10	0.41
	409	Au gpt	455	0.12	0.01	0.81	0.09	0.74
		Ag gpt	455	0.3	0.2	7.25	0.43	1.25
	410	Au gpt	852	0.13	0.01	0.73	0.11	0.78
		Ag gpt	852	0.32	0.2	4.70	0.29	0.9
	411	Au gpt	96	0.13	0.01	0.42	0.10	0.72
		Ag gpt	96	0.30	0.20	1.90	0.19	0.63

Source: SRK Consulting (2021)

After compositing, an evaluation of outliers and their influence on the mean grades within each domain was carried out using cumulative probability plots. This analysis was based on the visual interpretation of the probability curve structure, noting the appropriate inflection points at the end of populations, and that this does not generate a loss of more than 5% of metal content. Figure 11-23 shows the Au evaluation probability plot for domain 401 and domain 405, and Table 11-31 and summarizes the capping values used for each element and domain, and Table 11-32 summarizes the statistical comparison after and before capping, respectively.

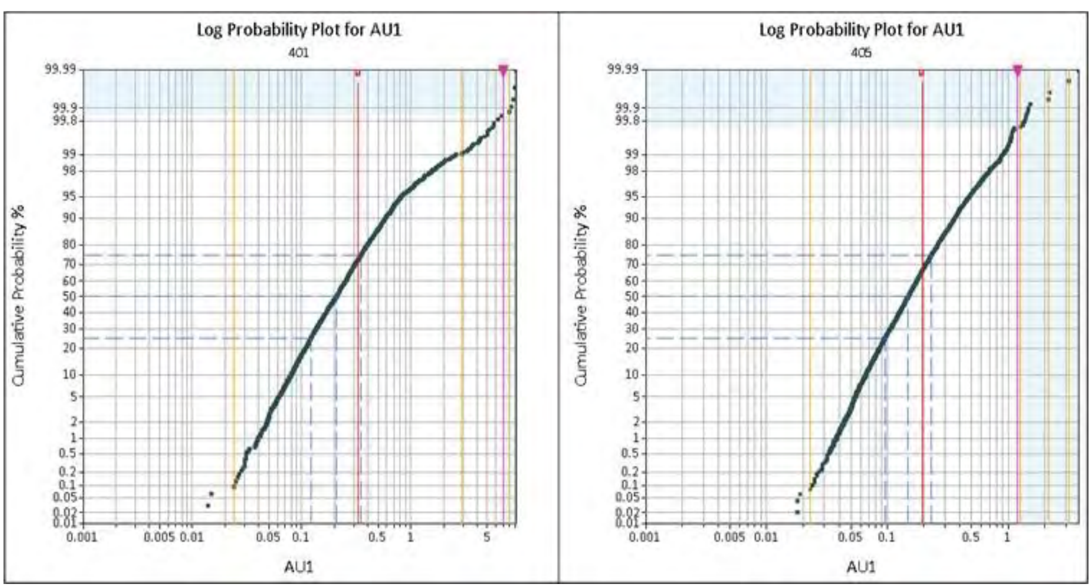


Figure 11-23: Cumulative probability curves evaluating capping in domain 401 and 405.

Source: Buenaventura (2021)

Table 11-31: Capping values for each element applied in Mirador.

Deposito	Dominio	Au gpt	Ag gpt
Mirador	401	7	NC
	402	1.6	3
	403	0.3	NC
	404	NC	NC
	405	1.2	20
	406	1.5	NC
	407	NC	NC
	408	0.2	NC
	409	0.5	2
	410	0.6	1.8
	411	0.3	0.6

Source: Buenaventura (2021)

Note: NC = not capped

Table 11-32: Statistical comparison after and before capping in Mirador.

Domain	Statistics	Comp_Au	Topcut_Au	Comp_Ag	Topcut_Ag
401	**Samples**	3301	3296	3244	-
	Mean	0.33	0.32	1.25	-
	Mínimum	0.01	0.01	0.20	-
	Maximum	9.14	7.00	4.93	-
	Std Dev	0.57	0.53	15.63	-
	CV	1.74	1.65	12.46	-
402	**Samples**	1372	1367	1345	1334
	Mean	0.28	0.27	0.42	0.40
	Mínimum	0.03	0.03	0.20	0.20
	Maximum	4.51	1.60	10.40	3.00
	Std Dev	0.30	0.24	0.58	0.36
	CV	1.07	0.89	1.39	0.92
403	**Samples**	76	69	73	-
	Mean	0.17	0.16	0.71	-
	Mínimum	0.02	0.02	0.20	-
	Maximum	0.56	0.30	6.20	-
	Std Dev	0.09	0.07	1.35	-
	CV	0.54	0.46	1.90	-
404	**Samples**	4	3	4	-
	Mean	0.04	0.04	0.5	-
	Mínimum	0.01	0.01	0.5	-
	Maximum	0.11	0.11	0.5	-
	Std Dev	0.04	0.04	0	-
	CV	0.97	0.97	0	-
405	**Samples**	5533	5519	4955	4952
	Mean	0.18	0.18	0.44	0.42
	Mínimum	0.02	0.02	0.20	0.20
	Maximum	3.82	1.20	90.04	20.00
	Std Dev	0.17	0.16	1.50	0.81
	CV	0.97	0.88	3.45	1.93
406	**Samples**	2706	2697	2706	-
	Mean	0.18	0.18	0.48	-
	Mínimum	0.01	0.01	0.20	-
	Maximum	2.43	1.50	100.00	-
	Std Dev	0.17	0.15	2.75	-
	CV	0.98	0.88	5.72	-

Domain	Statistics	Comp_Au	Topcut_Au	Comp_Ag	Topcut_Ag
407	Samples	16	-	16	-
	Mean	0.07	-	0.22	-
	Mínimum	0.02	-	0.20	-
	Maximum	0.13	-	0.40	-
	Std Dev	0.03	-	0.05	-
	CV	0.43	-	0.23	-
408	Samples	44	42	42	-
	Mean	0.11	0.11	0.26	-
	Mínimum	0.04	0.04	0.20	-
	Maximum	0.30	0.20	0.70	-
	Std Dev	0.06	0.05	0.10	-
	CV	0.54	0.46	0.41	-
409	Samples	455	451	455	454
	Mean	0.12	0.12	0.3	0.3
	Mínimum	0.01	0.01	0.2	0.2
	Maximum	0.81	0.50	7.25	2.00
	Std Dev	0.09	0.08	0.43	0.17
	CV	0.74	0.69	1.25	0.57
410	Samples	852	848	852	844
	Mean	0.13	0.13	0.32	0.31
	Mínimum	0.01	0.01	0.2	0.2
	Maximum	0.73	0.60	4.70	1.80
	Std Dev	0.11	0.10	0.29	0.21
	CV	0.78	0.77	0.9	0.68
411	Samples	96	89	96	95
	Mean	0.13	0.13	0.30	0.29
	Mínimum	0.01	0.01	0.20	0.20
	Maximum	0.42	0.30	1.90	0.60
	Std Dev	0.10	0.08	0.19	0.10
	CV	0.72	0.64	0.63	0.34

Source: Buenaventura (2021)

11.4.5 Block Model

Buenaventura created a block model for grade interpolation in Minesight. The block model is based on the alteration model and covers the extents of the current pits. The model is blocked with parent cells of 10x10x8. A summary of the data used to build the block model can be found in Table 11-33.

Table 11-33: Parameters used in the Mirador block model.

Coordinate	Minimum	Maximum	Block Size (m)	No. of blocks
East	755500	757050	10	155
North	9254250	9255900	10	165
Elevation	3700	4060	8	45

Source: Buenaventura (2021)

11.4.6 Variography and Estimation Parameters

Buenaventura performed varoiography analysis using Minesight software for each element within each estimation domain. The analysis was performed based on a conventional semi-variogram following the visual interpretation of mineralization trends together with variogram maps showing orientations of the best continuity.

Variograms were constructed using two spherical type structures. There is sufficient data to model directional variograms in all domains, except for domains 403, 408 and 411 which did not have sufficient samples, therefore the variograms were modeled omnidirectionally.

SRK reviewed the grade variograms of the estimation domains and found the modeling to be adequate, although some small adjustments can be made to the variogram models.

Figure 11-24 and Figure 11-25 show the variograms resulting from the continuity analysis for gold in domain 401 and domain 405, respectively.

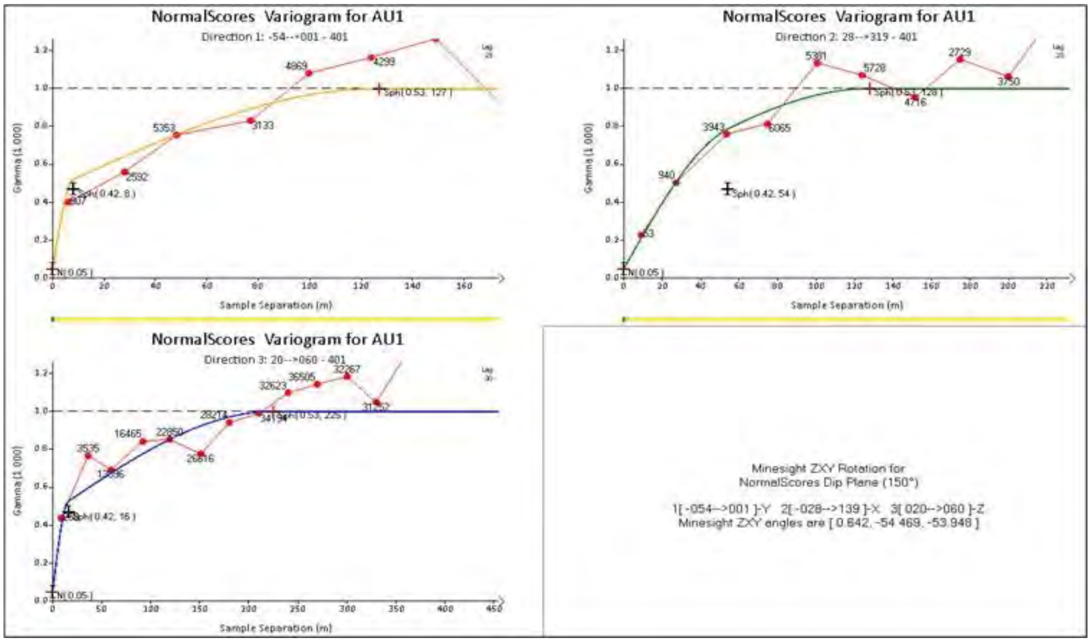


Figure 11-24: Modeled variogram for domain 401 of the gold element.

Source: Buenaventura (2021)

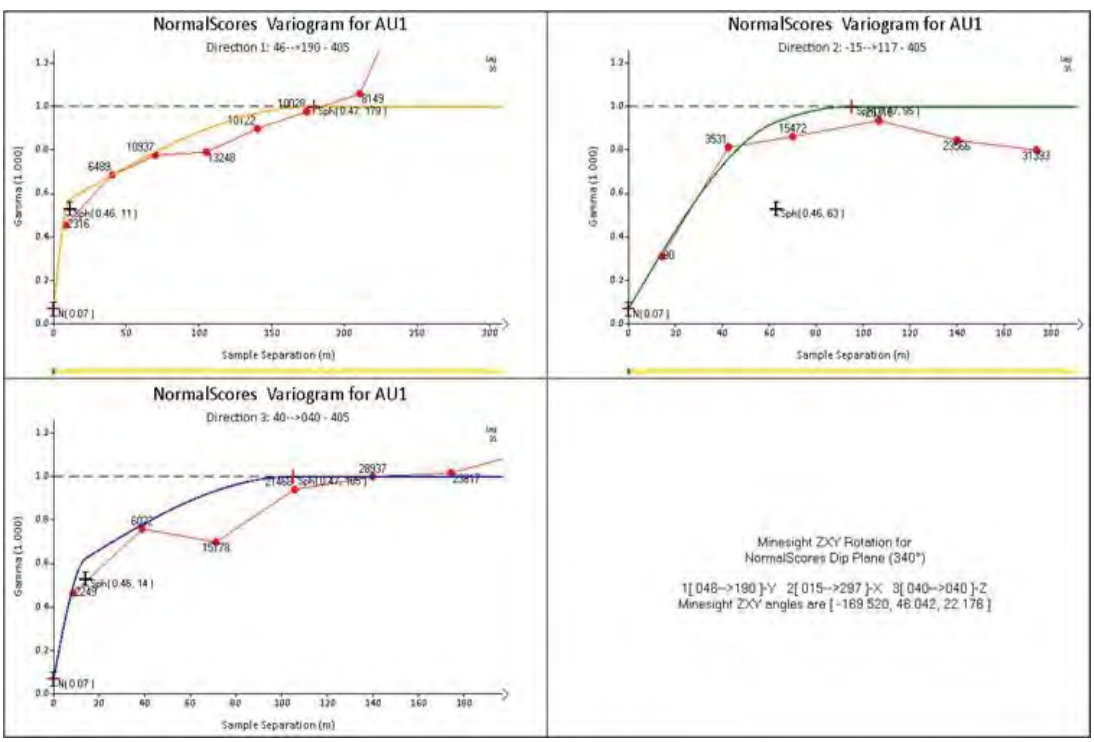


Figure 11-25: Modeled variogram for domain 405 of the gold element.

Source: Buenaventura (2021)

Table 11-34 summarizes the variogram models that were used in Mirador deposit estimation.

Table 11-34: Mirador Au Variogram Models

Domain	Nugget effect	Structure	Type	Sill	Minesight rotation (ZXY)			Range		
					ROT	DIPN	DIPE	Major Axis	Minor Axis	Vertical Axis
401	0.108	1 2	Sph. Sph.	0.6 0.3	0.6 0.6	-54.5 -54.5	-53.9 -53.9	8 127	54 128	16 225
402	0.105	1 2	Sph. Sph.	0.7 0.2	-50 -50	60 60	0 0	62 117	68 127	11 102
403	0.07	1 2	Sph. Sph.	0.4 0.5	0 0	90 90	-90 -90	12 19	20 40	20 40
405	0.09	1 2	Sph. Sph.	0.5 0.4	-169.5 -169.5	46.1 46.1	22.2 22.2	11 179	63 95	14 105
406	0.05	1 2	Sph. Sph.	0.5 0.4	-120 -120	-60 -60	0 0	15 242	93 163	33 144
408	0.05	1 2	Sph. Sph.	0.2 0.7	0 0	90 90	-90 -90	6 149	6 149	6 149
409	0.08	1 2	Sph. Sph.	0.5 0.4	-40 -40	0 0	-20 -20	116 195	157 163	4 29
410	0.07	1 2	Sph. Sph.	0.5 0.4	-60.8 -60.8	41.5 41.5	-48.1 -48.1	19 183	19 35	5 17
411	0.06	1 2	Sph. Sph.	0.4 0.5	0 0	90 90	-90 -90	9 35	9 35	9 35

Source: Buenaventura (2021)

11.4.7 Estimation Method and Parameters

Estimation parameters were defined based on quantitative kriging neighborhood analysis (QKNA) using Supervisor© software. Gold (Au ppm) and Silver (Ag ppm) grade estimation for each domain was run in Minesight© software. The estimation method used was Ordinary Kriging.

The estimation process was run in two passes, both for the Ordinary Kriging (OK) interpolation and the Nearest Neighbor (NN) interpolation, which was run for validation purposes.

The QKNA analysis included a study to determine the maximum number of samples to avoid excessive smoothing of estimates and to minimize the screening effect, which increases the number of negative weights assigned to data. Generally, a starting point of 2 samples as minimum and 24 samples as maximum, with a maximum of 2 samples per drillhole, was used. From this configuration, the appropriate parameters for each domain were determined. In Mirador, a minimum of 3 samples and maximum of 12 were used for 1 and 4 domains, a minimum of 3 and 16 samples was used for the 2 domain; and a minimum of 3 samples and 17 samples was used for domain number 3.

The rotation convention of search ellipsoids follows the Minesight © software format with GSLib-MS rotation. (ZL - First Rotation: ROT), XR - Second Rotation: DIPN, YR - Third Rotation: DIPE), with left rotation around the Z axis, and right rotation around the X and Y axes. In addition, Y is the Major Axis, X is the Minor Axis, and Z is the Vertical Axis.

Outlier restriction is implemented based on an 8 m constraint. Within 8m, the uncapped grade is used for block estimation, beyond 8 m, the capped grade is applied. This outlier restriction value was based on bench size and visual confirmation that this distance adequately controlled the influence of high grades.

Estimation parameters extracted from the Minesight © software are shown in Table 11-35 and Table 11-36.

Table 11-35: Estimation parameters for Au.

Domain		Pass	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max# Comp per DDH
401	2	100	100	200	0.642	-54.469	-53.948	3	18		2
	1	50	50	100	0.642	-54.469	-53.948				
402	2	160	180	120	-50	60	0	3	8		2
	1	90	80	60	-50	60	0				
403	2	80	80	80	0	90	-90	3	4		2
	1	40	40	40	0	90	-90				
405	2	200	120	140	-169.52	46.042	22.176	3	18		2
	1	100	60	70	-169.52	46.042	22.176				
406	2	240	160	140	-120	-60	0	3	8		2
	1	120	80	70	-120	-60	0				
408	2	80	80	80	0	90	-90	3	8		3
	1	40	40	40	0	90	-90				
409	2	200	100	20	-40	0	-20	3	24		2
	1	100	50	10	-40	0	-20				
410	2	240	50	30	-60.79	41.561	-48.07	3	24		2
	1	120	25	15	-60.79	41.561	-48.07				
411		2	80	80	80	0	90	-90	2	6	4

Source: Buenaventura, 2021

Table 11-36: Estimation parameters for Ag.

Domain	Pass	Major Axis	Minor Axis	Vertical Axis	Rot1 GSLIB	Rot2 GSLIB	Rot3 GSLIB	Min # Comp	Max # Comp	Max# Comp per DDH
401	2	180	70	80	-30	-50	0	3	18	2
	1	90	35	40	-30	-50	0			
402	2	80	250	120	20	-70	0	3	4	2
	1	40	180	60	20	-70	0			
403	2	160	160	160	0	90	-90	3	14	2
	1	80	80	80	0	90	-90			
405	2	140	140	50	-30	70	0	3	10	2
	1	70	70	25	-30	70	0			
406	2	40	200	50	150	-80	-90	3	10	2
	1	20	100	25	150	-80	-90			
409	2	80	80	80	0	90	-90	3	24	2
	1	40	40	40	0	90	-90			
410	2	120	120	120	0	90	-90	3	24	2
	1	60	60	60	0	90	-90			
411	2	160	160	160	0	90	-90	3	26	2
	1	80	80	80	0	90	-90			

Source: Buenaventura, 2021

11.4.8 Model Validation

Buenaventura applied the following validation methods in **Mirador**: swath plots were used to evaluate local **bias, global bias checks, and visual inspection comparing block estimates to the supporting composite data.**

11.4.9 Local Estimation Validation

SRK checked for local biases by creating a series of swaths using the Mirador grade models (for the three pits) by columns (easting), rows (northing) and levels (elevation) comparing the average grade average of the capped composites, the OK grades, and the nearest neighbor (NN) grades.

In general, SRK considers that the gold estimation model provides reasonable agreement in the three directions. Figure 11-16, Figure 11-17, and Figure 11-1828 show an example of the Mirador swath plots.

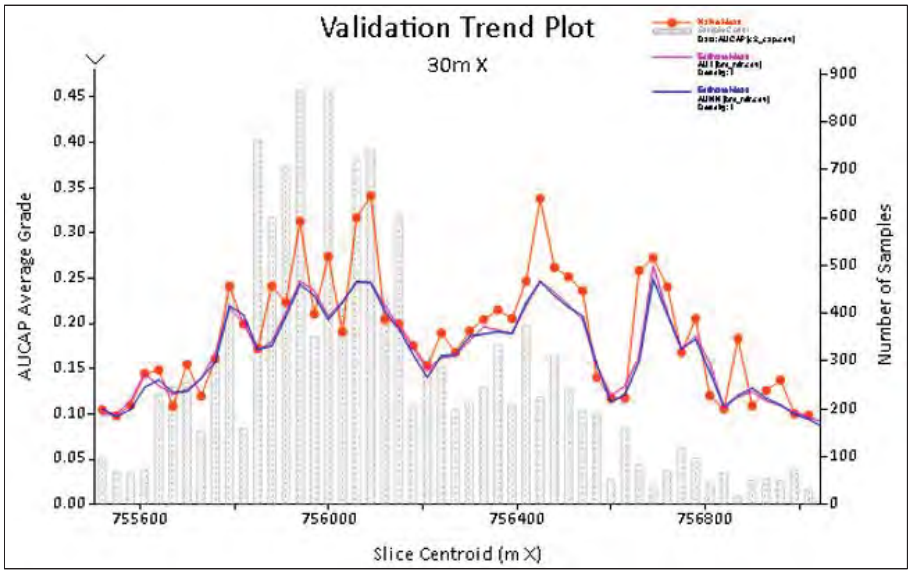


Figure 11-26: Mirador swath plots for Au (gpt) on the X-axis. OK interpolation in magenta, NN interpolation in blue, and Au (gpt) samples in red.

Source: SRK Consulting (2021)

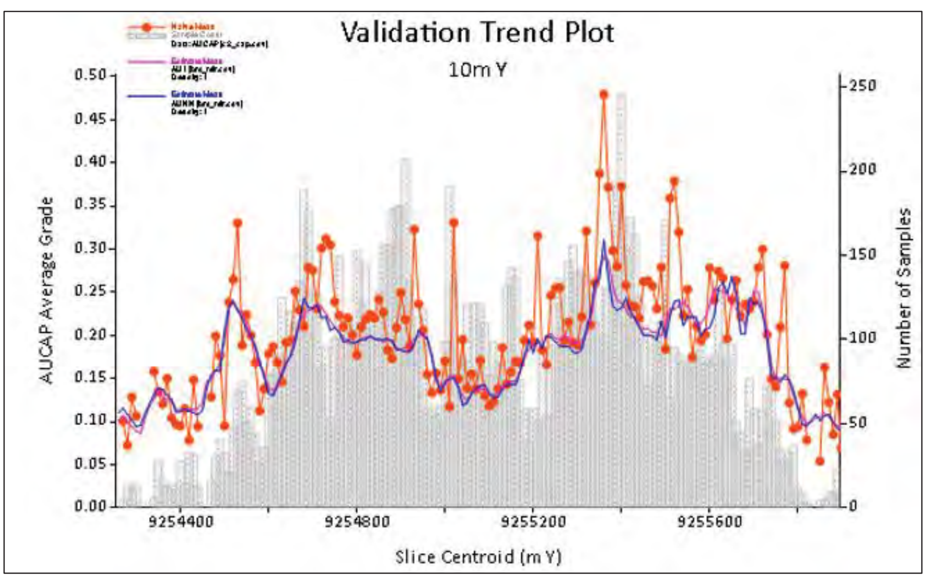


Figure 11-27: Mirador swath plots for Au (gpt) on the Y axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

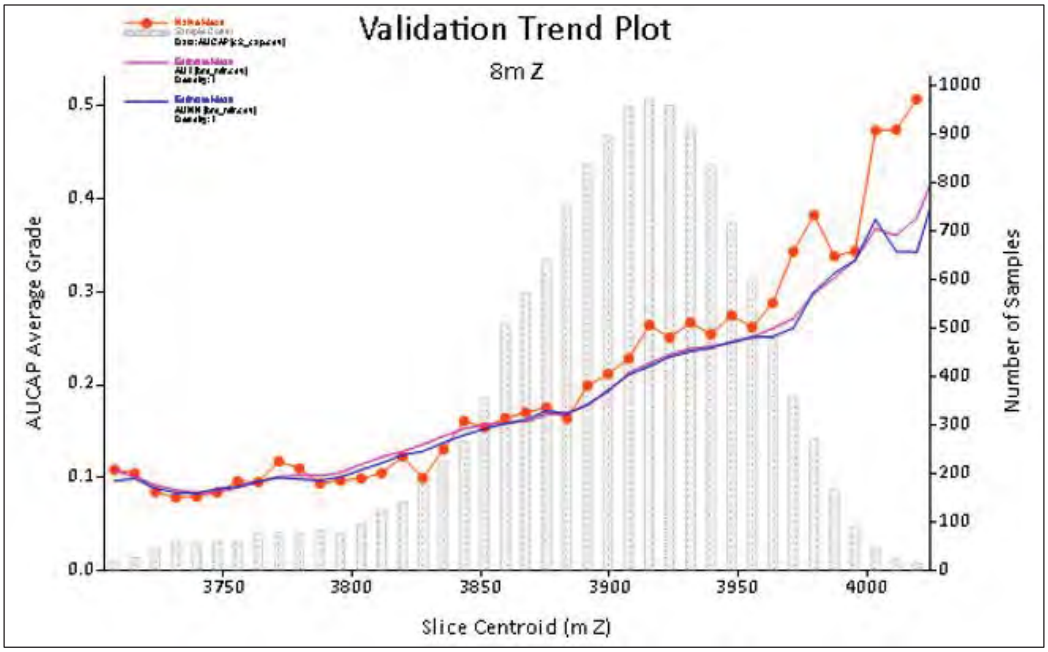


Figure 11-28: Mirador swath plots for Au (gpt) on the Z axis. OK interpolation in magenta, NN interpolation in blue and Au (gpt) samples in red.

Source: SRK Consulting (2021)

11.4.10 Visual Validation

The estimated Au models have been inspected in E-W sections, N-S sections, and plan views. The blocks have been visually compared with the composites used in the estimation, showing acceptable agreement. Figure 11-29 and Figure 11-30 show two examples.

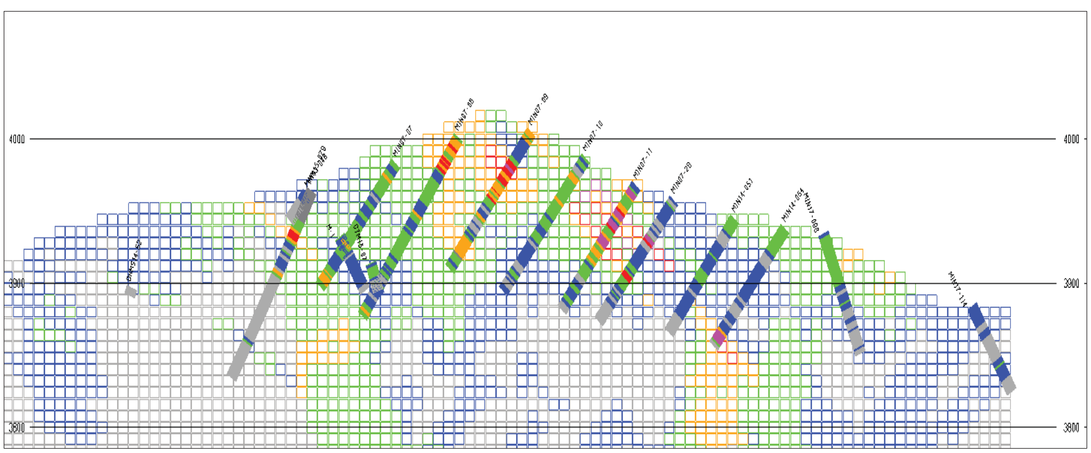


Figure 11-29: Vertical section E755950. Comparing Au block model with the composited Au data.

Source: Buenaventura (2021)

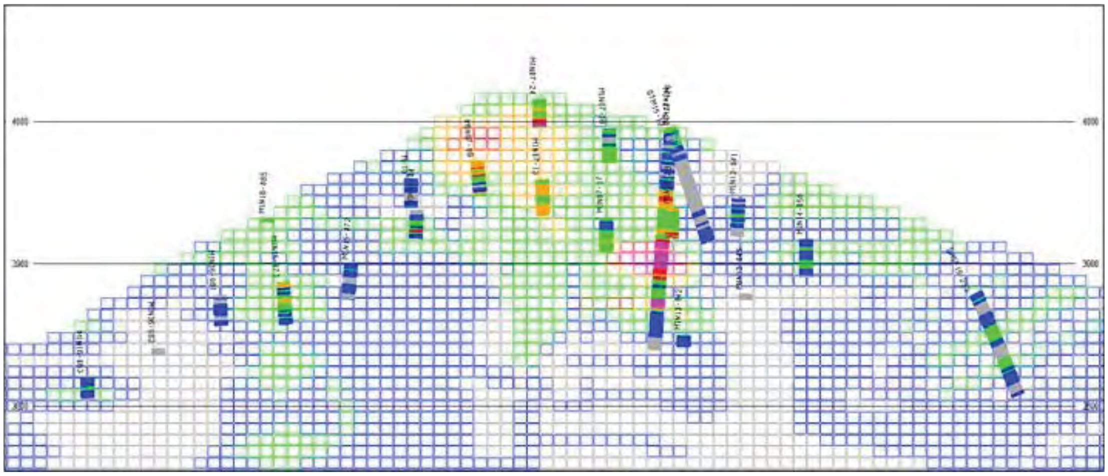


Figure 11-30: Vertical section N9255400. Comparing Au block model with the composited Au data.

Source: Buenaventura (2021)

11.4.11 Global Validation

Finally, the statistics of the block model grades interpolated by OK and NN were compared. The table below (Table 11-37) shows the comparison between the global means of OK vs NN. In general, the differences produced are minimal.

Table 11-37: Analysis of global means by domain for the Au element.

Domain	OK	NN	Diff
401	0.267	0.272	-1.8%
402	0.255	0.254	0.400%
403	0.218	0.214	1.9%
404	0.084	0.08	5.000%
405	0.178	0.175	1.7%
406	0.173	0.169	2.4%
407	0.091	0.088	3.4%
408	0.193	0.181	6.6%
409	0.134	0.131	2.3%
410	0.142	0.135	5.2%
411	0.123	0.117	5.1%

Source: Buenaventura (2021)

11.4.12 Resource Classification

Industry best practice guidelines suggest classification of Mineral Resources should consider confidence in the geological continuity of mineralized structures, the quality and quantity of data supporting the estimate, and confidence in the geostatistical processing of tonnage and grade estimates. Appropriate classification criteria should aim to integrate these concepts to outline regular areas in a similar resource classification.

In this context, Buenaventura considered various aspects to determine the classification including the representativeness and quality of the data used for estimation; the alteration and mineral zone controls, the continuity of mineralization, the number of samples close to the estimated block, the number of drillholes used in the estimate and the quality of the estimation.

Buenaventura conducted confidence limit analyses to define the drill spacing required to meet the requirements described below.

SRK and Buenaventura defined the mineral resource classification strategy based on the following criteria for each estimation domain:

Measured:

- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of quarterly production.
- Average distance under 55 m
- Greater than or equal to 3 drillholes

Indicated:

- Grades in the interval defined by ± 15% of the estimated value at a 90% confidence interval of annual production.
- Average distance greater than 55 m and less than 110 m
- Greater than or equal to 2 drillholes

Inferred:

- Average distance greater than 110
- Greater than or equal to 1 drillhole

After reviewing the criteria to classify the mineral resources in Cienaga, SRK suggested adding a variable to aid in classification as follow:

The variable was calculated as the average distance to the nearest three drillholes. The distance is divided for 0.7 to obtain the equivalent regular drill spacing for each block. The final classification was made according to the next table (Table 11-38). It is important to note that there is no Measured Resources discussed in this table.

Table 11-38: Classification parameters for Mirador deposit

Class	Distance (m)		Drillholes
Indicated	55		<= 3
Inferred	110		<= 1

Source: Buenaventura, 2021

Subsequently, to avoid the "Spotted Dog" effect on the resource model Buenaventura smoothed the classification by manually contouring improve continuity of the classification

Figure 11-31 shows the model before smoothing and after smoothing.

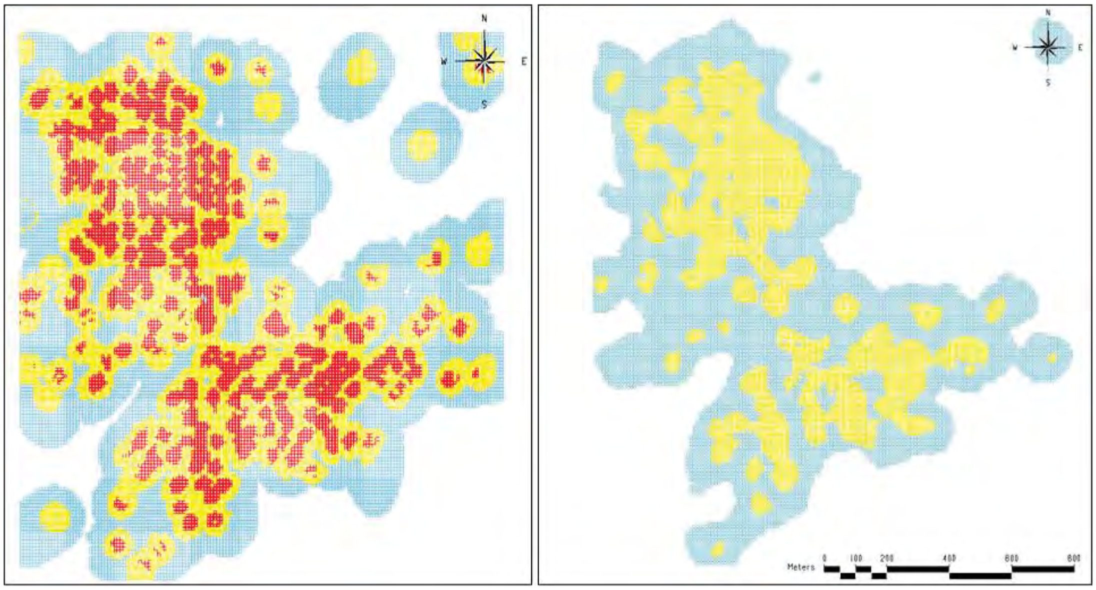


Figure 11-31: Plan view of Mirador resource model, before and after contour smoothing.

Source: Buenaventura (2021).

Reasonable Potential for Economic Extraction (RPEE), Cut-off grade estimates, Statement and Sensitivity of Mineral Resources and Uncertainty summary in the next items (11.5, 11.6, 11.7, 11.8 and 11.9)

11.5 Cut-Off Estimates

Due to presence of gold and silver as valuable metal contents, the cut-off grade is expressed in terms of unit value or USD/t. Note that Tantahuatay mine has two pits in operation for Tantahuatay deposit (Tantahuatay 2 pit an Tantahuatay 2 EXT NW pit), one pit for Cienaga deposit (Cienaga Norte) and two pits for Mirador deposit (Mirador Norte and Mirador Sur).

Cost Calculation

Cost calculation is based on unit values used for the mineral reserves definition. The cut-off value used to report mineral resources was estimated based on operating costs data of the period 2018-2020, determined by the finance and operation department of Buenaventura. There are 3 deposits divided in mining zones or pits for each one (Tantahuatay 2 and Tantahuatay 2 EXT NW in Tantahuatay, Cienaga Norte in Cienaga; and Mirador Norte and Mirador Sur in Mirador) that have been taken into account when determining the cut-off value of Mineral Resources during 2021, as shown in Table 11-39.

The zones determined by the planning area corresponding to the Tantahuatay 2 pit have a mine cost of US$1.90/t. Taking into account a 10% contingency on operating costs, a final NSR cut-off value of US$ 4.08/t is defined. The zones determined by the planning area corresponding to the Tantahuatay 2 EXT NW pit have an estimated mine cost of US$ 1.92/t. Taking into account a contingency of 10% on operating costs, a final NSR cut-off value of US$ 5.46/t is defined.

The zone determined by the planning area corresponding to the Cienaga Norte pit have an estimated mine cost of US$ 2.94/t. Taking into account a contingency of 10% on operating costs, a final NSR cut-off value of US$ 3.85/t is defined.

The zones determined by the planning area corresponding to the Mirador Norte pit have an estimated mine cost of US$ 2.40/t. Taking into account a contingency of 10% on operating costs, a final NSR cut-off value of US$ 5.67/t is defined. The zones determined by the planning area corresponding to the Mirador Sur pit have an estimated mine cost of US$ 2.40/t. Taking into account a contingency of 10% on operating costs, a final NSR cut-off value of US$ 5.67/t is defined.

Table 11-39: Cut Off Grade Calculation for Mineral Resources in Tantahuatay mine

		Value **			
Item	**Unit**	**THY2 ***	**CN ***	**THY2 EXT NW ***	**MIR ***
Mining cost					
Ore	US$/t mined	2.14	3.23	2.11	2.64
Waste	US$/t mined	1.92	3.24	2.01	2.66
Process cost	US$/t processed	1.48	1.48	1.45	1.48
General and administrative costs	US$/t processed	1.73	1.73	1.73	1.73
Sustaining capital cost	US$/t processed	0.24	0.24	1.76	2.07
Off site cost (corporate)	US$/t processed	0.42	0.42	0.42	0.42
Internal cut-off					
NSR	US$/t processed	4.08	3.85	5.46	5.67

Source: Buenaventura, 2021 (compiled by SRK)

** Acronyms correspond to: THY2: Tantahuatay 2, CN: Cienaga Norte, THY2 EXT NW: Tantahuatay 2 EXT NW, MIR: Mirador*

*** Values include 10% of Contingency for Mining, Process, G&A and Sustaining*

Reasonable Potential for Economic Extraction (RPEE)

As part of the mineral Resources estimation process, an evaluation was developed to determine the reasonability of material estimated into the block model of Tantahuatay mine for economic extraction. It to comply with resource disclosure requirements.

- Mining method definition
- Cost definition set for mineral reserves definition
- Metallurgical parameters (non verified by SRK)
- NSR calculated and included as part of block model file (non replicated by SRK)
- Pit optimization
- Cut-off and continuity

The RPEE process is similar to the mineral reserve definition process. Details of the mineral reserves estimation process are contained in Chapters 12 and 13 of this report. Table 11-40 shows a summary of the criteria and parameters used in this process.

Table 11-40: Parameters used for RPEE evaluation.

Parameter	**Description**	**Source**
Block Model Resources	Minesight Files: Tantahuatay: thy.prj, thy10.dat, thy15.dat Cianega: cn.prj, cn10.dat, cn15.dat Mirador: mir.prj, mir10.dat, mir15.dat	Buenaventura

Parameter	Description	Source
Metal Prices	1,600 USD / Oz Au 25 USD / Oz Ag	Buenaventura
NSR Calculation	Grade_Au(g/t)*RecoveryAu(g/t)*51.089*(1-%royalties)+Grade_Ag*RecoveryAg*0.798*(1-%royalties)	Buenaventura
Cut-off grade	Tantahuatay: Tantahuatay 2 pit: 4.08 USD, Tantahuatay 2 EXT NW (THY4): 5.46 USD Cienaga: 3.85 USD Mirador: Mirador Norte Pit 5.67 USD, Mirador Sur Pit: 5.67 USD	Buenaventura

Source: Buenaventura, 2021 (Buenaventura, 2021)

Metallurgical Recoveries

To define metallurgical parameters, Buenaventura have carried out studies to obtain metallurgical recoveries values for each element and mining zone (see chapter 12 and 14 for more details). SRK cannot replicate the assignment of metallurgical recoveries into the block model at Mineral Resource Estimation stage.

Table 11-41 summarizes the criteria used to obtain metallurgical recoveries in Tantahuatay mine.

