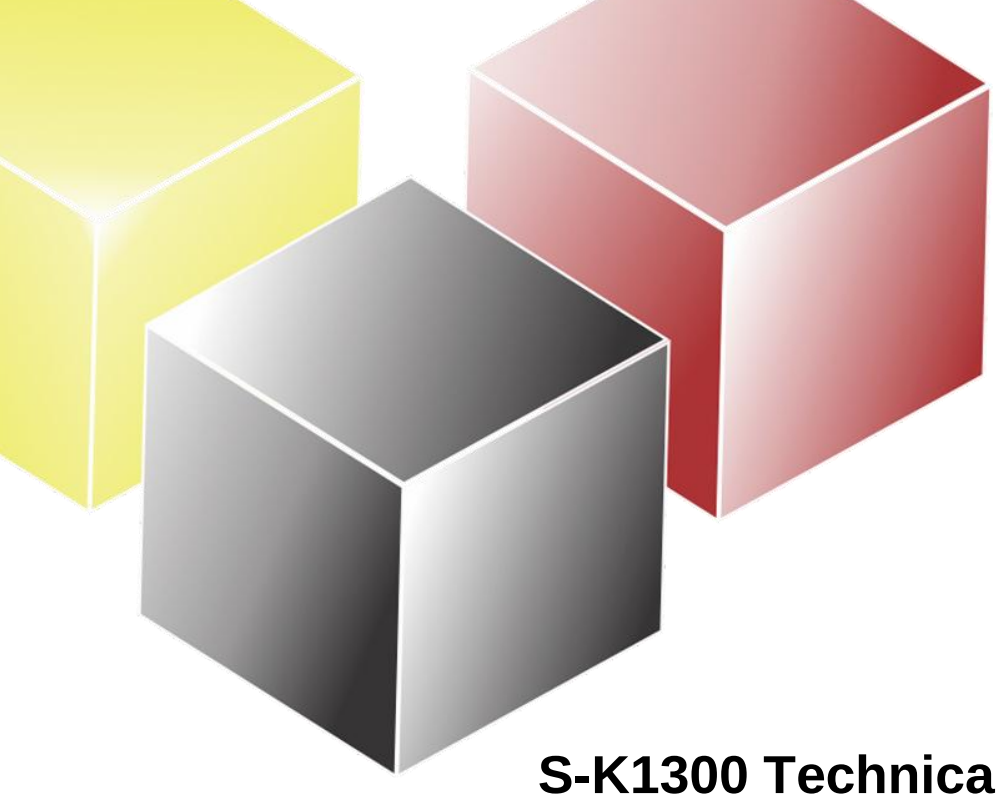


S-K1300 Technical Report Summary Apoena Mine (EPP Complex) Mineral Resource and Mineral Reserve, Mato Grosso, Brazil

Prepared by:

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On behalf of:

Aura Minerals Inc.

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Dated at Belo Horizonte, Brazil, on March 28th, 2025.

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UNITS, SYMBOLS, AND ABBREVIATIONS

Units and Symbols	
“	inches
°C	Celsius
%	Percentage
Au g/t	Grams Of Gold Per Tonne
Au	Gold
CDN$	Canadian Dollars
Cm	Centimetre(s)
E	East
Ga	Gigaannum
g/t	Grams Per Tonne
Ha	Hectare(s)
hp	Horse Power
hr	Hour
k	Thousands
k$	Thousands Of Dollars
kg	Kilogram
km	Kilometre(s)
kt	Thousands of Tonnes
kV	Kilovolt
l	Litre
m	Metres
m^3/h	Cubic Metres per Hour
Mt	Megatonne
M	Millions
Mtpa	Million Tonnes per Annum
mg	Milligram
Oz	Ounce
NE	Northeast
NW	Northwest
t/h	Tonnes Per Hour
tpd	Tonnes Per Day
USD	United States dollars ($)
V	Volts
w/v	Weight by volume

Abbreviations	
3D	Three Dimensional
AA	Atomic Absorption
AARL	Anglo American Research Laboratories
AHD	Average Hauling Distance
AI	Abrasion Index
AMPRD	Absolute Mean Paired Relative Difference
ANM	National Mining Agency of Brazil
Apoena	Mineração Apoena S.A.
ASL	Above Sea Level
Aura	Aura Minerals Inc.
BWI -	Bond Work Index
CA	Certificate of Authorization
CDN	Canadian

Abbreviations	
CFEM	Financial Compensation for Exploitation of Mineral Resources
Chl	Chlorite
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CoG	Cut-off Grade
Company	Aura Minerals Inc.
CRM	Certified Reference Material
CSA	Canadian Securities Administrators
Cum	Cumulative
DDH	Diamond Drill Hole
DGPS	Differential Global Positioning System
DTM	Dompieri Tecnologia em Mineração
DWT	Drop Weight Test
EIA	Environmental Impact Assessment
ERC	Ernesto Connection
ERN	Ernesto
Esp	Sphalerite
FA	Fire Assay
FS	Feasibility Study
GE21	GE21 Consultoria Mineral
GPS	Global Positioning System
GRG	Gravity Recoverable Gold Tests
Hem	Hematite
IBGE	Brazilian Institute of Geography and Statistics
ICU	Intensive Cyanidation Unity
JV	Joint Venture
LCT-USP	USP's Technological Characterization Laboratory
LOM	Life Of Mine
LP	Preliminary License
LPG	Liquefied Petroleum Gas
LRV	Lavrinha
Mag	Magnetite
MAR	Metarenites
MGL	Metaconglomerate
MSE	Mineração Santa Elina
MYL	Upper Schist and Schist
NI 43-101	National Instrument 43-101
NSD	Nosde
NSR	Net Smelter Revenue
Py	Pyrite
P80	Passing 80%
QA/QC	Quality Assurance and Quality Control
QP	Qualified Person
Qtz	Quartz
ROM	Run Of Mine
Sd	Siderite
Ser	Sericite
SGS	SGS Geosol Lab
SO2	Sulphur dioxide
SPI	SAG power index and
SR	Stripping Ratio
TVX	TVX Gold Inc.
Yamana	Yamana Gold Inc.

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1 EXECUTIVE SUMMARY

1.1 Introduction

This Technical Report Summary (TRS) titled “Apoena Mines (EPP Complex) Mineral Resource and Mineral Reserve” was prepared to support the disclosure of a mineral resource and mineral reserve estimate on the Ernesto/Pau-a-Pique Deposits (Apoena Mines, or EPP Complex, or EPP Property), located in the southwest of Mato Grosso state, near Pontes e Lacerda in Brazil. This TRS conforms to United States Securities and Exchange Commission’s (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary. The EPP Property is 100% beneficially owned by Aura Minerals Inc. (Aura or the Company). Aura is a public, TSX listed, company trading under the symbol ORA.

Aura, through its Brazilian subsidiaries, acquired the EPP Project from Yamana Gold Inc. (Yamana) in June 2016. The Project was initially studied by Yamana from 2009 to 2011, and was put into production in 2013 for approximately two years before been placed on care and maintenance in late 2014. The Apoena Mines is the third Project owned by Aura in this specific region of Brazil. The Company currently owns the operating Sao Francisco gold mine near the town of Pontes-e-Lacerda and use to own Sao Vicente gold mine that ceased operations in 2014.

The Qualified Persons (QPs) responsible for this independent TRS are Mr. Porfirio Cabaleiro Rodriguez, Mr. Luiz Eduardo Campos Pignatari, Mr. Farshid Ghazanfari, Mr. Homero Delboni Jr. and Miss Branca Horta de Almeida Abrantes. Neither GE21 nor the Authors of this Independent TRS, except for Mr. Ghazanfari, who is an Aura employer, have had any material interest invested in Aura or any of its related entities. Their relationship with Aura is strictly professional, consistent with that held between a client and an independent consultant. This TRS was prepared in exchange for payment based on fees that were stipulated in a commercial agreement. Payment of these fees is not dependent upon the results of this TRS.

The Effective Date as it relates to the Mineral Resource Estimate is October 31st, 2023, with the issue date of this TRS being March 28th, 2025.

1.2 Reliance on Other Experts

The information presented regarding the tenure, status, and work permitted by permit type is based on information published by the National Mining Agency of Brazil as of the effective date, October 31st, 2023.

This TRS has been reviewed for factual errors by Aura, and all Qualified Persons (QPs). Any changes made as a result of these reviews did not involve any alteration to the conclusions made.

Hence, the statement and opinions expressed in this TRS are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this TRS.

1.3 Property Description and Location

Apoena mines are near the town of Pontes e Lacerda, about 450 km west of Cuiabá, which is the capital of the Brazilian state of Mato Grosso. It is approximately 12 km southeast of Pontes e Lacerda. It can be accessed from Pontes e Lacerda by paved road BR-174 by a network of good gravel and dirt roads that offer year-round access for two-wheel drive vehicles. The Pau-a-Pique Deposit is located approximately 47 km southwest of Ernesto, and can be accessed via a dirt road that runs parallel to BR-174. Figure 1-1 shows the location of the Ernesto, Lavrinha, and Pau-a-Pique properties.

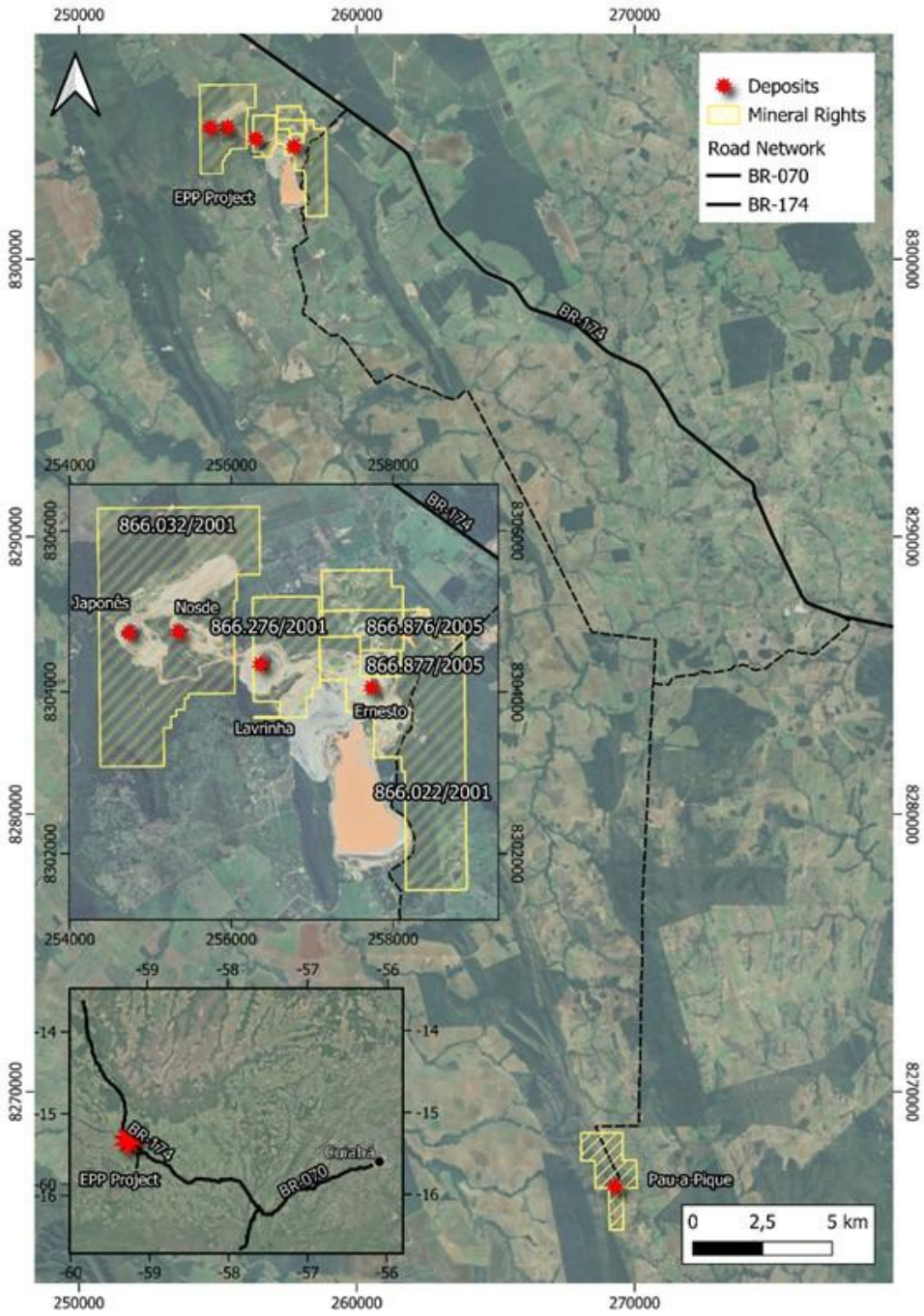


Figure 1-1: Location of EPP Complex

Aura Apoena holds existing surface rights across the entire project area. Of the total 1,636.69 hectares comprising the Aura Apoena Unit, approximately 921.96 hectares are owned directly by the mining operation. The remaining 714.73 hectares are secured through agreements with adjacent landowners, encompassing areas where certain pits and waste piles are situated. Additionally, the Pau-a-Pique Unit includes 41.20 hectares under direct mining ownership.

The Ernesto Property comprises 1,412.89 ha of six mining sites whose rights are (legally or beneficially) held by Mineração Apoena S.A. (Apoena), a company wholly owned by Aura. The list of mineral rights is shown in Table 1-1.

Table 1-1: Mineral Rights of EPP Complex

Mining Rights of the EPP Complex				
Target	**ANM Process No.**	**Petitioner**	**Area (ha)**	**Status**
Ernesto	866.022/2001	Apoena	375.49	Mining Concession
Ernesto	866.876/2005	Apoena	41.63	Mining Concession
Ernesto	866.877/2005	Apoena	15.96	Mining Concession
Lavrinha	866.276/2001	Apoena	111.63	Mining Concession
Nosde/Japonês	866.032/2001	Apoena	493.19	Application for Mining Concession
Pau-a-Pique	866.148/2003	Apoena	374.99	Mining Concession

As part of the purchase agreement, a 2% NSR royalty is payable on gold ounces produced from the EPP Complex with respect to up to 1,000,000 collective ounces of gold, and thereafter, a 1% NSR on gold ounces produced from the Project. A 0.5% NSR royalty is due to each landowner (one for Ernesto/Lavrinha, and one for Pau-a-Pique), proportional to their surface rights. The Mining Code provides that landowners are entitled to a royalty equivalent to 50% of the royalty due to the government (the Financial Compensation for Exploitation of Mineral Resources — CFEM) and CFEM is calculated based on net income resulting from the sales of the mineral product, deducting taxes, transport costs, and insurance. In the case of gold, the rate of CFEM is 1.5%, and the landowner royalty is 0.5%.

In the environmental context, based upon the Authors' knowledge and belief, after reasonable inquiry, the authors are not aware of any environmental litigation or pending fines associated with the EPP Complex.

1.4 Accessibility, Climate, Local Resources, Infrastructure, Physiography, and Socio-Economic Context

The Ernesto Property is accessible by paved road BR-174 and then gravel and dirt roads that offer year-round access to the Project. The Lavrinha Property is accessed from Pontes e Lacerda by the same roads used to access the Ernesto Property. The Pau-a-Pique Deposit is approximately 73 km away from Pontes e Lacerda by road, and approximately 47 km away by dirt road from Ernesto.

The climate in the Project area is suitable for year-round mining. The region boasts the hot, tropical, and semi-humid climate of the Mato Grosso state in Central West Brazil. The area has two well-defined seasons: one dry season, usually from April to October and a season that receives large amounts of rain during November to March.

The Ernesto Property is in a range of hills that runs from northwest of Pontes e Lacerda to southeast of Pau-a-Pique (Figure 1-2). The terrain is comprised of rolling hills. The Ernesto District is covered by the Amazon Forest, much of which has been cleared for livestock activity.

Locally, topographic features are characterized by flat relief and hilly highlands with elevation ranging between 280 m and 430 m. The Property averages around 270 m above sea level.

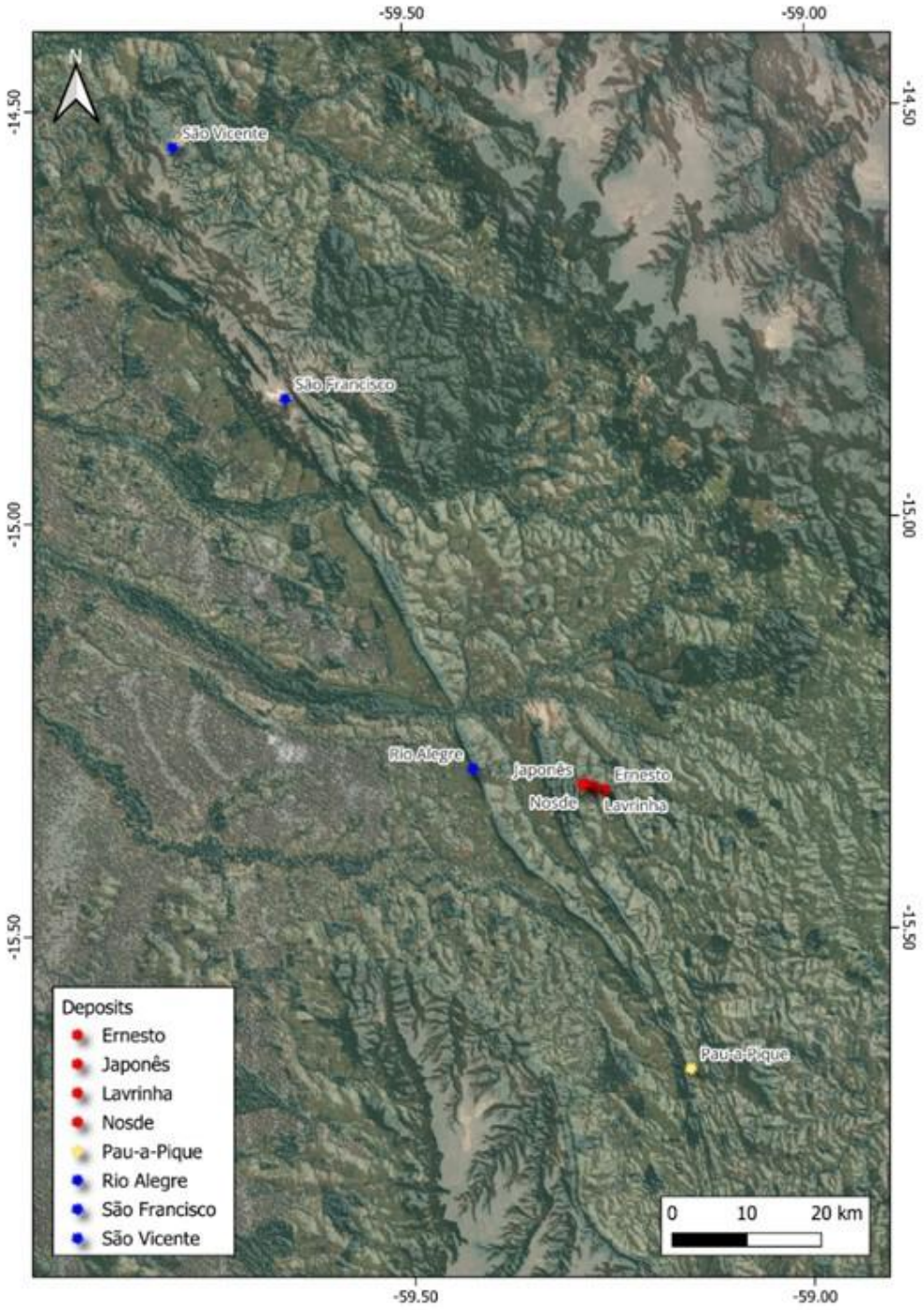


Figure 1-2: Terrain and Relief, Ernesto and Pau-a-Pique Area (looking NW)

Aura operated the São Francisco Mine and the past-producing São Vincente Mine until 2014, both in the vicinity of Pontes e Lacerda. Experienced personnel can be found in the local region or in the state capital Cuiabá (approximately 450 km to the east). The nearest major airport is in Cuiabá.

The Ernesto Property contains a 130 tonnes per hour carbon-in-leach process plant, which includes crushing, milling, and tailing facilities with power supplied from the national grid via 138 kV transmission line from Pontes e Lacerda. The Ernesto Property also contains a gatehouse,

administration offices, core shack, explosives storage facility, and the Ernesto open pit and waste rock dump. The contiguous properties do not contain any infrastructure, only the open pits and waste rock dumps. The Pau-a-Pique Property contains an underground mine in addition to surface facilities for administration and maintenance.

Aura has existing surface rights over most of the Project area either via direct ownership or agreements with landowners. There are no communities or permanent dwellings within the Complex footprint.

1.5 History

The Complex's history is rooted in gold exploration in the late 17th and early 18th centuries. Exploration and resource extraction activities started with artisanal miners recovering placer gold along the rivers and streams in the Complex area. The gold was first discovered at the Aguapeí Gold Belt in the 18th century, where it was mined from primary (mainly), colluvial, alluvial, or placer deposits. Modern gold mining began in 1984, during a second gold rush at Alto Guaporé Gold Province (1984-1997). Artisanal miners, after the exhaustion of alluvial and colluvial deposits, discovered several small primary gold deposits close to Pontes e Lacerda city.

Around Ernesto Complex, in 1992, Anglo American and WMC carried out intensive surface geochemical surveys along the belt, mainly stream sediment sampling. In 1993, Madison do Brasil, after the acquisition of exploration permits from Copacel and Minopar, carried out a diamond drilling program. In 1994, Madison do Brasil company assigned its mineral rights and transferred control of the exploration permits to TVX Gold, which, in 1995, carried out additional drilling campaigns. In the same year, TVX Gold transferred its mineral rights to MSE to capitalize on other business priorities. MSE drilled more exploratory drill holes. After 1995, no exploration was done until Yamana consolidated and expanded the Ernesto area claims. Yamana's exploration of the Ernesto Property began in 2003 and consisted of surveying, rock chip sampling, chip channel sampling, soil sampling, and mapping.

From 2003 to 2009, drill programs were carried out to extend and convert near-surface resources that were excavated by artisanal miners. However, the main goal was to increase resources at the São Francisco Mine. In May 2015, Apoena Mineração, a subsidiary of Aura Minerals that already held the mineral rights of the São Francisco and São Vicente Mines, acquired the mining rights of Yamana Gold, including the EPP mines. The ramp-up, initiated in 2016, at the Complex had approximately 233,000 oz in Proven and Probable Reserves. During the next seven years, over 420,000 oz of gold was produced. Recently it was decided to increase investments in exploration to extend the mine's lifespan. These investments have been successful, leading to an increase in Proven and Probable Mineral Reserves to over 276,000 oz, resulting in an additional five or more years to the life of mine (LOM).

Initial exploration work by Yamana began in 2009 on Pau-a-Pique Deposit, following up on earlier artisanal mining activity. From 2015 to 2016, Aura conducted a drilling campaign over the Deposit.

The Pau-a-Pique Mine started operations in 2017, following its acquisition by Apoena (Aura Minerals), and produced 61,099 oz until 2022, when operations were suspended.

1.6 Geology and Mineralization

The EPP deposits are situated in the Middle Proterozoic Aguapeí belt, along the southwestern margin of the Amazon Craton, in the Sunsás-Aguapeí Province (1.20 and 0.95 Ga; Teixeira *et al.*, 2010). The EPP deposits are described as a detachment-style gold deposit that typically has the following characteristics:

Gold mineralization is associated with low angle to flat detachment faults, generally with a normal (extensional) sense of movement which consistently places younger units over older units. Mineralization is epigenetic, hydrothermal in origin and is structurally controlled. Gold mineralization is located along asymmetrical anticlines and synclines that plunge gently to the north and are cut by Northwest and Northeast-trending narrow faults.

The Nosde-Lavrinha deposits consists of gold-rich quartz veins and veinlets occurring along a relatively thick, shallow-dipping structure at the base of the metasedimentary sequence and within altered sulphidic horizons in overlying meta-arenite units. The basal structure is interpreted to be a low-angle detachment fault that has been folded and faulted together with the overlying stratigraphy.

Gold mineralization in Apoena mines and surrounding areas occurs in four zones, which consists of the Lower Trap (Ernesto Mine), Middle Trap (Ernesto Mine and Ernesto Connection deposit), Upper Trap (Lavrinha and Nosde Mines) and Bonus Trap (Nosde Mine).

The Upper Trap is widely developed in the Lavrinha and Nosde deposits, occurs in metapelitic rocks (hematite sericite schist) in dilation zones of the intensely deformed synclinal troughs. The Upper and Intermediate traps share similar alteration and mineralization suites. The Upper Trap seems to be eroded in the Ernesto Deposit area.

Table 1-2 shows a summary of mineralized traps in EPP deposits, while Figure 1-3 illustrates representative mineralization in the Lavrinha deposit.

Table 1-2: Summary of mineralized traps in EPP deposits

Trap	Host Rock	Type	Vein Geometry	Structural Context	Mineral Assembly
Lower Trap (Ernesto)	Contact between metatonalite and metasediments of Fortuna Fm.	Disseminated and Quartz Veins	Shear veins from 3 to 20 cm width dipping 45° towards SW, with metric quartz pockets	Low angle shear zone	(Qtz + Ser + Chl + Py + Hem ± Esp ± Mag)
Middle Trap (Ernesto)	Interbedded metaconglomerate and metarenite	Disseminated and Quartz Veins	Shear veins from 3 to 20 cm width dipping 45° towards SW, with metric quartz pockets	Intra-stratigraphic shear zone	(Qtz + Py + Hem ± Esp ± Mag ± Ser ± Chl)
Upper Trap (Lavrinha/Nosde)	Interbedded schist and metarenite	Disseminated and Quartz Veins	Bedding-parallel shear veins with <30 cm width	Intra-stratigraphic shear zone	(Qtz + Ser + Chl + Py + Hem ± Esp ± Mag ± Sd)

Trap	Host Rock	Type	Vein Geometry	Structural Context	Mineral Assembly
Bonus Trap (Nosde)	Metarenite	Disseminated and Quartz Veins	Mineralized veins orthogonal to bedding (191°/54°) or parallel (27°/21°), and conjugate vein arrays (126°/58°, 277°/51°, 16°/37°).	Competent metarenite layer with open dome and basing folds, and rupture of axial planes.	(Qtz + Py + Hem ± Esp ± Mag ± Ser ± Chl)

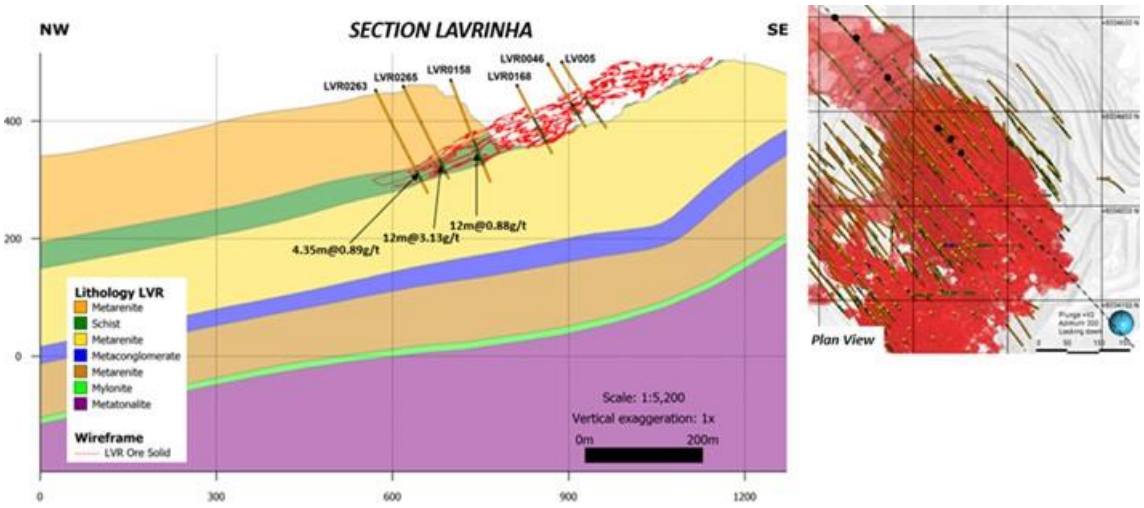


Figure 1-3: Representative cross section and planview of mineralized zone in the Lavrinha Mine

The Bonus Trap consists of centimetre thick cross-cutting quartz veins hosted by the upper metasandstone in the Nosde and Japonês deposits. These milky quartz veins include fresh and weathered pyrite and boxworks, along with visible gold. Hematite and limonite occur as fissure-filling and halos around the mineralized quartz veins.

Figure 1-4 shows planview and typical section of the Nosde Mine.

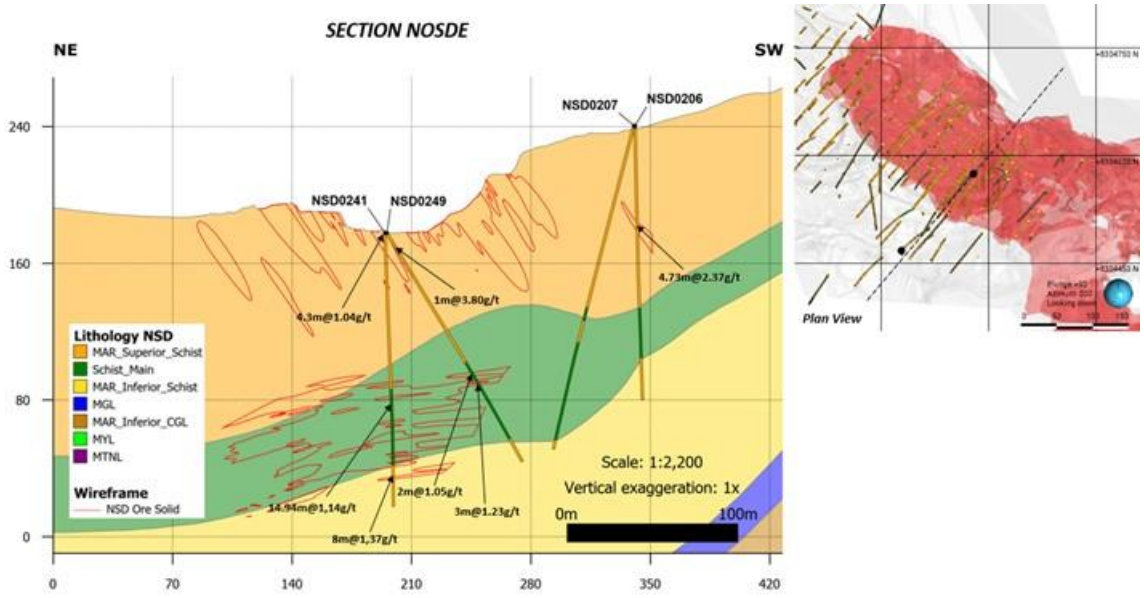


Figure 1-4: Representative cross section and planview of mineralized zone in the Nosde Mine

The main gold mineralization in Ernesto Mine developed within of the Lower Trap zone at Ernesto consists largely of free gold hosted by mylonite, muscovite schist, and quartz veins accompanied by sulphides that occur along the sheared contact between meta-tonalite and meta-arenite. In addition to Lower Trap, gold also occurs along sheared contacts between meta-conglomerate and meta-arenite in the Middle Trap in the Ernesto Mine.

The Ernesto Connection deposit is a continuation of the old Ernesto Mine, toward the west, that was historically mined by Yamana, operations ceased in 2014 and the mine remains abandoned. Gold mineralization in the Ernesto connection deposit occurs mainly in contact with the meta-conglomerate and meta-arenite of the Middle Trap and partially in the muscovite schist of the Upper Trap.

In the Ernesto Mine the rock foliation and mineralized contact trend NNW and have a shallow dip of approximately -25° NNE. The contact is not uniformly planar and is subject to rolling. In the Ernesto connection deposit, the mineralized zone trends E-W and has a shallow dip of approximately -15° WSW.

1.7 Drilling, Sampling and Assaying

1.7.1 Nosde and Lavrinha Deposits

From 2017 onwards, exploration activities at the Lavrinha Mine were conducted by Aura (Apoena), in which 234 drilling holes were carried out in the deposit between 2017 and 2023, totaling 39518.58 metres drilled.

The objectives of drilling in the Lavrinha Mine was: converting Mineral Resources in areas where there was already consolidated geological knowledge (central area and ends of the pit); exploratory in order to test the extent of mineralized bodies at depth and; exploration with the aim of verifying the extent of mineralization between the Lavrinha and Nosde deposits.

Aura (Apoena) commenced exploration activity on the Nosde Mine in 2019 with a robust drilling schedule of 100 exploratory holes throughout the area of the current Nosde pit. In the years that followed, exploration campaigns totaled 362 drilling holes in the area with 53,466.79 metres drilled. A summary of all survey campaigns carried out between 2019 and 2023 is presented in Figure 1-5.

The Nosde Mine drilling objectives was to convert Mineral Resources in areas where there was already consolidated geological knowledge, testing the continuity of mineralized bodies at 300 and 450 metres (Middle and Lower Traps, respectively), with an average depth of 380 metres, and exploratory holes in the connection region between the Nosde and Lavrinha pits to better understand local mineralization without a defined regular drilling network.

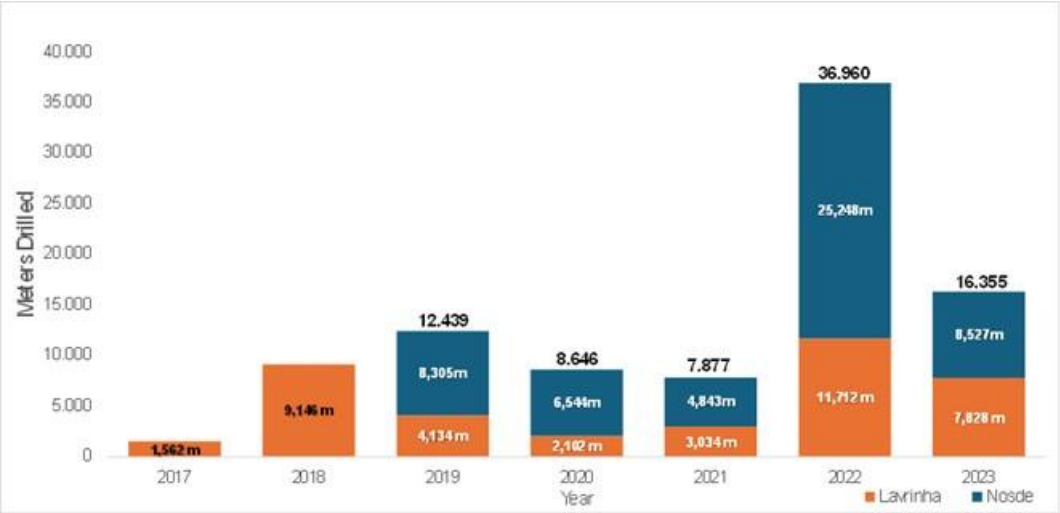


Figure 1-5: Summary of Aura's Exploration and infill Drilling in Nosde and Lavrinha

Aura's recent exploration successfully confirmed the connection of the Upper Trap zone between the Nosde and Lavrinha mines and added additional resources to the Mineral Resources inventory at Apoena. At the Nosde Mine, infill drilling successfully converted Mineral Resources, and tested the continuity of mineralized bodies at 300 and 450 metres (Middle and Lower Traps, respectively), confirming an average depth of 380 metres. The exploratory holes in the connection region between the Nosde and Lavrinha pits provided better understanding of local mineralization. Infill drilling at Lavrinha successfully converted Mineral Resources in the central area and NE ends of the pit and exploratory drilling tested and successfully confirmed the extent of the mineralized bodies at depth and between the Lavrinha and Nosde deposits.

The Lavrinha Lower Trap zone has been sampled by surface diamond drilling with core sampling. The Lower Trap database contains 396 drill holes, totaling 59,973.97 metres drilled of which 134 (18,547.7m) are historic holes drilled from 1994 to 2014, mainly by Yamana (85% of historical holes), and 262 were drilled by Aura since 2015.

The Nosde Bonus and Lower Trap zones have been sampled by surface diamond drilling and core sampling. The Nosde database contains 414 drill holes, totaling 61,951.51 metres drilled of which 53 (8,821.38 m) are historic holes drilled from 1994 to 2013, mainly by Yamana (94% of historical holes), and 361 were drilled by Aura since 2019 (NSD series).

A total of 52,015 drill core samples are included in the database of which 48,706 have the assay results available and 4,274.77 metres of drill holes were not sampled.

1.7.2 Ernesto and Ernesto Connection Deposits

In 2015, 3,076.2 m of drilling within 21 holes was conducted on the Ernesto area by Aura focusing only on the Lower Trap where Mineral Resources were deemed to be suitable for a potential underground mining operation.

In 2017, 2,998.63 m of infill drilling within 25 holes was conducted on the west part of the Ernesto deposit focusing on the Middle and Lower Traps. In 2018, a total of 1,823.44 m of infill drilling in 12 holes was conducted in the central and east side of the Ernesto deposit.

In 2021, 5,146.8 m of drilling within 37 holes was conducted on the eastern/northeastern and southeastern extensions of the Ernesto area focusing on Middle and Lower Trap. A total of 21 holes to inferred Mineral Resources on the east and northeast side of Ernesto deposit.

In 2022, a total of 13,440.2 m of drilling within 74 holes was conducted on the Ernesto deposit (north extensions). A total of 12 holes were drilled to confirm the potential of the “Paiol” northern area and possible Inferred Mineral Resources, focusing on shallower mineralization in the basal metarenite. A total of 62 holes of infill drilling focused on the Middle and Lower Trap, confirming continuous mineralization in both traps with variable continuity and thicknesses.

Aura drilled the Ernesto Connection area between 2018 and 2023 to establish a Mineral Resource. In 2018, 816.43 m were drilled in 9 drilling holes. In 2021, 10,157.96 m infill diamond drilling was drilled in 62 holes. In 2023, an additional 5,040.26 m was drilled in 17 holes. In 2022, four holes were drilled, totaling 593.27 m, to determine the near surface potential of old Ernesto pit area.

Figure 1-6 summarizes Aura’s exploration and infill drilling in Ernesto and Ernesto connection.

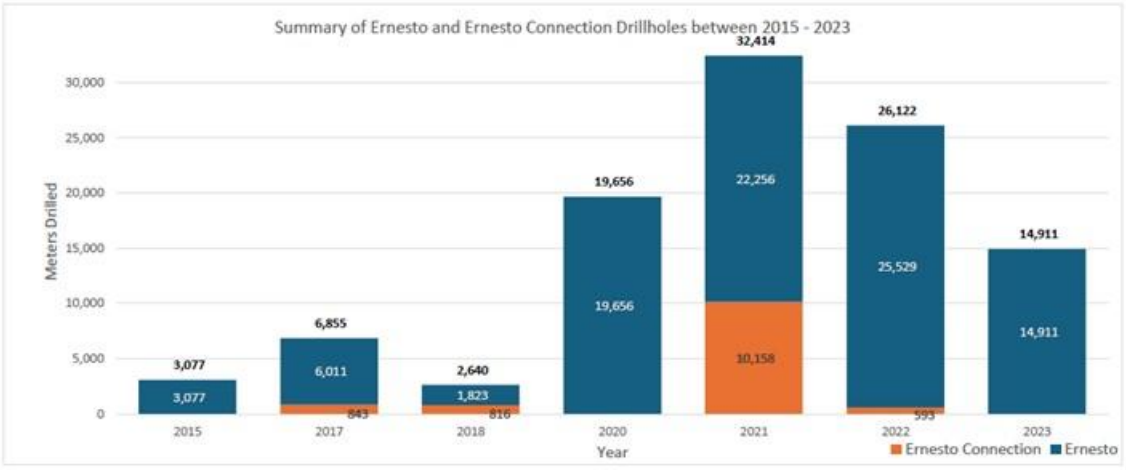


Figure 1-6: Summary of Aura’s Exploration and infill Drilling in Ernesto and Ernesto Connection

All core samples from Aura’s drill campaigns from the Ernesto and Ernesto Connection were analysed at SGS GEOSOL laboratory in Belo Horizonte, Brazil, using the fire assay method by AA finish. The drill holes were surveyed with a Gyromaster, reading twice every 3 m. A 5% tolerance value was used to compare the inclination in the two runs and was then validated in the survey report.

1.7.3 Pau-a-Pique Deposit

In 2009, Yamana initiated efforts to follow up on previous artisanal mining activity. From 2015 to 2022 Aura conducted several drill campaigns. The Pau-a-Pique Mine resumed operations in

2017, following its acquisition by Apoena (Aura Minerals), and produced 61,099 oz until August of 2022, when operations were suspended due to some geotechnical issues (collapse in mine workings) and below expectation economics.

1.8 Data Verification and QAQC Measures

Aura performed data verification and validation procedures on the drilling database prior to modeling and estimation. The Geology and Mineral Resources (Farshid Ghazanfari, P. Geo), QP, reviewed the geological, drilling, and gold (Au) analytical data that was used to support Mineral Resources, and confirmed the underlying data to be suitable for Mineral Resource Estimation. It is the QP's opinion that the raw drilling data used for estimating Mineral Resources have been adequately reviewed and any identified potential risks are accounted for Mineral Resource classification in-line with S-K 1300 guidelines.

The QP has conducted numerous visits and inspections to the local analytical laboratories that provided some of the analytical data supporting Mineral Resources. The independent accredited laboratories used are considered reputable and suitable for the analyses performed. The QP did not visit the SGS lab in Belo Horizonte, Brazil where majority of exploration samples were analyzed. The QP did not verify drill hole collar locations in the field but relied on work of survey contractors and the Apoena technical team. Collar locations were checked against LiDAR topography and satellite imagery and deemed acceptable. No independent samples were collected nor analyzed for verification purposes by the QP.

Analytical work was carried out by SGS Geosol Lab (SGS), in Belo Horizonte, Brazil. Drill core samples were shipped to SGS's Lab. All samples were analyzed for gold values determined by fire assay method with atomic absorption spectrometry finish on 50 g aliquots. SGS has routine quality control procedures which are independent from the Company's.

Aura has established a standard QA/QC procedure for the drilling programs in Apoena mines and all exploration targets as below: Each batch of samples sent to the lab is composed of approximately 40 core samples and four QA/QC samples (two blanks and two standards). The number of control standards should reflect the size of the analytical batch used by the laboratory. These QA/QC samples are randomly spaced into each batch. The bags labeled with these numbers are filled with 50 grams of one of the control standards and the sample tag is inserted in the bag. Records of which control standard was put in each bag in the sample log or sample cards are kept.

1.9 Nosde and Lavrinha Mineral Resource Estimate

The geological layout of the Nosde and Lavrinha deposits is subdivided into seven lithological domains from which two of them are mineralized. The mineralized domains are metarenites (MAR) of the Bonus and Upper Traps and schists of the Upper Trap.

Within these two lithological domains, four mineralized models were constructed using 0.35 g/t Au (for Upper Trap domains) and 0.2 g/t Au (for Bonus Trap domain) gold grades as well as alteration and mineralogical constraints which were logged during several diamond drilling campaigns (Figure 1-7).

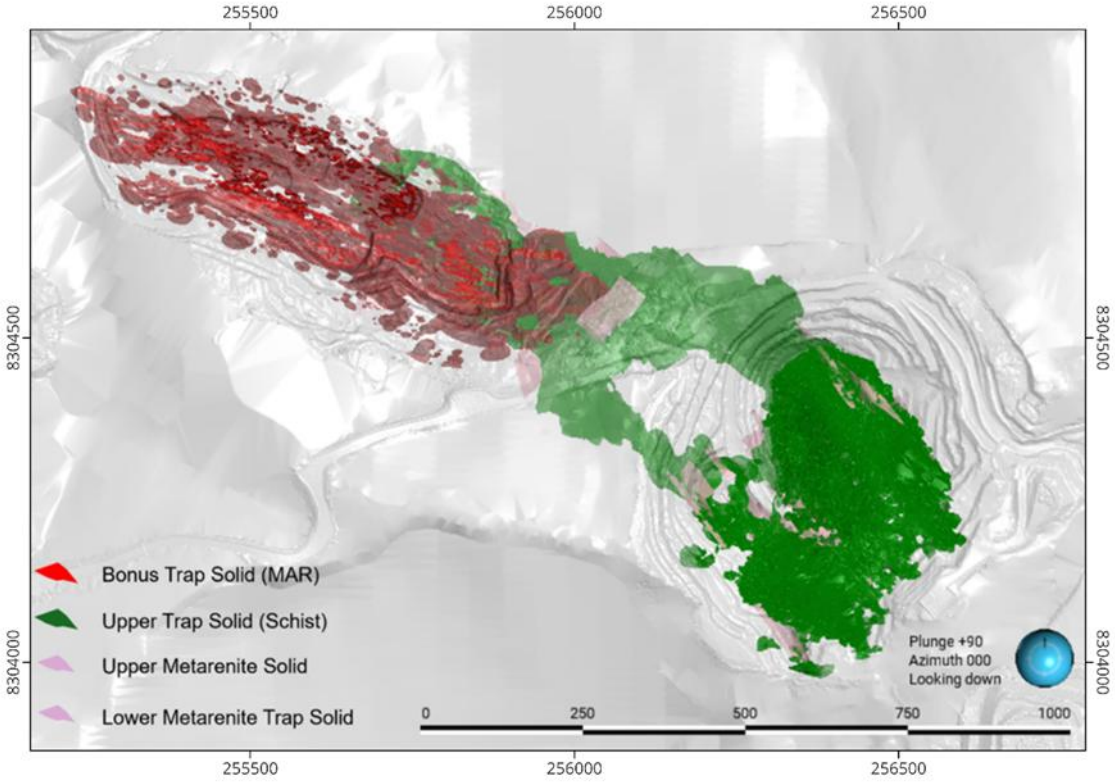


Figure 1-7: Planview of the Nosde and Lavrinha mines showing mineralized Models

The updated Mineral Resource Estimate is based on 3D domains encompassing all economic gold mineralization in the Nosde and Lavrinha deposits. These mineralized domains were analysed for grade capping and variography and then were interpolated using the ordinary kriging method.

Once the block model was completed Mineral Resources are classified in accordance with S-K 1300 guidelines into Measured, Indicated and Inferred classification based on identified uncertainly and risks.

Mineral Resources amenable to open pit mining methods were estimated through an open pit optimization exercise using the Measured, Indicated and Inferred Mineral Resources and $1900/oz gold price.

Figure 1-8. presents Nosde and Lavrinha mines cross section including block grade within Mineral Resources optimized Pit ($1900/oz).

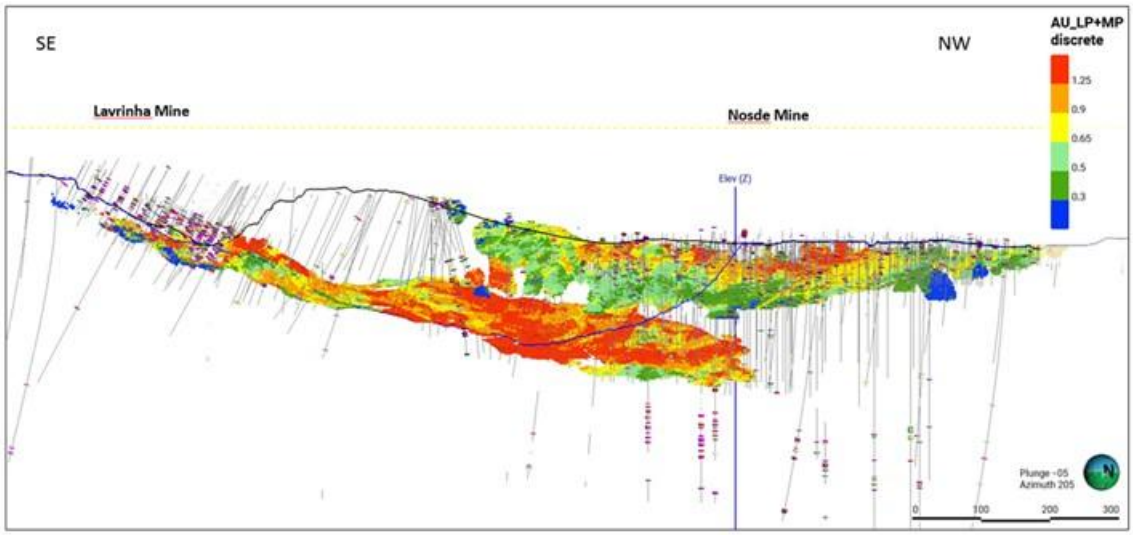


Figure 1-8: Nosde and Lavrinha mines cross section showing block grade within Mineral Resources optimized Pit($1900/oz)

Mineral Resources, exclusive of Mineral Reserves, of the Nosde and Lavrinha mines as of December 31, 2024, are shown in Table 1-3.

Table 1-3: Mineral Resources of the Nosde and Lavrinha Mines

Mineral Resource Estimate for Nosde and Lavrinha Mines					
Effective October 31,2023					
Mines	**Classfication**	**Tonnage (t)**	**Grade Au Wt)**	**Contained Au (oz)**	**Recovery (%)**
Nosde	Measured	446 823	0.64	9 248	93.5
	Indicated	1 447 852	1.05	48 815	93.5
	M&I	**1 894 675**	**0.95**	**58 063**	**93.5**
	Inferred	194 516	1.33	8 305	93.5
Lavrinha	Measured	54 610	0.98	1 717	93.5
	Indicated	673 110	1.13	24 545	93.5
	M&I	**727 720**	**1.12**	**26 262**	**93.5**
	Inferred	213 390	1.37	9 382	93.5
Nosde & Lavrinha	**Total (M&I)**	**2 622 395**	**1.00**	**84 326**	**93.5**
	Total (Inferred)	407 907	1.35	17 700	93.5

Notes:
1. Mineral Resources are reported based on the Annual Information Form for the year ended December 31, 2022, dated as of March of 2023 except for Nosde, Lavrinha, and Ernesto mines;
2. Mineral Resources for Ernesto mines are reported minus 2023 depletion;
3. The Mineral Resource estimate is reported on a 100% ownership basis.
4. Mineral Resources are exclusive of Mineral Reserves.
5. Metallurgical recoveries reported as the average over the life of mine.
6. Surface Topography Surface Topography as of October 31, 2023, for Nosde and Lavrinha and as of December 31, 2023, for rest of the mines;
7. The base case cut-off grade for the estimate of Mineral Resources is 0.39 g/t Au.
8. Recovery % is base don actual operational metallurgical recovery of Apoena plant.
9. The Mineral Resources estimate was prepared under the supervision of Farshid Ghazanfari, P. Geo., a Qualified Person as that term is defined in S-K 1300.

The Combined Mineral Resources of the Apoena Mines as of December 31, 2023, are shown in Table 1-4:

Table 1-4: Combined Mineral Resources of Apoena Mines

Apoena Resources 2023				
Measured	**Tonnes(t)**	**Au (g/t)**	**Contained Au (oz)**	**Recovery%**
Lavrinha	54 610	0.98	1 717	93%
Ernesto	0	0.00	0	0
Ernesto-Lavrinha Connection	0	0.00	0	0
Pau-A-Pique	242 180	3.19	24 850	93%
Japonês	0	0.00	0	0
Nosde	446 823	0.64	9 248	93%
Total Measured	743 613	1.50	35 815	93%
Indicated	**Tonnes(t)**	**Au (g/t)**	**Contained Au (oz)**	**Contained Au (oz)**
Lavrinha	673 110	1.13	24 545	93%
Ernesto	427 100	2.11	24 720	93%
Ernesto-Lavrinha Connection	1 232 480	1.18	46 840	93%
Pau-A-Pique	601 660	2.71	52 450	93%
Japonês	215 325	1.40	9 690	93%
Nosde	1 447 852	1.05	48 815	93%
Total Indicated	4 597 527	1.40	207 060	93%
Total Measured & Indicated	5 341 140	1.41	242 876	93%
Inferred	**Tonnes(t)**	**Au (g/t)**	**Contained Au (oz)**	**Contained Au (oz)**
Lavrinha	213 390	1.37	9 382	93%
Ernesto	542 000	1.94	33 760	93%
Ernesto-Lavrinha Connection	99 037	0.87	2 770	93%
Pau-A-Pique	71 330	2.47	5 660	93%
Japonês	4 370	1.37	190	93%
Nosde	194 516	1.33	8 305	93%
Total Inferred	1 124 643	1.66	60 067	93%

Notes:
1. Mineral Resources are reported based on the Annual Information Form for the year ended December 31, 2022, dated as of March of 2023 except for Nosde, Lavrinha, and Ernesto mines,
2. Mineral Resources for Ernesto mines are reported minus 2023 depletion,
3. The Mineral Resource estimate is reported on a 100% ownership basis.
4. Mineral Resources are exclusive of Mineral Reserves.
5. Metallurgical recoveries reported as the average over the life of mine.
6. The base case cut-off grade for the estimate of Mineral Resources is 0.39 g/t Au.
7. Recovery % is base don actual operational metallurgical recovery of Apoena plant.
8. Surface Topography Surface Topography as of October 31, 2023, for Nosde and Lavrinha and as of December 31, 2023, for rest of the mines,
9. The Mineral Resources Estimate was prepared under the supervision of Farshid Ghazanfari, P. Geo., a Qualified Person as that term is defined in S-K 1300.

1.10 Mineral Processing and Metallurgical Testing

The tests that served as the basis for the Feasibility Study (FS) produced by Ausenco in 2010 were conducted on the typologies of the Ernesto and Japonês mineralized bodies. For Ernesto (Lower and Upper Trapp) samples, the average levels obtained were between 4 g/t and 6 g/t of gold, whereas for Japonês samples, the average gold content was around 1 g/t, with a strong nugget effect. In all tests, a strong contribution of gravimetric concentration was found. This characteristic was repeated for the samples from Pau-a-Pique underground mine. The typologies

tested were metarenite, metaconglomerate, and quartz veins. The samples were subjected to characterizations for comminution parameters (simplified DWT and BWI) and to tests to check the efficiency of extractions – gravimetric analysis with centrifuge concentration and cyanidation. The average recovery in the gravimetric concentration step conducted in the benchtop centrifuge was greater than 68% of the contained gold. Cyanidation tests performed on bottle rolls in the presence of charcoal resulted in gold recoveries greater than 97%.

The FS produced in 2010 assumed a plant-fed gold content of 3 g/t for processing 1 Mtpa of ore, with a global average gold recovery of 95%. In the same FS, the processing route considered centrifuge gravimetry with the leaching of the concentrate in an intensive leaching reactor, with the rich liquor being then subjected to electrolysis and melting of the cathode concentrate. The single-stage SAG milling product, with P80 of 0.106 mm, proceeded to leaching into tanks in an LCIL configuration, that is, a leaching tank and the others containing activated carbon for gold adsorption, followed by elution, electrolysis, and casting of the concentrate obtained in the cathodes. The processing route also considered the treatment of the residual cyanide present in the final tailings and deposition of the latter in a dam, in accordance with environmental standards and the Cyanide Code.

The EPP plant operated between 2013 and 2014 with run of mine (ROM) content between 0.80 and 1.33 g/t of gold and gold recoveries between 80% and 97%. The difficulties of planning and mining control ended up contributing to the shutdown of operations.

New tests were conducted to resume the operation, including studies for the new ore body – Lavrinha. The tests revealed a high metallurgical performance of Lavrinha ore, with gold recoveries close to 94%. However, the presence of sericite shale and mylonite in the Ernesto Lower Trapp ore typology pointed to lower levels of gold recovery, owing to the lower contribution of gravimetry in the processing of such typology. With the presence of less tenacious material than the metaconglomerate, simulations based on characterizations by SPI and BWI tests revealed feed flows of the EPP circuit greater than 250 t/h of ore, greater than the rated capacity of 1 Mtpa of the plant.

Recent tests for Ernesto Medium Trapp and Nosde body showed high recoveries relating to the presence of metaconglomerate and metarenite typologies. Test results are expanded upon in Section 10 of this document. The gold recoveries obtained, close to 94%, were confirmed in 2022 when each of the typologies was processed at the EPP industrial plant.

Figure 1-9 shows the distribution of EPP feed during 2022. The typologies and origins of the ore are observed according to the vertical axis on the left, as well as the gold recoveries obtained on the vertical axis on the right. At the beginning of 2022, with the contribution of Nosde ore, gold recovery reached amounts between 93% and 94%.

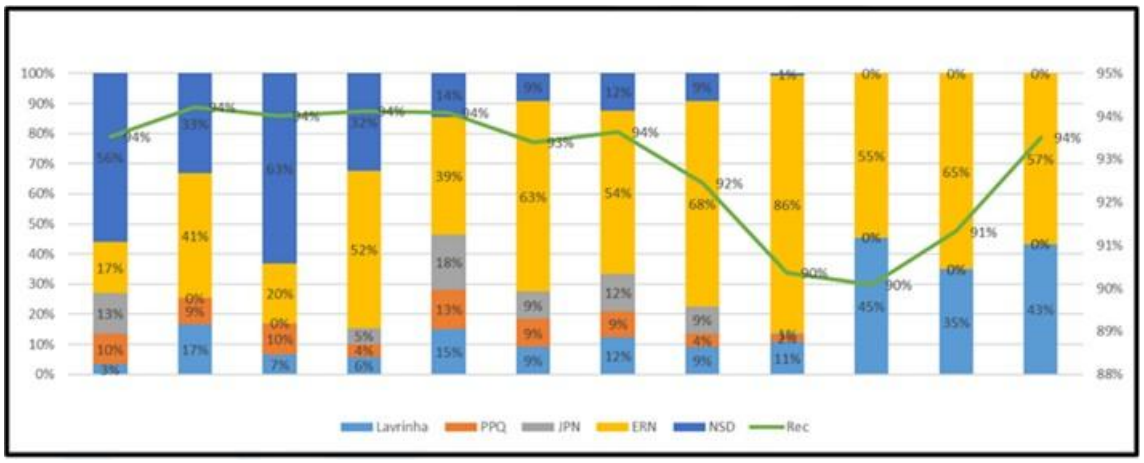


Figure 1-9: Gold Recoveries and Pit Contributions for the Year 2022

Figure 1-10 shows the feed profile for different typologies and the origin of ores predicted for the year 2024, in which a strong contribution of the Nosde body is observed. Figure 1-11 shows the distribution of ore bodies planned for LOM from 2025 to 2028.

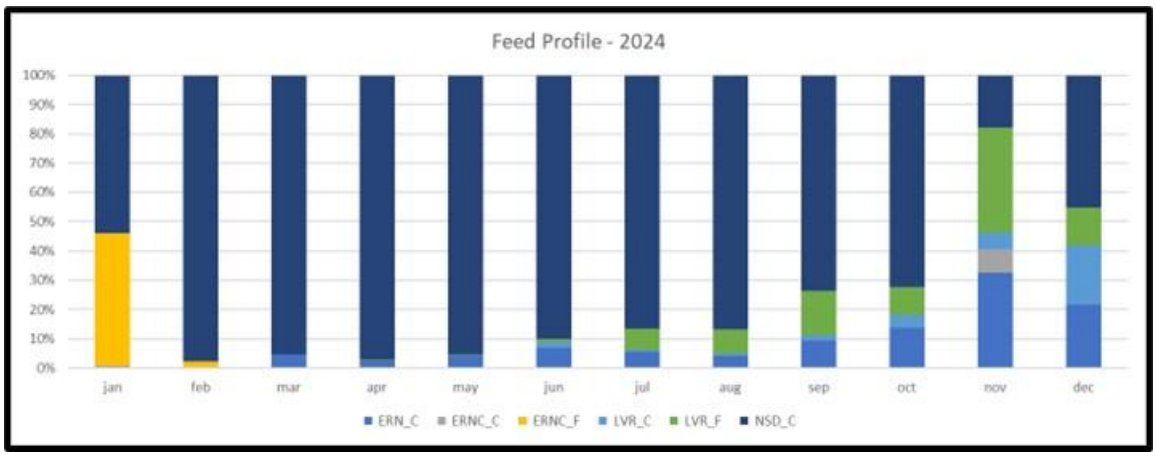


Figure 1-10: Contributions of Mineralized Bodies in the ROM Expected for the Year 2024

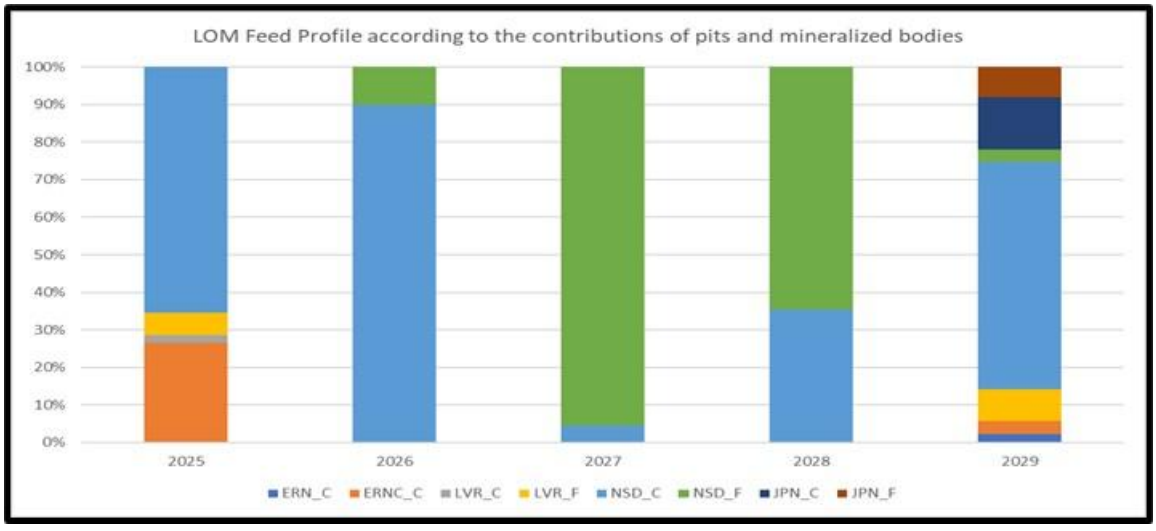


Figure 1-11: Contributions of Pits in LOM for the Years 2025 to 2028

With regard to the evaluation of the metallurgical recovery of gold at the EPP plant, the metallurgical testing campaign conducted during 2022, including the typologies processed at the industrial plant, resulted in an average recovery of 93.5%, at this point considered robust and proven.

Currently, the evaluation of crushing expansion is in the scope study phase, aiming at the inclusion of a secondary crushing stage that allows the disposal of the coarse fraction of the milling feed. To this end, determinations of granular chemical distributions were conducted, as well as tests performed on a pilot scale, which included primary crushing and secondary crushing in a cone crusher, followed by screening at 38 mm. The tests resulted in a screen oversize fraction with 0.20 g/t Au, as well as 70% gold recovery, which is thus equivalent 0.14 g/t Au, therefore regarded as waste. On the other hand, the 38 mm screen undersize fraction showed lower tenacity (BWI) and increased processing capacity in milling, in addition to a gold upgrade between 20% and 30%. Further technical and economical assessments indicated that the disposal of about 30% of the total mass fed to crushing results in a 25% reduction in the final processing cost for some ore types. The loss of gold content in the fraction disposed (38 mm screen oversize) may be offset by the increased recovery in the mine, owing to the reduction in the cut-off grade. The modification of the existing crushing circuit is considered essential to ensure grinding circuit throughputs higher than 200 t/h.

1.11 Mineral Reserve Estimate

The Mineral Reserve Estimate was prepared using S-K 1300 definitions. Dompieri Tecnologia em Mineração (DTM) reviewed the reported resources, production schedules, and factors of conversion of Mineral Resources into Mineral Reserves. Based on this review, the Measured and Indicated Mineral Resources within the final Nosde and Lavrinha pit design can be classified as Proven and Probable Mineral Reserves.

Viable Mineral Reserves for the open pit method were estimated through a pit optimization exercise using the Measured and Indicated Mineral Resources in the block model. Based on the optimized pit, the life-of-mine (LOM) production plan was prepared.

Figure 1-12 shows a longitudinal section illustrating that most of the mineralized shales in Nosde and Lavrinha became viable for open-pit mining.

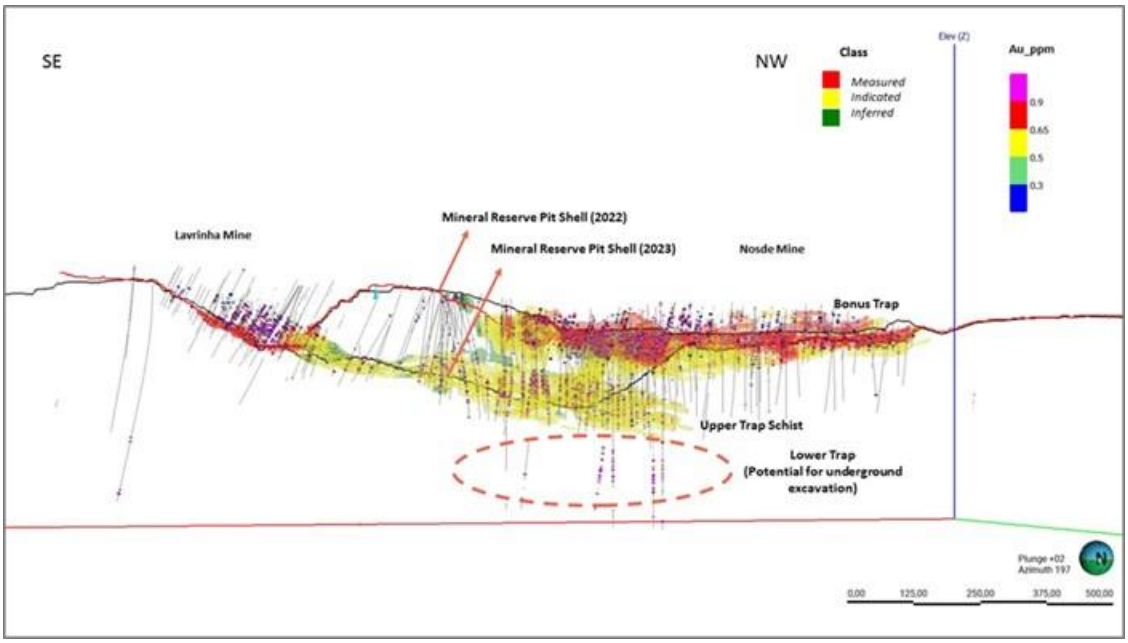


Figure 1-12: Cross Section of Nosde and Lavrinha Mines showing the Changes in the Contours of Mineral Reserve Pit 2022 vs. 2023 (Southwest)

The Mineral Reserves of Nosde and Lavrinha Mines on October 31, 2023, are presented in Table 1-5.

Table 1-5: Mineral Reserves of Nosde and Lavrinha Mines

Estimated Mineral Reserves for Nosde and Lavrinha Mines Effective as of October 31, 2023				
Effective as of October 31, 2023				
Mines	**Class**	**Tonnage (t)**	**Grade Au (g/t)**	**Au Contained (oz)**
Nosde	Proven	1,793,007	0.74	42,738
	Probable	5,362,391	0.97	168,089
	P&P	7,155,399	0.92	210,828
Lavrinha	Proven	216,395	0.78	5,447
	Probable	188,618	0.87	5,412
	P&P	405,013	0.83	10,859
Nosde & Lavrinha	Total (2P)	7,560,412	0.91	221,687

Notes and Assumptions on Mineral Resources:
1. The definitions for Mineral Reserves in S-K 1300 were followed for Mineral Reserves
2. The Mineral Reserves have an effective date of October 31, 2023.
3. The Mineral Reserves have been prepared under the supervision of Luiz Pignatari, P.Eng., an independent Qualified Person competent to sign as defined S-K 1300.
4. The base cut-off grade for estimating Mineral Reserves is 0.45 g/t Au.
5. Mineral Reserves are confined within an operationalized pit that uses the following parameters: gold price of 1800 USD, exchange rate of 5.1: USD 1, total process cost of 11.8 USD/t; mining costs of 2.26 USD/t, general and administrative costs of 3.79 USD/t; sustaining costs of 0.39 USD/t processed; metallurgical recovery of 93.5%; mining recovery of 95% for meta-arenite and 98% for shale, dilution in mining of 10%; general slope angle of 38°.
6. Tonnages and grades have been rounded according to reporting guidelines. Totals may not add up due to rounding.
7. Surface topography until October 31, 2023.

The parameters used to define the Mineral Reserves are presented in Table 1-6.

Table 1-6: Pit Optimization Parameters

Input	Description	Forward Values
oz	Ounce (troy)	31,10348 g
m	MCF	100%
mlg	MCF for low-grade	100%
r	Metallurgical recovery	93,50%
rlg	Metallurgical recovery (low-grade)	93,50%
	Mining recovery (meta-arenite)	95%
	Mining recovery (shale)	98%
ovb	Dilution	10%
fx	Exchange rate (R$/US$)	5,10
Cs	Cost of selling gold (refining, royalties, Management Fees) in (US$/oz)	77,31
P	Reserve Gold Price (US$/oz)	1.800
Pres	Resource Gold Price (US$/oz)	1.900

Costs Input		R$	U$
Cm	Mining Cost per mined t	11,50	2,26
Cmf	Mine fixed cost (Administration) per mined t	7,81	1,53
Cp	Total Processing Costs per processed t	60,54	11,87
Cpvar	Variable Processing Cost per processed t	37,53	7,36
Ca	G&A + Overhead + SHE per processed t	19,35	3,79
Cr	Rehandle per moved t	0,00	0,00
Clh	Cost For long Haulage per hauled t	0,00	0,00
Com	Premium cost for ore per processed t	7,85	1,54
Csism	Sustaining cost/ton (Mine) per mined t	1,97	0,39
Csisp	Sustaining cost/ton (process) per processed t	10,41	2,04
Cmc	New Mine Closure cost incurred	0,00	0,00

Input		CoG Grade
MO	Marginal Ore	0,34
FGO	Full Grade Ore	0,45
MW	Mineralized Waste	0,32
IO	Incremental Ore/Stockpile	0,20

1.12 Mining Method

The mining method established by Apoena is an open pit mine, and commercial operation is scheduled to continue until the year 2027.

The project is developed through an outsourced operation, subject to environmentally sustainable practices and high-level mining operations with guaranteed safety standards.

The waste material comprises soil, saprolite, weathered rock, and fresh rock. The excavation of these deposits requires the use of drilling and blasting for safe and efficient mining, which is also a unit operation carried out through an outsourced company. The loading and transport of ore and waste is carried out with a combination of loaders, hydraulic excavators, and trucks prepared for the mine operation.

The mining schedule resulted in a production of 7.56 Mt of crude ore and 53.77 Mt of waste over the four years of the project's life.

The development of the mine is based on variable cut-off grades that maximize gold production and operational flexibility, divided into high-grade (above 0.9 g/t), medium-grade (between 0.9 and 0.7 g/t), and low-grade (between 0.7 and 0.34 g/t). The production by grade class is presented in Table 1-7.

Table 1-7: Masses of ROM Extracted in Pit and Average Transport Distance by Classification

Source	Mine					
Destination	Ore Yard/Stacks					
Ore/Waste	High and medium-grade ore (to the plant)		Low-grade ore (to stockpile)		Waste (to waste deposits)	
Year	Tonnage	AHD	Tonnage	DMT	Tonnage	DMT
	t	m	t	m	t	m
2023	229,169	3,249	158,801	3,937	1,940,756	3,242
2024	1,169,175	3,249	612,514	3,937	12,201,627	3,242
2025	419,169	3,249	393,518	3,937	16,810,920	3,242
2026	797,770	3,249	558,026	3,937	17,833,307	3,242
2027	2,964,735	3,249	257,533	3,937	4,984,070	3,242

Notes: AHD Average Haul Distance

The production mining fronts will be accessed by berms with a minimum width of 6.5 m, ramps with a minimum width of 13 m, and a maximum slope of 10%. The conditions of the tracks will be consistent with good practices for the operation of mining equipment.

When necessary, mechanical excavation of soil and saprolite should be performed by bulldozer or directly by hydraulic excavators, while all rock operations will be carried out with the use of explosives. The loading operation will preferably be performed by a hydraulic excavator with a backhoe profile and complemented by loaders. The transport of rocks will be carried out by trucks prepared for the mining operation. The development and infrastructure of the mine will be carried out by bulldozers, motor graders, and compactor rollers, while dust control will be performed with the use of water trucks.

The ore will be removed from the stockyard near the crushing plant using a loader that will feed the concentration plant. Thus, there will be no direct feeding by trucks to the primary crusher feeder.

When necessary, the material from the low-grade deposits will be loaded and transported to the beneficiation plant; this alternative was considered in the production schedule until the end of the project's useful life.

1.13 Recovery Methods

The processing route considered in the EPP Apoena processing plant was based on tests conducted for types of metarenite ore and metaconglomerates, with predominant coarse gold content. The project comprises the primary crushing stage, followed by milling in a semi-

autogenous mill (SAG), operating in a single stage and closed circuit with cyclones to generate a product with P80 of 0.106 mm. Part of the milling circulating load is diverted to a density recovery circuit, made up of two centrifuges, in addition to an intensive leaching reactor, of which rich liquor proceeds to the electrolysis step, resulting in gold-charged cathodes, which are melted to obtain the gold bullion.

The milling product goes to a linear sieve to remove organic deleterious substances, which have its undersize thickened to feed seven mechanically stirred tanks, the first for leaching, while the others are subject to leaching and adsorption of gold by coal. Such configuration is referred to as LCIL. Originally, the residence time in the LCIL circuit was 24 hours, based on the rated plant feed rate of 123 t/h of ore. However, the residence time is currently 16 hours, owing to progressive increases in the plant's feed flow. Cyanide is dosed into the first tank, as well as lime milk to create a buffer environment for cyanide integrity. In this same first tank, injection of air was originally performed, later replaced by cryogenic or purified oxygen injection, in order to provide oxygen for the complexation reaction of gold.

Coal is moved in the counter current tanks in batches. At the end of the route, that is, in the first tank, coal is separated from the pulp by sieving, followed by acid washing and elution, according to the AARL process, to remove the gold in charcoal. The rich liquor from elution proceeds to electrolysis, and subsequently, the concentrate generated in the cathodes is cast. After gold recovery, the charcoal returns to the leaching circuit. The heating system of the solutions applied in the elution includes a boiler and liquefied petroleum gas (LPG) as fuel.

The pulp from the last tank feeds, by gravity, the Detox circuit through the SO_2-air process. The Detox circuit consists of two tanks, which offer a residence time of two hours for the abatement of ionic and weakly complexed cyanide. Two additional tanks were subsequently added as the plant's feed flow increased in order to maintain the established residence time. The reagents used are sodium metabisulphite and copper sulphate, respectively, as a source of SO_2 and as a catalyst. Before being pumped to the tailings dam, the pulp with the abated cyanide passes through a sieve to retain the charcoal still contained in the process.

The feed of less tenacious typologies, such as sericite shale or mylonite, resulted in both an increase in the plant's feed flow and a reduction in the gravimetry portion of the overall gold recovery of the EPP plant. Several measures were adopted to correct this effect, including (a) installing two additional centrifuges, i.e., tripling the gravimetric concentration capacity, (b) placing charcoal in the first tank of the circuit, (c) using oxygen instead of air to increase the leaching reaction kinetics, and (d) increasing the elution batches, with the addition of a second column.

In addition to the measures already adopted, the following should be implemented in the EPP industrial plant: (a) an increase in the intensive leaching capacity, with the installation of a second reactor with a capacity of 2 t per batch; and (b) an increase in the area of the baskets or the capacity of the interstage sieves of CIL tanks.

Still at the level of a strategic plan (Scope Study), the expansion of crushing is under evaluation, with the concept of eliminating fractions of larger size and with low gold contents. The crushing circuit considers the following capacity increments: primary crushing with the replacement of the current C110 crusher with a C130 model; the adaptation of a secondary cone crusher – HP300 and a sieve to discard the material above 38 mm. At milling, the mill would be adapted from its current SAG configuration to a ball mill. These modifications, in addition to discarding low-grade material from the circuit and increasing the operating margin, will allow processing rates greater than 200 t/h to be practiced in order to meet the expected LOM.

The chemical laboratory had its capacity tripled for sample preparation and chemical analysis and to meet the "Ore Control" program. The current capacity of the Chemical Laboratory is to process 6,500 samples per month, analyzed in duplicates and by the Fire Assay (FA) method, followed by atomic absorption spectrometry.

1.14 Environmental Studies, Permitting, and Social or Community Impacts

Technical Environmental Assessment of the Aura Apoena Unit was based on the analysis of the current situation of the environmental compliance of the enterprise and its relevant socio-environmental factors, in light of its environmental legal compliance.

This analysis was carried out within the scope of environmental licensing, which, for mineral extraction activity, is mandatory in Brazil and should be conducted according to Federal Decree No. 99274/90, which regulates Federal Law No. 6938/81, which, in turn, establishes the National Environmental Policy.

The jurisdiction for Environmental Compliance of the enterprise in question lies with the State of Mato Grosso, established by Law 6938/81, as well as by CONAMA Resolution No. 237/97.

For mining activities, it is also necessary for the entrepreneur to prove that it holds the right to exploit the intended mineral substance, which is granted by the National Mining Agency (ANM), considering that mineral resources are assets of the Federal Government pursuant to Article 20, IX, of the Federal Constitution of 1988.

According to CONAMA Resolution No. 237/97, which sets out concepts, procedures, and criteria used in environmental licensing, a three-phase model is the rule in Brazilian environmental licensing, being divided into the stages of preliminary license (LP), which certifies the environmental viability of the proposed activities regarding location, the installation license (LI), which allows its construction provided that the environmental control and monitoring actions are carried out, and the operating license (LO), which authorizes the project to operate after being built and commissioned in keeping with the preliminary and installation license, and also requires the performance of environmental control and monitoring efforts over operation, pursuant to applicable laws.

In summary, the environmental studies developed for the Preliminary License (LP) stage evaluated the socio-environmental characteristics of the area where the Aura Apoena Unit is

located. The Environmental Impact Assessment (EIA) was prepared by the environmental consulting firm Mineral in 2009 and details the characteristics of the Project areas, obtained through socio-environmental diagnosis, and characteristics of the complex area. The EIA informs that the Project's insertion area does not affect areas protected by law.

The Aura Apoena unit is located in the transition area between the Amazonian and Cerrado biomes, with the predominance of Cerrado and Anthropogenic Field vegetation types observed in the influence areas. Regarding the territorial dynamics of land use and occupation, the EIA indicates that the complex intersects areas with extensive livestock use, with no indigenous lands, traditional communities, archaeological sites, or speleological sites identified.

Aura Apoena has existing surface rights over the entire project area, whether as owner or through agreements with owners of adjoining lands. There are no communities or permanent dwellings within the Project area.

Among the potential negative impacts identified in the EIA (Mineral, 2009) that deserve special attention from the entrepreneur are the continuation of socio-environmental control actions. These include the maintenance of Legal Reserve areas, air quality monitoring, fauna monitoring, noise and vibration monitoring, water and effluent monitoring, water consumption control, control of its properties, degraded areas recovery program, environmental education program, social program, seedling nursery, dam monitoring, and closure plan.

The Aura Apoena Unit complied with all stages of environmental licensing, including the preliminary, installation, and operating license, as well as fulfilling the guidelines for requesting renewals of Operating Licenses, on February 7, 2022, operating regularly with the Renewal of Operating License in effect as of August 9, 2025.

It should be noted that this is a project that has already been in operation since 2012, with the implementation of environmental control actions and in accordance with current environmental laws. Thus, the environmental feasibility of operating the mining activity is proven and supported by the effective Operating License issued by the State Secretariat for the Environment of Mato Grosso.

Environmental monitoring is carried out periodically during the Project's operational phase and are compliant with current environmental legislation. Especially concerning the monitoring of surface water quality and effluents, the results of the samples collected also indicate discharge standards in accordance with the law.

It is noted that the Nosde Mine constitutes the main target of the resource assessment addressed in this TRS, with its operational feasibility being attested by the current environmental license coupled with the implementation of environmental control actions.

Nevertheless, for the exploitation of the entire mineral resource, it is necessary to carry out technical environmental studies, in light of new environmental intervention authorizations to support vegetation suppression, necessary for the expansion of the pit.

At this point, it is important to note that, for the expansion of the pit to fully utilize the entire mineral resource, there is an exclusive need to comply with the requirements of current legislation is necessary to obtain the appropriate authorizations, which include specific technical studies such as forest inventory, respective compensation proposals, and other procedures.

Aura's Conceptual Mine Closure Plan includes an assessment of activities necessary to minimize the impacts associated with the closure phase of the activity. The closure project costs are estimated at R$ 0.54 million for the Ernesto unit and R$ 12.72 million for the Pau-a-Pique unit. These costs were revised according to a balance carried out by the company's financial sector. The cost model assumes some expenses related to the elaboration of mine closure executive projects, degraded area recovery projects (PRAD), PRAD execution, decommissioning of structures, and other executive activities necessary for closure.

Among the main activities of the Closure Plan are the demolition of civil installations, removal of infrastructures and foundations, land regularization, drainage for rainwater runoff, initial soil coverage with grass and legume species to aid in area stabilization, and soil preparation for subsequent planting of tree and shrub species. Planning for the closure of new structures and physical and chemical stabilizations, as well as recovery of affected areas, will be included in the review process related to future expansions, at an opportune time and in accordance with legal requirements.

It is concluded that, Aura Apoena Unit complied with all stages of environmental licensing, including the preliminary, installation, and operating license, as well as fulfilling the guidelines for requesting renewals of Operating Licenses, on February 7, 2022, operating regularly with the Renewal of Operating License in effect until August 9, 2025.

It should be noted that this is a Project that has already been in operation since 2012, with the implementation of environmental control actions and in accordance with current environmental laws. Thus, the environmental feasibility of operating the mining activity is proven and supported by the effective Operating License issued by the State Secretariat for the Environment of Mato Grosso.

It is important to note that the Aura Apoena Unit also adopts good environmental management practices and is committed to furthering sustainable and social-impact efforts.

From the above, it can be concluded that the Aura Apoena Unit currently in operation is considered feasible, provided that the control and monitoring actions contained in the various environmental programs and conditions required by the current licenses are followed.

1.15 Capital and Operation Costs

Apoena has decided that the mine operation will be outsourced, the entire mining operation will be contracted. During the year 2025, the costs of the outsourced mine operations (OPEX) are expected to follow the breakdown presented in Table 1-8 and Figure 1-13.

Table 1-8: Mine Operating Costs for Year 2025

Drilling (BRL/t mined)	*BRL 2.19*
Blasting (BRL/t mined)	*BRL 1.65*
Load (BRL/t mined)	*BRL 1.33*
Transportation (BRL/t mined)	*BRL 4.45*
Auxiliary Equipment (BRL/t mined)	*BRL 1.46*
Geology (BRL/t mined)	*BRL 1.02*
Technical Services (BRL/t mined)	*BRL 0.19*
Mine Management (BRL/t mined)	*BRL 0.29*
TOTAL 2025 (BRL/t mined)	BRL 12.59



Figure 1-13: Mine Operating Costs for Year 2025

The operating costs of EPP Plant are classified into two categories: fixed and variable. Table 1-9 and Table 1-10 show a summary of the cost breakdown for both categories – from 2024 to 2028. The average operational cost estimate of the Plant, per ton processed, showed sums between USD 11/t and USD 12/t processed – consistent with industrial practices for operations with similar operating design and the same scale (1.5 Mtpa).

Table 1-9: Fixed OPEX Plant costs breakdown

	2024	2025	2026	2027	2028
Manpower (USD 000)	3,040.00	2,980.42	2,923.11	2,923.11	2,923.11
Contracts (USD 000)*	1,063.08	1,042.24	1,022.20	1,022.20	1,022.20
Contingency (USD 000)	56.40	55.29	54,229	54,229	54,229
Total fixed costs (USD 000)	4,159.52	4,077.96	3,999.54	3,999.54	3,999.54

(*) includes a fixed part of the power supply agreement for the minimum contracted demand.

Table 1-10: Variable OPEX Plant Costs Breakdown

	2024		2025		2026		2027		2028	
	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t
Maintenance cost	4,582.40	3.24	4,405.54	3.17	4,478.39	3.11	5,225.64	3.11	4,929.67	3.11
Input costs	5,578.79	3.94	5,363.47	3.86	5,452.17	3.79	6,361.89	3.79	6,001.56	3.79

	2024		2025		2026		2027		2028	
	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t
Power cost (*)	1,566.79	1.11	1,506.32	1.08	1,531.23	1.06	1,786.72	1.06	1,685.53	1.06
Variable contracts	1,163,.60	0.82	1,118.69	0.81	1,137.19	0.79	1,326.93	0.79	1,251.78	0.79
Contingency	-	0.00	-	0.00	-		-		-	
TOTAL VARIABLE COSTS	12,891.57	9.10	12,394.02	8.93	12,598.97	8.75	14,701.18	8.75	13,868.53	8.75

(*) includes a fixed part of the power supply agreement for the minimum contracted demand.

The following Table 1-11 shows anestimated of Capital costs (CAPEX) to meet the demands of thePlant. The installation of an intensive leaching reactor was considered, in addition to the current circuit, and the replacement of the interstage sieves – to meet the feed rate increase of the leaching circuit (CIL).

Table 1-11 – Estimated Capital Costs of the Plant to Meet LOM

	2024	2025	2026	2027	2028
Miscellaneous projects	300	294	288	288	288
Additional leaching reactor	-	980	-	-	-
Interstage screening x6	700	-	-	-	-

CAPEX was not considered for the purchase of mine equipment, since the entire operation is 100% outsourced. CAPEX was considered as sustaining of BRL 1.97 per tonne mined.

The closure project costs are estimated at US$ 0.54 million for the Ernesto unit and US$ 12.72 million for the Pau-a-Pique unit. Mine Closure costs were not considered as part of the CAPEX and OPEX for all of Aura's assets.

1.16 Economic Analysis

The economic analysis estimates annual post-tax cash flow based on an assumed 10% discount rate, running with no inflation. Key assumptions include the beginning based on January 2024, 4-year mine life, and all the production are exported. The exchange rate was based on Focus Boletim issued by Central Bank of Brazil.

Taxes due were estimated by applying existing tax law to revenues associated with the Complex Production. The tax regulation applied consists of four types of taxes: the Financial Compensation for the Exploitation of Mineral Resources (CFEM), Income Tax and Social Contribution and Tax for the Control, Monitoring, and Supervision of Research, Mining, Exploration, and Exploitation of Mineral Resources (TFRM).

The CFEM tax is a federal royalty paid to the Government of Brazil for the extraction and economic exploration of Brazilian Mineral Resources.

The income tax (Imposto de Renda sobre Pessoa Jurídica) applies to the profit earned by companies and other legal entities.

The Social Contribution tax is directed to finance social security matters, which encompass health, social security, and social assistance. The tax rate is 9% and it is also applied to the earnings before income taxes.

Lastly, TFRM tax is due in Mato Grosso State, and its rate is R$ 2.66 per ton of ROM.

There is a royalty right to be paid by Aura to the owners, being 0.5% of the NSR based on production of Lavrinha, Nosde, and Pombinhas. Another royalty right to be paid by Aura to the Irajá, being 2.0% of the NSR.

An estimate of working capital was incorporated into the cash flow based on accounts receivable (30 days), inventories (30 days), and accounts payable (30 days).

The closure project costs are estimated at US$ 0.54 million for the Ernesto unit and US$ 12.72 million for the Pau-a-Pique unit.

The base case estimates a post-tax NPV of US$91.38 million at a discount rate of 10% per year.

A sensitivity analysis was undertaken to evaluate the impact of the resulting economic indicators for the following attributes within the cash flow: Price, discount rate, CAPEX, OPEX, and exchange rate (Figure 1-14). The sensitivity analysis showed that the Apoena Project is most vulnerable to volatility and uncertainties associated with the gold selling price, followed by the OPEX costs.

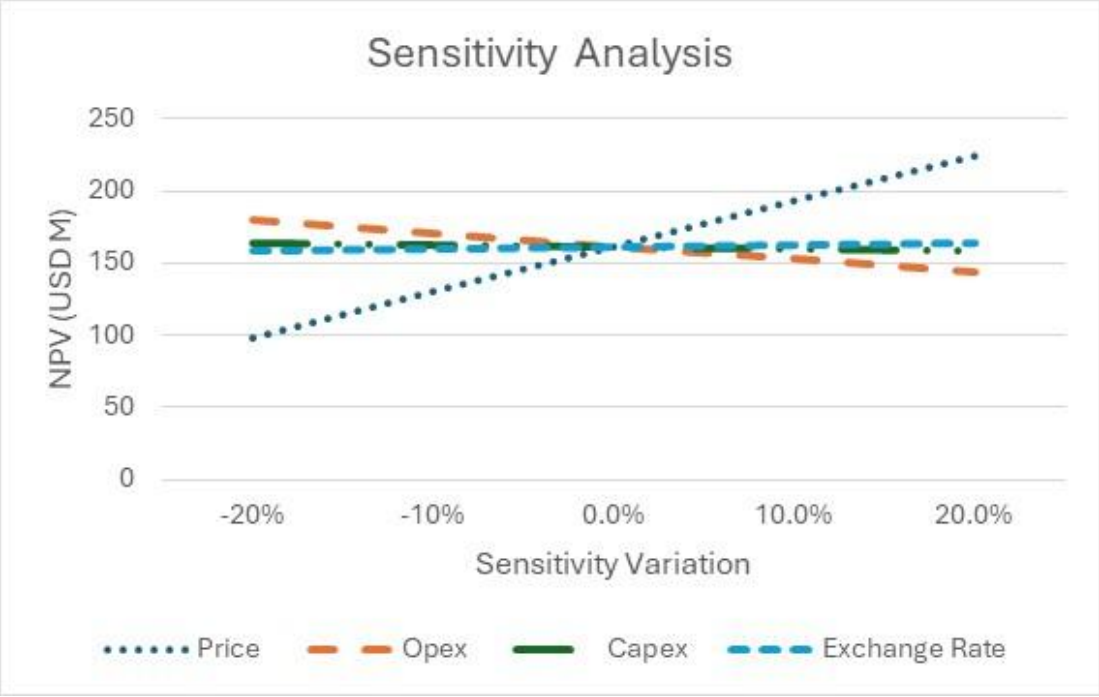


Figure 1-14: Discounted Cash Flow Sensibility Analysis

2 INTRODUCTION

GE21 Consultoria mineral Ltda (GE21) prepared a Technical Report titled “Apoena Mines (EPP Complex) Mineral Resource and Mineral Reserve”, dated April 1st, 2024 (the 2023 Technical Report), in accordance with Canadian National Instrument 43-101 (NI 43-101). The 2023 Technical Report was prepared to support a disclosure of the mineral resource and mineral reserve estimate on the Ernesto/Pau-a-Pique Deposits (Apoena Mines, or EPP Complex, or EPP Property), located in the southwest of Mato Grosso state, near Pontes e Lacerda in Brazil. There has been no material change to the information contained in the 2023 Technical Report, and Aura considers the 2023 Technical Report to be current. This Technical Report Summary (TRS) presents information from the 2023 Technical Report in compliance with United States Securities and Exchange Commission’s (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary (S-K 1300). GE21 has prepared this TRS to support a Aura's planned listing on the NYSE.

The EPP Property is 100% beneficially owned by Aura Minerals Inc. (“Aura” or the “Company”). Aura is a public, TSX listed, company trading under the symbol “ORA”, with its head office located at 78 SW 7th St., Miami, FL 33130 USA.

Aura, through its Brazilian subsidiaries, acquired the EPP Project from Yamana Gold Inc. (“Yamana”) in June 2016. The Project was initially studied by Yamana from 2009 to 2011 and was put into production in 2013 for approximately two years before been placed on care and maintenance in late 2014.

The EPP Complex is the third Project owned by Aura in this specific region of Brazil. The Company currently owns the operating Sao Francisco gold mine near the town of Pontes-e-Lacerda and had the Sao Vicente gold mine that ceased operations in 2014.

Ernesto, Lavrinha, Nosde, Japonês open pit mines and Pau Pique Mine underground mine are collectively called Apoena mines (formerly known as the EPP project).

The Lavrinha open pit and the Ernesto deposit are located approximately 60 kilometres ("km") south of the Company's Sao Francisco Mineand 12 km south of the town of Pontes e Lacerda. These two deposits are within close proximity to the process plant which is located at Ernesto.

The Pau-a-Pique deposit is located approximately 40 km south of the Ernesto and Lavrinha deposits and process plant.

Three exploration areas (Nosde, Japonês and Pombinhas) are within 20 km of the process plant.

2.1 Qualified Persons

The Qualified Persons (QPs) responsible for this independent TRS are Mr. Porfirio Cabaleiro Rodriguez, Luiz Eduardo Campos Pignatari, Farshid Ghazanfari, Homero Delboni Jr. and Miss

Branca Horta de Almeida Abrantes (Table 2-1). Neither GE21 nor the Authors of this Independent TRS, except for Mr. Ghazanfari, who is an Aura employer, have had any material interest invested in Aura or any of its related entities.

Mr. Porfirio Cabaleiro Rodriguez, Director of GE21 Consultoria Mineral, is a mining engineer, a Fellow of the AIG (FAIG #3708), and has more than 40 years of experience in Mineral Resource and Mineral Reserve estimation. Mr. Rodriguez has sufficient experience relevant to the styles of mineralization and types of deposits under consideration to be considered a QP, as defined by S-K 1300. He is responsible for supervising all sections in this Independent TRS, is individually responsible for for sections 15, 16 and 19, and is co-responsible, with other QPs, for sections 1, 18, 22, 23, and 24.

Mr. Farshid Ghazanfari, Director of Geology and Mineral Resources for Aura Minerals, is a geologist by merit of education and experience and a registered Professional Geoscientist with the Association of Professional Geoscientists of Ontario (membership # 1702). Mr. Ghazanfari has more than 30 years of experience in geology, exploration, and Mineral Resource estimation. Mr. Ghazanfari has sufficient experience relevant to the styles of mineralization and types of deposits under consideration to be considered as a QP, as defined by S-K 1300. He is individually responsible for sections 6, 7, 8, 9, and 11 and is co-responsible, with other QPs, for sections 1, 22, 23, and 24.

Mr. Luiz Eduardo Pignatari is a mining engineer associated to Dompiere Tecnologia Mineral, and a QP consultant certified associated to Dompiere Tecnologia Mineral by the Chilean Commission for the Qualification of Competencies in Resources and Reserves – CH 20.235 nº 288. Mr. Pignatari has large mining operation experience and its mineral processing, including mineral exploration, technical evaluation for many mining enterprises with economic financial feasibility studies, always with a focus on the most advanced technology and operational intelligence. Mr. Pignatari is responsible for sections 12 and 13 of this TRS, and is co-responsible, with other QPs, for sections 1, 18, 22, 23, and 24.

Dr. Homero Delboni Jr. is a Mining Engineer and Minerals Processing, Ph.D, in Minerals Processing and Chartered Professional (Metallurgy) of the Australasian Institute of Mining and Metallurgy (AusIMM #112813), and has more than 40 years of experience in mineral processing. Mr. Delboni has sufficient and relevant experience in mineral processing industrial circuits to be considered a QP as defined by S-K 1300. He is individually responsible for sections 10 and 14 and is co-responsible, with others QPs, for sections 1, 18, 22, 23, and 24.

Environmental Expert Branca Horta de Almeida Abrantes has 19 years of experience in the industrial, mining, energy, and sanitation sectors. Ms. Abrantes is a member of the AIG (MAIG #8145). She is the QP responsible for the environmental assessment, is individually responsible for sections 17, and is co-responsible, with others QPs for sections, 1, 18, 22, 23, and 24.

Neither GE21 nor the Authors of this Independent TRS, except for Mr. Ghazanfari, who is an Aura employer, have any material interest invested in Aura or any of its related entities. Their

relationship with Aura is strictly professional, consistent with that held between a client and an independent consultant. This TRS was prepared in exchange for payment based on fees that were stipulated in a commercial agreement. Payment of these fees does not depend on the results of this TRS.

Table 2-1: List of QPs and related responsibilities

QP	Section Responsibility	Site Visit	Responsibility
Porfirio Cabaleiro Rodriguez, FAIG	15, 16, 19 and partially 1, 18, 22, 23, and 24		Author and Peer Review
Farshid Ghazanfari	6, 7, 8, 9, and 11 and partially 122, 23, and 24	August 16 to 18, 2023	Author and Peer Review
Luiz Eduardo Pignatari	12 and 13and partially 1, 18, 22, 23, and 24	August 16 to 18, 2023	Author and Peer Review
Dr. Homero Delboni Jr., AusIMM	10 and 14, and partially 1, 18, 22, 23, and 24.		Author and Peer Review
Branca Horta de Almeida Abrantes, MAIG	17 and partially 1, 18, 22, 23, and 24		Peer Review

2.2 Site Visits and Scope of Personal Inspection

Mr. Farshid Ghazanfari has conducted numerous visits and inspections to the local analytical laboratories which provided some of the analytical data supporting Mineral Resources. The independent accredited laboratories used are considered reputable and suitable for the analyses performed. The QP did not visit the SGS lab in Belo Horizonte, Brazil where majority of exploration samples were analyzed. The QP did not verify drill hole collar locations in the field but relied on work of survey contractors and Apoena technical team. Collar locations were checked against LiDAR topography and satellite imagery and deemed acceptable. No independent samples were collected nor analyzed for verification purposes by the QP.

Mr. Ghazanfari visited the Apoena Mines, in Mato Grosso State, Brazil, regularly since 2005 and his last site visit was between October 23 to 27, 2023. During his last site, he reviewed core logging procedures, QAQC measures, production and exploration database, geological interpretation, lithological modeling, mineralization modeling, geostatistical analysis, and resource modeling as well as exploration drilling and new targets in the near mine and regional areas. He validates all information that supports Mineral Resource estimation.Mr. Eduardo Pignatari visited the Apoena Mines, in Mato Grosso State, Brazil, in August 16 to 18, 2023. He reviewed pit optimization, mine plan, schedules that support Mineral Reserves for Nosde and Lavrinha.

2.3 Effective Date and Sources of Information

Apoena mines previous technical report was prepared by P&E mining in 2016 after acquisition of the asset from Yamana Inc. This report titled “Feasibility Study and Technical Report on the EPP Project, Mato Grosso, Brazil” (“Report” or “Technical Report”), was prepared to provide Aura

Minerals Inc. (“Aura” or the “Company”) with a National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) Technical Report on the Ernesto/Lavrinha/Pau-a-Pique Deposits located in the southwest of Mato Grosso state, near Pontes e Lacerda in Brazil. The EPP Project at time of the report was 100% beneficially owned by Aura. Aura is a public company listed on the TSX, under the symbol “ORA”.

The effective date for this Mineral Resource Estimate is October 31st, 2023. The authors believe that no relevant data with respect to the Mineral Resource Estimate were produced after this date.

Aura and its consultants provided GE21 with the information that was used to develop this TRS, specifically during the execution of the work that is described herein. This work reflects the technical and economic conditions at the time that it was executed. The authors executed, whenever possible, an independent verification of the data that it received, in addition to field visits to corroborate said data. This information was supplied in the form of an exploratory drilling database, certifications, maps, technical reports, and a topographical survey. The data is a combination of historical and newly generated information.

The results, images and illustrations presented in this TRS have been generated from information provided and compiled by Aura through data organized in spreadsheets, internal and third-party technical reports, and supplemental information obtained from the Aura technical team. Exceptions will be subtitled for the source reference.

3 PROPERTY DESCRIPTION

3.1 Property Location

The Ernesto, Lavrinha, and Pau-a-Pique gold mines are near the town of Pontes e Lacerda, about 450 km west of Cuiabá, that is the capital of the Brazilian state of Mato Grosso. The Ernesto Mine is located approximately 12 km southeast of Pontes e Lacerda and the entrance to the project has the coordinates 258141.59 east, 8303731.75 north, SAD 1969 21S. The Pau-a-Pique Mine is located approximately 38 km southeast of Pontes e Lacerda and the entrance to the project has the coordinates 269453.05 east, 8266523.38 north, SAD 1969 21S. The Project locations are shown in Figure 3-1.

The Ernesto and Lavrinha gold mines are contiguous and can be accessed from Pontes e Lacerda by paved road BR-174, which crosses within 2 km of the Project, and by a network of good gravel and dirt roads that offer year-round access for two-wheel drive vehicles. The Pau-a-Pique Deposit is located approximately 47 km southwest of Ernesto, and can be accessed via a dirt road that runs parallel to BR-174. Figure 3-2 shows the location of the Ernesto, Lavrinha, and Pau-a- Pique properties. In 2010, Pontes e Lacerda's population recorded by IBGE (Brazilian Institute of Geography and Statistics) was 41,408.

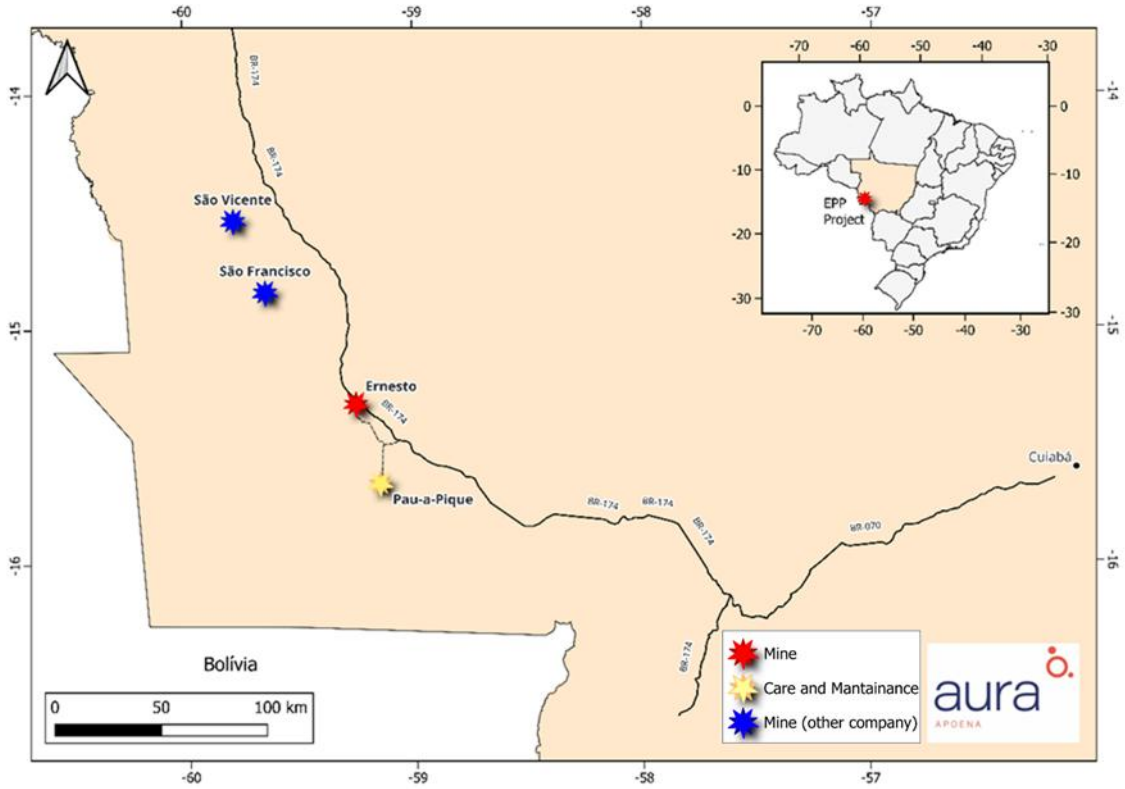


Figure 3-1: Location of the Pau-a-Pique and Ernesto Project Sites

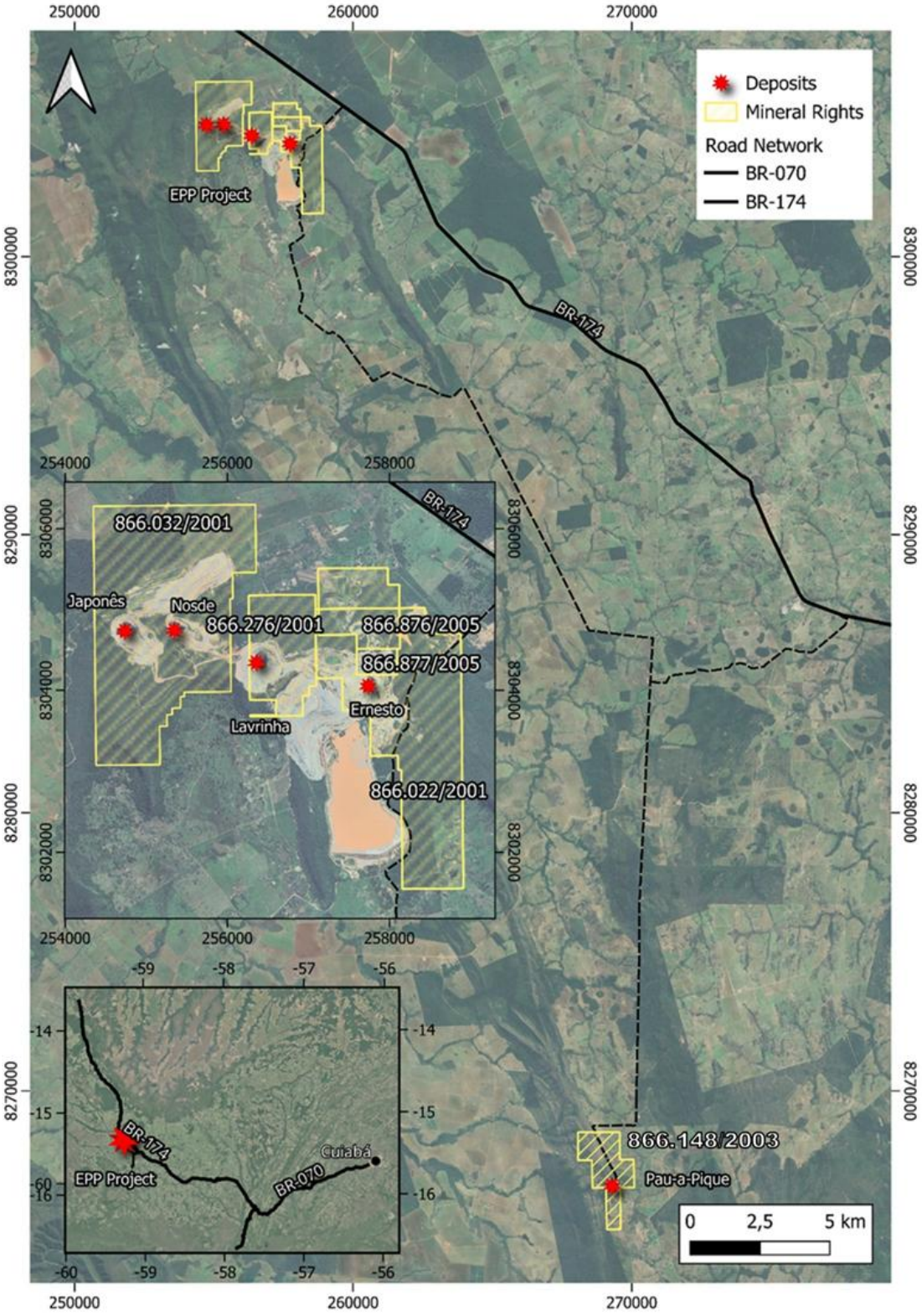


Figure 3-2: Location of the Ernesto, Lavrinha, and Pau-a-Pique Concessions

3.2 Property Description and Tenure

The Ernesto Property comprises 1,412.89 ha of six mining sites whose rights are (legally or beneficially) held by Mineração Apoena S.A. (“Apoena”), a company wholly owned by Aura. The mining in these areas is being conducted in accordance with the mining plan approved by the regulatory agency (ANM), after the release of the Mineral Research Operating License or Operating License (LO), as informed in Table 3-1. Annually, the Annual Mining Report (RAL) is presented, and the Financial Compensation for the Exploration of Mineral Resources (CFEM) is regularly collected. In addition, the safety measures required by the regulatory standards of mining activity are adopted, ensuring full compliance with current legislation, as well as the validity of acquired rights. The mining rights that cover the targets in this TRS are listed in Table 3-1. A claims map is presented in Figure 3-3, which includes the coordinates of concessions in latitude and longitude.

Table 3-1: Mining Rights of the Ernesto District

Mining Rights of the Ernesto District						
Target	**ANM Process No.**	**Petitioner**	**Area (ha)**	**LOPM (License No. and expiration data)**	**LO (License No. and expiration data)**	**Status**
Ernesto	866.022/2001	Apoena	375,49		327479/2022 (No expires)	Mining Concession
Ernesto	866.876/2005	Apoena	41,63		327479/2022 (No expires)	Mining Concession
Ernesto	866.877/2005	Apoena	15,96		327479/2022 (No expires)	Mining Concession
Lavrinha	866.276/2001	Apoena	111,63		327479/2022 (No expires)	Mining Concession
Nosde/Japonês	866.032/2001	Apoena	493,19	329418/2023 (19-Apr-2026)		Application for Mining Concession
Pau-a-Pique	866.148/2003	Apoena	374,99		328090/2022 (No expires)	Mining Concession

866.022/2001	
Latitude	Longitude
-15°19'31"113	-59°15'13"474
-15°19'14"846	-59°15'13"474
-15°19'14"846	-59°15'02"958
-15°19'25"329	-59°15'02"958
-15°19'25"329	-59°14'48"224
-15°21'07"742	-59°14'48"224
-15°21'07"742	-59°15'13"461
-15°20'19"908	-59°15'13"461
-15°20'19"908	-59°15'14"697
-15°20'14"091	-59°15'14"697
-15°20'14"091	-59°15'26"073
-15°19'55"689	-59°15'26"073
-15°19'55"689	-59°15'37"392
-15°19'42"688	-59°15'37"392
-15°19'42"688	-59°15'48"123
-15°19'14"830	-59°15'48"123
-15°19'14"830	-59°15'46"967
-15°18'58"563	-59°15'46"967
-15°18'58"563	-59°15'18"079
-15°19'05"447	-59°15'18"079
-15°19'05"447	-59°15'13"474
-15°19'14"846	-59°15'13"474
-15°19'14"846	-59°15'46"997
-15°19'25"287	-59°15'46"997
-15°19'25"287	-59°15'31"341
-15°19'41"544	-59°15'31"341
-15°19'41"544	-59°15'14"643
-15°19'31"113	-59°15'14"643
-15°19'31"113	-59°15'13"474

866.876/2005	
Latitude	Longitude
-15°19'14"848	-59°15'13"474
-15°19'31"113	-59°15'13"473
-15°19'31"113	-59°15'14"643
-15°19'31"116	-59°15'14"643
-15°19'31"116	-59°15'31"341
-15°19'25"293	-59°15'31"341
-15°19'25"287	-59°15'31"341
-15°19'25"287	-59°15'46"997
-15°19'14"849	-59°15'46"997
-15°19'14"848	-59°15'13"474

866.276/2001	
Latitude	Longitude
-15°19'51"202	-59°16'15"727
-15°19'09"044	-59°16'15"727
-15°19'09"044	-59°15'48"209
-15°19'45"776	-59°15'48"209
-15°19'45"776	-59°15'51"233
-15°19'49"546	-59°15'51"233
-15°19'49"546	-59°15'53"842
-15°19'57"740	-59°15'53"842
-15°19'57"740	-59°16'15"684
-15°19'57"209	-59°16'15"684
-15°19'57"209	-59°16'04"920
-15°19'51"202	-59°16'04"920
-15°19'51"202	-59°16'15"727

866.148/2003	
Latitude	Longitude
-15°39'04"142	-59°09'00"615
-15°39'36"676	-59°09'00"615
-15°39'36"676	-59°08'43"826
-15°40'09"208	-59°08'43"826
-15°40'09"208	-59°09'00"614
-15°40'58"009	-59°09'00"614
-15°40'58"009	-59°09'17"403
-15°40'09"208	-59°09'17"403
-15°40'09"208	-59°09'34"192
-15°39'36"676	-59°09'34"192
-15°39'36"676	-59°09'50"981
-15°39'04"142	-59°09'50"981
-15°39'04"142	-59°09'00"615

866.877/2005	
Latitude	Longitude
-15°19'41"544	-59°15'14"643
-15°19'41"544	-59°15'31"338
-15°19'31"116	-59°15'31"338
-15°19'31"116	-59°15'14"643
-15°19'41"544	-59°15'14"643

866.032/2001	
Latitude	Longitude
-15°18'31"297	-59°17'17"762
-15°18'31"297	-59°16'10"718
-15°18'58"564	-59°16'10"718
-15°18'58"564	-59°16'20"487
-15°19'09"007	-59°16'20"487
-15°19'09"007	-59°16'21"627
-15°19'46"411	-59°16'21"627
-15°19'46"411	-59°16'40"958
-15°19'48"129	-59°16'40"958
-15°19'48"129	-59°16'42"588
-15°19'52"767	-59°16'42"588
-15°19'52"767	-59°16'46"069
-15°19'55"362	-59°16'46"069
-15°19'55"362	-59°16'48"249
-15°19'59"991	-59°16'48"249
-15°19'59"991	-59°16'51"306
-15°20'15"413	-59°16'51"306
-15°20'15"413	-59°17'17"762
-15°18'31"297	-59°17'17"762

Figure 3-3: Coordinates of the Ernesto, Lavrinha, and Pau-a-Pique Concessions

3.3 Royalties

As part of the purchase agreement, a 2% NSR royalty is payable to Irajá, a company associated to Santa Elina Group, on gold ounces produced from the Project with respect to up to 1,000,000 collective ounces of gold, and thereafter, a 1% NSR on gold ounces produced from the Project.

A 0.5% NSR royalty is due to each landowner (one for Ernesto/Lavrinha, and one for Pau-a-Pique), proportional to their surface rights. The Mining Code provides that landowners are entitled to a royalty equivalent to 50% of the royalty due to the government (the Financial Compensation for Exploitation of Mineral Resources — “CFEM”). CFEM is calculated based on net income resulting from the sales of the mineral product, deducting taxes, transport costs, and insurance. In the case of gold, the rate of CFEM is 1%, thus the landowner royalty is 0.5%.

3.4 Environmental

To the best of QP’s knowledge and belief, after reasonable inquiry, the QP is not aware of any environmental litigation or pending fines associated with the EPP Project.

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

4.1 Access

The Ernesto Property can be accessed from Pontes e Lacerda by paved road BR-174 for 12 km and then following 2 km of gravel and dirt roads that offer year-round access to the Project. The Lavrinha Property is accessed from Pontes e Lacerda by the same roads used to access the Ernesto Property.

The Pau-a-Pique Deposit is approximately 73 km away from Pontes e Lacerda by road, and approximately 47 km away by dirt road from Ernesto.

4.2 Climate

The climate in the Project area is suitable for year-round mining. The region boasts the hot, tropical, and semi-humid climate of the Mato Grosso state in Central West Brazil. The area has two well-defined seasons: one dry season, usually from April to October, when the temperature averages 20 °C to 22 °C during the cooler dry winter; and a season that receives large amounts of rain during November to March, with daily maximum temperatures ranging from 30 °C to 43 °C. Weather data is summarized in Table 4-1. Average monthly temperatures for Pontes e Lacerda is presented in Figure 4-1 and average rainfall data is presented in Figure 4-2.

Table 4-1: Heather Data Summary

	Pontes e Lacerda and Porto Esperidião
Annual average temperature (°C)	22-24
Annual average humidity (%)	75-85
Annual average precipitation (mm)	1,440
Annual evaporation rate (mm)	1,001-1,100
Annual average potential evapotranspiration (mm)	1,201-1,400
Average summer temperature (°C)	24-26
Average summer highest temperature (°C)	32-34
Approx. summer fraction of annual precipitation	0.7
Average winter temperature (°C)	20-22
Average winter lowest temperature (°C)	14-16

Source: Ausenco, 2010.

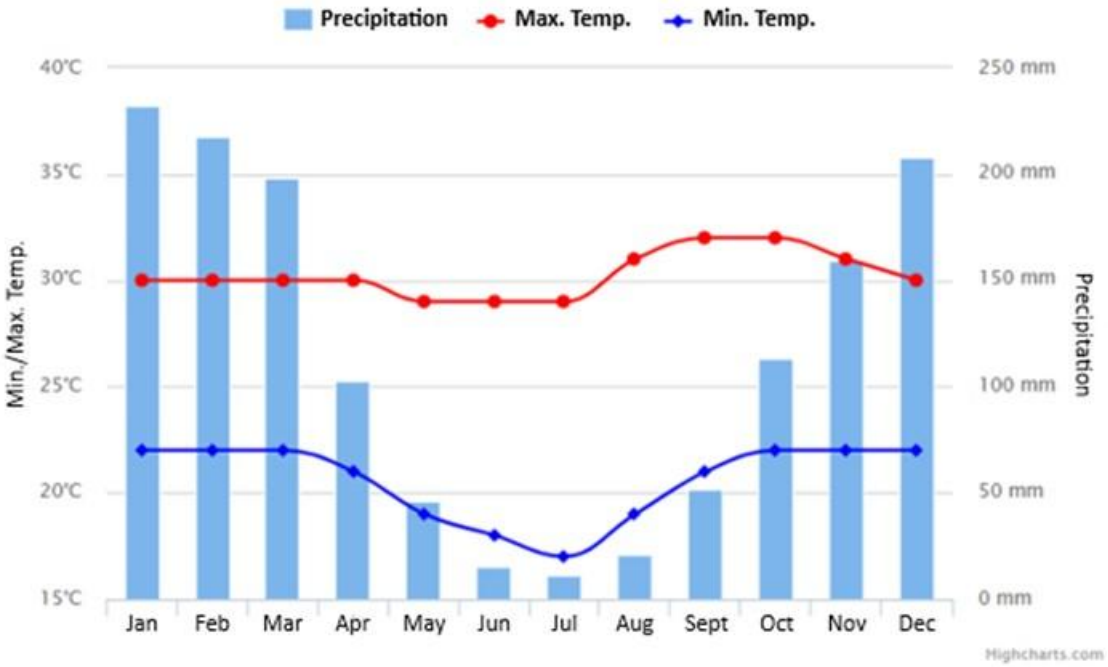


Figure 4-1: Average Temperature and Rainfall Data, Pontes e Lacerda, Brazil

Source: Climatempo.

Month	Minimum (°C)	Maximum (°C)	Precipitation (mm)
January	22°	30°	232
February	22°	30°	218
March	22°	30°	198
April	21°	30°	103
May	19°	29°	46
June	18°	29°	15
July	17°	29°	11
August	19°	31°	21
September	21°	32°	52
October	22°	32°	113
November	22°	31°	159
December	22°	30°	208

Figure 4-2: Average Temperature and Rainfall Data, Pontes e Lacerda, Brazil

Source: Climatempo.

4.3 Physiography

The Ernesto Property is in a range of hills that runs from northwest of Pontes e Lacerda to southeast of Pau-a-Pique (Figure 4-3). The terrain is comprised of rolling hills. The Ernesto District is covered by the Amazon Forest, much of which has been cleared for livestock activity.

Locally, topographic features are characterized by flat relief and hilly highlands with elevation ranging between 280 m and 430 m. The Property averages around 270 m above sea level.

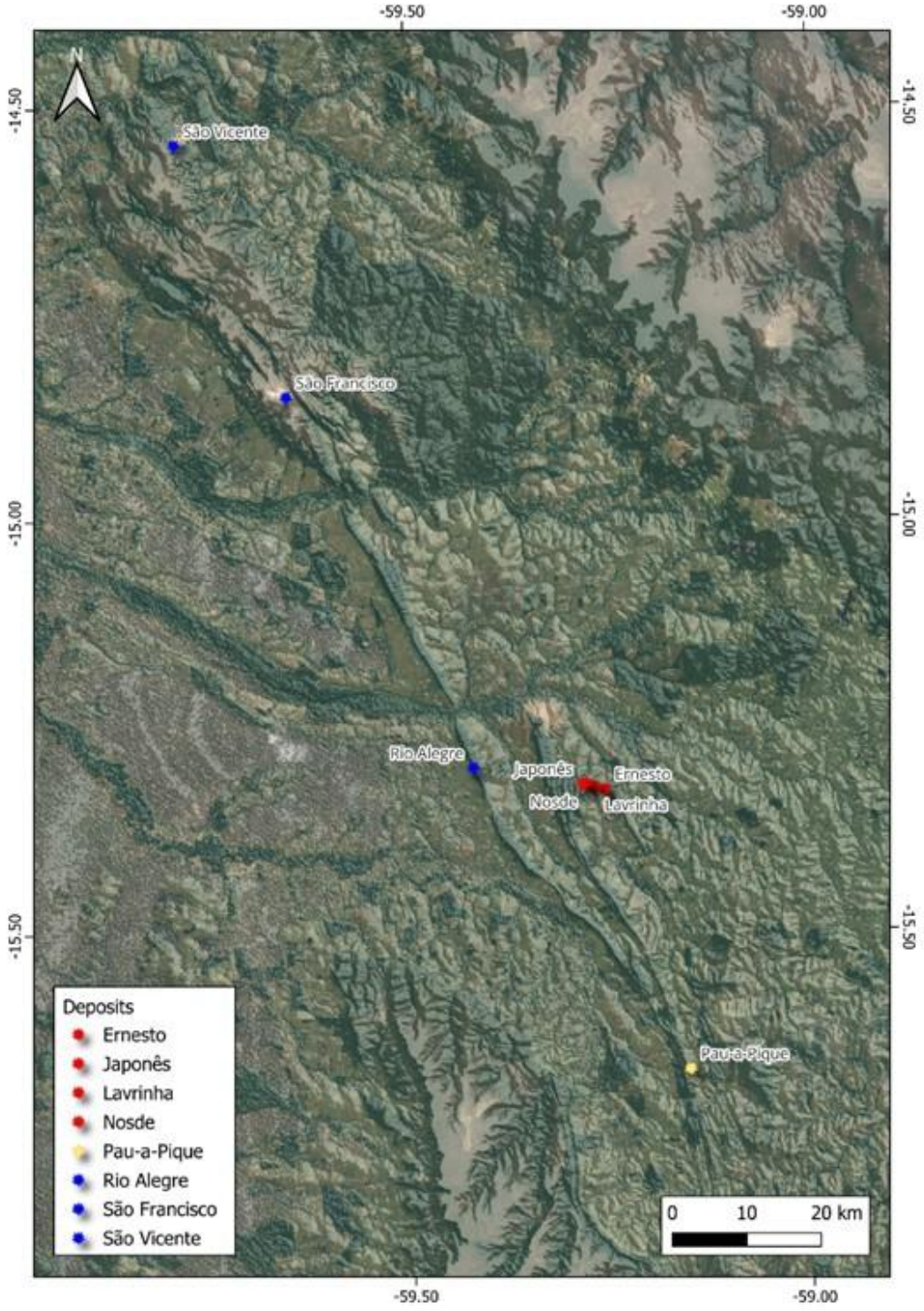


Figure 4-3: Terrain and Relief, Ernesto and Pau-a-Pique Area (looking NW)

4.4 Local Resources

Aura operated the São Francisco Mine and the past-producing São Vincente Mine until 2014, both in the vicinity of Pontes e Lacerda. Experienced personnel can be found in the local region or in the state capital Cuiabá (approximately 450 km to the east). The nearest major airport is in Cuiabá.