Table 11-41: Metallurgical recoveries for Tantahuatay

Deposit	Metal	Metallurgical Recovery
Tantahuatay	Au	Tantahuatay 2 Pit in Zone 1 (0.5 million tons) is 60.80% and Zone 2 (remaining) is 72.00%
		Tantahuatay 2 EXT NW Pit is 72%
	Ag	Tantahuatay 2 Pit in Zone 1 (0.5 million tons) is 23.40% and Zone 2 (remaining) is 16.00%
		Tantahuatay 2 EXT NW Pit is 16%
Cienaga	Au	Cienaga Pit in Zone 1 (1 million tons) is 60.80% and Zone 2 (remaining) is 72.00%
	Ag	Cienaga Pit in Zone 1 (0.5 million tons) is 23.40% and Zone 2 (remaining) is 16.00%
Mirador	Au	Mirador Norte Pit: 74.7 %
		Mirador Sur Pit: 74.7 %
	Ag	Mirador Norte Pit: 17.0 %
		Mirador Sur Pit: 17.0 %

Source: Buenaventura, 2021

Based in mineral reserves process references, currently the Tantahuatay mine is mined using open pit methods. Mineral resources are reported within a pit shell generated in Whittle software for each deposit. Pit optimization imput are noted as follows:

- Pit Slope of:
  - 48° for Tantahuatay 2 Pit and 45°, 41.5°, 45°, 38° for Tantahuatay 2 EXT NW Pit, divided in geotechnical zones 11, 12, 13 and 14, respectively.
  - 37.5°, 39.2°, 40.9°, 38.8°, 39.9° and 41.5° for Cienaga Pit, divided in geotechnical zones 1, 2, 3, 4, 5 and 6, respectively.
  - 40.5°, 41.5°, 41.5°, 43.5°, 42.5°, 41.5°, 42.5° and 39.3° for Mirador Norte Pit, divided in geotechnical zones 7, 8, 9, 10, 11, 12, 13 and 14, respectively; and 41.5°, 38.3°, 40.5°, 42.5°, 40.5° and 42.5 for Mirador Sur Pit, divided in geotechnical zones 1, 2, 3, 4, 5 and 6, respectively
- Gold price of 1,600 USD / Oz; Silver price of 25 USD / t.
- Cost is referential for processing of 30 k tpd for each deposit
- Some restrictions were used as dumps, lagoon, and mining concessions (not Buenaventura)
- Cut-off can see in Table 11-39
- Other costs used in pit optime assumption can see in cost structures in Table 11-40

The input parameters were based on:

- Metal prices net selling cost including concentrate refining.
- Bench-marked mining, processing and general and administrative (G&A) costs based onestimates and current costs for similar sized and similar types of operations in the region.
- Metallurgical recoveries are based on testing benchmarks.
- The pit shell was determined by evaluation of an NSR

11.6 Estimation Uncertainty

Aspects that can be considered as uncertainty in the mineral resource estimation of Tantahuatay mine include:

- The density assigned in the block model presents sufficient support for most estimation domains, however, domains with insufficient amount of density samples should be identified and an intensive density sampling program should be carried out in the next drilling campaign.
- Tantahuatay must improve the geological interpretation to increase confidence in the geological models and be supported with alteration, mineralization and lithology geological mapping.
- Estimation domains for all elements (Au and Ag) should be reviewed in detail to improve their construction and definition, as there are areas where locally the grade interpolation may be improved.
- A categorization of resources that reflects confidence in the estimation of resources is a key and sensitive aspect in the Tantahuatay mine, so much so that despite being

a mine in production since 2011 with an extensive drilling program, no measured resources are reported due to several factors such as geological variability in high gold grade zones within the estimation domains that cannot be supported by the current drill pattern (50m), mainly in sectors with higher variability for high gold grades.

- Tantahuatay does not have the necessary data to support reconcilliation between the Long-Term Model, the Short-Term Model and the mill output. If possible, for the updated models the results of a reconciliation between the resource models, mining plans, and results of the metallurgical plant, are incorporated into the resource and reserve model validation processes.

11.7 Summary of Mineral Resources

Buenaventura has declared the Tantahuatay Mineral Resource at an Au cut-off grade within an optimized pit based on a price of 1,600 US$/oz Au and 25 US$/oz Ag. Only Indicated Resources are included in the Mineral Resource statement.

A differentiated cutoff was used for reporting the resources.

The Mineral Resource statements of Tantahuatay, Cienaga and Mirador deposits are shown in Table 11-42.

SRK independently tabulated the Mineral Resources and confirmed the tonnes and grade. The difference in ounces is less than 1% which is acceptable.

Table 11-42: Mineral Resource Statement (exclusive), Tantahuatay mine. Department of Cajamarca - Peru, December 31, 2021.

Deposit	Category	Tonnes	Gold (grade)	Silver grade
		(Mt)	(g/t)	(g/t)
Tantahuatay	Indicated	30,79	0.23	16.31
	Inferred	3,17	0.17	12.63
Cienaga	Indicated	1,38	0.46	1.60
	Inferred	1,10	0.37	0.51
Mirador	Indicated	5,92	0.29	2.70
	Inferred	8,81	0.29	5.95
Total		51,16	0.25	11.99

Notes on mineral resources:

Source: Buenaventura, 2021

- Mineral Resources are defined by the SEC Definition Rules (SK-1300) for Mineral Resources and Mineral Reserves.
- Mineral Resources are exclusive of Mineral Reserves
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
- Mineral Resources were estimated as of December 31, 2021, and reported as of October 31, 2021 taking into account production-related depletion for the period through December 31, 2021.
- Mineral Resources are reported above a differentiated NSR cut-off grade for structures based on actual operating costs:
- Metal prices used in the NSR assessment are US$25/oz for silver and US$1,600/oz for gold.
- Extraction, processing and administrative costs used to determine NSR cut-off values were estimated based on actual operating costs as of 2021
- SRK Consulting Peru is the Qualified Person for the mineral resources.
- Tons are rounded to the nearest thousand

11.8 Resources Sensitivity

Factors that may affect estimates include metal price and exchange rate assumptions; changes in the assumptions used to generate the cut-off grade; changes in local interpretations of the geometry of mineralization and continuity of mineralized zones; changes in geological form and mineralization and assumptions of geological and grade continuity; variations in density and domain assignments; geometallurgical assumptions; changes in geotechnical, mining, dilution and metallurgical recovery assumptions; switch to design and input parameter assumptions pertaining to conceptual stope designs that constrain estimates; and assumptions as to the continued ability to access the site, retain title to surface and mineral rights, maintain environmental and other regulatory permits, and maintain the social license to operate.

There are no other known environmental, legal, title, tax, socioeconomic, marketing, political or other factors that could materially affect the estimate of Mineral Resources or Mineral Reserves that are not discussed in this Report.

To demonstrate the sensitivity of the Tantahuatay mineral resources to metal value cut-off, a grade-tonnage curve was developed to show changes in mineral resources tonnage and gold and silver grade to changes in the metal value cut-off. A grade-tonnage curve was estimated for each deposit and method to show the effect of varying the NSR cut-off value in tonnes and the NSR value. (Figure 11-32, Figure 11-33 and Figure 11-34).

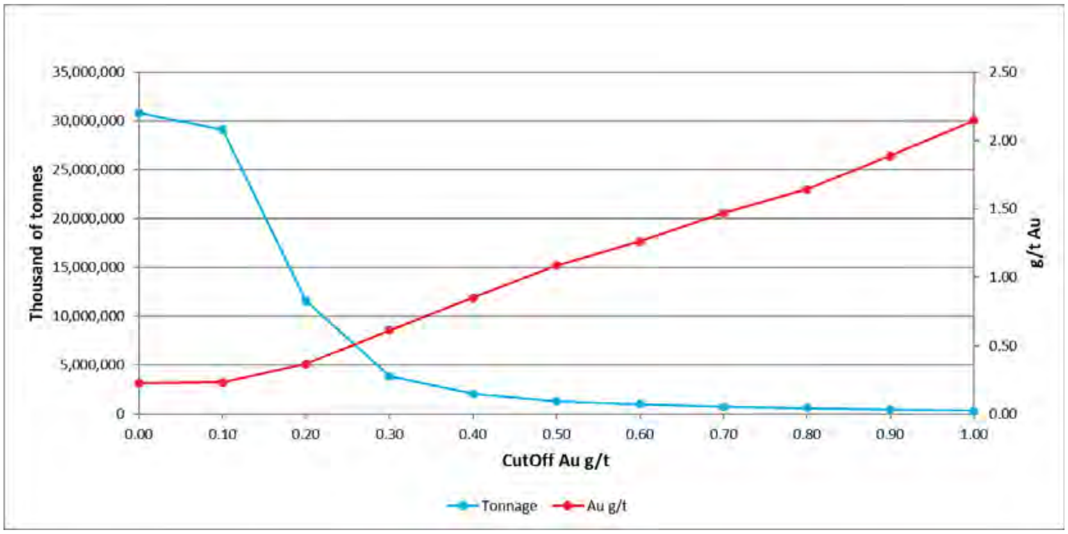


Figure 11-32: Grade-Tonnage Curve for indicated mineral resources for Tantahuatay deposit

Source: Buenaventura, 2021 (Buenaventura, 2021)

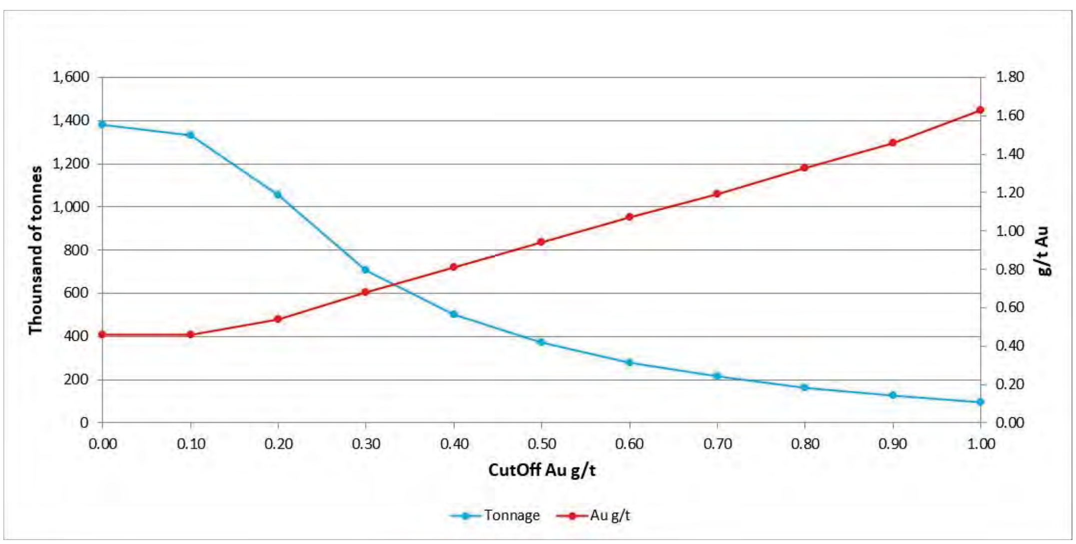


Figure 11-33: Grade-Tonnage Curve for indicated mineral resources for Cienaga deposit

Source: Buenaventura, 2021

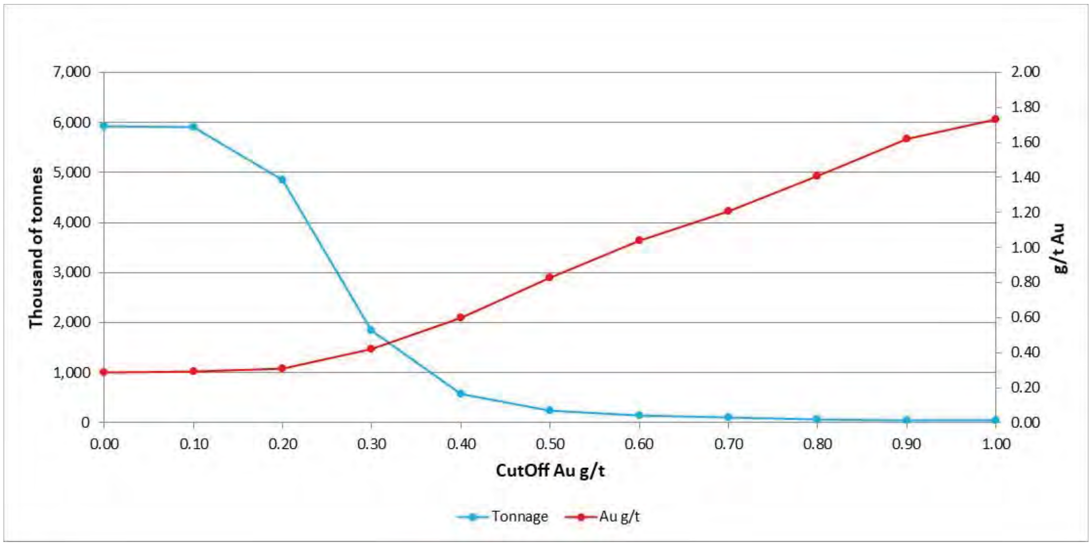


Figure 11-34: Grade-Tonnage Curve for indicated mineral resources for Mirador deposit

Source: Buenaventura, 2021

12 Mineral Reserve Estimates

Tantahuatay is an operating mine that uses conventional open pit methods to extract mineral reserves. A mineral reserve statement is provided in Section 12.5. The open pit mining areas are located entirely on land owned by Buenaventura or under surface use agreements with the owners. There are royalties stated with a third party company that impact around 85 kt of ore material located in the north-east sector of Tantahuatay 2 open pit.

Proven and probable mineral reserves are converted from measured and indicated mineral resources. Conversion is based on pit optimization results, mine design, mine sequence and economic evaluation. The in-situ value is calculated from the estimated grade and certain modifying factors.

The mine LoM plans and resulting mineral reserves stated in this report are based on pre-feasibility level studies.

Mineral reserves effective date is December 31st, 2021

12.1 Mineral Reserves

12.1.1 Introduction

The open-pit mineral reserves are reported in four open-pit locations named Tantahuatay 2 (THY2), Cienaga Norte (CN), Tantahuatay 4 (THY4) and Mirador (MIR),, the Mirador zone has two sectors (north and south) but for mineral reserves purposes both are considered as components of the same location Currently, the open pit Tantahuatay 2, Mirador (North Side) and Cienaga Norte are in operation. Run of Mine (RoM) material is hauled by truck from the pit to two leach pad facilities without any crushing or comminution process. Tantahuatay Leach pad is located in the Southwest side of Tantahuatay 2 open pit and Cienaga Leach Pad is located in the Southwest of Cienaga Open Pit. Waste material is hauled by truck to the appropriate waste dump location.

A regularized block model used has a cell size of 10 m x 10 m x 8 m. This block size is considered appropriate for the mining cycle at Tantahuatay. A dilution of 5% was introduced for the ore blocks, and ore recovery of 95% was considered for the ore materials in general. No further ore losses or ore dilution were applied.

12.1.2 Key Assumptions, Parameters, and Methods Used

The open pit mineral reserves are reported within a pit design based on open pit optimization results. The optimization included measured and indicated mineral resource categories. The pit shell used to define mineral reserves was based on a selected Revenue Factor detailed in Table 12-2. Inferred material within the reserve pit design was treated as waste and given a zero value. Optimization carried out in Geovia Whittle® software and parameters are shown in **¡Error! No se encuentra el origen de la referencia.**.

Table 12-1: Lerchs & Grossmann Optimization Parameters

Parameter	Unit	Value			
		THY2 *	CN *	THY2 EXT NW *	MIR *
Base mining cost	US$/t rock	1.92	3.24	2.01	2.66
Incremental mining cost (by bench) **	US$/t rock	0.013	0.013	0.013	0.014
Processing cost	US$/t ore	1.48	1.48	1.45	1.48
G&A cost	US$/t ore	1.73	1.73	1.73	1.73
Metallurgical recovery - Cienaga Pad***					
Gold	%	60.8%	60.8 %		
Silver	%	23.4%	23.4 %		
Metallurgical recovery - Tantahuatay Pad ***					
Gold	%	72.0%	72.0 %	72.0%	74.7 %
Silver	%	16.0%	16.0 %	16.0%	17.0 %
Royalties ****	%	by limit	0.00	0.00	0.00

Source: Buenaventura, SRK

* Acronyms correspond to: THY2: Tantahuatay 2, CN: Cienaga Norte, THY2 EXT NW Tantahuatay 42 NW MIR: Mirador

** Incremental cost is calculated in reference to the ramp exit level

*** Metallurgical recovery was assigned to a block model attribute

**** Royalties are stated for a specific limit of concession mining rights at the north-east of Tantahuatay 2

Table 12-2: Revenue factor used for final pit selection

Location	Revenue Factor
Tantahuatay 2	0.94
Cienaga Norte	0.98
Tantahuatay 2 EXT NW	1.00
Mirador	1.00

Source: SRK, Buenaventura

Geotechnical Parameters

The open pit slope angles used for the pit optimization and mine design are based on geotechnical studies and differentiate conditions of each open pit.

For Tantahuatay 2, GeoLogic developed a geotechnical evaluation. Figure 12-1 shows the recommended geotechnical zonification and slope angles.

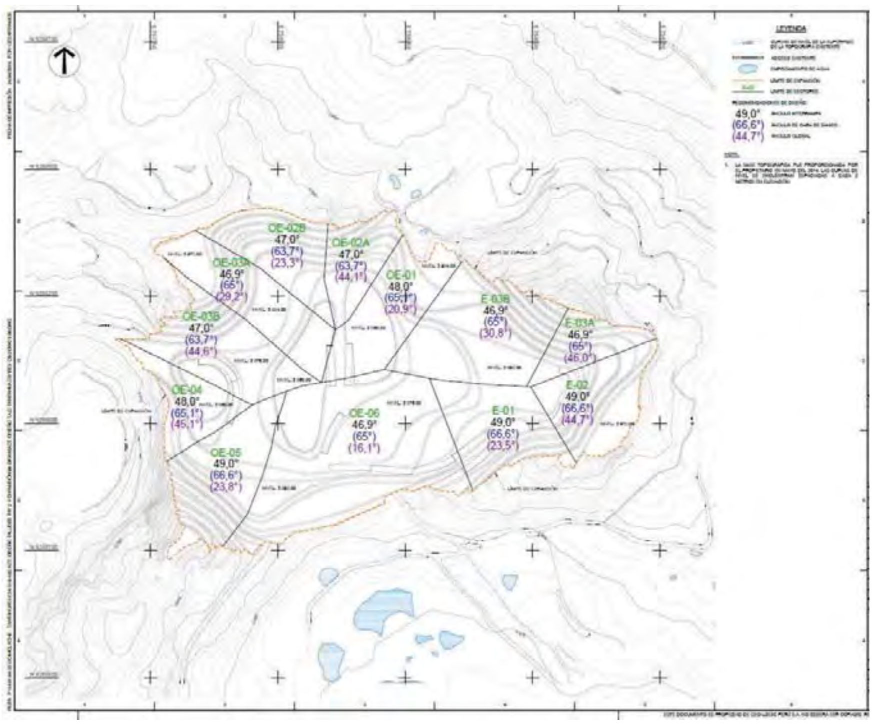


Figure 12-1: Geotechnical recommendations for Tantahuatay 2 open pit design

Source: GeoLogic, 2015

For THY2 EXT NW, Cienaga Norte and Mirador (North and South sectors) the geotechnical evaluation was developed by SRK. The resulting sectors and recommended angles are shown in Figure 12-2, Figure 12-3, Figure 12-4 and Figure 12-5.

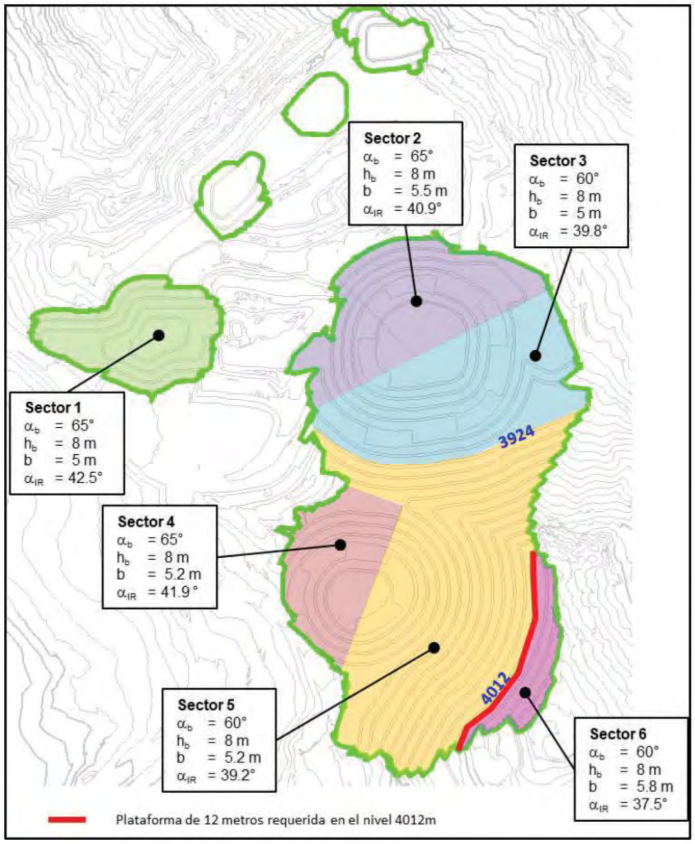


Figure 12-2: Geotechnical recommendations for Cienaga Norte open pit design

Source: SRK, 2021

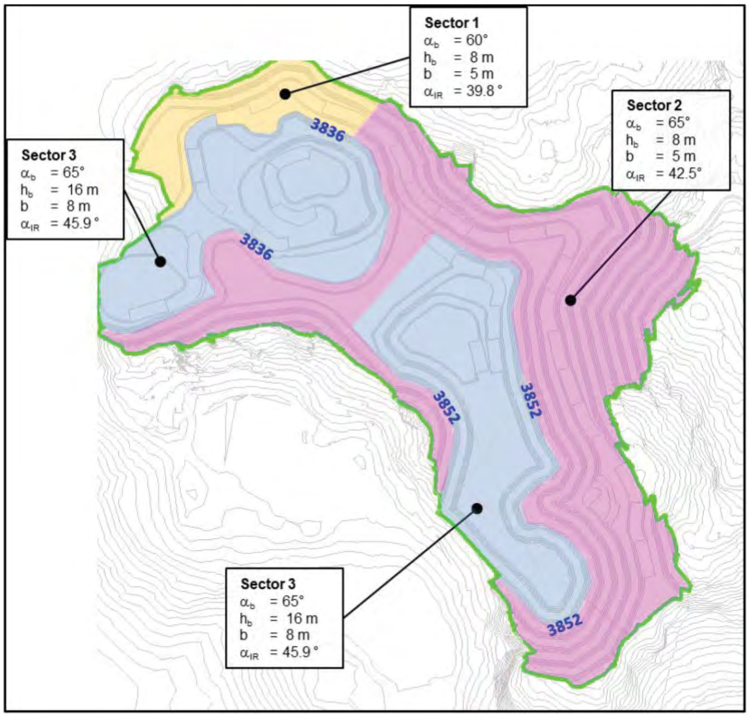


Figure 12-3: Geotechnical recommendations for Mirador (North Sector) open pit design

Source: SRK, 2021

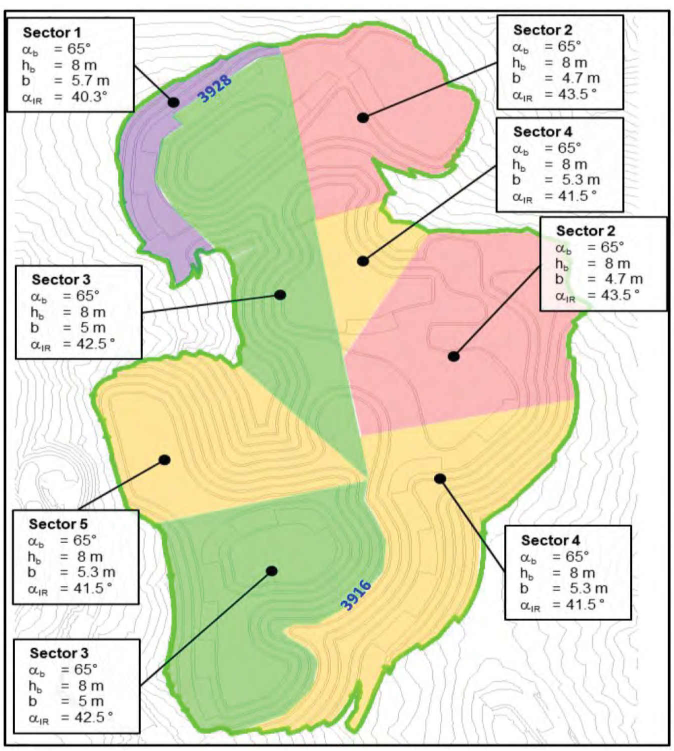


Figure 12-4: Geotechnical recommendations for Mirador (South Sector) open pit design

Source: SRK, 2021

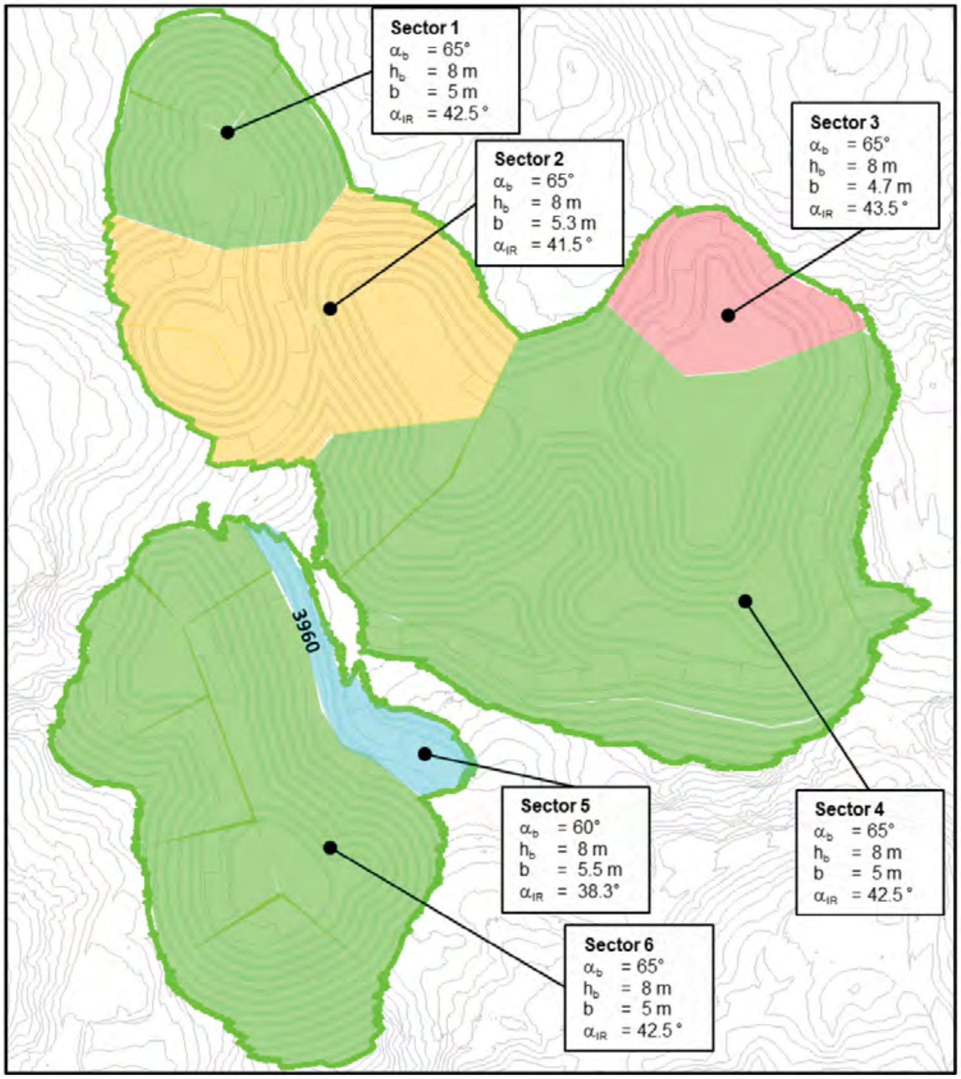


Figure 12-5: Geotechnical recommendations for Tantahuatay 2 EXT NW open pit design

Source: SRK, 2021

Methodology

A 3D mine design, based on the selected pit shell, was completed using Minesight ® software and is the basis for the open pit reserves.

The steps applied in the conversion process from mineral resources to mineral reserves included:

- Import resource block model;
- Assignment of metallurgical recoveries into an attribute of the block model;
- Compute NSR cut-off (internal and economic);
- Compute the revenue function per block on the resource model, considering as valuable blocks those that correspond to measured and indicated categories;
- Assignment of ore dilution of 5% and assignment of ore recovery of 95% to all ore blocks;

- Configure geotechnical sectors and overall slope angles;
- Pit optimization using Whittle® and algorithm Lerchs and Grossmann;
- Final pit selection and push-back definition;
- Pit design based on final pit shell envelope and selected push backs;
- Validate the equipment fleet;
- Prepare a production schedule;
- Tabulate mineral reserves.

12.1.3 Mining Dilution and Mining Recovery

Dilution and ore recovery were considered general values applicable to all ore blocks. Based on the current operation, selectivity level and operational antecedents, SRK recommended the following percentages:

- 5% for dilution
- 95% for ore recovery (or 5% of equivalent ore loss)

12.1.4 Cut Off Grades

An NSR cut-off was used in preference to a grade cut-off, considering that Tantahuatay produces dore bars with payable contents of gold and silver.

Cut-off grades definition are based on three last years (2018 to 2020) historical cost database and consider a detailed analysis process including:

- Analysis of the complete operating cost database managed through SAP System (Datamart);
- Analysis of Buenaventura corporate and headquarters costs (including non 100% Buenaventura owned subsidiary companies like Compañia Minera Coimolache);
- Comparative analysis of Buenaventura costs reported in public domain sources;
- Identification of the one-off costs and other expenses non-related to mine operations;
- Estimation of sustaining CAPEX;
- Assessment of current and future conditions of mine operations.

For Tantahuatay open pit mines, two NSR cut-off values were defined according to a common practice in an open pit reserves assessment:

- Economic cut-off: including mining, processing plant and administrative costs;
- Internal cut-off: including processing plant and administrative costs.

Mineral reserves were stated using the internal NSR cut-off value.

Inputs for NSR cut-off calculation and estimated NSR cut-off are listed in Table 12-3 and Table 12-4.

Table 12-3: NSR cut-off Input parameters

Item	Unit	Value			
		THY2 *	CN *	THY2 EXT NW *	MIR *
Mining cost					
Ore	US$/t mined	2.14	3.23	2.11	2.64
Waste	US$/t mined	1.92	3.24	2.01	2.66
Process cost **	US$/t processed	1.48	1.48	1.45	1.48
General and administrative costs	US$/t processed	1.73	1.73	1.73	1.73
Sustaining capital cost	US$/t processed	0.24	0.24	1.76	2.07
Off site cost (corporate)	US$/t processed	0.42	0.42	0.42	0.42

Source: Buenaventura, 2021 (compiled by SRK)

* Acronyms correspond to: THY2: Tantahuatay 2, CN: Cienaga Norte, THY2 EXT NW: Tantahuatay EXT NW, MIR: Mirador
** Dynamic pad use is considered for THY2, CN and MIR

Table 12-4: NSR cut-off value

Item	Unit	Value			
		THY2 *	CN *	THY2 EXT NW *	MIR *
NSR Internal cut-off	US$/t processed	4.08	3.85	5.46	5.67
NSR Economic cut-off	US$/t processed	6.00	7.09	7.47	8.33

Source: Buenaventura, 2021 (compiled by SRK)

* Acronyms correspond to: THY2: Tantahuatay 2, CN: Cienaga Norte, THY2 EXT NW: Tantahuatay 2 EXT NW, MIR: Mirador

12.2 Metallurgical Recovery

Tantahuatay operates a processing plant with two leach pads, producing gold-silver dore bars. Metallurgical recoveries were estimated considering operational conditions and were assigned to the block model as an attribute.

Recovery percentages are developed based on:

- Analysis of the last three years of statistical data and metallurgical performance of the plant;
- Historical metallurgical testing results, and the latest results (2021) from the metallurgical testing campaign using representative samples collected from the mineral reserves sectors.

Using the available information from the mining and metallurgical disciplines, SRK estimated metallurgical recovery. Data support and details of analysis (formulas and graphic representation) are included in chapters 10 and 14.

SRK believes there is significant room to improve the accuracy of the estimated recovery percentages, and strongly recommends continuing efforts to collect detailed operational data as well as executing metallurgical tests to increase the accuracy of the Reserves & Resources estimates.

Estimated values are shown as follows by leach pad and element according to current and projected processing plant operations.

Table 12-5: Metallurgical recovery by pit

		Value			
Parameter	**Unit**	**THY2 ***	**CN ***	**THY2 EXT NW ***	**MIR ***
Metallurgical recovery - Cienaga Pad **					
Gold	%	60.8%	60.8%		
Silver	%	23.4%	23.4%		
Metallurgical recovery - Tantahuatay Pad					
Gold	%	72.0%	72.0%	72.0%	74.7%
Silver	%	16.0%	16.0%	16.0%	17.0%

Source: Buenaventura, SRK

* Acronyms correspond to: THY2: Tantahuatay 2, CN: Cienaga Norte, THY2 EXT NW: Tantahuatay 2 EXT NW, MIR: Mirador
** Current available capacity at Cienaga Pad is in the order of 1 Mt

12.3 NSR Block value

Tantahuatay is a polymetallic mine operation, producing gold-silver dore bars. In this sense, the mineral reserves were estimated under the concept of multiple commodity ore based on the following saleable elements:

- Gold;
- Silver.

NSR block value estimation considers the contribution of the different elements that generate value in the sale of the dore bars, taking into consideration the following aspects:

- Metal prices;
- Metallurgical recovery, included as an attribute in the block model;
- Payable contents in the saleable product;
- Commercial deductions, as such: RC
- Selling expenses, as such: transport, insurance, supervision, sampling, logistic costs.

NSR value calculation uses "unit values" calculated for each metal, which contributes to the saleable products' value. The "unit value" consolidates the following aspects into a unique factor: payable contents, commercial deductions and selling expenses

Metal prices were stated by Buenaventura, based on market studies and long-term consensus sources. Metal prices are listed in Table 12-6 and are coherent with the results of Market Study (Chapter 16) carried out by CRU Group.

Table 12-6: Metal Prices for mineral reserves definition

Metal and Units	Price
Gold (US$/oz)	1,600
Silver (US$/oz)	25

Source: Buenaventura

Most of the terms and conditions of the contracts between Buenaventura and traders are covered by confidential agreement clauses. Notwithstanding, SRK has had access to the contracts and commercial clauses stated in each and confirmed that these parameters were used to define each "unit value".

Unit values calculated used to determine the NSR block value are shown in Table 12-7.

Table 12-7: Estimated unit value by metal

Concentrate	Unit value by Metal (US$ / unit of grade) *	
	Au	Ag
Gold-Silver Dore Bar	51.089	0.798
Grade units *	Au (g/t)	Ag (g/t)

Source: Buenaventura (compiled and verified by SRK)

* Unit value is used as a factor (multiplied by recoverable content) to calculate the value contribution (US$/t)

12.4 Material Risks Associated with the Modifying Factors

SRK has identified the following material risks associated with the modifying factors:

Impact of Currency Exchange Rates on Production Cost:

The operating costs are modeled in US Dollars (US$) within the cash flow model. The foreign exchange rate profile has not been analyzed in detail. Considering that only a portion of the cost and expenses are in local currency (Peruvian Soles), and given the high variability of the exchange rate over the last two years, the operating cost could be impacted.

Additionally, inflation rates, which were very stable in Peru over the ten years prior to 2021, have started to show variations and their evolution down the line is unpredictable.

Water treatment plant:

Currently, there is a water treatment plant operating as part of a progressive closure plan. However, in SRK's opinion, treated water was sourced not only from abandoned or in progress remediation sectors but also from operational and facilities sectors. In this sense, a detailed analysis of treatment water expenditures and adequate cost distribution can generate an increment in the operational costs.

Geotechnical Parameters:

Geotechnical parameters used to estimate the mineral reserves can change as mining progresses. Local slope failures could force the operation to adapt to a lower slope angle, which would cause the strip ratio to increase and the economics of the pit to change.

Revenue Factor for selected final pit:

The use of a revenue factor close to or equal to 1 for the final pit selection can reduce the possibility of reacting and adapting to a situation of high metal price variability. This also has an impact on the results of the financial model, reducing the NPV.

Reconciliation:

The absence of a systematic reconciliation process does not provide a tool to control, validate, and update the modifying factors to ensure that these parameters represent operating conditions. There are isolated processes that seek traceability of tonnages and grades throughout the mining cycle, however they fail to become a reconciliation process in accordance with best practices.

Politics:

Uncertainty in the local political situation can generate impacts on the cost, facilities, or conditions to operate the mining unit. Consequently, mineral reserves may be impacted by these factors.

12.5 Mineral Reserves Statement

The conversion of mineral resources to mineral reserves has been completed in accordance with CFR 17, Part 229 (S-K 1300). The reserves are based on open pit operation. Appropriate modifying factors have been applied as previously discussed. The positive economics of the mineral reserves have been confirmed by LoM production scheduling and cash flow modeling as discussed in sections **¡Error! No se encuentra el origen de la referencia.** and **¡Error! No se encuentra el origen de la referencia.** of this report, respectively.

The reference point for the mineral reserve estimate is the point of delivery to the leach pad. The Qualified Person Firm responsible for the estimate is SRK consulting (Peru) SA.

In the QP's opinion, the mineral reserves estimation is reasonable in the context of the available technical studies and information provided by Buenaventura.

Proven reserves were not reported and any mineral resource categorized as measured has been downgraded to mineral reserves.

Table 12-8 shows the Tantahuatay mineral reserves as of December 31st, 2021.

Table 12-8: Tantahuatay Open Pit Summary Mineral Reserve Statement as of December 31st, 2021

Destination	Confidence category	Tonnage (kt)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
Tantahuatay 2	Probable	12,275	0.20	16.40
Cienaga Norte	Probable	3,511	0.49	2.06
Tantahuatay 2 NW	Probable	29,157	0.29	11.02
Mirador	Probable	20,512	0.34	1.04
TOTAL	**Probable**	**65,454**	**0.30**	**8.42**

Source: SRK, 2021

(1) Buenaventura's attributable portion of mineral resources and reserves is 40.10% (Amounts reported in the table correspond to the total mineral reserves)

(2) The reference point for the mineral reserve estimate is the point of delivery to the leach pad.
(3) Mineral reserves are current as of December *31st*, 2021 and are reported using the mineral reserve definitions in S-K 1300. The Qualified Person Firm responsible for the estimate is SRK Consulting (Peru) SA
(4) Key parameters used in mineral reserves estimate include:
    (a) Average long-term prices of gold price of 1,600 US$/oz, silver price of 25.00 US$/oz
    (b) Variable metallurgical recoveries are accounted for in the NSR calculations and defined according to recovery functions, that average 72% for gold and 16% for silver
    (c) Mineral reserves are reported above a internal net smelter return cut-off of 4.08 US$/t for Tantahuatay 2 open pit, 3.85 US$/t for Cienaga Norte open pit, 5.46 US$/t for Tantahuatay 2 EXT NW open pit and 5.67 US$/t for Mirador open pit
    (d) Open pit ore will be processed using a heap leach process
(5) Mineral reserves tonnage, grades and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding

13 Mining Methods

13.1 Parameters Relevant to Mine Designs and Plans

Coimolache mining company operates the Tantahuatay mine and has planned extract ore, throughout the life of mine, of 5 zones by open pit mining method, that is, the surface mining of economic ore. For this purpose, open pits are designed considering geotechnical parameters, which are inherent to the rock mass quality and ensure the stability of pit slopes. Design parameters are established by sectors and the configuration of double or single bench, bench height, berm length, inter-ramp angle and bench face angle are defined for each sector.

Figure 13-1 shows the distribution of open pits throughout the life of mine and these are: Tantahuatay 2 (THY2), Tantahuatay 2 NW extension (THY2 NW Ext.), Mirador Norte (MN), Mirador Sur (MS), and Cienaga Norte (CN).

Figure 13-1: Tantahuatay Mine, distribution of open pits throughout the life of mine

Source: BVN, Dec. 2021.

13.1.1 Geotechnical

This section summarizes the main findings of the geotechnical works executed by SRK (2021) for the Coimolache MU Pre-Feasibility Study (PFS). These works were focused on developing the geotechnical design engineering of Cienaga Pit, Mirador Norte Pit, Mirador Sur Pit, Tantahuatay 2 EXT NW, and Tantahuatay 5 at PFS level.

Review of geotechnical information

For the analyses of this study, information from a total of 78 diamond drill holes was used for geotechnical purposes, with a total length of 6,853.27 m. Of this total, in the Cienaga-Mirador zone (i.e., Cienaga pit, Mirador Norte pit, Mirador Sur pit), information was collected from 37 drill holes (3,109.96 m), while in the Tantahuatay zone (i.e., Tantahuatay 2 pit, Tantahuatay 2 EST NW pit, and Tantahuatay 5 pit), information was collected from 41 drill holes (3,743.31 m). It should be noted that in the Tantahuatay zone, 13 drill holes (1,171.9 m) of the total were found distributed in the area of influence of Tantahuatay 2 EXT NW and Tantahuatay 5 pits under study, while the difference (2,571.41 m) corresponded to drill holes in the Tantahuatay 2 pit.

Of the total number of drill holes, 71 (~91%) were performed between the years 2007 to 2018 and make up the historical base of geotechnical information, with an approximate total length of 6,156.52 m. In terms of the type of information received, this historical database was limited to design reports, which included final geotechnical logs with little geotechnical characterization information that was primarily limited to directly assigned rock quality classification scores.

In 2021, BVN performed 07 additional drill holes (05 in the Cienaga-Mirador Zone and 02 in the Tantahuatay Zone) with a maximum depth of 153m, totaling 696.75 m of geotechnical information. These drill holes were oriented to reduce information gaps in the area of influence of the pits under study. During this research campaign, SRK obtained access to native log files, photographs, characterization, and sampling procedures information.