4.5 Infrastructure

There are paved roadways between the deposits and the town of Pontes e Lacerda. The 47 km ore haulage route between Pau-a-Pique and state road BR-174 was established by the previous operator, being utilized until mining ceased in late 2014. Construction of this gravel route mainly entailed upgrading the existing roads along with construction of some new sections.

The Ernesto Property contains a 130 tonnes per hour carbon-in-leach process plant, which includes crushing, milling, and tailing facilities with power supplied from the national grid via a 12 km 138 kV transmission line from Pontes e Lacerda. The Ernesto Property also contains a gatehouse, administration offices, core shack, explosives storage facility, and the Ernesto open pit and waste rock dump. The contiguous properties do not contain any infrastructure, only the open pits and waste rock dumps. The Pau-a-Pique Property contains an underground mine that was operated by Aura until late 2022, in addition to surface facilities for administration and maintenance.

Aura has existing surface rights over most of the Project area either via direct ownership or agreements with landowners. There are no communities or permanent dwellings within the Project footprint.

5 HISTORY

Mineral exploration in the Pontes e Lacerda region began with the discovery of mineral wealth by Portuguese explorers in the late 17th and early 18th centuries. This was followed by a mining boom for gold and diamonds that peaked with the exploitation of placer deposits in the Mato Grosso state in the mid-18th century (Machado and Figueiroa, 2001). The recent history of the Ernesto and Pau-a-Pique gold mines in sections 5.1 and 5.2 below is summarized from Ausenco's (2010) Feasibility Study report for Yamana.

5.1 Ernesto Complex

In the early 1980s, thousands of artisanal miners began recovering placer gold along the rivers and streams in the Complex area; these placer deposits were exhausted by the late 1980s. In 1989, artisanal miners began mining weathered bedrock at Ernesto and surrounding areas. From these areas, approximately 60,000 oz of gold have reportedly been recovered to date. At Ernesto, artisanal miners reportedly produced 9,000 oz of gold from a small pit in a three-metre-thick zone along a 200-metre length and from underground workings accessed via seven declines extending 50 m to 60 m down-dip from the surface outcrop. The highest artisanal miner's production was in 1991 when their best month reportedly yielded 1,600 oz of gold.

5.2 Exploration History

Gold was first discovered at the Aguapeí Gold Belt by Portuguese settlers (Paulistas frontiersmen) in the 18th century, around 1734, and it was mined from primary (mainly), colluvial, alluvial, or placer deposits (first Gold Cycle in Brazil's Colonial times). The most significant primary gold deposits were discovered at places today known as São Francisco Xavier and São Vicente mines, Rio Galera, Santana, Nossa Senhora do Pilar, Aguapeí, Cágado, Santa Bárbara, and Lavrinha. Since then, gold mining activities have been interrupted due to difficulties in operation and exhaustion of alluvial deposits.

Modern gold mining began in 1984, during a second gold rush at Alto Guaporé Gold Province (1984-1997). Artisanal miners, after exhaustion of alluvial and colluvial deposits, discovered several small primary gold deposits close to Pontes e Lacerda city, including Japonês, Nosde, Lavrinha, Ernesto (Copacel), Pombinhas, and Cantina/Serra Azul deposits.

About 6,000 artisanal miners carried out a large number of small operations (including panning, small underground workings, and small-scale process plants) around the cities of Pontes e Lacerda, Vila Bela da Santíssima Trindade, and Porto Esperidião. Gold production data for this period are not accurate, but it is estimated that about 5-6 tons of gold was produced between 1990 and 1995. In 1992, these artisanal mining activities attracted the attention of several mining companies, including Copacel, Minopar, Anglo American, WMC, Madison do Brasil, TVX Gold/Paulo Abib, and Mineração Santa Elina ("MSE").

Copacel and Minopar, local mining companies, were the first and main owners of exploration permits in the Ernesto District in the early 1990s. In 1992, Anglo American and WMC carried out intensive surface geochemical surveys along the belt, mainly stream sediment sampling. In 1993, Madison do Brasil, after the acquisition of exploration permits from Copacel and Minopar, carried out a diamond drilling program at Japonês, Nosde, Lavrinha, and Ernesto targets. In 1994, Madison do Brasil company assigned its mineral rights and transferred control of the exploration permits to TVX Gold, which, in 1995, carried out additional drilling campaigns. In the same year, TVX Gold transferred its mineral rights to MSE to capitalize on other business priorities. Meanwhile, MSE drilled nine more exploratory drill holes for a total of 1,711.77 m at the Lavrinha Deposit and collected 683 samples.

5.3 Pau-a-Pique Deposit

Like Ernesto, the Pau-a-Pique area was explored and mined in the 18th century, and mining activities were restarted in the 1980s by artisanal miners working in alluvium and colluvium around the deposit. Later in the 1990s, the company Mineração Itapuã developed an open pit and some small galleries. Small-scale artisanal mining still occurs in the vicinity through the processing of alluvium and colluvium by artisanal miners associated with a cooperative that owns an area adjoining the Pau-a-Pique exploration permit.

The Pau-a-Pique Mine resumed operations in 2017, following its acquisition by Apoena (Aura Minerals), and produced 61,099 oz until 2022, when operations were suspended.

5.4 Historic Exploration

5.4.1 Ernesto Complex

The following summary of historical exploration is based on the Ausenco (2010) report. Artisanal mine workings in the Ernesto area were examined by the Brazilian company Mineração Santa Elina (“MSE”), Western Mining Corporation, Anglo American, and other mining companies in 1991 and 1992. No significant programs were undertaken until 1994, when Madison acquired claims covering several artisanal mining targets and subsequently formed a 35/65 joint venture (“JV”) with TVX Gold Inc. (“TVX”). TVX, as the JV operator, completed a program consisting of regional aerial photo mapping at a scale of 1:5000; detailed mapping of several artisanal mining targets at a scale of 1:500; analysis of 1,160 trench samples; and analysis of 15 bulk samples (150 kg each). In late 1994, the JV drilled 46 diamond core holes (6,478 m) to test five targets and identified mineralization of interest in the Ernesto and Nosde targets. Resource estimates were made for both targets based on the drilling results.

In 1995, MSE became a third partner in the joint venture and the JV operator. MSE completed 24 vertical diamond drill holes (4,881 m) at Ernesto and 12 holes (1,359 m) in the Lavrinha target west of Ernesto. The MSE drilling helped establish and extend the down-plunge continuity of the Ernesto mineralization, and a new resource estimate was prepared. The Project was

subsequently abandoned in part due to declining gold prices. MSE maintained a core block of claims covering the northern down-plunge end of the Ernesto trend. After 1995, no exploration was done until Yamana consolidated and expanded the Ernesto area claims.

Yamana's exploration of the Ernesto Property began in 2003 and consisted of surveying, rock chip sampling, chip channel sampling, soil sampling, and mapping. The exploration activities carried out from 2003 to 2013 included rock chip sampling, chip channel sampling, soil sampling, detailed geological mapping, drilling, and compilation work. The historical drilling data analysis, combined with field checks and detailed geological mapping, revealed the higher-grade gold mineralized zones to be controlled by hinges and fold axes plunging at low angles to the northwest or southeast (azimuth N310° or N130°), which formed during compressive events where rocks of the Pontes e Lacerda Sequence were thrust over the Aguapeí Group rocks. Structural vergence indicated a tectonic transport from NE to SW.

From 2003 to 2009, drill programs were carried out only on Ernesto's near-mine areas (about 3,000 m) and at the Pau-a-Pique deposit (approximately 24,000 m) to extend and convert near-surface resources that were excavated by artisanal miners. However, the main goal was to increase resources at the São Francisco Mine.

Due to budget constraints, almost all drill programs at the Ernesto near-mine areas consisted of shallow drill holes, rarely reaching depths of 300 m or deeper. In the past, core sample intervals were visually selected, i.e., only strongly altered core intervals were sampled. It is estimated that at least 50% of the drill holes that were drilled in the Ernesto District before 2012 have not been sampled. In 2012-2013, some intervals of historic drill holes that were not completely sampled and not visually interesting returned positive results (e.g., ER_022, ER_043, ER_124). At the time, the geologic team had not developed a good understanding of what controlled the higher-grade gold mineralization (shoots). At the end of 2008, Yamana estimated the initial Proven and Probable gold resource (open pit and underground) at about 700,000 oz, from which 373,000 oz was related to the Pau-a Pique deposit. Exploration work during that period focused on adding resources to the São Francisco Mine. After the mine was sold to Aura, the goal was to add resources to the EPP project with less emphasis on testing additional potential areas of the district.

In May 2015, Apoena Mineração, a subsidiary of Aura Minerals that already held the mineral rights of the São Francisco and São Vicente Mines, acquired the mining rights of Yamana Gold, including the EPP mines. Operations resumed at both mines, with Ernesto restarting in 2016 and Pau-a-Pique in 2017. The Pau-a-Pique Mine suspended its operations in 2023. The Ernesto system began with the C1 Pit, followed by operations at the Lavrinha Pit, and, subsequently, opening its third pit, named C2, which was later renamed Ernesto Pit. The Japonês Pit was opened in the western part of the Ernesto Complex, and finally, the Nosde Pit was inaugurated.

The ramp-up initiated in 2016 at the EPP Complex had approximately 233,000 oz in Proven and Probable Mineral Reserves. During the next seven years, over 420,000 Oz of gold was produced. Recently, it was decided to increase investments in exploration to extend the mine's lifespan.

These investments have been successful, leading to an increase in Proven and Probable Mineral Reserves to over 276,000 oz, increasing the LOM by five or more years.

Exploration and drilling at Apoena continued, resulting in significant growth and extension of the LOM. Recent drilling campaigns carried out between 2022 and 2023 covered around 53,315 metres, both in expansion and in the delineation of mineralized zones, mainly focused on the Lavrinha and Nosde.

5.4.2 Pau-a-Pique Deposit

Exploration at Pau-a-Pique was initiated in 2005 by Yamana to follow up on earlier artisanal miner's activity. In 2005 and 2006, geological mapping of the Pau-a-Pique area was performed at a 1:1000 scale, the artisanal mining area was mapped at a scale of 1:500, and a scale of 1:25 was used to map channel samples and face benches where mineralized zones were exposed. A total of 119 channel samples were collected at two-metre intervals in mineralized areas.

Chip sampling was conducted to identify lithologies with hydrothermal alteration. Samples collected for gold analysis amounted to 10 kg to 15 kg. A total of 600 chip, soil, and trench samples were taken in 2008.

Soil sampling was conducted in the Pau-a-Pique area. The first 10 cm of each drill hole was discarded, and the next 25 cm were collected and passed through a 0.6 cm sieve and put over a canvas screen. A number of 10-15 L of material were homogenized and collected in a plastic bag for analysis. On slopes, five holes were drilled for each sample collected, but only a single hole was drilled in flat areas.

Coarse material in drainage beds was sampled, sieved, homogenized, and collected in 10- to 15-L samples. Stream anomalies associated with regional folds were sampled, along with coarse-grained sediments.

Total rock analysis was conducted on two chip samples and 19 core samples from mineralized areas. Samples were submitted for 32-element ICP analysis, and the gold mineralization at Pau-a-Pique was found to be associated with high iron and zirconium content, a strong cobalt enrichment and positive molybdenum, copper and barium anomalies.

Aura conducted a drill campaign at Pau-a-Pique from 2015 to 2016. A total of 27 holes (3,160.0 m) were drilled. Drilling was concentrated mainly on NW strike and NW down plunge extensions of the Pau-a-Pique main lens (P1 zone) below current development levels. Another objective was to delineate Mineral Resources in the SE portion of the deposit (P3 and P4 zones) below mined-out levels to add more ounces and also convert Inferred Mineral Resources to the Indicated classification.

Drill holes were collared from underground accesses by REDE Energenharia and Foraco utilizing the wireline method at BQ diameter. The drill holes were surveyed with a Maxibor II, reading twice every three metres. A 5% tolerance value was used to compare the inclination in the two runs, and then the survey report was validated.

All samples from this drill campaign were analyzed by fire assay method at the São Francisco Mine lab. Approximately 16% of the samples were sent to SGS in Belo Horizonte to check and validate the São Francisco laboratory results.

6 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1 Regional Geology

The Pau-a-Pique and Ernesto-Lavrinha-Nosde deposits are situated in the Middle Proterozoic Aguapeí belt, along the southwestern margin of the Amazon Craton, in the Sunsás-Aguapeí province (1.20 and 0.95 Ga; Teixeira et al., 2010). The belt is in the context of the Western Amazon Belt (WAB; Rizzotto et al., 2014), composed of the Neoproterozoic Nova Brasilândia, Aguapeí, and Sunsás fold-and-thrust belts. The paleogeographic context comprises the collision between Amazonia and Laurentia paleocontinents during early Grenvillian stages (ca. 1.2 Ga) in the Rodinia assembly (Tohver et al., 2005; Li et al., 2008).

According to Teixeira et al. (2010), the evolution of the Aguapeí Belt started with the deposition of the Sunsás and Vibosi groups in a passive margin setting on the Aguapeí Aulacogen. Later, a collisional stage with sinistral transcurrences developed the Aguapeí belt and nearby shear zones. The depocenter of the Aguapeí Aulacogen overlaps the Rio Alegre, Santa Helena, and Alto Jauru terranes (Saes, 1999; Geraldes, 2001). The Rio Alegre terrane is subdivided into the Minouro, Santa Isabel, and São Fabiano formations, comprising metavolcanic, metamafic, meta-ultramafic, chemical, and clastic metasedimentary rocks and banded iron-formation, with ages from 1509 to 1497 Ma (Geraldes, 2000; Matos et al., 2004). The Santa Helena suite consists of calc-alkaline tonalite and granodiorite to evolved granitic compositions, with U/Pb ages between 1.45 to 1.42 Ga (Geraldes et al., 2001). The Lavrinha and Pau-a-Pique tonalites are included in this suite, with U/Pb ages of 1,464 ± 25 and 1,481 ± 47, respectively (Geraldes et al., 2000). The lower contact of the Aguapeí belt with the tonalite is usually mylonitized and comprises an important regional control on gold mineralization.

The Aguapeí Group sedimentary sequence is composed of three formations – Fortuna, Vale da Promissão, and Morro Cristalina (Saes and Leite, 1993; Saes, 1999) (Figure 6-1). At the base, the sedimentation consists of conglomerates and sandstones from a shallow marine environment. Towards the top, quartz sandstones with crossbedding, plane-parallel shale packages, limestone, and mudstones, with colors varying from brown to purple predominately. The uppermost part of the Group comprises fine to medium quartz sandstones, varying from eolic to a fluvial setting.

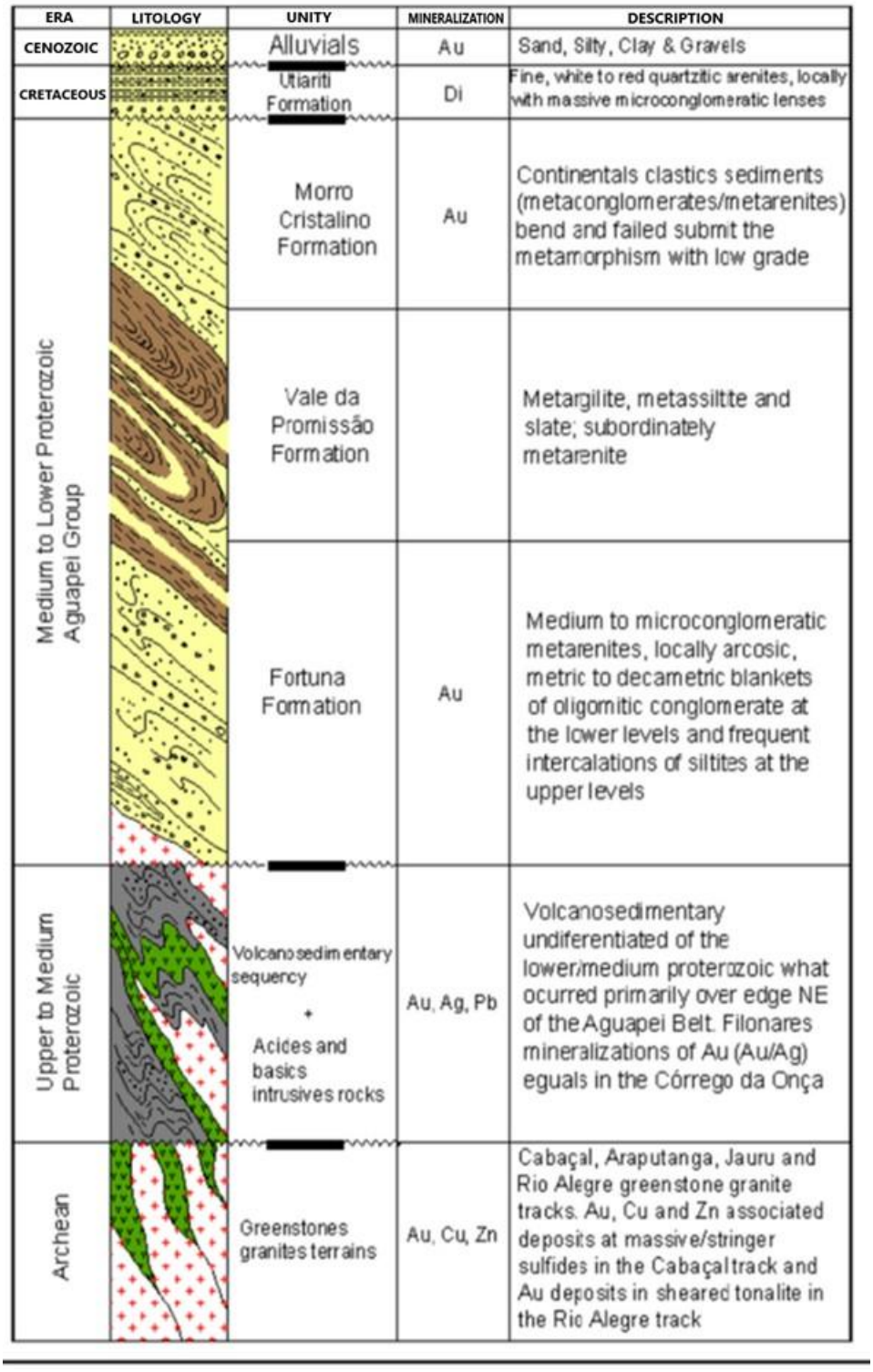


Figure 6-1: Regional Stratigraphic Column of the Aguapeí Group and basement units, Western Mato Grosso State, Brazil

6.2 Regional Structural Geology

The Aguapeí belt is NNW oriented, with 25 to 50 km width and 600 km in extension, widely affected by greenschist facies metamorphism. The belt is subdivided longitudinally (north-to-

south) into four compartments, according to Menezes et al. (1993) and Fernandes et al. (2005a) (Figure 6-2):

- Transcurrent domain – Pau-a-Pique deposit;
- Low-angle contractional domain – Ernesto deposit;
- Symmetric folded domain – São Vicente deposit;
- Brittle and tilted domain – Santa Bárbara hill, no deposit associated.

The structural models from different authors agree that the regional metamorphic foliation Dn in the basement units is related to the earlier Rondonian-San Ignacio event. After that, the D1 deformation comprises an S1 bedding parallel foliation and a late S2 sub-vertical foliation created by disjunctive and crenulation cleavages from folding during the Sunsás orogeny (Fernandes et al., 2005b).

The Cágado anticline, where the Ernesto deposit is located, is interpreted as the hinge zone of a regional-scale fold (Fernandes et al., 2005a; b). The contact between the Aguapeí Group and the Lavrinha tonalite is formed by the Morro Solteiro shear zone, originating the mylonitic foliation S1. Melo et al. (2022) characterized this shear zone as a fold-like geometry that originated after the thrusting and bending of the Aguapeí ductile sediments over the dome-shaped rigid tonalite during D2-D3 events. The D2 event is formed by the mylonitic foliation S2, while the D3 event is registered by mylonitic rocks near the basement and by a brittle fracture system at the upper sequences.

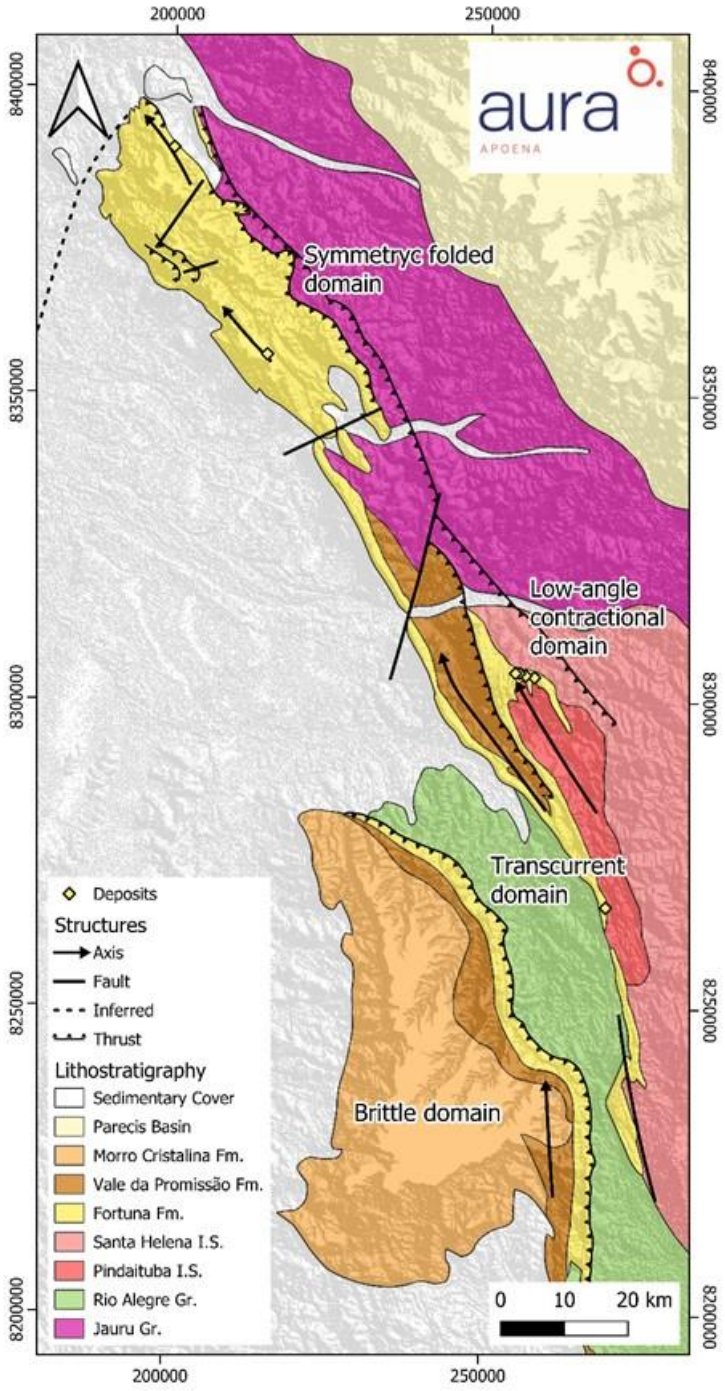


Figure 6-2: Regional Geology and Structural Domains of the Aguapeí belt, Western Mato Grosso State, Brazil

According to Carvalho (2006) (Gold Belt Regional Structural Analysis; internal report), the Ernesto Project area can be divided into three main structural domains based on the general structural features (Figure 6-3):

1. The eastern domain is characterized by low-angle structures dipping dominantly to the NE. These structures are responsible for thrusting the Rio Alegre rocks over the Aguapeí Group and for the basal slip of the Fortuna Formation over the tonalites of the Santa Helena Complex. The main vergence is directed to the SW. The Ernesto Lower Trap is the main mineralization associated with this context.

2. The western domain is characterized by low-angle structures that dip moderately to the west and associated high-angle, dextral strike-slips structures. These high-angle structures were probably developed as a continuation of the deformation responsible for generating the low-angle ones. These structures were responsible for the basal slip of the Fortuna Formation rocks over the tonalites and possibly for the local thrust of the tonalites over the meta-sedimentary sequence. The Pombinhas trend is the main mineralization associated with this context.
3. The northern domain is characterized by a complex deformation where at least two main events can be identified. These transpositions caused several interference fold patterns, depending on the domain sector. An important strain partitioning is also observed and probably related to rock rheology. Generally, the domain scenario is marked by a series of low angle, N to NNW dipping structures probably related to thrusts verging to the SSE. These structures are responsible for thrusting the Rio Alegre rocks over the Fortuna Formation. Thrusts are also mapped within the metasedimentary layers of the Fortuna Formation, mostly related to the mineralization. The structures (foliation, folds, and lineations) related to the thrusts have lately been refolded. Strong and complicated interference patterns can be observed on the Japonês, Lavrinha, and Nosde mining sites, which are the main mineralized horizons in this domain. Late NW striking, apparently strike-slip major faults seem to dislocate the former structures. There are some occurrences of breccias that seem to be intimately related to these late structures.

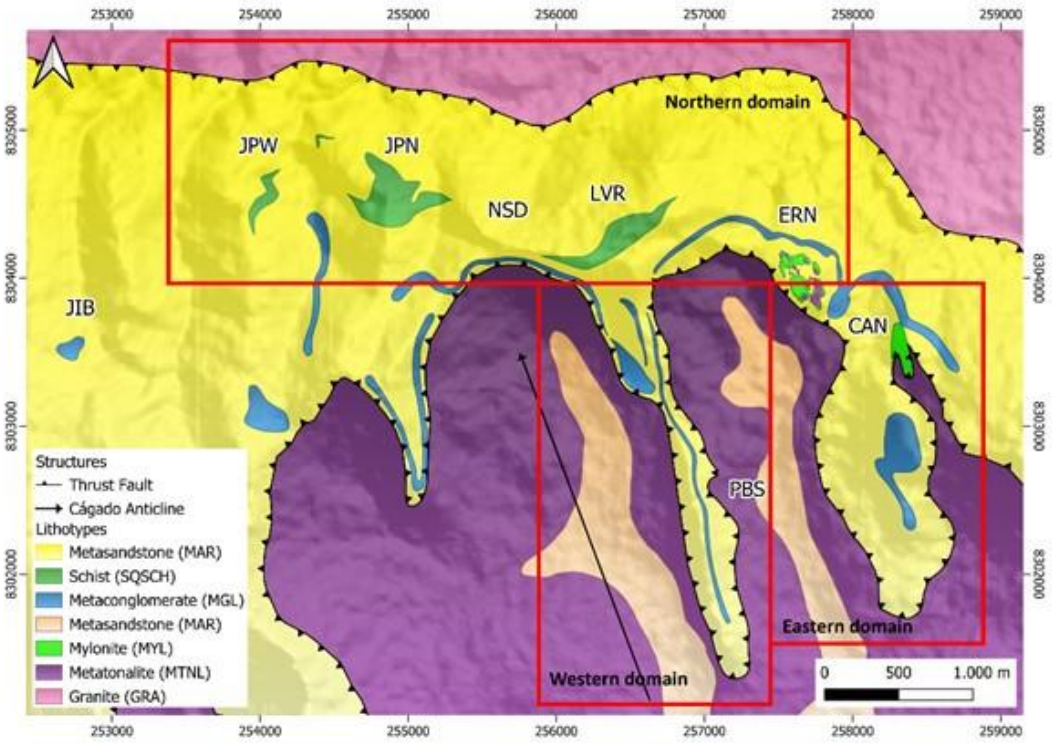


Figure 6-3: Geological map of the Cágado anticline region, with structural domains defined by Carvalho (2006) (Gold Belt Regional Structural Analysis; internal report)

Similarly, Malheiros and Garcia (2023; unpublished manuscript) interpreted the Cágado anticline deformation as a single shortening event with tensor rotation from NNE-SSW to NE-SW, which resulted in a D1 deformational phase with two progressive stages. For the D1 stage, metric-scale Type 3 folds (Ramsay, 1967) occur in the muscovite schist and lower metasandstone with

interbedded schist strata, related to the partitioning of deformation. The clockwise rotation of the regional stress field resulted in the superimposed NNW sub-horizontal folds of the D1 stage.

The Pau-a-Pique target is located far south of the main mineralized trend, at the Pau-a-Pique Range. The area is characterized by the Corredor shear zone (Fernandes et al., 2005a), a dextral NNW/SSE striking anastomosed contact zone between the Pau-a-Pique tonalite and the Fortuna Formation. Rocks are intensely deformed, prevailing a step-dipping mylonitic foliation and preserved folds. Tight to opened folds with moderately NW dipping axes are the most common. Mineralization is located in the aforementioned contact zone and is characterized by quartz veins and veinlets hosted on strongly hydrothermalized, sericite-rich mylonites. Alteration is dominated by quartz, sericite, pyrite, and magnetite.

According to the geological map and the field observations (Carvalho, 2006) the Pau-a-Pique area can be divided into two main contexts:

1. The southern sector of the Pau-a-Pique target is dominated by compressive tectonics that culminated in two major thrust faults. The West Thrust was responsible for thrusting the tonalite from the basement over the Fortuna Formation rocks. The East Thrust caused the slip of the sedimentary sequence over the tonalite.
2. The northern sector of the Pau-a-Pique prospect is dominated by strike-slip tectonics. It is characterized by step-dipping mylonitic foliation.

6.3 Deposit Geology

6.3.1 Ernesto Deposits

In the Ernesto-Lavrinha-Nosde area, the Middle Proterozoic Fortuna Formation crops out at the Cágado Anticline. The Formation consists, from base to the top, of a 40- to 60-m-thick basal feldspathic metasandstone and a 10- to 30-m-thick overlying metaconglomerate that serves as a stratigraphic guide. The above 60- to 120-m-thick lower metasandstone comprises interbedded metasandstone and muscovite schist, followed by a 20- to 60-m-thick intensely altered muscovite schist exposed in the Lavrinha and Japonês open pits. The overlying upper feldspathic metasandstone is ~30 m thick, followed by the < 80-m-thick upper metasandstone exposed in the Nosde and Japonês open pit (Malheiros and Garcia, 2023; unpublished manuscript). All of the rocks have been subjected to regional low-grade greenschist facies metamorphism but still display many well-preserved sedimentary structures such as graded bedding, crossbedding, and load deformation features.

The Lavrinha tonalite underlies the sediments. This unit is composed of fine- to medium-grained plagioclase and quartz into an aphanitic matrix, being weakly foliated and hydrothermally altered. The contact with the Fortuna Formation exhibits 0.2 m to 10 m mylonitic and ultramilonitic fabrics, and a metric layer of intensely altered, crushed, and decomposed metatonalite or saprolite. These features are observed only in drill cores under the Lavrinha and Nosde deposits and in the Ernesto open pit.

6.3.2 Pau-a-Pique Deposit

The Pau-a-Pique deposit is hosted by a mica-rich mylonitic zone in the sheared contact between the footwall Fortuna Formation and the hanging wall Mesoproterozoic igneous basement (Figure 6-4). The metasediments comprise metaconglomerates and arkosic metasandstones, while the basement includes diorites, tonalites, and granodiorites. These units were affected by the D2 shearing (Melo et al., 2022), and the igneous rocks were transformed into schistose layers of biotite, quartz, chlorite, muscovite, epidote, calcite, ilmenite, rutile, magnetite, apatite, and titanite. Toward the center of the shear zone, the biotite transitions into gray muscovite in zones with subsequent hydrothermal alteration and high-grade gold mineralization. The sheared metasediments in the hanging wall are described as centimetric to metric layers of muscovite with quartz, magnetite, rutile and ilmenite (Melo et al., 2022).

A silicified breccia occurs to the southwest of the Pau-a-Pique orebody, with no gold mineralization (Figure 6-4). It is uncertain whether it is related to an earlier rifting-related hydrothermal event, during the deposition of the Aguapeí sediments, a late D3 event, or a later Neoproterozoic event (Melo et al., 2022).

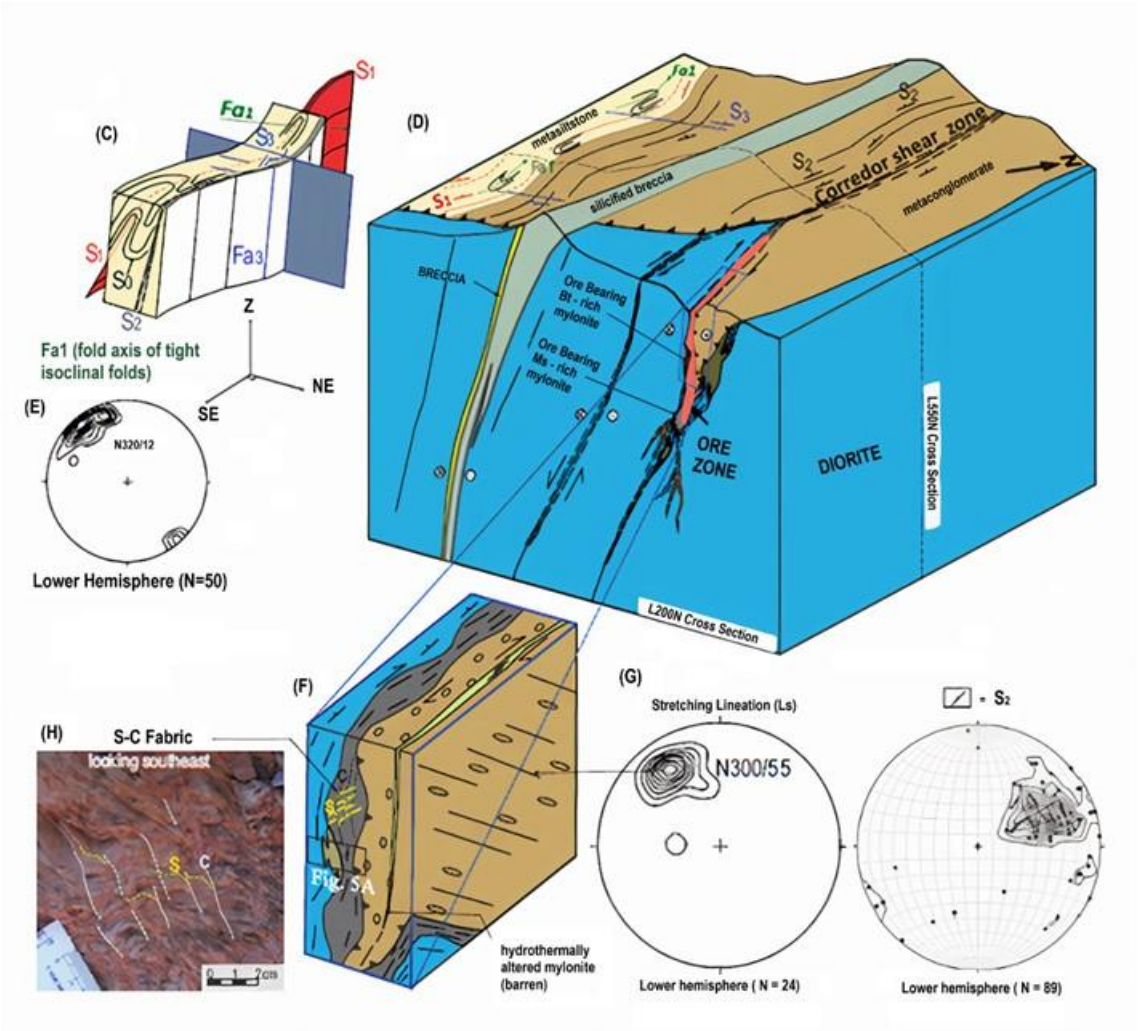


Figure 6-4: Schematic block diagram of the Pau-a-Pique deposit after Melo et al (2022)

6.4 Mineralization and Alteration

6.4.1 Ernesto Deposits

The Ernesto-Lavrinha-Nosde deposits consist of mineralized levels, following the local stratigraphy, as summarized in Table 6-1 and illustrated in Figure 6-5. The continuity of the ore bodies based upon the modeled Mineral Resources are summarized in Table 6-2

Table 6-1: Summary of ore traps of the Cágado anticline (Ernesto Complex deposits)

Trap	Host Rock	Type	Vein Geometry	Structural Context	Mineral Assembly
Lower Trap (Ernesto)	Contact between metatonalite and metasediments of Fortuna Fm.	Disseminated and Quartz Veins	Shear veins from 3- to 20-cm-width dipping 45° towards SW, with metric quartz pockets	Low-angle shear zone	(Qtz + Ser + Chl + Py + Hem ± Esp ± Mag)
Middle Trap (Ernesto)	Interbedded metaconglomerate and metarenite	Disseminated and Quartz Veins	Shear veins from 3- to 20-cm-width dipping 45° towards SW, with metric quartz pockets	Intrastractal shear zone	(Qtz + Py + Hem ± Esp ± Mag ± Ser ± Chl)
Upper Trap (Lavrinha/Nosde)	Interbedded schist and metarenite	Disseminated and Quartz Veins	Bedding-parallel shear veins with < 30 cm width	Intrastractal shear zone	(Qtz + Ser + Chl + Py + Hem ± Esp ± Mag ± Sd)
Bonus Trap (Nosde)	Metarenite	Disseminated and Quartz Veins	Mineralized veins orthogonal to bedding (191°/54°) or parallel (27°/21°), and conjugate vein arrays (126°/58°, 277°/51°, 16°/37°).	Competent metarenite layer with open dome and basing folds, and rupture of axial planes.	(Qtz + Py + Hem ± Esp ± Mag ± Ser ± Chl)

Table 6-2: Continuity of mineralization in each trap after the modeled resources in m

Deposit	Length (m)	Width (m)	Depth (m)
Lower Trap (Ernesto)	1,380	300	< 20
Middle Trap (Ernesto)	680	200	< 25
Upper Trap (Lavrinha/Nosde)	1,020	250	55
Bonus Trap (Nosde)	860	180	< 110 m

The Lower Trap consists of an intensely altered mylonitic zone developed along detachment structures between the Lavrinha tonalite and the feldspathic metasandstone of the Fortuna Formation. Alteration associated with gold mineralization within the mylonitic zone includes abundant quartz veins and veinlets with coarse-grained euhedral pyrite and fine-grained bipyramidal crystalline magnetite, along with visible gold. Additionally, there is fine-grained sericite, chlorite, specularite, and fissural hematite and limonite.

The presence of extensional faulting at the time of mineralization caused the alteration of the footwall tonalitic unit. The tonalite is extensively altered and historically logged as saprolite. However, the mineralogical composition of this altered footwall unit is completely different from the saprolite on the surface. The footwall saprolite is mainly composed of clay minerals produced

by alteration of feldspar and mica from tonalite groundmass and gradually changes to weakly altered tonalite.

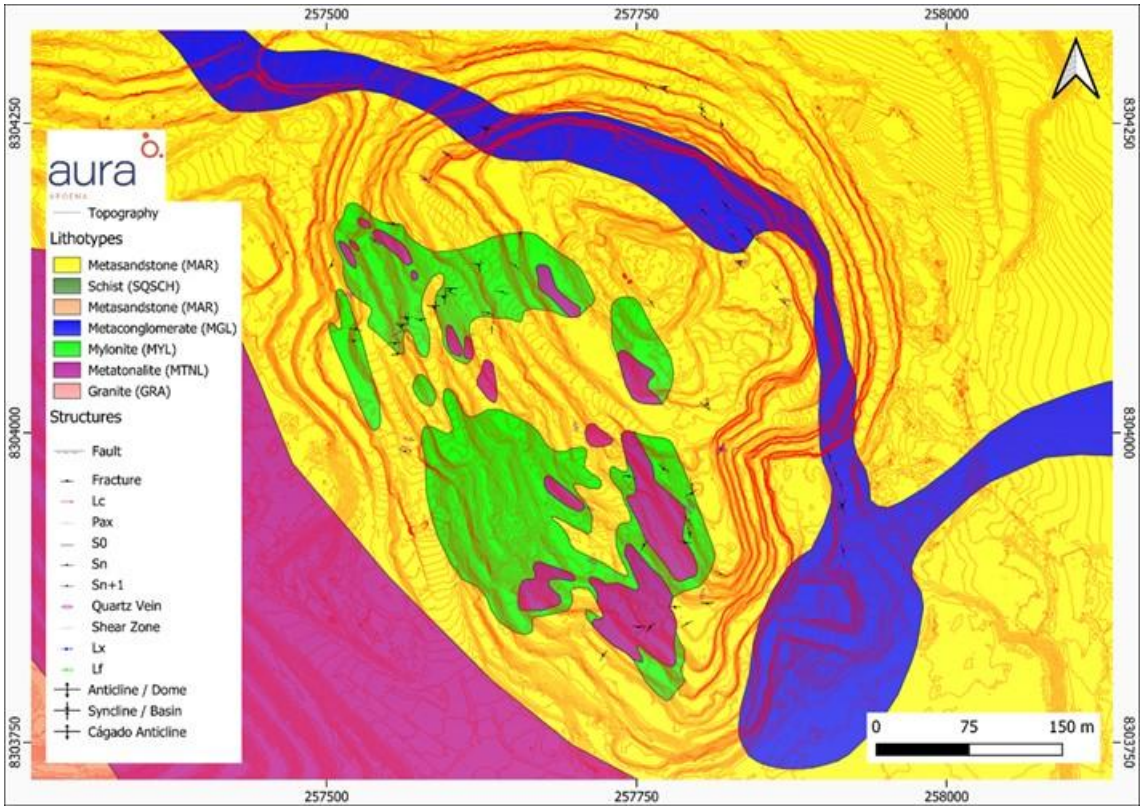


Figure 6-5: Detailed geological map of the Ernesto Mine

The Middle Trap is restricted to a permeable conglomeratic horizon, where it intersects dilation structures developed by folding and faulting. It comprises milky quartz veins with fresh and weathered pyrites, with sericite and chlorite alteration of the matrix and fissural hematite. This trap crops out in the Ernesto pit (Figure 6-5), and is intersected in drill holes at the Nosde and Lavrinha deposits.

The Upper Trap is widely developed in the Lavrinha and Nosde deposits (Figure 6-6 and Figure 6-7), occurs in metapelitic rocks (hematite sericite schist) in dilation zones of the intensely deformed synclinal troughs. The Upper and Intermediate traps share similar alteration and mineralization suites. The Upper Trap seems to be eroded in the Ernesto deposit area.

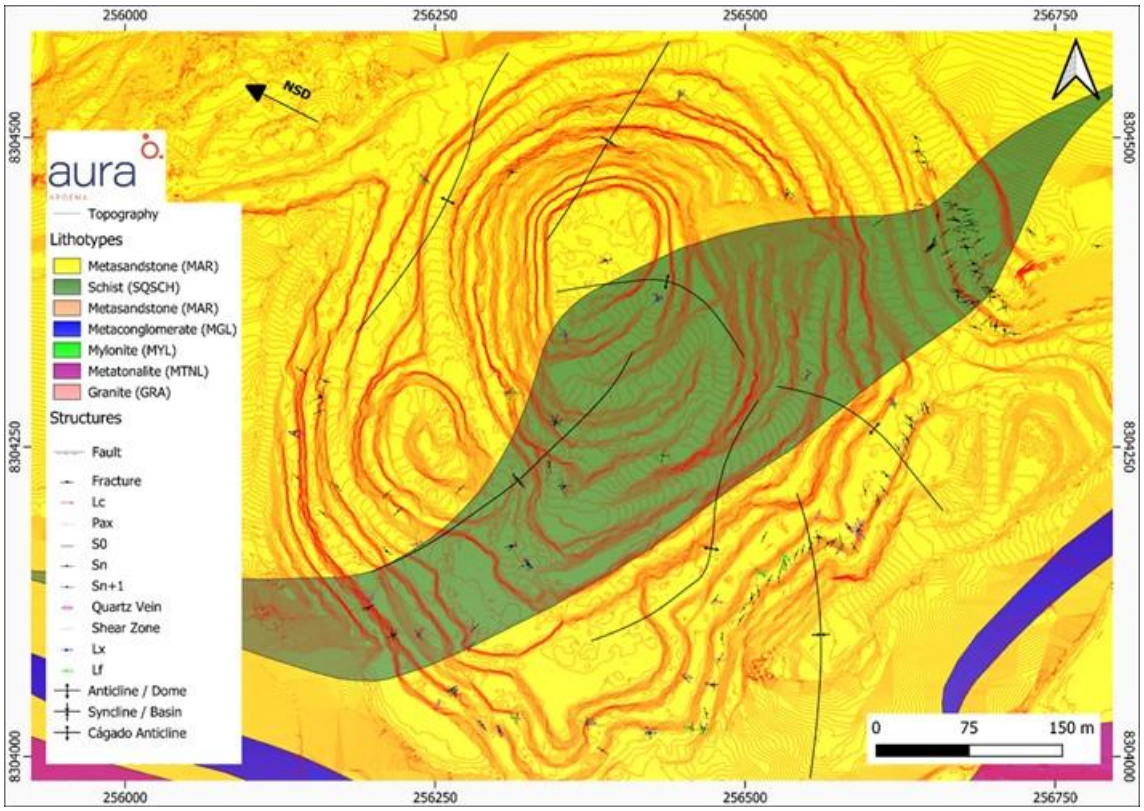


Figure 6-6: Detailed geological map of the Lavrinha Mine

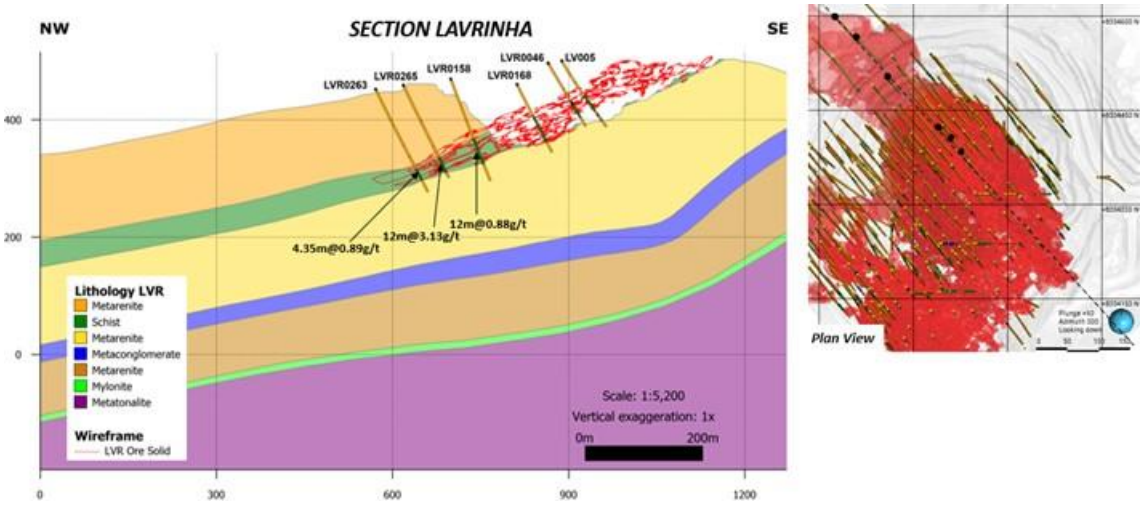


Figure 6-7: Typical cross-section of the Lavrinha Mine

The Bonus Trap consists of centimetre-thick cross-cutting quartz veins hosted by the upper metasandstone in the Nosde (Figure 6-8 and Figure 6-9) and Japonês deposits. These milky quartz veins include fresh and weathered pyrite and box works, along with visible gold. Hematite and limonite occur as fissure-filling and halos around the mineralized quartz veins.

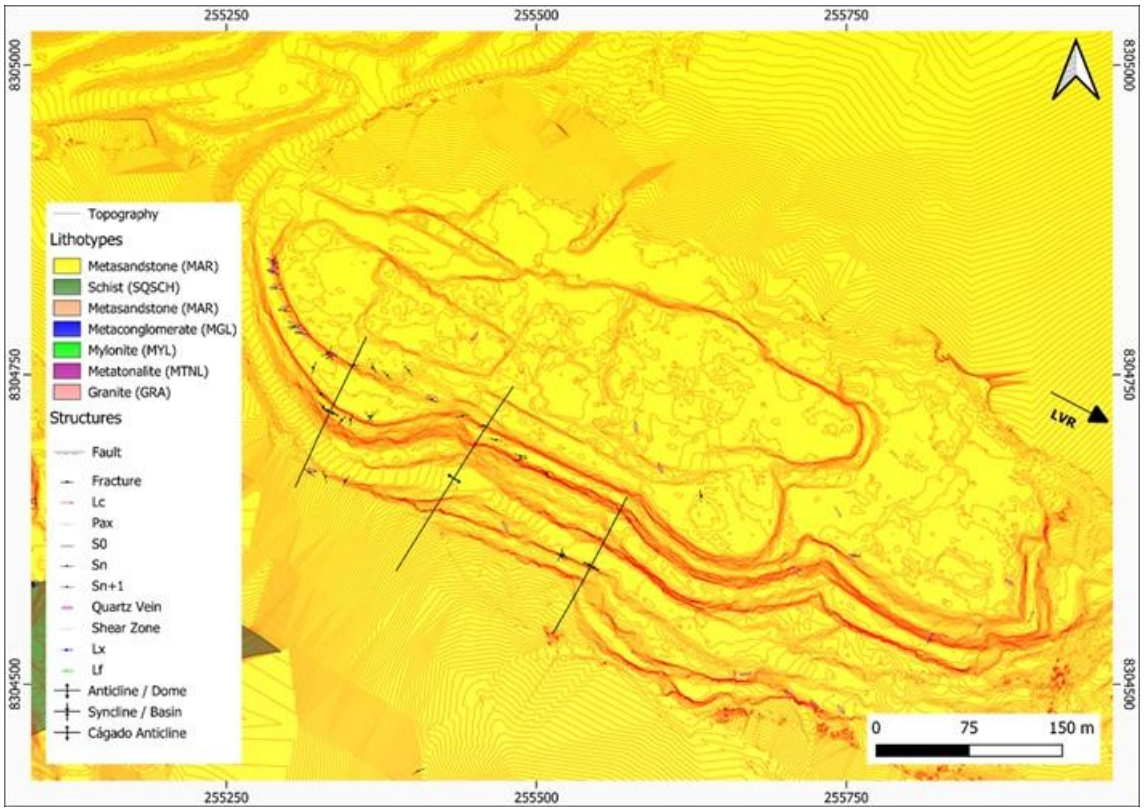


Figure 6-8: Detailed geological map of the Nosde Mine

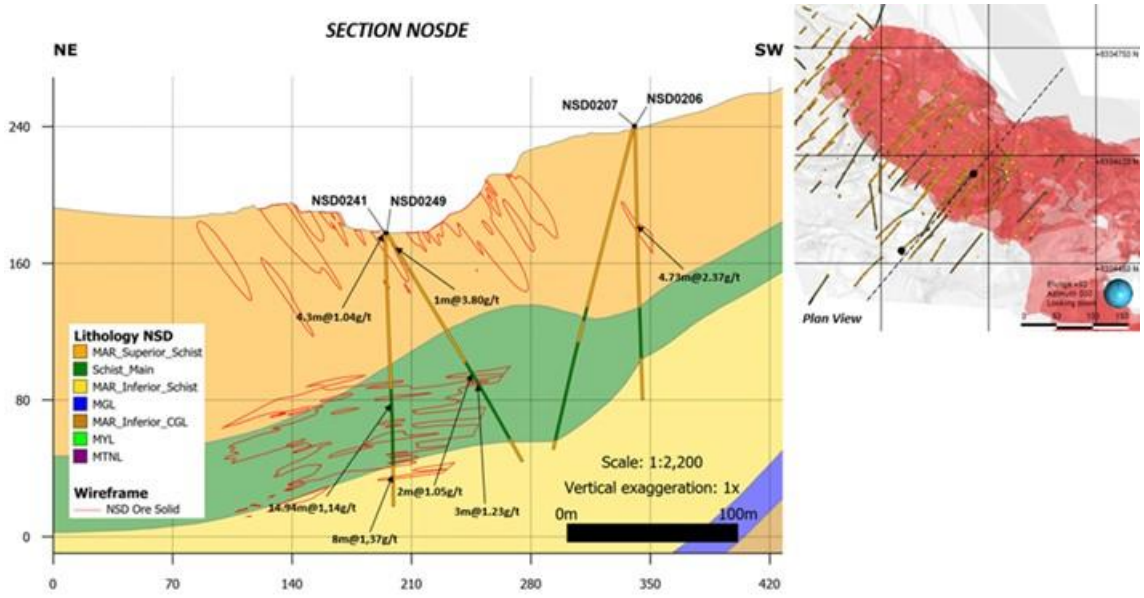


Figure 6-9: Typical cross-section of the Nosde Mine

6.4.2 Pau-a-Pique Deposit

The Pau-a-Pique ore zone is a 3- to 15-m-wide schistose layer with biotite and muscovite, along with multiple generations of quartz veins. The gold mineralization includes disseminated coarse pyrite with associated swarms of quartz veins. Gold occurs as inclusions in the pyrite and native gold within the quartz veins or disseminated in the mylonite. Gangue minerals comprise biotite, muscovite, magnetite, albite, chlorite, calcite, apatite, ilmenite, and rutile.

6.5 Mineralogy of Ore-Bearing Rock in Ernesto, Lavrinha, and Pau-a-Pique

A total of five samples were submitted for X-Ray Diffraction ("XRD") analysis to the University of São Paulo (Escola Politécnica da Universidade de São Paulo), Brazil. Two samples were selected from each of the Ernesto and Lavrinha mineralizations, and one sample from the NW zone of the Pau-a-Pique mineralization. These samples were sub-samples of the set of samples that were submitted for metallurgical tests in 2016.

The XRD analysis indicates that Ernesto and Lavrinha mineralized rocks are composed of 50 to 70% quartz, 25 to 40% muscovite, 5 to 7% hematite, and 1 to 4% kaolinite, with minor goethite and microcline. One sample of Pau-a-Pique mineralization contained 35% quartz, 35% muscovite, 9% albite, 6% clinoclore, 5% hematite, 5% microcline, 5% carbonate, and a trace of kaolinite. Ernesto and Lavrinha show typical mica-schist mineral composition that has been metamorphosed under lower greenschist facies. Most of the feldspar has been altered to sericite. Sulphide minerals such as pyrite are not identified by the XRD method. However, the presence of iron oxides in Ernesto and Lavrinha suggests that most of the pyrite is altered and converted to iron oxides. The lithological logging of mineralized intervals supports this since, in most cases, pyrite is replaced by iron oxide.

6.6 DEPOSIT TYPES

Ernesto, Lavrinha, Nosde and Japonês and Pau-a Pique deposits are described as a detachment-style gold deposit (Figure 6-10) that typically has the following characteristics:

- Gold mineralization is associated with low angle to flat detachment faults, generally with a normal (extensional) sense of movement that consistently places younger units over older units.
- Mineralization is commonly characterised by quartz-rich vein and veinlet zones (in the ±25% range) with magnetite or hematite, coarse euhedral pyrite (in the ±1% range), sericite, some clay mineral, some late stage calcite and gold. The gold is commonly associated with only very small amounts of silver.
- Mineralization is typically located along a 3 m to 8 m thick of mylonitic rocks of a detachment (or thrust) fault that intersects high angle structures, either faults or folds. iThe continuity of the mineralization within the detachment zone is normally quite good, extending over 100 m.
- Detachment–style gold mineralization is in altered rock parallel to anticline axes and faults.
- Multiple styles of mineralization are common with local stacked mineralized zones.
- Fluid inclusion studies indicate temperatures of formation about 200°C to 250°C.

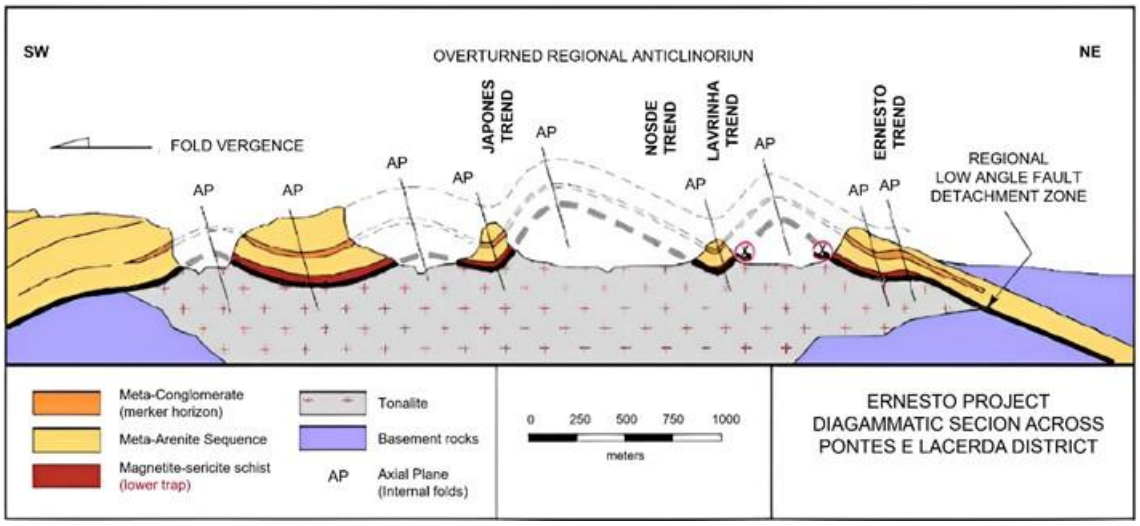


Figure 6-10: Diagrammatic Section Across Apoena Mines and EPP Complex Gold Deposits

The Pau-a-Pique and Ernesto (Lower Trap) deposits are similar in that they both occur at the contact between the Aguapeí Group and the basement meta-tonalite. At both locations, the contact is associated with shear zones and hydrothermal alteration assemblages with pyrite, sericite and hematite. However, there are some differences between each deposit including the Ernesto deposit having a low-angle dip (±15º-25º), and being hosted in the contact between the Aguapei Group and metatonalite (Lower Trap) and areas of weakness within Aguapei Group. While Pau-a-Pique mineralization has a high-angle (±80º) and is hosted only in the contact of the Aguapei Group and metatonalite.

The Middle Trap in Ernesto and São Francisco deposits are similar in that they both occur within Aguapeí Group psammitic rocks affected by hydrothermal alteration resulting in assemblages rich in silica, sericite and hematite. The Ausenco (2010) report draws parallels between the shallow dipping Ernesto Deposit and detachment-style gold deposits in the south eastern California and to bedding plane parallel shears in Tarkwa sediments in Ghana. Reid et al. (2012) consider the São Francisco Mine (currently in care and maintenance and owned by a third party), located north of Ernesto, to be a shear hosted lode gold deposit. São Francisco is located approximately 60 km northwest of Ernesto and displays similar host Aguapeí Group lithologies and structural controls at the deformed basement/Aguapeí Group contact. São Francisco is considered by Reid et al. (2012) as epigenetic, structurally controlled, and composed of narrow, 1 cm to 5 cm wide, and quartz veins containing free gold. The veins, and vein systems and stockworks both parallel and crosscut the bedding planes and appear to represent separate but closely related mineralizing events. The São Francisco, Ernesto-Nosde_Lavrinha and Pau-a-Pique Deposits are broadly similar in host lithologies, structural style, alteration, and mineralization and all share characteristics of shear hosted lode gold deposits. At Lavrinha and Nosde, mineralization occurs within a schist sub-member of the Aguapei Group. Mineralization is often associated with narrow quartz vein and veinlets in phyllonitic matrix with strong sericitization and chloritization. The thickness and size of quartz veins are smaller than Ernesto and rarely exceed 1 m in true thickness. Pseudomorphs of pyrite and strong sericitization with the presence of quartz are good

indicators for mineralization intervals. Strong foliation and kink-band structures disrupted mineralized shoots both along strike and down dip of the deposit. The style of mineralization and deposit type is very similar to Ernesto and detachment style faults are marked with pervasive alteration along the contacts and within a sericite schist package. Mineralization and alteration both developed in contact meta-arenite with sericite schist and also within the sericite schist.

7 EXPLORATION

7.1 Exploration

7.1.1 Ernesto

Yamana's exploration in the Ernesto Property began in 2003 and consisted of surveying, rock chip sampling, chip channel sampling, soil sampling, and mapping. Geological maps are presented in section 6 of this TRS. Drilling is summarized in section 7.2 of this TRS.

7.1.1.1 2003 – 2009 Exploration Activities

The exploration activities carried out from 2003 to 2009 included rock chip sampling, chip channel sampling, soil sampling, detailed geological mapping, drilling, and compilation work.

7.1.1.2 2012 – 2014 Exploration Activities

The exploration activities carried out during 2012 and 2013 included rock chip sampling, detailed geological mapping, drilling, and compilation work.

The historical drilling data analysis, combined with field checks and detailed geological mapping, revealed the higher-grade gold mineralized zones to be controlled by hinges and fold axes plunging at low angles to the northwest or southeast (azimuth N310o or N130o), which formed during compressive events where rocks of the Pontes and Lacerda Sequence were thrust over the Aguapeí Group rocks. Structural vergence indicated a tectonic transport from NE to SW.

7.1.1.3 2017 – 2023 Exploration Activities

Aura drilled 23,288.50 m across 148 drill holes in near-mine exploration activities between 2017 and 2021, see Table 7-1. The purpose of this drilling was to convert Inferred Mineral Resources into Measured and Indicated, and during the 2021-2022 campaign was to add resources, checking continuities in the pit extensions (down dip – strike). A total of 14,043 samples (including those used for QA/QC purposes) were collected in these drilling campaigns.

Table 7-1: Summary of 2017-2023 Drilling at Ernesto Mine

MINE	DDH	2017	2018	2021	2022	2023	TOTAL
Ernesto	metres	3,000.16	1,701.34	5,146.80	13,440.20	-	23,288.50
	holes	25	12	37	74	-	148

7.1.2 Ernesto Connection

7.1.2.1 2006 – 2013 Exploration Activities

Yamana worked on the Cava 1 and Ernesto Connection targets, distributing its campaigns with the objective of converting resources within the old pit and peripheral regions in the mineralizing

context of the Middle Trap (trend towards Lavrinha – a region currently called Ernesto Connection). For more details, see section 7.1.1 and Table 7-2.

Table 7-2: Summary of 2017-2023 Drilling at Ernesto Mine

MINE	DDH	2006	2007	2009	2012	2013	TOTAL
Ernesto Connection	metres	1,391.65	331.00	669.20	563.48	4,280.20	7,235.53
	holes	10	2	10	2	42	66

7.1.2.2 2018 – 2023 Exploration Activities

Aura drilled 16,607.92 m across 92 drill holes (816.43 m in 9 holes, 10,157.96 m in 62 holes, 593.27 m in 4 holes, and 5,040.26 m in 17 holes) in near-mine exploration during 2018 to 2023. The purpose of this drilling was to convert Inferred Mineral Resources into Measured and Indicated. For more details, see section 7.2.

7.1.3 Lavrinha

7.1.3.1 2007 – 2014 Exploration Activities

The exploration programs that were performed at the Lavrinha deposit were closely related to ones carried out for the Ernesto deposit, work was also carried out in the Aguapeí Belt area. Geological maps are presented in section 6 of this TRS. Drilling is summarized in section 7.2 of this TRS. The exploration activities are summarized below:

- Exploratory work by Yamana Gold from 2001 to 2014 and performed in three phases;
- Phase 1: Between 2003-2009;
- Phase 2: 2010 and 2011;
- Phase 3: Between 2012-2014;
- Infill drilling conducted by Aura.

During this period, Yamana drilled 15.828,86 metres across 115 drilling holes, see Table 7-3.

Table 7-3: Summary of 2007-2014 Drilling at Lavrinha Mine (Yamana)

MINE	DDH	2007	2011	2012	2013	2014	TOTAL
Lavrinha	metres	111.50	5,194.63	994.67	1,382.95	8,145.11	15,828.86
	holes	1	28	3	5	78	115

7.1.3.2 2015 – 2020 Exploration Activities

Aura drilled 17,941.87 m across 155 drill holes in near-mine exploration, see Table 7-4. The purpose of this drilling was to convert Inferred Mineral Resources into Measured and Indicated.

Table 7-4: Summary of 2015-2020 Drilling at Lavrinha Mine (Aura Minerals)

MINE	DDH	2015	2017	2018	2019	2020	TOTAL
Lavrinha	metres	997.40	1,385.70	9,322.97	4,133.85	2,101.95	17,941.87
	holes	23	22	68	27	15	155

7.1.3.3 2021 – 2023 Exploration Activities

Aura drilled 22,574.11 m across 102 drill holes (3,034.36 m in 17 holes, 11,711.99 m in 49 holes, and 7,827.76 m in 36 holes) in near-mine exploration, Lavrinha Mine area. The purpose of this drilling was to add Mineral Resources and check continuities in pit extensions (down dip – strike), mainly northwest, Lavrinha-Nosde trend. After confirmation of the 2020 exploratory survey, the addition and conversion of Mineral Resources (Bonus Trap and Upper Trap) continued. A total of 19,812 samples (including those used for QA/QC purposes) were collected in this drilling campaign.

7.1.4 Nosde

The exploratory programs carried out at Nosde, as well as at Japonês and Pombinhas, were closely related to those carried out in the Ernesto Complex, and gained emphasis after, after receiving encouraging results from processing of the Lavrinha and Ernesto mines feed. Geological maps are presented in section 6 of this tRS. The drilling is summarized in section 7.2 of this TRS.

7.1.4.1 2006 – 2013 Exploration Activities

Yamana Gold drilled 17,941.87 m across 155 drill holes in near-mine exploration, see Table 7-5. The purpose of this drilling was to verify potential and indicate resources.

Table 7-5: Summary of 2006-2013 Drilling at Nosde (Yamana)

MINE	DDH	2006	2007	2008	2012	2013	TOTAL
Nosde	metres	847.30	983.85	390.55	426.04	5,581.95	8,229.69
	holes	4	7	1	1	37	50

7.1.4.2 2019 – 2023 Exploration Activities

Aura drilled 53,466.79 m across 362 drill holes in near-mine exploration between 2019 and 2023, see Table 7-6. The purpose of this drilling was to convert Inferred Mineral Resources into Measured and Indicated, and between 2022-2023, the drilling focused mainly on the SW region of Nosde, trend Lavrinha-Nosde, both for the Bonus Trap (Metarenite) and Upper Trap (Schist). In addition to the potential in down dip (inside the Nosde pit) in the Middle Trap (Metaconglomerate) and Lower Trap (Mylonite), continuities in pit extensions (down dip – strike) were checked. A total of 43,649 samples (including those used for QA/QC purposes) were collected in this drilling campaign.

Table 7-6: Summary of 2006-2013 Drilling at Nosde (Aura Minerals)

MINE	DDH	2019	2020	2021	2022	2023	TOTAL
Nosde	metres	8,305.24	6,543.78	4,842.50	29,167.51	4,607.76	53,466.79
	holes	100	77	34	133	18	362

Fieldwork was concentrated between 2022 and 2023. At the Lavrinha and Nosde targets, detailed structural mapping work was carried out, which culminated in new model interpretations and gains for mine geology in model adherence. A total of 444 measures were taken in the Lavrinha Mine, and 290 others in the Nosde Mine. To see the spatial distribution of withdrawn measures, see section 6 (Figure 6-7 and Figure 6-8). They are located in the SE portions of the LVR and W-SE of the NSD.

7.1.5 2021 – 2023 Regional Exploration Activities

Besides near-mine targets, Aura has an extensive land package in the Guapore Belt and Pontes e Lacerda, which provide attractive greenfield, brownfield, and advanced exploration targets, see Figure 7-1.

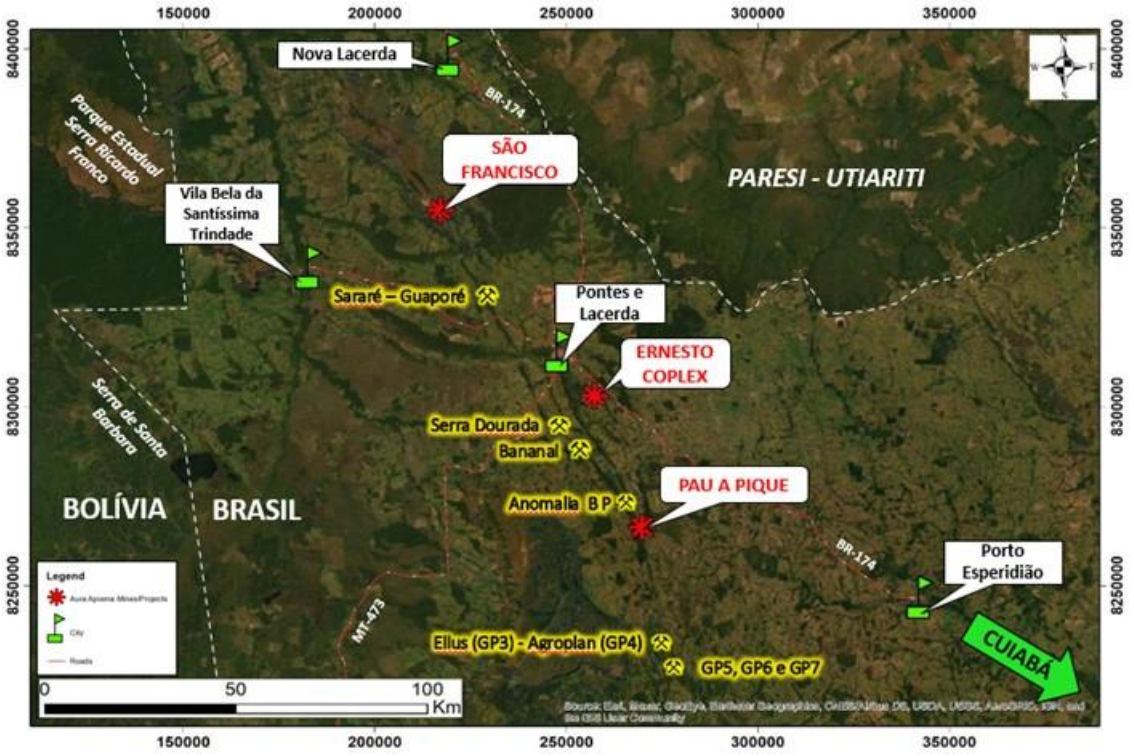


Figure 7-1: Distribution map of Aura Apoena's regional targets, highlighting the São Francisco, Ernesto, and Pau-a-Pique mining complexes.

Between 2020 and 2023, concomitant with the brownfield and near-mine works, the regional targets that make up the Aura Apoena portfolio were developed. These are (from north to south) Guaporé-Sararé, Serra Dourada, Bananal – North Block and BP anomaly, GP3, GP4, GP5, GP6, and GP7 – South Block.

7.1.5.1 Bananal Target

Bananal is one of the exploration targets (the most advanced Project), located ~22 km from the EPP plant. Drilling started in 2019 and continued during 2020. The Bananal target is divided into three parts, Bananal North, Bananal South, and Bananal Central, due to the different locations of these targets.

In 2020, infill drilling campaigns were conducted in Bananal North (drilling in a 100 x 50-metre grid) and in Bananal South (drilling in a 25 x 25-metre grid). Additionally, exploration drilling was conducted to extend Bananal South and Central targets. In Bananal North, a total of 4,390.15 metres were drilled across 17 holes, and 3,567 samples (including QA/QC samples) were collected. In Bananal South a total of 19,141.40 metres across 66 holes were drilled, and 14,975 samples were collected (including QA/QC samples). A total of 566.81 metres were drilled across two holes in Bananal Central.

The drilling results were incorporated into the resource estimate for Bananal South and North and, if future infill and exploration drilling are positive, Aura may publish a TRS including these assets into the Life of Mine (LOM) for the EPP project.

7.1.5.2 Guaporé-Sararé

The Guaporé-Sararé is an early-stage project with historical information inherited from Yamana, located in the Ernesto Complex. The first field checks yielded positive results (Figure 7-2). Field work will be extended over the next few years with the goal of defining structural and hydrothermal controls for a possible exploratory survey. Guaporé-Sararé is located in the geological context of the Fortuna Formation (Aguapeí), with gold in samples (Fire-Assay) of pan concentrate, soil, and rock (Historical Data Yamana Gold Inc.).

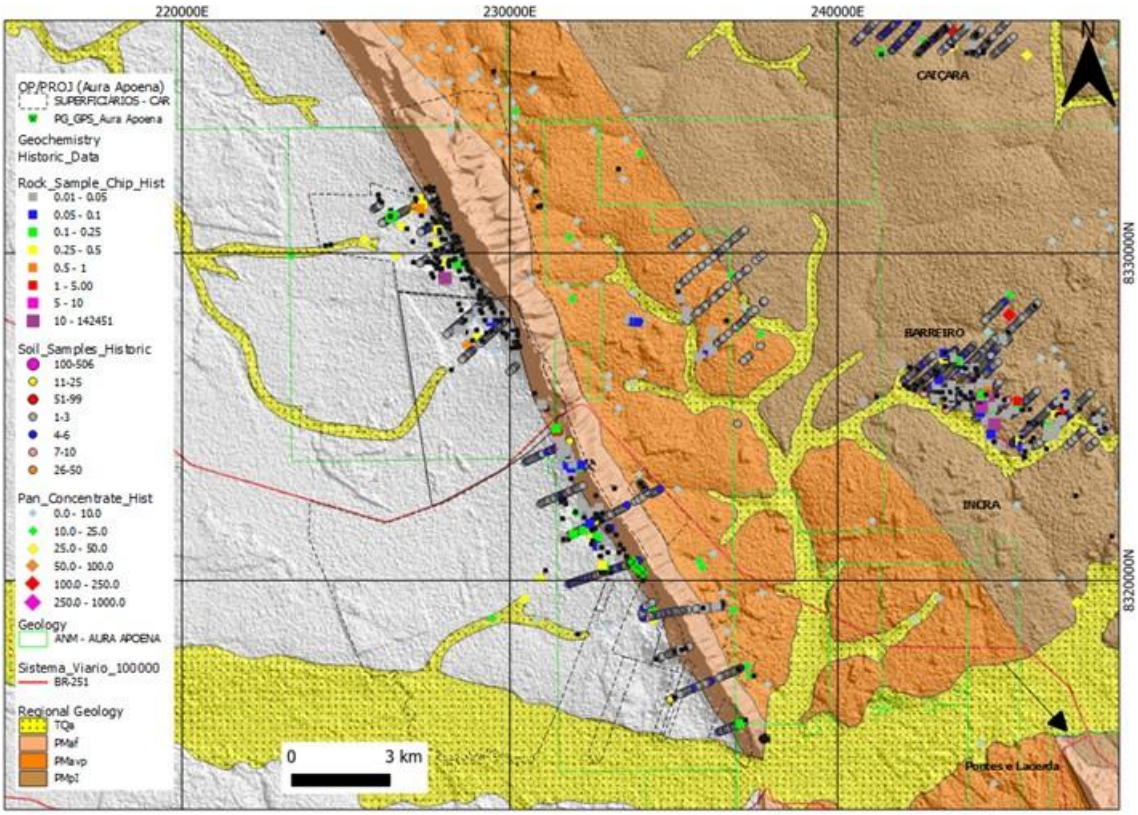


Figure 7-2: Distribution map of historical and current regional samples from the Guaporé-Sararé target

Legend: TQa = Quaternary Rocks; PMaf = Fortuna Formation; PMavp = Vale da Promissão Formation; PMpl = Pontes e Lacerda Group; Hist = Historic Data and PG = Geological.

7.1.5.3 Serra Dourada

Serra Dourada is another early stage project, located ~18 km from the EPP plant, among the mineralization trends of Bananal and Guaporé Sararé, in the geological context of the Fortuna Formation (Aguapeí), Gold sample results (fire assays) for pan concentrate, soil and rock samples are shown in Figure 7-3. (Historical Data Yamana Gold Inc.).

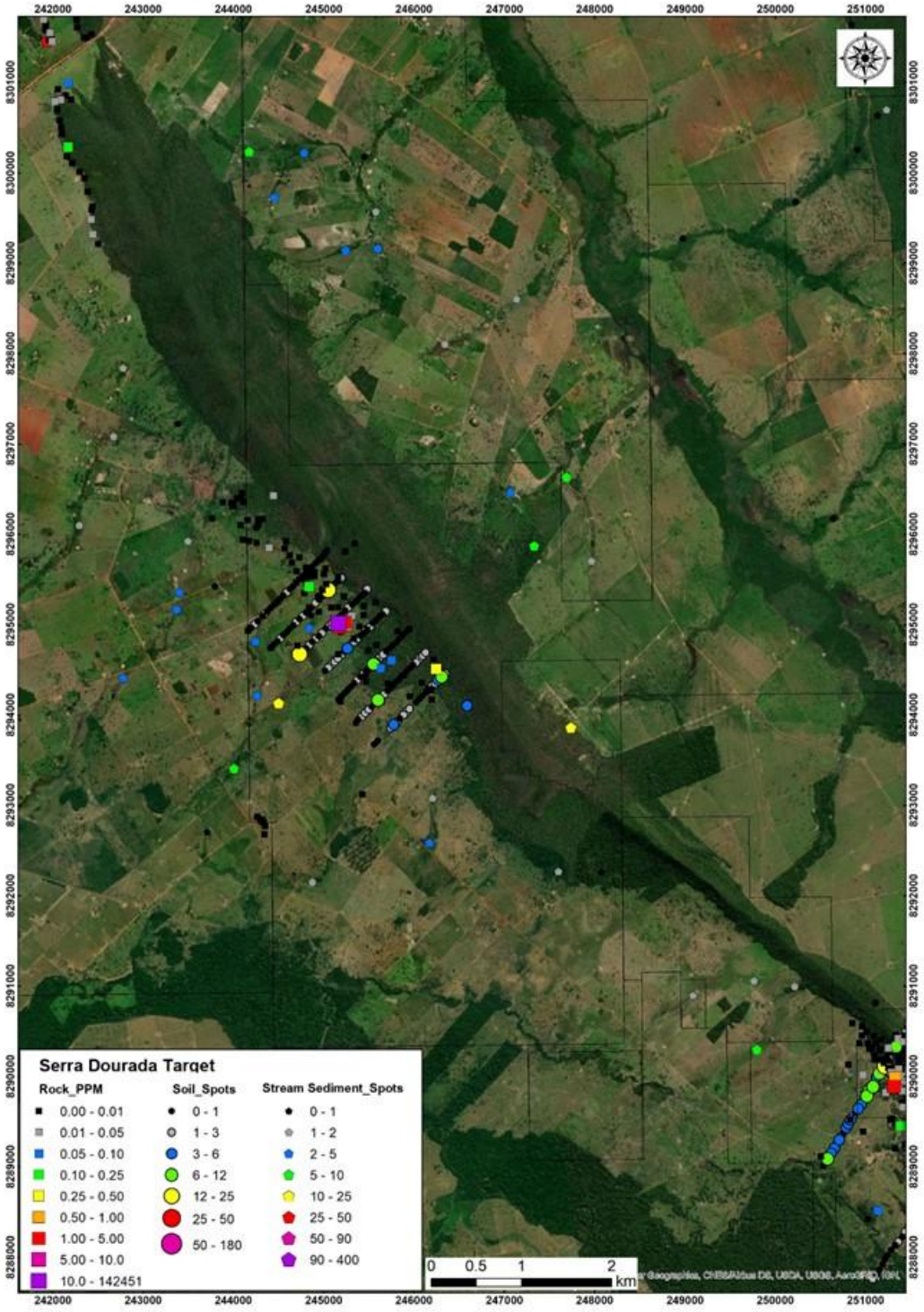


Figure 7-3: Distribution map of historical and current regional samples from the Serra Dourada target

7.1.5.4 The BP Anomaly

The BP anomaly is the second most advanced target in Aura Apoena's portfolio, which is located ~40 km from the EPP plant and 3 km north of the Pau-a-Pique Mine. The BP Anomaly is positioned at the contact between mafic/ultramafic basements (Rio Alegre Terrane) with intermediate (Pindaitube Suite) to acid/álcali (Sta. Helena Suite) rocks, covered by metasediments (Gr. Aguapeí). Historic activities started with BP Mineração in the late 80s and early 90s as regional gold pint counting works with an identified anomaly of 108 pints. Aura Apoena started its geological fieldwork in 2020.

During fieldwork 503 samples were collected (Aura Apoena), plus 234 historical samples from Yamana exploration work, (see Figure 7-3).

Figure 7-4 shows the geological and geochemical map of the BP anomaly by sectioning the exploration targets into the four blocks (North, Central, South, and Fenda).

In addition in the northern portionsamples were collected according to a ~1:5,000 scale, using the chipping method and analysis methodology (Fire-Assay for Yamana Gold Samples and ICP-MS for Apoena Samples) in the SGS laboratory (Figure 7 5).

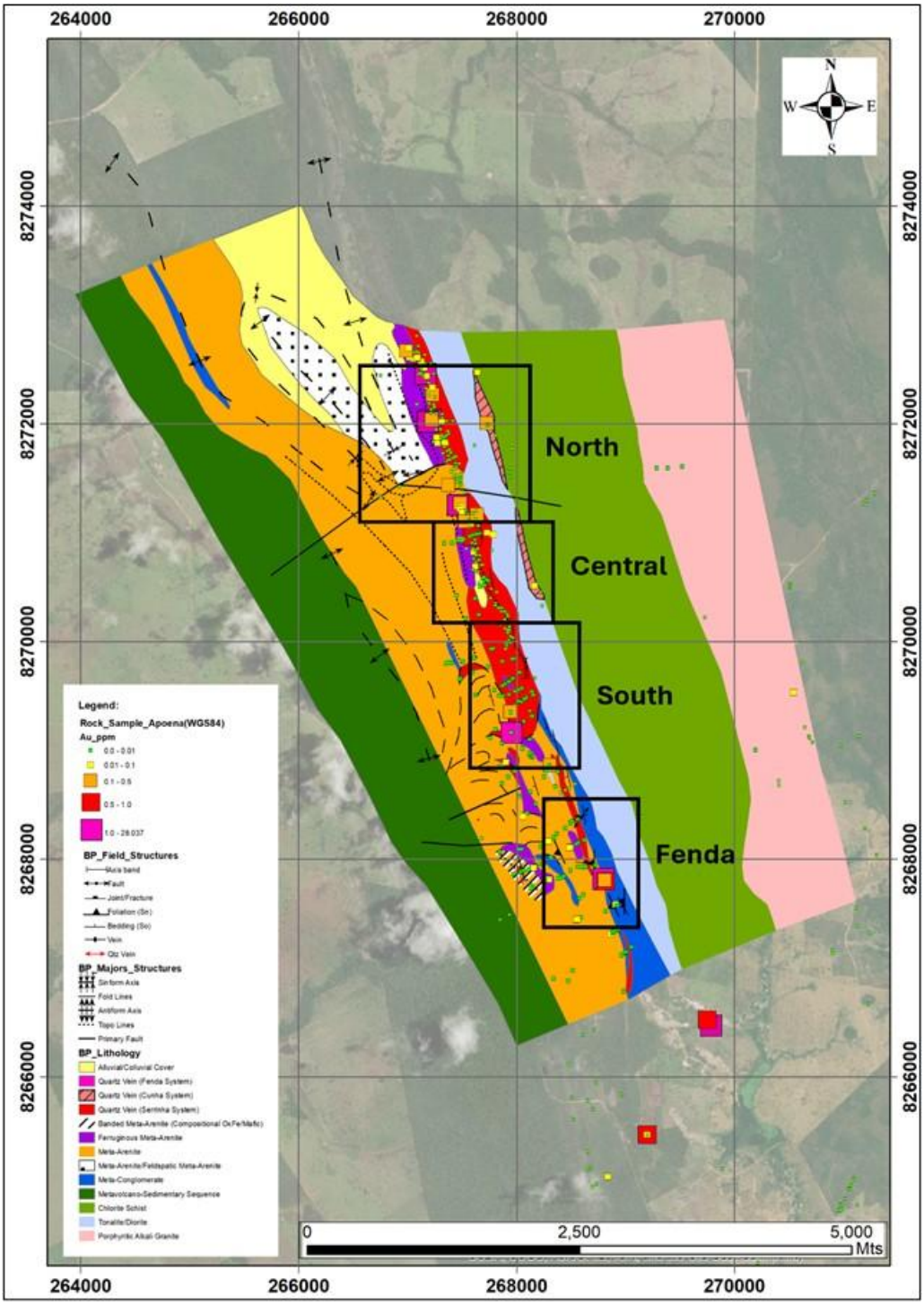


Figure 7-4: Geological and geochemical map of the BP anomaly showing the exploration target into the four blocks (North, Central, South, and Fenda)

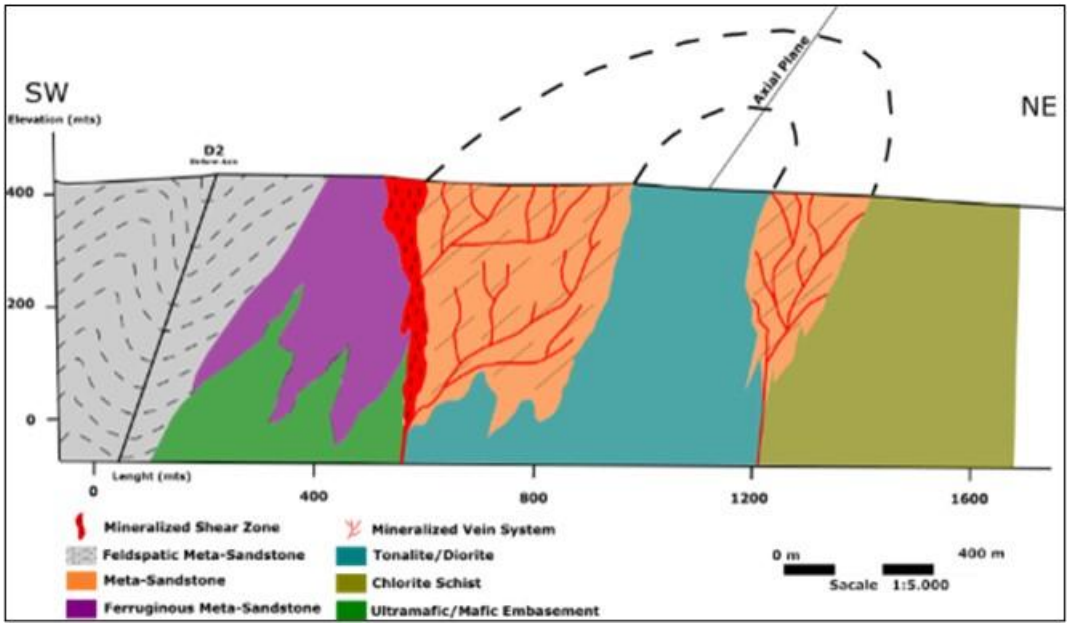


Figure 7-5: Geological section within the North zone

In 2021, 108 km of ground magnetic geophysics was carried out, with the aim of better defining the conductive structures of mineralization and possible tectonic-structural traps. In 2022, an 11 km, induced polarization (SIP), geophysical survey was carried out, helping define the best anomalies for further investigation.

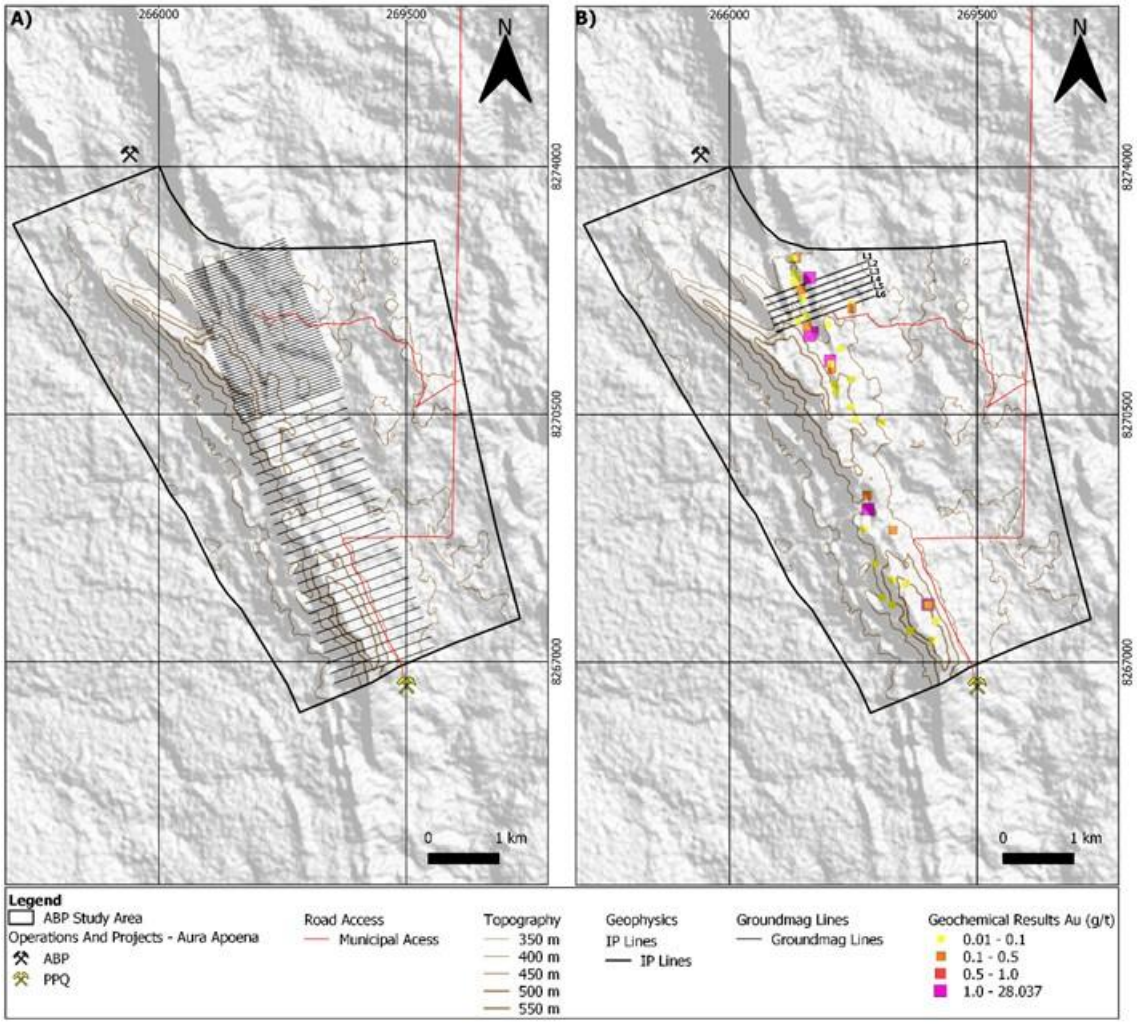


Figure 7-6 : Location map of geophysical acquisition lines, topographic conditions, and geochemical anomalies of the BP anomaly – Digital Elevation Model (DEM)

Source: ALOS PALSAR – Radiometric Terrain Correction. PPQ = Pau-a-Pique and ABP = BP Anomaly.

With the potential to add to the company's production portfolio, the BP Anomaly is being studied with the possibility of becoming part of the potential resources. During 2022, 11 drill holes were drilled in the area, totaling 4,411.44 m (Figure 7-7). The results are positive, and assays are still being received.



Figure 7-7: Location map of holes drilled into the BP target

7.1.5.5 GPs (GP3, GP4, GP5, GP6, GP7) – Early-Stage Targets

The GP3 and GP4 Targets are located about 30 to 40 km south of the Pau-a-Pique Mine, hosted in tonalites and granites (1.44 – 1.38 G.a) with aligned mineralization in a shear zone, trend N20W with 10 km strike extension. BPM historical works from 1984 to 1990 included mapping, soil, stream sediment rock, and drilling with sampling using chipping and analysis methodology (Fire-Assay).

7.1.5.5.1 GP3

The GP3 target consists of a mineral system of quartz veins with disseminated pyrite (1 to 3%) hosted in saussuritized granites; quartz veins with NNW direction and dip ranging from 45 to 80° SW, with punctual inversion to NE (Figure 7-8). Locally, there are recumbent to kink transposed folds, as well as folds with decimetric to metric dimensions of low amplitude (15-25°). The presence of limonitized pyrite in quartz veins, sometimes with visible gold is associated with this sulphide.

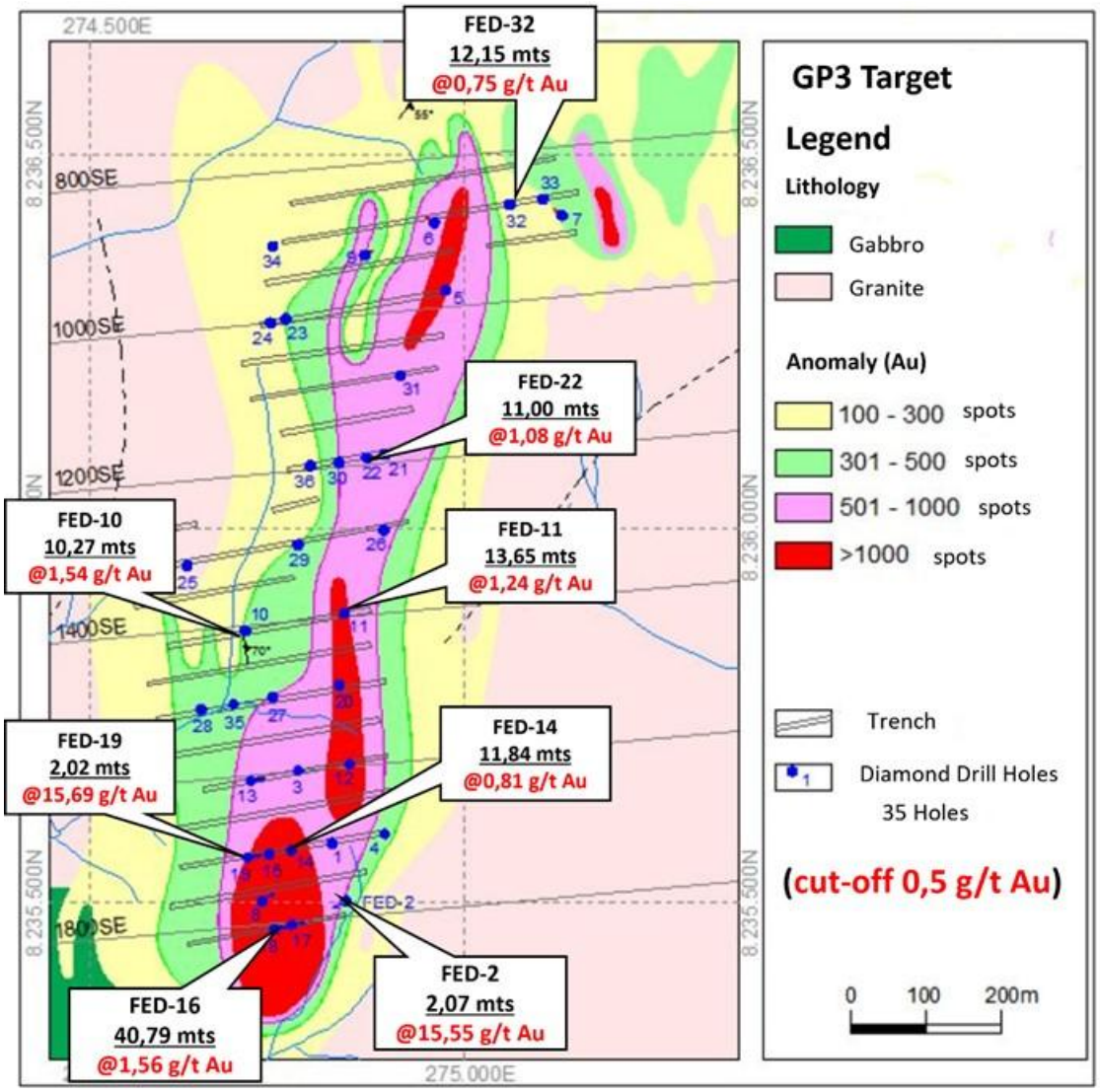


Figure 7-8: Distribution map of historical and current regional samples and drilling from the GP3 (Ellus) target

7.1.5.5.2 GP4

The GP4 target consists of tonalitic rocks subjected to regional metamorphism from facie greenschist to low amphibolite. An antiform structure, plunging NNW, contains pegmatoide and xenoliths with chlorite+sericite+quartz schist. Cataclastic deformation with presence of mylonits (shear zone), and hydrothermal alteration composed of chlorite, carbonate, sericite, and saussurite has occurred. Two distinct types of tonalite were found in the drill core: T1 - Albite+Chlorite+Sericite+Carbonate+Py (rich gold); T2 - Albite+Epidote+Amphibole+Py (poor gold) (Figure 7-9).

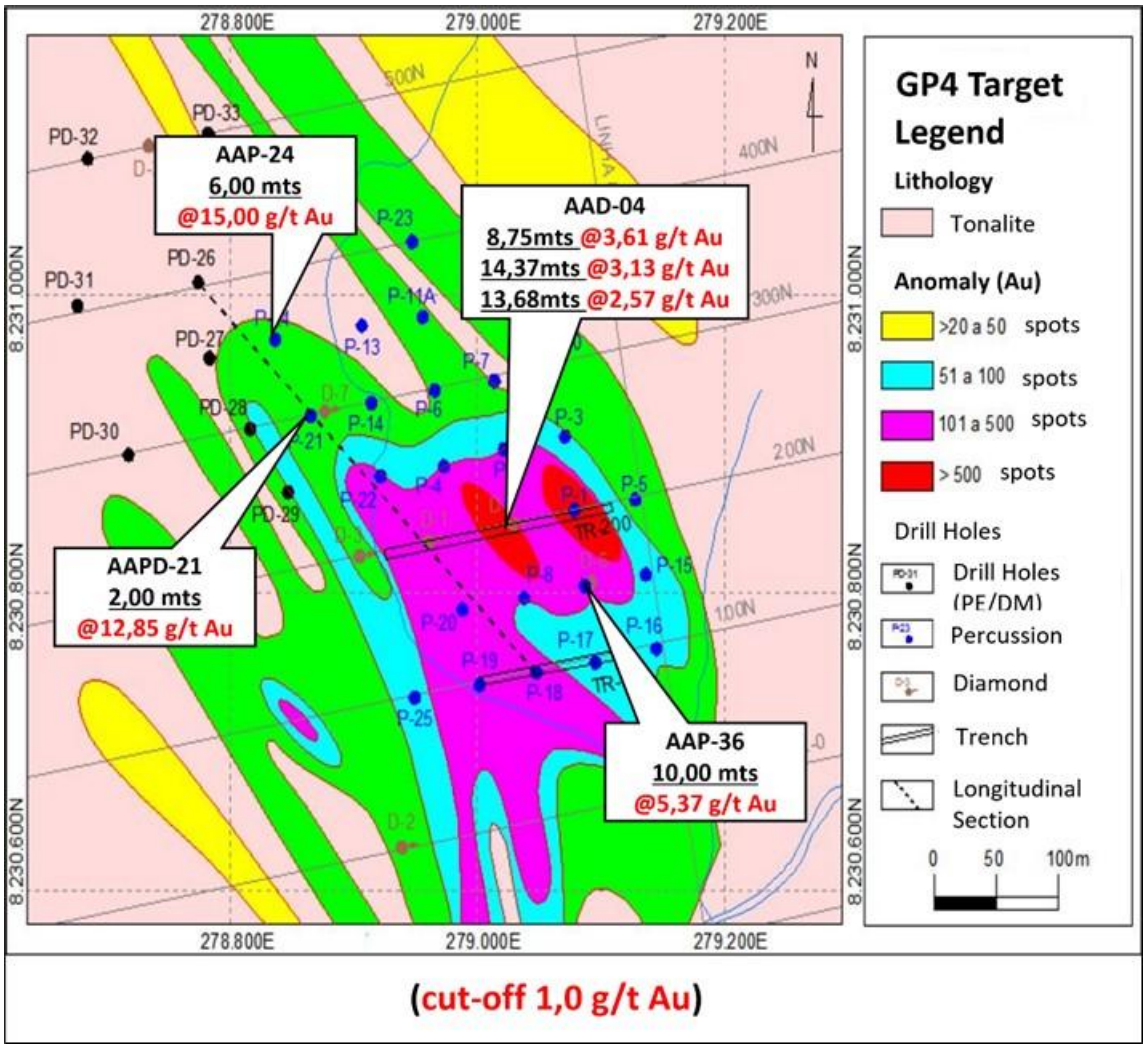


Figure 7-9: Distribution map of historical and current regional samples and drilling from the GP4 (Agroplan) target

To maintain ongoing work in both the GP3 and GP4 areas, field checks and systematic mapping are necessary to confirm and refine their historical potential, initially identified through BP Mineração's exploration from 1984 to 1990, which included mapping, soil and stream sediment sampling, and drilling with Fire-Assay analysis. GP3, hosted in saussuritized granites, features quartz veins with disseminated pyrite (1–3%) and occasional visible gold, while GP4 is characterized by tonalitic rocks subjected to regional metamorphism, hydrothermal alteration, and shear zone deformation. Distinct tonalite types (gold-rich T1 and less gold-rich T2) emphasize the need for further mineralogical studies to delineate mineralization patterns.

Research in the other targets with granitic trends (GP5, GP6, and GP7) has not progressed significantly, but they remain promising. These areas warrant systematic field checks, updated geophysical surveys, and geochemical sampling to assess their resource potential and further define the continuity of mineral systems in the region.

7.2 DRILLING

This section presents long-term drilling data associated with diamond drilling of 206,019.28 m with average depths of ~211.20 m and 145,484 samples distributed among the Ernesto (ERN), Ernesto Connection (ERC), Lavrinha (LVR), and Nosde (NSD) targets using the analysis method (Fire-Assay and ICP-MS). The drilling location is shown in the Figure 7-10.

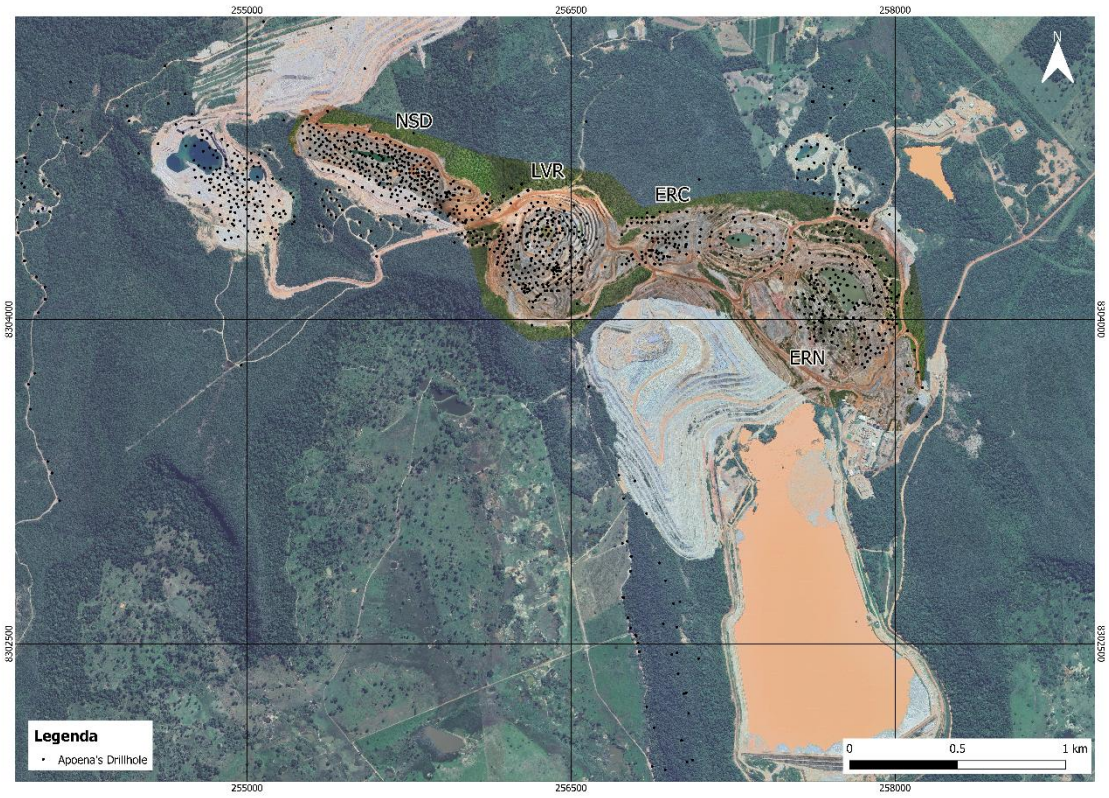


Figure 7-10: Sample Distribution

Information related to sample length, dips, azimuth, survey, and depth are summarized in the Table 7-7 to Table 7-10 tables below.

Table 7-7: Summary of sample length by target

Target	Samples	Length AVG	Length MIN	Length MAX	Length MIN (50 cm)	Length BET (50-100 cm)	Length BET (100-150 cm)	Length BET (150-200 cm)	Length MAX (200 cm)	Length BET (200-250 cm
ERN	13429	1.12	0.20	4.20	16	1469	8439	3480	13	12
NSD	43649	1.09	0.21	7.15	6	2407	33115	8086	27	8
ERC	10301	1.04	0.38	2.80	1	1491	7562	1238	7	2
LVR	30245	1.10	0.13	4.00	8	1881	22364	5974	13	5

Legend: AVG = Average; MIN = Minimum; MAX = Maximum; BET = Between.

Table 7-8: Summary of depth by holes/target

Target	DH	Depth MIN	Depth MAX	Depth AVG	Survey
ERN	75	70.34	302.98	154.24	72

Target	DH	Depth MIN	Depth MAX	Depth AVG	Survey
NSD	148	47.78	283.17	158.17	117
ERC	236	30.70	572.04	169.41	234
LVR	362	20.80	618.50	147.10	256

Legend: DH = Drill Hole; AVG = Average; MIN = Minimum; MAX = Maximum.

Table 7-9: Summary of dips by target

Target	DIP MIN	DIP MAX	DIP BET (90-85)	DIP BET (85-65)	DIP BET (65-45)
ERN	-64.54	-90	17	55	3
NSD	-52.44	-90	58	76	14
ERC	-48.40	-90	14	92	130
LVR	-52.10	-90	138	160	64

Legend: AVG = Average; MIN = Minimum; MAX = Maximum; AZ = Azimuth; BET = Between.

Table 7-10:Summary of azimuths by target

Target	AZ MIN	AZ MAX	AZ BET (0-45)	AZ BET (45-90)	AZ BET (90-135)	AZ BET (135-180)	AZ BET (180-225)	AZ BET (225-270)	AZ BET (270-315)	AZ BET (315-360)
ERN	0	335.61	4	28	24	8	3	4	1	3
NSD	0	359.96	35	7	14	7	18	49	13	5
ERC	0	354.01	6	3	27	176	2	1	6	15
LVR	0	338.04	278	9	1	9	49	8	4	4

Legend: AVG = Average; MIN = Minimum; MAX = Maximum; AZ = Azimuth; BET = Between.

7.2.1.1 Ernesto

In 2005, 11,128 m of drilling was conducted by Yamana on the Ernesto resource area. Twenty-two holes tested peripheral target areas. In 2006, a further 7,777 m of diamond drilling was carried out on the Property, focusing on targets near the resource area and including a few exploration holes. Twenty-four holes, totaling 4,295 m, were advanced in the Ernesto, Cantina, Japonês, Pombinhas, and Serra Azul targets in 2007. Yamana drilled 29 holes, totaling 2,820 m in 2009. The drill programs aimed to define areas with mineralization potential to add new gold resources or extensions (down plunge or down dip) of shallower gold mineralization zones at targets near the Ernesto deposit, including Ernesto North, Ernesto SE, Pombinhas, Lavrinha, Open Pit1 Extension W, the Lavrinha-Nosde trend, and the Japonês targets. The drill programs also helped define and understand some geological features of the Ernesto district. It was discovered that 60%-70% of the gold in the district was in the form of free gold, which helped determine the sampling procedures that could help improve the final analytical results. Ernesto drill core sample highlights are shown in Table 7-11. Sampling during the initial exploration drilling phases in the Ernesto district was collected systematically in 2 m intervals in the mineralized areas, ignoring geological features like thickness and grade. This resulted in dilution and the insertion of thick packages of waste zones into the mineralized zones due to inconsistent geological models.

Table 7-11: Ernesto Significant Drill hole Intersections - Yamana Drilling

Drillhole	From (m)	To (m)	Length	Au (g/t)	Zone
ER_022	152.36	153.07	0.71	18.95	Middle Trap
ER_043	185.00	189.00	4.00	1.57	Tonalite
Including	185.00	186.00	1.00	2.59	
ER_088	126.00	127.00	1.00	1.68	Inter Trap
ER_124	7.00	8.00	1.00	4.72	Middle Trap
ER_150	88.82	89.58	0.76	4.54	Lower Trap
ER_151	3.00	4.00	1.00	1.18	Inter Trap
	90.00	91.00	1.00	0.93	
	139.50	140.00	0.50	10.60	Middle Trap
	231.22	232.20	0.98	30.10	Lower Trap
ER_151 A	160.48	161.30	0.82	1.04	Middle Trap
	214.00	215.00	1.00	0.52	
	242.89	244.94	2.05	0.98	Lower Trap
ER_153	49.85	51.17	1.32	4.28	Lower Trap
Including	49.85	50.52	0.67	6.27	
ER_158	120.50	121.00	0.50	3.65	Inter Trap
	126.50	127.00	0.50	1.02	

In 2015, 3,076.2 m of drilling across 21 holes was conducted by Aura on the Ernesto resource area, focusing only on the Lower Trap, where resources were deemed to be suitable for a potential underground mining operation. From these 21 holes, 15 holes were infill drilling to delineate existing resources, and the six other holes were geotechnical holes to assess the geotechnical characteristics of host rocks for a possible underground operation. Infill drilling focused on the center of the Lower Trap deposit, where the majority of previous drilling was concentrated. Limited drilling was needed to upgrade Inferred Mineral Resources to the Indicated classification and to provide increased confidence in the Mineral Resource classification. Significant assay results from this drilling program are shown in Table 7-12. Drilling was carried out from the surface utilizing the wireline method, using the NQ diameter. The drill holes were surveyed with a Maxibor II, with readings being carried out twice every 3 m. A 5% tolerance value was used to compare the inclination in the two runs, which was then validated in the survey report.

Table 7-12: Significant Intersections for the 2015 Drilling in Ernesto

Hole-ID	From (m)	To (m)	Apparent Thickness (m)	True Thickness (m)	Weighted Average Au (g/t)
P-01	137	145	8.00	6.00	15.2
P-04	124	136	12.00	10.00	12.2
P-06	124	125	1.00	0.80	3.96
P-08	100.36	104	3.64	2.48	3.13
P-10	119	122	3.00	2.25	1.63
P-11	68	75	7.00	5.25	4.31
KP15-01	137	143	6.00	5.46	21.3

Hole-ID	From (m)	To (m)	Apparent Thickness (m)	True Thickness (m)	Weighted Average Au (g/t)
KP15-06	84	97	13.00	9.73	3.11

In 2017, 2,998.63 m of drilling across 25 holes was conducted on the Ernesto (West Side) resource area for infill drilling, focusing on the Middle and Lower Traps. In 2018, 1,823.44 m of drilling across 12 holes was conducted on the Ernesto area (Central and East Side) for infill drilling.

In 2021, 5,146.8 m of drilling across 37 holes was conducted on the Ernesto (Eastern/Northeastern and Southeastern Side extensions) area, focusing on the Middle and Lower Traps, 21 holes for Inferred Mineral Resources on East and Northeast extensions and 16 holes for infill drilling. Mineralization continues in the middle and Lower Traps, with considerable thickness and continuity in the southwestern portion. It is also confirmed in the eastern and northeastern portions, but with varying thicknesses and continuities.

In 2022, 13,440.2 m of drilling across 74 holes was conducted on the Ernesto (North Extensions) area, 12 holes to confirm “Paiol” potential in the northern area, as well as Inferred Mineral Resources, focusing on shallow mineralization in the base metarenite (below the Upper Trap), and the other 62 holes for Inferred Mineral Resources and infill drilling in the north cave area, focusing on the Middle and Lower Traps, confirming mineralization in both traps, although with continuity and variable thicknesses (boudinated zones).

All samples from this 2021-2022 drill campaign were analyzed at SGS GEOSOL laboratory in Belo Horizonte, Brazil, using the fire assay method by AA finish. The drill holes were surveyed with a Gyromaster, with readings being carried out twice every 3 m. A 5% tolerance value was used to compare the inclination in the two runs, which was then validated in the survey report.

Significant intersections for the 2022 drilling in the Ernesto area are presented in Ernesto Northern (Paiol Area) Table 7-13 and Ernesto Extensions Table 7-14.

Table 7-13: Best Drilling Intercepts (2022) in Ernesto “Paiol” Area

HOLE	FROM	TO	THICKNESS	GRADE	INTERSECTIONS
ERN0248	7	8	1	1.9655	1m@1.97g/t
ERN0249	42	43	1	2.067	1m@2.07g/t
ERN0250	32	33	1	1.575667	1m@1,58g/t
ERN0251	12	15	3	3.089	3m@3.09g/t
ERN0319	15	15.81	0.81	5.004	0.81m@5g/t
ERN0322	13	14	1	8.684	1m@8.68g/t
ERN0323	27.22	28	0.78	3.025	0.78m@3.02g/t

Table 7-14: Best Drilling Intercepts (2022) in Ernesto Extensions

HOLE	FROM	TO	THICKNESS	GRADE	INTERSECTIONS
ERN0252	49.75	50.75	1	4.439667	1m@4.44g/t
ERN0255	31	32	1	1.024	1m@1.02g/t

HOLE	FROM	TO	THICKNESS	GRADE	INTERSECTIONS
ERN0260	133	134	1	11.46567	1m@11.47g/t
ERN0261	26.87	28.8	1.93	0.954881	1.93m@0.95g/t
ERN0262	103	110	7	0.862667	7m@0.86g/t
ERN0263	150	151	1	1.358	1m@1.36g/t
ERN0264	105	106.1	1.1	0.903	1.1m@0.9g/t
ERN0265	113	118	5	2.3842	5m@2.38g/t
ERN0266	122	123	1	11.217	1m@11.22g/t
ERN0270	100	101	1	1.194	1m@1.19g/t
ERN0274	149	155	6	2.53725	6m@2.54g/t
ERN0275	116	117	1	2.467333	1m@2.47g/t
ERN0275	135.32	147	11.68	1.399259	11.68m@1.4g/t
ERN0276	114	124	10	1.41931	10m@1.42g/t
ERN0281	93	95	2	1.895333	2m@1.9g/t
ERN0284	206.8	207.64	0.84	8.156	0.84m@8.16g/t
ERN0320	49	50	1	21.789	1m@21.78g/t
ERN0320	196.49	201	4.51	10.19894	4.51m@10.19g/t
ERN0324	196	203	7	1.848	7m@1.84g/t

7.2.1.2 Ernesto Connection

During the period between 2006 and 2013, Yamana worked on the target (Cava 1 and Ernesto Connection), distributing its campaigns with the goal of converting resources within the old pit and peripheral regions in the mineralizing context of the Middle Trap. In 2006, 10 holes totaling 1,391.65 m of drilling were drilled in the Ernesto resource area. In 2007, a further 331 m of diamond drilling was carried out in two holes, focusing on the resource area. In 2009, ten holes were advanced, totaling 669.20 m. In 2012, Yamana drilled two holes totaling 563.48 m. As of 2013, 42 holes were drilled, totaling 4,280.20 m, determining the beginning of campaigns with the aim of identifying possible extensions to the west (trend towards Lavrinha – the region currently called the Ernesto Connection) and adding resources.

Between 2018 and 2023, work remained concentrated in the Ernesto connection region. In 2018, 816.43 m drilled in nine drill holes southwest of the Ernesto Connection with the aim of adding resources. In 2021, 62 drill holes, totaling 10,157.96 m of infill drilling was carried out (resource conversion), and in 2023, another 17 drill holes, totaling 5,040.26 m, were drilled. In 2022, 593.27 m of drilling in four holes was carried out to identify the potential close to the mining pit.

All samples from this drill campaign were analyzed at SGS GEOSOL laboratory in Belo Horizonte, Brazil, using the fire assay method by AA finish. The drill holes were surveyed with a Gyromaster, with readings being carried out twice every 3 m. A 5% tolerance value was used to compare the inclination in the two runs, which was then validated in the survey report.

Significant intersections for the 2021 and 2022 drilling in Ernesto Connection (Table 7-15).

Table 7-15: Best Drilling Intercepts (2021 and 2022) in Ernesto Connection

HOLE	FROM	TO	THICKNESS	GRADE	INTERSECTIONS
ERN0160	70	71	1	11.891	1m@11.89g/t
ERN0190	52	59	7	5.879574	7m@5.88g/t
ERN0195	38	39.04	1.04	5.383333	1.04m@5.38g/t
ERN0197	38.23	39	0.77	2.506333	0.77m@2.50g/t
ERN0202	234.2	235	0.8	4.932	0.8m@4.93g/t
ERN0205	64.8	66.87	2.07	10.25098	2.07m@10.25g/t
ERN0239	250	251	1	3.222	1m@3.22g/t
ERN0240	197	198	1	6.97	1m@6.97g/t
ERN0257	6.41	8	1.59	1.210226	1.59m@1.21g/t
ERN0257	63.75	64.55	0.8	1.77	0.8m@1.77g/t
ERN0257	74	92	18	0.932826	18m@0.93g/t
ERN0267	58	59	1	10.251	1m@10.25g/t
ERN0267	135.77	144.5	8.73	1.746409	8.73m@1.75g/t
ERN0280	60	62	2	47.97533	2m@47.98g/t

7.2.1.3 Lavrinha

From 2017 onwards, exploration activities at the Lavrinha target were conducted by Aura Apoena. Between 2017 and 2023, drill holes were drilled in the deposits, totaling 39,518.58 metres. A summary of all survey campaigns carried out between 2014 and 2023 is presented in Table 7-16 and in the Figure 7-11.

Table 7-16: Summary of Lavrinha Exploration Drill Holes between 2017 – 2023

Summary of Lavrinha Exploration Drill holes between 2017 – 2023								
Campaign	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
Drill holes	26	64	27	15	17	49	36	234
Drilled metres	1562,39	9146,28	4133,85	2101,95	3034,36	11711,99	7827,76	39518,58

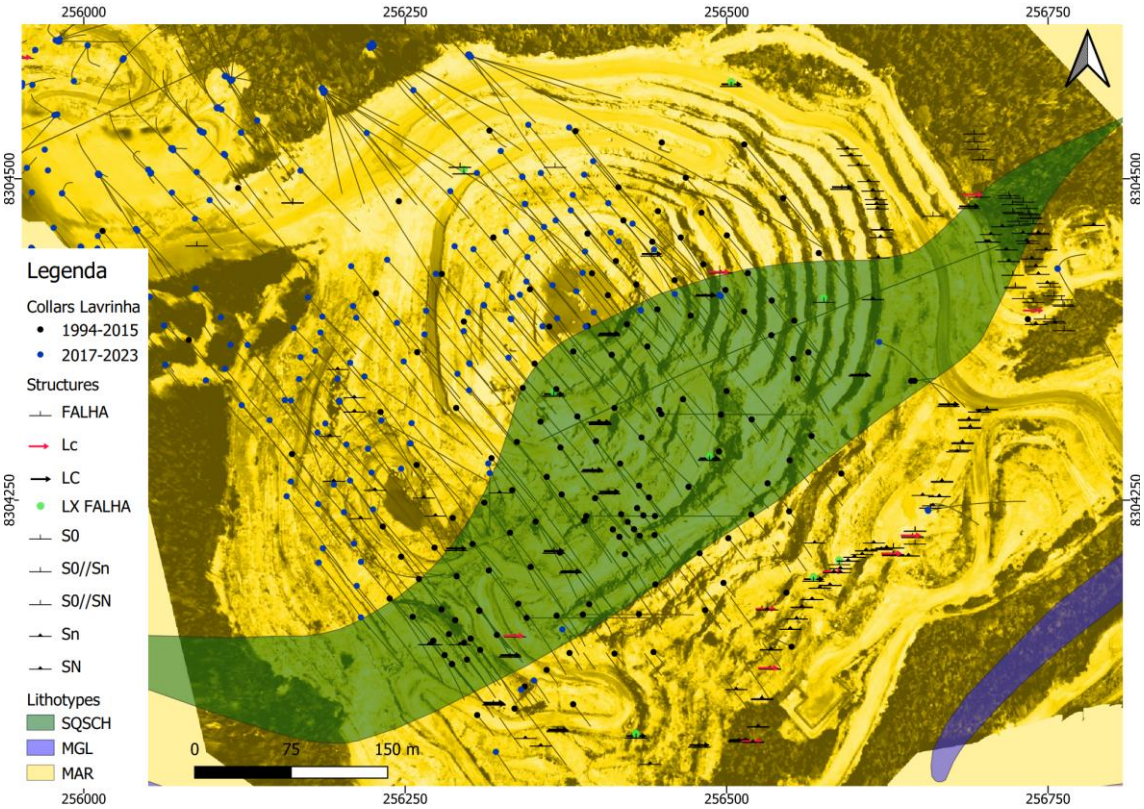


Figure 7-11: Drilling map of Lavrinha Exploration Drill Holes

The goals of the holes drilled at the Lavrinha target included: converting resources in areas where there was already consolidated geological knowledge (central area and ends of the pit); exploring and testing the extent of mineralized bodies at depth; and exploring with the aim of verifying the extent of mineralization between the Lavrinha and Nosde deposits.

In 2017, a drilling campaign was carried out that concentrated in the southern area of the Lavrinha pit, aiming to understand the geology of the area better. In 2018, holes were drilled to depths of 40 and 250 metres in a regular grid of 25 x 25 metres in the northwest area of the deposit, with the aim of converting resources close to the surface. In 2019 and 2020, drilling was concentrated on detailing this northwest to southwest region of the deposit, with a less tight and non-regular drilling grid, with holes 150 metres deep on average.