Based on the drillhole information with geotechnical finds, it was possible to estimate that for the Cienaga-Mirador Zone there is an "average" distribution of drill holes in the Final Pit phase, which is covered with an average of 10-18 % of the walls with Class I (Proven) and Class II (Possible) materials. With respect to the Tantahuatay Zone, there is a "low" distribution, with an average 5% with materials considered as Class I and Class II. SRK recommends that the distribution of drill holes allows characterizing at least 60% of the walls of the different phases for each pit under study. This represents the need to drill new holes according to the identified opportunities to improve geotechnical information; these holes should be located directly in the zone of influence of the excavation of the pits of interest.

With respect to the Cienaga Mirador zone, in terms of intact rock, the database provided by BVN included a total of 72 valid unidirectional compression tests, 24 multi-axial compression tests, 56 indirect tensile strength tests, and 310 point load tests.

With respect to the Tantahuatay zone, in terms of intact rock, the database provided by BVN included a total of 97 valid unidirectional compression tests, 34 multi-axial compression tests, 76 indirect tensile strength tests, and 650 point load tests. It should be noted that most of these tests correspond to samples collected in the Tantahuatay 2 pit.

Basic Geotechnical Units

During the geotechnical analysis, local seismic conditions, and the current geotechnical characterization in terms of lithology (Porphyritic Dacites/Andesites and hydrothermal breccias) and hydrothermal alterations were considered. The study identified that the geotechnical units for all the pits are largely controlled by the hydrothermal alteration present in the materials; the Advanced Argillic alteration was most extensive and presented high variability in its physical and mechanical properties, which was characterized by the existence of two assemblages of Silica-Alunite and Silica-Pyrophyllite type.

Through an analysis of the material characterization and the behavior observed in field and laboratory, different properties and classifications were differentiated for the geotechnical units located in the Cienaga, Mirador Norte, and Mirador Sur pits (Cienaga-Mirador Zone) in comparison with similar alterations in the Tantahuatay 2 EXT NW and Tantahuatay 5 pits

(Tantahuatay Zone). In general, materials in the Tantahuatay Zone presented higher values in parameters used to characterize rock mass fracturing, material strength, and structural conditions.

SRK considers as valid the definition of basic geotechnical units (BGU) as the sectors where rock mass has and/or will have a characteristic behavior, which is expressed by the values assigned to the mechanical properties of each unit. Consequently, the BGUs in the Coimolache MU were defined mainly by the type of hydrothermal alteration found in the rock and degree of weathering, which influence the rock mass and which, at the same time, were identified in the available geotechnical information. Table 13-1 shows the BGUs identified in the zones under study. In the next stage of the project, it is crucial to confirm this definition, based mainly on alterations because there is a high variability in the geotechnical characterization and strength parameters for each BGU and it is necessary to determine the presence of highly disturbed material and soft rocks.

Due to high variability in the geotechnical characterization results, the geomechanical limits were analyzed for each zone of the pits under study where geotechnical drill holes were available. These limits were used to define the distribution of BGUs, considering not only the current geological model of hydrothermal alterations, but also the findings in terms of weathering, hardness, and consistency of materials found in the geotechnical drill holes located in the vicinity of the zone of interest.

The geology of the main faults was explicitly modeled identifying a total of 102 faults grouped in 5 systems, based on the interpretation of their geometry.

Table 13-1: Geotechnical Units for the Cienaga-Mirador and Tantahuatay Zones

Zone	Geotechnical Unit	Description	Abbreviation
Cienaga-Mirador (CN-M)	1	Argillic	ARG
	2	Advanced Argillic	AA
	3	Intermediate Argillic	AI
	4	Propylitic	PRO
	5	Massive Silica	SILM
	6	Granular Silica	SIL-G
	7	Vuggy Silica, Sandy	SIL-V-A
	8	Argillic Material (ARG-AA)	MARG
	9	Silica Material (SILM/SIL-G)	MSIL
Tantahuatay (THY)	1	Argillic	ARG
	2	Advanced Argillic	AA
	5	Massive Silica	SILM

Source: BVN.

Geotechnical Engineering

Based on the geotechnical characterization presented, it is possible to indicate that according to the material classification system proposed by Bieniawski (1976), the materials of the Cienaga-Mirador Zone are predominantly classified between class V and III rocks (very poor to fair). Tantahuatay Zone materials are predominantly classified between class IV and II rocks (poor to good). With respect to the rock quality index (RQD) (Deere,1964), Cienaga-Mirador Zone materials present mostly indexes classified as Poor-Very Poor, while in the Tantahuatay Zone, mostly Fair indexes were identified.

The Argillic, Intermediate Argillic, Advanced Argillic, and Sandy/Granular Silica alterations have drastically reduced the strength of host rocks in both zones under study. The materials found with these alterations have been classified as 'weak rocks' according to the classification developed by the ISRM (International Society for Rock Mechanics), mainly due to the strength of intact rock that ranges primarily between extremely weak (R0) and weak (R2). Current geotechnical information indicates that for these alterations there is a wide range of rock quality, including materials with a high degree of weathering, soil with high fines content. To locate this type of low-quality material, the current alteration model was subdivided using the drill holes with geotechnical information.

Stability Analysis

For the different components of the Coimolache MU, SRK adopted the acceptance criteria described in Table 13-2, estimating the factor of safety to define the geotechnical design of slopes. These criteria are detailed in CSIRO (2009) and are accepted by practice in the international mining industry.

Table 13-2: Acceptance Criteria (CSIRO, 2009)

Scale	Consequence of failure	Factor of safety (minimum)		Probability of failure (maximum)
		Static	Dynamic	P[FS ≤ 1]
Bench	Low - High	1.1	N/A	25 - 50%
Inter-ramp	Low	1.15 - 1.2	1.0	25%
	Medium	1.2	1.0	20%
	High	1.2 - 1.3	1.1	10%
Global	Low	1.2 - 1.3	1.0	15 - 20%
	Medium	1.3	1.1	5 - 10%
	High	1.3 - 1.5	1.1	5%

Source: BVN.

Considering the rock quality in each pit under study (i.e., poor quality massifs and presence of soft rocks), the first stage of the design and stability analysis process was focused on evaluating the global and inter-ramp stability, defining inter-ramp angles that meet the acceptance criteria. During the final stage, different bench configurations were adjusted to the global and inter-ramp angles previously defined in the first stage. These guidelines for slope design are consistent with the recommendations of CSIRO, 2009, which defines a workflow for the design process of mining slopes in soft rocks similar to the above.

From the evaluation of the rock mass and geotechnical units, the shear strength characteristics of the materials shown in Table 13-3 were estimated. These parameters were used in the slope stability analyses, which considered the current operational design and were focused on analyzing the stability of benches and final slope stability analysis at inter-ramp level.

Table 13-3: Summary of shear strength criteria for rock masses

Zone	Geotechnical Unit	Dry Unit Weight (kN/m³)	Failure Criteria					
			Generalized Hoek-Brown (2002)				Mohr-Coulomb	
			σ_{ci} (MPa)	mi	D	RMR/GSI	Cohesion (kPa)	Friction angle (°)
CN-M	ARG	20	5/9	8	0.4-1.0	34/38	-	-
	AA	21.4	12	11	0.4-1.0	37	-	-
	AI	20	9	8	0.4-1.0	34	-	-
	PRO	21.7	28	12	0.4-1.0	30	-	-
	SILM	21.9	38	19	0.4-1.0	38	-	-
	SIL-G	19	11	12	0.4-1.0	37	-	-
	SIL-V-A	18	6/22/36	17/8/21	0.4-1.0	31/35/37	-	-
	MARG	20	-	-	-	-	15	28
	MSIL	20	-	-	-	-	15	32
THY	ARG	23	6.12	12.13	0.4-1.0	44	-	-
	AA	24	13/27/48	11/9/19	0.4-1.0	41/49	-	-
	SILM	25	27/66	19/22	0.4-1.0	40/48	-	-
Every one	Fault	20	N/A	N/A	N/A	N/A	5	25

Notes:
[1] Linear Mohr Coulomb values apply for normal stresses of less than 0.5MPa.
[2] The width assumed for all failures is 3m.

Source: BVN.

Geotechnical Design

The slope stability analysis was used to determine the recommended geotechnical design for each pit under study based on the guidelines indicated above. The recommendations for Cienaga Pit, Mirador Norte Pit, Mirador Sur Pit, Tantahuatay 2 EXT NW, and Tantahuatay 5 are listed in Table 13-4 - Table 13-8 respectively. The geotechnical sectors corresponding to these recommendations are illustrated in Figure 13-2 - Figure 13-6 for each pit under analysis.

Table 13-4: Slope design recommendations - Cienaga Pit.

Sector	Alteration	Bench-Berm			Inter-ramp		Safety Berm (m)
		Height (m)	Width (m)	Max. Angle (°)	Max. Height (m)	Max. Angle (°)	
1	SIL-G / ARG	8	5.0	65	96	42.5	12
2	ARG/AI/AA	8	5.5	65	96	40.9	
3	ARG/AI	8	5.0	60	96	39.8	
4	SIL-G	8	5.2	65	96	41.9	
5	SILM/SIL-G/ARG	8	5.2	60	96	39.2	
6	ARG/AA	8	5.8	60	48	37.5	

Notes:
[1] Inter-ramp angle (measured from foot to foot)
[1] A 12m safety platform is recommended at the 4012m level, decoupling design sectors 5 and 6.
Source: BVN.

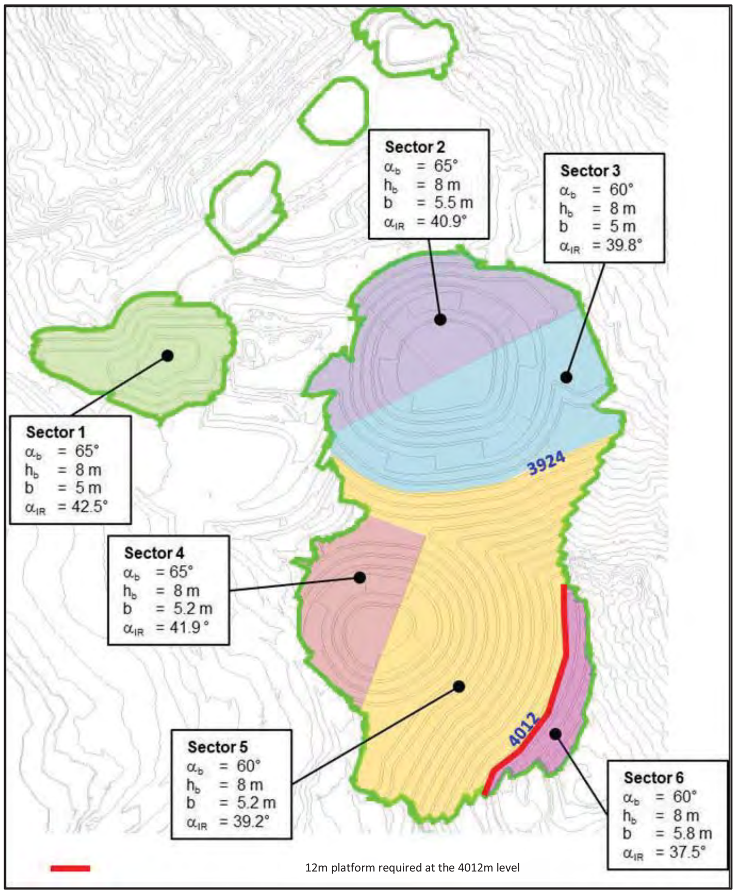


Figure 13-2: Design sectors - Cienaga pit.

Source: BVN.

Table 13-5: Slope design recommendations - Mirador Norte pit.

Sector	Alteration	Bench-Berm			Inter-ramp		Safety Berm (m)
		Height (m)	Width (m)	Max. Angle (°)	Max. Height (m)	Max. Angle (°)	
1	ARG/AI	8	5.7	65	48	40.3	12
2	AA/ARG	8	4.7	65	96	43.5	
3	AA/SILM	8	5.0	65	96	42.5	
4.5	ARG, AA	8	5.3	65	96	41.5	

Notes:
[1] Inter-ramp angle (measured from foot to foot)
Source: BVN.

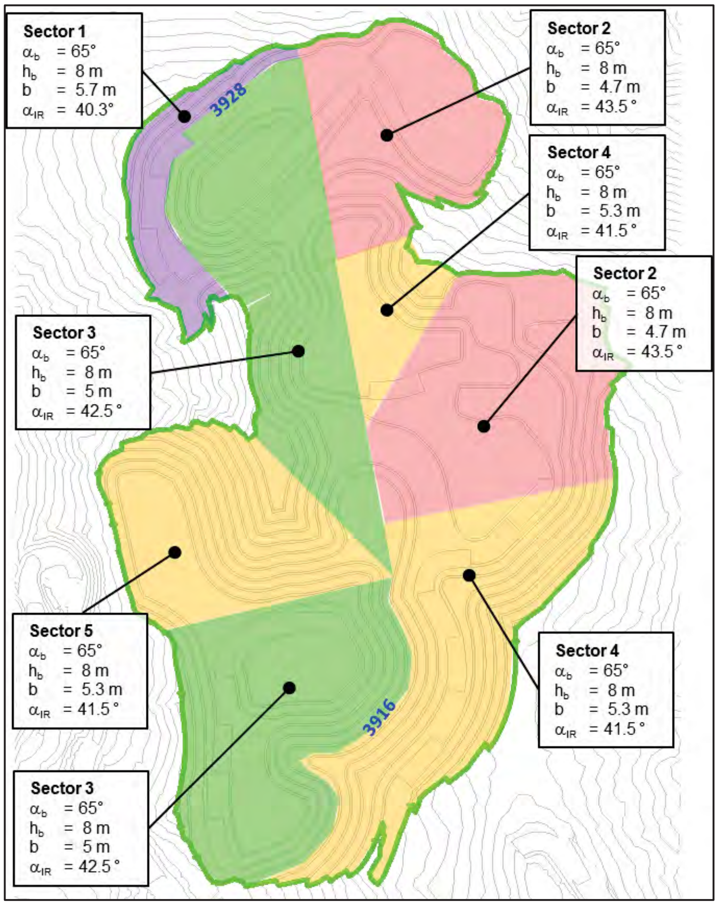


Figure 13-3: Design Sectors - Mirador Norte pit.

Source: BVN

Table 13-6: Slope design recommendations - Mirador Sur pit.

Sector	Alteration	Bench-Berm			Inter-ramp		Safety Berm (m)
		Height (m)	Width (m)	Max. Angle (°)	Max. Height (m)	Max. Angle (°)	
1,4,6	ARG/AA, AA/SIM, AA/SILM	8	5.0	65	96	42.5	12
2	ARG/SILM	8	5.3	65	96	41.5	
3	SILM	8	4.7	65	96	42.5	
5	ARG/PROP	8	5.5	60	48	38.3	

Notes:
[1] Inter-ramp angle (measured from foot to foot)
Source: BVN.

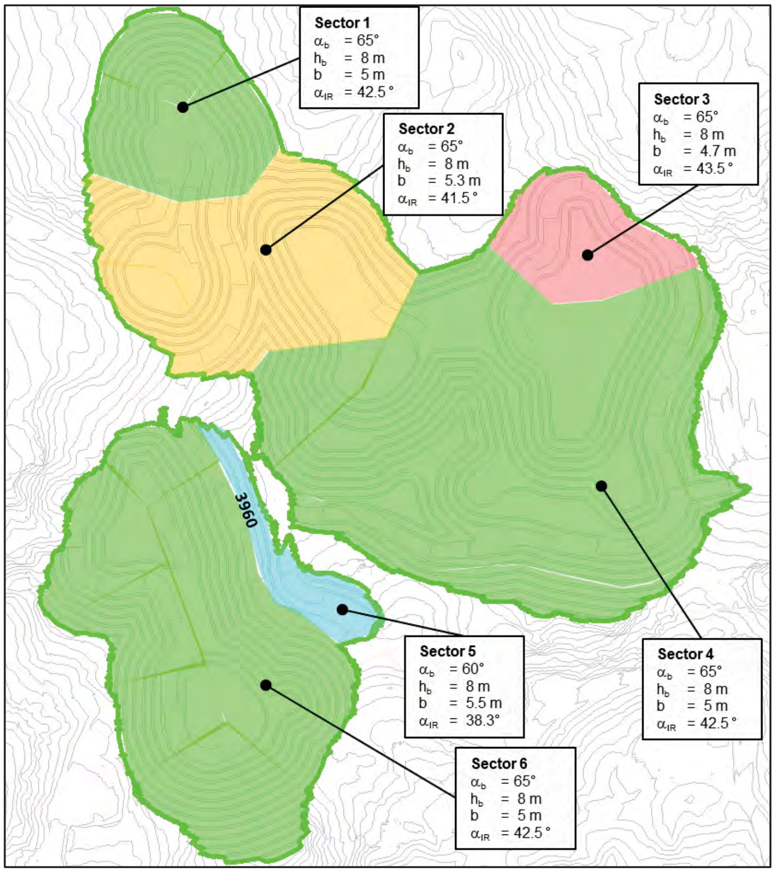


Figure 13-4: Design Sectors – Mirador Sur Pit.

Source: BVN

Table 13-7: Slope design recommendations - Tantahuatay 2 EXT NW pit.

Sector	Alteration	Bench-Berm			Inter-ramp		Safety Berm (m)
		Height (m)	Width (m)	Max. Angle (°)	Max. Height (m)	Max. Angle (°)	
1	ARG/AA	8	5.0	60	48	39.8	12
2	AA	8	5.0	65	100	42.5	
3	AA/SILM	16	8.0	65	100	45.9	

Source: BVN.
Notes:
[1] Inter-ramp angle (measured from foot to foot)

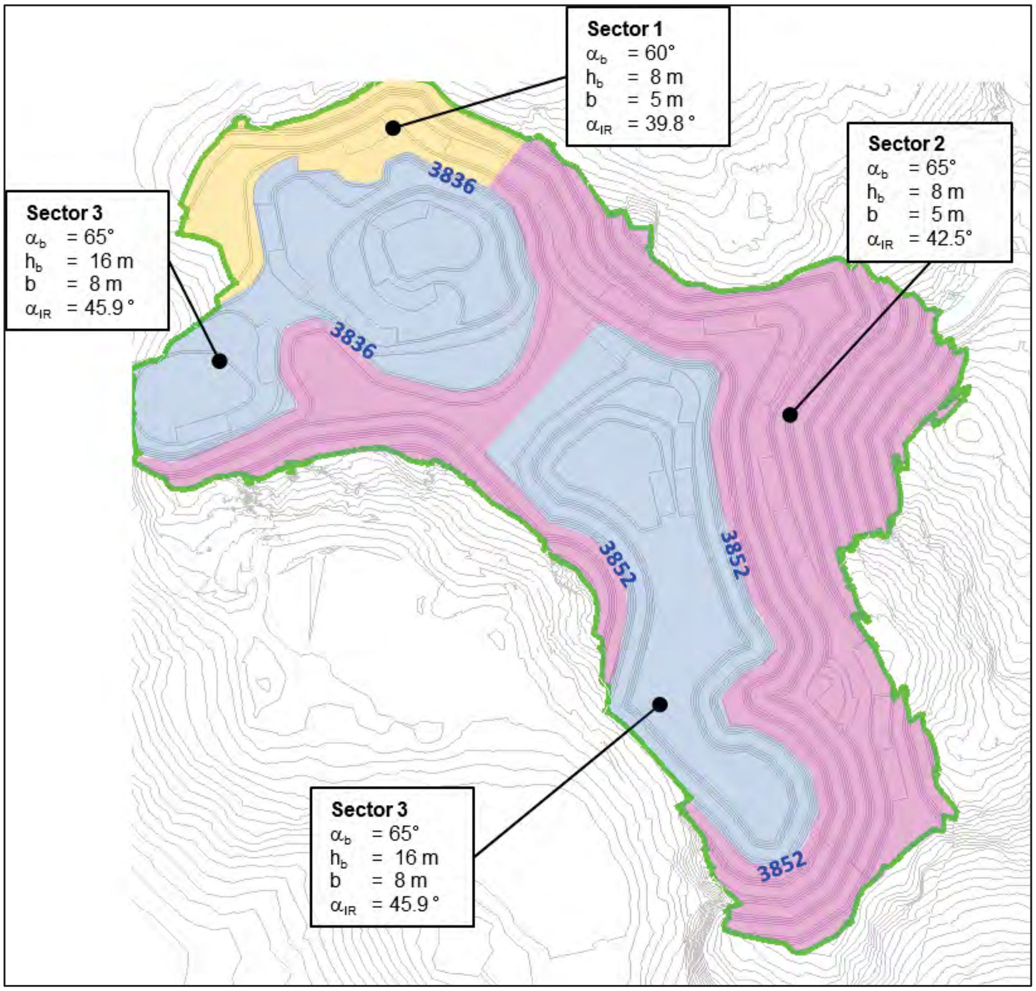


Figure 13-5: Design sectors– Tantahuatay 2 EXT NW pit.

Source: BVN.

Table 13-8: Slope design recommendations - Tantahuatay 5 pit.

Sector	Alteration	Bench-Berm			Inter-ramp		Safety Berm (m)
		Height (m)	Width (m)	Max. Angle (°)	Max. Height (m)	Max. Angle (°)	
1	AA - Upper limit	16	8.0	65	100	45.9	12
2	AA - Lower limit	8	5.0	65	100	42.5	
3	AA/SILM	8	5.0	60	100	39.8	

Notes:
[1] Inter-ramp angle (measured from foot to foot)

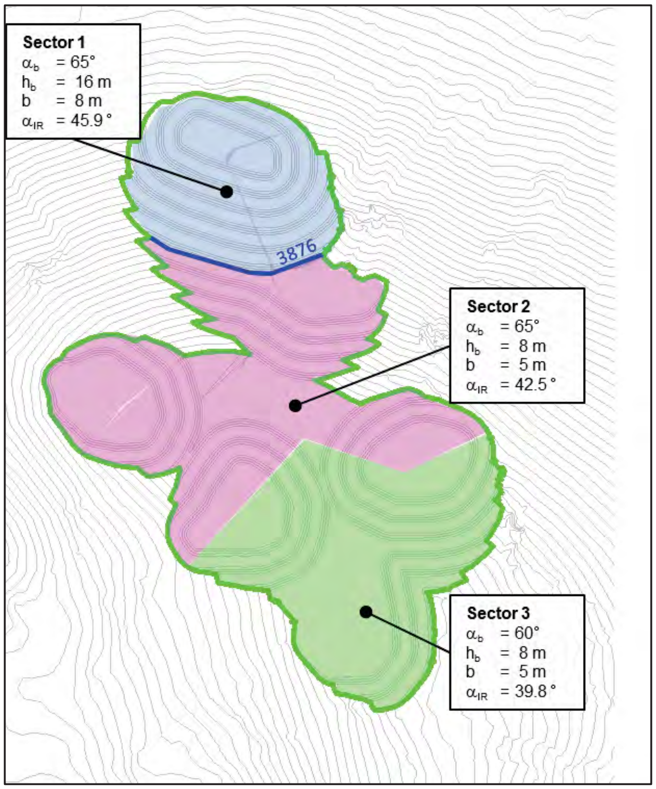


Figure 13-6: Design sectors – Tantahuatay 5 pit.

Source: BVN.

Preliminary monitoring considerations

SRK anticipates that the slopes in all the pits analyzed will be subject to unloading and strength degradation processes, conditioned not only by the intrinsic characteristics of materials and structures, but also by vertical mining activities. This could trigger potential failure mechanisms associated with shearing through the rock mass or structures in the final benches, giving rise to small instabilities at bench and multi-bench scale. It is also vital that a system of runoff control and surface water management be implemented, avoiding infiltration into the slopes, in order to reduce the probability of occurrence of these instabilities.

To keep track of slope deformations, CMC must implement an integrated monitoring system that is redundant, including complementary instruments, and with sufficient accuracy to warn of possible instabilities. At PFS level, SRK recommends considering the acquisition of total station and prism systems, which could be complemented with additional instrumentation such as extensometers, TDR cables, and piezometers. These recommendations are preliminary and should be validated in the next stage of the project, when the uncertainties in the geotechnical model, identified at PFS level, are analyzed. The aforementioned equipment has a robust alarm system capable of alerting mine personnel to avoid accidents due to unexpected instabilities.

In SRK's experience, monitoring information in similar deposits could be used to perform retrospective analyses, oriented to validate material strength estimates, especially those with geotechnical quality classified as extremely low, where it is not possible to obtain unaltered samples. The sectors with the highest probability of occurrence of instability include slopes excavated in soft rock, argillic and intermediate argillic altered material, located in Cienaga Pit, Mirador Norte Pit and Mirador Sur Pit.

13.1.2 Hydrogeological

A hydrogeological evaluation was carried out to estimate the inflow and the distribution of pore pressure in Tantahuatay, Mirador and Cienaga open pits. To do this, a hydrogeological simulation model was developed using the Modflow USG code (Panday et al., 2013). The groundwater model was developed based on the current hydrodynamic understanding that was established through geological information, flow measurements, piezometric levels and integration of hydraulic tests.

The geological framework of the study area is mainly made up of unconsolidated (quaternary) and volcanic materials that have been intruded by breccia and domes, generating hydrothermal alterations of the argillic and advanced argillic type in the surroundings of the Tantahuatay, Mirador and Cienaga Norte pits. The set of materials forms a low permeability media due to its hydraulic characteristics. In the rest of the study area, the volcanic rock presents a moderate permeability during the first 50 m due to fracturing, caused by tectonic events and surface weathering. At greater depths, the permeability decreases considerably, which makes it difficult groundwater to move. On the other hand, unconsolidated deposits are mainly found at the bottoms of streams and have a limited thickness, so they do not constitute significant units for the hydrodynamics. The groundwater flow system is controlled by regional structures (Tacamache, Tantahuatay Faults, etc.) that constitute the main preferential routes for groundwater flow. This has been evidenced by base flow measurements in the currents lining these structures.

To date, interception between open pits and groundwater levels has not been identified. The only source of water that recharges the open pit is precipitation; however, no drainage system has been required to date. Groundwater discharges have been evidenced in the Tantahuatay and Tacamache streams. According to drilling information provided by Compañía Minera Coimolache (CMC), the water level in the areas planned for mining is deep, so an interception of the groundwater surface is not expected. However, this information must be confirmed by installing piezometers. The groundwater model was calibrated to reproduce the current conceptual model. This was based on available water levels and measurements of surface water flow in the dry season. Subsequently, LOM geometric information provided by CMC was explicitly implemented in the groundwater model with the aim of predictively simulating the hydrodynamic behavior of the system. The results of the predictive simulation indicated that the groundwater inflow to the pits would reach 1.4, 1.8 and 0.8 l/s as annual average flow, respectively for the Tantahuatay, Mirador and Cienaga Norte open pits, during the final phase of operation. Because of all runoff infiltrates into the groundwater system, these fluxes were considered in groundwater simulations as a recharge. The bedrock dewatering will generate slightly changes in the base flow discharges of the Tantahuatay and Tacamache streams. Expected pit inflow rates will require managed at the bottom of the pits with dynamic ponds of 300 m^3 and suction pumps (see Figure 13-7).

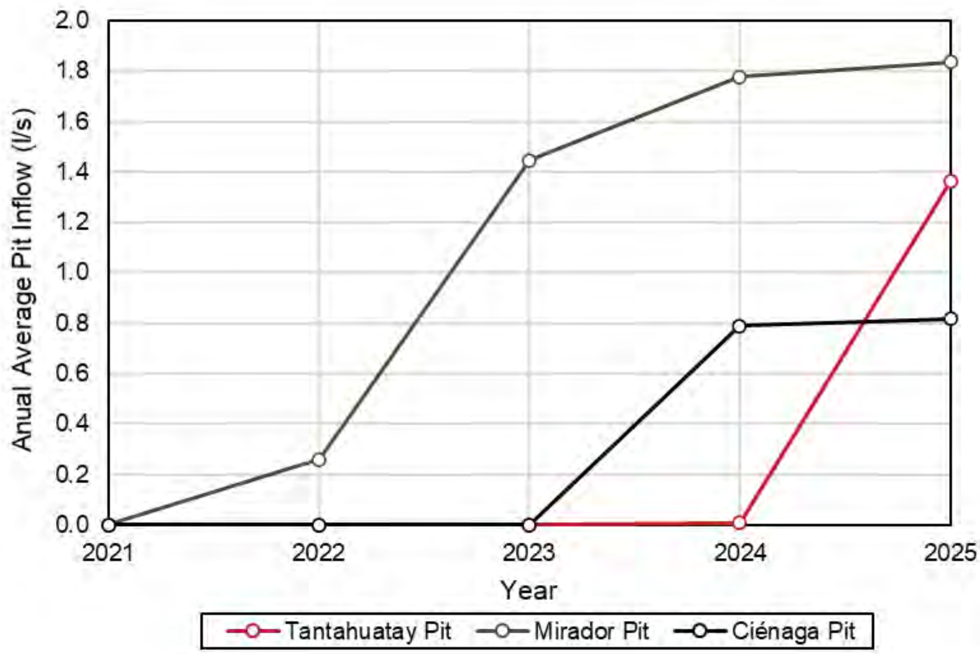


Figure 13-7: Pit inflow predictions

Source: BVN.

Groundwater model simulations were made based on available piezometric data. However, additional piezometric data need to be generated in North sector of Tantahuatay and Cienaga Norte open pits.

Regarding the geochemical characterization, an assessment was developed in Amphos 21 (2021) considering the interpretation of the performed tests of a number of samples (74) that were available by CMC. Based on this, mineral heterogeneity associated with epithermal high sulphidation deposits such as the case of Tantahuatay, together with the large number of components from the mine makes the selection of 74 samples selected for environmental geochemistry studies short, suggesting that more samples must be considered to cover variability in terms of distribution of mineral heterogeneity in different types of materials (i.e., waste rock, ores, PAD waste materials, quarries, etc.).

However, the results from the geochemical analyses show that all components can generate acid rock drainage (ARD) with associated metal leaching (ML). Therefore, considering that geochemical results indicate that ARD and ML will extend to all mining components, the small number of samples became a minor issue. The most relevant ARD generating minerals are pyrite and alunite, which are present in all assessed materials. Other sulfides, such as sphalerite, galena, chalcopyrite, or tennantite – tetrahedrite are also present, but with contents much lower than pyrite. Despite the low amount of these other sulfides, the geochemical analyses show that once some acidity is developed metal leaching can occur, especially regarding metals such as Al, As, Cu, Fe, Mn, Pb and Zn, and in some cases also Cd, Co or Ni.

During the operation period, the formation of acid mine drainage can only be minimized by limiting the water infiltration through the different mining components. As this can only be limited up to certain level, an acid water treatment plant will be required. For mine closure, the use of soil modified covers for all components agrees with the ARD and ML potentials for all components.

Although the use of cover with modified soils is a very good option to limit the generation of ARD and ML, there are certain aspects that must be verified and validated. The aspects to be considered include:

- Evaluating the acid generation due to the non-oxidative dissolution of other minerals, such as alunite (and jarosite).
- Ensuring that there is no presence of other oxidants than oxygen inside the different deposits (i.e., Fe3+ under already developed acidic conditions).
- Ensuring that, in case ML is produced, the retention capacity exerted by the covers is effective even for those metals that only precipitate under high alkaline conditions, as it is the case of Mn, Zn, and Cd.

Although the number of samples is a minor issue regarding that all components will generate ARD and ML, taking additional samples to cover all the mineral compositional range and all the components should be considered. This will provide knowledge on the behavior of different materials and refine the predictions and models for the future situations, as present models are based, in some cases, on a single sample analysis.

13.2 Production Rates, Expected Mine Life, Mining Unit Dimensions, and Mining Dilution and Recovery Factors

13.2.1 Production Schedule

The production schedule established over the life of mine (LOM plan) considers the ore production from Tantahuatay 2 (THY2), Tantahuatay Northwest Extension (THY2 NW Ext), Mirador Norte (MN), Mirador Sur (MS), and Cienaga Norte (CN).

The strip ratio of the LOM plan is 0.34, i.e., on average over the life of the mine 0.34 tons of waste rock will be mined to expose and extract one ton of ore.

Reported ore reserves total 65.45 Mt with an average grade of 0.30 g/t Au and 8.42 g/t Ag. On the other hand, the reported waste will total 22.03 Mt. The LOM mining plan will be developed over a period of 6 years.

A total of 469.8 koz Au and 3,054.9 koz Ag are planned to be produced over the life of the mine. See details in Table 13-9.

Table 13-9: Tantahuatay mine LOM production plan 2022

LOM Plan	Units	2022	2023	2024	2025	2026	2027	Total
Ore	**Mt**	**8.59**	**9.00**	**14.20**	**14.20**	**14.20**	**5.26**	**65.45**
Waste rock	Mt	3.75	5.09	3.40	3.40	3.40	2.99	22.03
Total	**Mt**	**12.34**	**14.09**	**17.60**	**17.60**	**17.60**	**8.26**	**87.48**
Stripping ratio	W/O	0.44	0.56	0.24	0.24	0.24	0.57	0.34
Au grade	g/t	0.38	0.37	0.30	0.27	0.27	0.20	0.30
Ag grade	g/t	6.86	3.99	11.09	11.13	6.77	8.47	8.42
Ounces Au cont.	**koz**	**106.1**	**108.0**	**135.0**	**122.0**	**122.0**	**33.3**	**626.4**
Ounces Ag cont.	**koz**	**1,895.1**	**1,155.7**	**5,062.5**	**5,079.5**	**3,092.2**	**1,432.0**	**17,717.0**
Au Recovery	%	72.0%	71.3%	72.2%	72.6%	72.8%	72.7%	72.2%
Ag Recovery	%	18.2%	16.5%	16.0%	16.3%	16.0%	16.0%	16.4%
Ounces Au prod.	**koz**	**80.1**	**80.8**	**97.5**	**88.5**	**88.8**	**34.2**	**469.8**
Ounces Ag prod.	**koz**	**363.2**	**208.2**	**811.0**	**827.5**	**495.4**	**349.6**	**3,054.9**

Source: BVN, Dec. 2021.

13.2.2 Dimensions of mining units (dimensions of benches and berms)

The configuration of design parameters established for the 5 pits that make up Tantahuatay mine, are detailed in the geotechnical - slope stability section.

Figure 13-8 and Figure 13-9 show the general layout of the configuration of single and double bench slope, respectively.

Table 13-10 shows the summary of the general design parameters applied in the Tantahuatay mine pits.

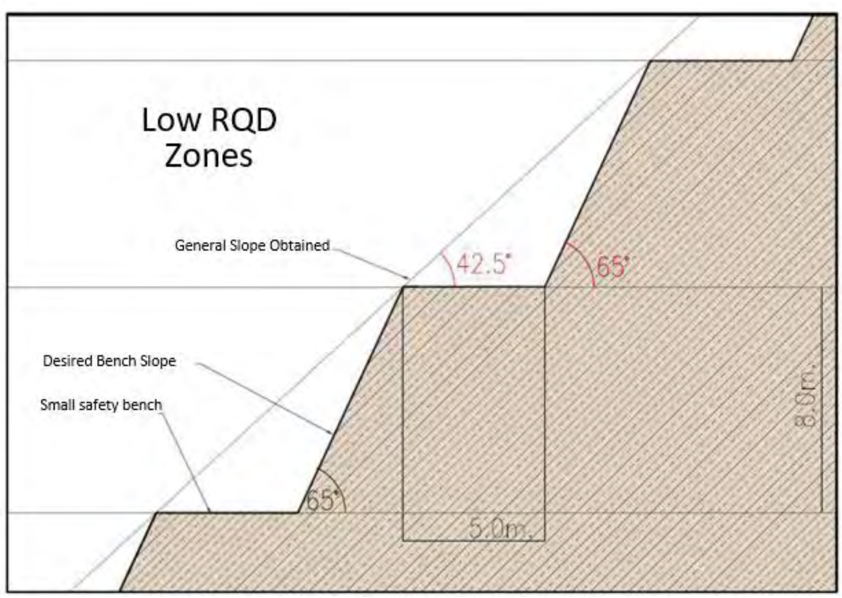


Figure 13-8: Single bench pit slope configuration.

Source: Geo-Logic.

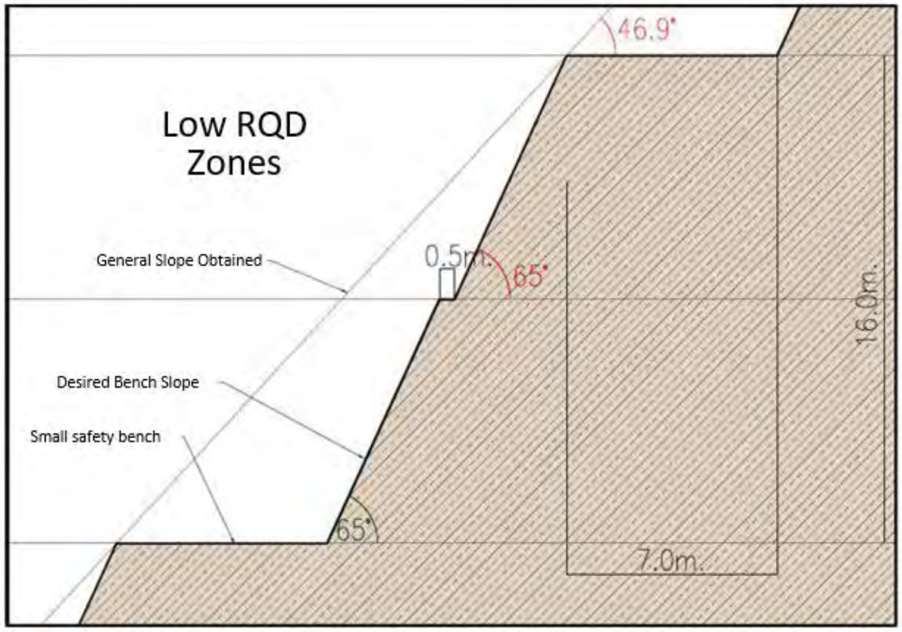


Figure 13-9: Double bench pit slope configuration.

Source: Geo-Logic.

Table 13-10: General summary of design parameters

Design Parameter	Unit	Value
Total ramp width	m	12
Ramp gradient	%	10
Bench height	m	8
Bench configuration		Single / Double
Safety berm width	m	5 - 8
Bench face slope angle	°	60 - 65
Inter-ramp slope angle	°	40 - 46

Source: Geo-Logic

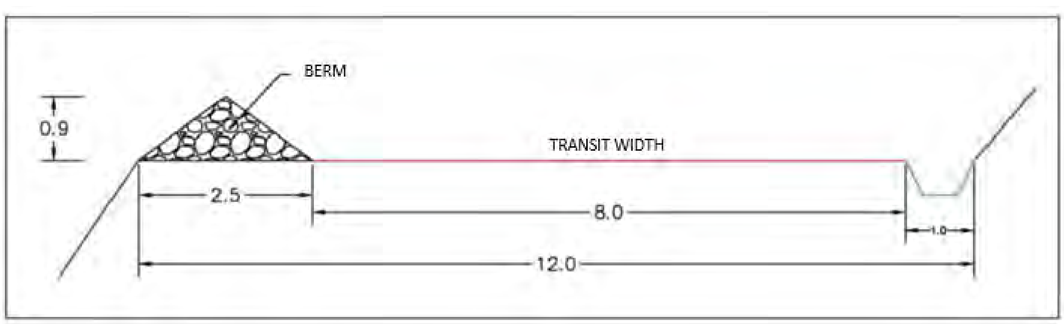


Figure 13-10: Typical access road design.

Source: BVN.

All parameters, with the exception of slope angles (inter-ramp and bench face) and safety berm width, which are specified for each zone and pit in the geomechanics chapter, are of common application for all THY2, CN, MN, MS, and THY2 NW Ext pits.

In relation to the material haulage equipment (ore/waste) currently operating on the 12-meter roads (10% slope in the pit), said roads are considered consistent given that they allow adequate transit of equipment, which are primarily 8x4 trucks and to a lesser extent, 6x4 trucks.

13.2.3 Mining dilution

Mining dilution refers to waste material or low-grade ore that is not separated during the mining process from the economic ore (ore above the cut-off value). This refers to unwanted material that is mixed with the ore and sent to the leaching PAD and consequently, increases operating costs; reduces ore value; distorts the production schedule; among other issues.

At Tantahuatay mine, a constant dilution of 5% is applied for the estimation of ore reserves and LOM plan development. This value has been taken referentially from other open pit operations with similar production levels and deposit types.

13.2.4 Mine recovery

An ore loss of 5% has been considered for the Tantahuatay mine operations, i.e., an ore recovery of 95%. This value has been taken referentially from other open pit operations with similar production levels and deposit types.

At Tantahuatay mine, an ore recovery of 95% is applied for the estimation of ore reserves and LOM plan development.

13.3 Requirements for Stripping

13.3.1 Stripping ratio

The stripping ratio for the LOM plan is 0.34, i.e., on average over the life of the mine 0.34 tons of waste rock will be mined to expose and extract one ton of ore.

Table 13-9 shows that the stripping ratio varies between 0.24 and 0.57, with an average of 0.34 t waste / t ore.

13.4 Required Mining Equipment Fleet and Machinery

The main operation equipment and auxiliary operation equipment is shown in Table 13-11 that includes all equipment of the five open pits.

Table 13-11: Mine Equipment Summary

Fleet of operating equipment	Brand / Capacity	Quantity (Units)
Main operation equipment		
Blasthole drill rig	DM 7 7/8"	2
Excavator	CAT 336 dl 2.4m^3	6
Dump Truck	15 m^3	46
Auxiliary operation equipment		
Bulldozer	CAT D8T	1
Bulldozer	CAT D6T	5
Excavator	CAT 336 dl 2.4m^3	4
Hydraulic hammer		2
Motor grader		4
Water tanker truck	5,000 gal.	2
Fuel tanker truck	5,000 gal.	2
Front loader		2
Blasthole drill rig	ROC L8 DX	1
Backhoe loader		4
Auxiliary equipment and facilities		
Lube truck		3
Mixing truck (for blasting)		1
Bus for operations personnel		5

Source: BVN, Dec. 2021.

13.5 Final Mine Outline Map

13.5.1 Plane of surface components

Figure 13-11 shows the plane of surface components.

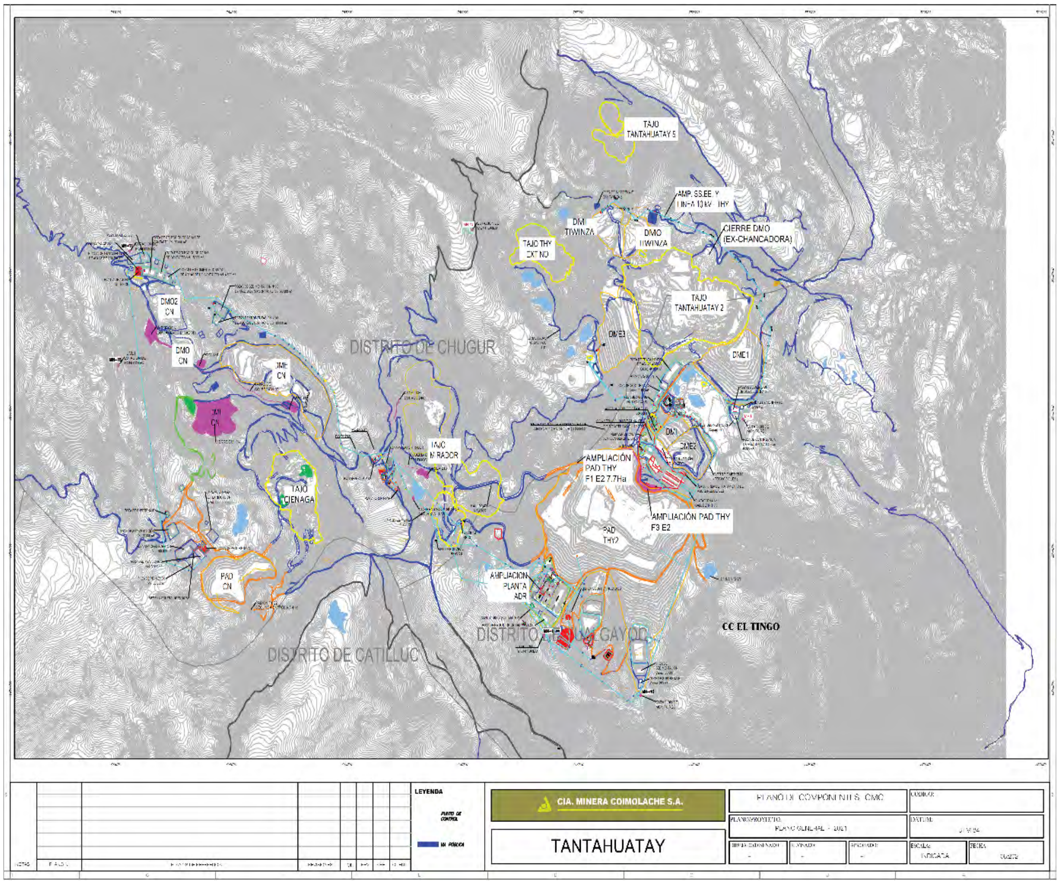


Figure 13-11: Final mine outline map

Source: BVN, Dec. 2021.

14 Recovery Methods

Coimolache operates a run-off-mine (ROM) leaching operation that processes gold and silver rich ores to produce dore bars assaying above 90% precious metals. Coimolache started operating in late 2011, and as of 2020 December a total of 102 milion tonnes of ore has been delivered to the leaching operation. See simplified Block Flow Diagram in Figure 14-1.

The open pit mining operation uses haultrucks to deliver ROM ore to two leaching pads, namely Tantahuatay and Cienaga distant approximately one kilometer from each other. The Tantahuatay leach pad receives ore from multiple open pits including: Tantahuatay 2, Tantahuatay 2 North-West Extension, Tantahuatay 5, Mirador Sur, Mirador Norte. The Cienaga leach pad receives ore mainly from Cienaga Norte open pit.

Once haultrucks dump their ore load in the leach cell a backhoe adds powder calcium oxide (or CaO), then a bulldozer starts spreading the material in 8-meter high lifts. The surface area of a leaching cell varies with a number of factors, but typically ranges between 2,500 m² up to 5,000 m².

In the Tantahuatay leach pad, the percolating solution collected at the bottom of the pad is segregated based on its gold concentration. High gold grade solution, also referred to as PLS is routed directly to a Merrill-Crowe stage, meanwhile low gold grade solution also referred to as ILS is routed to a multistage activated carbon adsorption-desorption columns plant. The desorbed solution from the carbon stage feeds the Merrill-Crowe plant.

In the Cienaga leach pad, the percolating solution is processed in a dedicated multi-stage carbon-adsorption columns plant. The barren solution effluent from the carbon columns is recirculated to the leach pad to continue with irrigation after adjusting its cyanide concentration. The precious metals loaded carbon is transferred to Tantahuatay's carbon desorption stage approximately once a week and then returned to Cienaga.

The Merrill-Crowe plant precipitates the precious metals from the high precious metals solutions to produced a zinc powder precipate. The barren solution from the Merrill-Crowe is recirculated back to the leaching operation. The zinc precipitate bearing the precious metals is smelted to produce a dore bar grading a minimum of 90% precious metals that becomes the final product from Coimolache. Dore bars are trucked off site under a contract with a third-party secure precious metals logistic company.

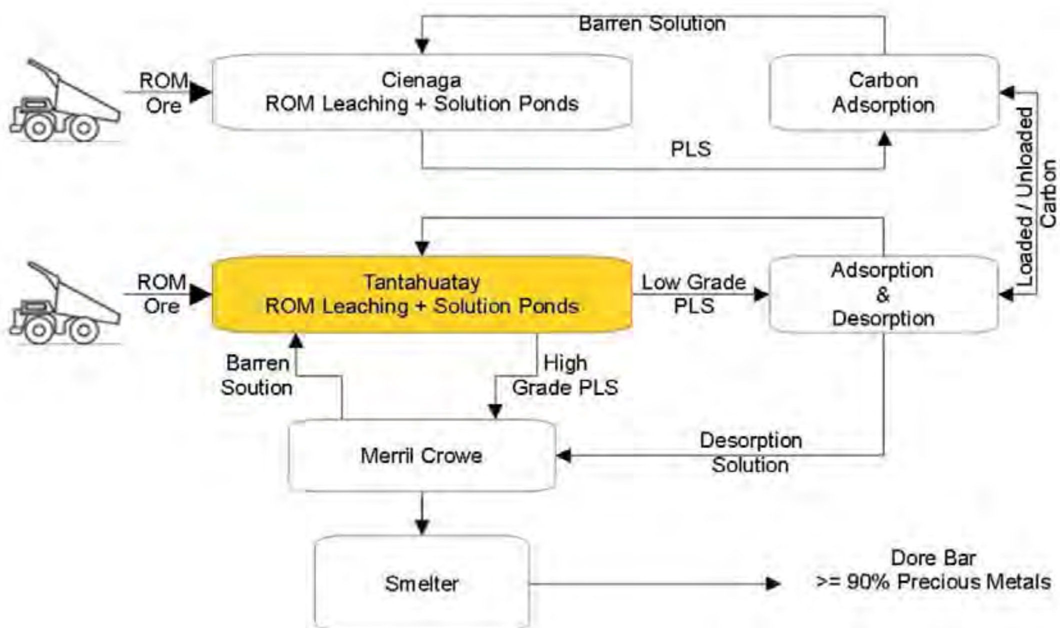


Figure 14-1: Coimolache, Simplified Block Flow Diagram

Source: BVN.

14.1 Ore Feed

Coimolache's overall performance for the period 2018 to 2020 is presented on Table 14-1 and Figure 14-2. Annual ore feed ranged from 11.5 million to 14.2 million during 2018 to 2020. Gold's head grade ranged from 0.43 grams per tonne to 0.58 grams per tonne with a clear downward trend. An opposite trend is observed for silver; in 2018 silver's head grade was 7.45 grams per tonne and increase up to 14.97 grams per tonne in 2020.

SRK visited Coimolache site just before publishing this report and observed that not all the ore placed on the leach pad has been leached. More specifically, it seems that since beginning of the operation all the interlift' slopes has been left unleached. The following analysis is performed without correcting any figures, but the Economical Analysis of this report incorporates corrections aiming to preliminary quantify its overall economic impact.

An analysis of the relationship between head grade of gold and that of silver shown in Figure 14-3 suggest that both metals are closely related with each other. Their correlation coefficient for the accumulated grade during the 2018 to 2020 period reach R^2=0.96 which is much higher than for the 2017 to 2020 period at R^2=0.52, but in any case, both suggest a strong correlation between precious metals' head grade. Note that during the 2018 to 2020 period, approximately a 0.05 g/tonne increase in gold grade translate in approximately 3.5 g/tonne decrease in silver grade, in other terms Ag:Au=70.

Unfortunately, the ore's head grade data available to SRK did not include base metals; this would have provided better support to understand the leaching kinetics and consumption of key cost driver reagents such cyanide and lime, which are critical to maximize metal extraction kinetics, safety, and ultimately the profitability of the business.

At this time, it is SRK's understanding that Coimolache applies a threshold of 500 ppm Cu; any material above such threshold is automatically classified as waste disregarding its precious metals content. It is SRK's experience that such thresholds are the result of multiple technical and economical parameters, and as such, they need to be constantly evaluated and adjusted to the varying compositions of the mined material, the company's current operating cost, and market prices. Failing to regularly perform this evaluation unnecessarily risks losing company's value.

Table 14-1: Coimolache's Overall Performance 2017 to 2020 Period

	2018	2019	2020	Total
Ore, tonnes	13,220,669	14,245,680	11,484,947	38,951,296
Ore Au g/t	0.58	0.53	0.43	0.52
Ore Ag g/t	7.45	10.92	14.97	10.94%
Recovery Au	69.90%	67.30%	66.20%	67.90%
Recovery Ag	25.0%	15.1%	12.7%	17.7%
Production Au g	5,386,865	5,044,849	3,297,528	13,729.24
Production Ag g	24,608,497	23,461,546	21,752,926	69,822.70
Consumption CN Kg	2,993,600	4,436,400	3,966,960	11,396,960

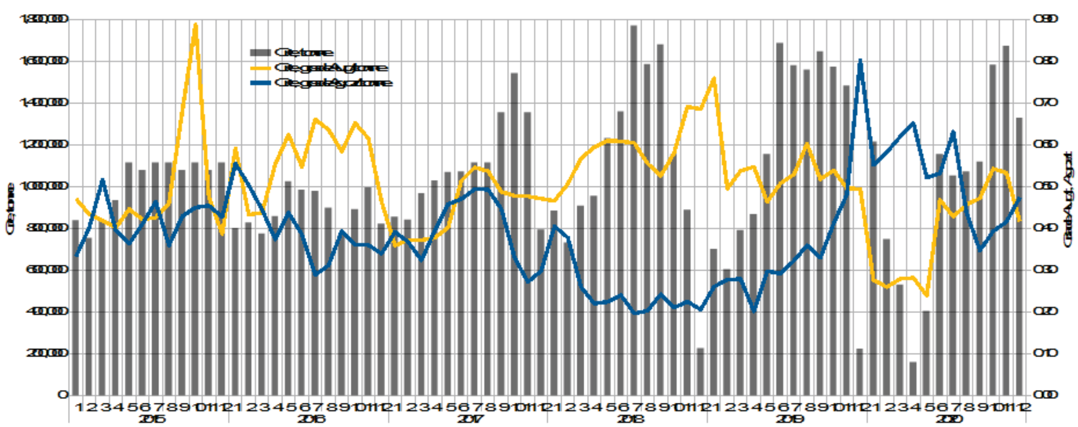


Figure 14-2: Coimolache, Ore Throughput and Head Grade for 2015 to 2020 Period

Source: BVN

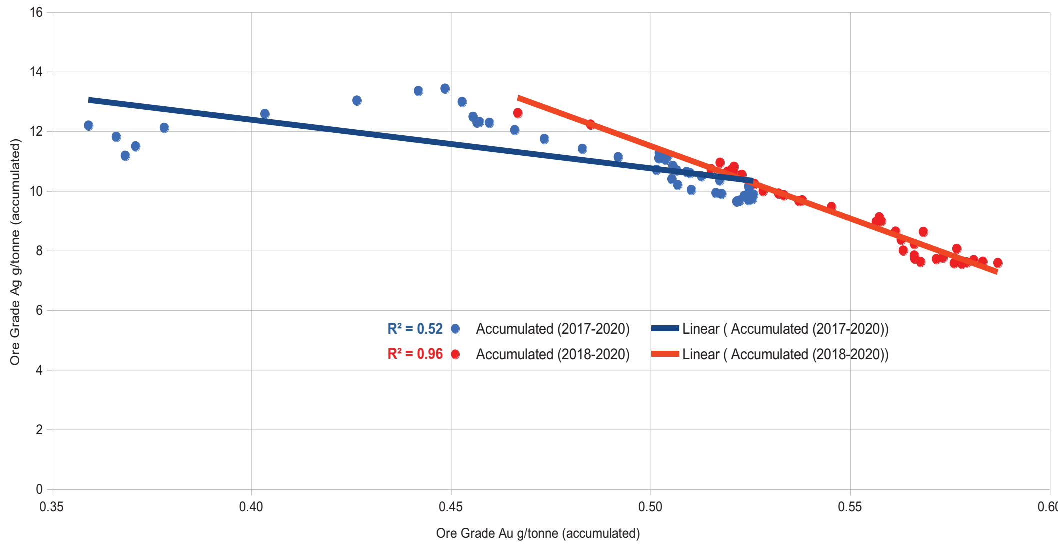


Figure 14-3: Coimolache, Gold and Silver Head Grade Relationship

Source: SRK

A more detailed analysis of the Tantahuatay leach pad and Cienaga leach pad is presented in Figure 14-4 and Table 14-2, note the followings:

- In terms of gold grade, feed to Cienaga leach pad shows head grades higher than those loaded onto Tantanuatay leach pad. Cienaga ore varied from 0.41 grams per tonne to 1.21 grams per tonne, meanwhile Tantahuatay pad's gold grade varied from app oximately 0.44 g/tonne to 0.56 g/tonne.
- Silver grade show the opposite relationship to that shown for gold, this is, Tantahuatay grades are consistently higher than those of Cienaga. Cienaga ranged from 0.84 g/tonne Ag up to 6.216 g/tonne Ag, meanwhile Tantahuatay's silver grade varied from 8.06 g/tonne up to 16.11 g/tonne.
- Gold and silver show an inverse relationship with each other, that is, the higher the gold grade the lower the silver grade. The relationships is stronger for Tantahuatay than for Cienaga. The correlation coefficients for both curves are R^2=0.57 for Tantahuatay, and R^2=0.50 for Cienaga leach pad.

Table 14-2: Coimolache, Tantahuatay and Cienaga Leach Pads

Leach Pad	Parameter	2018	2019	2020	Total
Tantahuatay	Ore, tonnes	12,070,732	13,201,391	10,164,299	35,436,422
	Ore Au g/t	0.56	0.47	0.44	0.49
	Ore Ag g/t	8.06	11.72	16.11	11.73
	Recovery Au	78.00%	67.80%	67.70%	71.20%
	Recovery Ag	25.10%	14.30%	12.80%	17.60%
	Production Au g	5,261,147	4,231,647	3,005,540	12,498,334
	Production Ag g	24,465,737	22,175,262	21,007,436	67,648,435
Cienaga	Ore, tonnes	1,149,937	1,044,289	1,320,647	3,514,874

	Ore Au g/t	0.83	1.21	0.41	0.79
	Ore Ag g/t	1	0.84	6.21	2.91
	Recovery Au	13.10 %	64.50%	54.30%	43.80%
	Recovery Ag	12.40%	146.20%	9.10%	50.90%
	Production Au g	125717	813203	291989	1230909
	Production Ag g	142759	1286285	745490	2174534
Global	Ore, tonnes	13,220,669.36	14,245,679.79	11,484,946.50	38,951,295.65
	Ore Au g/t	0.58	0.53	0.43	0.52
	Ore Ag g/t	7.45	10.92	14.97	10.94
	Recovery Au	0.7	0.67	0.66	0.68
	Recovery Ag	0.25	0.15	0.13	0.18
	Production Au g	5,386,864.81	5,044,849.41	3,297,528.28	13,729,242.51
	Production Ag g	24,608,496.62	23,461,546.37	21,752,925.66	69,822,968.66
	Consumption CN kg	2,993,600.00	4,436,400.00	3,966,960.00	11,396,960.00
	Consumption CN kg/t	0.23	0.31	0.35	0.29

Source: BVN

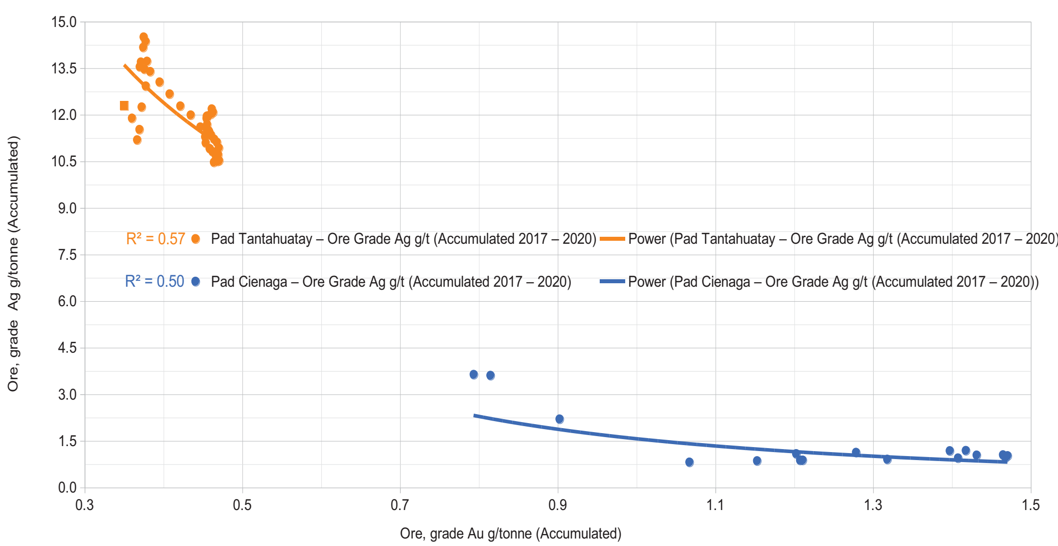


Figure 14-4: Coimolache, Gold and Silver Head Grade Relationship

Source: BVN

14.2 Leach Pad Performance

Permanent leach pad behave as inertial systems, that is, it takes a relatively long time to observed a changes in its performance when one or more input variables are changed. Time is a function of its design, climate, and operating conditions. Consequently, in order to understand its metallurgical performance it is necessary to look at the long term operation, see Table 14-3.

The combined operation, that is, Tantahuatay and Cienaga, have accumulated 105,505,665 tonnes of ore. The head grade is 0.54 grams per tonne of gold and 12.58 grams per tonnes of silver. The total gold production is 1,362,194 ounces equivalent to 73.8% gold recovery. The total silver production is 7,255,114 ounces equivalent to 17.6% silver recovery.

Table 14-3: Coimolache, Long Term Performance, Annual Basis

Leach Pad	Parameter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Tantahuatay	Ore, tonnes	3,595,703	9,871,775	7,470,840	9,367,260	11,994,111	8,896,277	11,936,420	12,070,732	13,201,391	10,164,299	98,568,809
	Ore Au g/t	0.59	0.58	0.73	0.58	0.43	0.40	0.37	0.56	0.47	0.44	0.50
	Ore Ag g/t	21.53	16.41	14.42	10.97	13.49	13.65	13.55	8.06	11.72	16.11	13.30
	Recovery Au	68.0 %	76.7 %	81.5 %	82.5 %	87.7 %	131.8 %	106.7 %	78.0 %	67.8 %	67.7 %	85.285 %
	Recovery Ag	10.4 %	17.7 %	19.8 %	22.8 %	16.9 %	18.2 %	15.4 %	25.1 %	14.3 %	12.8 %	17.7 %
	Production Au g	1,435,872	4,393,939	4,437,184	4,467,801	4,503,232	4,690,909	4,710,758	5,261,147	4,231,647	3,005,540	41,138,029
	Production Ag g	8,089,186	28,594,778	21,285,974	23,463,133	27,365,851	22,125,064	24,912,105	24,465,737	22,175,262	21,007,436	223,484,527
Cienaga	Ore, tonnes					533,224	1,474,793	1,413,966	1,149,937	1,044,289	1,320,647	6,936,856
	Ore Au g/t					2.40	1.47	1.18	0.83	1.21	0.41	1.14
	Ore Ag g/t					2.17	2.08	1.89	1.00	0.84	6.21	2.47
	Recovery Au					0.0 %	0.0 %	0.0 %	13.1 %	64.5 %	54.3 %	22.2 %
	Recovery Ag					0.0 %	0.0 %	0.0 %	12.4 %	146.2 %	9.1 %	25.8 %
	Production Au g					0	0	0	125,717	813,203	291,989	1,230,909
	Production Ag g					0	0	0	142,759	1,286,285	745,490	2,174,534
Global	Consumption CN kg	0	0	0	0	0	0	1,917,300	2,993,600	4,436,400	3,966,960	13,314,260
	Ore, tonnes	3,595,703	9,871,775	7,470,840	9,367,260	12,527,335	10,371,070	13,350,386	13,220,669	14,245,680	11,484,947	105,505,665
	Ore Au g/t	0.59	0.58	0.73	0.58	0.51	0.55	0.46	0.58	0.53	0.43	0.54
	Ore Ag g/t	21.53	16.41	14.42	10.97	13.01	12.00	12.31	7.45	10.92	14.97	12.58
	Recovery Au	68.0 %	76.7 %	81.5 %	82.5 %	70.2 %	81.9 %	77.4 %	69.9 %	67.3 %	66.2 %	73.8 %
	Recovery Ag	10.4 %	17.7 %	19.8 %	22.8 %	16.8 %	17.8 %	15.2 %	25.0 %	15.1 %	12.7 %	17.6 %
	Production Au g	1,435,872	4,393,939	4,437,184	4,467,801	4,503,232	4,690,909	4,710,758	5,386,865	5,044,849	3,297,528	42,368,938
	Production Ag g	8,089,186	28,594,778	21,285,974	23,463,133	27,365,851	22,125,064	24,912,105	24,608,497	23,461,546	21,752,926	225,659,060

Source: BVN

Tantahuatay leach pad initiated operations in 2011. As of 2020 the ore loaded on Tantahuatay totaled 98,568,809 tonnes with a weighted average grade of 0.50 grams per tonne gold and 13.30 grams per tonnes silver. The total precious metals produced from Tantahuatay are 1,322,619 ouces of gold equivalent to 85.3% recovery, and 7,185,201 ounces of silver equivalent to 17.7% silver recovery.

Cienaga leach pad initiated operations in 2015. As of 2020 the ore loaded on Cienaga totaled 6,936,856 tonnes with a weighted average grade of 1.14 grams per tonne gold and 2.47 grams per tonnes silver. The total precious metals produced from Cienaga are 39,575 ouces of gold equivalent to 22,2% recovery, and 69,913 ounces of silver equivalent to 25.8% silver recovery.

The Tantanuatay leach pad show a high correlations between the key reagents consumption and the ore tonnage loaded on the heap leaching operation, see Figure 14-5.

- Accumulated cyanide consumption presents a linear correlation coefficient of R^2=0.969 with accumulated ore loaded on the leach pad
- Accumulated lime consumption presents a linear correlation coefficient of R^2=0.999 with accumulated ore loaded on the leach pad

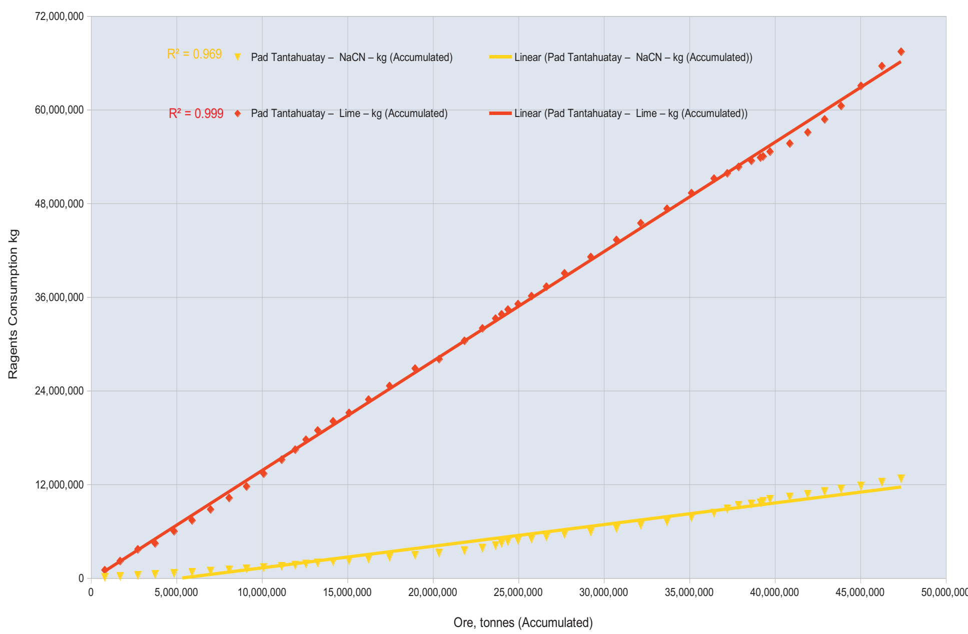


Figure 14-5: Coimolache, Tantahuatay's Reagents Consumption Relationships

Source: BVN

The Cienaga leach pad also show a high correlations between the key reagents consumption and the ore tonnage loaded on the heap leaching operation, see Figure 14-6.

- Accumulated cyanide consumption presents a linear correlation coefficient of R^2=0.935 with accumulated ore loaded on the leach pad

- Accumulated lime consumption presents a linear correlation coefficient of R^2=0.611 with accumulated ore loaded on the leach pad

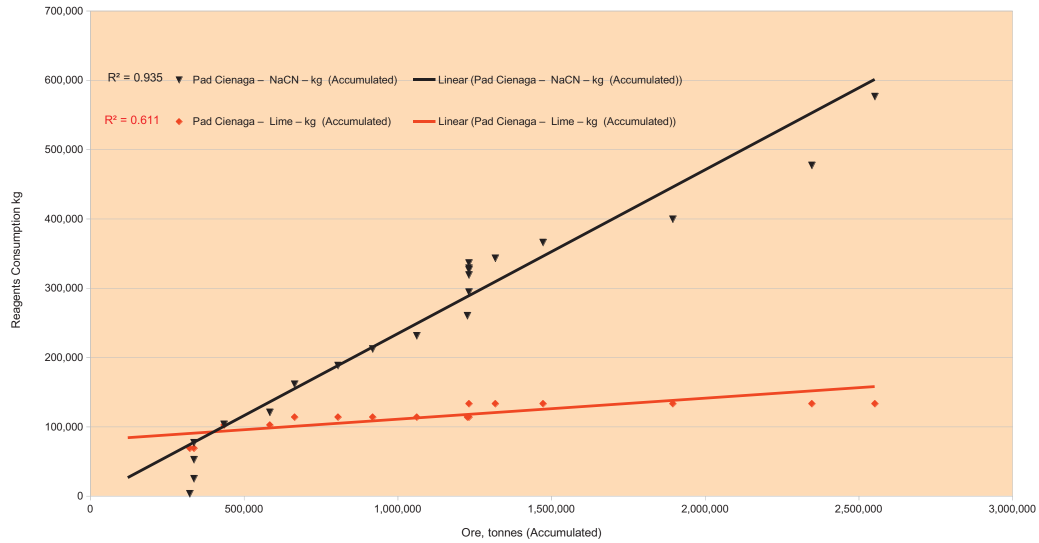


Figure 14-6: Coimolache, Cienaga Reagents Consumption Relationships

Source: BVN

14.3 Conclusions & Recommendations

Coimolache operates a conventional leaching operation. Two parallel operating leach pads are loaded with run-off mine ore from the Tantahuatay and Cienaga deposits. The solution management and recovery plant uses a serie of solution ponds and a combination of activated carbon and merrill-crowe to recover the precious metals that are then smelted into a dore bar.

During SRK's visit to Coimolache site it was observed that both Tantahuatay and Cienaga leach pad's interlift slopes were not leached. At the time this report was developed, the quantification of tonnage and grade, and therefore the total potentially recoverable ounces, were not available. SRK is the opinion that a good practice that has a major impact on the economics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad. Maintaining an ore inventory, like the unleached ore stored in the interlift's slopes, has, at a very minimum, the following negative impacts on the company's economics:

- Incurring in unnecessary operating expenses, meaning mining cost, hauling cost, loading cost
- Biasing the gold recovery estimates, and consequently all key performance indicators of the company.
- Depriving the company of revenue because gold bearing ore was left untouched
- Biasing the mine planning, likely towards using a higher cutt-off grade and therefore wrongly diverting valuable ore to the waste rock dump.
- Lowering company's ore Reserves and Resources because lower than real metal recovery observed in the leaching operation must be used to support forecasting of future production.

The Tantahuatay leach pad receives the large majority of the ore mined at Coimolache or approximately higher than 90%. During the last three years the annual ore loaded ranged from 10 million to 13.2 million. Long term metal recovery in the Tantahuatay circuit reached 85% for gold and 18% for silver.

The Cienaga leach pad receives a minor portion of the total ore mined at Coimolache or approximately less than 10%. During the last three years the annual ore loaded ranged from 1 million to 1.3 million. Long term metal recovery in the Cienaga circuit reached 22% for gold and 26% for silver.

Coimolache's key cost driver in the processing area are Cyanide and Lime, both show a very strong linear correlation with the ore tonnage loaded on the leach pads. In Tantahuatay the historical consumption rates are 0.277 kilograms of cyanide per tonne of ore, and 1.4 kilograms of lime per tonne of ore. In Cienaga the historical consumption rates are 0.236 kilograms of cyanide per tonne of ore, and 0.03 kilograms of lime per tonne of ore.

SRK is of the understanding that Coimolache applies a threshold of 500 ppm Cu to classify mined material; any material above such threshold is automatically defined as waste and as such, disregards any potential precious metal grade. It is SRK's experience that such thresholds are the result of multiple technical and economical parameters, and as such, they need to be constantly evaluated and adjusted to the varying compositions of mined material; the company's current operating cost; and market prices. Failing to regularly performed this evaluation puts the company's value at risk unnecessarily.

The ore's head grade data available to SRK does not include base metals; this would have provided better support to understand the leaching kinetics and consumption of key cost driver reagents such cyanide and lime, which are critical to maximize metal extraction kinetics, safety, and ultimately the profitability of the business.

15 Infrastructure

15.1 Waste Rock Management Facility

15.1.1 Cienaga Norte DME

The engineering design of Cienaga Norte DME was developed in 2017 and updated in 2018 by the company Ausenco, considering an extension of 44.3 ha for a storage volume of 6.7 Mm³ or 11.1 Mt, with a density of 1.65 t/m³. (See Figure 15-1)

The waste rock management facility design contemplates 8 m high benches with 36° slopes, and a berm width of 7 m. The geometry establishes an overall slope of 24° with a total height of 84 m, reaching the maximum storage level at 3,844 MASL.

The foundation area was made up of a series of materials of low geotechnical competence, for which a practically perimeter cut was projected; materials that despite low competence pose no risk to the facility's physical stability were confined towards the slope. The design proposes to strategically locate the so-called unsuitable materials so that they can be placed on the upper platforms of the facility.

The geotechnical characterization of materials was established based on the "Geotechnical Study of Final Condition of the Waste Rock Management Facility - Final Engineering Report" - Ausenco 2017. Meanwhile, the geotechnical design establishes criteria compatible with international standards, considering a return period of 475 years for the pseudo-static condition.

Although the acid generation quality from the waste rock is not specified, the design contemplates a waterproofing system with the catchment of infiltrated water through subdrainage systems that derive to control ponds.

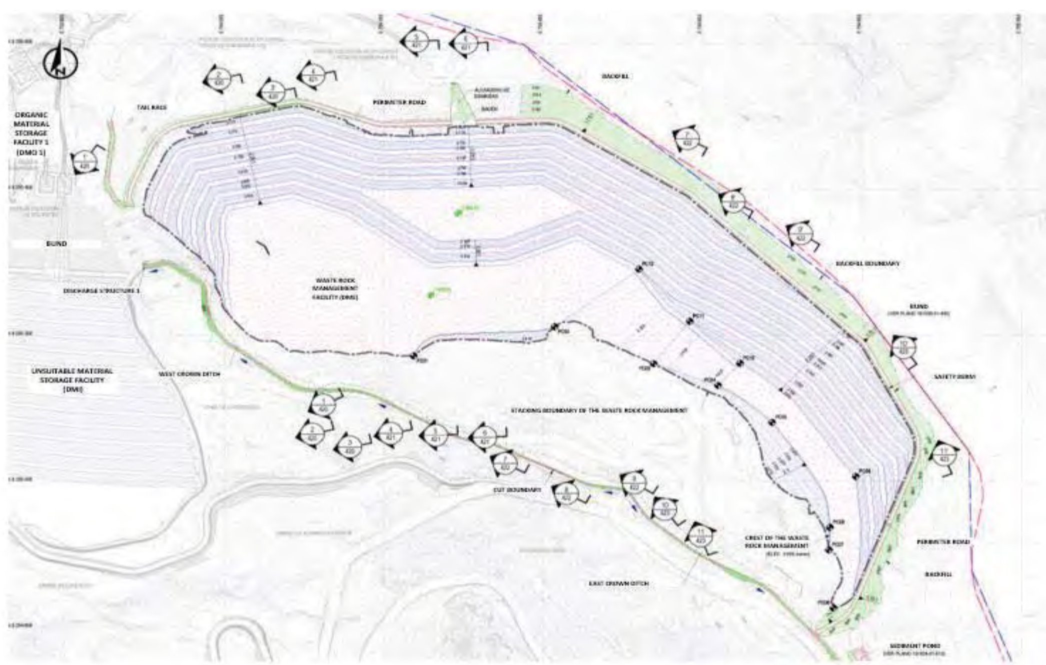


Figure 15-1: Cienaga Norte DME Layout

Source: BVN

15.1.2 Tantahuatay 1 DME

The engineering design of Tantahuatay 1 DME was developed in 2014 by the company Ausenco, considering an extension of 13.9 ha for a storage volume of 2.2 Mm³ or 4.5Mt with an average density of 2 t/m³. (See Figure 15-2)

The waste rock management facility design contemplates 8 m high benches with slopes of 37° and berm widths between 9.6 and 13.6 m. The geometry establishes an overall slope of 18°, reaching the maximum storage level at 3,973 MASL.

The report reviewed for this component corresponds to an evaluation of physical stability of the facility and not fully to the design; therefore, preliminary foundation conditions, auxiliary structures for hydraulic design, geochemical analysis of the environment, or closure conditions could not be verified. However, it is worth mentioning that the design criteria used for physical stability conditions are compatible with international standards and the results are within acceptable ranges.

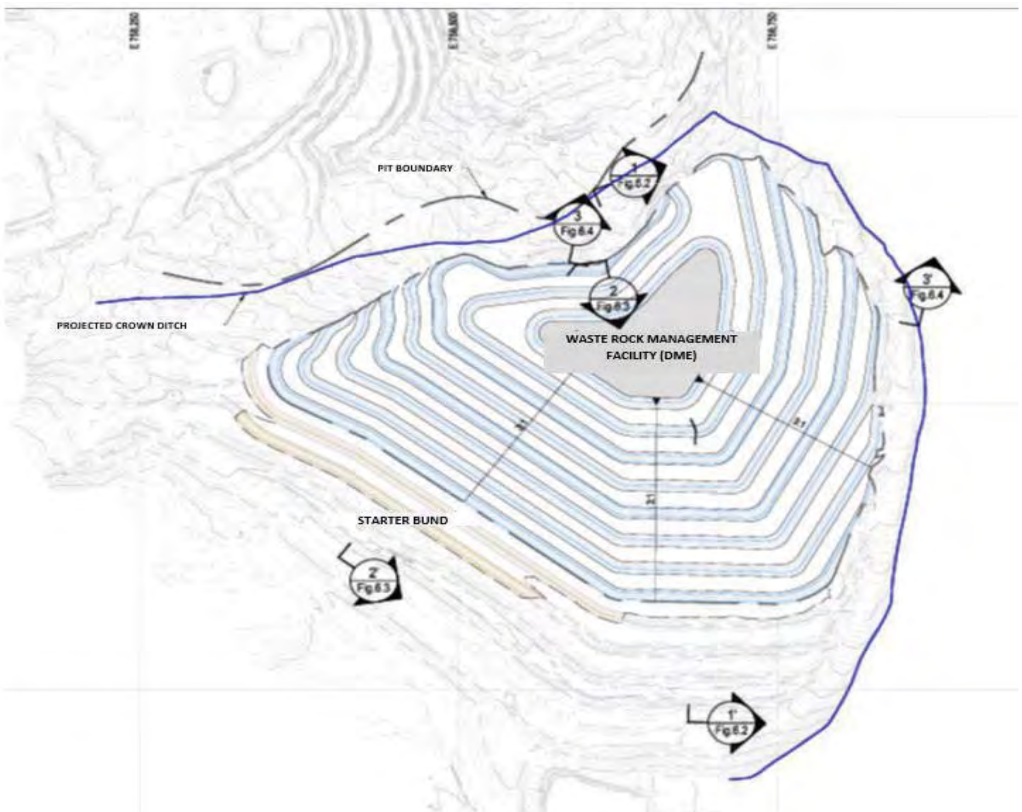


Figure 15-2: Tantahuatay 1 DME Layout

Source: BVN

15.1.3 Tantahuatay 2 DME

In 2015, a Feasibility Level Engineering Study was developed for the Tantahuatay 2 Waste Rock Management Facility, prepared by Ausenco. The facility is located east of Tantahuatay pit, supported on an existing unsuitable material storage facility, for which no technical reference information has been found.

DME 2 would be made up of dump material from Tantahuatay and Cienega Norte pits. The design contemplates an extension of 8.4 Ha for the storage of 1.22 Mm³ or its equivalent in tonnes of 1.95 Mt, for an average density of 1.6 t/m³.

The geometry of the facility would be developed in 8 m high benches with 36° slopes, and 9 m berm widths. Meanwhile, the overall slope would be 21° with a total height of 35 m, reaching an elevation of 3,925 MASL.

Geological and geotechnical investigations were carried out to define the foundation materials and characterize the waste rock during this study. This activity made it possible to identify low-competence foundation materials that were planned for stripping, varying from 0.1 m to 5 m thick until competent geotechnical units were found.

Given that the waste rock material is declared to be a potential generator of acid rock drainage, the design includes a waterproofing system with a layer of HDPE geomembrane, complemented with a subdrainage system for natural waters and an effluent collection system, as well as subdrainage and effluent collection ponds. It should be noted that the study does not include an infiltration calculation model that would validate the implemented systems' capacity.

The geotechnical design considers industry-accepted criteria and calculations meet the minimum requirements; however, the soil-geomembrane interface has not been taken into account for the analysis as eventual block failure planes.