In 2021, an exploratory campaign without a defined grid was carried out between the Lavrinha and Nosde deposits to verify the continuity of the ore bodies between the two deposits. The results of this campaign were promising and continued in 2022 with holes between 150 and 200 metres deep for resource conversion. A restrictive campaign of exploratory holes was also carried out in 2022 between the Lavrinha and Ernesto pits (a region known as Ernesto Connection and already detailed in section 7.6.2.

The last survey campaign carried out in 2023, aimed to convert resources in the connection region between the Lavrinha and Nosde pits and some deep holes, averaging of 470 metres deep, with the aim of testing the extent of all layers mineralized in the deposit.

The best results observed in the campaigns detailed above are presented in the Table 7-17.

Table 7-17: Significant Intersections - Lavrinha Exploration Drill Holes between 2017 and 2023

SIGNIFICANT INTERSECTIONS - LAVRINHA EXPLORATION DRILL HOLES BETWEEN 2017 AND 2023				
Hole ID	**From (m)**	**To (m)**	**Length (m)**	**Weighted Average Au (g/t)**
LVR0223	105.00	109.00	4.00	6.12
LVR0228	124.00	127.00	3.00	9.158
LVR0233	137.00	139.00	2.00	7.84
LVR0240	142.03	146.00	3.97	1.53
LVR0238	120.63	134.73	14.10	0.55
LVR0238	178.00	180.50	2.50	6.84
LVR0248	109.03	120.00	10.97	2.077
LVR0252	145.00	181.00	36.00	1.855
LVR0254	5.00	17.00	12.00	1.15
LVR0257	2.50	17.00	14.50	0.739
LVR0260	2.50	15.75	13.25	0.6
LVR0260	135.65	147.00	11.35	2.153
LVR0265	127.00	132.00	5.00	3.47
LVR0265	142.00	154.00	12.00	3.128
LVR0265	142.00	143.00	1.00	23.95
LVR0266	161.00	174.00	13.00	1.5
LVR0268	10.00	16.27	6.27	1.953
LVR0268	147.00	165.00	18.00	2.356
LVR0270	2.76	14.00	11.24	1.06
LVR0270	149.00	166.00	17.00	0.878
LVR0270	171.00	178.00	7.00	1.96
LVR0271	131.00	132.00	1.00	12.576
LVR0271	150.00	160.00	10.00	1.28
LVR0271	176.00	193.00	17.00	1.26
LVR0273	139.00	140.00	1.00	13.832
LVR0274	66.00	70.00	4.00	3.059
LVR0277	467.49	472.98	5.49	0.99
LVR0278	3.00	4.70	1.70	1.95
LVR0279	150.00	151.00	1.00	19.452
LVR0279	173.00	179.00	6.00	3.539
LVR0280	185.00	193.00	8.00	3.035
LVR0282	157.00	161.00	4.00	6.07
LVR0282	177.00	181.00	4.00	3.28
LVR0283	172.00	174.25	2.25	8.55
LVR0286	148.87	162.00	13.13	0.466
LVR0291	156.00	158.00	2.00	7.926
LVR0292	115.48	127.00	11.52	0.317
LVR0293	138.00	181.00	43.00	1.94
LVR0295	3.00	13.00	10.00	0.771
LVR0302	130.00	144.00	14.00	0.875
LVR0302	159.00	174.00	15.00	0.94
LVR0317	126.00	143.00	17.00	0.866
LVR0317	169.00	178.00	9.00	4.227

SIGNIFICANT INTERSECTIONS - LAVRINHA EXPLORATION DRILL HOLES BETWEEN 2017 AND 2023				
Hole ID	**From (m)**	**To (m)**	**Length (m)**	**Weighted Average Au (g/t)**
LVR0320	170.00	172.12	2.12	130.84
LVR0320	170.00	171.00	1.00	277.146
LVR0325	141.00	155.00	14.00	1.595
LVR0325	157.58	168.00	10.42	0.75
LVR0325	172.00	175.00	3.00	1.45

The seven drilling campaigns were carried out by the contracted company GEOSOL Geologia e Sondagens S.A., using tracked probes model Maquesonda 1200. The holes were initially drilled in HQ diameter until they exceeded the disaggregated saprolite material, with the diameter subsequently being reduced to NQ. After completing each hole, profiling was carried out to measure hole deviation using the Reflex MaxiBor equipment or the GyroMaster equipment from the SPT brand (Stockholm Precision Tools).

7.2.1.4 Nosde

Apoena drilled the Nosde target from 2019 onwards, starting 100 exploratory holes throughout the current Nosde pit area. In the following years, exploration campaigns totaled 53,466.79 metres drilled in the area across 362 drilling holes. A summary of all survey campaigns carried out between 2019 and 2023 is presented in Table 7-18 and in the Figure 7-12.

Table 7-18: Summary of Nosde Exploration Drill Holes between 2019 – 2023

Summary of Nosde Exploration Drill holes between 2019 - 2023						
Campaign	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
Drill holes	100	77	34	124	27	362
Drilled metres	8305,24	6543,78	4842,50	25248,40	8526,87	53466,79

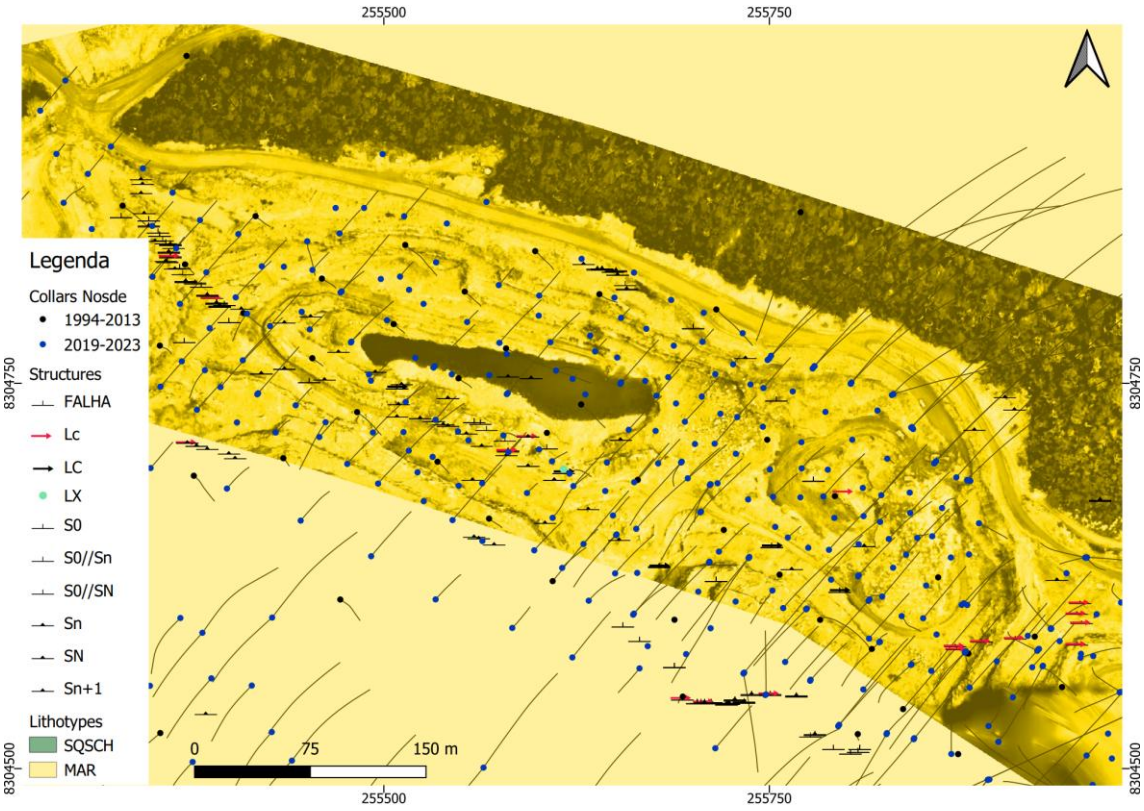


Figure 7-12: Nosde Exploration Drill Holes between 2019 – 2023

The 2019 drilling campaign aimed to drill shallow exploratory holes with an average depth of 83 metres and between 25 and 150 metres deep on a 50 x 25-metre grid to define the Inferred Mineral Resource. In 2020, exploratory holes were carried out to define the mathematical pit and pit extension, with depths ranging from 20 to 190 metres. In 2021, exploratory holes were drilled between the Nosde and Lavrinha pits, determining an initial connection region between the two deposits. These holes averaged 140 metres deep each.

In 2022, the largest drilling campaign was carried out in the Nosde region, with holes drilled for different objectives: holes to define the Indicated Mineral Resource of the Bonus Trap (shallower mineralization of the deposit), with a drilling mesh of 25 x 25 metres; holes in the central region of the pit to define the indicated Mineral Resource of the Upper Trap (muscovite-sericite-chlorite-schist mineralized at a depth of approximately 150 to 200 metres), with a drilling mesh of 50 x 25 metres and 25 x 25 metres; extensive and deep holes with the objective of testing the continuity of mineralized bodies at 300 and 450 metres (Middle and Lower Traps, respectively), with an average depth of 380 metres; and exploratory holes in the connection region between the Nosde and Lavrinha pits to better understand local mineralization without a defined regular drilling network.

The last 2023 drilling campaign in the Nosde area aimed to improve geological understanding of the connection region between the Nosde and Lavrinha pits with a regular survey mesh of 50 x 50 metres and, in some cases, 50 x 25 metres was used.. In addition, 14 exploratory holes were also drilled in 2023 to check geophysical anomalies in the extreme northeast region of the Nosde deposit, aiming to identify whether there would be continuity of ore bodies in this region.

The best results observed in the campaigns detailed above are presented in the Table 7-19 below.

Table 7-19: Significant Intersections - Nosde Exploration Drill Holes between 2019 – 2023

SIGNIFICANT INTERSECTIONS - Nosde EXPLORATION DRILL HOLES BETWEEN 2019 AND 2023				
Hole ID	**From (m)**	**To (m)**	**Length (m)**	**Weighted Average Au (g/t)**
NSD0150	64.00	75.00	11.00	1.56
NSD0152	57.00	66.00	9.00	1.02
NSD0154	64.00	76.00	12.00	2.3
NSD0156	41.00	43.20	2.20	7.32
NSD0157	13.16	19.00	5.84	2.44
NSD0161	9.00	20.00	11.00	1.91
NSD0168	17.00	22.00	5.00	4.12
NSD0168	60.00	62.00	2.00	12.49
NSD0170	24.00	31.00	7.00	3.06
NSD0170	45.00	68.10	23.10	1.46
NSD0171	49.00	52.00	3.00	5.14
NSD0174	21.00	24.00	3.00	12.81
NSD0174	29.00	31.00	2.00	10.87
NSD0206	52.42	57.15	4.73	2.37
NSD0208	51.00	54.00	3.00	4.37
NSD0210	134.25	138.00	3.75	10.12
NSD0211	133.00	142.23	9.23	3.96
NSD0211	142.23	151.00	8.77	8.90
NSD0213	132.00	138.30	6.30	2.51
NSD0215	16.00	21.00	5.00	14.80
NSD0215	125.00	133.00	8.00	1.29
NSD0215	163.00	175.00	12.00	0.63
NSD0217	113.00	134.21	21.21	1.10
NSD0217	142.00	168.00	26.00	1.89
NSD0218	11.25	19.00	7.75	2.06
NSD0218	137.10	140.00	2.90	1.43
NSD0218	171.00	176.00	5.00	10.83
NSD0218	186.00	189.00	3.00	8.85
NSD0219	17.00	21.00	4.00	10.48
NSD0220	107.00	117.00	10.00	1.27
NSD0220	124.25	154.00	29.75	1.33
NSD0222	115.00	122.41	7.41	3.65
NSD0222	122.41	132.00	9.59	7.01
NSD0223	117.00	130.00	13.00	2.69
NSD0224	85.00	98.00	13.00	4.70
NSD0225	31.00	41.00	10.00	2.72
NSD0225	153.00	158.00	5.00	2.74
NSD0226	110.19	123.00	12.81	1.45
NSD0226	128.00	142.00	14.00	1.38
NSD0228	101.28	144.00	42.72	2.78
NSD0228	160.00	163.00	3.00	11.52

SIGNIFICANT INTERSECTIONS - Nosde EXPLORATION DRILL HOLES BETWEEN 2019 AND 2023				
Hole ID	**From (m)**	**To (m)**	**Length (m)**	**Weighted Average Au (g/t)**
NSD0230	97.14	110.00	12.86	0.99
NSD0230	131.00	143.00	12.00	1.57
NSD0232	7.00	10.00	3.00	2.80
NSD0234	113.20	153.62	40.42	1.13
NSD0236	94.00	141.00	47.00	1.14
NSD0237	112.00	124.00	12.00	0.41
NSD0237	138.00	145.00	7.00	2.14
NSD0238	114.00	173.09	59.09	1.64
NSD0239	30.00	32.75	2.75	3.41
NSD0241	87.00	116.00	29.00	1.46
NSD0241	121.00	135.94	14.94	1.14
NSD0242	151.00	162.00	11.00	2.92
NSD0244	99.00	130.00	31.00	2.56
NSD0245	121.00	132.00	11.00	1.14
NSD0246	94.00	114.00	20.00	1.34
NSD0247	88.00	97.22	9.22	9.42
NSD0248	126.07	165.00	38.93	0.93
NSD0250	93.01	101.00	7.99	1.28
NSD0250	107.00	140.72	33.72	0.74
NSD0253	8.00	23.83	15.83	1.05
NSD0253	116.00	129.00	13.00	1.79
NSD0253	130.16	173.00	42.84	1.14
NSD0255	176.00	178.00	2.00	4.51
NSD0256	104.00	116.00	12.00	1.05
NSD0257	172.00	173.00	1.00	12.57
NSD0257	178.00	179.00	1.00	26.28
NSD0258	174.00	183.00	9.00	2.66
NSD0260	166.00	169.00	3.00	2.00
NSD0263	130.00	136.00	6.00	8.94
NSD0265	11.93	15.00	3.07	1.00
NSD0269	184.00	195.00	11.00	2.93
NSD0274	39.00	41.00	2.00	9.56
NSD0276	166.00	168.00	2.00	18.01
NSD0278	125.00	126.00	1.00	102.67
NSD0278	152.00	156.00	4.00	8.64
NSD0294	165.00	175.00	10.00	1.51
NSD0295	168.00	170.00	2.00	18.07
NSD0311	38.00	39.00	1.00	9.44
NSD0319	31.40	35.00	3.60	8.88
NSD0298	348.50	361.00	12.50	0.92
NSD0303	12.00	24.00	12.00	0.81
NSD0317	56.00	58.00	2.00	7.36
NSD0323	47.00	55.00	8.00	3.09
NSD0326	20.00	32.00	12.00	1.15

SIGNIFICANT INTERSECTIONS - Nosde EXPLORATION DRILL HOLES BETWEEN 2019 AND 2023				
Hole ID	**From (m)**	**To (m)**	**Length (m)**	**Weighted Average Au (g/t)**
NSD0350	125.00	157.00	32.00	1.70
NSD0350	189.00	195.00	6.00	5.28
NSD0351	147.65	158.00	10.35	1.33
NSD0352	182.00	186.00	4.00	4.38
NSD0353	130.00	143.00	13.00	3.29
NSD0356	128.09	137.00	8.91	2.59
NSD0358	156.00	165.00	9.00	4.19
NSD0359	125.00	158.40	33.40	2.14

The five drilling campaigns were carried out by the contracted company GEOSOL Geologia e Sondagens S.A., using tracked probes model Maquesonda 1200. The holes were initially drilled in HQ diameter until they exceeded the disaggregated saprolite material, with the diameter subsequently being reduced to NQ. After completing each hole, profiling was carried out to measure hole deviation using the Reflex MaxiBor equipment or the GyroMaster equipment from the SPT brand (Stockholm Precision Tools).

7.3 Hydrogeology

The hydrogeological study of the Pontes e Lacerda region was conducted following internationally recognized standards, including the works of Struckmeier and Margat (1995), UNESCO (1983), Diniz et al. (2012, 2014), and Monteiro et al. (2016). The municipality of Pontes e Lacerda lies within the Amazon River Basin (level 1) and the Madeira River Basin (level 2), as classified by the National Water Agency (ANA). The Madeira basin encompasses the states of Mato Grosso, Rondônia, parts of Acre, and Amazonas. Figure 7-13 illustrates the hydrographic location of the region, with detailed mapping up to the fourth level, while Figure 7-14 highlights the Madeira River Basin, showing its major tributaries, including the Guaporé River, which crosses the municipality.

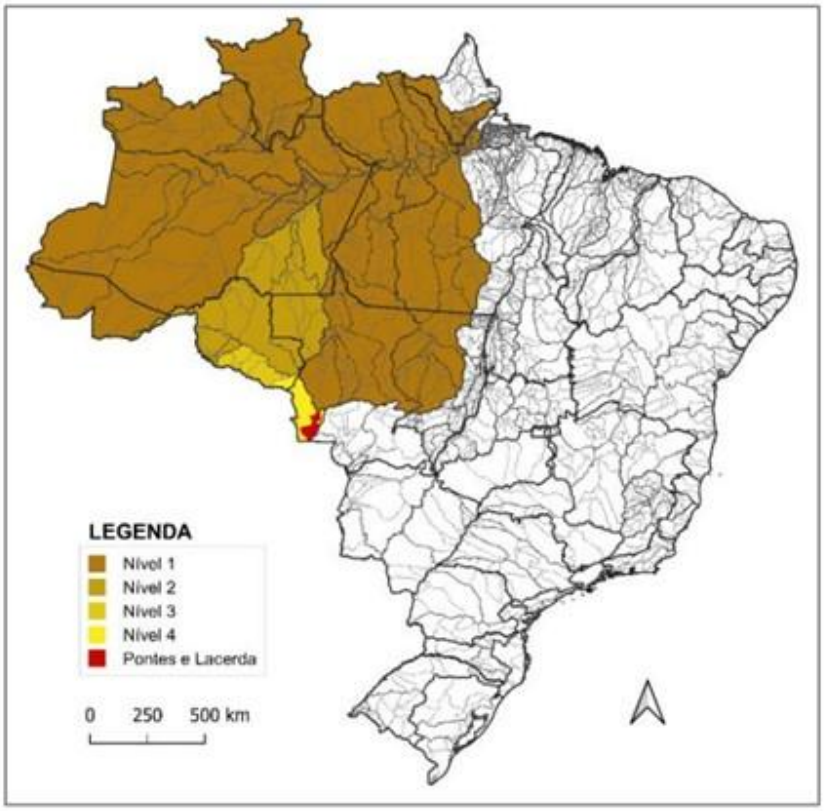


Figure 7-13: Hydrographical location of the municipality of Pontes e Lacerda-MT

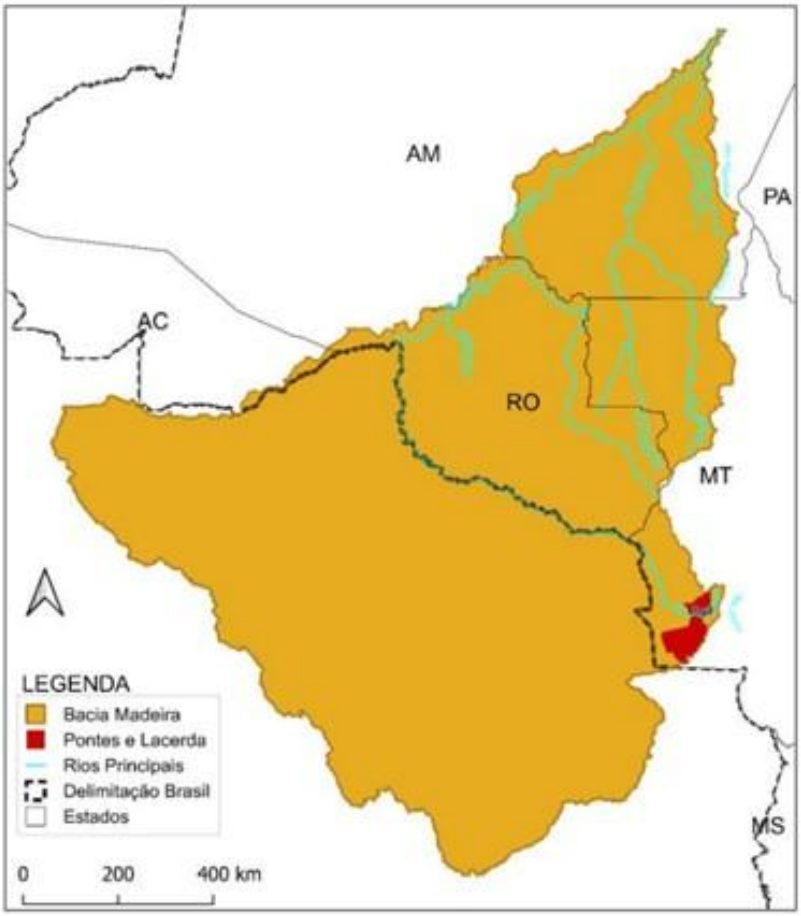


Figure 7-14: Madeira Basin

Hydrogeological mapping was structured around four key thematic bases: planimetry, geology, wells, and hydrology. These elements were tailored and simplified to align with the adopted methodology and scale of the study. For instance, in the geological base, units deemed hydrogeologically irrelevant, such as thin surface coverings or restricted occurrences, were excluded due to their negligible groundwater storage capacity.

Main Aquifer Units:

- Fissural Unit: A fractured aquifer system where groundwater flows through fractures in the metarenite. Flow rates are variable, and both storage and transmission capacity are low, governed by the discontinuities' properties.
- Porous Unit: An intergranular aquifer system comprising fine sands and clay layers. Porosity and permeability are primarily influenced by the lithological matrix and weathering profiles.

The hydrodynamic parameters—hydraulic conductivity, transmissivity, and flow—vary according to the mineralogical, textural, and structural characteristics of the rocks. This study contributed significantly to the development of a conceptual hydrogeological model for the region.

7.4 Geotechnical Data

The geotechnical investigation involved boreholes to characterize the rock mass conditions, providing critical data for geotechnical models, engineering designs, and parameter definitions for future developments. During these activities, detailed descriptions of geotechnical characteristics were performed, classifying the rock mass based on its lithology, structure, and physical state.

The assessments adhered to the following methodologies:

- Barton Q Index (1974): Evaluates rock mass quality using parameters such as the compressive strength of intact rock, discontinuity conditions, groundwater influence, and structural factors. Widely applied for stability analysis and support requirements in both underground and open-pit operations.
- Bieniawski RMR Classification (1989): Combines factors such as intact rock strength, discontinuity spacing and condition, water presence, and fracture orientation to determine rock mass quality. This system supports tunnel, slope, and foundation design projects.
- ISRM Standards (1978): Provides standardized protocols for geotechnical descriptions of rock samples, including texture, mineralogy, mechanical strength, and structural features. This ensures consistency and reliability in data analysis.

In addition to borehole analyses, geotechnical field mapping was conducted to correlate subsurface findings with surface observations in outcrops, pits, and exposed areas. These mappings included detailed evaluations of geological structures such as fractures, faults, and shear zones, enabling the assessment of massifs' geometry and stability conditions.

The integration of data from boreholes and field mapping provides a comprehensive and accurate interpretation of the geotechnical conditions in the study area. These results form the foundation for developing robust geotechnical models, supporting the planning and execution of safe and economically viable interventions.

8 SAMPLE PREPARATION, ANALYSES AND SECURITY

Sample preparation for all historical drill holes (all drilling before Aura's acquired the project in 2015) was disclosed in the previous NI43-101 technical report under title "FEASIBILITY STUDY AND TECHNICAL REPORT ON THE EPP PROJECT MATO GROSSO, BRAZIL, January 13, 2017" by P&E Mining consultant.

Drilling campaigns prior to 2015 were conducted by various companies in the 90s, e.g., TVX Gold, MSE, as discussed in Section 5 History, and by Yamana from 2005 till 2013. The drilling campaigns from 2015 to 2023 were conducted by Aura.

Although the term historical was not used in the EPP Feasibility Study report for drilling before 2015, for this TRS and hereafter all drilling before 2015 is considered to be historical. The QP of this TRS has relied on previous authors in terms of other companies' sample preparation and procedures which was reviewed and validated by Ausenco when Yamana was operating the mine and at the time of preparation of EPP Feasibility Study report by P&E. Therefore, in this TRS only sample preparation, analysis, and QAQC measures related to Aura's drilling (after 2015) is discussed.

From 2015 and onward the primary laboratory used by Apoena for the analysis of diamond drill hole samples were SGS (Geosol laboratory, located in Vespasiano, Minas Gerais State, Brazil) and EPP Complex local lab at mine.

8.1 Core Handling, Logging, and Sampling Protocols (Aura Minerals)

Apoena conducted diamond drilling campaigns during the period 2015 to 2023 under contract with SGS Geosol Drilling Ltda. Geosol drilling crews extracted the core, placed it in wooden or plastic core boxes, then sealed the boxes with tape or straps prior to transport. The core was then transported by truck to Apoena's core shed (Figure 8-1).

On arrival at the core shed, the core was laid out and washed. The core was then logged, and sample intervals marked by Apoena geologists and are photographed. Sample intervals were generally one metre; however, variations were allowed for special samples or special interval breaks. The average sample size was 1.09 m. Core logging included lithology, alteration, mineralization, structural and geotechnical logging. Structural and geotechnical details that were noted included foliation, fractures, vein orientation, and faults. Wherever possible, oriented core samples were taken to give more accurate structural readings, percent core recovery and RQD measurements were taken and calculated for all drill intervals (Figure 8-2).

The core was then cut under Apoena supervision by mining technicians. Core was cut using diamond impregnated cutting saws, standard to the industry. To the extent possible, core was cut perpendicular to major vein orientations. Then the samples are bagged in plastic bags according to Apoena procedures. Samples were tagged with one tag inside the bag and one tag outside. Sample bags were also marked by hand in permanent ink. The sample numbers were

perpendicular to major vein orientations. Then the samples are bagged in plastic bags according to Apoena procedures. Samples were tagged with one tag inside the bag and one tag outside. Sample bags were also marked by hand in permanent ink. The sample numbers were electronically entered into the database, according to the proper sample intervals. This system then provided an electronic sample submittal form.

Core handling, logging, and sampling procedures practiced by Apoena and its contractors in the EPP Project are summarized in the flow sheet on Figure 8-3.

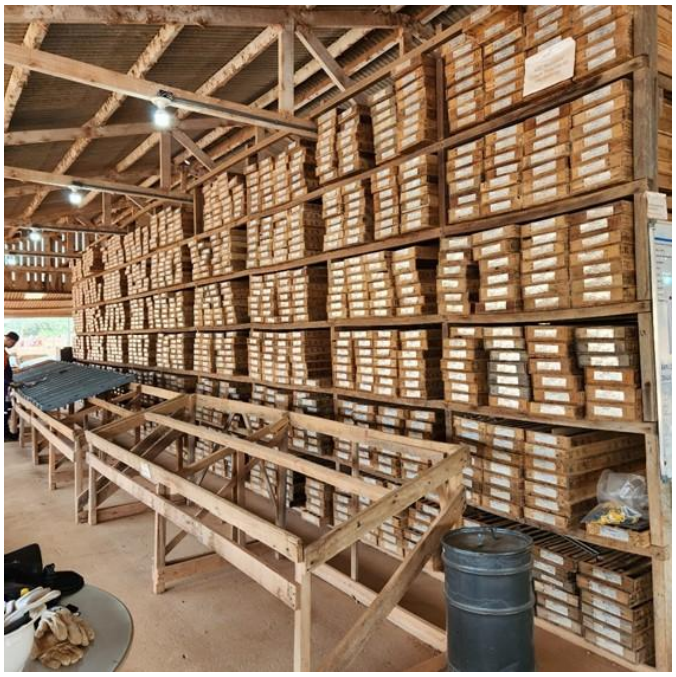


Figure 8-1: Apoena Core Shack Storage and Working Area



Figure 8-2: Core Boxes Logging in Apoena Core Shac

1. DRILL HOLE SPECIFICATION
    1. Drilling collars are surveyed with SAD 1969 datum.
    2. Early holes were located by GPS and are re-surveyed by Total Station.
    3. Down-hole survey is done using GyroMaster, Stockholm Precision Tools.

↓

2. CORE HANDLING AND STORAGE
    1. Core is picked up at drill rigs at a regular schedule and transported to core shed.
    2. Drill core is laid out on racks and organized by drill targets.
    3. Check and list the advances and recoveries.
    4. Core boxes are labeled with hole numbers, core intervals and sample numbers.
    5. The core is cut in half with a diamond bladed and stored again in the core box.
    6. Core boxes are stacked and stored.

↓

3. LOGGING
    1. A standard spreadsheet is used to record all logging information.
    2. The lithological, mineralization and alteration description is recorded for each interval respecting the lithological contacts or alteration intensity.
    3. Geotechnical data are recorded following procedures for obtaining structural measures.
    4. RQD (information about the degree of alteration, areas of strength and frequency of fractures) are recorded.
    5. Structures and core orientation are recorded.

↓

4. DENSITY DETERMINATIONS
    1. After the core is logged the intervals for performing density testing are defined and recorded in the density plan.
    2. Marking of the sample size
    3. Identification of the sample box
    4. Collecting samples for analysis
    5. Weighing the sample in air and water (Archimedes' method)
    6. Explanation of results in specific spreadsheet
    7. Removal of the sample and returning the same to the core box
    8. Formula:
       Density = (Sample weight / (Sample weight(M1) – Sample weight in water (M2)))

↓

5. SAMPLING
    1. Drill core samples are taken at intervals of one metre, respecting the geological contacts (the drill core samples must be in minimum 0.5 m in size). When the drill core presents low potential to mineralization, it's sampled according to regular intervals each 2 metres.
    2. Samples from one hole are combined in batches of approximately 40 routine samples and 4 control samples.
    3. Insertion of 5 percent of blank samples in each batch (mainly after mineralized zones)
    4. Insertion of 5 percent of standards samples (high ore-grade, medium ore-grade and low ore-grade)
    5. Batches and dispatches are tracked by laboratory report number assigned to each dispatch number.

Figure 8-3: Core Handling and Sample Protocols

8.2 Sample Preparation – Laboratory

8.2.1 SGS Laboratory

To ensure that the correct particle size and sample reduction procedures are achieved during sample preparation, the SGS Geosol Laboratory used established protocols for preparation of samples of rock/core as summarized in Figure 8-4. Before starting sample preparation, proper equipment must be setup, calibrated and monitored to ensure quality specifications are met.

Quality control measures conducted during sample preparation by SGS Geosol were as follows:

- Equipment is designed and set up to produce representative sample fractions during splitting.
- Equipment was cleaned with cutting barren rock followed by compressed air between each sample run.
- Screen tests for coarse gold were conducted on crushed and pulverized sample fractions at the rate of one test per 20 sample batch.

The procedure for sample preparation is to dry the received sample at 105º C and crush the sample until 75% is less than 3 mm (<3 mm). Using a rotary splitter, an aliquot of 500 g is selected and milled until 95% of rock less than a #150 mesh. Further quartering allows the separation of a 50 g aliquot, which is ready to be analyzed for Au Fire Assay. A coarse crushed aliquot and a pulp aliquot are kept in the lab as reserve for possible re-assaying requests or to return to the customer.

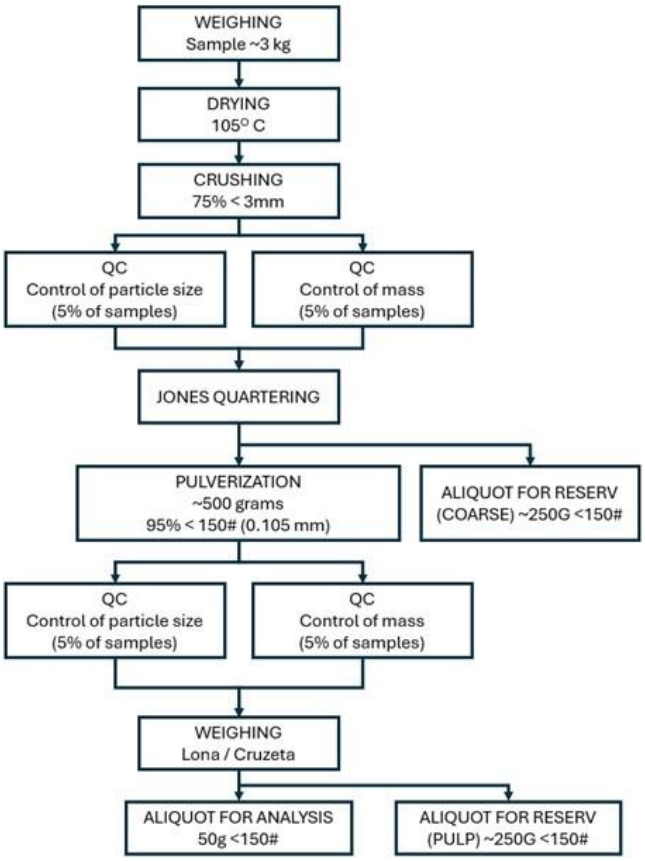


Figure 8-4: SGS Sample Preparation Protocol

8.2.2 EPP Laboratory

The procedure for sample preparation at the EPP laboratory is to dry the received sample at 120º C, crush the sample in the primary crusher until 50% is less than ¼ in (0.64 cm) in size, then in the secondary crusher crush the rock until 90% of the sample is less than 2 mm. Using a rotary splitter, an aliquot of 1,200 gram is selected and milled until 95% of the sample is less than a #150 mesh. Further quartering allows the separation of a 50 g aliquot, which is ready to be analyzed for Au Fire Assay. Pulp aliquots are kept in the lab as reserve for possible re-assaying requests or to return to the customer. The EPP laboratory sample preparation method is summarized it the Figure 8-5 flow chart.

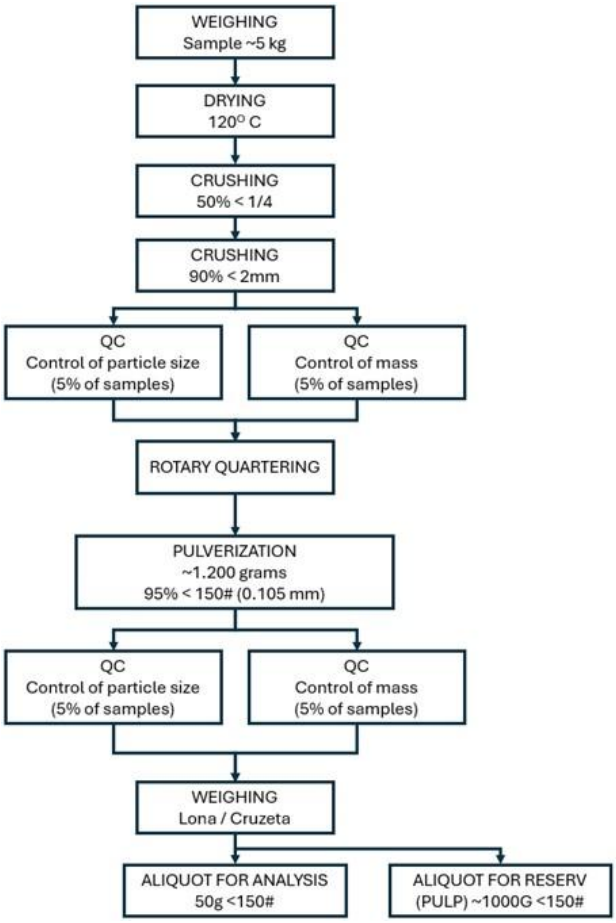


Figure 8-5: EPP Sample Preparation Protocol

8.3 Sample Assaying

The primary analytical laboratory used by Apoena for the EPP Project was the SGS Geosol laboratory, located in Vespasiano, Minas Gerais State, Brazil. The laboratory has ISO 9001 certification and ISO 14001:2004, ISO 17025:2009 certification for environmental chemical analyses. SGS Geosol employs modern, industry standard techniques and analytical methods.

For the purpose of routine gold analysis at the EPP Project, Fire Assay with Atomic Absorption Spectroscopy finishing (“AAS”) finish has been used since the 2015 drilling campaign.

Fire Assay with AAS finish is a quantitative analysis through which precious metals are separated by melting a powdered mineral sample in a reducing environment. The precious metals are collected in molten lead which separates from the slag by virtue of density differences. The lead button is then dissolved in aqua regia and the resulting acid solution containing the precious metals is analyzed by atomic absorption spectroscopy to determine the gold content.

The lower analytical detection limit for Au FAA505 is 0.005 ppm. When the analytical result exceeds the upper detection limit of this method (100 ppm), the samples are re-assayed using FAA525 method. The Table 8-1 shows details about the methods used for analysis in the primary laboratory, SGS.

Table 8-1: Analytical Codes for Gold Analysis: SGS Laboratory

LABCODE	CODE	LOWER DETECTION LIMIT	UPPER DETECTION LIMIT	DESCRIPTION
SGS	Au_FAA505_ppm	0.005	100	Au fire assay with AAS finish, 50g.
SGS	Au_FAA525_ppm	0.001	-	Au fire assay with AAS finish, 50g.

Apoena also analyzed core samples in the EPP local laboratory, located in Pontes e Lacerda, Mato Grosso, Brazil. The laboratory does not have any ISO certification, however, in 2021 improvements were made in the process of preparation, analysis, and management of the data, especially after the acquisition of the LIMS system for laboratories and improvements in workflows from the receipt of samples to the release of analysis results.

The analysis method used for core samples at the EPP local laboratory was Fire Assay with Atomic Absorption Spectroscopy finishing (“AAS”), 50 grams, summarized in Table 8-2.

Table 8-2: Analytical Codes for Gold Analysis: EPP Laboratory

LABCODE	CODE	LOWER DETECTION LIMIT	UPPER DETECTION LIMIT	DESCRIPTION
EPP	Au_FA50_gt	0.040	-	Au fire assay with AAS finish, 50g.

8.4 Quality Assurance/Quality Control Program

Quality Assurance (“QA”) determines if assay data has precision and accuracy within generally accepted limits for the sampling and analytical method(s), and that the data is of good quality, to be used with confidence in a Mineral Resource Estimate. Quality Control (“QC”) consists of procedures used to ensure that an adequate level of quality is maintained in the process of collecting, preparing, and assaying the exploration drill samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical), precision (repeatability), and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling-assaying variability of the sampling method itself.

8.4.1 Apoena Internal QA/QC Program

The general procedure applied by Aura consisted of samples grouped into batches of approximately 40 units. Five percent of standards, certified reference materials, and five percent

of blanks, material containing no gold, are included in each sample batch. QA/QC samples comprise 10% of the data. Blanks are inserted in the sample stream at the end of visible mineralization, standards are randomly inserted within mineralized intervals. Pulp and reject duplicates are not routinely inserted in sample stream. Field duplicates, pulp duplicates and check assays were performed in the 2014, 2017 and 2023 campaigns.

The following types of control samples were routinely analyzed as part of Apoena's QA/QC program.

- Certified Reference aBlank samples.
- Core duplicate assays (2017 drilling campaign).
- Pulp duplicate assays (2017 drilling campaign).
- Intra and inter-laboratory check assays (2014, 2017 and 2023 drilling campaign).

8.4.2 Acceptance and Rejection Thresholds

The following criteria were used to establish acceptance and rejection thresholds for internal control samples analyzed in the EPP Project.

CRM:

- The CRM fails if the assay result is greater than three standard deviations of the accepted the net value of the CRM. Re-assaying was done for all of samples prior to the failed standard up the previous approved standard sample and also the samples after the failed standard down to next approved standard sample.

Blanks:

- If assays on field blanks exceed three times the detection limit, then automatic re-assaying of ten samples surrounding the blank sample in the batch (five above and 5 below the failed sample).

Duplicates:

Apoena did not routinely submit internal field duplicates, pulp and coarse reject material, Limited core and pulp duplicate for Ernesto deposit showed very high variability due to the nuggety nature of these deposits.

8.4.3 Certified Reference Materials (Standards)

Certified Reference Materials (CRMs) or standards were used to monitor analytical accuracy and precision of assay results within the primary laboratory or externally, between two or more laboratories. CRMs are well-analyzed, meticulously prepared, ground rock powders, for which the concentration of selected constituent elements are well behaved and vary within low statistical ranges. Once a material containing the desired elements is selected, the CRM producer sends multiple samples of the reference material to a minimum of ten accredited laboratories for analysis by one or more analytical methods. This Round Robin approach is to provide sufficient assay data to determine statistically a representative mean value and standard deviation required for setting acceptance/rejection tolerance limits for the elements of interest.

The EPP Gold Project used 23 CRMs; provided by Geostats Pty Ltd. and a total of 4,979 standards aliquots (Table 8-3) were inserted into the sample batches sent to the laboratories. The results were analyzed based on control charts and statistical analysis considered as acceptable the 3rd standard deviation of Au g/t limits per certified standard.

Table 8-3: Certified Reference Materials ("CRM", "Standards")

CERTIFIED REFERENCE MATERIAL	TYPE	CERTIFIED VALUE Au grade (ppm)	STANDARD DEVIATION	NUMBER OF SAMPLES
CM-41	Medium-grade	1.6	0.15	104
CM-47	Medium-grade	1.13	0.11	100
G312-4	High-grade	5.3	0.22	221
G906-1	Medium-grade	1.67	0.09	208
G912-6	High-grade	4.08	0.17	226
G998-6	Low-grade	0.8	0.06	221
GS-12B	High-grade (>10.0 g/t)	11.88	0.57	204
GS-1P5Q	Medium-grade	1.329	0.1	461
GS-1P5T	Medium-grade	1.75	0.17	187
GS-2U	Medium-grade	2.12	0.13	318
GS-2W	Medium-grade	2.1	0.14	232
GS-4H	High-grade	5.01	0.3	207
GS-5X	High-grade	5.04	0.33	233
GS-5Y	High-grade	5.21	0.31	150
GS-7H	High-grade	6.56	0.5	122
GS-7J	High-grade	7.34	0.29	107
GS-7K	High-grade	7.06	0.37	3
GS-P4G	Low-grade	0.468	0.052	337
GS-P4J	Low-grade	0.479	0.049	624
GS-P5H	Low-grade	0.497	0.056	136
GS-P8G	Low-grade	0.818	0.06	318
GS-P8H	Low-grade	0.833	0.071	124
ME-2101	Low-grade	0.765	0.087	136

8.4.4 CRM Charts

The results of the internal QA/QC program for the EPP Project regarding the CRMs are presented in graphic form from Figure 8-6 to Figure 8-29 and statistical form in Table 8-4 and Table 8-5, for samples analyzed at SGS and EPP laboratories.

According to the results received, the 23 CRMs used in the EPP Project (Table 8-3), all returned analyzes that are well within the rejection threshold of three standard deviations.

Of the 4,979 CRM samples analysed (2015-2023), only 72 samples failed, comprising less than 2% of the total. Based on the CRM data presented here, the accuracy of the tests generated for the EPP Project (2015 - 2023) were acceptable by the industry standard and would not prevent their use in Mineral Resource estimation. The QP agrees with this observation.

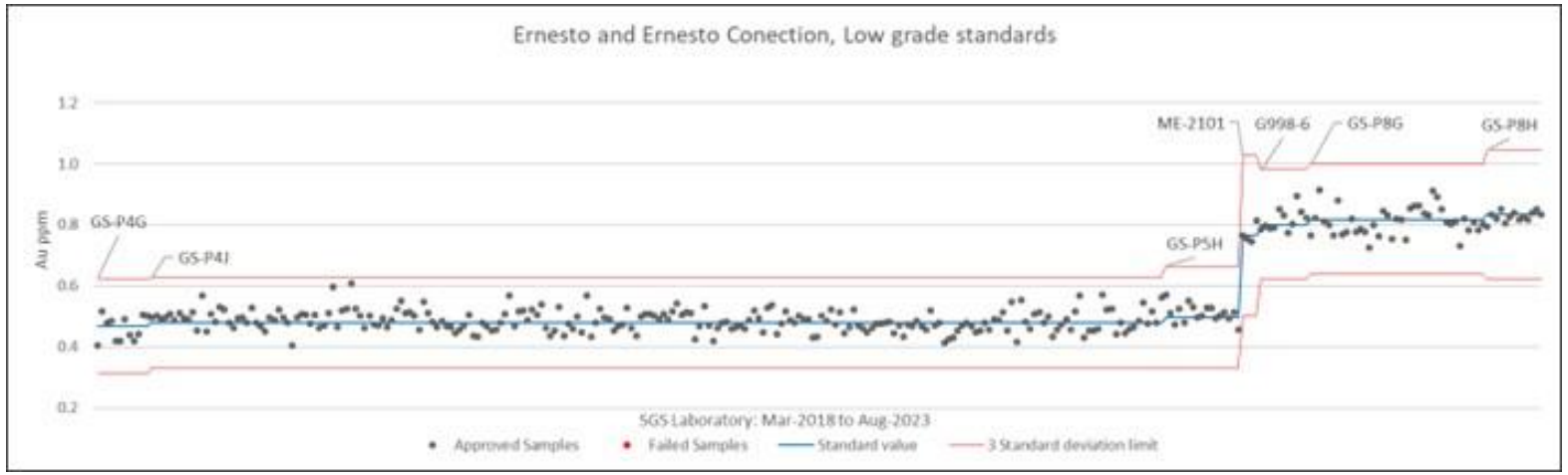


Figure 8-6: Ernesto and Ernesto Connection – Low-grade Standards - SGS Laboratory

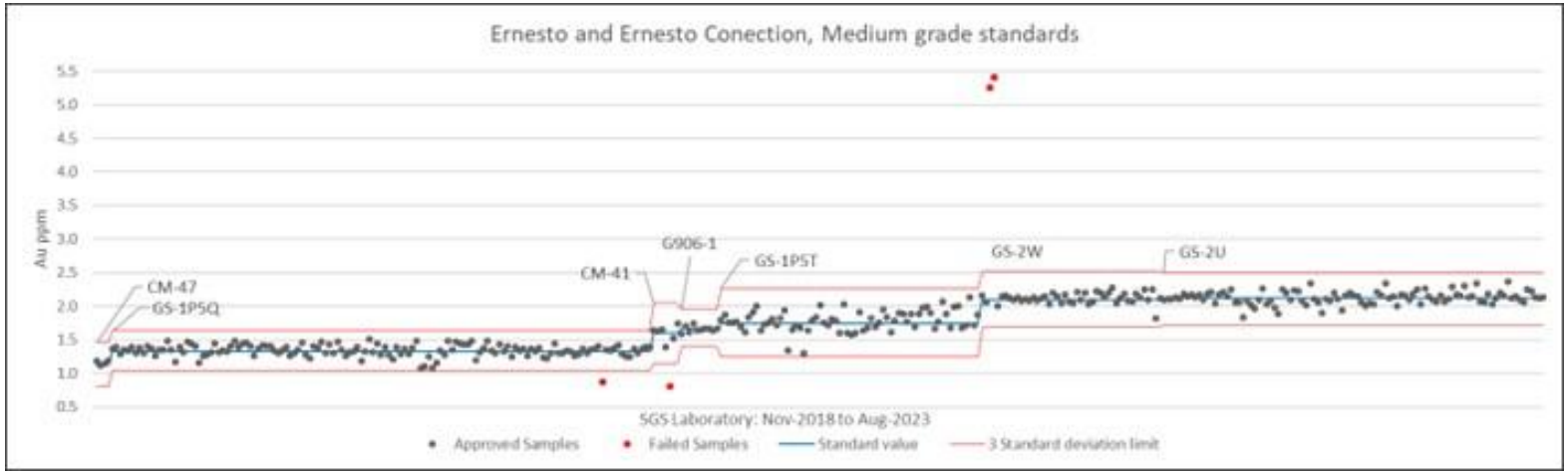


Figure 8-7: Ernesto and Ernesto Connection – Medium-grade Standards - SGS Laboratory

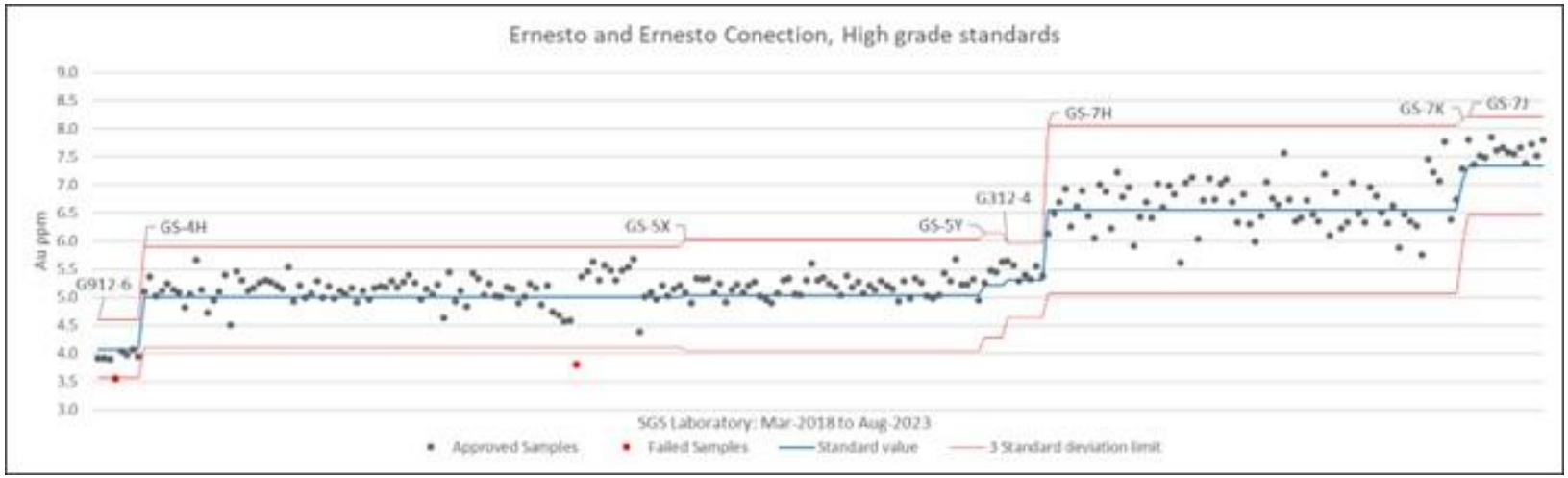


Figure 8-8: Ernesto and Ernesto Connection – High-grade Standards - SGS Laboratory

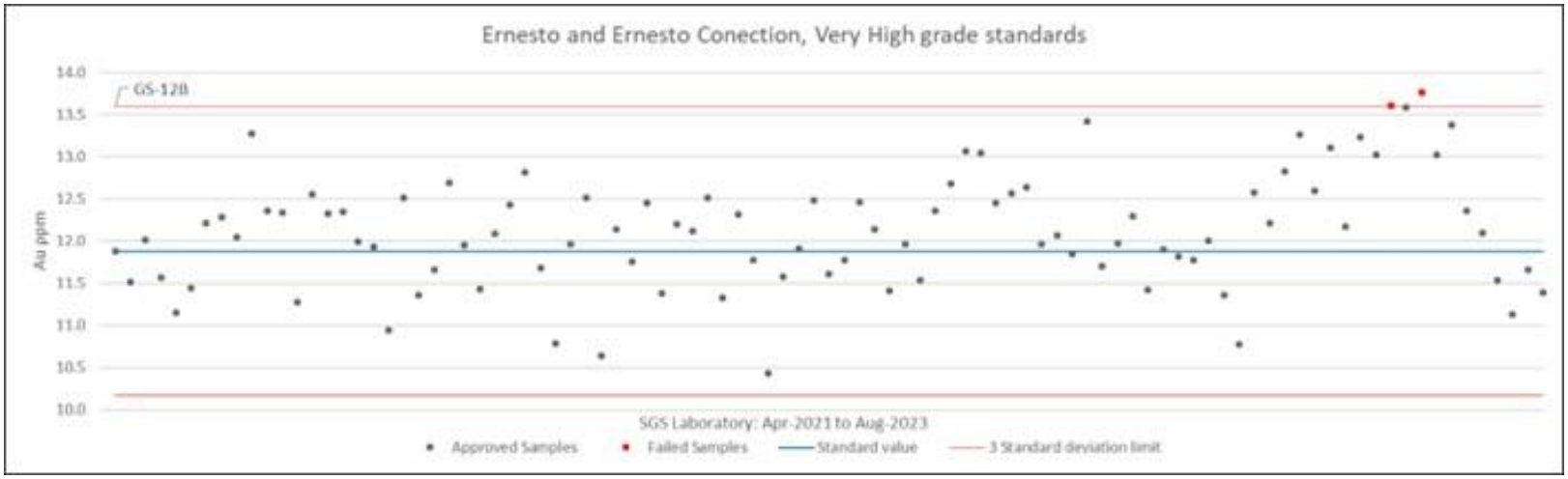


Figure 8-9: Ernesto and Ernesto Connection – High-grade Standards (Above 10.0 g/t) - SGS Laboratory



Figure 8-10: Ernesto and Ernesto Connection – Low-grade Standards - EPP Laboratory

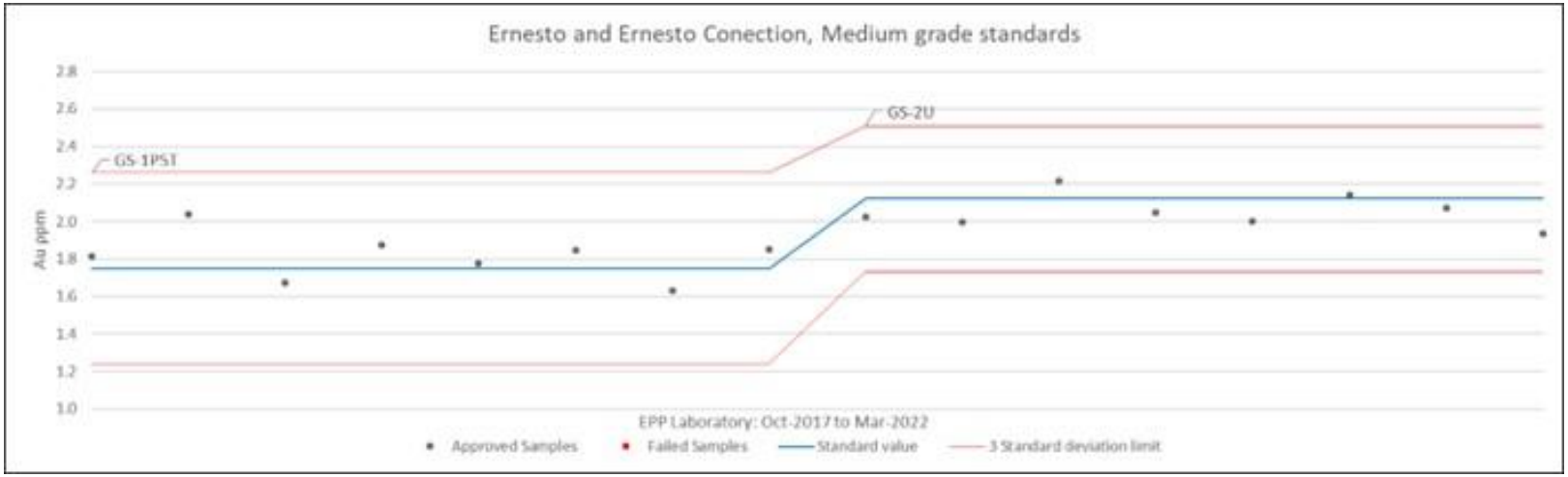


Figure 8-11: Ernesto and Ernesto Connection – Medium-grade Standards - EPP Laboratory

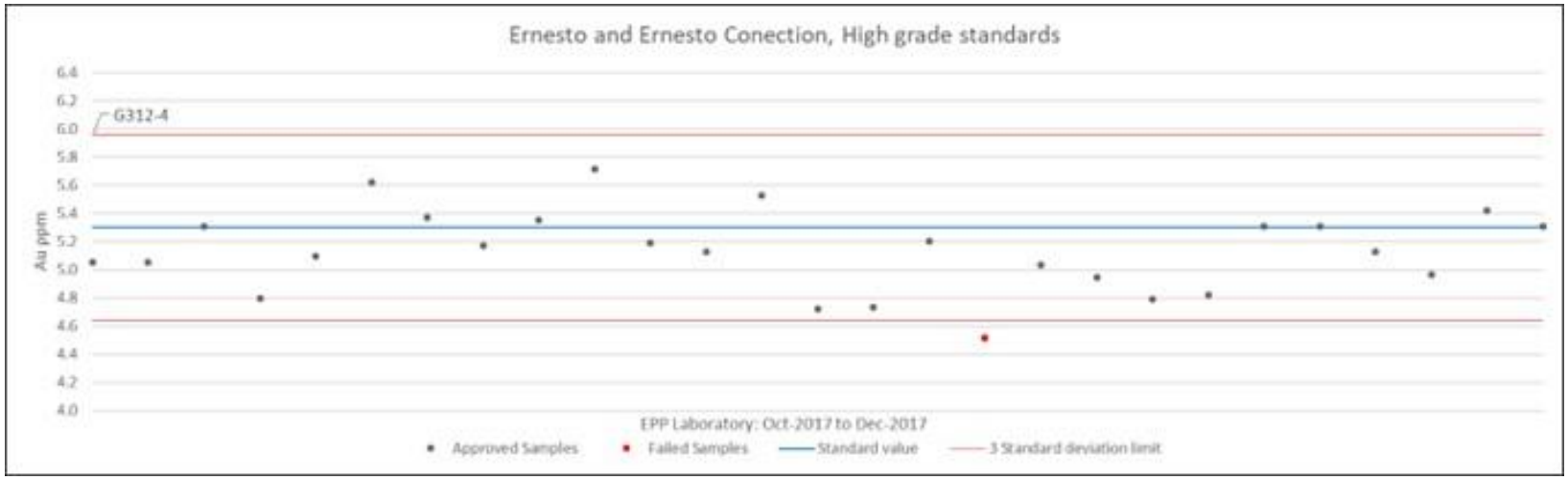


Figure 8-12: Ernesto and Ernesto Connection – High-grade Standards - EPP Laboratory

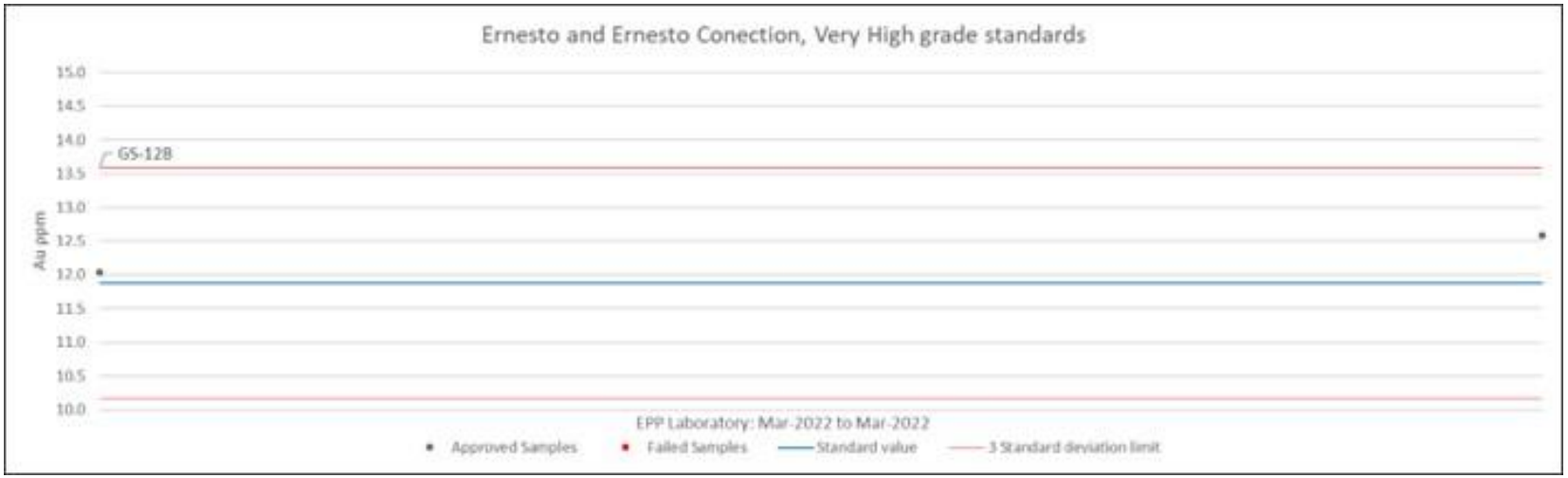


Figure 8-13: Ernesto and Ernesto Connection – Very High-Grade Standards - EPP Laboratory