No calculations for the hydraulic structures required to divert surface runoff are developed in the reports.

Figure 15-3: Tantahuatay 2 DME Layout

Source: BVN

15.2 Leach Pads

15.2.1 Mirador Leach Pad

The Mirador Leaching Pad is located at the head of the Tacamache creek, on the Southeast flank of the Cienega Norte hill. During the geotechnical investigation, the detailed geological-geotechnical mapping of the study area was carried out, in order to identify the geological features and geotechnical units present an additionally 77 test pits, 11 boreholes, geophysical tests with a length of approximately 1,320m and 48 LDPT (Light dynamic penetration test) were carried out.

Lithologically, the study area presents, to its greatest extent, a colluvial soil cover of sandy clayey gravel and dense to very dense of variable thickness. Flooded grasslands are made up of silts and clays with the presence of organic material that are located at the bottom of the creek and small depressions, in a very humid to saturated state, with an estimated thickness of up to 9.10 m. The underlying bedrock is made up of porphyritic andesites and tuffs, moderately fractured, partially altered residual soils, with hardness from R0.5 to R3. The removal of the unsuitable material was recommended to a competent foundation level for the Pad. Groundwater levels are reported relatively shallow compared to the foundation levels.

During the geological mapping, a small slip scarp has been recorded in the flooded grassland, which poses no major risk to the projected structure. No evidence of active geological faults has been recorded.

Geotechnical investigations were developed in accordance with established guidelines and good engineering practices for field investigations, along with suitable foundation materials under both static and pseudo static (seismic) loading conditions. For the pseudo-static analysis, a 475-year return period earthquake design was used. Geotechnical properties of foundation materials (soils and rocks) were based on field investigations and laboratory results from several field studies. The projected configuration of the leach pad achieved factors of safety above the required values defined in the design criteria, considering best engineering practices for heap leach facilities. Table 15-1 shows the minimum factors of safety estimated.

Table 15-1: Estimated Factors of Safety for projected configuration of Pad Mirador

Description	Factor of Safety	
	Static (≥ 1.5)	Pseudo Static (≥ 1.0)
Minimum	1.50	1.00
Maximum	2.26	1.41

Source: Ausenco

The leach pad includes the installation of a set of monitoring geotechnical instrumentation that includes topographic benchmarks, piezometers, inclinometers, and strain gauges. The hydrologic analysis estimated peak flows for the design storm events for the development of hydraulic structures (channels, culverts, ponds) related to the water management system for leach pad “Mirador”. Peak flows were calculated for 100-year returned period for operational conditions and 500-year returned period for post-closure conditions.

The design of the hydraulic structures was developed to capture and divert surface runoff during operation of leach pads, in accordance with the general mine water management plan.

The hydraulic structures were designed to catch and divert the runoff water generated by an event of a 100-year and 500-year return period, according to the operation stage and post-closure condition. These structures were designed to fulfill the safety recommendations.

The purpose of water balance is to represent water usage for the leach pad “Mirador” in operation together with ponds (process pond and major events pond) to verify the cyanide destruction plant capacity during the stacking period 2020 – 2021. The water balance considers the site’s climate conditions (in terms of precipitation and evaporation), the stacking plan, hydraulic properties of the ore, humidity retention, pad irrigation, storage, and discharge capacity of the system. It includes the estimation of: the leach pad pond capacities required for extremely wet conditions; freshwater demands for operational continuity; utilization of raincoats to reduce contact water; as well as the capacity required for cyanide destruction plant to treat excess flows from the pad-ponds system. The estimation of the pond's storage capacities considered a range of precipitation and evaporation scenarios. The major event pond requires 100,000 m³ of storage capacity and it would store a portion of the runoff in extreme wet conditions to avoid exceeding the capacity of the treatment plant.

The civil design for the "Mirador" leach pad included underdrain and collection systems, composite liner system (low permeability soil and geomembrane liner), solution collection system and ore stacking plan. The underdrain and collection systems consist of a network of perforated pipes. The underdrain system is placed under the leach pad liner system. The solution collection system is placed on top of the liner system. The ore to be stacked consists of run-of-mine (ROM) mineral, i.e. non-crushed ore.

Tables 15-2 below presents a summary of the Mirador Leach Pad:

Table 15-2: Mirador Leach Pad

Leach Pad Mirador	Maximum stacking height (m)	Area (ha)	Under drain system	Solution Collection System	Overliner thickness (m)	Volumen (Mm³)	PLS and ILS Pond	Status
Pad Mirador	90	22	Yes	Yes	0.65	8.66	Ponds were projected	Projected

Source: Ausenco, 2021

The detailed engineering of the Leach Pad "Mirador" was carried out in accordance with the standards of the mining industry practices and is physically stable.

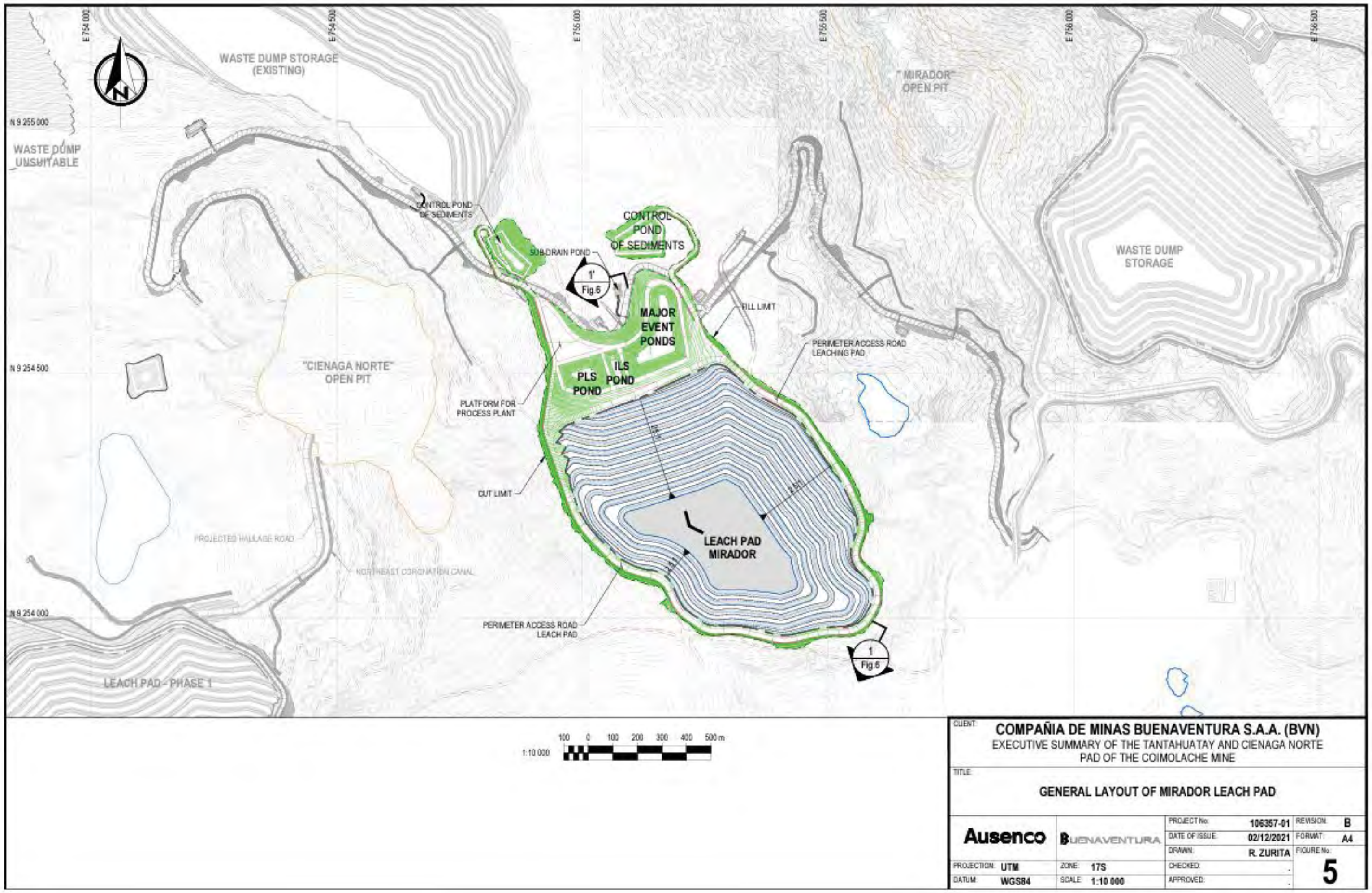


Figure 15-4: General layout for the Mirador Leach Pad

Source: Ausenco

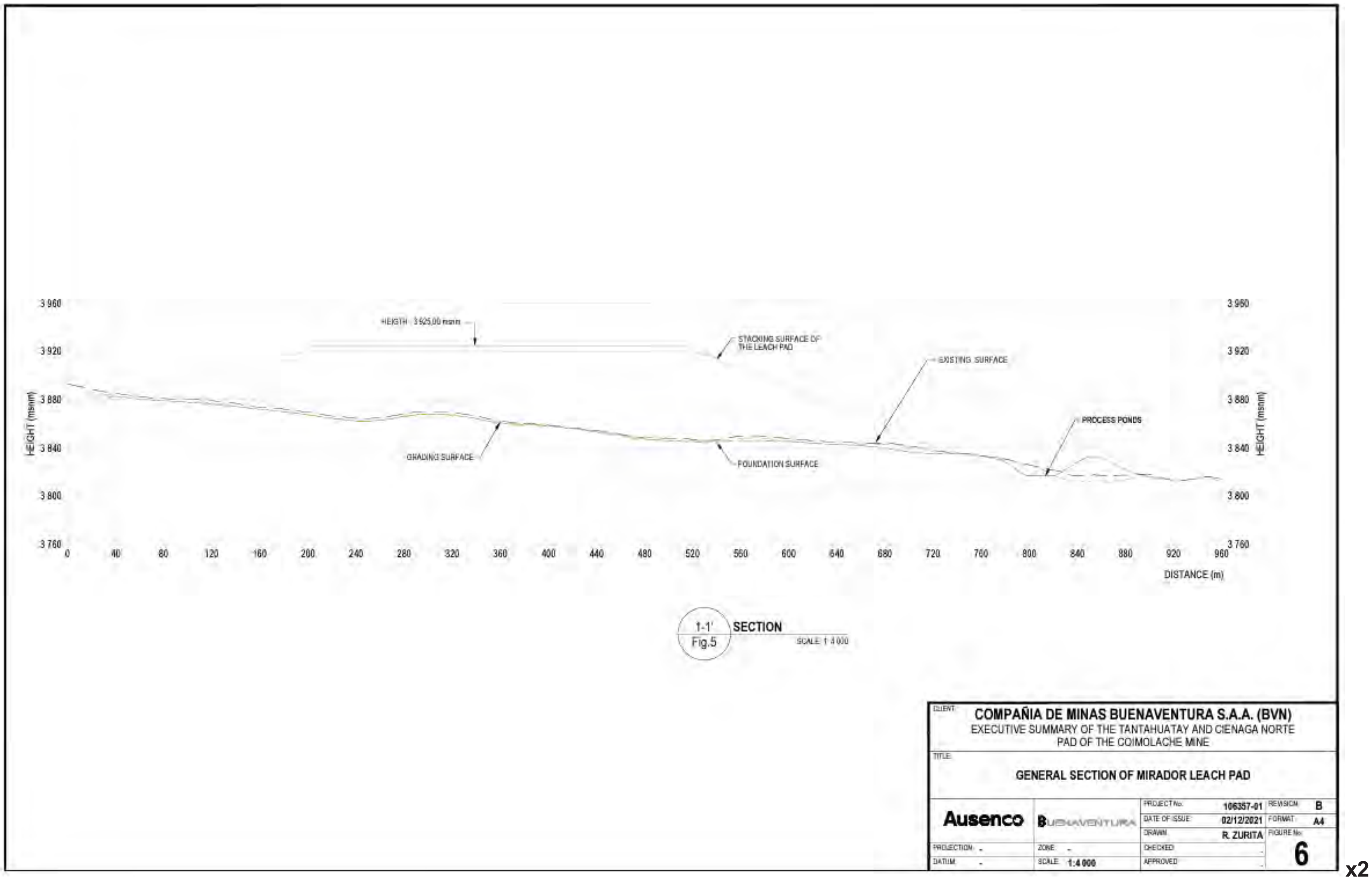


Figure 15-5: General Section of Mirador Leach Pad

Source: Ausenco

15.2.2 Tantahuatay Leach Pad

Geological mapping of the leach pad at “Tantahuatay” areas were carried out to determine the distribution of the foundation materials for the different phases of the leach pad expansions along with external geodynamic processes. The geological characterization was utilized to establish that the sites were stable for the construction and operations of leach pads.

Field investigations were carried out for these pads to characterize the foundation materials for the different phases, foundation grading, and groundwater water levels. The geotechnical investigations were developed in accordance with established guidelines and good engineering practices for field investigations were used to develop the design for these leach pads.

Slope stability analyses were completed to assess the performance (i.e., factor of safety) of the pads under both static and pseudo static (seismic) loading conditions. For the pseudo-static analysis, a 475-year return period earthquake design was used. Geotechnical properties of foundation materials (soils and rocks) were based on field investigations and laboratory results from several field studies. The current and final configuration of the leach pads achieved factors of safety above the required values defined in the design criteria, even when the factors of safety were below the criteria the estimated deformations reach acceptable values considering best engineering practices for heap leach facilities.

Table 15-3 shows the minimum factors of safety estimated.

Table 15-3: Estimated Factor of Safety for current and final configuration of Pad Tantahuatay

Configuration	Description	Factor of Safety		Deformation[2] (cm) (<30)
		Static	Pseudo static	
		(≥ 1.5)	(≥ 1.0)	
Current	Minimum	1.5	0.84	9.8
	Maximum	3.01	1.54	
Final	Minimum	1.5	0.8	14.7
	Maximum	3.01	1.54	

Notes:

1. Minimum and maximum values from representative analysis sections.
2. Related to minimum value of pseudo static analysis.

Source: Ausenco

Each phase of leach pads includes the installation of a set of monitoring geotechnical instrumentation that includes topographic benchmarks, piezometers, inclinometers, and strain gauges. The hydrologic analysis estimated peak flows for the design storm events for the development of hydraulic structures (channels, culverts, ponds) related to the water management system for pad Tantahuatay. Peak flows were calculated for 100-year returned period for operational conditions and 500-year returned period for post-closure conditions. The design of the hydraulic structures was developed to capture and divert surface runoff during operation of leach pads in accordance with the general mine water management plan.

The hydraulic structures were designed to catch and divert the runoff water generated by an event of a 100-year return period, according to the operation stage. These structures were designed to fulfill safety recommendations.

Water balance for pad Tantahuatay considered the site climate conditions (in terms of precipitation and evaporation), the stacking plan, hydraulic properties of the ore, humidity retention, pad irrigation, storage, and discharge capacity of the system. It included development of required leach pad ponds capacities for extreme wet conditions, freshwater demands for operational continuity, utilization of raincoats to reduce contact water, as well as required capacity of the cyanide destruction plant for treatment of excess flows from the pad-ponds system. The estimation of the pond's storage capacities considered a range of precipitation and evaporation scenarios. Major event ponds "Hueco 1" and "Hueco 2" require 100,000 and 175,000 m^3 of storage capacity, respectively. The ponds would store a portion of the runoff in extreme wet conditions to avoid exceeding the capacity of the treatment plant.

The civil design for both leach pads included underdrains and a collection system, a composite liner system (low permeability soil and geomembrane liner), a solution collection system and ore stacking plan. The underdrain and collection systems consist of a network of perforated pipes. The underdrain system is placed under the leach pad liner system. The solution collection system is placed on top of the liner system. The ore to be stacked consists of run-of-mine (ROM) mineral, i.e. non-crushed ore.

Table 15-4 below present a summary of the main phases for the Tantahuatay Leach Pad:

Table 15-4: Phases of the Tantahuatay (THY) Leach Pad

Leach pad Tantahuatay	Maximum Stacking height (m)	Area (ha)	Underdrain system	Solution collections system	Overliner thickness (m)	Volume (Mm³)	Process pond	Status
Pad phase 1	112	27.9	Yes	Yes	0.50	7.56	Ponds were projected	Built
Pad phase 2	112	-	Yes	Yes	0.50	7.95	Existing	Built
Pad phase 2A	92	6.6	Yes	Yes	0.50	3.37	Existing	Built
Expansion Phase 2 Stage 1	45	5.2	Yes	Yes	0.50	2.31	Existing	Built
Expansion Phase 2 Stage 2	50	7.9	Yes	Yes	0.50	2.55	Existing	Built
Expansion Phase 1 Stage 1	56	5.3	Yes	Yes	0.50	3.29	Existing	Built
Expansion Phase 1 Stage 2	65	7.7	Yes	Yes	0.50	4.61	Existing	Built
Expansion Phase 1 Stage 3	55	2	Yes	Yes	0.50	2.0	Existing	Built
Pad Phase 3	83	28.2	Yes	Yes	0.50	5.7	Ponds were projected	Built
Pad Phase 3A	100	24	Yes	Yes	0.50	12.8	Existing	Built
Pad Phase 3B	50	1.6	Yes	Yes	0.50	2.6	Existing	Built
Expansion Pad Phase 3 Stage 1	70	8.87	Yes	Yes	0.65	5.45	Existing	Built
Expansion Pad Phase 3 Stage 2	80	3.98	Yes	Yes	0.70	4.12	Existing	Built
Pad Phase 4	80	11.7	Yes	Yes	0.65	8	Existing	Projected
Pad phase 5 Stage 1	100	9	Yes	Yes	0.65	5.17	Existing	Projected
Pad phase 5 Stage 2	100	11.3	Yes	Yes	0.65	4.11	Existing	Projected
Pad phase 6	70	10.5	Yes	Yes	0.65	2.85	Existing	Projected
Pad phase 7	120	17.5	Yes	Yes	0.65	12.7	Ponds were projected	Projected
Expansion del pad - phase 1	16	-	Above Existing	Above Existing	Above Existing	2.32	Existing	Projected
Total volume of the projected phases		-	-	-	-	35.2	-	-
Total volume of the built phases		-	-	-	-	64.7	-	-

Source: Ausenco, 2021

Finally, the CQA team verified that all construction activities for each phase and stage described in **Table 15-4** for the "Tantahuatay" Leach Pad were executed in accordance with the engineering design, engineering drawings, technical specifications and construction quality assurance manuals for each phase of each project.

The detailed engineering of the Leach Pad "Tantahuatay" was carried out in accordance with the standards of the mining industry practices and is physically stable

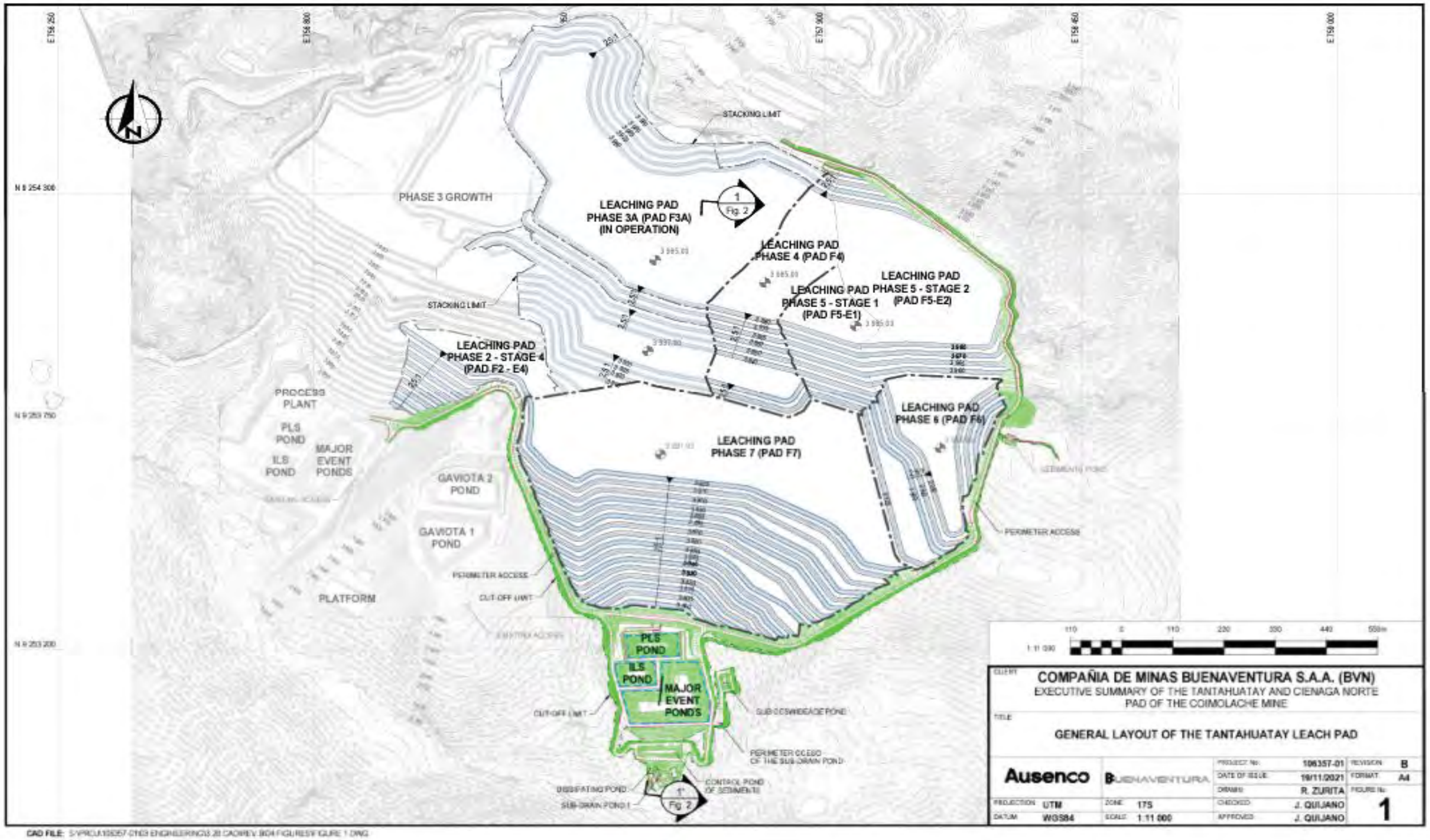


Figure 15-6: General layout for the Tantahuatay Leach Pad

Source: Ausenco

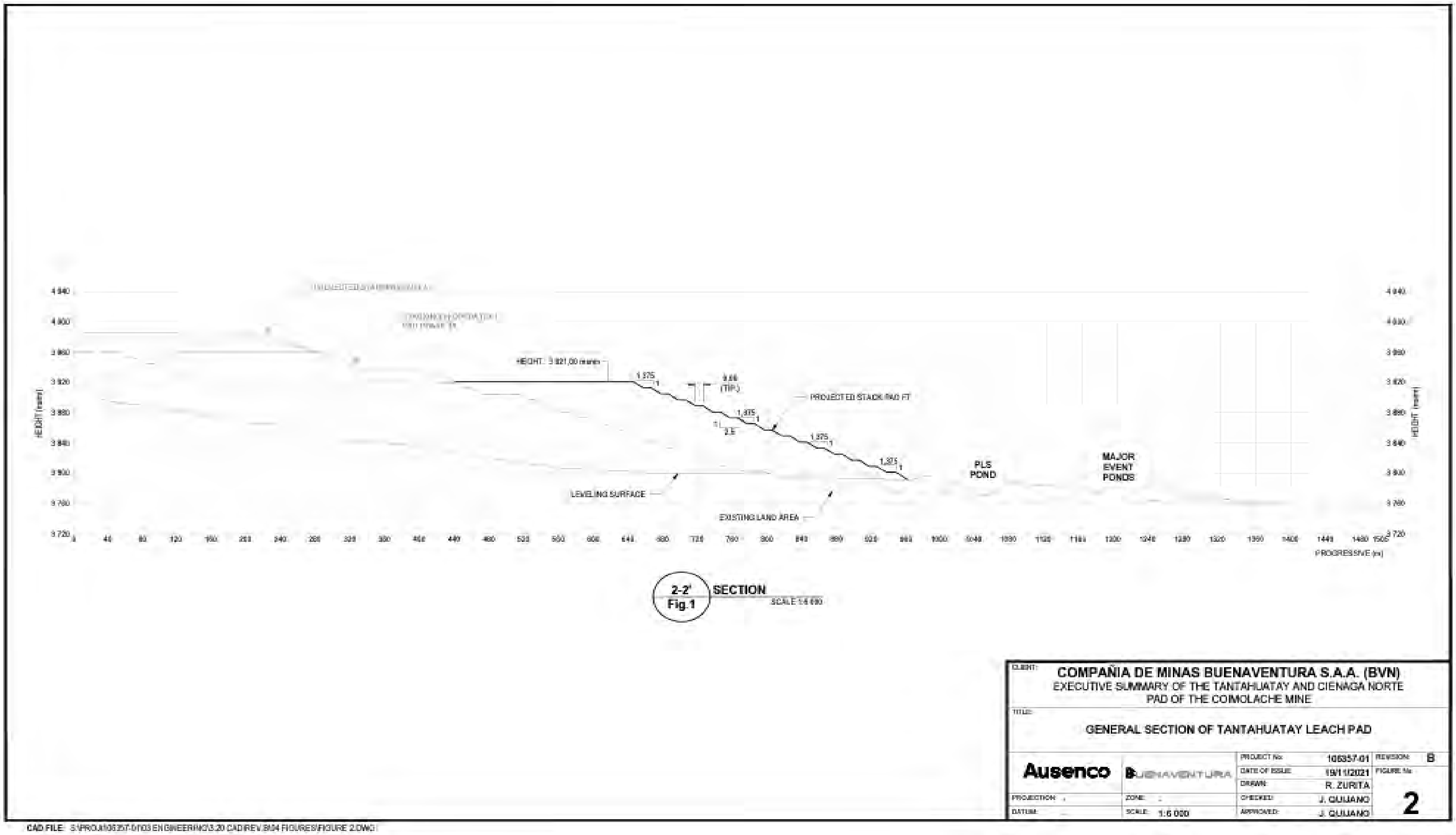


Figure 15-7: General Section of Tantahuatay Leach Pad

Source: Ausenco

15.2.3 Cienaga Norte Leach Pad

Geological mapping of the leach pad at “Cienaga Norte” areas were carried out to determine the distribution of the foundation materials for the different phases of the leach pads expansions and external geodynamic processes. The geological characterization was utilized to establish that the sites were stable for the construction and operations of leach pads.

Field investigations were carried out for these pads to characterize the foundation materials for the different phases, foundation grading, and groundwater water levels. Geotechnical investigations were developed in accordance with established guidelines and good engineering practices for field investigations to develop the design of these leach pads.

Slope stability analyses were completed to assess the performance (i.e., factor of safety) of the pads under both static and pseudo static (seismic) loading conditions. For the pseudo-static analysis, a 475-year return period earthquake design was used. Geotechnical properties of foundation materials (soils and rocks) were based on field investigations and laboratory results from several field studies. The current and final configuration of the leach pads achieved factors of safety above the required values defined in the design criteria; even when the factors of safety were below the criteria the estimated deformations reach acceptable values considering best engineering practices for heap leach facilities.

Table 15-5: Estimated Factor of Safety for current and final configuration of Pad Cienaga Norte

Configuration	Description	Factory of Safety		Deformation [2] (cm)
		Static (>1.5)	Pseudo Static (>1.0)	(<30)
Current	Minimal	1.55	1.02	
	Maximal	2.86	1.66	
Final	Minimal	1.52	0.81	27.8
	Maximal	2.28	1.39	

Source: Ausenco

Notes:
1. Minimum and maximum values from representative analysis sections.
2. Related to minimum value of pseudo static analysis.

Each phase of leach pads includes the installation of a set of monitoring geotechnical instrumentation that includes topographic benchmarks, piezometers, inclinometers, and strain gauges.

The hydrologic analysis estimated peak flows for the design storm events for the development of hydraulic structures (channels, culverts, ponds) related to the water management system for leach pad “Cienaga Norte”. Peak flows were calculated for 100-year returned period for operational conditions.

The design of the hydraulic structures was developed to capture and divert surface runoff during operation of leach pads, in accordance with the general mine water management plan.

The hydraulic structures were designed to catch and divert the runoff water generated by an event of a 100-year return period, according to the operation stage. These structures were designed to fulfill safety recommendations.

The purpose of the water balance is to represent the operation of the leach pad “Cienaga Norte” together with ponds (PLS and major event pond) to verify the capacity of the cyanide destruction plant during the stacking period. The water balance considered the site’s climate conditions (in terms of precipitation and evaporation), the stacking plan, hydraulic properties of the ore, humidity retention, pad irrigation, storage, and discharge capacity of the system. It included development of estimated leach pad pond capacities for extreme wet conditions; freshwater demands for operational continuity; utilization of raincoats to reduce contact water; as well as the capacity required by the cyanide destruction plant for treat excess flows from the pad-ponds system. The estimation of the pond’s storage capacity considered a range of precipitation and evaporation scenarios. Major event pond 1 require 98,402 m^3 of storage capacity. The pond would store a portion of the runoff in extreme wet conditions to avoid exceeding the capacity of the treatment plant.

The civil design for both leach pads included underdrains and collection system, composite liner system (low permeability soil and geomembrane liner), solution collection system and ore stacking plan. The underdrain and collection systems consist of a network of perforated pipes. The underdrain system is placed under the leach pad liner system. The solution collection system is placed on top of the liner system. The ore to be stacked consists of run-of-mine (ROM) mineral, i.e. non-crushed ore.

Table 15-6 below present a summary of the main phases for the Cienaga Norte Leach Pad:

Table 15-6: Phases of the Cienaga Norte (CN) Leach Pad

Leach Pad Cienaga Norte	Maximum stacking height (m)	Area (ha)	Underdrain system	Solution Collection System	Overliner thickness (m)	Volume (Mm^3)	PLS and ILS Pond	Status
Pad stage 1	70	19.6	Yes	Yes	0.65	2.82	Pond were projected	Built
Pad stage 2	70	9.1	Yes	Yes	0.65	2.33	Existing	Projected
Expansion pad	70	1.6	Yes	Yes	0.65	0.99	Existing	Projected
Total volume of the projected phases						3.32		
Total volume of the built phases						2.82		

Source: Ausenco, 2021

Finally, the CQA team verified that all construction activities for each phase and stage described in Table 15-6 for the “Cienaga Norte” Leach Pad were executed in accordance with the engineering design, engineering drawings, technical specifications and construction quality assurance manuals for each phase of each project.

It is concluded that the detailed engineering of the Leach Pad “Cienaga Norte” was carried out in accordance with the standards of the mining industry practices and is physically stable.

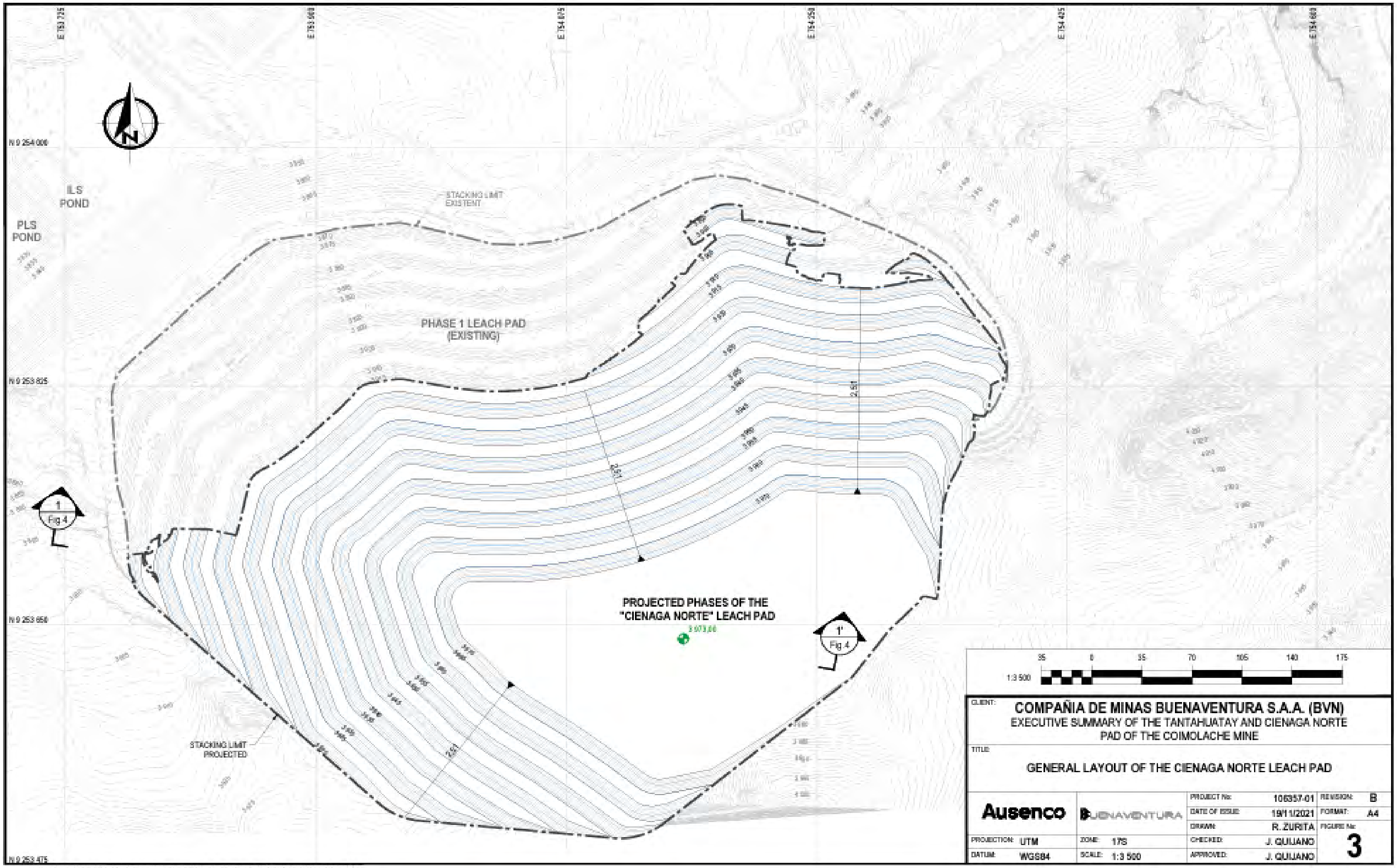


Figure 15-8: General layout for the Cienaga Norte Leach Pad

Source: Ausenco

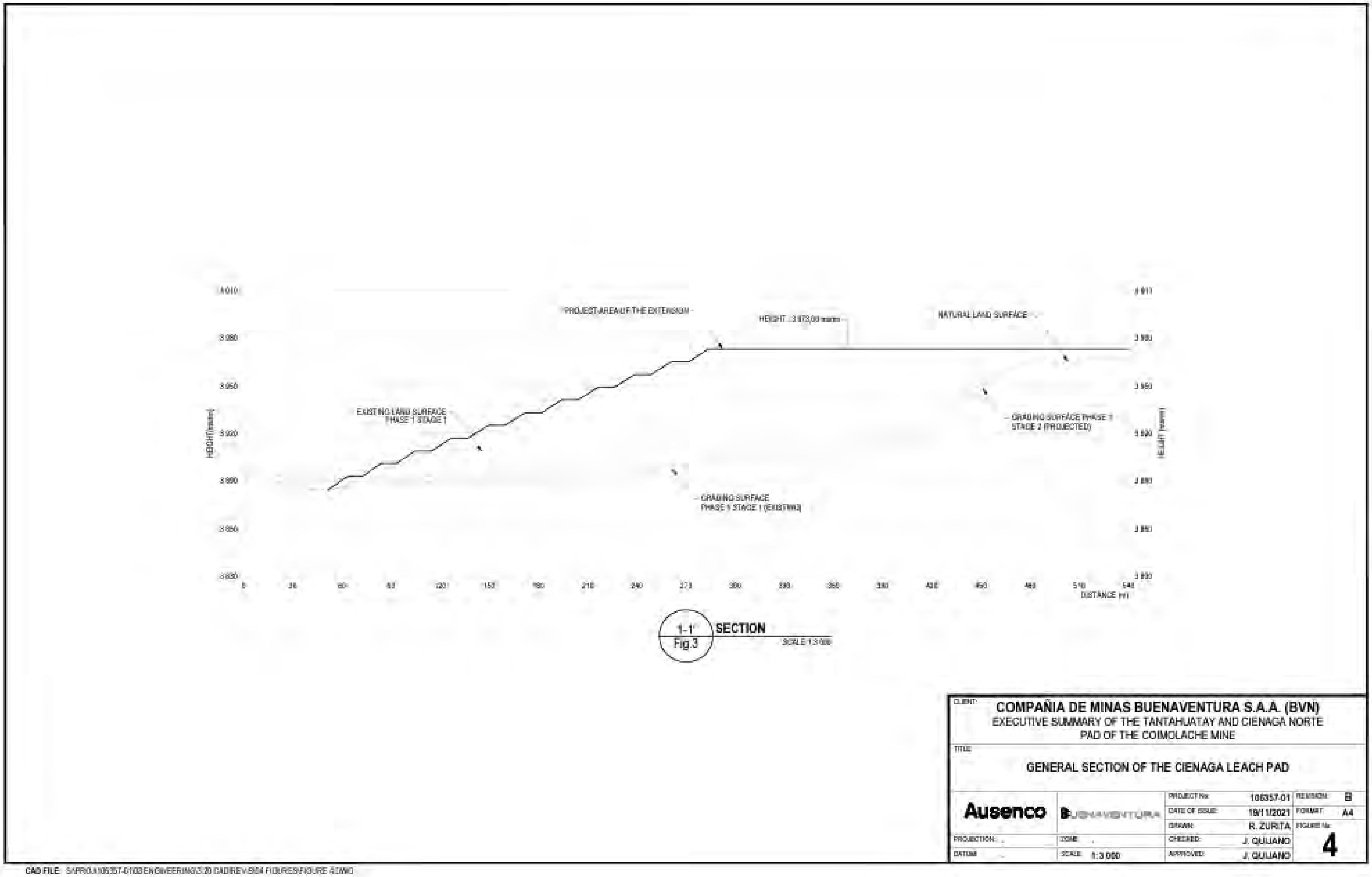


Figure 15-9: General Section of Cienaga Norte Leach Pad

Source: Ausenco

15.3 Haul Roads

Roads are for loading, hauling and dumping within the lixiviation platform. The on-site service roads were designed for two-way traffic with a nominal free width of 19.1 m and a 2% camber for runoff collection. In addition, safety berms of 2.3 m are built on the sides of the road, where there is a 1 m difference in height difference with the downside level.

15.4 Mine Operations Support Facilities

15.4.1 Mine Administration Building

The Mine Administration building is located southeast of the pit with an area of 550 m², including the parking area. The building is divided into two sections: Administration and Mine Operations. The Mine Operations section provides offices for General Superintendence, Mine Operations, Planning & Engineering, Environment, and Safety Staff. Additionally, the building has toilets and parking for 15 light vehicles.

15.4.2 Mine Truck Workshop

The Mirador Norte Truck Workshop building has an area of 3,000 m², and the Cienaga Norte Truck Workshop building has an area of 4,300 m².

These facilities were built with structural steel with roof covers and walls with corrugated zinc plates held by pedestals and slabs of reinforced concrete. The concrete compression resistance is 42280 kg/cm².

There are different areas within the workshops, such as tire station, lubrication station, truck repairs area, welding area, and truck wash facility.

The truck facilities are equipped with a closed washing system and a water/oil separator.

15.4.3 Truck Fuel Facility and Petrol Station

The fueling facility and the fuel station are close to the access to the lixiviation platform. The fueling facility has two tanks with a storage capacity of 80 000 gals of diesel two and a smaller tank for gasoline.

15.4.4 Explosives Storage

The ammonium nitrate deposit is more than 2,000 m southeast of the pit. Also, this facility is more than 150 m away from the explosive’s magazine and blasting accessories deposit.

The building is sized 5 m x 5 m, with internal and external fire protection, within a 45 m x 32 m platform with a perimeter fence security guard.

The blasting accessories deposit is more than 1,500 m away from the man camp.

15.5 Processing Plant Support Facilities

15.5.1 Laboratory

The laboratory building has an area of 420 m², built with thermoacoustic panels for roof and walls with 50 mm thickness. The panels are installed over concrete slabs with a compression resistance of 210 kg/cm².

The facility has nine working areas (sample preparation, assaying, testing facilities, warehouse, and others) and four support areas (offices, men & women toilets, and dressing room).

There are three areas for dust collection, lead collection, and gas scrubbing adjacent to the building.