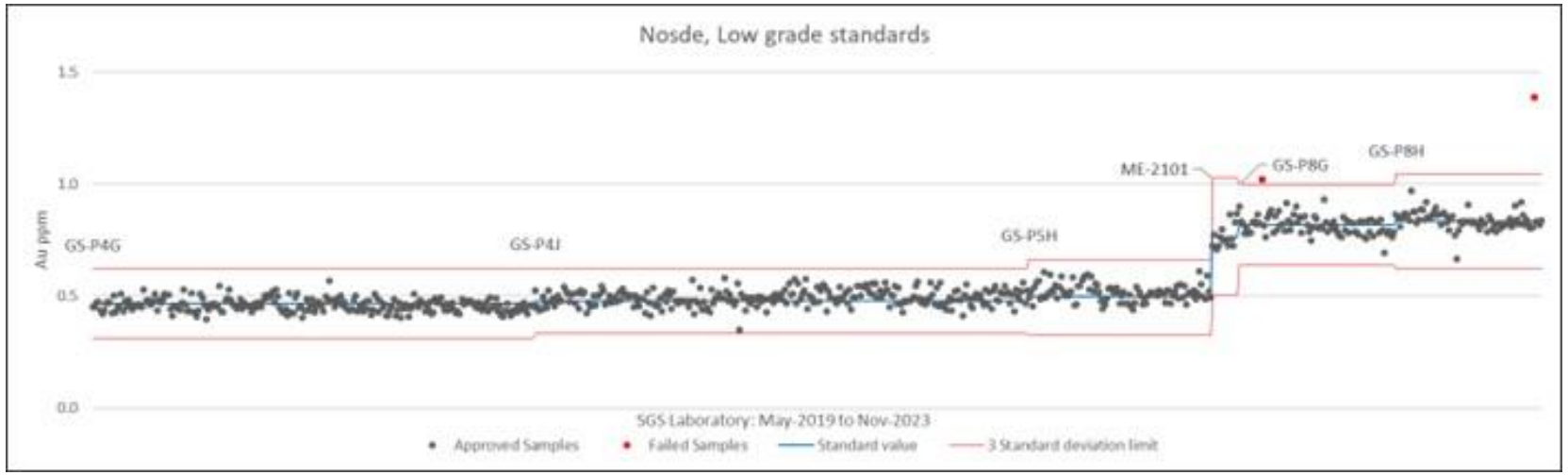


Figure 8-14: Nosde – Grade Standards - SGS Laboratory

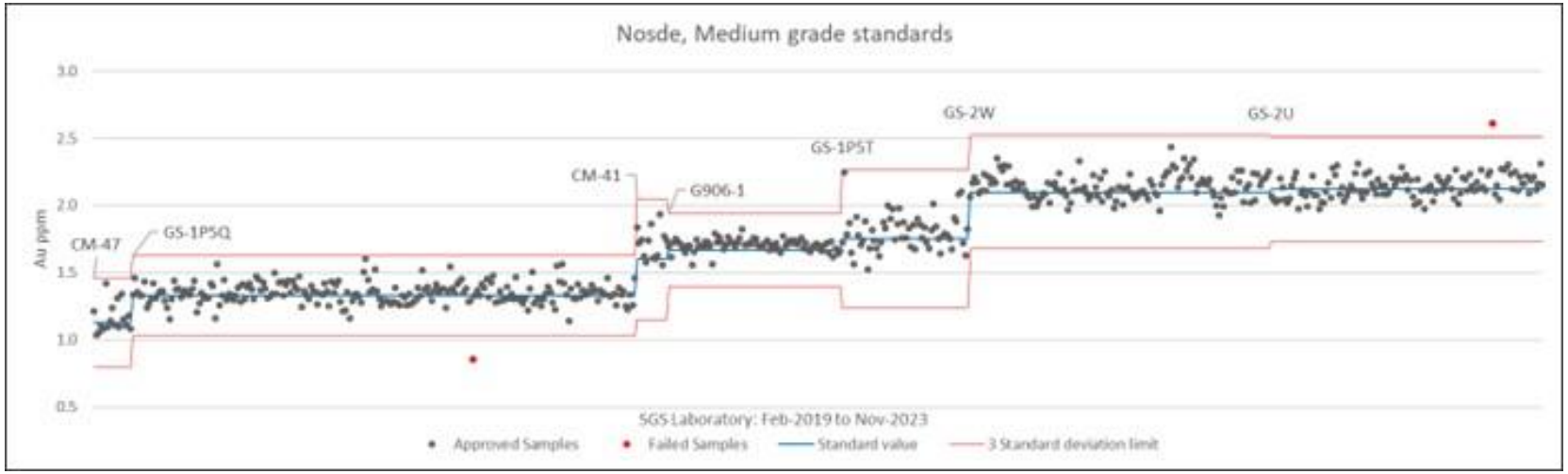


Figure 8-15: Nosde – Medium-grade Standards - SGS Laboratory

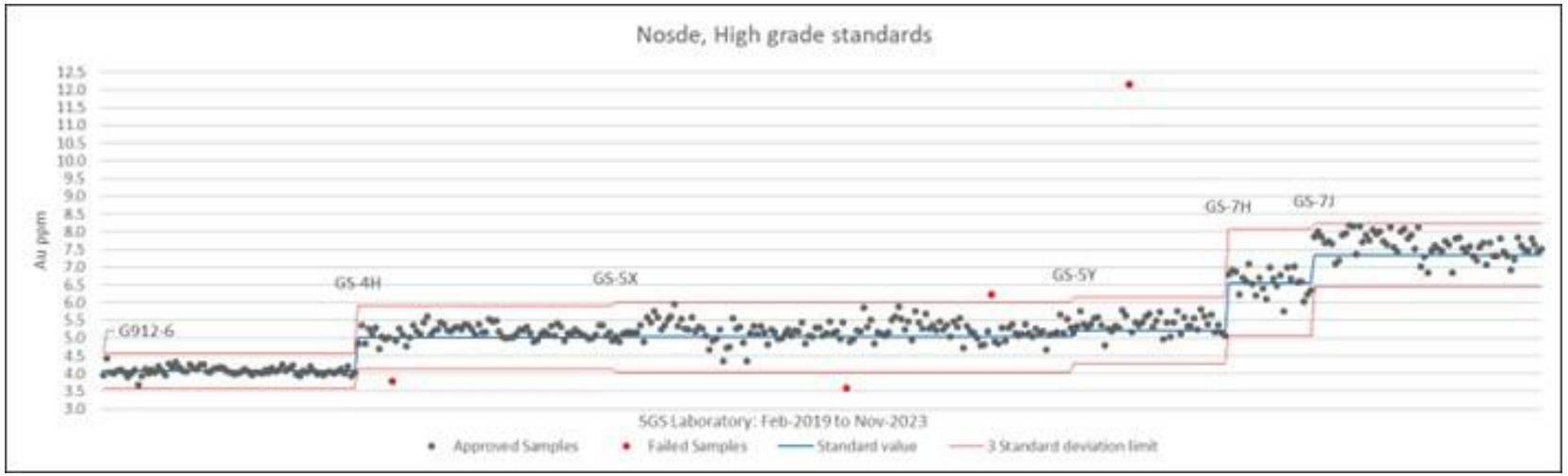


Figure 8-16: Nosde – High-grade Standards - SGS Laboratory

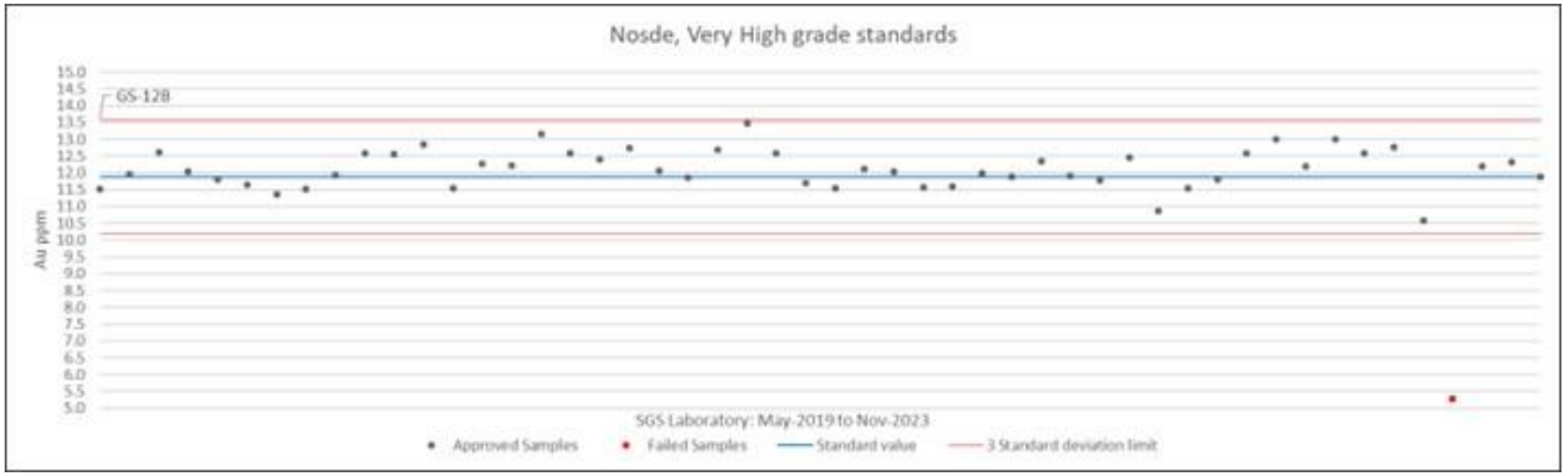


Figure 8-17: Nosde – Very High-Grade Standards - SGS Laboratory

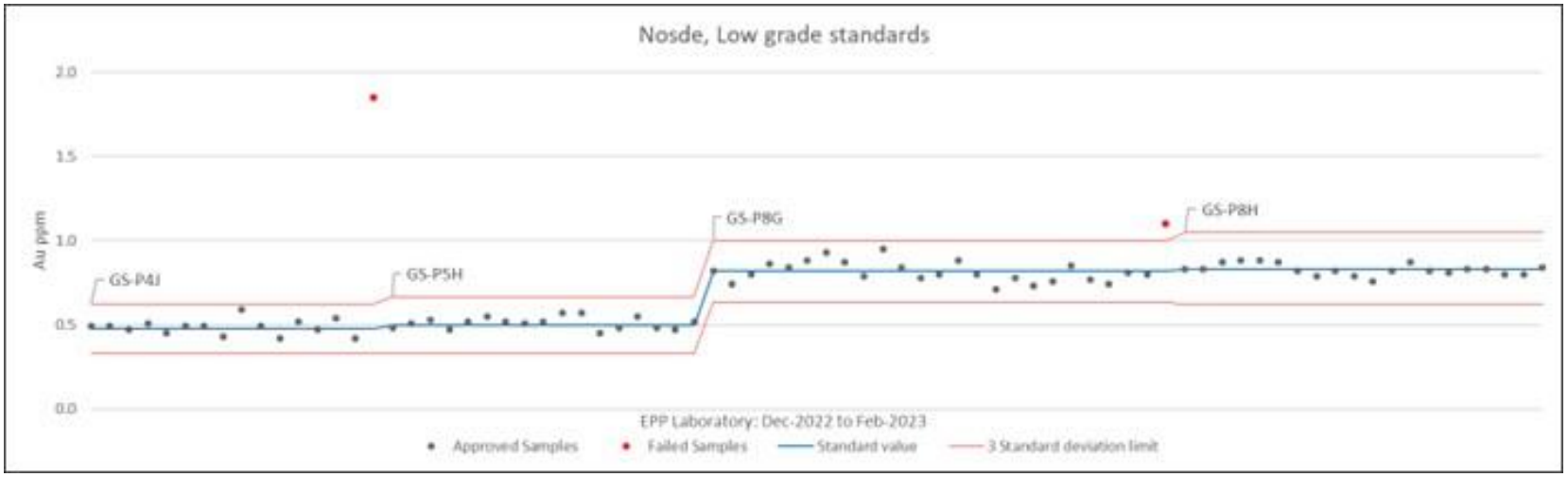


Figure 8-18: Nosde – Low-Grade Standards - EPP Laboratory

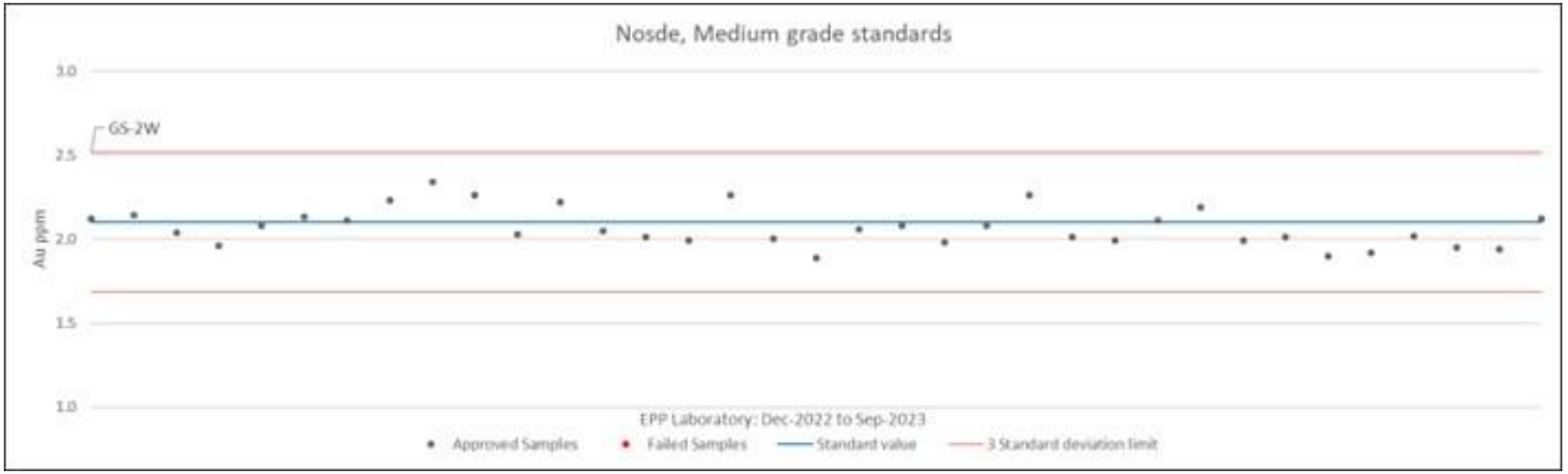


Figure 8-19 – Nosde: Medium-grade Standards - EPP Laboratory

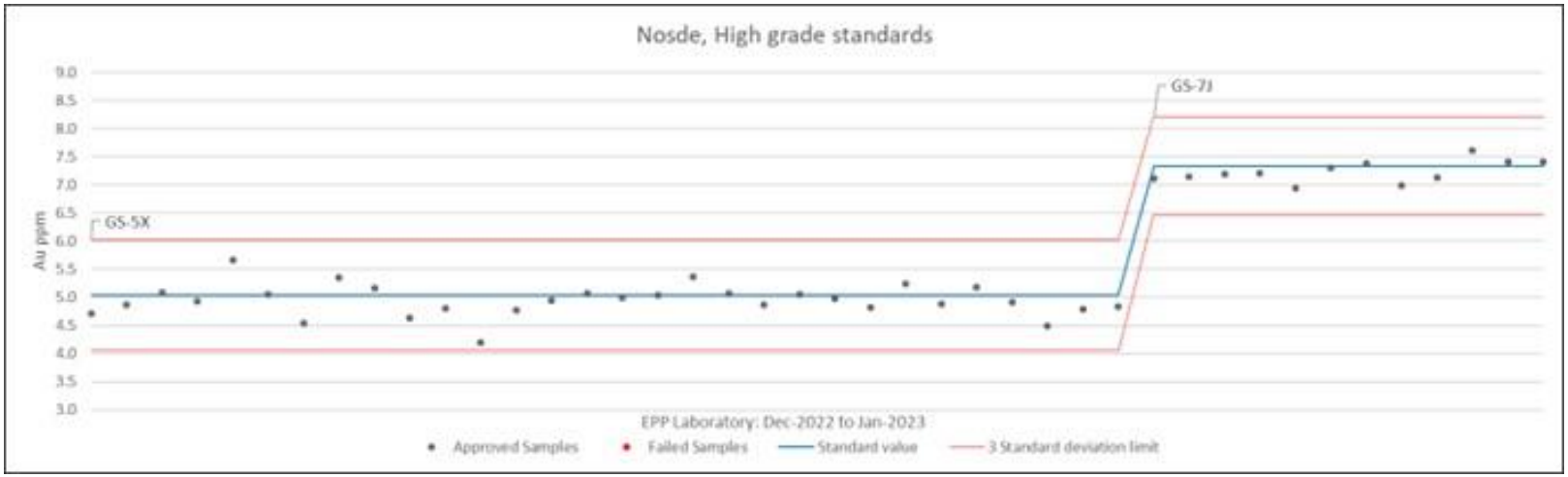


Figure 8-20 – Nosde: High-grade Standards - EPP Laboratory

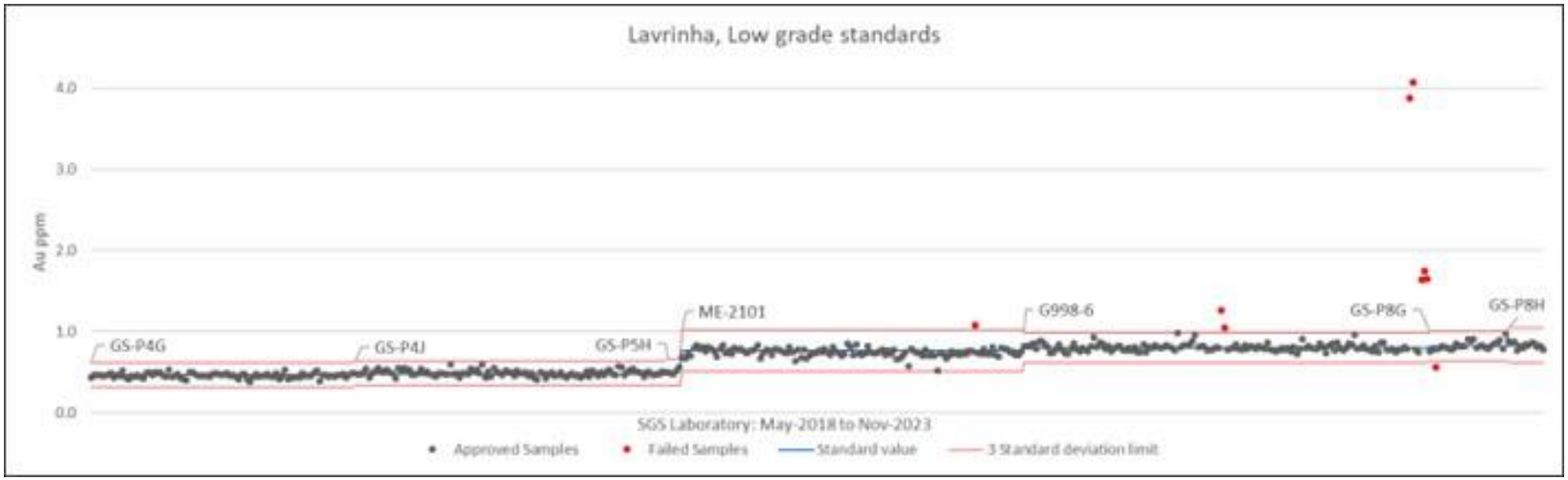


Figure 8-21: Lavrinha – Low-grade Standards - SGS Laboratory

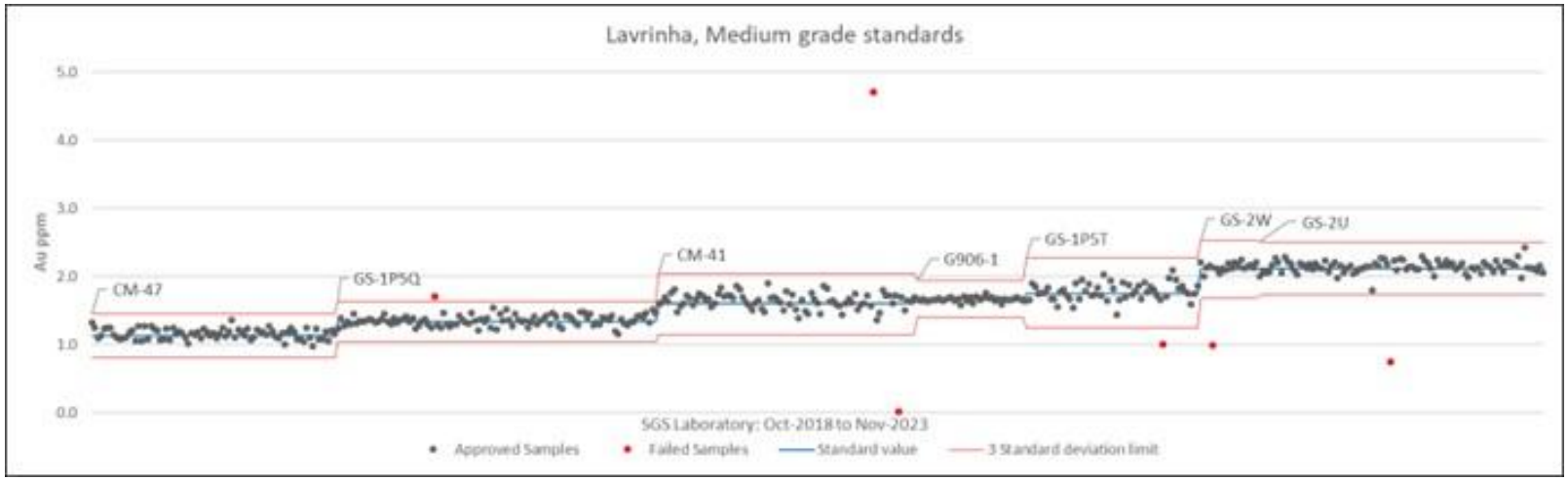


Figure 8-22: Lavrinha – Medium-grade Standards - SGS Laboratory

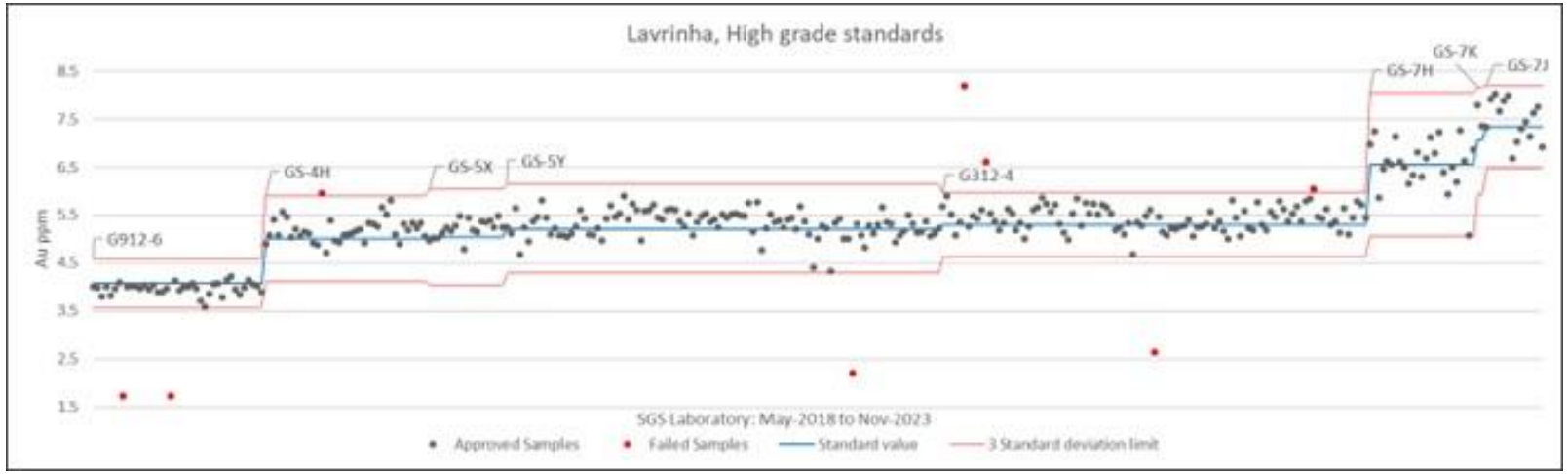


Figure 8-23: Lavrinha – High-grade Standards - SGS Laboratory

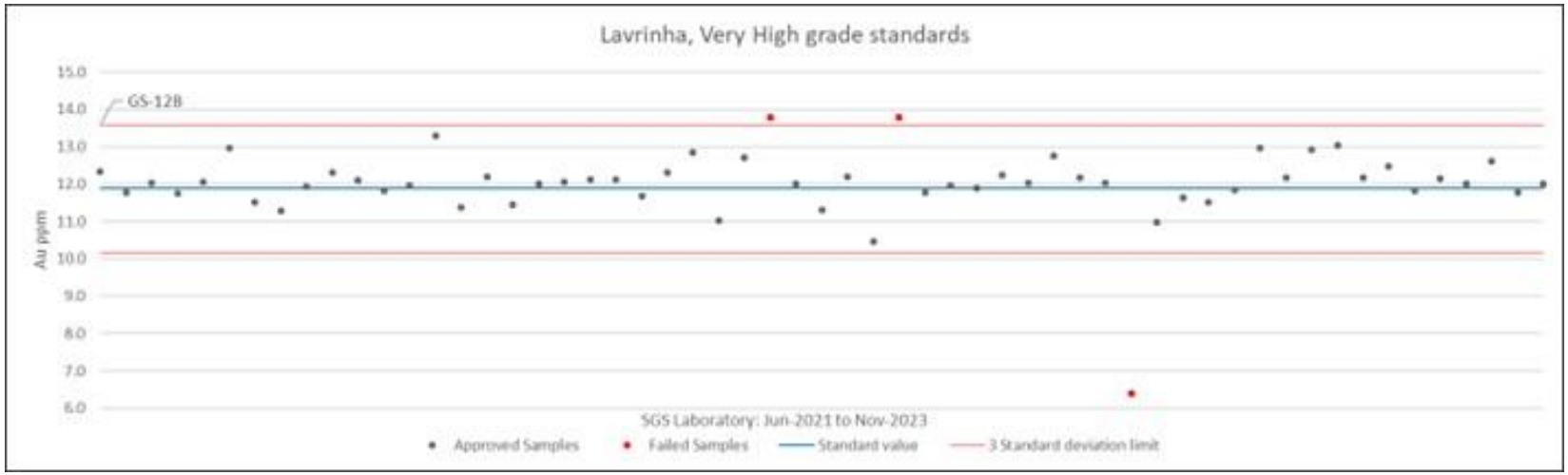


Figure 8-24: Lavrinha – Very High-grade Standards - SGS Laboratory

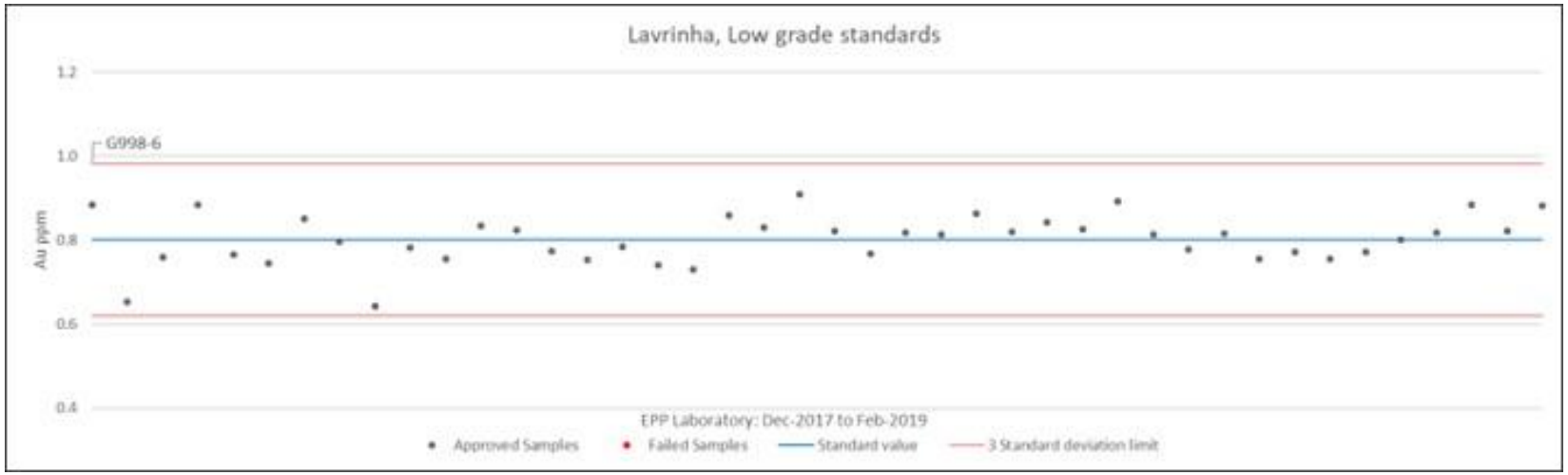


Figure 8-25: Lavrinha – Low-grade Standards - EPP Laboratory

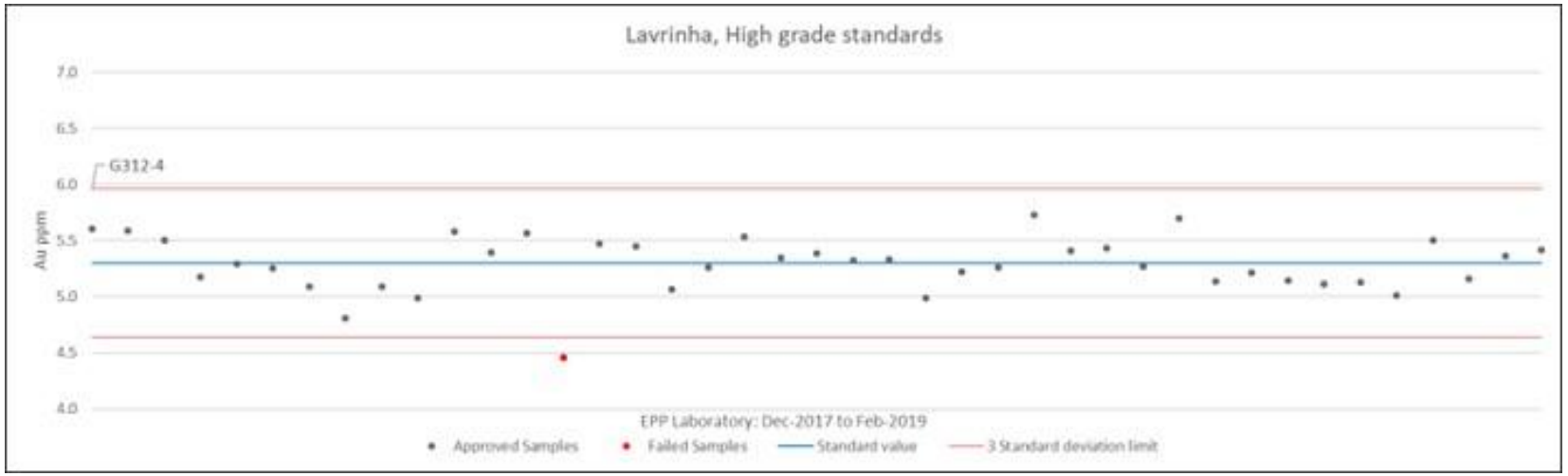


Figure 8-26: Lavrinha – High-grade Standards - EPP Laboratory

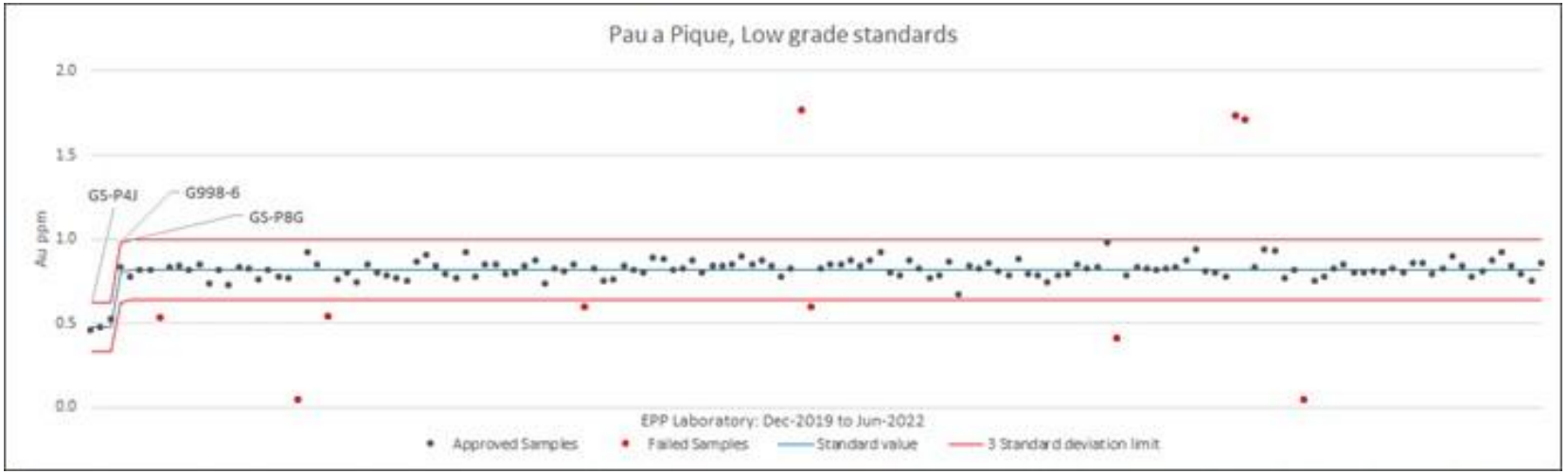


Figure 8-27: Pau-a-Pique – Low-grade Standards - EPP Laboratory

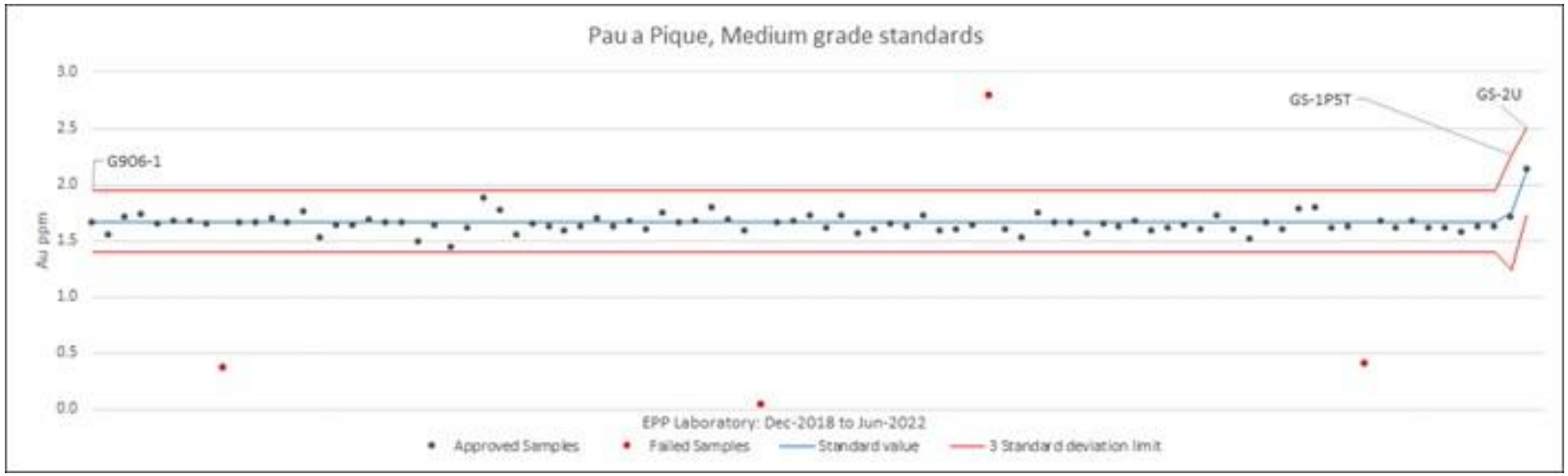


Figure 8-28:Pau-a-Pique – Medium-grade Standards - EPP Laboratory

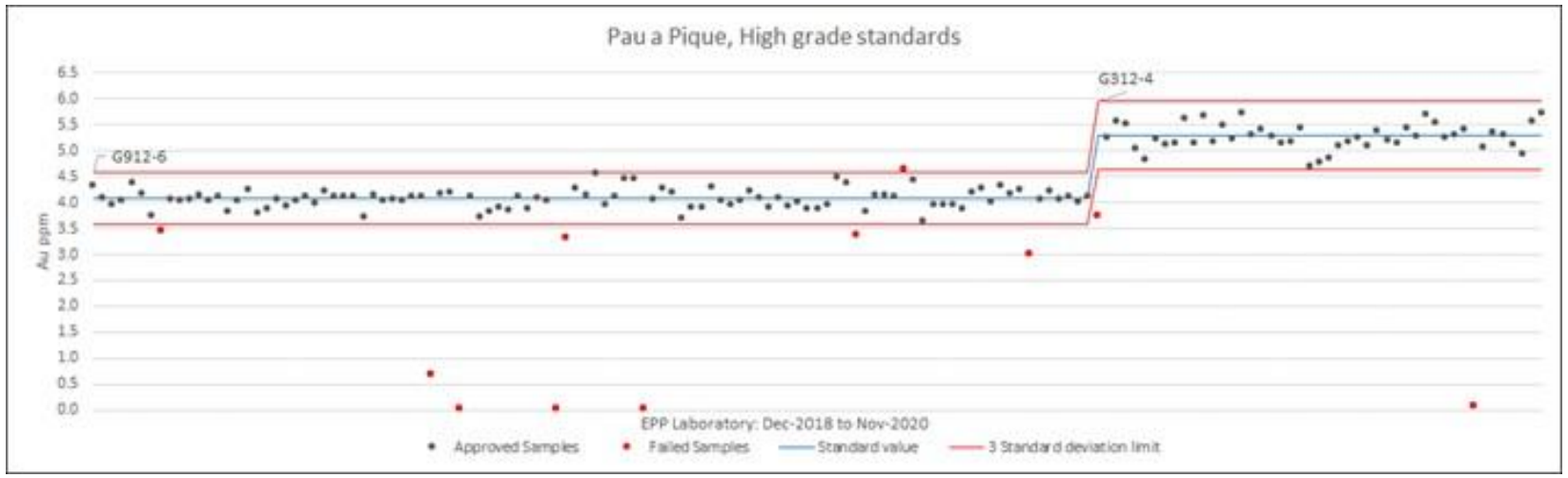


Figure 8-29: Pau-a-Pique – High-grade Standards - EPP Laboratory

Table 8-4: Standard Table (Analyzed in SGS Laboratory)

Lab	Target	CRM Grade	CRM	CRM Au ppm	CRM Std dev	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
SGS	ERN-ERC	Low-grade	GS-P8G	0.8180	0.0600	39	0.8109	0.7250	0.9140	0.0455	5.6169	0.0562	0.0073	0.8994	-0.0086	-0.8620
SGS	ERN-ERC	Low-grade	G998-6	0.8000	0.0600	11	0.8165	0.7750	0.8940	0.0356	4.3638	0.0436	0.0107	1.3157	0.0207	2.0682
SGS	ERN-ERC	Low-grade	GS-P5H	0.4970	0.0560	17	0.5102	0.4570	0.5720	0.0281	5.5019	0.0550	0.0068	1.3344	0.0265	2.6512
SGS	ERN-ERC	Low-grade	ME-2101	0.7650	0.0870	4	0.7688	0.7450	0.8130	0.0305	3.9689	0.0397	0.0153	1.9845	0.0049	0.4902
SGS	ERN-ERC	Low-grade	GS-P4G	0.4680	0.0520	12	0.4601	0.4050	0.5160	0.0398	8.6572	0.0866	0.0115	2.4991	-0.0169	-1.6916
SGS	ERN-ERC	Low-grade	GS-P8H	0.8330	0.0710	13	0.8272	0.7930	0.8510	0.0168	2.0343	0.0203	0.0047	0.5642	-0.0069	-0.6926
SGS	ERN-ERC	Low-grade	GS-P4J	0.4790	0.0490	224	0.4860	0.4060	0.6090	0.0343	7.0514	0.0705	0.0023	0.4711	0.0145	1.4539
SGS	ERN-ERC	Medium-grade	CM-47	1.1300	0.1100	4	1.1603	1.1220	1.1880	0.0327	2.8205	0.0282	0.0164	1.4103	0.0268	2.6770
SGS	ERN-ERC	Medium-grade	GS-1P5Q	1.3290	0.1000	137	1.3415	0.8790	1.5140	0.0930	6.9291	0.0693	0.0079	0.5920	0.0094	0.9419
SGS	ERN-ERC	Medium-grade	GS-2W	2.1000	0.1400	46	2.2605	1.8220	5.4100	0.6675	29.5305	0.2953	0.0984	4.3540	0.0764	7.6439
SGS	ERN-ERC	Medium-grade	CM-41	1.6000	0.1500	7	1.4857	0.8100	1.7420	0.3179	21.3991	0.2140	0.1202	8.0881	-0.0714	-7.1429
SGS	ERN-ERC	Medium-grade	GS-2U	2.1200	0.1300	97	2.1298	1.8350	2.3640	0.0970	4.5551	0.0456	0.0099	0.4625	0.0046	0.4625
SGS	ERN-ERC	Medium-grade	G906-1	1.6700	0.0900	10	1.6574	1.5880	1.7390	0.0435	2.6260	0.0263	0.0138	0.8304	-0.0075	-0.7545
SGS	ERN-ERC	Medium-grade	GS-1P5T	1.7500	0.1700	66	1.7819	1.3070	2.1370	0.1543	8.6577	0.0866	0.0190	1.0657	0.0182	1.8234
SGS	ERN-ERC	High-grade	GS-7J	7.3400	0.2900	14	7.6086	7.3600	7.8450	0.1499	1.9704	0.0197	0.0401	0.5266	0.0366	3.6590
SGS	ERN-ERC	High-grade	GS-7K	7.0600	0.3700	1	7.2810	7.2810	7.2810	0.0000	0.0000	0.0000	0.0000	0.0000	0.0313	3.1303
SGS	ERN-ERC	High-grade	GS-5Y	5.2100	0.3100	4	5.4558	5.2580	5.6350	0.1548	2.8380	0.0284	0.0774	1.4190	0.0472	4.7169
SGS	ERN-ERC	High-grade	GS-5X	5.0400	0.3300	52	5.1873	4.8950	5.6840	0.1705	3.2876	0.0329	0.0236	0.4559	0.0292	2.9235
SGS	ERN-ERC	High-grade	GS-4H	5.0100	0.3000	94	5.1235	3.8140	5.6780	0.2826	5.5152	0.0552	0.0291	0.5689	0.0227	2.2653
SGS	ERN-ERC	High-grade	G312-4	5.3000	0.2200	7	5.4527	5.2880	5.6510	0.1406	2.5780	0.0258	0.0531	0.9744	0.0288	2.8814
SGS	ERN-ERC	High-grade	G912-6	4.0800	0.1700	8	3.9151	3.5560	4.0790	0.1587	4.0536	0.0405	0.0561	1.4332	-0.0404	-4.0411
SGS	ERN-ERC	High-grade	GS-7H	6.5600	0.5000	72	6.6374	5.6100	7.7740	0.4238	6.3845	0.0638	0.0499	0.7524	0.0118	1.1806
SGS	ERN-ERC	Very High-grade	GS-12B	11.8800	0.5700	95	12.1156	10.4380	13.7620	0.6824	5.6326	0.0563	0.0700	0.5779	0.0198	1.9829
SGS	LVR	Low-grade	GS-P8G	0.8180	0.0600	27	0.8175	0.5610	0.9660	0.0705	8.6267	0.0863	0.0136	1.6602	-0.0006	-0.0634
SGS	LVR	Low-grade	GS-P4G	0.4680	0.0520	91	0.4576	0.3780	0.5310	0.0284	6.2048	0.0620	0.0030	0.6504	-0.0222	-2.2236
SGS	LVR	Low-grade	GS-P8H	0.8330	0.0710	13	0.8308	0.7660	0.8800	0.0356	4.2796	0.0428	0.0099	1.1870	-0.0026	-0.2586
SGS	LVR	Low-grade	GS-P5H	0.4970	0.0560	5	0.5054	0.4740	0.5560	0.0318	6.2938	0.0629	0.0142	2.8147	0.0169	1.6901
SGS	LVR	Low-grade	G998-6	0.8000	0.0600	140	0.8736	0.7200	4.0690	0.4003	45.8279	0.4583	0.0338	3.8732	0.0919	9.1938
SGS	LVR	Low-grade	ME-2101	0.7650	0.0870	118	0.7459	0.5200	1.0780	0.0583	7.8161	0.0782	0.0054	0.7195	-0.0250	-2.4958
SGS	LVR	Low-grade	GS-P4J	0.4790	0.0490	108	0.4892	0.4130	0.5970	0.0359	7.3293	0.0733	0.0035	0.7053	0.0213	2.1321

Lab	Target	CRM Grade	CRM	CRM Au ppm	CRM Std dev	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
SGS	LVR	Medium-grade	GS-1P5T	1.7500	0.1700	56	1.7614	1.0050	2.0970	0.1611	9.1449	0.0914	0.0215	1.2220	0.0065	0.6541
SGS	LVR	Medium-grade	GS-1P5Q	1.3290	0.1000	103	1.3546	1.1600	1.7060	0.0832	6.1421	0.0614	0.0082	0.6052	0.0193	1.9271
SGS	LVR	Medium-grade	GS-2W	2.1000	0.1400	19	2.0802	0.9880	2.2440	0.2713	13.0409	0.1304	0.0622	2.9918	-0.0094	-0.9424
SGS	LVR	Medium-grade	CM-41	1.6000	0.1500	83	1.6580	0.0090	4.7080	0.3992	24.0768	0.2408	0.0438	2.6428	0.0363	3.6273
SGS	LVR	Medium-grade	GS-2U	2.1200	0.1300	92	2.1268	0.7420	2.4290	0.1699	7.9903	0.0799	0.0177	0.8330	0.0032	0.3220
SGS	LVR	Medium-grade	CM-47	1.1300	0.1100	79	1.1569	0.9730	1.3650	0.0784	6.7762	0.0678	0.0088	0.7624	0.0238	2.3782
SGS	LVR	Medium-grade	G906-1	1.6700	0.0900	35	1.6616	1.5830	1.7580	0.0334	2.0084	0.0201	0.0056	0.3395	-0.0050	-0.5013
SGS	LVR	High-grade	GS-4H	5.0100	0.3000	38	5.2043	4.7220	5.9490	0.2642	5.0775	0.0508	0.0429	0.8237	0.0388	3.8780
SGS	LVR	High-grade	G912-6	4.0800	0.1700	40	3.8617	1.7240	4.2170	0.5099	13.2042	0.1320	0.0806	2.0878	-0.0535	-5.3499
SGS	LVR	High-grade	G312-4	5.3000	0.2200	99	5.4409	2.6420	8.1910	0.4818	8.8543	0.0885	0.0484	0.8899	0.0266	2.6579
SGS	LVR	High-grade	GS-7J	7.3400	0.2900	14	7.4815	6.6820	8.0370	0.4280	5.7214	0.0572	0.1144	1.5291	0.0193	1.9278
SGS	LVR	High-grade	GS-5X	5.0400	0.3300	18	5.2227	4.7960	5.4880	0.1871	3.5829	0.0358	0.0441	0.8445	0.0362	3.6243
SGS	LVR	High-grade	GS-5Y	5.2100	0.3100	101	5.2792	2.2010	5.8950	0.4136	7.8347	0.0783	0.0412	0.7796	0.0133	1.3278
SGS	LVR	High-grade	GS-7H	6.5600	0.5000	25	6.5689	5.0850	7.2560	0.4984	7.5875	0.0759	0.0997	1.5175	0.0014	0.1354
SGS	LVR	High-grade	GS-7K	7.0600	0.3700	2	7.5790	7.3600	7.7980	0.3097	4.0865	0.0409	0.2190	2.8896	0.0735	7.3513
SGS	LVR	Very High-grade	GS-12B	11.8800	0.5700	57	11.9990	6.3880	13.7950	0.9768	8.1409	0.0814	0.1294	1.0783	0.0100	1.0018
SGS	NSD	Low-grade	GS-P4G	0.4680	0.0520	234	0.4599	0.3970	0.5670	0.0290	6.3012	0.0630	0.0019	0.4119	-0.0174	-1.7395
SGS	NSD	Low-grade	ME-2101	0.7650	0.0870	14	0.7684	0.7090	0.8670	0.0525	6.8371	0.0684	0.0140	1.8273	0.0044	0.4388
SGS	NSD	Low-grade	GS-P8H	0.8330	0.0710	78	0.8455	0.6640	1.3880	0.0736	8.7019	0.0870	0.0083	0.9853	0.0150	1.5037
SGS	NSD	Low-grade	GS-P8G	0.8180	0.0600	84	0.8177	0.6930	1.0210	0.0456	5.5802	0.0558	0.0050	0.6088	-0.0004	-0.0407
SGS	NSD	Low-grade	GS-P5H	0.4970	0.0560	97	0.5167	0.4410	0.6110	0.0389	7.5356	0.0754	0.0040	0.7651	0.0397	3.9702
SGS	NSD	Low-grade	GS-P4J	0.4790	0.0490	261	0.4922	0.3500	0.5790	0.0356	7.2290	0.0723	0.0022	0.4475	0.0276	2.7620
SGS	NSD	Medium-grade	CM-47	1.1300	0.1100	17	1.1634	1.0360	1.4220	0.1081	9.2957	0.0930	0.0262	2.2545	0.0295	2.9516
SGS	NSD	Medium-grade	G906-1	1.6700	0.0900	76	1.7044	1.5590	1.8270	0.0452	2.6529	0.0265	0.0052	0.3043	0.0206	2.0588
SGS	NSD	Medium-grade	GS-1P5T	1.7500	0.1700	56	1.8042	1.5230	2.2460	0.1340	7.4283	0.0743	0.0179	0.9927	0.0310	3.0990
SGS	NSD	Medium-grade	GS-2W	2.1000	0.1400	132	2.1420	1.9300	2.4380	0.0923	4.3112	0.0431	0.0080	0.3752	0.0200	1.9989
SGS	NSD	Medium-grade	CM-41	1.6000	0.1500	14	1.7106	1.5580	1.9360	0.1159	6.7744	0.0677	0.0310	1.8105	0.0692	6.9152
SGS	NSD	Medium-grade	GS-1P5Q	1.3290	0.1000	221	1.3475	0.8580	1.6030	0.0831	6.1641	0.0616	0.0056	0.4146	0.0139	1.3942
SGS	NSD	Medium-grade	GS-2U	2.1200	0.1300	120	2.1456	1.9730	2.6120	0.0924	4.3081	0.0431	0.0084	0.3933	0.0121	1.2095

Lab	Target	CRM Grade	CRM	CRM Au ppm	CRM Std dev	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
SGS	NSD	High-grade	GS-7J	7.3400	0.2900	67	7.6181	6.8490	8.1910	0.3287	4.3143	0.0431	0.0402	0.5271	0.0379	3.7887
SGS	NSD	High-grade	GS-5X	5.0400	0.3300	133	5.2033	3.5920	6.2200	0.3209	6.1666	0.0617	0.0278	0.5347	0.0324	3.2393
SGS	NSD	High-grade	GS-7H	6.5600	0.5000	25	6.5707	5.7610	7.0890	0.3409	5.1887	0.0519	0.0682	1.0377	0.0016	0.1628
SGS	NSD	High-grade	GS-4H	5.0100	0.3000	75	5.1510	3.7750	5.6220	0.2434	4.7256	0.0473	0.0281	0.5457	0.0281	2.8144
SGS	NSD	High-grade	GS-5Y	5.2100	0.3100	45	5.5453	4.7890	12.1650	1.0358	18.6780	0.1868	0.1544	2.7843	0.0644	6.4359
SGS	NSD	High-grade	G912-6	4.0800	0.1700	74	4.0798	3.6850	4.4220	0.1103	2.7037	0.0270	0.0128	0.3143	-0.0001	-0.0056
SGS	NSD	Very High-grade	GS-12B	11.8800	0.5700	50	11.9894	5.2740	13.4580	1.1233	9.3691	0.0937	0.1589	1.3250	0.0092	0.9205

Table 8-5: Standard Table – Analyzed in EPP Laboratory

Lab	Target	CRM Grade	CRM	CRM Au ppm	CRM Std dev	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
EPP	ERN-ERC	Low-grade	GS-P4J	0.4790	0.0490	12	0.4928	0.4470	0.5430	0.0291	5.9068	0.0591	0.0084	1.7051	0.0289	2.8880
EPP	ERN-ERC	Low-grade	G998-6	0.8000	0.0600	27	0.7994	0.6660	0.9280	0.0603	7.5401	0.0754	0.0116	1.4511	-0.0008	-0.0787
EPP	ERN-ERC	Medium-grade	GS-1P5T	1.7500	0.1700	8	1.8128	1.6310	2.0370	0.1255	6.9239	0.0692	0.0444	2.4480	0.0359	3.5857
EPP	ERN-ERC	Medium-grade	GS-2U	2.1200	0.1300	8	2.0538	1.9360	2.2140	0.0885	4.3115	0.0431	0.0313	1.5244	-0.0313	-3.1250
EPP	ERN-ERC	High-grade	G312-4	5.3000	0.2200	27	5.1331	4.5160	5.7170	0.2896	5.6414	0.0564	0.0557	1.0857	-0.0315	-3.1495
EPP	ERN-ERC	Very High-grade	GS-12B	11.8800	0.5700	2	12.3110	12.0430	12.5790	0.3790	3.0786	0.0308	0.2680	2.1769	0.0363	3.6279
EPP	LVR	Low-grade	G998-6	0.8000	0.0600	42	0.8020	0.6420	0.9080	0.0583	7.2656	0.0727	0.0090	1.1211	0.0026	0.2560
EPP	LVR	High-grade	G312-4	5.3000	0.2200	41	5.2871	4.4550	5.7260	0.2480	4.6904	0.0469	0.0387	0.7325	-0.0024	-0.2437
EPP	NSD	Low-grade	GS-P8H	0.8330	0.0710	20	0.8280	0.7600	0.8800	0.0329	3.9690	0.0397	0.0073	0.8875	-0.0060	-0.6002
EPP	NSD	Low-grade	GS-P8G	0.8180	0.0600	24	0.8263	0.7100	1.1000	0.0844	10.2187	0.1022	0.0172	2.0859	0.0101	1.0086
EPP	NSD	Low-grade	GS-P5H	0.4970	0.0560	17	0.5118	0.4500	0.5700	0.0359	7.0194	0.0702	0.0087	1.7024	0.0297	2.9708
EPP	NSD	Low-grade	GS-P4J	0.4790	0.0490	16	0.5700	0.4200	1.8500	0.3442	60.3808	0.6038	0.0860	15.0952	0.1900	18.9979
EPP	NSD	Medium-grade	GS-2W	2.1000	0.1400	35	2.0706	1.8900	2.3400	0.1133	5.4715	0.0547	0.0191	0.9249	-0.0140	-1.4014
EPP	NSD	High-grade	GS-7J	7.3400	0.2900	12	7.2358	6.9400	7.6100	0.1931	2.6684	0.0267	0.0557	0.7703	-0.0142	-1.4192
EPP	NSD	High-grade	GS-5X	5.0400	0.3300	30	4.9447	4.1900	5.6600	0.2833	5.7302	0.0573	0.0517	1.0462	-0.0189	-1.8915
EPP	PPQ	Low-grade	GS-P8G	0.8180	0.0600	144	0.8184	0.0400	1.7650	0.1769	21.6149	0.2161	0.0147	1.8012	0.0004	0.0441
EPP	PPQ	Low-grade	G998-6	0.8000	0.0600	1	0.8320	0.8320	0.8320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0400	4.0000
EPP	PPQ	Low-grade	GS-P4J	0.4790	0.0490	3	0.4807	0.4520	0.5200	0.0352	7.3299	0.0733	0.0203	4.2319	0.0035	0.3479
EPP	PPQ	Medium-grade	GS-2U	2.1200	0.1300	1	2.1400	2.1400	2.1400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0094	0.9434
EPP	PPQ	Medium-grade	G906-1	1.6700	0.0900	87	1.6102	0.0400	2.7870	0.2921	18.1418	0.1814	0.0313	1.9450	-0.0358	-3.5811
EPP	PPQ	Medium-grade	GS-1P5T	1.7500	0.1700	1	1.7100	1.7100	1.7100	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0229	-2.2857
EPP	PPQ	High-grade	G912-6	4.0800	0.1700	104	3.9059	0.0400	4.6510	0.7838	20.0668	0.2007	0.0769	1.9677	-0.0427	-4.2673
EPP	PPQ	High-grade	G312-4	5.3000	0.2200	47	5.1338	0.0930	5.7440	0.8198	15.9677	0.1597	0.1196	2.3291	-0.0314	-3.1357

The results from the standards were mainly consistent with the expected values. The standards were analyzed together and if two or more standards within one certificate failed, then the decision was made to retest the entire certificate.

8.4.5 Internal Blank Samples

An acceptable blank sample is prepared from rock that is known to contain very low or non-detectable concentrations of the element being sought. A blank is used to monitor cross contamination that may occur during sample preparation, commonly as result of insufficient cleaning of the crushing, grinding or splitting equipment between samples.

The blank sample used in the EPP Project was prepared by Apoena from material near the project site.

A total of 5,665 blank samples were inserted into the sample stream sent to the laboratories. The lower detection limit for gold by the fire assay-AA finish method was 0.005 ppm Au and 0.04 g/t Au for SGS and EPP laboratory respectively. The warning and failure thresholds for blank samples were established at twice the detection limit and three-times detection limit, respectively.

The results of the blank analyses from Apoena's drilling campaigns are presented statistically and graphically in Table 8-6.

Table 8-7 and in Figure 8-30 to Figure 8-36. The chart shows that most of the blank samples are below the failure threshold. For those blanks with gold assays above the failure threshold, ten samples surrounding the blank sample position in the batch were automatically re-assayed and compared to the original ten assays. Of the 5,665 blank samples analyzed during the EPP Project, 54 samples failed – a failure rate of less than 1%.

The blank samples used in 2019 presented several inconsistencies and Apoena began to be used another source of the material, which fixed the issue in the next analyses received, showing that the problem was associated with the material used, and not cross contamination during sample preparation in the laboratory.