15.5.2 First-Aid Facility

The first aid facility is located southwest of the man camp and provides first aid treatment. This facility is 8.5 m x 7.8 m and includes a doctor's office, emergency room, recovery room, toilet, and waiting room.

15.5.3 Gatehouse

The entry area, including a guardhouse, an office, toilets, and a parking area for light vehicles, buses, and trucks, is located at the main entrance to the property.

15.6 Man Camp

There are two man camp: Cienaga norte, Mirador norte. Each man camp has an area of 5,000 m². These facilities provide a cooking area, dining area, laundry room, leisure room, and sports slab. Additionally, there is a parking area for light vehicles and buses.

15.7 Power Supply and Distribution

The Tantahuatay substation provides the energy supply for the mine site. This substation is supplied by the 22.9 kV primary transmission line from the Cerro Corona substation fed by the 220 kV Cajamarca-Cerro Corona transmission line. Starting from the Tantahuatay substation, a 10 kV primary network is presented to the mine facilities.

There are two types of energy: electrical and chemical (oil). The installed electrical energy power for all the mine facilities is 5,520 kW, with a maximum demand of 3,180 kW.

15.8 Water Supply

15.8.1 Water Source

The water supply is generated by pumping water from Puente de la Hierba steam from 2 wells. This source of water is used for industrial and domestic purposes.

The system provides a flow rate that varies from 4 L/s to 8 L/s depending on the depth of the well pump.

The pump lines are 3" and 4" in Schedule 40 carbon steel material and HDPE. HDPE pipes are of class SDR-7.3, SDR-9, SDR-11, and SDR-17 in ASTM F714 standard, as appropriate according to the working pressures.

15.8.2 Water Storage Tanks

There is a primary storage tank with a capacity of 230 m³. Additionally, the firewater is estimated in 143 m³ of the primary storage tank.

Additionally, there are three tanks for potable water with a combined capacity of 203 m³.

15.9 Waste Water Treatment and Solid Water Disposal

15.9.1 Waste Water Treatment

Industrial Water Treatment

The area of this plant is 317.0 m². It comprises a slab of 0.10 m thick reinforced concrete, cantilevered sardines 0.20 m high and 0.20 m thickness, a drainage gutter 0.30 m wide and 0.20 m deep, and concrete material construction reinforced with corrugated steel.

The effluent treatment plant can be divided by its distribution on the ground into three units or blocks. The first block consists of tanks of sodium cyanide degradation; the second block comprises the pool of clarification and pumping equipment; and finally, the third block includes the columns of activated carbon and DSM mesh. This last block constitutes the final stage before pouring the treated effluent into the environment. The treatment plant capacity is 100 m³/h.

Acid Water Treatment

The design contemplates collecting acid effluents in 2 pools, one at the base of the pit mine with a capacity of 5,000 m³, and the other at the bottom of the mine waste deposit with a total of 2,450 m³.

The acidic water coming from the reservoir passes through a sedimentation pool and, through overflow, will feed the collection pond of the waste rock management facility. From this point, the acidic effluent is pumped to the acid pit water pool through a submersible pump. Then, the final mixture is pumped to the acid water treatment plant. Thus, there is a guaranteed continuous feed to the process.

The design uses two reactors with an operating capacity of 18 m³ each to neutralize the acids present in acidic waters and oxidize the metallic ions.

Potable Water Treatment

There are two potable water treatment plants: Cienaga Norte and Mirador Norte, each with an area of 700 m² and a production rate of 5m³/h of product water. The potable water treatment plant provides water to the man camp, offices, truck workshop, process plant, and other facilities with water requirements.

The system includes the following components:

- A pumping system for plant feeding.
- Chlorine injection system (initial disinfection).
- Coagulant dosing pump.
- Flocculant dosing pump.
- OFSY system (clarifying filter + multimedia filter).
- Removal of organics (activated carbon filter).
- Post-disinfection system (chlorination).

Domestic Water Treatment

The domestic water treatment system has three sectors defined according to the different facilities that make up the project.

These sectors are described below:

- Sector 1 includes the man camp, offices, and first-aid facility. The man camp and the offices have a compact activated sludge treatment plant southeast of the solid waste deposit. In contrast, the first-aid facility has its septic tank south of the solid waste deposit.
- Sector 2 includes the processing plant, plant maintenance workshop, chemical laboratory, security guard area. The wastewater produced in this sector is arranged in a septic tank with their respective absorption wells. These wells are southwest of the process pools.
- Sector 3 includes the heavy machinery maintenance workshop. This sector uses a portable HDPE self-cleaning septic tank and wells absorption northeast of the truck workshop.

The compact activated sludge plant is a system that corresponds to a biological treatment aerobic-type "activated sludge" under the mode of "extended aeration" and is designed to generate good quality treated water for use in irrigation or infiltration into the ground.

The treatment system includes:

- Pre-chamber equalization
- Aerated bioreactor
- Gravitational clarifier
- Chlorination pond

This plant is a biological treatment system, which means that purification occurs thanks to the action of microorganisms that feed on organic matter, converting it into by-products of your metabolism that are harmless to the environment.

The septic tanks are waterproof underground structures that receive the residual water from the first-aid facility in Sector 1 and those in Sector 2. In both cases, the septic tanks are designed to:

- Allow the sedimentation of solids and their separation from the liquid
- Achieve limited digestion of organic matter
- Store solids
- That the clarified liquid passes to the infiltration system

The selected infiltration system corresponds to that of percolation wells. The foundation of this system consists of introducing the effluent from the septic tanks below the ground surface. Depending on its texture and permeability, the soil functions as a biological filter where chemical, physical and biochemical phenomena cause wastewater purification. The wastewater from the septic tanks is distributed to the percolation wells in such a way as to divide the flow, and the infiltration may have greater flexibility of operation.

The residual sludge drying system is set through a "natural drying bed," The water contained interstitially in said sludge is removed by evaporation and seepage through the bottom drainage medium. This system is not necessary to add reagents or mechanical elements since slow drying is foreseen. Due to the presence of precipitation in the project area, the drying bed will be temporarily covered with a geomembrane anchored in the contour. When there is no precipitation, the geomembrane will retreat to allow the drying process to continue.

15.9.2 Solid Waste Disposal

There are four solid waste disposals:

- Mirador: Approximately area of 37,654 m², with benches of 5 m. height and berms of 5.5 m. width. Estimate storage of 250 000 m³.
- Kiwillas: Approximately area of 43,487 m², with benches of 5 m. height and berms of 10 m. width. Estimate storage of 200 600 m³.
- Cienaga Norte 1: Approximately area of 33,217 m², with benches of 5 m. height and berms of 7.5 m. width. Estimate storage of 113 430 m³.
- Mirador: Approximately area of 64,622 m², with benches of 5 m. height and berms of 7.5 m. width. Estimate storage of 328 040 m³.

15.10 Mine Operations Support Facilities

15.10.1 Mine Administration Building

The Mine Administration building is located southeast of the pit with an area of 550 m², including the parking area. The building is divided into two sections: Administration and Mine Operations. The Mine Operations section provides offices for General Superintendence, Mine Operations, Planning & Engineering, Environment, and Safety Staff. Also, the building has a toilet and parking for 15 light vehicles.

The Community Relationship area has two offices, conference/training facilities, a dining area, a toilet, and parking.

15.10.2 Mine Truck Workshop

The Mirador Norte Truck Workshop building has an area of 3,000 m², and the Cienaga Norte Truck Workshop building has an area of 4,300 m².

These facilities were built with structural steel with roof covers and walls with corrugated zinc plates held by pedestals and slabs of reinforced concrete. The concrete compression resistance is 280 kg/cm².

There are different areas within the workshops, such as tire station, lubrication station, truck repairs area, welding area, and truck wash facility.

The truck facilities are equipped with a closed washing system and a water/oil separator.

15.10.3 Truck Fuel Facility and Petrol Station

The fueling facility and the fuel station are close to the access to the lixiviation platform. The fueling facility has two tanks with a storage capacity of 80,000 gals of diesel two and a smaller tank for gasoline.

15.10.4 Explosives Storage

The ammonium nitrate deposit is more than 2,000 m southeast of the pit. Also, this facility is more than 150 m away from the explosive’s magazine and blasting accessories deposit.

The building is sized 5 m x 5 m, with internal and external fire protection, within a 45 m x 32 m platform with a perimeter fence security guard.

The blasting accessories deposit is more than 1,500 m away from the man camp.

15.11 Processing Plant Support Facilities

15.11.1 First-Aid Facility

The first aid facility is located southwest of the man camp for early care treatment. This facility is 8.5 m x 7.8 m, including the doctor’s office, emergency room, recovery room, toilet, and waiting room.

15.11.2 Laboratory

The laboratory building has an area of 420 m², built with thermoacoustic panels for roof and walls with 50 mm thickness. The panels are installed over concrete slabs with a compression resistance of 210 kg/cm².

The facility has nine working areas (sample preparation, assaying, testing facilities, warehouse, and others) and four support areas (offices, men & women toilets, and dressing room).

There are three areas adjacent to the building for dust collection, lead collection, and gas scrubbing.

15.11.3 Gatehouse

The entry area, which includes a guardhouse, office, toilets, and a parking area for light vehicles, buses, and trucks, is located at the main entrance to the property.

15.12 Man Camp

There are two man camps: Cienaga norte, Mirador norte. Each man camp has an area of 5,000 m². These facilities provide a cooking area, dining area, laundry room, leisure room, and sports area. Additionally, there is a parking area for light vehicles and buses.

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There are two types of energy: electrical and chemical (oil). The installed electrical energy power for all the mine facilities is 5,520 kW, with a maximum demand of 3,180 kW.

15.14 Water Supply

15.14.1 Water Source

The water supply is generated by pumping water from Puente de la Hierba steam from 2 wells. This source of water is used for industrial and domestic purposes.

The system provides a flow rate that varies from 4 L/s to 8 L/s depending on the depth of the well pump.

The pump lines are 3” and 4” in Schedule 40 carbon steel material and HDPE. HDPE pipes are of class SDR-7.3, SDR-9, SDR-11, and SDR-17 in ASTM F714 standard, and are adequate for the use given.

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There is a primary storage tank with a capacity of 230 m³., the firewater is estimated in 143 m³ of the primary storage tank.

Additionally, there are three tanks for potable water with a combined capacity of 203 m³.

15.15 Waste Water Treatment and Solid Water Disposal

15.15.1 Waste Water Treatment

Industrial Water Treatment

The area of this plant is 317.0 m². It comprises a slab of 0.10 m thick reinforced concrete, cantilevered sardines 0.20 m high and 0.20 m thickness, a drainage gutter 0.30 m wide and 0.20 m deep, and concrete material construction reinforced with corrugated steel.

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The acidic water coming from the reservoir passes through a sedimentation pool and, through the overflow, will feed the collection pond of the waste rock management facility. From this point, the acidic effluent is pumped to the acid pit water pool through a submersible pump. Then, the final mixture is pumped to the acid water treatment plant. In this way, there is a guaranteed continuous feed to the process.

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- Sector 3 includes the heavy machinery maintenance workshop. This sector uses a portable HDPE self-cleaning septic tank and absorption well, which are northeast of the truck workshop.

The compact activated sludge plant is a system that corresponds to a biological treatment aerobic-type "activated sludge" under the mode of "extended aeration" and is designed to generate good-quality treated water for use in irrigation or infiltration into the ground.

The treatment system includes:

- Pre-chamber equalization
- Aerated bioreactor
- Gravitational clarifier
- Chlorination pond

This plant is a biological treatment system, which means that purification occurs thanks to the action of microorganisms that feed on organic matter, converting it into by-products that are harmless to the environment.

The septic tanks are waterproof underground structures that receive the residual water from the first-aid facility in Sector 1 and those in Sector 2. In both cases, the septic tanks are designed to:

- Allow the sedimentation of solids and their separation from the liquid

- Achieve limited digestion of organic matter
- Store solids

- That the clarified liquid passes to the infiltration system

The selected infiltration system utilizes percolation wells. The foundation of this system consists of introducing the effluent from the septic tanks below the ground surface. Depending on its texture and permeability, the soil functions as a biological filter where chemical, physical and biochemical phenomena cause wastewater purification. The wastewater from the septic tanks is distributed to the percolation wells in a way that divides the flow and heightens the flexibility of the infiltration process.

The residual sludge drying system is set through a "natural drying bed." The water contained interstitially in said sludge is removed by evaporation and seepage through the bottom drainage medium. This system is not necessary to add reagents or mechanical elements since slow drying is foreseen. Due to the presence of precipitation in the project area, the drying bed will be temporarily covered with a geomembrane anchored in the contour. When there is no precipitation, the geomembrane will retreat to allow the drying process to continue.

15.15.2 Solid Waste Disposal

There are four solid waste disposals:

- Mirador: Approximate area of 37,654 m², with benches of 5 m. height and berms of 5.5 m. width. Estimate storage capacity of 250,000 m³.
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- Cienaga Norte 1: Approximate area of 33,217 m², with benches of 5 m. height and berms of 7.5 m. width. Estimate storage capacity of 113, 430 m³.
- Mirador: Approximate area of 64,622 m², with benches of 5 m. height and berms of 7.5 m. width. Estimated storage capacity of 328,040 m³.

16 Market Studies

16.1 Coimolache markets

16.1.1 Overview of the gold market

Gold is extensively used in investment portfolios to protect purchasing power, reduce volatility and minimise losses during periods of market shock, and therefore there is an important fraction of demand which comes from the financial sector as opposed to demand from fabrication. The annual volume of gold bought by investors has increased by at least 235% over the last three decades, but as of today, gold still only makes up less than 1% of investment portfolios.

When it comes to gold fabrication demand, jewellery is the most common end use, accounting for ~77% of global consumption. Electronics and coins together account for ~21% of global gold demand. Gold has long been central to innovations in electronics. Today the unique properties of gold and the advent of 'nanotechnology' are driving new uses in medicine, engineering and environmental management, although volumes are still very low when compared to the metal's use in jewellery.

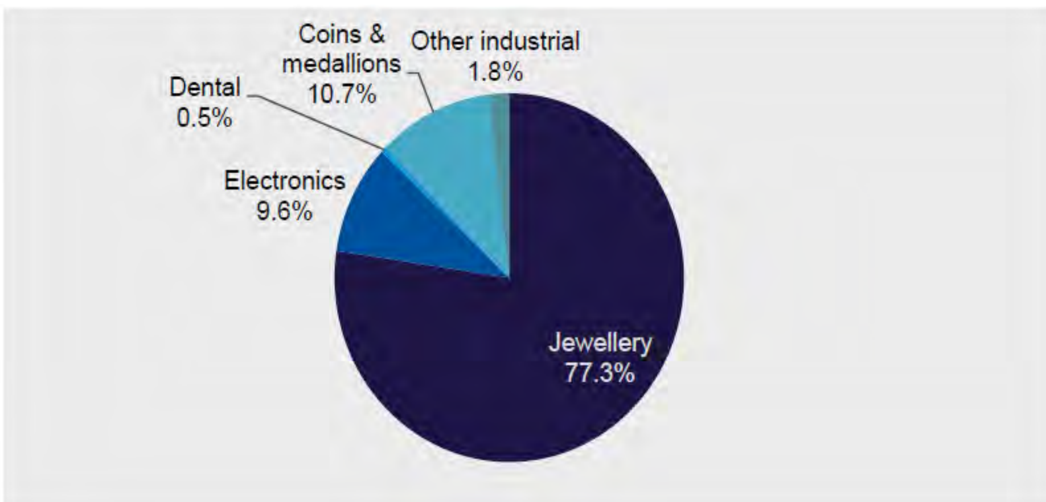


Figure 16-1: Gold demand by end-use, 2019

Source: CRU

Gold can be obtained both primarily – extracted through mining –, as well as from secondary production – through recycling. In the case of the primary route, the main product that is sold to market are doré bars, which have mostly gold and silver as well as relatively minor contents of other elements. There is also a relatively minor production of gold concentrates that is marketed, as well as gold content that is found as a by-product in base metals concentrates such as copper and lead concentrates.

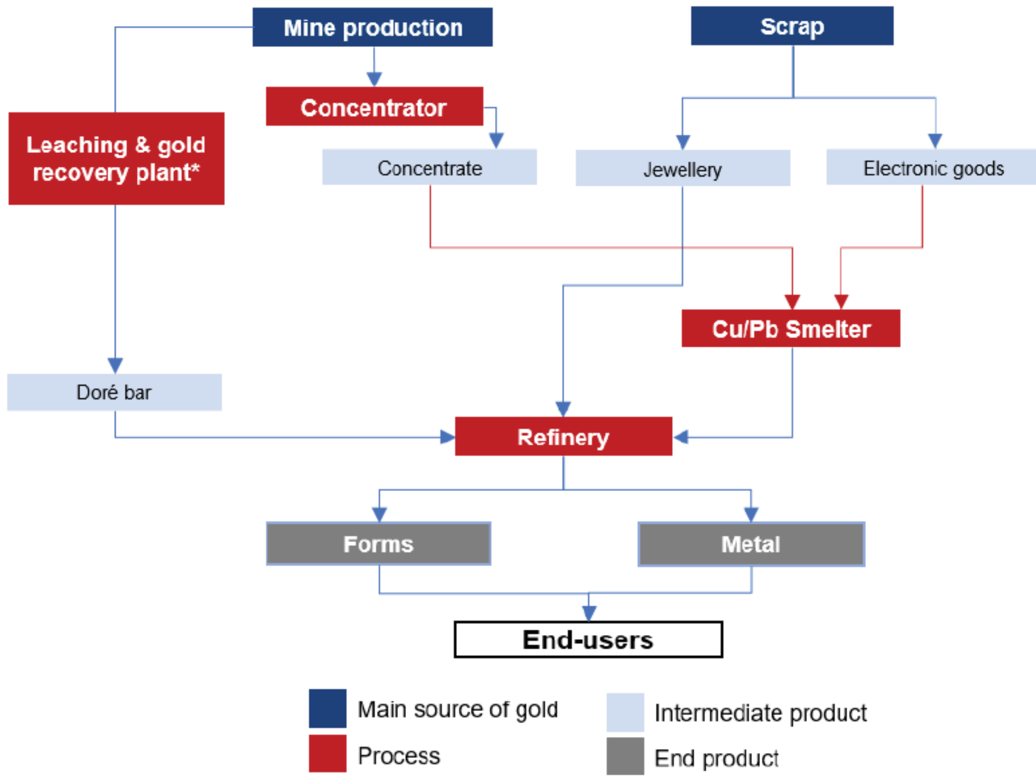


Figure 16-2: Gold value chain

Source: CRU

* There are a number of processes to recover gold from pregnant solution obtained from the leaching process

16.1.2 Gold value chain

From a mineralogical point of view, gold is associated with several metals such as silver, copper, mercury, iron and platinum, among others. Reservoirs can be found in a variety of forms, such as quartz veins, metamorphic rocks, and alluvial deposits. This, combined with the high price of gold, is why gold mining takes place practically all around the world. At the same time, a large number of deposits have this metal as a by-product, and the gold supply from this type of exploitation is quite significant.

The following figure shows a simplified version of the gold value chain:

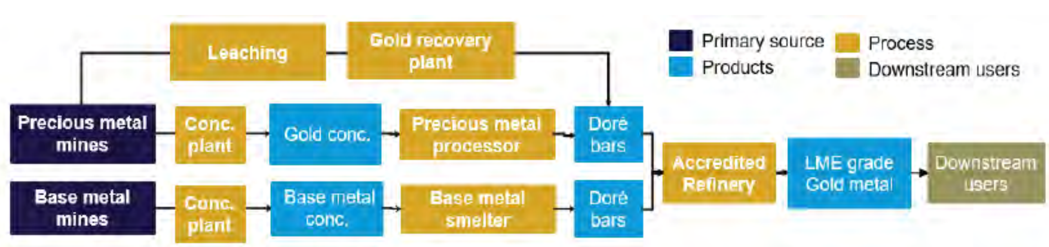


Figure 16-3: Simplified gold value chain

Source: CRU

Gold can be obtained both primarily, that is, being extracted through mining, and secondarily, through scrap recycling (not included in the simplified value chain presented above). Primary production can come in the form of concentrates or in the form of doré bars being produced at the mine site. In the case of the concentrates route, gold can be found in both gold concentrates / precious metals concentrates and as a by-product in base metal concentrates, such as copper and lead concentrates. After the processing of a concentrate, extracted gold is transformed into doré bars for further refining. In the case of doré bars being produced on-site, the mined material goes through a hydrometallurgical process which includes the leaching of the material using a cyanide solution and the recovery of gold from this solution using a variety of methods available.

The share of traded gold concentrates is around 70% of the primary supply of gold, the rest is supplied as a by-product.

16.1.3 Doré bars

Doré bars are a co-product/by-product of mining operation which typically have a significant amount of gold and silver content.

Gold doré bars usually contain 70-80% Au and 10-15% Ag, while silver doré bars are typically composed of around 75-90% Ag and 10-25% Au. They also include other elements, sometimes deleterious ones. The specific geology and mineralogy of each deposit, as well as the processing route used for the refining process, are the ultimate determinants of the grade of the gold doré bars.

When selling doré bars to the refinery, the seller will be paid for a proportion of the value of the metal by weight, less a refining charge and any penalties for impurities as well as any other specific items such as transport costs.

The key area of negotiation between the buying and selling parties is the payment terms for the gold and silver contained within the doré. Payment terms for gold generally vary between 99.0% and 99.9% of the value of the gold content by weight. For silver, payment terms usually range between 98.0% and 99.5% of the value of the silver content by weight.

The higher the gold grade of the doré, the less intensive the refining process for the buyer, with fewer impurities required to be removed and less slag generated. Therefore, payability for gold and silver often increases as the presence of other elements decreases.

The refinery charges a specific refining charge per ounce of gold and silver metal refined. CRU understands that this refining charge is typically $0.5-1.5/troy oz range for silver and up to $6-7/troy oz for gold, which can sometimes include a separate treatment charge relating to the re-melting of the whole doré bar. The exact refining charge agreed between two parties will be negotiated on a case-by-case basis, and therefore there is no standardised benchmark for these charges.

Gold and silver doré contracts specify cut-off levels for a range of commonly found impurity elements that can be problematic above certain concentrations in the doré product. Refineries' tolerances can depend on environmental compliance regulations and the refineries' ability to dispose of certain volumes of some materials. As such, the tolerance levels for particular elements may change, or the payability terms increased, in order to reflect these limitations.

Most contracts make a distinction between those elements that are considered hazardous, deleterious or simply general impurities. Elements in each of the different categories can incur penalties if they exceed certain concentrations in the doré.

- Hazardous elements are the elements that are extremely not welcome in the product. Refineries usually are very strict on them. They include Mercury, Arsenic, Cadmium and even radioactivity of the material.
- Deleterious elements are defined as impurities that can disturb the refining process and influence environmental protection processes. They include Lead, Tin, Selenium, Tellerium, Bismuth, Antimony, Sulphur.
- Other impurities are elements that can be present during the refining process but are non-hazardous and do not fundamentally impact the refining process, unless present in high quantities. They include Iron, Nickel, and Cobalt.

Most contracts will also stipulate maximum cut-off levels for impurity elements, above which the refinery has the right to refuse to accept the doré product under the contract arrangement that is in place.

16.1.4 Gold market balance and price

The following price forecast represents CRU's forecast as of March 2021.

Annual gold mining production adds between 2% and 3% to global gold inventories each year. Gold can be sold by central banks and private investors, as well as for attractive returns in the case of jewellery or other gold items such as scrap metal.

In addition to large gold players, there is a natural annual production surplus above consumption in fabrication processes which is absorbed by financial demand (investors). This specific demand comes from purchases by central banks and private investors. Therefore, the demand for gold for investment is the element that balances this market.

For 2019, the gold market had an estimated surplus of ~1,000 tonnes. As demand for fabrication purposes declined drastically compared to supply in 2020, that surplus increased to almost 2,000 tonnes, and is expected to decrease going forward as demand for fabrication purposes continues to increase in environment of relatively stable supply.

According to mineral economics theories, the price of industrial metals is defined as "mean reverting" – meaning, their prices will fluctuate around a long run mean which is determined by costs of production. However, this is not the case for gold. A fundamental reason for this is that the above-ground stock of gold (held by Central Banks, private investors and in non-destructive uses like jewellery) vastly dwarfs the level of current production. This means that the market is balanced not necessarily by changes in production, but by the much greater impact of investment or disinvestment in stocks. Therefore, it is difficult to define fundamental factors which can "anchor" the price of gold in the long term. In general, gold prices are highly linked to investor expectations and, being a commodity that is seen as a "safe haven", to the perception of economic conditions and uncertainties.

Figure 16-4: Gold supply-demand gap analysis, 2021 - 2036, kt

Source: CRU

Table 16-1: Gold Market Balance 2021 – 2026 (kt)

Source: CRU

Gold price, unlike other industrial metals, is not determined purely by the balance between supply and fabrication demand, but rather by the high levels of investment holdings, which is the function of the geopolitical and economic outlook. Gold prices are likely to follow a downward trend for the following three years as post-pandemic monetary policies continue to normalize, with annual prices slipping from $1,799 /oz in 2021 to $1,676/oz by 2024. Bullish sentiment is expected to return in 2025 and drive prices up to reach $1,762 /oz and later $1,890 /oz in 2026.

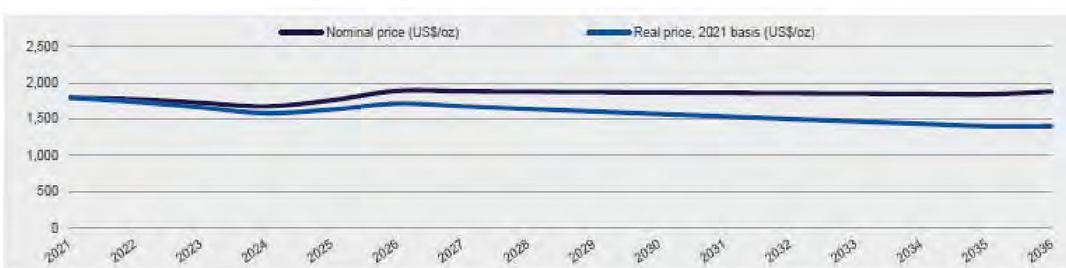


Figure 16-5: Gold price forecast, 2021 – 2036, US$/oz

Source: CRU

Table 16-2: Gold prices 2021 - 2036, US$/oz

	2021	2022	2023	2024	2025	2026	2027	2028
Nominal (US$/oz)	1,799	1,775	1,727	1,676	1,762	1,890	1,884	1,879
Real (US$ 2021/oz)	1,799	1,740	1,660	1,580	1,630	1,715	1,677	1,639

	2029	2030	2031	2032	2033	2034	2035	2036
Nominal (US$/oz)	1,874	1,869	1,864	1,859	1,853	1,848	1,843	1,880
Real (US$ 2021/oz)	1,603	1,567	1,532	1,498	1,465	1,432	1,400	1,400

Source: CRU

16.1.5 Overview of the silver market

Silver is often compared to gold given its ancient usage in jewellery and coinage, which now account for 30% and 8% of silver demand respectively. The main distinction between both markets is that silver has more extensive uses in industrial applications, with electrical/electronic uses accounting for 23% of demand. Like gold, silver is used in electronics for its excellent electrical conductivity, lack of corrosion, and ease of mechanical use – but given its lower price point and higher availability, it sees far more widespread usage than gold in this area.

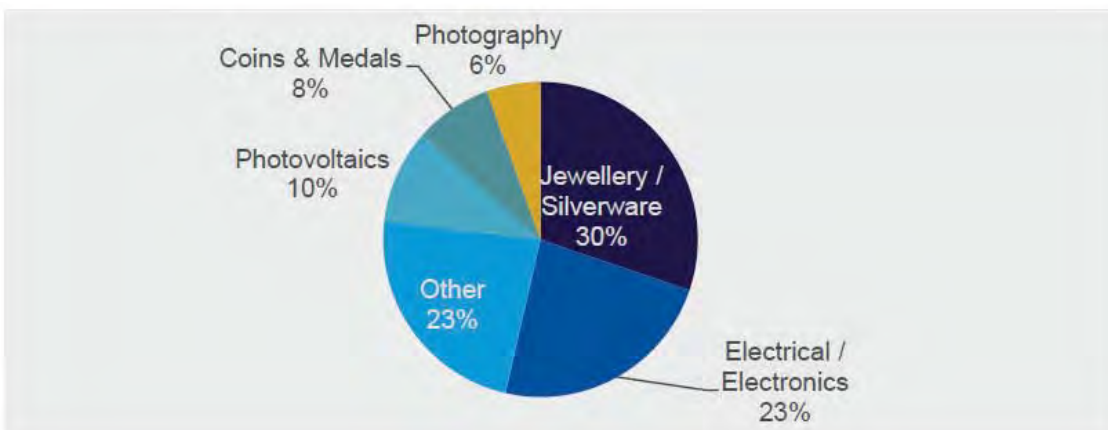


Figure 16-6: Silver demand b end-use

Source: CRU

In terms of supply, mined silver makes up ~80% of this total silver production, with recycled silver scrap accounting for the rest. Furthermore, only 25% of mined silver comes from mine which produce silver as their primary metal, while the remainder of mined supply is produced as a by-product from polymetallic mines that may also produce zinc, lead, or copper. Because of this, the silver market is highly diversified with the top eight producers only making up less than 30% of global mined supply.

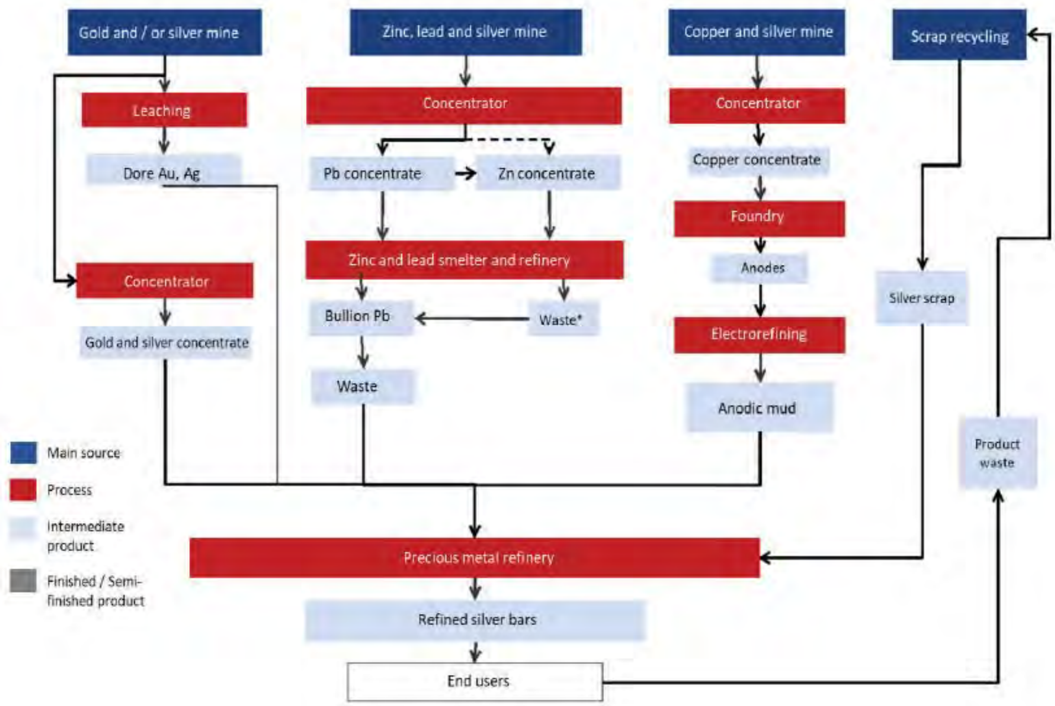


Figure 16-7: Silver value chain

Source: CRU

16.1.6 Overview of the silver market

The following price forecast represents CRU's forecast as of March 2021.

The silver market is currently going through a phase of rapid market rebalancing as it shifts from a period of deficit from 2016 to 2019, to a surplus in 2020 and forward. With the Covid-19 pandemic, fabrication demand was hit harder than supply, which resulted in a small surplus for the year. Both supply and demand are expected to rebound in 2021, bringing the market back into a deficit. In the medium term, the market is expected to remain relatively well balanced, alternating between years of surplus and undersupply. Demand is expected to peak in 2024 as increases in the jewellery sector – the main end use for silver –are not enough to offset dwindling demand from other end uses, and the market is expected to see an increasing surplus into the long term.

On the price side, and similarly to gold, silver prices do not tend toward equilibrium like other commodities. Instead, price is often linked to sentiment rather than fundamental market forces. Since 2015, prices have been relatively stable, ranging between US$16 and US$17 per troy ounce between 2015 and 2019. The uncertainly brought by Covid-19 pushed prices up to US$20 /oz in 2020. This tendency is expected to continue out to 2025, when prices are expected to peak at US$34 /oz.

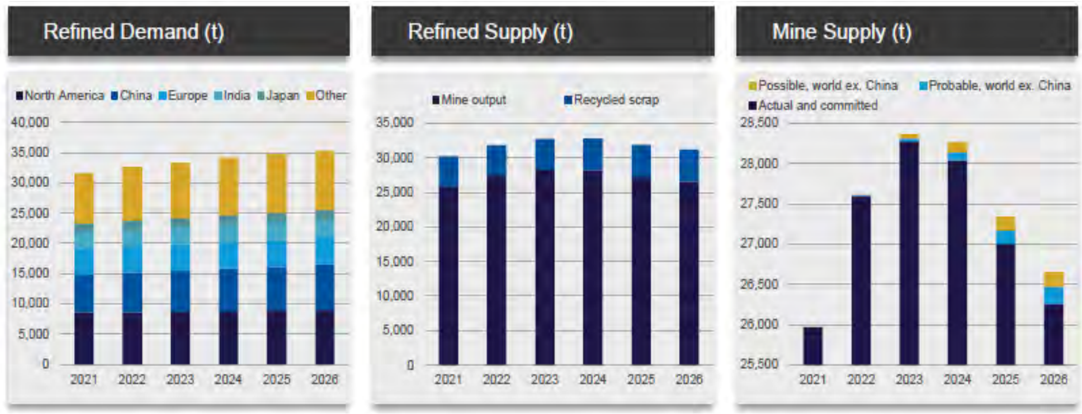


Figure 16-8: Silver supply-demand gap analysis, 2021 - 2026, kt

Source: CRU

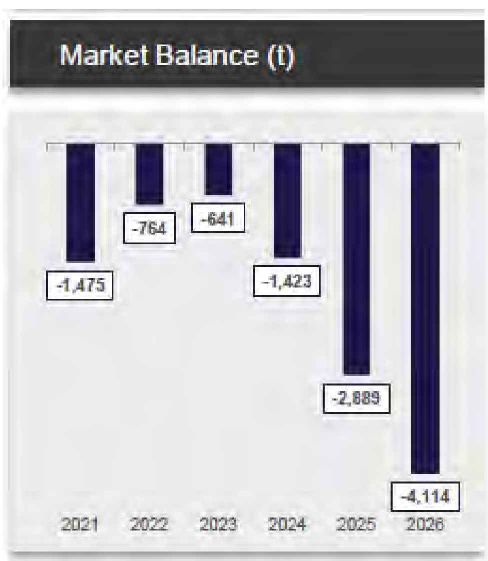


Table 16-3: Silver Market Balance 2021 – 2026 (kt)

Source: CRU

Rising uncertainty about the strength of the post-pandemic global economic recovery will keep reining in growth in industrial demand. This, combined with a robust recovery in metal supply, will reduce the fundamental deficit, leading to a more balanced silver market in 2022-2023. CRU does not expect to see a sustainable return in buying interest towards this precious metal until late 2022 with the nominal annual average silver price dropping from $25.1/oz in 2021 to $23.3/oz in 2022. Starting from 2023, market fundamentals will start to retighten as industrial demand for silver (ex-coins) fully recovers from the pandemic shock and mine supply weakens driven by grades degradation, reserves exhaustion and mine closures. This will spark a resumption of the silver bull rally and pushing nominal prices all the way up to $31.1/oz in 2026.

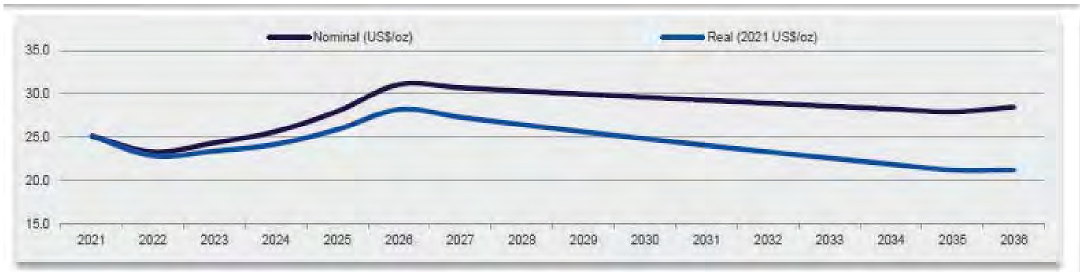


Figure 16-9: Silver price forecast, 2021 – 2036, US$/oz

Source: CRU

Table 16-4: Silver prices 2021 - 2036, US$/oz

	2021	2022	2023	2024	2025	2026	2027	2028
Nominal (US$/oz)	25.1	23.3	24.3	25.7	28.0	31.1	30.7	30.3
Real (US$ 2021/oz)	25.1	22.9	23.4	24.2	25.9	28.2	27.3	26.5

	2029	2030	2031	2032	2033	2034	2035	2036
Nominal (US$/oz)	30.0	29.6	29.3	28.9	28.6	28.3	27.9	28.5
Real (US$ 2021/oz)	25.6	24.8	24.1	23.3	22.6	21.9	21.2	21.2

Source: CRU

16.2 Coimolache products

The following tables summarizes the main specifications of the doré produced in Coimolache:

Table 16-5: Typical specifications of Coimolache's doré product

Au, %	15
Ag, %	85
Cu and others, %	

Source: Buenaventura

This section aims to assess and compare Coimolache's product to other players in the industry. This is done by showing where each product stands when compared to estimated specification from a large sample of mines. The figures presented show the minimum and maximum content of each element under analysis in the samples of mines used, as well as the median and the distribution around it segmented in quartiles in the following way:

Figure 16-10: Sample boxplot

Source: CRU

To compare Coimolache's doré production to other products in the market, a total of 233 mines were considered from CRU's Zinc & Lead Cost Model, looking at data between 2015 and 2019. Out of these 233 mines, 95 have combined gold and silver production in the form of doré. At the same time, the remaining 138 are exclusively silver producers. The following charts show Coimolache's doré product when compared to the samples:

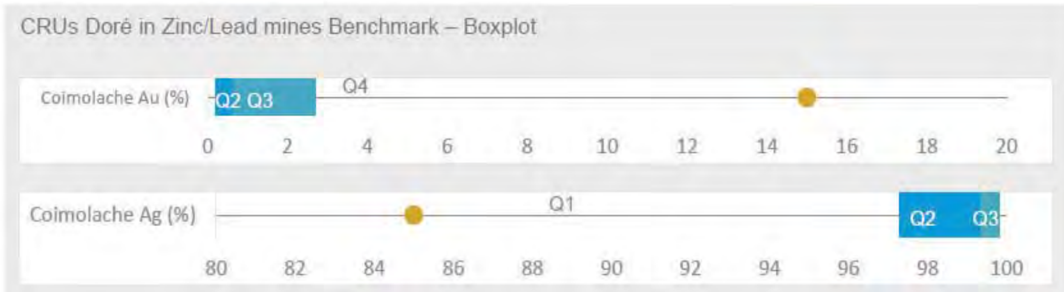


Figure 16-11: Precious metals content in Coimolache's doré production

Source: CRU

Doré bars are normally sold directly to precious metal refineries. Since refining costs constitute a very small share of the total doré values, there are few companies that are integrated with a refinery. Hence, most of the existing refinery capacities operate in the customs market.

There are a number of precious metal refineries operating throughout the world, with the major differentiating factor being official accreditation. The highest level and most widely respected accreditation is awarded by the London Bullion Market Association (LBMA), which is an industry trade association that represents the London market for internationally traded gold and silver. The LBMA publishes an annually updated "Good Delivery List", which details those refineries that meet stringent criteria for producing gold and silver bars. The list includes 71 gold refineries and 84 silver refineries.

Trading of doré products is not restricted by geography. The high value of the product per weight unit makes it convenient to transport via airplane with no regard for the cost. Having said that, the Chinese market has been notorious for gold trade restrictions. Imports of doré and gold products have been restricted in this market, and as such, it is understood that this market is not a possible target market for Buenaventura's products.

Coimolache's doré has high levels of both silver and gold in it. There are 42 companies that are both in the LBMA's silver and gold refineries list. After excluding refineries in China, the list contains 29 refineries that can refine both silver and gold. Generally speaking, given Coimolache's product quality, its doré production should be acceptable in all of the customs market. Looking forward, Buenaventura has contracts in place securing sales for 100% of Coimolache's doré production for 2022, 2023 and 2024. Conversations with current buyers are ongoing future production is likely to be secured when the time comes as well.

17 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

According to Peruvian law, any activity that can cause significant negative environmental impacts must be evaluated prior to execution. A set of commitments about what to do, and what not to do, is generated is generated to prevent said impacts or to mitigate, remedy, or compensate the same. When the environmental study is approved, commitments become environmental obligations that can be audited, and non-compliance is sanctionable.

Similarly, the national regulation requires the mining company to make a technical and economic proposal for how the intervened areas will be rehabilitated to ensure compatibility with the surrounding ecosystem when mining activity ends. This report refers to the Mine Closure Plan (MCP), which is executed during the mine’s useful life (progressive closure) and at the end of operations (final closure and post-closure).

The afore mentioned management instruments also consider approaches for adequate social relations. Regulations require the mining owner to have a "Social Management Plan", i.e., a set of "strategies, programs, projects, and social impact management measures to be adopted to prevent, mitigate, control, compensate, or avoid negative social impacts and to optimize the positive social impacts of the mining project in their respective areas of social influence." The Social Management Plan is approved as part of the EIAd.

In addition to the commitments that may be established in the Social Management Plan, derived from the social impacts related to project implementation, it is important to note that there are also social commitments that derive from compliance with the "Principles of Social Management" to which all mine owners must adhere, and which are not necessarily related to the social impacts of the project, but are equally enforceable.

In addition to the above, the national regulatory framework requires other permits of a sectorial nature as conditions for the commencement and development of mining activities (permits from the Ministry of Energy and Mines), such as for the use of other natural resources, protection of natural heritage or culture, among others.

Below, we report on the performance of the Tantahuatay MU regarding the aspects described above, pointing out the problems identified, if applicable.

17.1 Environmental Study Results

Tantahuatay's activities were subject to an Environmental Impact Assessment (EIA) as the primary environmental management instrument, and subsequently several preventive environmental studies were approved for various areas of the mining activity, as well as amendments to these (either through modifications or Supporting Technical Reports -STR-).

SRK found that the Tantahuatay MU has an initial EIA from 2009 and approved an EIA to expand the operation (2013), as well as the amendments to these studies (2014, 2016), and obtained conformity for minor or environmentally non-significant STR variations (2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021).

A review of the descriptive scope of the documents identified above led SRK to the conclusion that the main activities and components for mining and beneficiation relative to Tantahuatay MU possess statutory Environmental Certification. SRK determined that ancillary components also comply with this requirement.

17.2 Project permitting requirements, the status of any permit applications, and any known requirements to post performance or reclamation bonds

17.2.1 Mining operating permits issued by sectoral mining authorities.

a) For mining and ancillary activities

After reviewing the documents available, SRK corroborated that the Tantahuatay MU has mining rights for its mining and ancillary activities and possesses the corresponding permit from the mining authority.

Mining rights are grouped within an Administrative Economic Unit, as required by Presidential Resolution No. 4321-2009-INGEMMET/PCD/PM, of 7,308.6488 hectares.

Tantajuantay MU also obtained the corresponding authorizations to start activities in different areas in 2010, 2013, 2014, 2016, 2018, and 2019.

b) For beneficiation and ancillary activities

SRK's review of available documentation allowed it to corroborate that the Tantahuatay MU has the corresponding permits to develop its mining beneficiation activities.

The "Tantahuatay" beneficiation concession was approved by Directorial Resolution No. 081-2015-MEM-DGM/V. Subsequently, extensions, modifications, and communication were submitted processed as required by the regulations in force.

The current capacity of the Beneficiation Plant is 60,000 MT/day, authorized by D.R. No. 0222-2019-MEM-DGM/V (2019).

17.2.2 Other permits required by other sectoral authorities.

SRK found that Tantahuatay MU has permits other than the environmental and sectoral permits mentioned above. These authorizations are of utmost importance to develop mining activities, such as the ones described below:

a) For the use of water resources

SRK was unable to access the content of the water use licenses obtained for the Tantahuatay MU but verified that one water use license for human consumption exists as well as two licenses for underground water use for mining purposes and one license for surface water use for mining purposes.

b) For discharge into water resources

Water derived from different uses in mining operations must be previously treated and authorized for discharge into natural bodies of water. In this regard, it has been verified that Tantahuatay MU has obtained authorizations for its discharges into Los Gentiles Lake, from domestic wastewater treatment; into Tacamache Creek, from DWWTP Cienaga Norte; into Tantahuatay Creek, from AWTP Mirador Norte; and into Tacamache Creek, from industrial activities. In this respect, the mine owner states that it has requested the authority to renew the discharge authorization corresponding to points E-3, E-4, E-5, and E-6, but has not received a response from the water authority to date.

c) For drinking water treatment plants

Regulations require that the water provided for human consumption meets the appropriate quality conditions. To this end, DWTPs must have the corresponding sanitary authorization for the water treatment system. We have verified that this authorization has been obtained for the DWTP at the Tantahuatay PU Camp and for consumption in Cienaga Norte.

d) For the protection of cultural heritage

For the protection of cultural heritage. Regarding the protection of cultural heritage, it was verified that there are several Certificates of Non-existence of Archaeological Remains for the area of the Tantahuatay MU.

17.3 Mine closure plans, including remediation and reclamation plans, and associated costs

Tantahuatay MU's activities comply with the legal requirement of having presented measures for the progressive, final, and post-closure of its existing and planned components. Thus, the approval of an initial MCP in 2011 has been corroborated, as well as its modification in 2014, the first update in 2015, and a second update in 2021. According to the current MCP, the final closure activities are projected to begin in 2027.

Also, it has been confirmed that the semiannual reports for the years 2012 to the second half of 2021 have been submitted to the authorities.

It should be noted that the schedule of closure activities included in the MCPs or their amendments are mandatory, otherwise, administrative sanctions could be imposed and financial guarantees could be required for the progressive closure budgets not executed.

17.4 Social relations, commitments, and agreements with individuals and local groups.

The area of direct social influence is made up of El Tingo Rural Community and the small village of Alto Coimolache in the district of Hualgayoc, and the small villages of El Chencho, Ramirez, and Cercado de Chugur in the district of Chugur, whose population's main activity is agricultural production, characterized by subsistence or self-consumption, with mining and commerce as complementary activities.

The area of indirect social influence is made up of the other villages surrounding the operations in the districts of Hualgayoc, Bambamarca, and Chugur in the province of Hualgayoc and some villages in the district of Catilluc, province of San Miguel.

Due to the COVID-19 pandemic, the 2020 and 2021 Social Management Plans as well as the Programs and sub-programs of the current Environmental Management Instruments (EMI) have been rethought and executed and are recorded in the Mining Unit's follow-up or monitoring matrix of commitments and obligations. This matrix has been reviewed for this analysis.

The objective of the SMP programs and sub-programs is to strengthen the mining unit's ties with the communities and local authorities for a sustainable relationship that will allow for future acquisition of land for the mining operation by strengthening social relations and the company's reputation.

In this sense, the company seeks to improve its relationship through the execution of its 2021 Management Plan and the obligations and commitments systematized in its matrix which presents the social objectives (annual objectives, strategies, and cross-cutting risks) whose main objective is the acquisition of land for the mining operation through the strengthening of social relations and the company's reputation.

Regarding the 20 relationship goals to be executed in 2021 and based on the traffic light monitoring, six (06) are in red, twelve (12) are in green, and two (02) are in yellow. Of these it should be noted that the activities linked to obligations from the EMIs, agreements, and minutes with ADSI and AISI recorded in the Matrix of Obligations - Commitments 2021 show that 48 activities have been completed, 21 are in process, 17 suspended by COVID, and 1 with no progress, resulting in a projected annual execution of 55%.

While it is true that this COVID-19 context has weakened community relations due to the lack of visits to the ADSI and AISI, it is also true that the Social Affairs Area of the mining unit should have more support to meet the goals, objectives, and proposals for improvement in order to implement the strategy developed for 2022, which seeks to meet the obligations and commitments acquired and improve community relations to help meet future goals of acquisition of land or areas of interest for the expansion of the mining operation.

In general, the Coimolache - Tantahuatay Mining Unit - BUENAVENTURA S.A.A., complied with the practice of reporting on the social components in accordance with regulation SK-1300.

17.5 Mine Reclamation and Closure

17.5.1 Closure Planning

Coimolache’s closure plan has been approved by the mining authority, which deemed that all corresponding regulatory requirements had been met. Although this plan is fairly detailed, most of the proposed plan does not comply with CDC and ICMM Guidelines. SRK is of the opinion that most of the actions proposed have been defined at the conceptual level given that detailed engineering has yet to be performed.

Nevertheless, the objective of this chapter is not to describe components and closure activities in detail as they are shown in the approved Closure Plan. The general closure actions for the project components that pose the greatest risks and represent the largest costs are summarized below. Closure of other facilities, such as civil infrastructure, demolition of structures and buildings, quarries and landfills are considered in the closure plan, but are not addressed herein.

Closure actions proposed in the closure plans for the key facilities are summarized below and some aspects are discussed in more detail in the following sections.

Open Pits

There are three open pits included in the current mine closure plan: Tantahuatay, Cienága Norte and Mirador. The general closure activities for all the pits will consist of resloping the rock to meet factors of safety (FoS) and backfilling with waste rock materials. The backfill materials will be covered and revegetated. Flat areas will be regraded to 1% for water management.

Heap Leach Pads

There are three heap leach pads included in the current mine closure plan: Tantahuatay, Cienága Norte and Mirador Norte. The general closure activities for the heap leach pads includes regrading slopes to 2H:1V, followed by placing cover material in the flat areas and slopes. The area will be revegetated and detailed with water management features, including internal and external diversion channels.

Waste Rock Dumps

There are five non-acid generating waste rock dumps included in the current mine closure plan: Tantahuatay 1, Tantahuatay 2, Tantahuatay 3, Cienága and Mirador. Additionally, there are three acid generating waste rock dumps including: Tiwinza 1, Tiwinza II and Cienága. The general closure activities for the waste rock dumps include the following:

- Material from Tiwinza 1 and Tiwinza 2 will be used as backfill for the Tantahuatay pit
- No regrading activities are currently included in the closure strategy for Cienága
- Regrading slopes in the range of 2H:1V to 2.5H:1V (depending on the facility)
- Placement of cover in the flat areas and slopes (Cover I and Cover II)
- Revegetation
- Detailed water management including internal and external channels (diversion channels)
- Some of the sterile material will be used as backfill for the open pits

Organic Material Dumps (DMO)

There are five identified deposits of organic material (DMO) included in the current mine closure plan: DMO No.1, DMO No.5, Tiwinza, Cienága, and Mirador. The general closure activities for the DMOs include using material from DMOs for cover (Cover I) in the aforementioned facilities. Any remaining materials will require no additional stability activities and will be revegetated.

Progressive Closure

Progressive closure of some facilities at Tantahuatay is included in the approved closure plan. The facilities that were identified as part of the progressive closure strategy include the following.

- Three open pits
- Three heap leach pads
- Five waste rock dumps
- Three DMIs
- 4 Quarries
- General project infrastructure

17.5.2 Closure Cost Estimate

The estimated closure cost has been based on the approved closure plan (The Segunda Modificación del Plan de Cierre de Minas) and the results of the additional physical and chemical stability review performed by SRK during this project. SRK has prepared a revised closure cost estimate incorporating the relevant gaps and an update for several closure activities. Therefore, this section describes associated costs, and a comparison between the estimate and the approved closure plan of Tantahuatay.

SRK´s closure cost update focuses on the most significant cost components, which comprise approximately 80 percent of the total existing or updated costs. This analysis reviewed and, as necessary, updated quantities and unit costs based on the existing information and SRK's experience.

The analysis of the most significant closure activities was developed based on an update of productivity levels and unit prices related to labor, equipment and material. This analysis and update was based on published cost data[1], Peruvian Chamber of Construction CAPECO, (in its Spanish acronym)[2] and internal SRK data from similar projects.

In updating the closure costs, SRK made assumptions given that limited information available.

Buenaventura was not able to provide detailed information on the composition of the Cover Type I system. The information received by SRK was limited to a small number of components and potential sources for materials (Table 17.1).

Table 17-1: Cover I Composition

Material	Supplier
Biomass (Pine)	Local
Soils PAD Cienaga	Mine Material
Limestone (2 to 4 mm)	Local
Chufla Cienaga (S-83)	Mine Material
Organic residue	Material imported from Chiclayo
Ash de bagazo	Material imported from Chiclayo
Soils de Andrea	Mine Material
AWTP	Mine Material

Source: SRK

- SRK assumed material proportions similar to the cover system implemented in La Zanja mine. A distance of 3 km was assumed for the materials coming from the mine, 6.5 km for local materials and 250 km for materials transported from Chiclayo and new unit rates were calculated. The new unit rate for Cover Type 1 increased from 46.66 USD/m³ to 101.77 USD/m³. This significant increase in unit rates is significantly impacted by the material being transported from Chiclayo.

[1] Website: https://costosperu.com/

[2] Website: Capeco - Nosotros

- No detailed physical, chemical and agronomical characterization for the cover system components was provided.
- Due to the lack of adequate data to justify Cover I system performance as well as the significantly high cost associated with it, a detailed trade-off analysis is recommended to further justify cover requirements for the mine waste facilities.
- These assumptions lead to high unit rates which have a significant impact in the total closure costs.
- Based on the limited site-specific data available, it is SRK's opinion that perpetual water treatment will be required even with a Cover I, and therefore the expense of placing Cover I would not be justified.
- For cost estimation purposes, SRK only considered the placement of Cover II on the mine waste facilities.
- Unit rates for Cover Type II were reviewed and updated based on SRK's experience in other projects and an independent calculation of equipment productivities.
- Cover types include layer thicknesses up to 25 cm thick. It is extremely difficult to place a layer of soil this thin consistently over large areas. Required volumes should be adjusted to accommodate a minimum thickness of 30 cm with some portion of the layer placed thicker.
- Unit rates for cover type II materials were independently estimated by SRK. An increase from 11.67 USD/m³ to 12.55 USD/m³ was observed.
- Costs for active water treatment were included in this assessment. The assumption is that active water treatment will be needed in perpetuity. The current closure plan does not include water treatment. Details for water treatment costs are treated separately in Section 4.3
- Contingency was increased from 9% in the current closure plan to 15% in the updated closure costs.
- Indirect costs for supervision control CQA and Complementary engineering studies increased from 8% in the current final closure plan to 20% in SRK's estimation, based on SRK's experience in closure projects
- Indirect costs for general expenses and utility increased from 18% in the current final closure plan to 40% in SRK's estimation, based on SRK's experience in closure projects.
- Indirect costs for supervision control CQA and Complementary engineering studies were maintained in 8% from the current progressive closure plan in SRK's estimation, based on SRK's experience in closure projects
- Indirect costs for general expenses and utility were reduced from 18% in the current progressive closure plan to 10% in SRK's estimation, based on SRK's experience in closure projects.

Table 17-2 below, shows a comparison of costs between the current BVN progressive and final mine closure plan and the SRK estimates updated to February 2022.

Table 17-2: UM Tantahuatay closure cost comparison

Description	Closure Plan -2020		Update Closure Cost -2021		Percentage	
	Progressive Closure	Final Closure	Progressive Closure	Final Closure	Progressive Closure	Final Closure
	(US$)	(US$)	(US$)	(US$)	(%)	(%)
Direct cost	63,318,154	24,735,08	54,647,631	30,885,829	-14%	25%
Indirect cost	16,462,720	6,431,123	6,601,459	9,502,117	-60%	48%
Contingency*	5,698,634	2,226,158	9,187,364	6,058,192	-	-
Total (without Taxes)	**85,479,508**	**33,392,369**	**70,436,454**	**46,446,138**	**-18%**	**39%**

Source: SRK

Post-Closure Costs

Post-closure activities were presented in the approved closure plan. These primarily related to monitoring and maintenance for the minimum requirement of five years. SRK updated these costs based on professional experience and internal databases but did not increase the length of the monitoring and maintenance period. The results are presented in the following Table 17-3.

Table 17-3: Post-closure approved closure plan and update (2021)

Description	Approved Closure Plan (2020)	Update Closure Cost (2021)	Percentage Increase
	(US$)	(US$)	(%)
Mobilization/Demobilization	60,603	60,603	0%
Maintenance	1,815,717	1,909,174	5%
Monitoring	316,013	334,791	6%
Direct Cost	2,192,333	2,304,568	16%
Indirect cost	570,007	1,382,741	132%
Contingency	197,310	345,685	-
Total (without Taxes)	**5,151,983**	**6,337,562**	**23%**

Source: SRK

17.5.3 Limitations on the Current Closure Plan and Cost Estimate

Limited information was available in the approved closure plan and cost estimate regarding closure material quantities and how they were calculated. Because of the limited information available, particularly the lack of details as to how those costs were calculated basis for the unit rates, SRK cannot validate the cost estimate in the approved closure plan.

However, in order to assess the impact of changes in unit prices, SRK used the quantities and key parameters (e.g., topsoil haul distances and cover material thicknesses) that were included in the approved closure plan and assumptions where details were absent, and applied current unit rates for labor, equipment, and materials to those quantities. For example, the cost to excavate, haul and place low permeability cover material did not indicate how far the material would be hauled. In this case, we used published and internal equipment and labor rates, and estimated an average haul distance to update the cost. For Tantahuatay, the resulting average factor is 1.18.

17.5.4 Material Omissions from the Closure Plan and Cost Estimate

Based on our review of the available data, SRK has observations with respect to predicting and designing closure actions to manage the long-term physical stability of the site. The results of the stability analyses indicated that all analyzed slope configurations satisfied the minimum static and pseudostatic FOS criteria set in the study (static FOS=1.5; pseudostatic FOS = 1.0). SRK makes the following observations with respect to the available stability analyses:

- The established seismic loading and stability criteria satisfy Peruvian national regulations and are typically accepted for studies using operating-basis earthquake loading but should be reviewed and revised depending on the guidelines Buenaventura elects to adhere to in demonstrating long-term closure stabilization.
- The stability analyses completed to date consider several different seismic accelerations, each of which appear to satisfy current Peruvian national regulations, but none of which satisfy the passive-closure recommendations in the Global Industry Standard on Tailings Management. If Buenaventura decides to comply with this relatively new standard, additional design and stabilization work will be required to ensure the facilities meet the seismic criteria of the GISTM, possibly including the construction of compacted fill buttresses to increase embankment stability under 1/10,000-year seismic loading. At the very least, a consistent approach to determining and applying the seismic hazard across the site should be developed and applied to all proposed closure configurations to facilitate a consistent approach to closure stabilization design.
- Slopes to be covered should be analyzed using the infinite slope method to demonstrate long-term closure stability of the cover layer.
- Records of WRD and HLP seepage and draindown were not available. Phreatic conditions within the WRDs and HLPs are generally unknown and should be modelled for the closure configuration to facilitate accurate stability analyses and predictions of long-term draindown flows.

Based on our review of the available geochemistry data, SRK has observations with respect to predicting and designing closure actions to manage the long-term chemical stability of the site and potential impacts to the surrounding environment, specifically downstream water resources.

- The Amphos21 closure cost estimate (CCE) includes no provision of post-closure water treatment. The fact that water is treated operationally means that there is a high likelihood that water treatment will be required post-closure, at least for a period of time. The available water quality and geochemistry data supports this assumption.
- There is currently no post-closure water balance for the site, which is required to determine the flows of water associated with mine features, such as the open pit, waste rock dumps (WRD) and heap leach facilities (HLPs).
- There are currently no predictions of future water quality at Tantahuatay. These are required to fully determine the nature and length of time that water treatment is required post-closure.
- The site climatic conditions, the available water quality data, and fact that the site currently treats water prior to discharge indicates that water treatment will be required after closure to meet downstream water quality objectives. Based on data reviewed, SRK anticipates that even with the closure actions proposed, including covers on mine waste

facilities, untreated discharge water from the site will result in continued exceedances of the applicable standards.

- Water treatment is currently required at the site. Because water is treated operationally, SRK's experience indicates that water treatment would also likely be required post-closure, at least for a period of time that extends beyond that allowed in the closure plan.
- Although detailed geochemical analysis has not been conducted and predictive numerical calculations have not been produced to determine future water quality predictions, the nature of the geology and mine waste materials at Tantahuatay indicate that acid rock drainage and metal leaching (ARDML) is likely to be an issue post-closure. Available geochemistry results indicate that the majority of waste material generated at site are potentially acid generating.
- Based on estimates of flows by SRK from WRD and the HLP and the relative positions of these facilities, it is anticipated that two HDS plants will be required, as is the case operationally. After 5 years of operation the cyanide treatment plants will be decommissioned (subject to confirmatory monitoring for cyanide). Remaining flows from the HLPs that require treatment will be transferred to the other HDS WTP by use of pumping and gravity.
- Numerical simulations of the post-closure conditions are not detailed. It is unclear if the direct precipitation and runoff from watershed were included in the open pit water balance.
- It is unclear if the backfilled open pits will be terminal sinks or through-flow systems.
- Sensitivity analysis of post-closure conditions was not performed.

Water Treatment Capital Cost

Because post-closure water treatment was omitted from the current closure and post-closure costs, and the available data indicate that this will be required, SRK has prepared a high-level estimate of the capital costs to update the existing water treatment plant to a HDS plant and construct a second HDS water treatment plant to treat water from the TSF after closure. Operating costs are included as a post-closure cost.

The capital costs (Capex) for water treatment have been estimated by using previously received quotations for the major equipment associated with HDS plants, scaling these appropriately and adjusting for inflation. Due to time constraints no new quotes have been sought as part of this project. No optimization of design has been conducted with the scaling of costs being the same for each WTP. SRK has also used our experience of similar commissions. SRK has included a 50% buffer in the predicted maximum design flow to provide a contingency for plant sizing. The Capex for both HDS WTPs at post-closure assume WTP would need to be operational immediately in the post-closure phase.

Table 17-4: Water Treatment Capex

Item	Tant WTP* Cost (USD)	Cienaga WTP+ Cost (USD)	Tantahuatay Cyanide WTP@ Cost (USD)	Cienaga Norte Cyanide WTP# Cost (USD)
	Predicted Max Flow – 346 m³/hr	Predicted Max Flow – 87 m³/hr		
	Design Flow – 519 m³/hr	Design Flow – 131 m³/hr		
General Excavation	74,400	-	-	-
Structures	289,000	-	-	-
Equipment	6,000,000	1,200,000	1,200,000	1,200,000
Electrical	250,000	-	-	-
Piping	250,000	-	-	-
Site Construction Management and Services	315,000	-	-	-
Construction Equipment and Services	234,000	-	-	-
Engineering	500,000	-	-	-
Commissioning	50,000	-	-	-
Sub Total	**7,962,400**	**1,200,000**	**1,200,000**	**1,200,000**
10% Contractor Profit	796,240	120,000	120,000	120,000
Total	**8,758,640**	**1,320,000**	**1,320,000**	**1,320,000**

Source: SRK

As both HDS WTPs will be required to operate in perpetuity, albeit at a reduced capacity in the future, it is necessary to consider the expected lifespan of the WTPs and the sustaining CAPEX that would be required to build new or refurbish WTP in the future. For this aspect, it was important to consider the fact that estimates of post-closure flows are lower in the future in comparison to the first 3 year of the post-closure phase. The expected lifespan of the new or upgraded HDS WTP is estimated at 20 years. The sustaining CAPEX is estimated to be USD 430,000 for the first 3 years post-closure and USD 112,000 per year thereafter for the Tantahuatay HDS WTP.

For the Cienaga Norte HDS WTP the sustaining CAPEX is estimated at USD 650,000 annually for the first 5 years due to capital upgrades that are assumed to be required at this time to build a new or upgraded HDS WTP. Thereafter, the sustaining CAPEX is estimated at USD 118,000 annually. The reduction in sustaining CAPEX after 5 years is due to a reduction in predicted flows and the fact that the WTP will have been replaced/upgraded and will operate with an assumed design life of approximately 20 years.

Water Treatment Operating Cost

Total operating costs are based on average annual flows that require treatment. Each of the HDS WTP will be required in perpetuity.

The annual summary of closure costs by period are shown in Table 17-5.

Table 17-5: Total Water Treatment Costs Annual Summary

Item	Years 0-3	Years 3-5	Years 6-10	Years >10
Tanta_HDS WTP Opex	5,000,000	390,000	390,000	390,000
Cienaga Norte_HDS WTP Opex	550,000	129,000	492,000	492,000
Tanta_Cyanide WTP Opex	950,000	315,000	-	-
Cienaga Cyanide WTP Opex	177,000	66,000	-	-
Sludge Mgmt.	140,000	11,500	11,500	11,500
Tanta_HDS WTP Sustaining Capex	430,000	112,000	112,000	112,000
Cienaga Norte_HDS WTP Sustaining Capex	650,000	650,000	118,000	118,000
Tanta_Cyanide WTP Sustaining Capex	50,000	50,000	-	-
Cienaga Cyanide WTP Sustaining Capex	50,000	50,000	-	-
Total (US$)	**7,997,000**	**1,773,500**	**1,123,500**	**1,123,500**

Source: SRK

17.6 Adequacy of Plans

17.6.1 Environmental

Through a field supervision, the OEFA identified a component with variations that did not have environmental certification. In this regard, the mine owner states that the file submitted to MINEM for construction was approved considering this variation. Also, the variation has been included in the 3rd modified EIA that is being processed, so there would be elements to support its existence.

In addition, the Fifth STR declared non-compliant, points out an inconsistency in the description of certain components with respect to what is described in the EMI approved for the Tantahuatay MU, so it is possible that these components already exist, but are not included in the existing EMI.

None of the aforementioned aspects represent a threat to the continuity of mining operations, which are mainly supported by current environmental management instruments.

17.6.2 Local Individuals and Groups

Regarding the 20 relationship goals to be executed in 2021 and based on the traffic light monitoring, six (06) are in red, twelve (12) are in green, and two (02) are in yellow. Of these it should be noted that the activities linked to obligations from the EMIs, agreements, and minutes with ADSI and AISI recorded in the Matrix of Obligations - Commitments 2021 show that 48 activities have been completed, 21 are in process, 17 suspended by COVID, and 1 with no progress, resulting in a projected annual execution of 55%.

While it is true that this COVID-19 context has weakened community relations due to the lack of visits to the ADSI and AISI, it is also true that the Social Affairs Area of the mining unit should have more support to meet the goals, objectives, and proposals for improvement to implement the strategy developed for 2022. This strategy seeks to meet the obligations and commitments acquired and improve community relations to facilitate acquisition of land or areas of interest to expand the mining operation.

17.6.3 Mine Closure

Hydrology and Stormwater Management

- A comprehensive sitewide stormwater management system for the closed site configuration should be developed and documented in a design report. The report should specify all design and input parameters used and should align with Buenaventura's chosen final closure criteria (CDA, GISTM, etc.).
- The details of the comprehensive stormwater design should be used to develop accurate construction costs using local or regional contractors to update the pricing and cost estimate.

Hydrogeology

- Post-mining simulations should be updated in the next level of studies for an accurate estimate of the main hydrogeological parameters' designs (water levels, groundwater flows and rebound timing). Simulations should consider the runoff from the watersheds, the prediction of termination sink or through-flow types of the backfilled open pits, and a sensitivity analysis.

Cover Design

A detailed cover and borrow soil material balance should be prepared to determine exactly how much of each material type is required and where the material will come from. Each type of material should be characterized for geotechnical, hydraulic, and geochemical properties to support infiltration modeling, water balance development, and chemical modeling.

- A trade-off study should be prepared to evaluate the potential cost benefit of alternative and more feasible cover types.
- Cover costs should be adjusted to account for the results of the trade-off study, the detailed material balance, and the specified source for each material.

Physical Stability

- Review and revise FOS criteria based on selected guideline for demonstrating long-term closure stabilization.
- Complete sitewide seismic hazard assessment and apply consistently to all slope stability analyses.
- Review and revise closure designs, construction materials, and slope stability analyses to ensure long-term stability of all construction components.
- Evaluate phreatic conditions within WRDs and HLPs and develop a sitewide water balance model incorporating all predicted flows and informing the potential need for post-closure water treatment.
- Complete geochemical characterization of waste rock and heap leach pads and prepare a sitewide model of predicted water chemistry to facilitate determination of post-closure water management requirements.

Water Quality and Water Treatment

The available geochemistry test work data indicates that the majority of mine waste materials at Tantahuatay are PAG. The data demonstrates a significant potential for ARDML impacts which is evidenced by the influent water chemistry to the exiting WTP that contain elevated metals that exceed the mine discharge permits. Hence, BVN operationally treat water at the site.

Based on the review of the existing information and identified gaps, SRK have concluded that:

- The lack of inclusion of a water treatment provision in the Amphos21 CCE is a significant omission. As water treatment is required operationally, SRK has assumed that it will be required post-closure.
- As predictions of future water quality and flows (i.e., a water balance) are not available, SRK has assumed that water treatment will be required in perpetuity, with the chemistry remaining of similar type to that observed operationally.
- SRK recommends that the existing WTP be used and upgraded in terms of capacity and for the inclusion of a filter press where necessary. SRK also recommends the continued operation of each of cyanide WTP for 5 years, after which time they can be decommissioned subject to satisfactory monitoring for cyanide. Residual flows that require treatment from HLP will be transferred to the HDS WTP by a combination of pumping and gravity flow.

A number of assumptions have been made in order to develop the conceptual level water treatment cost estimate. In order to refine and improve this cost estimate, SRK recommends that the following work is carried out as soon as possible to improve the accuracy of the work.

- Some complementary geochemical characterization of mine waste materials may be necessary, specifically for the residual HLP material as its characteristics may have changed as a result of the heap leaching process. Predictive numerical geochemical modelling to determine likely future water quality associated with the HLP an WRD are required. Depending on future hydrogeological and hydrological modelling, it may be necessary to carry out predictive numerical geochemical modelling for the open pit area. This is due to an assumption, developed by BVN, that there will be no decant to the environment of contact water from the pits. Complimentary geochemistry test work would include some amount humidity cell test work (HCT) to determine long term metal release rates and reactivity with time. Based on SRKs experience of this type of work and the size and type of waste facilities, it is anticipated that approximate costs for this predictive numerical modelling would be in the order of $175,000 - $225,000 for professional fees, not inclusive of third-party external disbursements such as analytical test work, borehole drilling, site investigation etc.
- The development of a post-closure water balance that will define the flows and the timings, thereof. The current numerical groundwater model needs to be updated and recalibrated in order to predict post-closure hydrological and hydrogeological conditions, aiming at more accurate estimates of groundwater and surface flows associated with backfilled pits to be used in the post-closure water balance. The cost of the hydrological and hydrogeological numerical simulations would be around $75,000 to $100,000.

Depending on the results of the above, further assessment of the post-closure treatment options would be required. Depending on the type of chemistry and flows predicted this would be expected to cost between $75,000 - $150,000 excluding external disbursements such as analytical test work.

The exact scope of this work cannot be determined, but may include, options appraisals, trade off studies, obtaining third party vendor costs for active water treatment and the piloting testing of passive water treatment options where appropriate.

Closure Costs

The following items will need additional effort to estimate a more accurate closure cost in compliance with S-K 1300.

- Proposed cover systems need to be reassessed, specially Cover I which will be used over acid generating materials. The unit rates for this cover system in the current closure plan seem to be on the low end, considering that some of the cover components will need to be transported from 250 km away.
- The need for, and cost, of water treatment should be investigated in future studies to optimize closure activities related to water management.
- Once the closure and post-closure activities are reviewed and updated in the closure plan, the requirements and length of time needed for post-closure monitoring and maintenance should be revised to accommodate those changes.

17.7 Commitments to Ensure Local Procurement and Hiring

Several mandatory commitments have been identified in the 2021 Social Management Plan, prepared from the 1st and 2nd EIA Amendments, corresponding to local employment and the acquisition of goods and services.

17.7.1 Commitments to ensure the hiring of local labor

In the 2021 Social Management Plan, section V) Local employment, there are six (06) Commitments related with hiring and training of new employees. It does not present evidence or progress, but high priority is given to the following activities:

- Provide job training to workers during the exploration, construction and operation phases of the Project, to contribute to the formation of qualified labor.
- Before starting work, each worker will receive an induction on Community Relationships.
- Promote scholarships at the technological institute and hiring by the company: 03 workers awarded scholarships per year at the technological institute.
- Training in heavy machinery. 01 heavy machinery training workshop per year.
- Tantahuatay will invest US$310K in local employment per year (1st EIA Amendment).
- An annual budget for the Local Employment Program will be defined autonomously, under its own criteria and corporate procedures for an amount of US$760,000 (2nd EIA Amendment).

Furthermore, in the Environmental Commitment Matrix 2020 - Mine Closure Plan - Coimolache II, window year 2021, the objective in regards of local hiring is as follows:

Generate adequate conditions with the local business community of Hualgayoc and Chugur to ensure that Tantahuatay can adequately conduct operations. The goal is to have one (01) internal plan to articulate with the local business community and to scale up employment opportunities to comply with the obligation/commitment to ensure that 80% of employment generated by the mining operation is sourced from the area. The Communication and Consultation Program's goal is to improve relationship and job application management. Currently, 40% of applications are from candidates living in the area.

17.7.2 Commitments to ensure local procurement

In the 2021 Social Management Plan, section VI) Acquisition of goods and services has a budget of S/.21,000 and has the following commitments:

- The Project will seek to promote the linkage of local companies or organizations with the company's activities in the provision of goods and services: Annual technical assistance program to improve the capacities and abilities of local companies/organizations.
- The project will promote the acquisition of local products for those items in which there is a significant local offer that meets the necessary quality, quantity, timeliness and competitiveness standards. (In coordination with Tantahuatay area of procurement and logistics).
- Communicate to potential suppliers and stakeholders, the Project's local purchasing policies and requirements.
- Compliance with the established minimum quota for local acquisitions (according to Diagnosis carried out) Minimum percentage of local acquisitions fulfilled each year: i) 25 companies per year. ii) Tantahuatay will have a budget for the program of US$450K. iii) Maintain fluid information on product and/or service requirements.

In the Matrix of environmental commitments 2020 - Mine Closure Plan - Coimolache II, window year 2021. The objectives are: J) Comply with IGA commitments, agreements and minutes with the direct and indirect area of influence. Registering as a Goal to Comply with 100% of Annex V: Commitment Fulfillment Sheet, which is 55% advanced, within the Goods and Services Acquisition Program.

18 Economic Analysis

Estimation of capital and operating costs is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations. For this report, capital and operating costs are estimated at PFS-level with a targeted accuracy of +/-25%. However, this accuracy level is only applicable to the base case operating scenario and forward-looking assumptions outlined in this report. Therefore, changes in these forward-looking assumptions can result in capital and operating costs that deviate more than 25% from the costs forecast herein.

SRK has reviewed and analyzed the following aspects:

- Historical operating costs from 2018 to 2020, including a detailed analysis of the cost database and compilation of costs for forecast estimation;
- Projected capital cost for the LOM of Tantahuatay, including sustaining CAPEX

18.1 Capital and Operating Cost Estimates

18.1.1 Operating Costs

The forecast LoM operating unit costs are summarized in

Table 18-1.

A contingency of 10% was considered for the operating cost to cover any unpredictable factor or variation in the future cost with regard to the historical cost used for forecast estimation.

Table 18-1: Operating cost estimate

Item **	Units	Forecast Cost	Estimated cost * (Inc. 10% Contingency)
Mining Open Pit			
Tantahuatay 2 - Ore	US$ / t ore	1.95	2.15
Tantahuatay 2 - Waste	US$ / t waste	1.75	1.93
Cienaga Norte - Ore	US$ / t ore	2.93	3.22
Cienaga Norte - Waste	US$ / t waste	2.94	3.23
Tantahuatay 2 EXT NW - Ore	US$ / t ore	1.92	2.11
Tantahuatay 2 EXT NW - Waste	US$ / t waste	1.83	2.01
Mirador - Ore	US$ / t ore	2.40	2.64
Mirador - Waste	US$ / t waste	2.42	2.66
Plant Processing			
Plant	US$ / t processed	1.32	1.46
Plant (with dynamic pad)	US$ / t processed	1.35	1.49
G&A Mine Operations	US$ / t processed	1.57	1.73
Sustaining CAPEX			
Tantahuatay 2	US$ / t processed	0.22	0.24
Cienaga Norte	US$ / t processed	0.22	0.24
Tantahuatay 2 EXT NW	US$ / t processed	1.60	1.76
Mirador	US$ / t processed	1.88	2.07
Off Site Cost (Corporate) ***	M US$ / year	2.00	2.00
Other costs			
Incremental cost ****	US$ / bench - t rock	0.013	0.014
Rehandle *****	US$ / t ore	0.73	0.73
Rinsing costs ******	M US$ / year	7.20	7.92
	US$ / oz Au recovered	65.00	71.50

Source: Buenaventura

* Some items, depending on the cost type, do not include a contingency
** Estimation does not include selling expenses and some commercial costs stated by the contract with the trader. These costs are included directly in the Cashflow
*** Average forecast corporate cost (2022-2026) attributable to Tantahuatay mining unit
**** Estimated for a bench height of 8 m and using in force contractor rates for hauling
***** Cost is applied to material stored in the stockpile and sent to a leach pad
****** Rinsing process will start after mine production is ended (aligned with the closure plan starts)

18.1.2 Capital Costs

Capital costs were estimated by Buenaventura based on infrastructure and investment requirements for the LoM plan.

A contingency of 15% was considered for the capital cost to cover any unpredictable factor or variation.

Capital costs for the LoM are summarized in

Table 18-22. SRK does not have any additional details about the yearly amounts to support or conduct a detailed analysis on specific infrastructure or components.

Table 18-2: Capital cost estimation

Year	Capital cost *
2022	23.33
2023	40.50
2024	24.10
2025	11.45
2026	2.05
Total	**101.43**

Source: Buenaventura

* Amounts do not include a 15% contingency

18.1.3 Closure Cost

SRK has developed an estimation cost for the three stages of the closure process and the water treatment system:

- Progressive closure
- Final Closure
- Post Closure
- Water treatment

A contingency of 15% was considered for the closure cost to cover any unpredictable factor or variation.

Additionally to the estimated closure costs, it has been considered the cost of the existing water treatment system, which implies an expenditure of 4.20 M US$ / year.

The total closure cost distributed up to the year 2051 is 169.41 M US$. The detail of closure cost is shown in

Table 18-3.

Table 18-3: Closure Cost

Year	Progressive closure *		Final Closure *		Post Closure *		Water treatment *	
	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)	Direct (M US$)	Indirect (M US$)
2022	9.11	1.10					1.46	
2023	9.11	1.10					1.46	
2024	9.11	1.10					1.46	
2025	9.11	1.10					1.46	
2026	9.11	1.10					1.46	
2027	9.11	1.10					1.46	
2028			10.30	3.17			1.32	
2029			10.30	3.17			1.32	
2030			10.30	3.17			1.32	
2031					0.11	0.02		8.00
2032					0.11	0.02		8.00
2033					0.11	0.02		8.00
2034					0.11	0.02		8.00
2035					0.11	0.02		1.77
2036					0.11	0.02		1.77
2037					0.11	0.02		1.12
2038					0.11	0.02		1.12
2039					0.11	0.02		1.12
2040					0.11	0.02		1.12
2041					0.11	0.02		1.12
2042					0.11	0.02		1.12
2043					0.11	0.02		1.12
2044					0.11	0.02		1.12
2045					0.11	0.02		1.12
2046					0.11	0.02		1.12
2047					0.11	0.02		1.12
2048					0.11	0.02		1.12
2049					0.11	0.02		1.12
2050					0.11	0.02		1.12
2051					0.11	0.02		1.12
Total	**54.65**	**6.60**	**30.89**	**9.50**	**2.30**	**0.36**	**12.72**	**52.39**

Source: SRK

* Amounts do not include 15% contingency

18.2 Basis and Accuracy Level for Cost Estimates

18.2.1 Basis and Premises for operating cost

According to the Life of Mine (LoM) plan, future operations will have conditions similar to those found in current operations but some changes are planned, which have been included in the criteria to estimate the operating cost.

The following premises and criteria were considered for the operating cost estimation:

- A 2018-2020 cost database was used for the forecast cost estimation. The cost estimation process began in May 2021, when information on reported 2021's costs was not available. A comparison between the estimated forecast cost and 2021 results was made, resulting in a concordance above 90%;
- The cost of the existing water treatment system was considered as part of progressive closure costs;
- A detailed analysis of the equipment fleet, hauling contractor rates, and hauling routes was developed by Buenaventura and SRK to estimate a specific cost by each open pit;
- An incremental cost was considered for deeper benches;
- The current mining operation use contractors and cost estimation considers the same schema;
- Non-inflation rate was considered in the cost estimation;
- Royalties are applicable to Tantahuatay 2 open pit;
- Exploration costs related to brownfield targets are not included in the operating cost estimation.