Table 8-6: Blank Table – Samples Analyzed in SGS Laboratory

Lab	Target	BLANK	Au ppm	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
SGS	ERC	EPP-BLK	0	513	0.005	0.005	0.016	0.001	14.618	0.146	0.000	0.645	0.020	2.027
SGS	ERN	EPP-BLK	0	529	0.005	0.005	0.036	0.002	30.959	0.310	0.000	1.360	0.030	2.973
SGS	LVR	EPP-BLK	0	1243	0.006	0.005	0.263	0.010	166.484	1.665	0.000	4.722	0.204	20.418
SGS	NSD	EPP-BLK	0	1771	0.006	0.005	0.574	0.015	237.890	2.379	0.000	5.653	0.250	25.003

Table 8-7: Blank Table – Samples Analyzed in EPP Laboratory

Lab	Target	BLANK	Au ppm	Num of Samples	Mean	Min value	Max value	Standard dev	% Rel. Std Dev	Coef. Variation	Std Error	% Rel Std Error	Total Bias	% Total Bias
EPP	ERN	EPP-BLK	0.040	60	0.041	0.040	0.085	0.006	14.262	0.143	0.001	1.841	0.024	2.417
EPP	LVR	EPP-BLK	0.040	54	0.042	0.040	0.123	0.011	27.192	0.272	0.002	3.700	0.038	3.843
EPP	NSD	EPP-BLK	0.040	161	0.041	0.040	0.080	0.006	14.178	0.142	0.000	1.124	0.033	3.302
EPP	PPQEX	EPP-BLK	0.040	1334	0.046	0.040	2.246	0.078	171.017	1.710	0.002	4.682	0.139	13.877

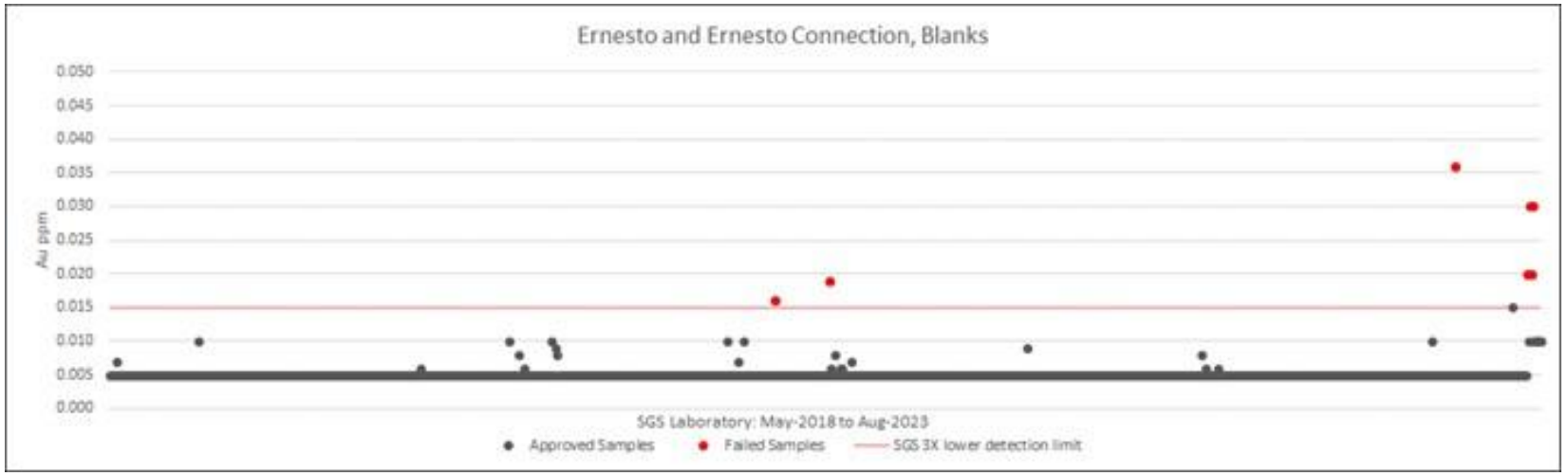


Figure 8-30: Ernesto and Ernesto Connection – Blanks - SGS Laboratory

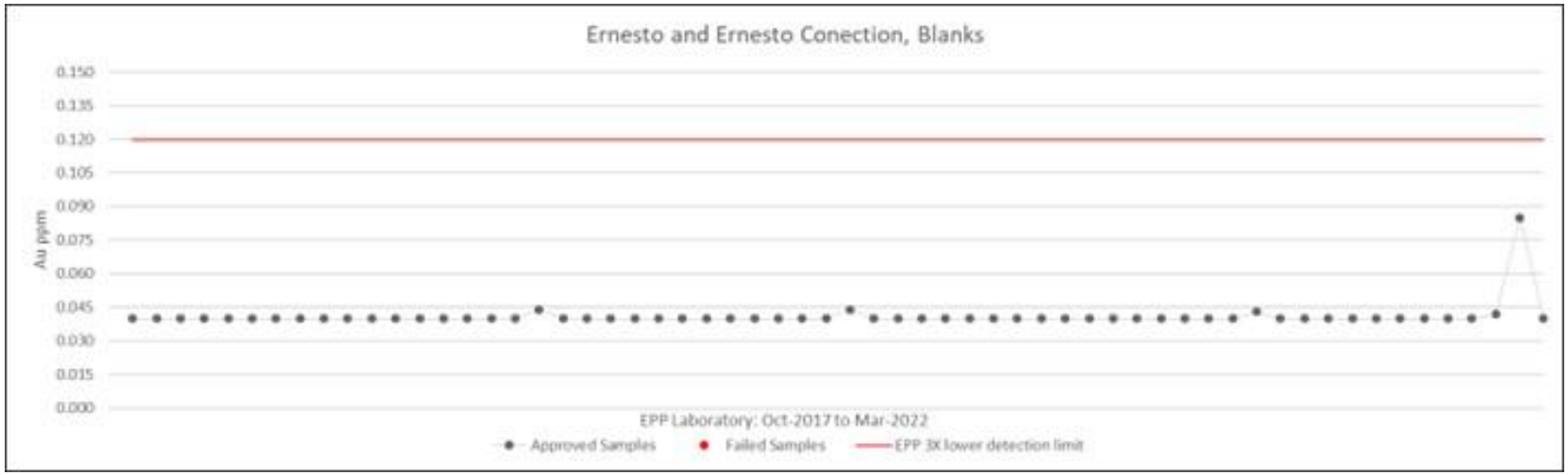


Figure 8-31: Ernesto and Ernesto Connection – Blanks - EPP Laboratory

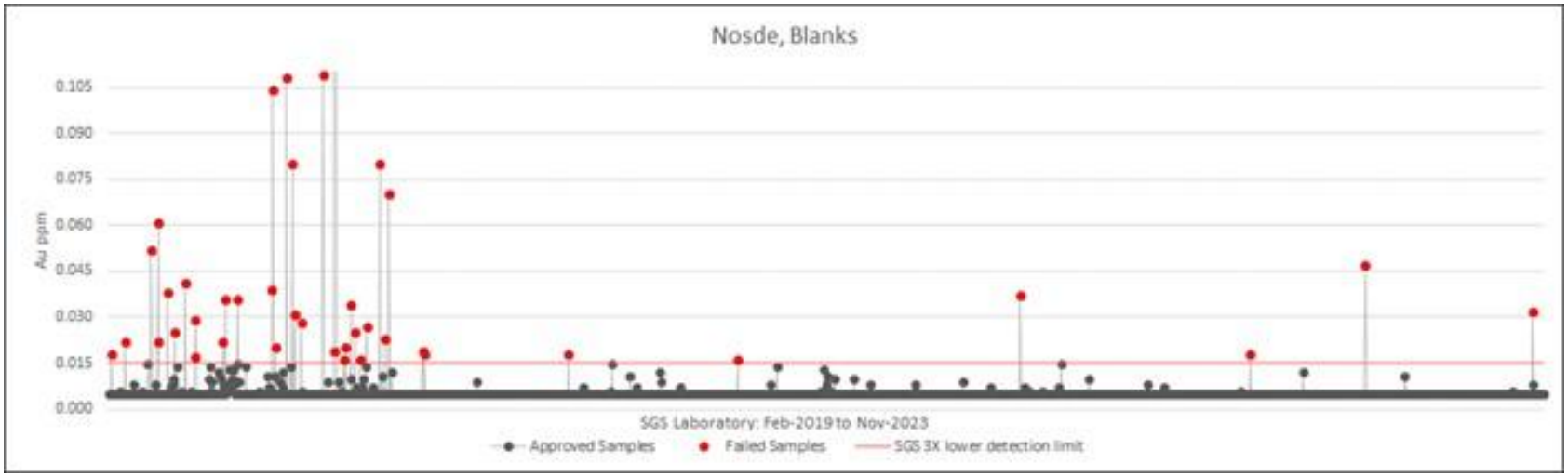


Figure 8-32: Nosde – Blanks - SGS Laboratory

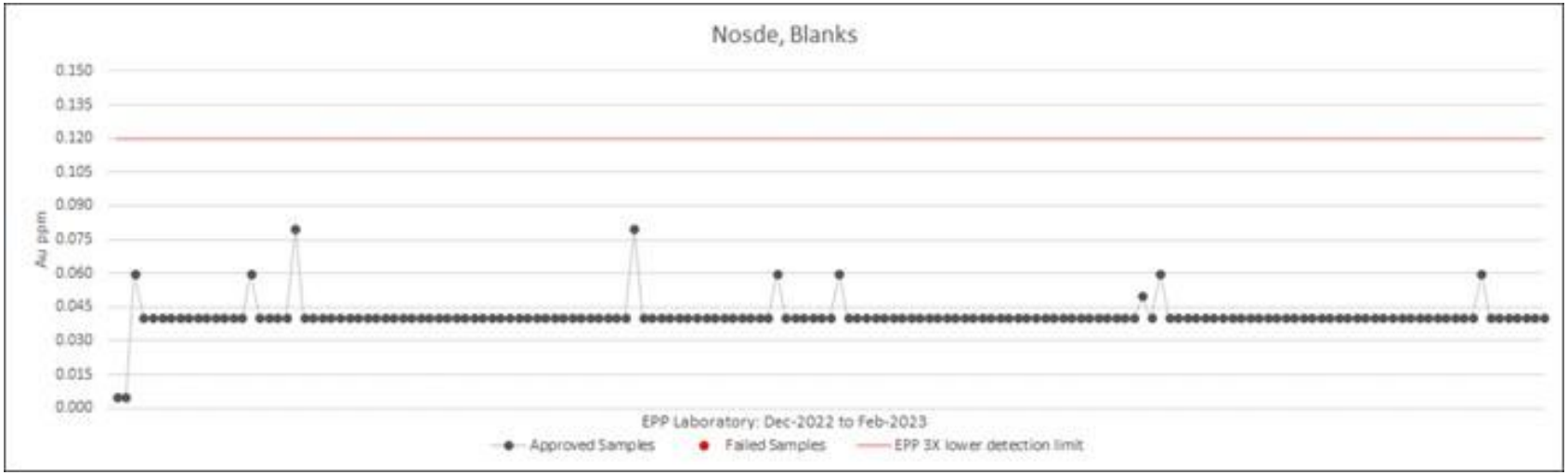


Figure 8-33: Nosde – Blanks - EPP Laboratory

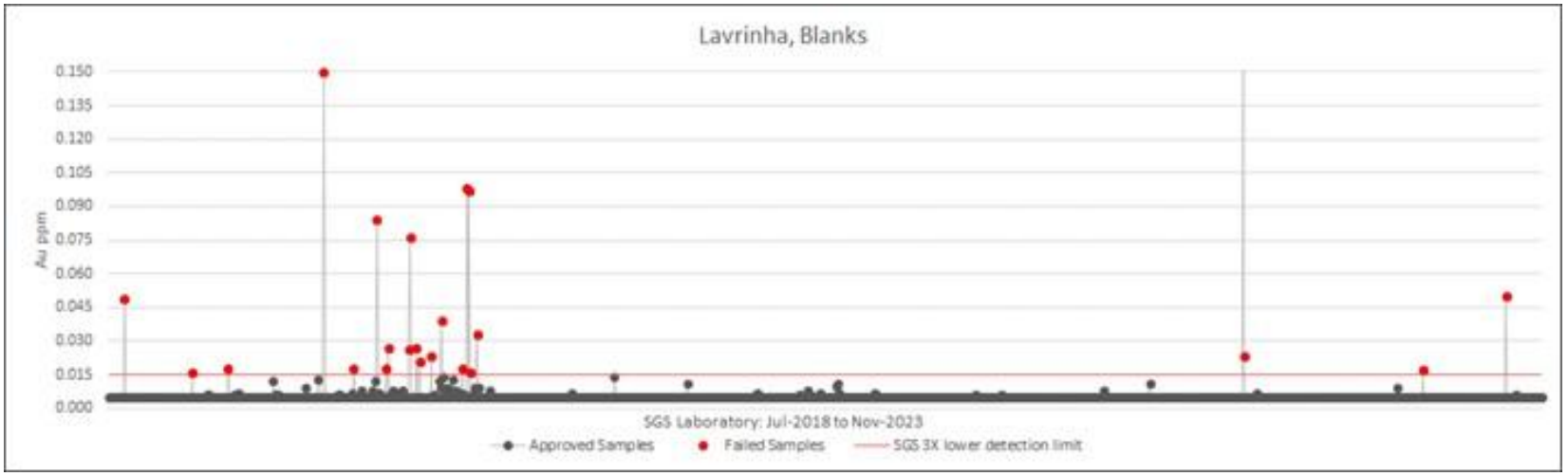


Figure 8-34: Lavrinha – Blanks - SGS Laboratory

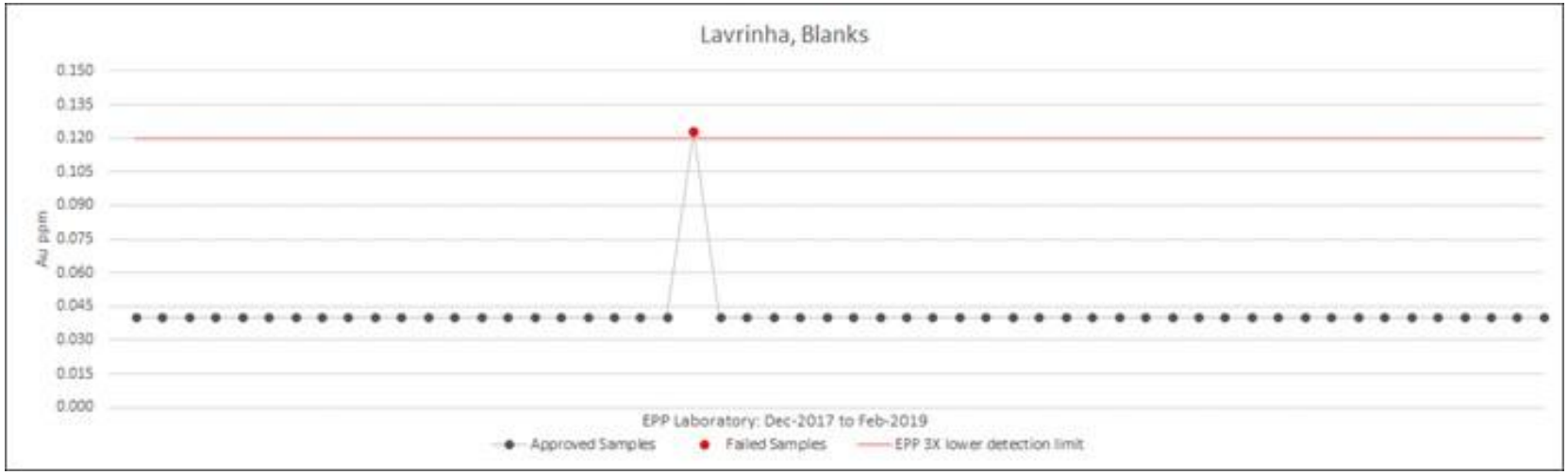


Figure 8-35: Lavrinha – Blanks - EPP Laboratory

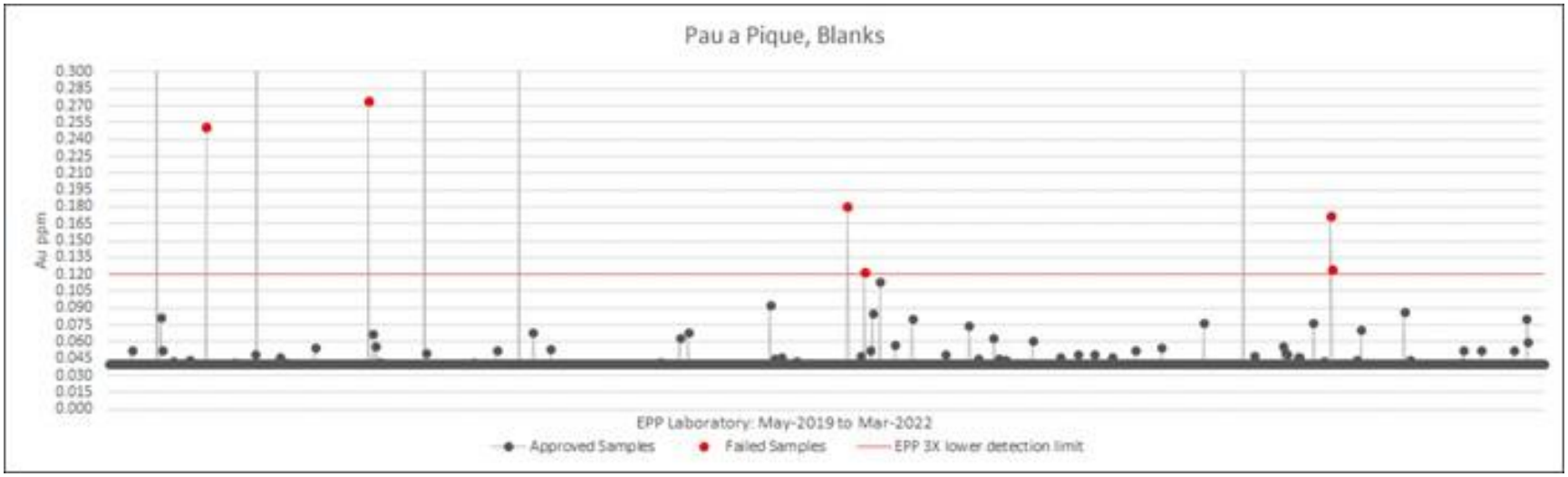


Figure 8-36: Pau-a-Pique – Blanks - EPP Laboratory

8.4.6 Pulp Duplicate Samples

In 2017, Apoena selected 162 samples from Ernesto 2017 drilling campaign to have the pulp re-assayed in the same laboratory, EPP Lab. This number represents 9 percent of the total of core samples analyzed in the period.

The results showed 104 samples were outside the range of 20% difference, representing a low precision in these samples possibly caused by homogenization of samples (Table 8-8, Figure 8-37).

Table 8-8 – Pulp Duplicate Table – Ernesto Drilling Campaign (EPP Laboratory)

Au ppm	Analyses	# Outside 20% Accuracy Limit	Mean	Median	Min	Max	Variance	Coeff. Of Variance	Sample Std. Dev.	Bias	Corr. Coeff.	RMA Error
Original	162	104	1.37	0.15	0.02	22.81	13.28	2,68	3.66	-0.03	0.19	6.12
Check			1.33	0.15	0.02	19.57	9.78	2.36	3.14			

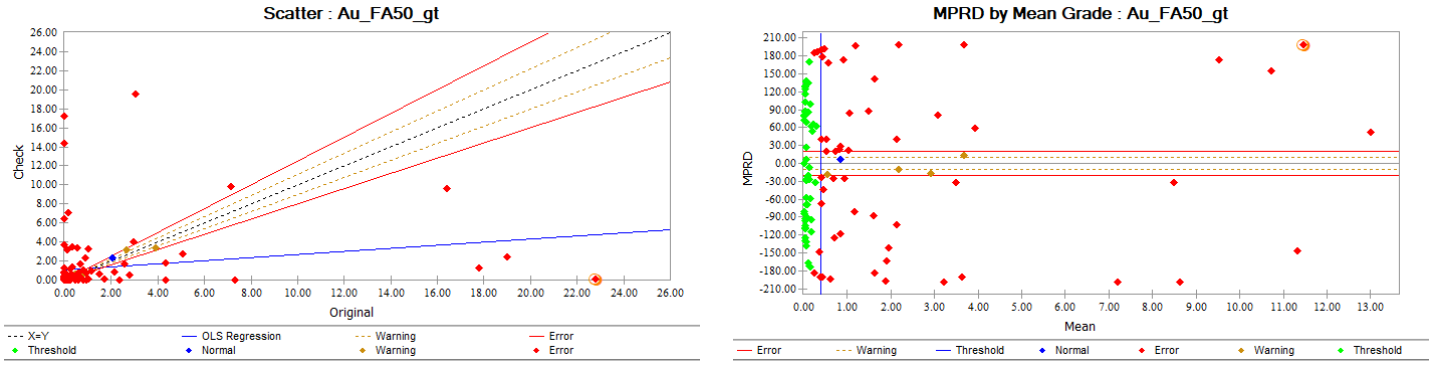


Figure 8-37 – Ernesto – Pulp Duplicates (EPP Laboratory)

8.4.7 Check Assay Duplicates

In the period of 2015 to 2023 Apoena sent Coarse duplicates, Pulp Duplicates and Core Duplicates from samples originally analysed in the EPP Laboratory to be check assayed in the SGS Laboratory in order to assess variability associated with the ore type, laboratory analysis and sample preparation.

A total of 221 coarse check assay were carried on the samples from the Lavrinha and Ernesto 2017 drilling campaign, representing seven percent of the total of original samples analyzed in EPP Laboratory in the period. The results in Table 8-9 and Table 8-10, and Figure 8-38 and Figure 8-39, show that 103 samples were outside the 20% accuracy limit, indicating possible nugget effect in the analysed materials..

In 2017, SGS received and analyzed 170 Core Check Assay duplicates originally analyzed in the EPP laboratory, this amount represents 88 percent of total samples analyzed at the EPP Laboratory. The results in Table 8-11 and Figure 8-40 show that 151 samples were outside the 20% accuracy limit., indicating possible nugget effect in the analysed materials.

A total of 198 pulp assays were carried out on the samples from the 2022 Nosde drilling campaign, representing seven percent of the total samples analyzed at the EPP Laboratory in the period. The results in the Table 8-12 and Figure 8-41 show that 131 samples were outside the 20% accuracy limit, indicating possible nugget effect in the analysed materials..

Table 8-9: Coarse Check Assay – Ernesto 2017 Drilling Campaign (EPP Lab - SGS Lab)

Au ppm	Analyses	# Outside 20% Accuracy Limit	Mean	Median	Min	Max	Variance	Coeff. Of Variance	Sample Std. Dev.	Bias	Corr. Coeff.	RMA Error
Original	142	81	1.58	0.27	0.02	22.81	15.41	2.5	3.95	0.24	0.23	7.28
Check			1.97	0.36	0	23.23	18.74	2.21	4.35			

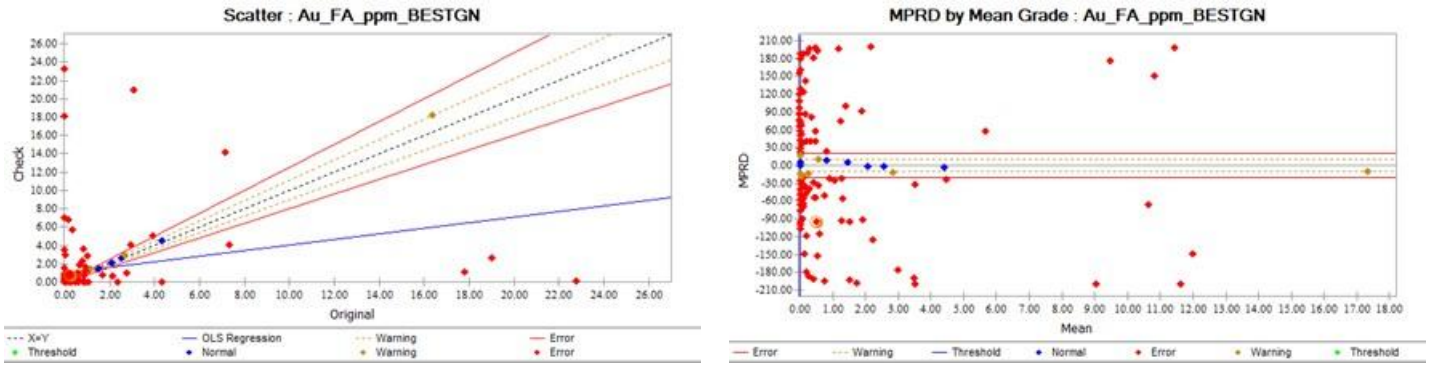


Figure 8-38: Ernesto – Coarse Check Assay (EPP Lab – SGS Lab)

Table 8-10: Coarse Check Assay – Lavrinha 2017 Drilling Campaign (EPP Lab - SGS Lab)

Au ppm	Analyses	# Outside 20% Accuracy Limit	Mean	Median	Min	Max	Variance	Coeff. Of Variance	Sample Std. Dev.	Bias	Corr. Coeff.	RMA Error
Original	79	22	0.21	0.1	0.02	2.12	0.13	1.71	0.36	-0.08	0.93	0.19
Check			0.2	0.11	0.01	1.78	0.1	1.61	0.32			

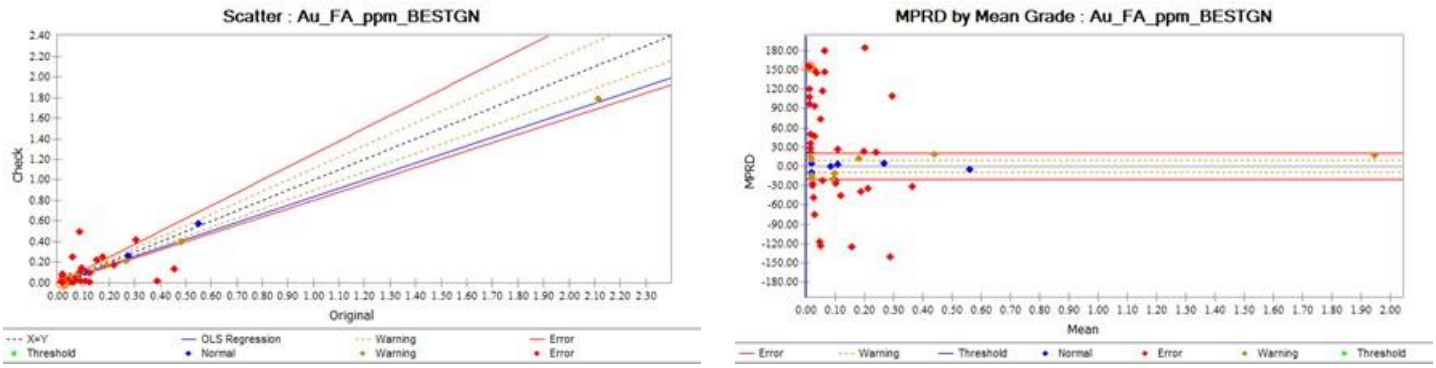


Figure 8-39: Lavrinha – Coarse Check Assay (EPP Lab – SGS Lab)

Table 8-11: Core Check Assay – Ernesto 2017 Drilling Campaign (EPP Lab - SGS Lab)

Au ppm	Analyses	# Outside 20% Accuracy Limit	Mean	Median	Min	Max	Variance	Coeff. Of Variance	Sample Std. Dev.	Bias	Corr. Coeff.	RMA Error
Original	170	118	1.32	0.12	0.02	22.81	12.54	2.69	3.56	0.71	-0.01	10.59
Check			2.27	0.3	0.01	43.02	42.47	2.89	6.54			

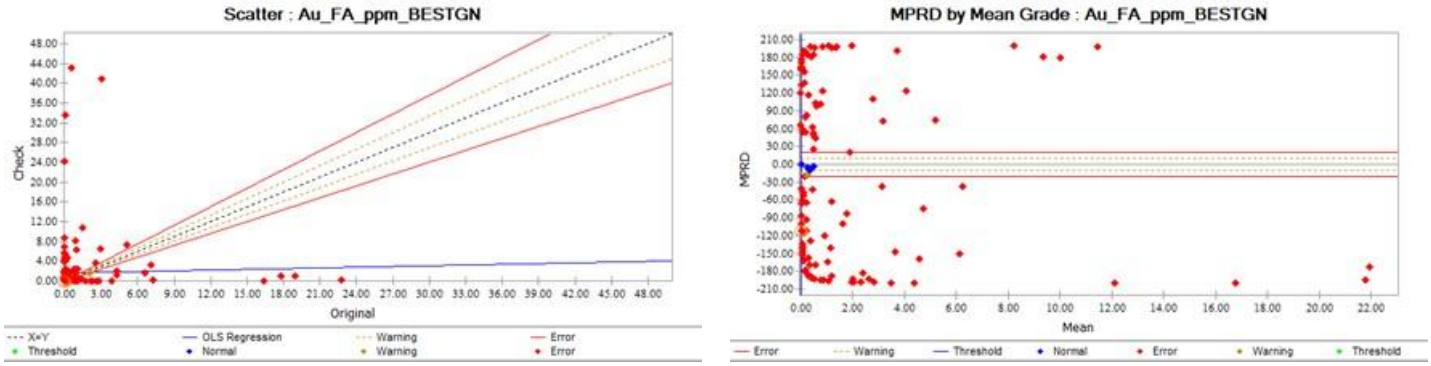


Figure 8-40: Lavrinha – Coarse Check Assay (EPP Lab – SGS Lab)

Table 8-12: Pulp Check Assay – Nosde 2022 Drilling Campaign (EPP Lab - SGS Lab)

Au ppm	Analyses	# Outside 20% Accuracy Limit	Mean	Median	Min	Max	Variance	Coeff. Of Variance	Sample Std. Dev.	Bias	Corr. Coeff.	RMA Error
Original	198	56	1.5	0.18	0.02	33.1	25.3	3.37	5.05	-0.1	0.97	1.56
Check			1.35	0.19	0	23.72	15.59	2.97	3.97			

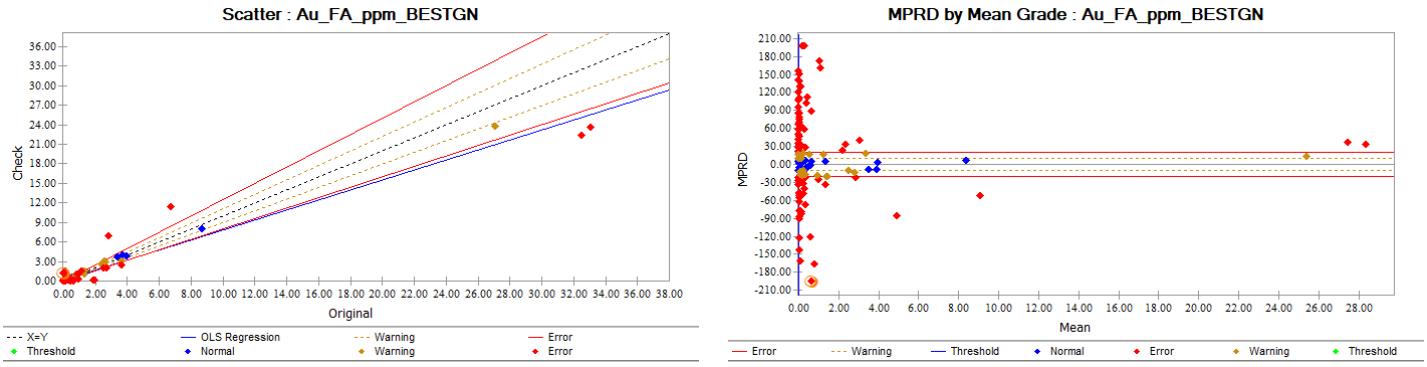


Figure 8-41: Nosde – Pulp Check Assay (EPP Lab – SGS Lab)

8.5 Density Determination

After completing the geological description, the intervals from which samples will be collected for density determinations was selected and recorded in the Density Plan spreadsheet, which will be completed by the geologist responsible for describing the hole and subsequently used by the technician/assistant responsible for density determinations.

Samples for determining densities were selected, preferably, every 20 metres, per lithological interval, and a fragment of approximately 10 to 20 centimetres in length will be selected, as determined in the operational procedure “Description of drilling cores”.

To determine the mass, one dry sample must be placed at a time on the upper tray of the balance and wait for stabilization. When the scale stabilizes, write down the resulting value in the Wet Weight (g) column of the Density Determination Sheet in Survey Testimonies. When exchanging samples, clean the upper tray of the balance with a dry cloth.

To define the density of each lithological unit in the context, the sampling method based on the Archimedes principle (e.g. water displacement) was used. In this method, a graduated plastic cylinder with a known volume of water is used ($v_{\ initial} = 500\, mil$ mililiters) and the new volume of water ($v_{\ final}$) is measured after placing the sample in the cylinder. An illustration of the method for better understanding can be seen in Figure 8-42 and equation 1.

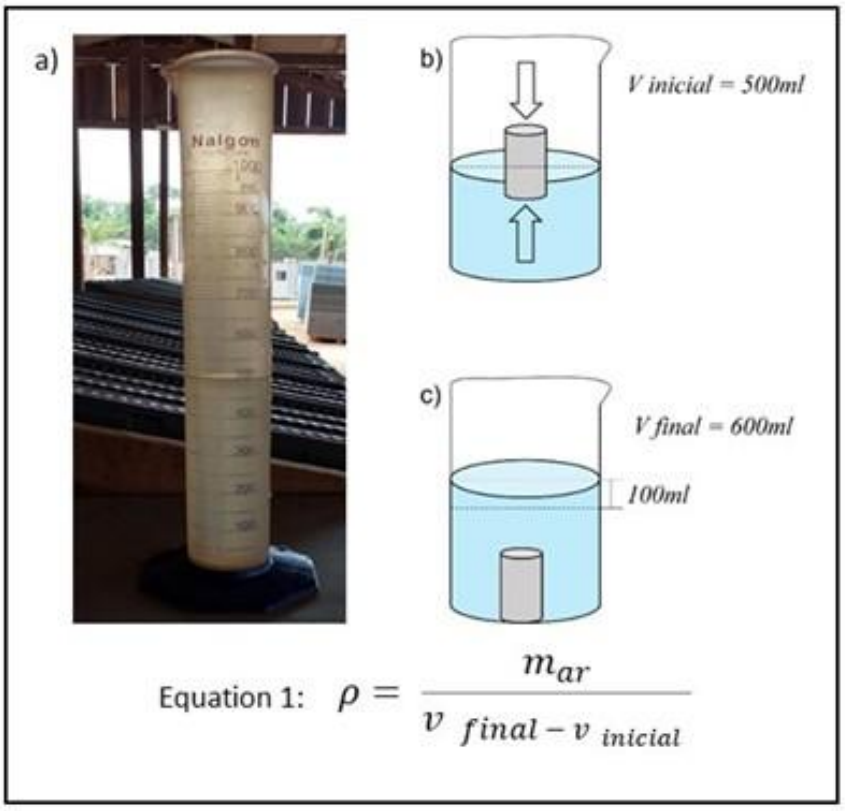


Figure 8-42: In a) cylinder with initial volume of water in 500 milliliters. In b) Sample recently inserted into the cylinder with 500ml of water and, in c) cylinder with the core fully immersed, adding 100 ml to the final volume. Equation 1: relative density equation used in the procedure

8.6 Recommendations and Conclusions

In general sampling protocols are consistent with good practises for the mining industry. Based upon the evaluation of the QA/QC programs undertaken by Aura, as well as due diligence sampling, the QP concludes that the data are of good quality for use in the Mineral Resource estimation.

Following are QP's recommendation regarding Sample Preparation, security and QAQC measures:

- Apoena core shack is in desperate need of expansion in it is size and capacity to store any future drilling core boxes. The expansion should not be short-sighted as increases to the LOM, resulting in more drilling, and exploration drilling, requires additional core boxes from current or future drilling campaigns.
- Apoena core shack needs more space in storing and keeping all existing and future pulps from exploration drilling. All pulps from mined-out deposits as well as mines in operation, and current and future exploration targets need to be stored properly in dry and separate rooms. All pulps need to be easily accessible.
- Coarse rejects can be discarded for all mined-out deposits and after six months for deposits and mines that are subject to the current TRS. All coarse rejects from targets and deposits that are not subject to this TRS need to be kept in a dry location in the core shack facility area.
- Additional duplicate samples need to be collected especially for deposits such as Nosde, which has a high nugget effect, to understand the distribution of nuggets and its effect on gold grade distribution.
- Six percent of assay results reported by the SGS Lab returned with re-assays due to discrepancies in the results found. This fact may be associated with the presence of Coarse Au in the samples. Consider using a Screen-fire assay for high-grade checks.
- All the CRM used in the EPP Project are provided by Geostatys, consider reviewing the matrix of standards and purchasing the standards from other providers.
- Acquiring a set standard close to the matrix of mineralization and lithology of host rocks specifically for the Nosde and Lavrinha deposits and all other exploration targets.
- It's recommended to carry out a check using screen-fire assay to verify the effect of coarse gold on selected duplicate samples using coarse reject material.
- Apoena needs to send more samples for re-assaying to the external secondary laboratory (besides SGS) for data verification purposes. Ideally, these selected samples need to be analyzed by the EPP local lab, SGS, and a secondary lab in Brazil or Canada.
- Additional QAQC measures are recommended for local mine site laboratories as well including different internal standards than field Geostat standards.
- Consider including a Fine blank as CRM, since the unique blank used in the Project is coarse and also is not certified.

9 DATA VERIFICATION

This section mainly covers the data verification of the Nosde-Lavrinha database used for the Mineral Resource and Mineral Reserve Estimates.The Nosde and Lavrinha database comprises five different databases composed of data compiled by Aura's geological team since 2015. The databases are grouped into three categories: Exploration, including only diamond drill holes; Production, including grade control drill holes; and Definition, including RC drill hole data. Nosde has three databases (exploration, production, and definition), and Lavrinha has two databases (exploration and production). Nosde and Lavrinha databases contain the collar information, down-hole survey data, assay results, and geological description (lithology, alteration, structure).

Verification of historical holes and data before 2017 for the Ernesto deposit is extensively discussed in the previous NI43-101 technical report under the title of "*FEASIBILITY STUDY AND TECHNICAL REPORT ON THE EPP PROJECT MATO GROSSO, BRAZIL, January 13, 2017"* by P&E Mining consultants Since most of the underlying data is similar to that of the Nosde and Lavrinha for all other deposits, including the Ernesto and Ernesto connection, only a brief description related to analytical validation and re-assaying is presented herein for the Ernesto and Ernesto connection deposits.

Data verification by the QP responsible for this section of the TRS included several visits since 2015, during due diligence and taking over from Yamana and during the 2017 feasibility study. Since then, only a few visits have occurred yearly. The latest site visit was in October 2023. During the site visits, QP visited the drill rigs and core shack, as well as reviewing information on mined-out areas and the data for selected drill holes (assays, QA/QC program, downhole surveys, lithologies, alteration, and structures).

9.1 Historical Drilling Data (Previous Operators)

For this TRS, historical data refers to all data before 2015, when Aura took over the EPP project from Yamana Inc. Historical data for the Lavrinha deposit are related to drill campaigns by TVX and MSE, respectively, a total of 20 diamond drill holes were drilled between 1994 and 1995, and then Yamana drilled a total of 115 diamond drill holes between 2007 and 2014.

Historical data for the Nosde deposit are related to drill campaigns by TVX, a total of three diamond drill holes in 1994, and then Yamana drilled a total of 50 diamond drill holes between 2006 and 2013.

The data verification related to Lavrinha's drill campaigns was discussed in "FEASIBILITY STUDY AND TECHNICAL REPORT ON THE EPP PROJECT MATO GROSSO, BRAZIL, January 13,2017 by P&E Mining Consultants."

The QP responsible for this section relied on previous technical reports to verify historical drill holes. However, due to significant deficiencies related to some of the historical holes, including lack of preserved core boxes, lack of original pulps in the Apoena core shack, as well as lack of

QAQC data, the QP decided to exclude some of the holes from the updated Mineral Resource estimation for the Nosde and Lavrinha mines.

Table 9-1 shows the list of these holes excluded from the estimation process, which includes 20 holes for Lavrinha and one drill hole for the Nosde database.

Table 9-1: Excluded Historical Drill Holes and Samples Excluded from Mineral Resource Estimation

PROSPECT	HOLE ID	DEPTH	YEAR	OPERATING COMPANY	SMP	BLK	STD
LVR	FL008	108.8	1994	TVX	82	0	0
LVR	FL009	126.45	1994	TVX	75	0	0
LVR	FL010	114.24	1994	TVX	79	0	0
LVR	FL011	109.32	1994	TVX	63	0	0
LVR	FL012	102.9	1994	TVX	99	0	0
LVR	FL013	167.4	1994	TVX	175	0	0
LVR	FL046	284.77	1994	TVX	12	0	0
LVR	FL047	457.45	1994	TVX	67	0	0
LVR	LV001	82.5	1995	MSE	40	0	0
LVR	LV002	126.45	1995	MSE	61	0	0
LVR	LV003	126.9	1995	MSE	63	0	0
LVR	LV004	100.2	1995	MSE	49	0	0
LVR	LV005	135.45	1995	MSE	68	0	0
LVR	LV006	133.14	1995	MSE	66	0	0
LVR	LV007	126.5	1995	MSE	34	0	0
LVR	LV008	130.9	1995	MSE	27	0	0
LVR	LV009	148.2	1995	MSE	39	0	0
LVR	LV010	78.49	1995	MSE	34	0	0
LVR	LV011	80.03	1995	MSE	20	0	0
LVR	LV012	90.27	1995	MSE	23	0	0
LVR	LVR0077	49.3	2014	Yamana	42	0	0
NSD	JP0019	390.55	2008	Yamana	276	0	0

In the opinion of QP, the rest of the historical holes (specifically Yamana drill holes) have enough backup information, including core boxes, logs, and QAQC measures, to be used in Mineral Resource Estimation.

9.2 Aura Drilling Database (2015 to 2023)

Aura uses the AcQuire® software to store and maintain data both in Apoena operation and in corporate office to check duplicated data, variations in drill hole orientation, sample intervals larger than the end of the hole, and missing assay, survey, or lithological data. Database for exploration and infill RC drilling was validated and managed at the corporate level under the QP's supervision by Aura's database manager. The production data was maintained and validated at the mine site by the Apoena team. The database manager and the QP reviewed and validated the production databases regularly to make sure they were error-free. Table 9-2 shows the analytical sample status of Aura's database from 2015 to 2023, which was used for Mineral Resource Estimation in this TRS for both Lavrinha and Nosde mines.

Table 9-2: Sampling Status of Different Databases for Nosde and Lavrinha Mines

Database	YEAR	TYPE	HOLES	DEPTH	SAMPLES	SAMPLES WITH AU RESULTS			AU ANALYSIS		
						SGS LAB	SFR LAB	EPP LAB	SGS LAB	SFR LAB	EPP LAB
LVR-EX	2015	DD	23	997	845		845			845	
	2017	DD	22	1 385	1 106			1 106			1 106
	2018	DD	68	9 323	5 475	5 331		144	5 779		144
	2019	DD	27	4 134	2 189	2 189			2 333		
	2020	DD	15	2 102	1 232	1 232			1 276		
	2021	DD	17	3 034	2 937	2 937			3 059		
	2022	DD	49	11 712	10 142	9 839			10 044		
	2023	DD	41	8 738	7 555	5 693			5 804		
LVR-CP	2016	PW	352	5 230	5 159			5 159			5 159
	2017	PW	4 854	69 651	68 703			68 703			68 703
	2018	PW	6 630	113 037	111 416			111 416			111 416
	2020	PW	2 402	35 944	35 230	540		34 690	540		49 206
	2021	PW	436	7 958	7 876			7 876			16 082
	2022	PW	260	4 714	4 709			4 709			9 656
	2023	PW	36	835	830			830			1 734
LVR-MP	2023	RC	58	2 043	2 038			2 038			4 229
NSD-EX	2019	DD	100	8 305	6 325	6 325			7 056		
	2020	DD	77	6 544	5 321	5 321			5 608		
	2021	DD	34	4 843	4 440	4 440			4 522		
	2022	DD	125	25 814	22 330	18 894		3 189	19 506		6 382
	2023	DD	25	7 624	5 233	2 191			2 275		
NSD-CP	2020	PW	2 147	41 520	41 408	9 450		31 958	9 450		61 604
	2021	PW	3 699	66 774	66 004			66 004			136 875
	2022	PW	778	12 811	12 223			12 223			25 829
	2023	PW	434	10 941	10 406			10 406			18 399
NSD-MP	2021	RC	98	6 291	6 069	5 168		901	5 168		1 900
	2022	RC	156	7 382	7 060			7 060			14 509
	2023	RC	54	1 625	1 595			1 595			3 282

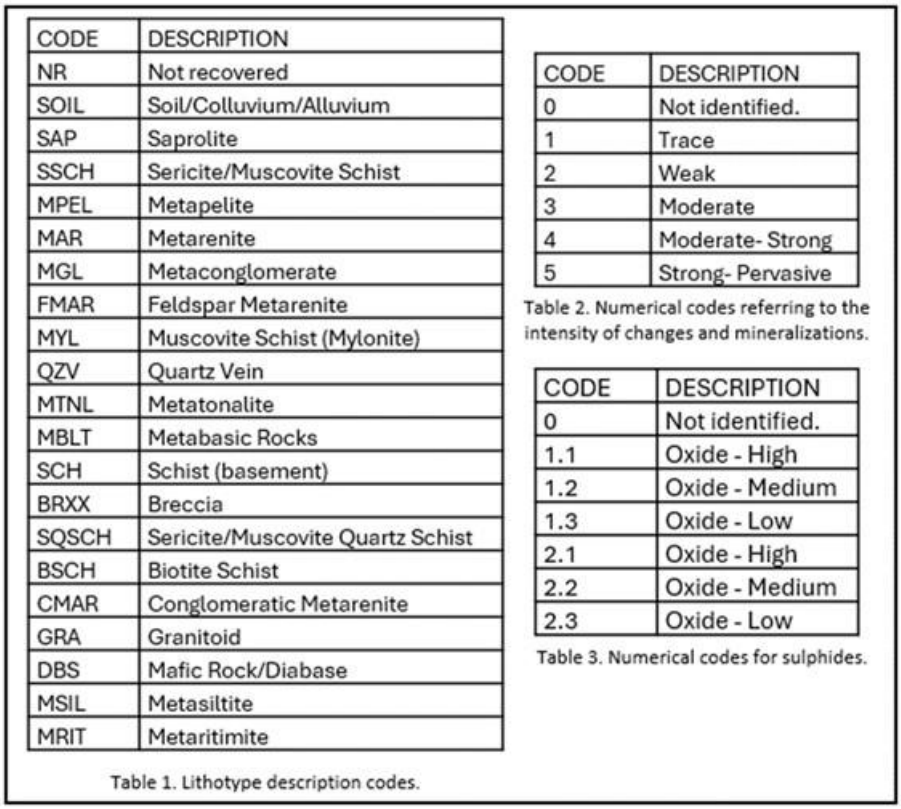
9.3 Drill hole Logging

The geological description of drill core was carried out by the responsible geologists using an Excel® spreadsheet to insert the data into the AcQuire® software. Firstly, drill hole ID, target, date of logging, and core diameter were recorded. Then, the geologist described the lithological types with delimiting intervals that were representative of lithological contacts or changes in the type or intensity of hydrothermal alteration.

Lithological contacts were marked on the witness box with a blue or black pen on the left side of the trough. If there were an intercalation of two lithologies (e.g., an interval with centimetric to decimetric intercalations of schist and metarenite), the predominant lithology code (according to Figure 9-1) (> 50%) was filled in, describing the intercalation of the interval in a brief observation.

The alterations and mineralization present appear as a numerical code in their respective column. The codes range from 0 to 5, indicating the intensity of the occurrence, according to Figure 9-1. For sulphides, the codes referring to oxidation and intensity of mineralization in Table 3 are used. For fresh sulphides, the prefix 1 is used, and for oxidized sulphides, the prefix 2 is used. The second number of the code goes from 1 to 3, with 1 referring to strong sulphidation, 2 for intermediate sulphidation, and 3 for weak sulphidation.

For the Qualified Person, the geological logging was satisfactory and utilized for geological modeling or Mineral Resources.



CODE	DESCRIPTION
NR	Not recovered
SOIL	Soil/Colluvium/Alluvium
SAP	Saprolite
SSCH	Sericite/Muscovite Schist
MPEL	Metapelite
MAR	Metarenite
MGL	Metaconglomerate
FMAR	Feldspar Metarenite
MYL	Muscovite Schist (Mylonite)
QZV	Quartz Vein
MTNL	Metatonalite
MBLT	Metabasic Rocks
SCH	Schist (basement)
BRXX	Breccia
SQSCH	Sericite/Muscovite Quartz Schist
BSCH	Biotite Schist
CMAR	Conglomeratic Metarenite
GRA	Granitoid
DBS	Mafic Rock/Diabase
MSIL	Metasiltite
MRIT	Metaritimite

Table 1. Lithotype description codes.

CODE	DESCRIPTION
0	Not identified.
1	Trace
2	Weak
3	Moderate
4	Moderate- Strong
5	Strong- Pervasive

Table 2. Numerical codes referring to the intensity of changes and mineralizations.

CODE	DESCRIPTION
0	Not identified.
1.1	Oxide - High
1.2	Oxide - Medium
1.3	Oxide - Low
2.1	Oxide - High
2.2	Oxide - Medium
2.3	Oxide - Low

Table 3. Numerical codes for sulphides.

Figure 9-1: Lithological Description Codes for Nosde and Lavrinha Databases

9.4 Collar Location Validations

All drill hole collar locations were surveyed using the GPS Geodetic method (HiPerSR instrument). Collar surveying measurements were done by a third party (drilling contractors) and were monitored and audited by Aura's geologists (Figure 9-2).

After completing the hole and removing the executed coordinate, the necessary information inserting the landmarks in non-operational areas (outside the mine/greenfield) was passed on to drilling contractors.

The collar location construction was done using sand and cement. Afterward, mixed water was added and stirred with a spade or shovel, and then ready dough was added. After the dough was filled, a metal trapeze was added to the form. A tube of one-metre PVC diameter - 75 millimetres were added.

It is the opinion of the QP that all collars in the drilling database used for Mineral Resource calculations are considered to be fairly accurate and reliable. The QP did not perform a validation check in the field to confirm collar locations.



Figure 9-2: The Collar Location and Cemented Location after Surveying (Nosde and Lavrinha Mine Drilling)

9.5 Downhole Survey Validation

Downhole surveys have been completed on all diamond drill holes, including historical holes. For RC and production holes (grade control drill holes), no downhole survey was performed. These holes were drilled at 0.0 azimuth orientation and -90º dip.

Gyroscope (Gyro Master) has been used for downhole surveys in Apoena operations since 2015. The reading is digitally stored in a palm reader (Core Retriever) and consists of measuring deviations (inclination and direction) in the trajectory of the drill holes.

After completing the hole deviation readings, the Core Retriever is exported, which contains the readings of the descent and ascent directions with the intervals recorded in the spreadsheet, as shown in Figure 9-3, which will be analyzed by the geologist and/or technician responsible for validation. The ascent reading within the software for 3D visualization of holes with their behavior at depth is only to be considered for final downhole survey readings.

After completing the profile conference and validation, the geologist responsible for the activity must insert the database with appropriate downhole survey data (Figure 9-4).

Following QAQC measures were routinely performed throughout different drilling campaigns in EPP in general:

- The drilling company delivers records of deviation measurements to the geology supervisor, who must check the results of the borehole logging, save the documents, and carry out monthly measurements, passing on the negative results to the drilling contract manager.

- Apoena geological team instructs the survey team on the best way to carry out additional activities to determine the surveying (safe distances from equipment for checking readings) and execution (safe distances from equipment for checking readings).
- Ensure that the drill holes were surveyed with a Gyromaster, reading twice every three metres. A 5% tolerance value was used to compare the inclination in the two runs and was then validated in the survey report.
- If the limits of the differences between one reading and another are not respected, i.e. beyond acceptable tolerance surveyors contact the Apoena team and possibly drill the hole again to guarantee the programmed direction.

GEOSOL	ESPECIFICAÇOES TÉCNICAS
Executor:	Thaw an Alves Oliveira
Fabricante-Equipamento	SPT - GyroMaster 1972
Empresa Executora:	Geosol Geologia e Sondagens S/A
Nome do Furo:	LVR-0335
Data da Perfilagem:	22/11/2023
Sonda n°:	285
Direção da medida:	Descendo/Subindo
Mina:	Ernesto
Localização:	Pontes e Lacerda/MT
Country:	Brasil
Empresa:	Mineração Apoena S/A
Profundidade Atual (m):	224.37
Profundidade Perfilada (	213.00
Numero de Medidas:	72
Diâmetro do Furo:	NQ-2
Inclinação:	- 80 Graus
Latitude:	S15.32'
Longitude:	W59.27'
Elevation	452.100
Easting:	256222.620
Northing:	8304601.830
Survey Run On:	Wire line

GEOSOL	ESPECIFICAÇOES TÉCNICAS

Executor:	Thawan Alves Oliveira
Fabricante-Equipamento	SPT - GyroMaster 1972
Empresa Executora:	Geosol Geologia e Sondagens S/A
Nome do Furo:	LVR-0335
Data da Perfilagem:	22/11/2023
Sonda n°:	285
Direção da medida:	Descendo/Subindo
Mina:	Ernesto
Localização:	Pontes e Lacerda/MT
Country:	Brasil
Empresa:	Mineração Apoena S/A
Profundidade Atual (m):	224.37
Profundidade Perfilada (	213.00
Numero de Medidas:	72
Diâmetro do Furo:	NQ-2
Inclinação:	- 80 Graus
Latitude:	S15.32°
Longitude:	W59.27°
Elevation	452.100
Easting:	256222.620
Northing:	8304601.830
Survey Run On:	Wire line

GEOSOL	ESPECIFICAÇOES TÉCNICAS

Executor:	Thawan Alves Oliveira
Fabricante-Equipame	SPT - GyroMaster 1972
Empresa Executora:	Geosol Geologia e Sondagens S/A
Nome do Furo:	LVR-0324
Data da Perfilagem:	16-08-23
Sonda n°:	243
Direção da medida:	Descendo/Subindo
Mina:	Ernesto
Localização:	Pontes e Lacerda/MT
Country:	Brasil
Empresa:	Mineração Apoena S/A
Profundidade Atual (	197.97
Profundidade Perfila	186.00
Numero de Medidas:	63
Diâmetro do Furo:	NQ-2
Inclinação:	- 55 Graus
Latitude:	S15.33°
Longitude:	W59.27°
Elevation	466.660
Easting:	256040.600
Northing:	8304461.000
Survey Run On:	Wire line

Primeira Leitura

Station	Dip	Azimuth	Elevation	East	North
Metres	Degrees	Degrees	Metres	Metres	Metres
0.00	-55.11	141.30	466.66	256040.60	8304461.00
3.00	-55.06	141.18	464.20	256041.68	8304459.66
6.00	-55.17	141.10	461.74	256042.75	8304458.33
9.00	-55.16	141.35	459.28	256043.82	8304456.99
12.00	-55.06	141.55	456.82	256044.89	8304455.65
15.00	-55.01	141.77	454.36	256045.96	8304454.30
18.00	-54.81	142.01	451.91	256047.03	8304452.93
21.00	-54.64	142.21	449.47	256048.10	8304451.56
24.00	-54.57	142.47	447.03	256049.16	8304450.18
27.00	-54.53	142.58	444.58	256050.22	8304448.80
30.00	-54.53	142.86	442.14	256051.28	8304447.41

Segunda Leitura

Station	Dip	Azimuth	Elevation	East	North
Metres	Degrees	Degrees	Metres	Metres	Metres
0.00	-54.93	141.33	466.66	256040.60	8304461.00
3.00	-55.27	141.21	464.20	256041.67	8304459.67
6.00	-55.22	141.33	461.73	256042.74	8304458.33
9.00	-55.17	141.56	459.27	256043.81	8304456.99
12.00	-55.13	141.75	456.81	256044.88	8304455.65
15.00	-55.00	141.93	454.36	256045.94	8304454.29
18.00	-54.82	142.16	451.91	256047.01	8304452.92
21.00	-54.68	142.35	449.46	256048.07	8304451.55
24.00	-54.59	142.59	447.02	256049.13	8304450.17
27.00	-54.54	142.70	444.57	256050.19	8304448.79
30.00	-54.51	142.96	442.13	256051.24	8304447.40

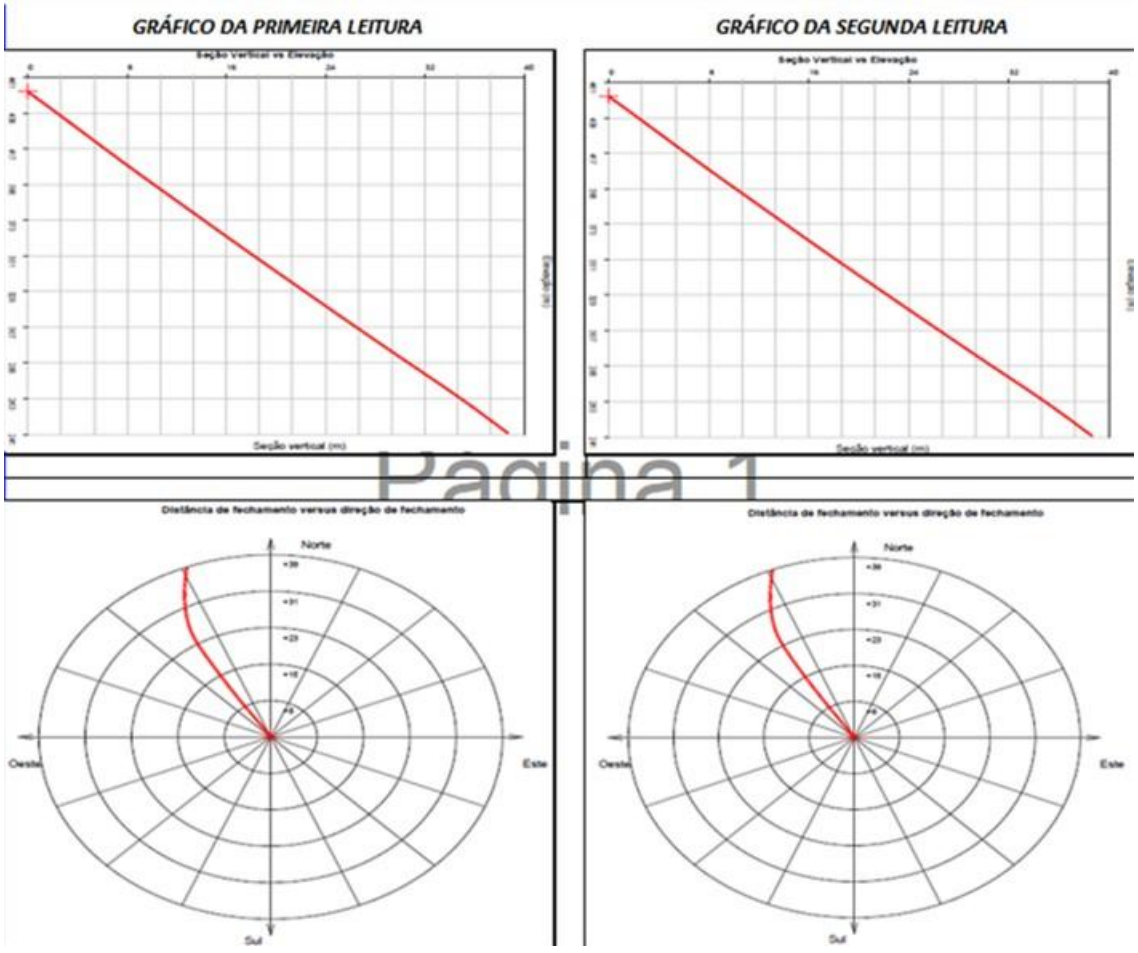


Figure 9-3: Technical Specifications of the Surveying, Quantitative Data from the Ascent and Descent Surveying, and Behavior in the Borehole Chart/Cartographic Trajectory

	A	B	C	D	E	F
1	HoleID	Depth	Dip	Azimuth	Survey equipment	Comments
2	Furo	Profundidade	Dip	Azimuth	Equipamento de Perfilagem	Observações
3	Automatic	Num	Num	Num	Drop-down	255 char
4	Calculated	Required	Required	Required	Required	Fill
5	LVR0324	0.00	-54.93	141.33	GyroMaster	
6	LVR0324	3.00	-55.27	141.21	GyroMaster	
7	LVR0324	6.00	-55.22	141.33	GyroMaster	
8	LVR0324	9.00	-55.17	141.56	GyroMaster	
9	LVR0324	12.00	-55.13	141.75	GyroMaster	
10	LVR0324	15.00	-55.00	141.93	GyroMaster	

Figure 9-4: SPREADSHEET within the Acquire Database

Legend: contains the logging tab for inserting the ascent reading data after validation, as well as the logging method used.

9.6 Analytical Validations

Apoena operation uses acQuire as the geological data management software for both production and exploration data in real-time. It provides a high level of validation and management, increasing the reliability of all the data, like collar surveying, downhole surveying, samples and assay information, and geological descriptions. For production data, an integration with the EPP internal laboratory was done to speed up the data import process and eliminate potential errors.

Aura started its drilling campaign at the Lavrinha and Nosde in 2015 and 2019 respectively, and by the end of 2023 were drilled other 623 diamond drill holes, totaling 94,556 metres drilled. A total of 69,979 samples were analyzed in the São Francisco internal laboratory (1.21%), Ernesto internal laboratory (6.34%), and SGS external laboratory (92.45%).All the assay results for these samples were imported into the project's database from the assay certificates provided by the laboratories and validated according to the data previously stored in this database. The assay results were approved after validation of the quality control samples inserted in the sample batches.

Reverse circulation holes were also drilled from 2021 to 2023 and assayed mainly in the EPP laboratory (69%), following the same controls for assay validation used in the diamond drilling.

From 2016 to 2023, over 363,000 ore control samples from the Lavrinha and Nosde pits were analyzed by Au fire assay, mainly in the EPP internal laboratory (97%).

In 2021, the internal EPP laboratory improved the preparation, analysis, and management of the data, especially after the acquisition of the LIMS system from laboratories. There were also improvements in workflows from the receipt of samples to the release of analysis results. In addition, integration with the mine database was done to improve the load of assay results, providing more agility in the release of results and reliability in the data provided.

All assay results for Exploration and Production holes were imported to the database from the reported assay certificates, corresponding to the same data in the database and the original certificates, except for the results that are below the detection limit (5 ppb). For these samples the assay values are divided by 2.

Gold Re-assaying

Gold re-assaying was not done systematically during the operation of Lavrinha or Nosde mines. Limited coarse duplicate re-assaying was done in 2018 for Lavrinha. In 2022, approximately 3,189 samples from Nosde exploration were analyzed in the local laboratory in Ernesto. The QP submitted a selected set of samples to SGS for re-assaying. The results did not show significant bias. However, the QP believes more samples need to be analyzed for data accuracy by an umpire laboratory throughout the life of mines.

9.6.1 Pulp duplicates re-assay of Ernesto (2017)

Apoena selected a total of 162 samples originally analyzed in the EPP laboratory to be re-assayed in the same laboratory and using the same analysis method. The correlation coefficient for these samples is 0.22. and 65% of the population have an Absolute Mean Paired Relative Difference (AMPRD) greater than 20%. The low correlation for EPP samples may be associated with the nugget effect (Figure 9-5).

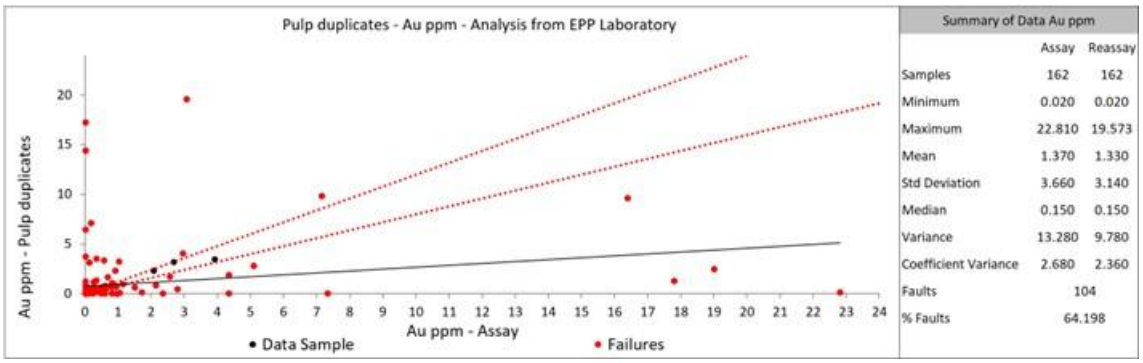


Figure 9-5: Pulp Duplicates Analysis of Ernesto Drill Hole Samples

9.6.2 Coarse reject duplicates re-assay of Ernesto (2018)

In 2018, the coarse reject from 142 samples, related to Ernesto drill holes drilled by Apoena in 2017, were sent to the SGS laboratory to validate the original assay results provided by the EPP laboratory. A total of 87% of samples are outside the 20% of AMPRD (Figure 9-6).