Estimated operating costs included:

- Mining cost contractors
- Mining cycle activities (drilling, blasting, loading, hauling and ground support)
- Cost of auxiliary services
- Energy (mining, processing plant and facilities)
- Processing plant consumables
- Mine equipment maintenance
- Processing plant equipment maintenance
- Supervision and management
- Technical services
- Administrative costs (all areas)
- Environmental costs
- Community relations
- Safety

Operational parameters considered for cost estimation are listed in Table 18-4.

Table 18-4: Operational parameters

Parameters	Units	Value
Mine production		
Open Pit - Ore	tpd	40,000
Open Pit - Waste	tpd	50,000
Plant Capacity		
Heap Leach plant	tpd	40,000

Source: Buenaventura

18.2.2 Basis and Premises for capital cost

According to references from Buenaventura the estimated capital cost included:

- Mine support facilities and utilities;
- Process plant sustaining investments;
- Leach pad facilities (growth and expansion);
- Waste dump construction;
- Site support facilities and utilities;
- Site power distribution;
- Camps.

19 Economic Analysis

19.1 General Description

SRK prepared a cash flow model to evaluate Tantahuatay's ore reserves on a real basis. This model was prepared on an annual basis from the effective date of mineral reserves estimation to the effective date for the exhaustion of mineral reserves. This section presents the main assumptions used in the cash flow model and the resulting indicative economics. The model results are presented in U.S. dollars (US$), unless otherwise stated.

Technical and cost information is presented on a 100% basis to assist the reader in developing a clear view of the fundamentals of the operation. Buenaventura's attributable portion of mineral resources and reserves is 40.10%.

As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations.

According rules S-K 1300, all inputs to the economic analysis are at the minimum of a pre-feasibility level of confidence and have an accuracy level of ±25% and a contingency range below 15%.

The financial analysis is based on an after-tax discount rate of 7.01%. All costs and prices are in unescalated "real" dollars expressed as Real US$ 2021. The currency used to document the cash flow is US$.

19.1.1 Financial Model Parameters

Key criteria used in the analysis are presented throughout this section. Financial model parameters are summarized in Table 19-1.

Table 19-1: Financial Model Parameters

Item	Value
TEM Time Zero Start Date	January 1st, 2022
Mine Life	6
Discount Rate	7.01%

Source: Buenaventura, SRK

The model continues after the 6th year to include the whole closure cost in the cash flow analysis.

Buenaventura set a discount rate of 7.01%.

19.1.2 External Factors

Exchange Rates

Tantahuatay's operations are located in the central Andes of Peru. The official currency in Peru is the "Peruvian Sol". However, in accordance with typical practices in the Peruvian mining industry, most of the payments for services, consumables and others are made directly in US dollars (US$). Only a minor portion of payments is made in local currency (for example, salaries or some independent services).

An official exchange rate is announced daily by the Peruvian Central Bank. The exchange rate in the last ten years has shown remarkable stability.

The operating and capital costs are modeled directly in US Dollar (US$)

Metal Prices

Modeled prices are based on the prices developed by CRU Group in the Market Study section of this report. CRU Group developed two metal prices set options, "Nominal USD" and "Real 2021 US$".

The financial model is based on Real 2021 US$ set price.

Table 19-2: Metal Prices forecast

Metal	Units	Projected Metal Prices					
		2022	2023	2024	2025	2026	2027
Cu	US$/t	9,010	8,201	7,752	8,104	8,448	8,244
Zn	US$/t	3,490	3,095	2,604	1,975	2,131	2,197
Pb	US$/t	2,227	2,152	2,155	2,163	2,170	2,152
Au	US$/oz	1,740	1,660	1,580	1,630	1,715	1,677
Ag	US$/oz	22.90	23.40	24.20	25.90	28.20	27.30

Metal	Units	Projected Metal Prices					
		2028	2029	2030	2031	2032	2033
Cu	US$/t	8,041	7,838	7,634	7,431	7,450	7,469
Zn	US$/t	2,264	2,330	2,397	2,463	2,469	2,475
Pb	US$/t	2,135	2,117	2,099	2,081	2,086	2,091
Au	US$/oz	1,639	1,603	1,567	1,532	1,498	1,465
Ag	US$/oz	26.50	25.60	24.80	24.10	23.30	22.60

Source: CRU Group, February 23rd, 2022

* Expressed as Real 2021 US$

Taxes and Royalties

As modeled, the operation is subject to a 29.50% income tax plus a special mining income tax (variable rate).

Tax depreciation depends on the investment type and is calculated annually on a percentage basis; this figure is used to estimate the income tax payable. Typical depreciation periods used are 5 years, 10 years and LoM.

There is a third party royalty applicable to Tantahuatay's operations which impact a small zone located on the north-east side of Tanthuatay 2 open pit

SRK notes that the mining units are being evaluated with a corporate structure cost, including the cost of corporate offices located in Lima. Office costs in Lima are distributed among all managed mining units.

Mining concession holders are obligated to pay a Special Mining Tax (IEM) to exploit metallic mineral resources. For income tax purposes, the IEM is considered an expense in the same year it is paid. IEM is determined on a quarterly basis and a percentage is applied to the quarterly operating profit.

Participation of workers in a profit-sharing scheme is a labor benefit that seeks to boost employee productivity. This charge is set at 8% of the operation's profit before taxes.

Working Capital

The assumptions used for working capital in this analysis are as follows:

- Accounts Receivable (A/R): 30 day delay
- Accounts Payable (A/P): 30 day delay
- Zero opening balance for A/R and A/P

19.1.3 Technical Factors

Mining Profile

The modeled mining profile was developed by Buenaventura in collaboration with SRK. The details of mining profile are outlined earlier in this report. The modeled profile is presented on a 100% basis in Figure 19-1.

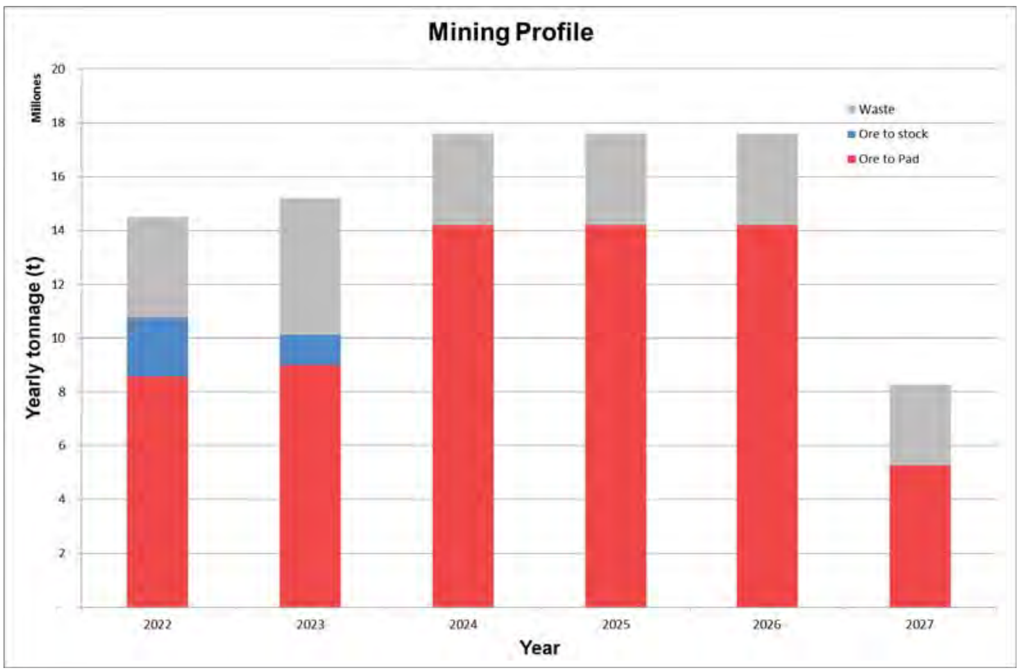


Figure 19-1: Tantahuatay Mining profile graphic

Souce: SRK, Buenaventura

A summary of the modeled life of mine mining profile is presented in .

Table 19-3: Tantahuatay Mining Summary

LOM Mining	Units	Value
Total OP Ore Mined	Mt	65.45
Total Waste Mined	Mt	22.03
Total Material Mined	Mt	87.48
LoM Strip Ratio	Adim	0.34

Source: Buenaventura, SRK

Processing Profile

The processing profile was developed by Buenaventura in collaboration with SRK. Stockpile was considered in the analysis. The modeled profile is presented on a 100% basis in Figure 19-2.

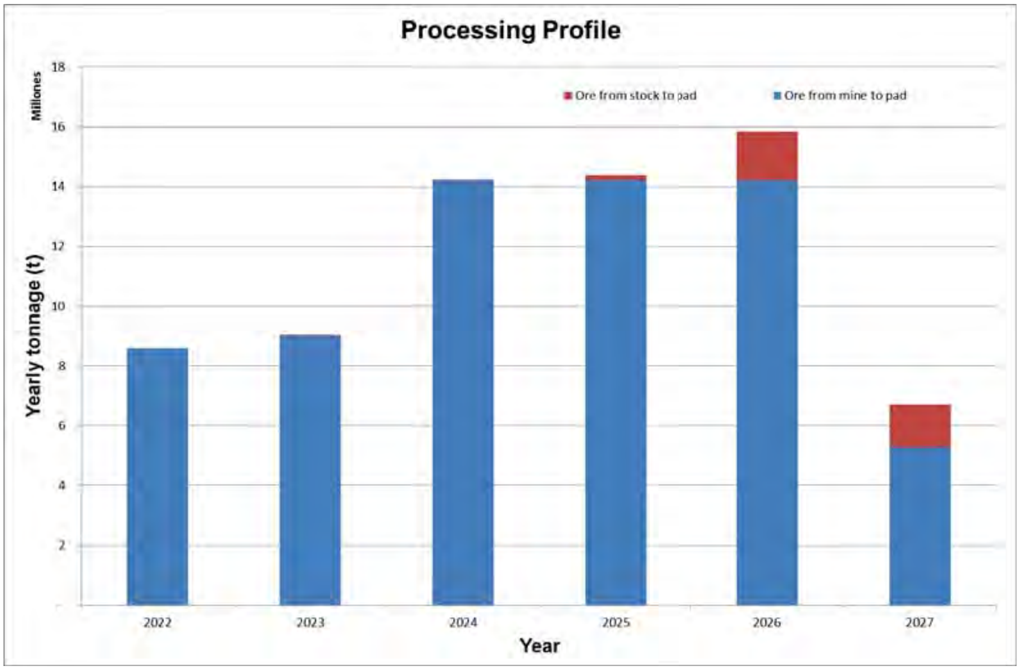


Figure 19-2: Tantahuatay Processing profile graphic

Source: SRK, Buenaventura

Yearly Estimated Costs

Main yearly costs were estimated outside of the Cash Flow template and incorporated to the Cash Flow template as a fixed cost on an annual basis.

Results for the mining cost, processing cost, and administrative cost estimation on an annual basis are shown in Table 19-44, Table 19-55, Table 19-66, Table 19-77 and Table 19-88

Table 19-4: Reference unit cost for Yearly cost calculation

Rock / Material	Reference Unit Cost		
	Mining	Proc	G&A
THY02 Ore	1.95	1.35	1.57
THY02 Waste	1.75		
CN Ore	2.93	1.35	1.57
CN Waste	2.94		
THY2 EXT NW4 Ore	1.92	1.32	1.57
THY2 EXT NW Waste	1.83		
MIR Ore	2.40	1.35	1.57
MIR Waste	2.42		
Rehandle Ore **	0.73		

Source: Buenaventura, SRK

Table 19-5: Yearly material movement (tonnage)

Rock / Material *	Plant	Production Year (Tonnage)										
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
THY02 Ore	Leach	2.9	0.7	1.0	4.3	0.1	3.5					
THY02 Waste		0.5	0.2	0.7	0.6	0.0	2.0					
CN Ore	Leach	0.6	1.4	0.0	0.0	1.6	0.4					
CN Waste		0.7	1.9	0.0	0.0	1.0	0.0					
THY2 EXT NW Ore	Leach	0.0	2.5	12.2	6.5	8.4	0.0					
THY2 EXT NW Waste		0.0	2.0	1.9	1.0	1.3	0.0					
MIR Ore	Leach	7.2	5.5	1.0	3.3	4.1	1.4					
MIR Waste		2.6	1.0	0.9	1.8	1.2	0.9					
Rehandle Ore **	Leach	0.0	0.0	0.0	0.2	1.6	1.4					

Source: Buenaventura, SRK

* Ore reported material corresponds to mined tonnage. Not necessarily the same tonnage is processed in that year due a portion is sent to stockpìle

** Rate only for ore sent from stockpile to pad

Table 19-6: Yearly incremental bench cost (Ore & Waste) and Rinsing cost (produced oz Au and Ag)

Rock / Material	Units	Production Year (Yearly Cost)										
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Incremental Cost ***	MUS$	1.80	1.89	1.02	1.34	2.64	0.61					
Rinsing cost	MUS$							10.20	10.20	8.92	8.06	7.20

Source: SRK

*** Incremental bench cost expressed as MUS$/year. It is calculated in detail

Table 19-7: Yearly Cost (No contingency)

Rock / Material	Units	Production Year (Yearly Cost)										
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mining Cost	MUS$	35.76	37.34	35.49	37.74	42.66	18.80					
Processing Cost	MUS$	11.60	12.09	18.83	19.22	21.12	9.04	10.20	10.20	8.92	8.06	7.20
G&A Cost	MUS$	13.49	14.13	22.32	22.58	24.88	10.51					

Source: SRK

Table 19-8: Yearly cost (Including contingency 10%)

Rock / Material	Units	Production Year (Yearly Cost)										
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mining Cost (Cont)	MUS$	39.34	41.07	39.03	41.51	46.92	20.68					
Processing Cost (Cont)	MUS$	12.76	13.30	20.71	21.14	23.24	9.94	11.22	11.22	9.81	8.86	7.92
G&A Cost (Cont)	MUS$	14.84	15.55	24.55	24.84	27.37	11.56					

Source:SRK

Capital Cost

Capital cost was estimated by Buenaventura on a yearly basis. No further detail is available.

A summary of capital costs is shown in Table 19-9.

Table 19-9: Yearly capital costs

Item	Units	Production Year				
		2022	2023	2024	2025	2026
Capital Cost LoM	MUS$	23.3	40.5	24.1	11.5	2.1

Source: Buenaventura

19.2 Results

The economic analysis metrics are prepared on an annual after-tax basis in US$. The results of the analysis are presented in **¡Error! No se encuentra el origen de la referencia.**. Note that because the mine is operating and valued on a total project basis by treating prior costs as sunk, IRR and payback period analysis are not relevant metrics.

Table 19-10: Indicative Economic Results

	Units	Value
LoM Cash Flow (Unfinanced)		
Total Net Sales	M US$	1,167.70
Total Operating cost	M US$	497.39
Total Operating Income	M US$	361.08
Income Taxes Paid	M US$	58.73
EBITDA		
Free Cash Flow	M US$	635.75
NPV @ 7.01%	M US$	459.02
After Tax		
Free Cash Flow	M US$	198.95
NPV @ 7.01%	M US$	157.41

Source: SRK

Table 19-11: Cashflow Analysis on an Annualized Basis

Operational Indicators	2022	2023	2024	2025	2026	2027
Ore Treated	**8,591,000**	**9,001,380**	**14,217,068**	**14,383,345**	**15,845,663**	**6,693,510**
Au Head Grade (g/tm)	0.38	0.37	0.30	0.27	0.28	0.25
Ag Head Grade (g/tm)	6.86	3.99	11.08	11.02	6.39	7.30
Au Fines (oz)	**76,404**	**77,061**	**97,640**	**90,327**	**105,082**	**38,327**
Ag Fines (oz)	**317,172**	**190,172**	**811,242**	**830,374**	**521,179**	**251,977**
Operating Cost (US$/tm)	**6.9**	**7.3**	**5.9**	**6.1**	**6.5**	**7.1**
Mine Cost (US$/tm ore mined)	3.7	4.1	2.8	2.9	3.3	3.9
Plant Cost (US$/tm ore processed)	1.5	1.5	1.5	1.5	1.5	1.5
Services Cost (US$/tm ore proc.)	1.7	1.7	1.7	1.7	1.7	1.7
D&A (US$/tm)	**(4.2)**	**(4.6)**	**(3.6)**	**(3.9)**	**(2.3)**	**(3.8)**
P&L						
Net Sales	**139,694**	**131,971**	**172,916**	**167,754**	**194,136**	**70,819**
- Mine	(39,336)	(41,070)	(39,034)	(41,511)	(46,924)	(20,681)
- Plant	(12,758)	(13,301)	(20,711)	(21,143)	(23,237)	(9,939)
- Services	(14,837)	(15,545)	(24,553)	(24,840)	(27,365)	(11,560)
Operating Cost	**(66,930)**	**(69,916)**	**(84,297)**	**(87,495)**	**(97,527)**	**(42,180)**
D&A	**(36,100)**	**(41,466)**	**(50,781)**	**(56,324)**	**(36,995)**	**(25,195)**
Gross Income	**36,663**	**20,589**	**37,838**	**23,935**	**59,614**	**3,443**
Selling Expenses	(302)	(285)	(374)	(363)	(420)	(153)
G&A	(2,410)	(2,277)	(2,983)	(2,893)	(3,338)	(1,212)
Operating Income	**33,951**	**18,027**	**34,481**	**20,679**	**55,857**	**2,078**
Royalties	(2,232)	(1,703)	(2,535)	(2,124)	(3,409)	-
FCF						
EBITDA	**67,819**	**57,789**	**82,727**	**74,879**	**89,443**	**27,274**
Workers Participation	(2,538)	(1,306)	(2,556)	(1,484)	(4,196)	(166)
Income Tax	(4,650)	(472)	(4,712)	(1,078)	(10,276)	-
CAPEX	**(26,830)**	**(46,575)**	**(27,715)**	**(13,168)**	**(2,358)**	**-**
Mine Closure **	**(18,246)**	**(18,246)**	**(18,246)**	**(18,246)**	**(18,246)**	**(18,246)**
Free Cash Flow	**15,556**	**-8,809**	**29,498**	**40,904**	**54,368**	**8,861**

Operational Indicators	2028	2029	2030	2031	2032	2033
Ore Treated	**0**	**0**	**0**	**0**		**-**
Au Head Grade (g/tm)	-	-	-	-		-
Ag Head Grade (g/tm)	-	-	-	-		-
Au Fines (oz)	**46,221**	**46,221**	**26,412**	**13,206**		**-**
Ag Fines (oz)	**1,122,069**	**1,122,069**	**641,182**	**320,591**		**-**
Operating Cost (US$/tm)	**-**	**-**	**-**	**-**		**-**
Mine Cost (US$/tm ore mined)	-	-	-	-		-
Plant Cost (US$/tm ore processed)	-	-	-	-		-
Services Cost (US$/tm ore processed)	-	-	-	-		-
D&A (US$/tm)	**-**	**-**	**-**	**-**		**-**
P&L						
Net Sales	**104,389**	**101,718**	**56,662**	**27,645**	**0**	**-**
- Mine	-	-	-	-	-	-
- Plant	(11,225)	(11,225)	(9,808)	(8,864)	(7,920)	-
- Services	-	-	-	-	-	-
Operating Cost	**(11,225)**	**(11,225)**	**(9,808)**	**(8,864)**	**(7,920)**	**-**
D&A	**(19,830)**	**(10,515)**	**(4,972)**	**(4,500)**	**-**	**-**
Gross Income	**73,335**	**79,979**	**41,882**	**14,281**	**-7,920**	**-**
Selling Expenses	(226)	(220)	(123)	(60)	-	-
G&A	(1,271)	(1,734)	(1,449)	(471)	-	-
Operating Income	**71,838**	**78,025**	**40,311**	**13,750**	**-7,920**	**-**
Royalties	-	-	-	-	-	-
FCF						
EBITDA	**91,668**	**88,539**	**45,283**	**18,250**	**-7,920**	**-**
Workers Participation	(5,747)	(6,242)	(3,225)	(1,100)	634	-
Income Tax	(14,482)	(16,161)	(5,925)	(976)	-	-
CAPEX	**-**	**-**	**-**	**-**	**-**	**-**
Mine Closure **	**(17,000)**	**(17,000)**	**(17,000)**	**(9,343)**	**(11,024)**	**(11,024)**
Free Cash Flow	**54,439**	**49,136**	**19,132**	**6,832**	**-18,311**	**(11,024)**

Source: Buenaventura, SRK

* Corresponds to Special Mining Tax (IEM). This tax is considered as a type of "royalty". Includes royalty with a third party company for a total of 33,500 US$ for LoM
** Between 2022 and 2027, reported amounts include the cost of existing water treatment plant of around 4.83 MUS$/year (including contingency)

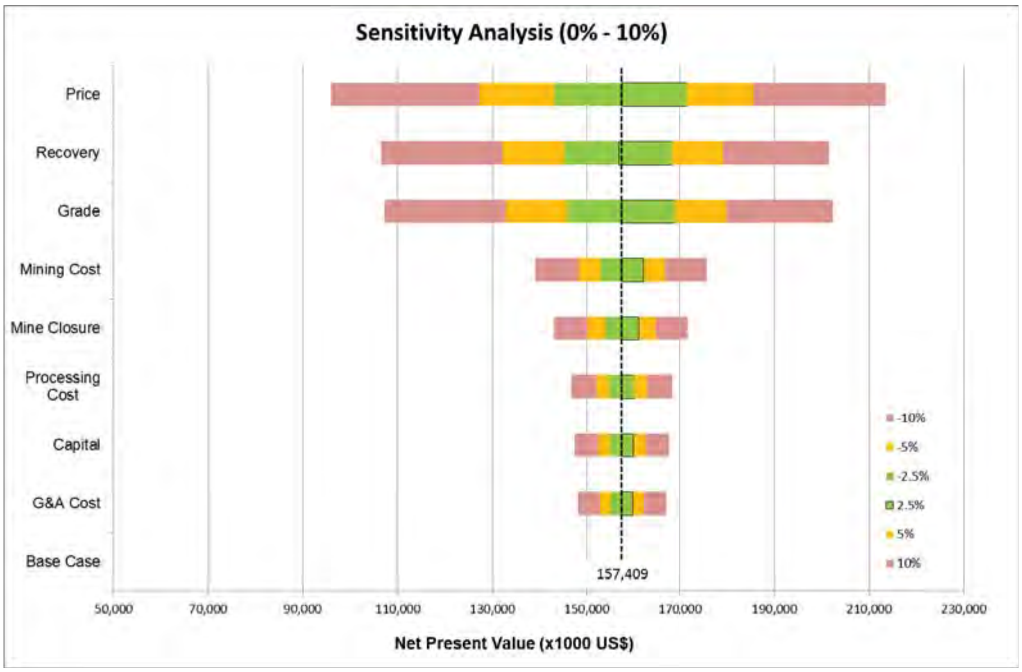
*** Mine closure cost were included up to 2051 to represent the post closure period

19.3 Sensitivity Analysis

SRK performed a sensitivity analysis to determine the relative sensitivity of the operation's NPV to a number of key parameters. This is accomplished by flexing each parameter upwards and downwards by 10%. Within the constraints of this analysis, the operation appears to be most sensitive to: commodity prices, metallurgical recovery and ore grade assumptions.

SRK cautions that this sensitivity analysis is for informational purposes only and notes that these parameters were flexed in isolation within the model and are assumed to be uncorrelated; this may not be an accurate reflection of reality. Additionally, the amount of flex in the selected parameters may violate physical or environmental constraint that are present at the operation.

Figure 19-3: Tantahuatay NPV Sensitivity Analysis



Source: SRK

20 Adjacent Properties

Tantahuatay is located in the mining district of Hualgayoc, within the Chicama-Yanacocha corridor, in the Cajamarca-Cutervo deflection of the western Andes Mountain range of northern Peru (Lecaros et al., 2000; Carlotto et al., 2009, 2010. This region is known by hosting epithermal Au-Ag-Cu deposits (INGEMMET, 2021). The most important neighboring ore deposits are:

- Cerro Corona mine is located in the region of Cajamarca, province of Hualgayoc, district of Hualgayoc, in El Tingo peasant community, La Jalca annex, in the hamlets of Coimolache and Pilancones. This mine produces copper concentrate with high-grade gold by applying conventional open pit mining methods and sulphide ore treatments through concentration floatation extraction. In the last three years (2018-2020), it had an annual production of 266,000 gold ounces.
- La Zanja mine produces gold by open pit mining. It is located in the district of Pulán, province of Santa Cruz, in the region of Cajamarca, starting operations in 2010. It is a gold epithermal deposit in oxides. Additionally, there are several recognized low-to-intermediate sulphuration vein systems in the periphery and also, copper-molybdenum-gold mineralization related to porphyry-type systems. The annual production in the last three years (2018-2020) was: 71,630 oz, 31,500 oz and 17,228 oz, respectively.
- Sipán mining unit, located in the department of Cajamarca, produced gold through heap leaching of the material of an epithermal deposit. The reserves were depleted in 2000 and for this reason, the mine stopped its extraction activities to proceed to its closure stage. The closure plan of Sipan mining unit was approved by the pertaining environmental authority through Directorate Resolution R.D. 067-2009-MEM-AAM.
- Yanacocha is a mining district with several volcanic events that have generated oxide deposits in gold surface in which copper sulphide deposits with arsenic underlie. It is located at km 54 north of the city of Cajamarca. Yanacocha has produced 38.6 M oz of Au, approximately, from 1993 to date. Gold production in 2020 was 340,000 oz versus 527,000 oz produced in 2019. Silver production was 2.140 million oz versus 0.737 million oz produced in 2019.

21 Other Relevant Data and Information

This Chapter is not relevant to this Report.

22 Interpretation and Conclusions

22.1 Geology

Tantahuatay presents four of the alteration assemblages of typical high-sulfidation epithermal systems, including an increase in the order of intensity, propylitic, quartz - kaolin (argillic), quartz - alunite - pyrophyllite (advanced argillic), and vuggy silica. The areas of Au anomalies at C° Tantahuatay, C° Mirador, C° Cienaga and C° Peña de las Águilas are associated with vuggy silica alteration and early hydrothermal breccias. Hydrothermal breccias of various types are common and form throughout the life of the hydrothermal system. The late stage dominated by the vapor phase and post-mineral supergene oxidation has been superimposed on hypogene assemblages (Tosdal, 1996).

Tantahuatay andesitic volcanic complex hosts a series of high-sulfidation epithermal deposits. It consists of five areas of Au-Ag mineralization, which are found in the supergene oxidation zones (Mirador Norte, Mirador Sur, Cienaga Norte, Cienaga Sur and Tantahuatay). It was also discovered that below the oxide level of Cerro Tantahuatay area, there is a significant Cu-Au-Ag resource in pyrite-enargite minerals (sulfides), which presents as disseminations and fracture fillings associated with advanced argillic alteration and breccia bodies.

Tantahuatay is a high-sulfidation epithermal deposit. It presents Au-Ag mineralization in oxides, which are associated with silicified breccias that present mainly silica alteration. Below the oxide level, there is a predominant Cu mineralization with the presence of As, and in smaller quantities, covellite and supergene chalcocite

The current Tantahuatay open pit (TH1 and TH2) mines Au mineralization within high-sulfidation epithermal alteration and mineralization structures comprising silicified breccias with extensive silica alteration, and laterally grading to pervasive silicification and local alteration of marginal silica alunite

22.2 Mineral processing

Coimolache's processing facilities consists of a run-off-mine (ROM) leaching operation, an adsorption-desorption-recovery plant, and a smelter to produce a dore bar containing approximately 98% precious metals.

During SRK's visit to Coimolache site, it observed that the interlift slopes of the leach pads at both Tantahuatay and Cienaga were not leached. At the time this report was issued, tonnage and grade had yet to be quantified; accordingly, the total of potentially recoverable ounces was not determined. SRK is the opinion that a good practice that has a major impact on theeconomics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad. Maintaining an ore inventory, such as unleached ore in the interlift' slopes, negatively impacts the company's economics. It is SRK's opinion that the figures reviewed will have a positive and material impact on the calculations and economics of Coimolache presented in this report.

Coimolache operates a conventional run-off-mine leaching operation that processes gold-silver ores in order to produce dore bars.

22.3 Mineral resources

Estimation parameters were defined based on quantitative kriging neighborhood analysis (QKNA) using Supervisor© software. Gold (Au ppm) and Silver (Ag ppm) grade estimation for each domain was run in Minesight© software. The estimation method used was Ordinary Kriging.

The estimation process was run in two passes, both for the Ordinary Kriging (OK) interpolation and the Nearest Neighbor (NN) interpolation, which was run for validation purposes.

Buenaventura has declared the Tantahuatay Mineral Resource at a cut-off grade Au and a price of 1,600 US$/oz and 1760 US$/oz Au for cone optimization, which is not an operating design. Blocks with indicated categorization have been considered for this estimation report.

SRK considers that Buenaventura is reporting within the “Reasonable Prospects for Eventual Economic Extraction,” as required by international reporting guidelines of the industry. Tantahuatay pit contains approximately 52,949,925 tonnes of indicated mineral resources grading 0.28 g/t Au and 13.994 g/t Ag (at a cut-off grade of 0.110 g/t Au).

Buenaventura has declared Cienaga Mineral Resource at a cut-off grade Au and a price of 1,600 US$/oz and 1760 US$/oz Au for cone optimization, which is not an operating design. Blocks with indicated categorization have been considered for this estimation report.

SRK considers that Buenaventura is reporting within the “Reasonable Prospects for Eventual Economic Extraction” as required by international reporting guidelines of the industry. Cienaga pit contains approximately 4,263,721 tonnes of indicated mineral resources grading 0.523 g/t Au and 1.978 g/t Ag (at a cut-off grade of 0.082 g/t Au).

Buenaventura has declared Mirador mineral resources at a cut-off grade Au and a price of 1,600 US$/oz and 1760 US$/oz Au for cone optimization, which is not an operating design. Blocks with indicated categorization have been considered for this estimation report.

SRK considers that Buenaventura is reporting within the “Reasonable Prospects for Eventual Economic Extraction” as required by international reporting guidelines of the industry. Mirador pit contains approximately 28,898,771 tonnes of indicated mineral resources grading 0.357 g/t Au and 0.906 g/t Ag at a cut-off grade of 0.148 g/t Au).

22.4 Mining

The strip ratio in the LOM is 0.41 on average.. .

Reported ore reserves total 65.45 Mt with an average grade of 0.30 g/t Au and 8.42 g/t Ag; reported waste will total 27.16 Mt. The LOM mining plan will be developed over a period of 6 years.

A total of 469.8 koz Au and 3,054.9 koz Ag are planned to be produced over the life of the mine.

22.5 Recovery methods

The open pit mining operation uses haultrucks to deliver ROM ore to two leaching pads, namely Tantahuatay and Cienaga, which are located approximately one kilometer apart. The Tantahuatay leach pad receives ore from multiple open pits including: Tantahuatay 2, Tantahuatay 2 North-West Extension, Tantahuatay 5, Mirador Sur, Mirador Norte. The Cienaga leach pad receives ore mainly from Cienaga Norte open pit.

SRK visited Coimolache site just before publishing this report and observed that not all the ore placed on the leach pad has been leached. More specifically, it seems that since beginning of the operation, all the interlift’ slopes have been left unleached. The following analysis is performed without correcting any figures, but the Economical Analysis of this report incorporates corrections to preliminary quantify the overall economic impact.

22.6 Infrastructure

The engineering design of Cienaga Norte DME was developed in 2017 and updated in 2018 by the company Ausenco, considering an extension of 44.3 ha for a storage volume of 6.7 Mm³ or 11.1 Mt, with a density of 1.65 t/m³.

The engineering design of Tantahuatay 1 DME was developed in 2014 by the company Ausenco, considering an extension of 13.9 ha for a storage volume of 2.2 Mm³ or 4.5Mt with an average density of 2 t/m³.

Tantahuatay DME 2 would be made up of dump material from Tantahuatay and Cienega Norte pits. The design contemplates an extension of 8.4 Ha for the storage of 1.22 Mm³ or its equivalent in tons of 1.95 Mt, for an average density of 1.6 t/m³.

22.7 Market Studies

Coimolache's doré has high levels of both silver and gold. There are 42 companies that are on LBMA's silver and gold refineries list. After excluding refineries in China, the list contains 29 refineries that can refine both silver and gold. Generally speaking, given Coimolache's product quality, its doré production should be acceptable in all of the customary markets. Going forward, Buenaventura has contracts in place securing sales for 100% of Coimolache's doré production for 2022, 2023 and 2024.

22.8 Permitting

SRK found that the Tantahuatay MU has an initial EIA from 2009, and approved an EIA to expand the operation (2013), as well as the amendments to these studies (2014, 2016), and obtained conformity for minor or environmentally non-significant STR variations (2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021). After reviewing the documents available, SRK corroborated that the Tantahuatay MU has mining rights for its mining and ancillary activities and possesses the corresponding permit from the mining authority.

SRK's review of available documentation allowed it to corroborate that the Tantahuatay MU has the corresponding permits to develop its mining beneficiation activities.

SRK was unable to access the content of the water use licenses obtained for the Tantahuatay MU, but verified that one water use license for human consumption exists as well as two licenses for underground water use for mining purposes and one license for surface water use for mining purposes.

It has been verified that Tantahuatay MU has obtained authorizations for its discharges into Los Gentiles Lake, from domestic wastewater treatment; into Tacamache Creek, from DWWTP Cienaga Norte; into Tantahuatay Creek, from AWTP Mirador Norte; and into Tacamache Creek, from industrial activities.

Tantahuatay MU's activities comply with the legal requirement of having presented measures for the progressive, final, and post-closure of its existing and planned components.

Coimolache's closure plan has been approved by the mining authority, which deemed that all corresponding regulatory requirements had been met. Although this plan is fairly detailed, most of the proposed plan does not comply with CDC and ICMM Guidelines. SRK is of the opinion that most of the actions proposed have been defined at the conceptual level given that detailed engineering has yet to be performed

Limited information was available in the approved closure plan and cost estimate regarding closure material quantities and how they were calculated. Because of the limited information available, particularly the lack of details as to how those costs were calculated basis for the unit rates, SRK cannot validate the cost estimate in the approved closure plan.

23 Recommendations

23.1 Mineral Processing

- SRK is the opinion that a good practice that has a major impact on the economics of a heap leaching operation is to immediately leach all the ore that has been loaded on a leach pad. Maintaining an ore inventory, like the unleached ore in the interlift' slopes negatively impact the company's economics.
- The metallurgical testing regularly carried out at Coimolache adequately addresses the needs to optimize the day-to-day operation. It is SRK's opinion that the metallurgical control should include tracking of all sulfide minerals in the fresh feed and its relationship to cyanide consumption, lime consumption, irrigation rate (m^2/tonne), and ultimately metal extraction of precious metals and cyanicides.

23.2 Mineral Resource Estimates

- SRK suggests that Tantahuatay must improve the geological interpretation to increase confidence in the geological models and be supported with alteration, mineralization and lithology geological mapping. In addition, estimation domains for gold and silver must be reviewed in detail to improve their construction and definition, as there are areas where locally the grade interpolation may be improved.
- No measured resources are reported due to several factors, including geological variability in high gold grade zones within the estimation domains that cannot be supported by the current drill pattern (50 m to 60m), mainly in sectors with higher variability for high gold grades. SRK recommends conducting several drill spacing studies to define and classify measured resources.
- SRK recommends implementing a reconciliation program that includes the different types of resource models, reserves, mine plans and plant results.

23.3 Sample Preparation, Analysis and Security

- SRK recommends including a greater Ag standard quantity in future re-sampling campaigns and/or diamond drills to improve the Ag accuracy evaluation.
- SRK recommends validating the protocols used for recollecting and preparing drilling samples with a heterogeneity study, focusing on the geological domains which will be the most important during the production.

23.4 Data Verification

- It is recommended to carry out internal validations of the database, verification of the data export process and issuance of chemical analysis reports from the Internal Laboratory for future reviews and/or internal audits.

23.5 Mineral Reserve Estimates

- Improve metallurgical recovery estimation through on-going performance control of plant operations and the execution of additional metallurgical tests. SRK finds that proposed percentages are coherent with the current and future processing plant operations; however, it is necessary to complete additional analysis.

- Review of costs associated with the water treatment process to evaluate implications for operating costs
- Improvement of “unit value” calculation by means the parameters traceability and adding some level of differentiation in the commercial terms, separating commercial terms related to the metal or payable content and commercial terms related to the dore bar.
- Geotechnical monitoring of open pit slopes and implement feedback process to incorporate monitoring results into the geotechnical model used for pit design purposes.
- Implement a policy for optimal pit shell selection which allow improvements in the financial results;
- Implement a reconciliation process, following best practices in the industry. This process should involve personnel of the following areas: mine operations, geology, mine planning and processing plant under a structured plan of implementation;

23.6 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

- Proposed cover systems need to be reassessed, specially Cover I which will be used over acid generating materials. The unit rates for this cover system in the current closure plan seem to be on the low end, considering that some of the cover components will need to be transported from 250 km away.
- The need for, and cost, of water treatment should be investigated in future studies to optimize closure activities related to water management.
- Once the closure and post-closure activities are reviewed and updated in the closure plan, the requirements and length of time needed for post-closure monitoring and maintenance should be revised to accommodate those changes.
- Review and revise FOS criteria based on selected guideline for demonstrating long-term closure stabilization.
- Review and revise closure designs, construction materials, and slope stability analyses to ensure long-term stability of all construction components.
- Evaluate phreatic conditions within WRDs and HLPs and develop a sitewide water balance model incorporating all predicted flows and informing the potential need for post-closure water treatment.
- Complete geochemical characterization of waste rock and heap leach pads and prepare a sitewide model of predicted water chemistry to facilitate determination of post-closure water management requirements.
- A comprehensive sitewide stormwater management system for the closed site configuration should be developed and documented in a design report. The details of the comprehensive stormwater design should be used to develop accurate construction costs using local or regional contractors to update the pricing and cost estimate.

23.7 Capital and Operating Cost

- Development of additional technical studies for the mine closure process and to improve the accuracy of cost estimation. SRK believes that there are opportunities to improve and reduce the closure costs supported by technical studies;
- Continuous monitoring of cost results (yearly, quarterly); these results should be used as feedback for the operating and capital cost estimation;

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25 Reliance on Information Provided by the Registrant

25.1 Introduction

The QPs fully relied on the registrant for the guidance in the areas noted in the following sub-sections. Buenaventura has active mining operations in Peru and has considerable experience in developing mining operations in the jurisdiction.

The QPs undertook checks that the information provided by the registrant was suitable to be used in the Report.

25.2 Macroeconomic Trends

Information relating to inflation, interest rates, discount rates, foreign exchange rates and taxes.

This information is used in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.3 Markets

Information relating to market studies/markets for product, market entry strategies, marketing and sales contracts, product valuation, product specifications, refining and treatment charges, transportation costs, agency relationships, material contracts (e.g., mining, concentrating, smelting, refining, transportation, handling, hedging arrangements, and forward sales contracts), and contract status (in place, renewals).

This information is used when discussing the market, commodity price and contract information in Chapter 16, and in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.4 Legal Matters

Information relating to the corporate ownership interest, the mineral tenure (concessions, payments to retain, obligation to meet expenditure/reporting of work conducted), surface rights, water rights (water take allowances), royalties, encumbrances, easements and rights-of-way, violations, and fines, permitting requirements, ability to maintain and renew permits

This information is used in support of the property ownership information in Chapter 3, the permitting and closure discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.5 Environmental Matters

Information relating to baseline and supporting studies for environmental permitting, environmental permitting and monitoring requirements, ability to maintain and renew permits, emissions controls, closure planning, closure and reclamation bonding and bonding requirements, sustainability accommodations, and monitoring for and compliance with requirements relating to protected areas and protected species.

This information is used when discussing property ownership information in Chapter 3, the permitting and closure discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.6 Stakeholder Accommodations

Information relating to social and stakeholder baseline and supporting studies, hiring and training policies for workforce from local communities, partnerships with stakeholders (including national, regional, and state mining associations; trade organizations; fishing organizations; state and local chambers of commerce; economic development organizations; non-government organizations; and regional and national governments), and the community relations plan.

This information is used in the social and community discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.7 Governmental Factors

Information relating to taxation and royalty considerations at the Project level, monitoring requirements and monitoring frequency, bonding requirements.

This information is used in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.