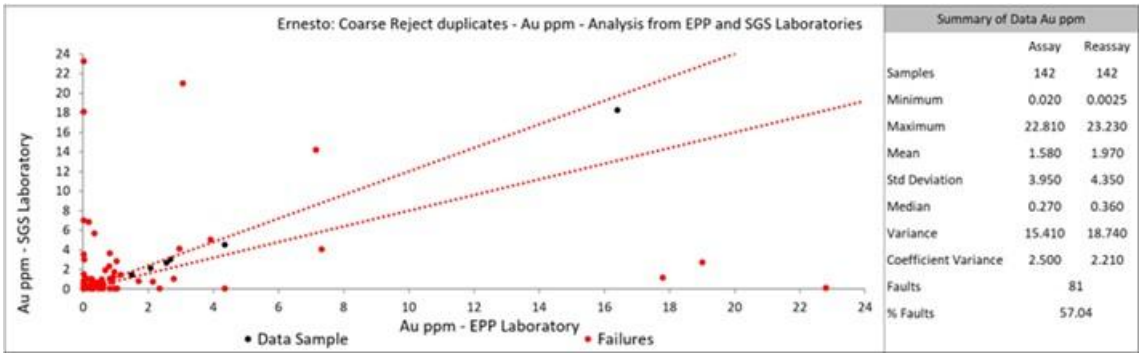


Figure 9-6: Coarse Rejects Analysis of Ernesto Drill Hole Samples

9.6.3 Coarse reject duplicates re-assay of Lavrinha (2018)

In 2018, the SGS laboratory analyzed 79 coarse reject samples from Lavrinha diamond drill holes to validate the original assay results provided by the EPP laboratory. Eight samples were returned with results below the lower detection limit of the EPP laboratory, and a total of 28% of samples was outside 20% of the correlation (Figure 9-7).

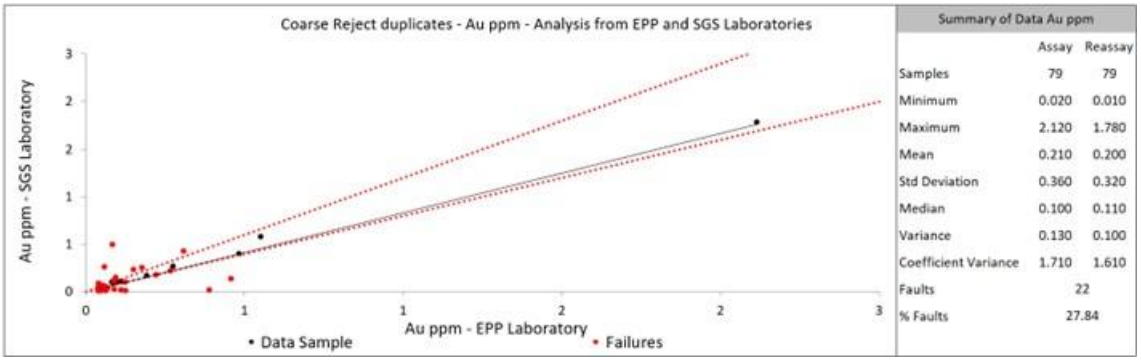


Figure 9-7: Coarse Rejects Duplicates Analysis of Lavrinha Drill Hole Samples

9.6.4 Pulp duplicates re-assay of Nosde (2023)

A total of 198 pulps from samples of Nosde drill holes were sent to the SGS laboratory for analysis and validation of the original results provided by the EPP Local laboratory with the SGS results as showed in the Figure 9-8.The threshold 0.04 ppm was used to limit differences in the lower detection limit of SGS and EPP Lab (0.005 ppm / 0.04 ppm). The correlation in an R-squared value of 0.95 between the original assays and the SGS assays suggests that bias is not evident in the data.

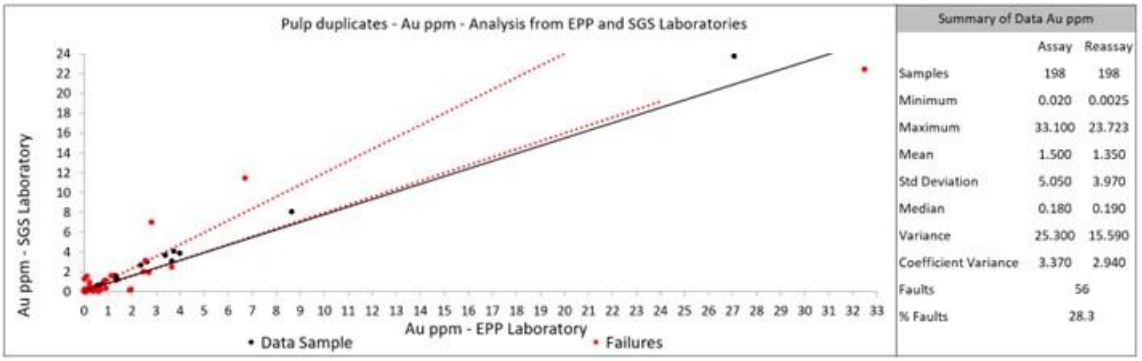


Figure 9-8: Pulp Duplicates Analysis of Nosde Drill Hole Samples

9.7 Qualified Person's Opinion

The QP supervises and oversees data acquisition of drilling, logging, or analytical data performed in Apoena since 2015, and this information was used to determine the Mineral Resources. Based on this lengthy experience, it is the Qualified Person's opinion that drilling and analytical data used in support of Mineral Resources were collected in a manner aligned with good industry practices sufficient for Mineral Resource classification.

The QP has conducted numerous visits and inspections along with other independent consultants to the local analytical laboratories, which provided some of the analytical data supporting Mineral Resources. The independent accredited laboratories used are considered reputable and suitable for the analyses performed. The QP did not visit the SGS lab in Belo Horizonte, Brazil, where the majority of exploration samples were analyzed.

The QP did not verify drill hole collar locations in the field but relied on the work of survey contractors and the Apoena technical team. Collar locations were checked against LiDAR topography and satellite imagery and deemed acceptable.

No independent samples were collected nor analyzed by the QP for verification purposes.

The QP has reviewed the adequacy of the exploration information and the visual, physical, and geological characteristics of the property and has found no significant issues or inconsistencies that would cause one to question the validity of the data. The QP is satisfied to include the exploration, infill, and grade control data, including the drilling, drill litho-logs, and sample assays for Mineral Resource modeling, evaluation, and estimations as presented in this TRS.

10 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 Summary of Mineral Process and Metallurgy

The metallurgical tests that supported the Feasibility Study (FS) developed by Ausenco Limited in 2010 were based on samples of Ernesto and Japonês ore bodies. Apoena's geology staff defined three target ore bodies for the initial campaign:

- Japonês Upper Trap (UT), shale sericite, quartzite, intense deformation by failed metarenites belonging to the Aguapeí group. The average gold content for the studied sample was 1.01 g/t but with a strong nugget effect – variations in gold content ranged between 0.4 g/t and 6.8 g/t.
- Ernesto Medium Trap (MT), metaconglomerate and metarenites. Mineralization occurring in quartz veins, associated with fresh or oxidized pyrites. The presence of coarse native gold and boxwork was observed. The average content of the studied sample was 4.13 g/t of gold and ranged from 2.9 g/t to 7.9 g/t of gold – nugget effect.
- Ernesto Lower Trap (LT), mineralization associated with intense fault zone, mylonite, and clastic sediments of metarenites and metaconglomerates, with a tonalite base. Native gold associated with quartz veins and pyrites was observed. The average content for this sample was 6.39 g/t gold (Au).

The preliminary mineralogical and technological extraction characterization was performed at USP's Technological Characterization Laboratory (LCT-USP), in São Paulo, Brazil. The technological characterization for comminution was developed by HDA Serviços S/S Ltda, in São Paulo, Brazil. Subsequently, gravimetric concentration tests were developed Knelson Research & Technology Centre in Langley, Canadá, flotation tests in the laboratory of Metais de Goiás S.A. (Metago) in Goiania, Brazil, and cyanidation extraction tests in the laboratory of Testwork Desenvolvimento de Processo Ltda, in Nova Lima, Brazil. A campaign for the use of modular extraction facilities was developed in Ballarat, Australia, by Gekko System.

Gravimetric concentration analysis showed a potential for recovery of gold contained in up to 61%. All leaching tests (cyanidation in a bottle roll) indicated a gold extraction close to 95% for Ernesto's mineral. Tests conducted for ore from the Pau-a-Pique underground mine, containing, in particular, sericite shale, indicated high gravity recovery potential but relatively low cyanidation recovery – between 80% and 90% of gold. The Design criteria were developed considering a total gold recovery of 95% – FS from Ausenco. In the FS, a semi-autogenous grinding step (SAG) with a gravimetric concentration inserted in its circulating load was considered as the process route. Subsequently, the grinding product with P_{80} at 0.106 mm (80% passing through the 0.106-mm mesh) was sent to the cyanidation step in tanks. The stipulated solids flow rate for the circuit was 3,000 tpd (tonnes per day).

The industrial plant operated in 2013 and had its activities suspended in 2014 owing to the difficulties in implementing and performing Ore Control procedures during mining. The total gold recovery obtained in the industrial operation in this period was 92.3%, for an average fed content of around 1.2 g/t of gold (Au) – a value lower than that provided for in the Design Criteria, which

considered total gold recovery of 95% and average Run of Mine (ROM) content greater than 3.0 g/t Au.

In 2016, a metallurgical testing campaign was conducted, considering characterization for grinding (SPI and BWI), gravimetric concentration, and cyanidation, which were conducted at SGS Lakefield (Canada). In this campaign, samples of the Lavrinha mineral body were also tested, with the same geological characteristics as Ernesto Lower Trap. The results showed that the SAG mill could easily reach flows in excess of 130 tph, although the revised Life of Mine (LOM) pointed to a maximum of 55 kt per month. The gravimetric concentration analyses revealed a gold recovery greater than 76%. However, as in the Feasibility Study (FS), the effect of high mass recovery in the laboratory centrifuge and its effects on the estimation of the industrial circuit were not considered. The mass recovered in a centrifugal concentrator on a laboratory scale was about ten times (10x) greater than that obtained on an industrial scale. Cyanidation extraction tests, coupled with density recovery, indicated global gold recoveries of 94% for Lavrinha, 93.6% for Pau-a-Pique, and only 86.1% for Ernesto. The possible cause for the low gold recovery for Ernesto's ore was the lack of control of the cyanide concentration – low dosage of this reagent during the tests performed at SGS Lakefield. The recianetation of the tailings allowed an increase in the final recovery of gold that reached values higher than 88%.

The Nosde body, for which a strong contribution was foreseen in the LOM from 2024, has characteristics similar to the Ernesto Medium Trap. The tests showed gold recoveries greater than 97% in the laboratory, with a high contribution from the density step.

The Apoena EPP operation is constantly evaluating opportunities for production increases. One such opportunity under development is an ore sorting program via sieving, which is based on the differences in the gold content of the relatively coarse and fine fractions resulting from the formation and transformation process of some types of ores. In this case, although the disposal of part of the material fed to the crushing composed of larger fragments represents an impact on the recovery of gold, the contained value is lower than the processing cost of this fraction. The introduction of this procedure was evaluated on a pilot scale, the results of which are in a phase equivalent to the strategic planning stage (Scope Study), with results that have been consistent for the potential for operating margin gains, increased reserves, and productivity gains – aspects addressed in this Section.

10.2 Characterization for Comminution

For the purpose of design criteria for Ausenco's FS in 2010, comminution tests were developed by HDA Serviços S/S Ltda., considering the concept of a single-stage crushing (primary) and a semi-autogenic mill (SAG) with a capacity of 3 ktpd (thousands of tonnes per day), equivalent to 130 tph (tonnes per hour). The samples used in these tests came from the Ernesto and Japonês mineralized bodies, having as main typologies metarenite, metaconglomerate, and quartz veins. In 2016, a review of the grinding capacity was carried out to resume the operation, and samples were used according to the expected LOM and also the Lavrinha ore. This testing campaign was

conducted in the SGS Lakefield laboratory. More recent tests were addressed to Minpro Solutions, with a view to checking the effect of blendings and the effects of the entry of the Nosde mineral body.

10.2.1 Characterizations for Ausenco's FS in 2010

The comminution tests for Ausenco's FS 2010, developed by HDA Serviços S/S Ltda., were:

- Impact Tests (DWT).
- Bond Tests (BWI).
- Abrasivity Tests (Ai).

10.2.1.1 Impact Tests - DWT FS 2010

In the impact tests, two energy intensity ranges are applied in a device called "Impact Cell." The results of the tests are the indices of the parametric equation that relates the resulting fragmentation as a function of the applied energy.

The results obtained for impact tests - Drop Weight Test Simplified (DWT) carried out in 2020 are addressed in Table 10-1 and classify the samples as medium impact resistance.

Table 10-1: Impact Tests - FS 2010

Identification	A	b	IQ	Classification
EPP- 1	70.0	0.847	59.3	MED
EPP- 2	68.2	0.862	58.8	MED

10.2.1.2 Bond Work Index (BWI) Tests - FS 2010

The Bond Work Index (BWI) tests were performed considering the closure in two meshes, the first at 0.149 mm (100# Tyler) and the second at 0.105 mm (150# Tyler).

The results obtained for the two samples tested in each of the two meshes are presented in Table 10-2 and indicated relatively high BWI values for the thinner closing mesh (0.105 mm).

Table 10-2: BWI Test Results - FS 2010

Sample	Test (mm)	F80 (mm)	P80 (mm)	Gbp (g/rev)	WI (kWh/st)	WI kWh/t)
EPP-1	0.149	2.70	0.111	2.421	9.0	9.9
EPP-1	0.105	2.70	0.087	1.580	119.0	13.1
EPP-2	0.149	2.63	0.118	2.975	7.9	8.7
EPP-2	0.105	2.63	0.084	1.935	9.9	10.9

10.2.1.3 Abrasivity Tests (AI) - FS 2010

Abrasivity tests (AI) were also conducted by HDA Serviços S/S Ltda. The results obtained for the tests, in duplicate, are presented in Table 10-3. The values obtained were lower than the reference values for granite samples (AI between 0.45 and 0.65).

Table 10-3: Abrasivity Tests Results – FS 2010

Sample		Start (g)	End (g)	P80 (mm)	AI
EPP-1	A	92.42	92.06	5.2	0.368
EPP-1	B	92.06	91.74	4.9	0.312
Average	EPP-1	-	-	-	0.340
EPP-2	A	92.00	92.00	5.8	0.365
EPP-2	B	92.36	91.68	5.0	0.315
Average	EPP-2	-	-	-	0.340

10.2.1.4 Modeling and Simulations

From the results of the comminution characterizations, mathematical modeling and simulations were carried out, using the JKSimMet simulator, based on the nominal new feed rate of 127 t/h of ore. The circuit configuration selected by Serviços S/S Ltda. was primary crushing, followed by a single stage grinding performed in a semi-autogenic mill (SAG), a configuration referred to as Single Stage SAG (SSSAG). The results of the simulation selected by HDA Serviços S/S Ltda. for the industrial comminution circuit are shown in Figure 10-1, which thus contains the process flowchart and the summary of the circuit's mass balance.

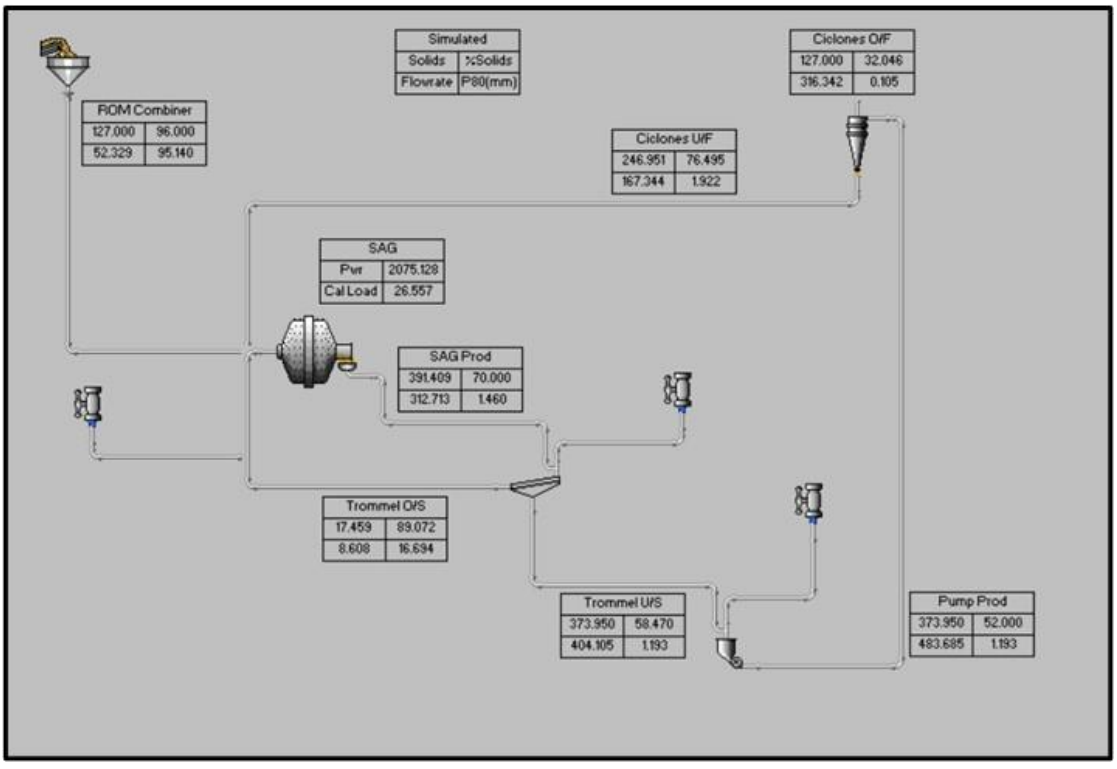


Figure 10-1: Process Flowchart and Proposed Balance for the Grinding Circuit - FS 2010

From the results obtained, the SAG mill was dimensioned, which has its main specifications shown in Table 10-4. During the Basic Engineering phase of the Design, the specification of this equipment was revised to include equipment with a nominal diameter and length of 19 feet and an installed capacity of 3 MW for a nominal capacity of 1 Mtpa (million tonnes per year).

Table 10-4: Characteristics of the Selected Mill for EPP - FS 2010

Equipment	Characteristic	p80=0,105 mm
SAG	Equipment number	1
	Size (feet) -ϕ x EGL	18x 18
	Motor KW	2500

10.2.2 Comminution Tests for Plant Resumption in 2017

For the resumption of the EPP operation, suspended in 2014 owing to problems in mining control, new comminution tests were conducted considering ore samples from Ernesto and Lavrinha. The tests were conducted at SGS Lakefield Research Ltd. (SGS Canada) and included the SAG Power Index (SPI), as well as BWI tests. These two tests are the basis for simulations conducted according to the Comminution Economic Evaluation Tool (CEET) method.

According to this method, SPI tests point out the energy required for size reduction up to 1.76 mm, while the BWI reveals energy required for reduction from 1.76 mm up to 0.106 mm.

At this stage of the tests, representative samples from each semester of Life of Mine (LOM) for the bodies of Ernesto and Lavrinha were selected. Table 10-5 presents the results obtained for BWI and SPI for Lavrinha (Lav) and Ernesto samples for selected LOM periods, namely years 1 to 4 and, for each, the respective first halves (H1) and second halves (H2).

Table 10-5: Results of Characterization Tests for Comminution of Representative LOM Samples

SPI AND BOND WORK INDEX RESULTS			
Deposit Sample	**LOM**	**MBWI**	**SPI**
Lav	Year 1 H1	8.1	16.4
Lav	Year 1 H2	8.2	24.1
Lav	Year 2 H1	7.8	20.1
Lav	Year 2 H2	7.7	28.3
Lav	Year 3 H1	8.7	39.8
Ernesto	Year 1 H2	8.9	20.4
Ernesto	Year 2 H1	9.9	30.0
Ernesto	Year 2 H2	10.8	46.3
Ernesto	Year 3 H1	12.8	31.0
Ernesto	Year 3 H2	10.4	31.9
Ernesto	Year 4 H1	9.2	22.5
Ernesto	Year 4 H2	9.3	13.6

Based on the BWI results, estimates of energy consumption and processing capacity of the grinding circuit were conducted to resume the EPP operation pursuant to LOM. The results of the estimates are shown in Table 10-6.

Table 10-6: Results of Grinding Capacity Estimates for LOM

BOND WORK IN DEX RESULTS			
		Calculated	Calculated
LOM	Wi	kWh/t	t/h
Lavrinha			
Y1 H1	8.1	3.52	258
Y1 H2	8.2	4.35	230
Y2 H1	7.8	3.94	250
Y2 H2	7.7	4.75	225
Y3 H1	8.7	5.73	195
Ernesto			
Y1 H2	8.9	3.97	230
Y2 H1	9.9	4.49	205
Y2 H2	10.8	4.98	190
Y3 H1	12.8	5.72	165
Y3 H2	10.4	5.04	190
Y4 H1	9.2	4.24	220
Y4 H2	9.3	3.69	230

Based on the study conducted, it was concluded that the grinding capacity of the circuit was higher than those calculated for the predicted LOM, the latter with a maximum of 55 ktpm (thousands of tonnes per month). Owing to these results, operating the circuit in order to obtain a finer grinding product was evaluated, which would lead to a potential increase in the metallurgical gold recovery from the industrial circuit.

10.2.3 Recent Comminution Tests

Recent characterization studies were conducted by MinPro Solutions to evaluate scenarios of increased production in the grinding circuit. The types of ores object of this study phase were metaconglomerate, mylonite, and metarenite. Table 10-7, Table 10-8, and Table 10-9 show the summaries of the results obtained.

Table 10-7: Results of BWI Tests for Metaconglomerate, Metarenite, and Mylonite Typologies

Sample	Test Loop (mm)	Passing in Test Loop in feed (%)	F_{80}(mm)	P_{80} (mm)	G_{pb} (g/rev)	Wi (kWh/t)	Tenacity
Metaconglomerate - A	0.150	27.9	2.18	0.107	1.996	11.7	Average
Mylonite - B	0.150	38.8	1.68	0.091	3.653	6.7	Moderately Low
Metarenite - C	0.150	20.0	2.15	0.112	1.919	12.5	Moderately High

Table 10-8: Results of DWT Impact Tests for Metaconglomerate, Metarenite, and Mylonite Typologies

Sample	Impact			
	A	b	IQ	Sorting
Metaconglomerate - A	59.2	1.04	61.5	Moderately Low

Sample	Impact			
	A	b	IQ	Sorting
Mylonite - B	61.5	2.50	153	Extremely Low
Metarenite - C	55.0	1.23	67.4	Moderately Low

Table 10-9 – Specific Mass Tests for Metaconglomerate, Metarenite, and Mylonite Typologies

Sample A: Metaconglomerate	Sample 1	Sample 2	Sample 3
Specific Mass (g/cm³)	2.576	2.573	2.622
Average Specific Mass (g/cm³)	2.59		

Sample B: Mylonite	Sample 1	Sample 2	Sample 3
Specific Mass (g/cm³)	2.775	2.744	2.738
Average Specific Mass (g/cm³)	2.75		

Sample C: Metarenite	Sample 1	Sample 2	Sample 3
Specific Mass (g/cm³)	2.691	2.670	2.665
Average Specific Mass (g/cm³)	2.68		

10.3 Extraction Tests

10.3.1 Initial Extraction Tests - FS 2010

The gold hydrometallurgical extraction tests used the mineralogical and technological characterization conducted by LCT of the University of São Paulo (LCT-USP). The first tests were conducted with heavy liquid separation and cyanidation of the floating fraction. Samples were also sent to the Knelson Research & Technology Centre in Vancouver, Canada. The purpose of the studies conducted at Knelson was to check the potential for recovery of the samples by gravimetric concentration in a centrifuge (GRG tests), and the intensive leaching of the obtained concentrate. Tests to evaluate the selectivity of the flotation process were also performed, in this case in the laboratories of Metais de Goiás S.A. (Metago).

Table 10-10 presents the summary of the results obtained, adopting the following abbreviations:

Labs:

- USP – Tests carried out at the University of São Paulo's LCT;
- Knelson – Tests carried out in the Knelson Research & Technology Centre's laboratories;
- Yamana – Tests carried out in the Testwork Desenvolvimento de Processo Ltda.'s laboratories.

Samples:

- Ernesto LT – Lower Trap;
- Ernesto MT – Medium Trap;
- Japonês UT – Upper Trap.

Table 10-10: Summary of Results Obtained from Concentration and Extraction Tests

Responsible	Sample	Test	Recovery	Overall recovery
Knelson	Ernesto	Knelson Concentrator	69%	69%
Yamana	Ernesto LT	Knelson Concentrator	93%	93%
		Intensive leaching		
	Ernesto MT	Knelson Concentrator	90%	90%
		Intensive leaching		
	Pau a Pique	Knelson Concentrator	89%	89%
		Intensive leachin		
	Ernesto MT	flotation p80 0,149mm	89%	89%
		flotation p80 0,074mm	51%	51%
	Pau a Pique	flotation p80 0,149mm	92%	92%
		flotation p80 0,074mm	79%	79%
USP	Ernesto LT	Heavy liquid separation	23%	96%
		Leaching	73%	
	Ernesto MT	Heavy liquid separation	68%	95%
		Leaching	27%	
	JP UT	Heavy liquid separation	55%	92%
		Leaching	37%	
	Pau a Pique	Heavy liquid separation	48%	90%
		Leaching	42%	

The results indicated high gold recoveries, both for the gravimetric method and by hydrometallurgical extraction (cyanidation). However, flotation tests indicated lower overall gold recoveries relative to direct leaching, as well as the potential need for finer grinding.

10.3.2 Cyanidation Tests on Bottle Rolls - FS 2010

The leaching tests with cyanide - cyanidation, to support the Feasibility Study, were conducted on samples from the Japonês Upper Trap, Ernesto Medium Trap, and Ernesto Lower Trap ores. The tests were carried out in the laboratories of Testwork Desenvolvimento de Processo Ltda. in bottle rolls with samples without previous gravimetric concentration under two conditions, namely, simple leaching and leaching in the presence of activated carbon. The results of these tests are shown in Table 10-11, Table 10-12, and Table 10-13.

Table 10-11: Cyanidation Tests on Bottle Rolls - Japonês Upper Trap

Sample top size (mm)	Test conditions	Number of tests performed	NaCN consumption (g/t)	Au extraction (%)
0.297	Leaching Only	1	501	94.5
		2	371	97.1
	Leaching with Carbon	1	846	91.9
		2	514	98.3
0.149	Leaching Only	1	566	93.6
		2	771	95.4

Sample top size (mm)	Test conditions	Number of tests performed	NaCN consumption (g/t)	Au extraction (%)
	Leaching with Carbon	1	696	96.8
		2	546	99
0.074	Leaching Only	1	442	92.4
		2	677	94.3
	Leaching with Carbon	1	651	99.4
		2	579	99.7

As listed in Table 10-11, except for one test, all other activated carbon leaching tests conducted with Japonês UT ore sample indicated gold recovery superior to the respective tests without the use of charcoal. The same Table 10-11 indicates a small progressive increase in gold recovery as the top size of the sample decreases.

Table 10-12: Cyanidation Tests on Bottle Rolls - Ernesto Medium Trap

Sample top size (mm)	Test conditions	Number of tests performed	NaCN consumption (g/t)	Au extraction (%)
0.297	Leaching Only	1	234	94.9
		2	768	95.6
	Leaching with Carbon	1	540	94.4
		2	566	98.8
0.149	Leaching Only	1	555	97
		2	468	92.8
	Leaching with Carbon	1	787	96.3
		2	813	94.4
0.074	Leaching Only	1	312	96.7
		2	572	95.2
	Leaching with Carbon	1	624	97.8
		2	618	97.7

As with the Japonês UT sample, superior gold extraction was obtained for most leaching tests with the Ernesto MT sample in the presence of charcoal in relation to the respective tests without this input. The same Table 10-12 indicates the trend of increasing gold recovery in connection with the decrease in top size.

Table 10-13: Cyanidation Tests on Bottle Rolls - Ernesto Lower Trap

Sample top size (mm)	Test conditions	Number of tests performed	NaCN consumption (g/t)	Lime consumption (g/t)	Au extraction (%)
0.297	Leaching Only	1	764	7	98.6
		2	741	7.6	98.7
	Leaching with Carbon	1	2007	10.5	99.5
		2	1980	10.6	99.6

Sample top size (mm)	Test conditions	Number of tests performed	NaCN consumption (g/t)	Lime consumption (g/t)	Au extraction (%)
0.149	Leaching Only	1	1815	7.4	99.8
		2	903	9.1	99.3
	Leaching with Carbon	1	870	7.1	99.4
		2	965	7.4	99.2
0.074	Leaching Only	1	715	10.9	99
		2	813	11	99.6
	Leaching with Carbon	1	2355	13	98.7
		2	2386	13	98.7

Table 10-13 shows gold extraction equal to or greater than 98.6% for all tests performed with the Ernesto LT sample. However, in this case, a higher consumption of sodium cyanide was observed in relation to the other two samples studied. Lime consumption, as listed in the same Table 10-13, was considered high, thus indicating the possible presence of sulfates or rapid oxidation of the sulfides present with consequent pH changes. For the Ernesto LT sample, there was no significant increase in gold recovery owing to the sample's selected granulometries.

10.3.3 Gravimetric Concentration Tests - FS 2010

The gravimetric concentration tests were conducted in the laboratories of the Knelson Research & Technology Centre in Canada, according to the GRG (Gravity Recoverable Gold) method, with their results interpreted as the maximum possible density recovery for the sample. Table 10-14 presents the summary of the results of GRG tests conducted on the Ernesto LT sample.

Table 10-14: GRG Test Results - FS 2010 – Ernesto Lower Trap

Grind Size µm	Product	Mass		Assay (gAu/t)	Distribution (%)
		(g)	(%)		
662	Conc.	101.1	0.57	664	39.9
	tails	202.7	1.14	5.72	0.7
167	Conc.	97.6	0.55	373	21.7
	tails	349.1	1.96	3.65	0.8
74	Conc	107.7	0.61	111	7.1
	Final Tails	16914	95.17	2.97	29.9
	(Head)	17772	100.0	9.47	100.0
	Knelson conc.	306.4	1.72	377.2	68.7

The maximum recovery of gold obtained in the GRG tests was 68.7%, thus showing its high susceptibility to gravimetric concentration. However, it should be noted that the mass recovered in this test is about six times greater than those practiced in industrial equipment. Therefore, in this case, an adjustment is necessary to establish the equivalent recovery in the industrial equipment relating to the GRG result.

10.3.4 Gold Recoveries

In the Feasibility Study (FS) conducted by Ausenco in 2010, the metallurgical recovery of 95% of the gold fed to the circuit was adopted as a premise. In this scenario, 100 kOz per year (thousands of annual troy ounces) would be produced for the annual feed rate of the 1 Mt industrial plant, with an average content greater than 3.0 g/t gold in ROM.

To contextualizing such project premises, Table 10-15 presents the summary of the operation data of the EPP industrial circuit in the period between 2013 and 2014.

Table 10-15: Summary of Metallurgical Results - Plant Operation Period between 2013 and 2014

	2013					2014				
	QI	Q2	Q3	Q4	Total	QI	Q2	Q3	Q4	Total
Throughput t	146067	183249	197051	263761	790128	154253	125177	118977	42094	440441
Average gold grade gpt	1 080	1 330	1 140	1 170	1 150	1 240	1 450	1 260	0,800	1 260
Average gold recovery %	86,0%	90,0%	93,0%	97,0%	92,3%	90,0%	90,0%	85,0%	80,0%	87,7%

As shown by the historical plant operation data, the contents fed between 2013 and 2014 were much lower than those initially predicted at 3.0 g/t Au. The operation of the plant with lower fed contents ended up impacting the results of gold recovery and production.

10.3.5 Extraction Tests - 2016 Campaign

In order to resume the operation of the plant, a test campaign was conducted in 2016 at SGS's laboratories in Lakefield, Canada. The extraction route tested aimed to reproduce the route of the EPP industrial process, which included gravimetric concentration, followed by intensive leaching of the concentrate for 12 hours. The tailings from the gravimetric concentration were subjected to cyanidation in bottle rolls, in the P_{80} granulometry of 0.106 mm, with a residence time of 24 hours. In these tests, representative samples of the revised LOM were used to resume operations, thus considering the ores to be fed each semester and the mineralized bodies of Pau-a-Pique, Lavrinha, and Ernesto underground mine. The following tables show the results obtained for the Lavrinha (Table 10-16), Pau-a-Pique (Table 10-17), and Ernesto Table 10-18() ore samples.

Table 10-16: Results of Extraction Tests for Lavrinha Ore

Lavrinha Recoveries		GRG 12h IL	CIL 24 h	Overall
period	**mic.**	**%**	**%**	**%**
Y1 H1	125	72,25	96,4	97,22
	106	75,49	96,8	97,95
Y1 H2	125	71,71	91,1	95,94
	106	76,6	91,2	97,31
Y2 H1	125	83,49	91,6	95,67
	106	77,65	95,5	91,21
Y2 H2	125			
	106	73,15	78,8	93,01

Lavrinha Recoveries		GRG 12h IL	CIL 24 h	Overall
period	mic.	%	%	%
Y3 H1	125	66,78	94	93,57
	106	65,74	95,2	90,3
Average recovery - 106 mic.				93,96

Table 10-17: Results of Extraction Tests for Pau-a-Pique Ore

Pau a Pique Recoveries		GRG 12h IL	CIL 24 h	Overall
	mic.	%	%	%
North	125	74,62	80,2	94,19
	106	75,03	83,7	95,04
South	125	67,21	78,6	91,57
	106	64,19	80,9	92,1
Average recovery - 106 mic.				93,57

Table 10-18: Results of Extraction Tests for Ernesto Ore

Ernesto Recoveries		GRG 12h IL	CIL 24 h	Overall
period	mic.	%	%	%
Y2 H1	125	45,16	73,1	82,22
	106	48,19	81,7	8774
Y2 H2	125	50,55	70,3	72,35
	106	52,66	80,1	81,82
Y3 H1	125	28,01	72,2	50,4
	106	33,7	82,2	84,25
Y3 H2	125	50,83	80,9	86,59
	106	54,49	84,2	90,45
Average recovery - 106 mic.				86.10

As shown in Table 10-18, the recovery of gold in the step of leaching the tailings from the gravimetric concentration, which simulates the CIL circuit, was relatively lower for the Ernesto sample. These results are interpreted to result from a combination of two factors. First, in the tests carried out during the Feasibility Study (FS 2010) phase, the Ernesto Lower Trap sample showed a high consumption of lime and cyanide. The second factor was the adoption of the same dosage of reagents for all tests. In this case, the retention of the tailings from the leaching tests indicated an increase in gold recovery of 4.36% (percentage points), thus supporting the above diagnosis.

The kinetics tests showed that the residence time of 24 hours adopted is sufficient to reach the maximum values of recovery (extraction) of gold, as shown in the graph in Figure 10-2.

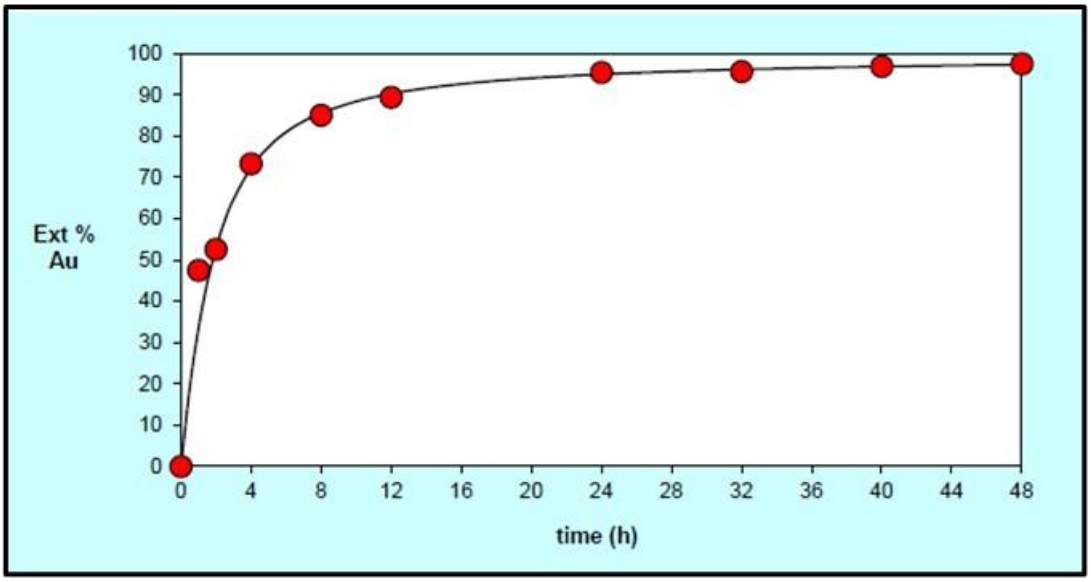


Figure 10-2: Typical Kinetics Curve for Leaching of Lavrinha Ore Sample at P_{80} of 106 Micrometres

10.3.6 Extraction Tests for Nosde Ore

Nosde body ore has been mined and fed to the EPP plant and significantly contributed to the Life of Mine (LOM) as of 2024. This ore has two main typologies: metaconglomerate and metarenite, such as Ernesto Medium Trap.

In order to evaluate the metallurgical performance of the Nosde body, samples of this ore were sent to the laboratories of Testwork Desenvolvimento de Processo Ltda. for characterization. The contracted scope was the evaluation of the process that includes the density recovery of gold, followed by the leaching of the gravimetric tailings, thus simulating the process route of the EPP CIL leaching circuit. The summary of the results obtained is presented in Table 10-19.

Table 10-19: Summary of Tests for Nosde Body

Test	**Leaching Test – Gravimetric Tailings**			
Sample	Nosde			
Test Number	LT2	LT3	LT4	LT5
P80	106 µm	106 µm	106 µm	106 µm
Charcoal	-		CIL - 18 g/L Charcoal	
	Gravimetric Concentration			
Analyzed Feed (g/t)	2.10			
Calculated Feed (g/t)	3.65			
Recovered Gold Grav. Conc. (g/t)	192.68			
Medium Tailings Grav. Conc. (g/t)	0.87			
% Mass at Grav. Conc.	1.45%			
Recovery in Grav. Conc. (%)	76.36%			
	Leaching of Gravimetric Tailings			
Initial NaCN (g/t)	1515	1508	1543	1504
NaCN Consumption (g/t)	486	484	492	487

		Leaching of Gravimetric Tailings							
Lime Consumption (kg/t)		1.15		1.17		1.24		1.18	
Calc. Content Au Grav. Tail. (g/t)		0.85		0.94		0.86		0.86	
Charcoal Content (g/t)		-		-		25.30		0.86	
Gravimetric Tailings Leaching Recovery	Time	Tailings (g/t)	Recov. (%)	Tailings (g/t)	Recov. (%)	Tailings (g/t)	Recov. (%)	Tailings (g/t)	Recov. (%)
	0	-	0.00%	-	0.00%	0.86	0.00%	0.86	0.00%
	2	-	-	-	59.38%	0.19	77.89%	0.19	77.82%
	4	-	78.04%	-	76.22	0.11	87.20%	0.14	83.65%
	8	-	84.95%	-	85.45%	0.06	93.02%	0.07	91.83%
	24	0.08	90.57%	0.08	91.45%	0.06	93.02%	0.07	91.83%
Final Average Tailings Content (g/t)		0.08				0.07			
Final Average Recovery (%)		97.81%				98.22%			

The results of the tests with the Nosde ore sample indicated high-density recovery of gold, such as Ernesto Medium Trap, as well as high leaching performance of the gravimetric tailings. The final average recovery of gold from the process was in the range between 97.8% and 98.2% for the Nosde sample.

10.4 Relevant Aspects of the Recovery of Gold in the Plant, Metallurgical Balances, and Reconciliations

The recovery of gold from the EPP plant pertains to the types of ore fed to the plant. Ore typologies such as metaconglomerate, metarenite, or quartz veins present better metallurgical performance due to the greater contributions of gold recovery in the gravimetric circuit. The mylonite and sericite shale typologies have finer gold distributions, thus resulting in relatively lower recoveries in the gravimetric concentration. Difficulties faced in EPP for the execution of the "Ore Control" protocol, such as the demand for densification of the drilling loop, ended up leading the mine operation to send ores to the plant with significantly lower levels than expected, the latter based on the characterization tests. In this scenario, the strategies adopted to enable the operation were as follows: (a) increase in the feed rate of the grinding circuit in relation to those provided for by the Feasibility Study (FS 2010); (b) expansion of the capacity of the gravimetric circuit, and (c) use of oxygen in CIL circuit to compensate for the loss of residence time owing to the processing of higher feed rates. These points are covered in Section 14 of this TRS. For detailing purpose Table 10-20 shows the monthly metallurgical balances for 2022.

Table 10-20: Metallurgical Balance for Year 2022

aura APOENA	Metallurgical Balance													
MONTHLY REPORT	Unit	January	February	March	April	May	June	July	August	September	October	November	December	2022
Processed Ore	Ton	125,429	113,756	120,314	114,103	126,918	118,968	141,059	150,117	136,979	140,315	104,315	121,061	1,513,713
Feed Content	(gAu/t)	1.04	1.05	1.16	1.34	0.98	0.99	0.90	1.29	2.51	2.28	2.84	2.44	1.56
Contained Gold	Oz	4,180	3,849	4,493	4,926	3,979	3,800	4,097	6,219	11,059	10,330	9,536	9,492	75,960
Tailings Content	(gAu/t)	0.128	0.113	0.116	0.151	0.132	0.126	0.126	0.175	0.36	0.36	0.38	0.39	0.213
Gold for the Dam	Oz	518	413	449	554	537	481	571	844	1,569	1,622	1,288	1,504	10,350
Plant Recovery	%	87.6%	89.3%	90%	88.7%	87%	87.3%	86.1%	86.4%	85.8%	84.3%	86.5%	84.15%	86.4%
Plant Recovered Gold	Oz	3,662	3,436	4,044	4,372	3,443	3,319	3,526	5,375	9,490	8,708	8,248	7,987	65,610
Dam Recovered Gold	Oz	241	176	172	251	278	225	294	355	545	648	544	867	4,595
Process Recovered Gold	Oz	3,903	3,612	4,217	4,623	3,720	3,544	3,819	5,730	10,035	9,356	8,792	8,855	70,205
Process Recovered Gold	%	93.4%	93.8%	93.9%	93.8%	93.5%	93.3%	93.2%	92.1%	90.7%	90.6%	92.2%	93.3%	92.4%
Cast Gold – Process	Oz	4,030	3,964	4,308	4,771	4,144	3,577	3,978	5,559	8,378	8,518	8,429	9,953	69,610
Cast Gold – Process – Analysis Differences	Oz	4,030	3,964	4,252	4,771	4,144	3,577	3,978	5,559	8,378	8,518	8,429	9,953	69,553
Cast Gold – Plant without return of the Dam	Oz	3,798	3,788	4,079	4,520	3,866	3,352	3,684	5,204	7,833	7,870	7,886	9,086	64,958

A highlight in the Metallurgical balance, Table 10-20, is the gold in the liquid phase that returns through the pumping of the water recovered in the dam. Although this gold is accounted for in the metallurgical balance, it is not considered in the reconciliation with the mine. Reconciliation based on the 2022 metallurgical balance data is presented in Table 10-21.

Table 10-21: Reconciliation for 2022 Metallurgical Balance

Inventory	Unit	January	February	March	April	May	June	July	August	September	October	November	December	2022
Thickener	Oz	4.4	12.8	3.1	2.4	2.4	1.0	3.2	7.9	15.7	10.8	10.2	9.6	9.6
Gravimetry	Oz	0	0	0	0	0	0	0.0	0	0	0	0	0	0
CIL Charcoal	Oz	267	155	239	331	307	338	464	850	2,004	2,396	1,808	1,010	1,010
CIL Pulp	Oz	18	15	26	14	18	29	14	49	111	60	56	78	78
Desorption	Oz	0	0	0	0	0	0	0.0	0	0	0	0	0	0
Electrolysis	Oz	0	0	0	0	0	0	0.0	0	0	0	0	0	0
Total	Oz	289	183	267	348	327	368	481	907	2,130	2,467	1,874	1,097	1,097
Variation	Oz	-22	-106	84	80	-21	41	114	426	1,223	337	-593	-777	786
Reconciliation	**Unit**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**2022**
Recalculated Feed Content	(gAu/t)	1.06	1.12	1.19	1.41	1.07	1.01	0.96	1.34	2.41	2.17	2.56	2.52	1.56
Dam Recovered Gold	Oz	241	176	172	251	278	225	294	355	545	648	544	867	4595
Gold Recovered from the plant	Oz	3,768	3,681	4,164	4,601	3,845	3,393	3,798	5,630	9,056	8,207	7,293	8,309	65,744
Process Recovered Gold	Oz	4,008	3,858	4,336	4,852	4,123	3,618	4,092	5,985	9,601	8,855	7,836	9,176	70,339
Plant Feed Contained Gold (Oz)	Oz	4,286	4,095	4,612	5,155	4,382	3,874	4,369	6,474	10,625	9,829	8,581	9,813	76,094
Plant Recovery	%	87.9%	89.8%	90.3%	89.2%	87.8%	87.6%	86.9%	87.0%	85.2%	83.5%	85.0%	84.7%	86.4%
Process Recovery	%	93.5%	94.2%	94.0%	94.1%	94.1%	93.4%	93.6%	92.4%	90.4%	90.1 %	91.3%	93.5%	92.4%

Figure 10-3 shows the contributions to the ROM of the ores from the various pits in 2022. The average monthly gold recovery values are also shown in the same Figure 10-3.

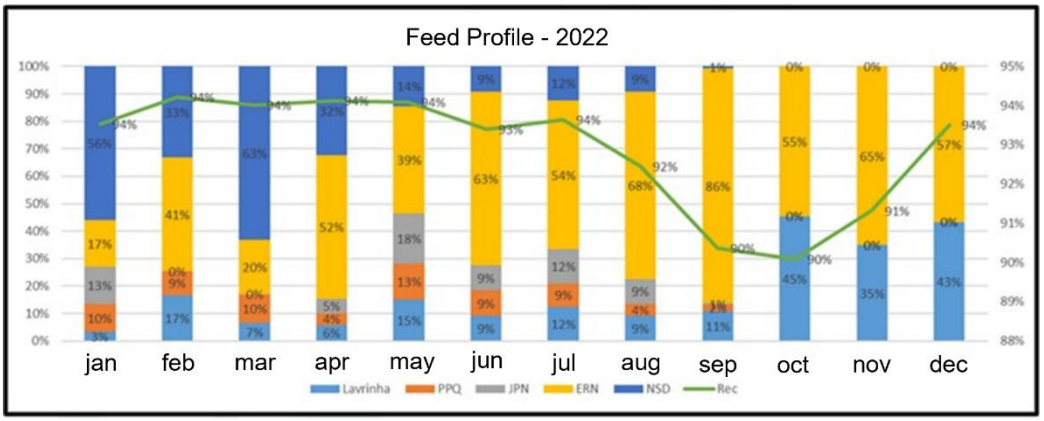


Figure 10-3: Gold Recoveries and Pit Contributions for the Year 2022

The graph in Figure 10-3 shows that the highest gold recovery values, around 94%, are for feeds with higher proportions of Nosde pits (NDD), in which the predominant typologies are metaconglomerate and metarenite.

The predicted contributions of the mineral bodies in the Run of Mine (ROM) are as follows: Figure 10-4 for the year 2024 and Figure 10-5 for the years between 2025 and 2028.

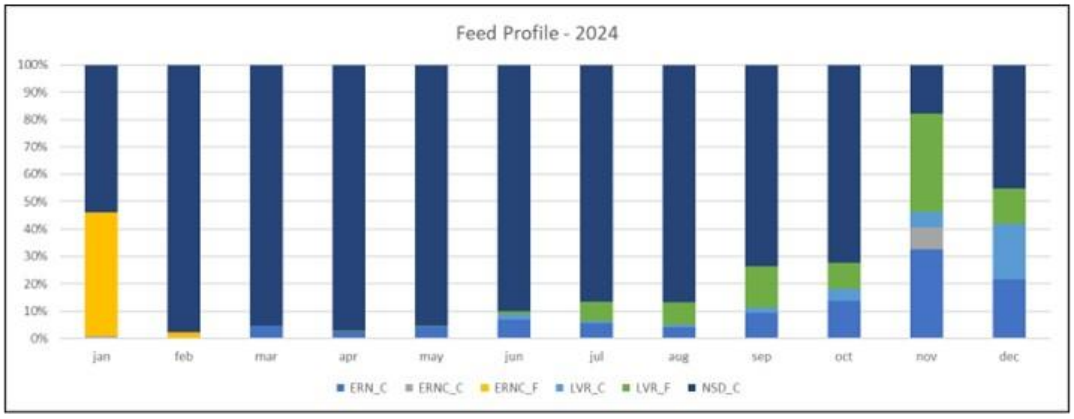


Figure 10-4: Contributions of Mineralized Bodies in the ROM Expected for the Year 2024

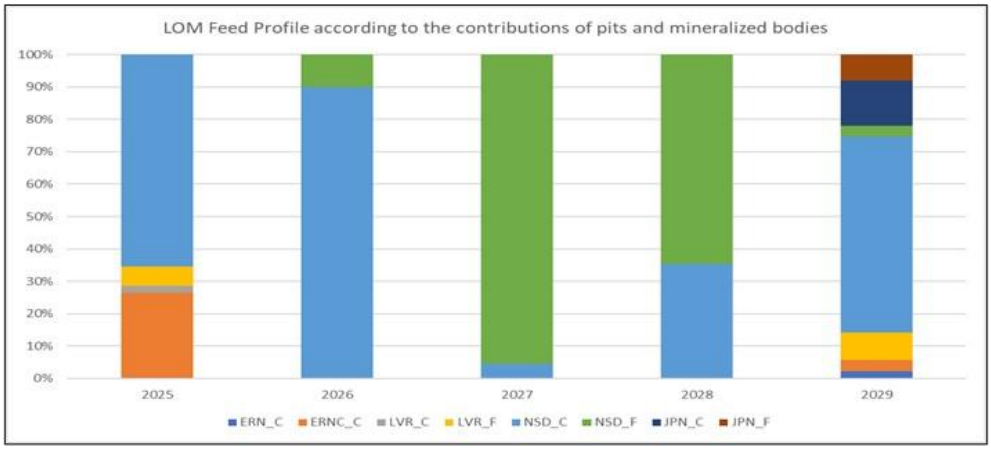


Figure 10-5: Contributions of Pits in LOM for the Years 2025 to 2028

In the period between 2025 and 2028, the LOM indicates that there will be a concentration of the mine operation in the Ernesto and Nosde pits, where there is a predominance of metaconglomerate, metarenite, and quartz veins typologies. The recovery values considered were based on the metallurgical tests carried out and the metallurgical balances derived from them, thus endorsing the metallurgical recovery of gold of 93.5% considered in LOM.

10.5 Ore Sorting Tests

The EPP industrial circuit was subject to specific sampling to evaluate the characteristics of the fraction called pebbles, composed of relatively coarse fragments that are recirculated in the SAG mill. The chemical analyses conducted on the samples obtained indicated relatively low gold contents and, as it is a high-tenacity material, the decision was made to evaluate the effect of the separation of the pebbles on the grinding performance and, consequently, on the overall recovery of gold from the process.

In general, gold mineralization processes in EPP deposits tend to occur in discontinuities of the rock matrix, in zones of high frequency of failures, which are preferred breaking surfaces. From these observations, the decision was made to investigate the distribution of gold in the various granulometric fractions that make up the pebbles. To this end, several granulochemical determinations were carried out in an external metallurgy laboratory, in this case, Testwork. The work consisted of crushing the sample of pebbles, sieving, and gold analysis by Fire Assay (FA).

Figure 10-6, Figure 10-7, and Figure 10-8 show the gold contents and distributions in the selected granulometric fractions, respectively for the metaconglomerate, metarenite, and mylonite typologies, predominant in the next LOM phases.

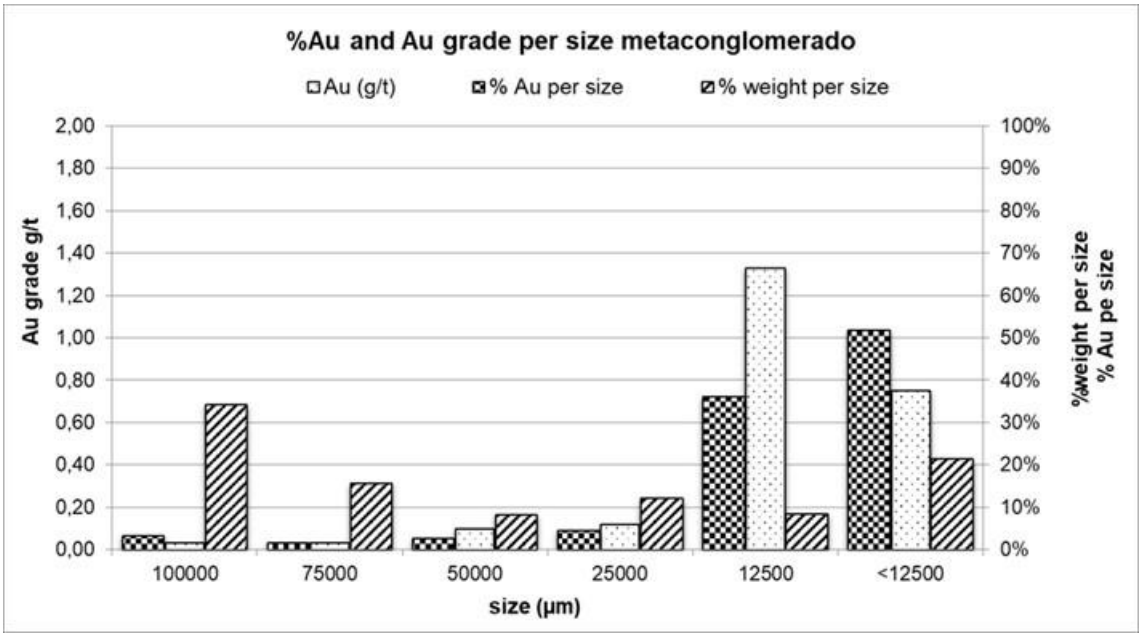


Figure 10-6: Gold Content and Distribution for the Metaconglomerate Typology

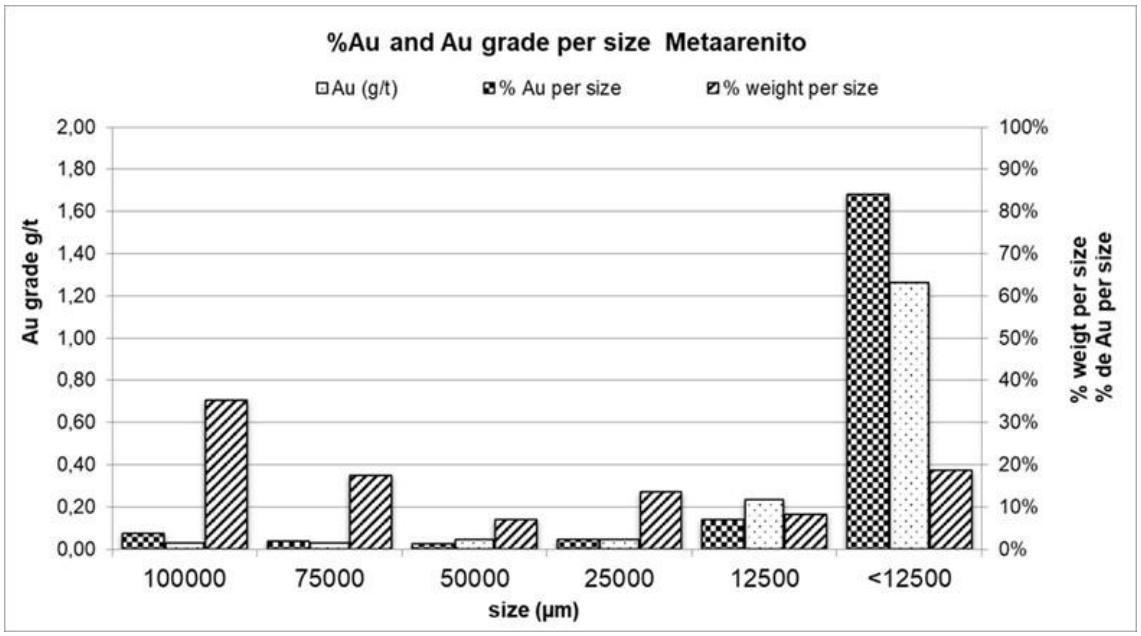


Figure 10-7: Gold Content and Distribution for the Metarenite Typology

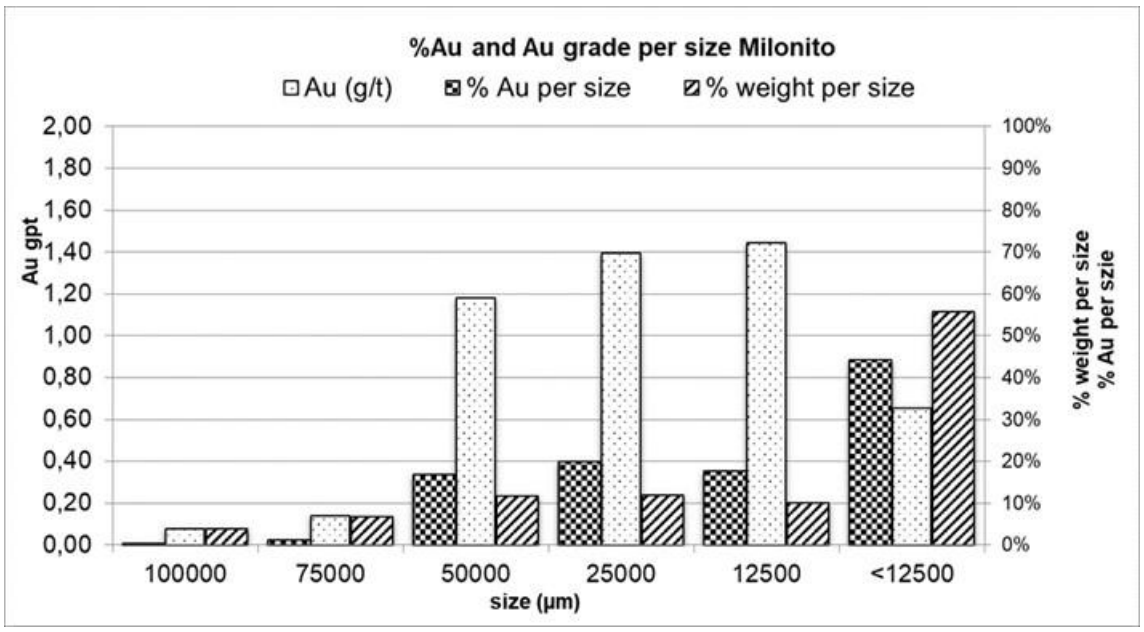


Figure 10-8: Gold Content and Distribution for the Mylonite Typology

For all typologies, the gold contents for the three coarser granulometric fractions (> 50,000 µm or 2 inches) showed lower gold contents compared to the other finer fractions. The separation of these fractions in the mining would be feasible through practices such as Ore Control but through excessive densification of drilling for this purpose. In this same context, to be effective, the loading operation of the disassembled material should be practiced with high selectivity, thus implying operational difficulties.

Based on the results of the analyses listed in Figure 10-6, Figure 10-7, and Figure 10-8, the decision was made to investigate the inclusion of a secondary crushing step in the EPP industrial circuit, which would thus provide the possibility of a separation based on fragment size. Therefore, this additional crushing would be equipped with sieving, which would thus allow the disposal of a

relatively coarser fraction while the finer fraction would be enriched, increasing the gold content fed into the EPP mill. An evaluation program of this alternative was executed with the following objectives:

- Evaluation of the contents and gold content in the discarded fraction.
  - Evaluation of the economic value of the discarded material.
  - Evaluation of the impact of the withdrawal of this fraction on the final recovery.
  - Grinding feed enrichment.
- Productivity gain in grinding.
  - Impact on the processing of lower grinding feed tenacity.
- Increase in operating margin.
  - Disposal of material with lower added value.

A pilot campaign was carried out, including the following steps: Primary crushing, secondary crushing, and two-deck sieving. A sample of metaconglomerate-type ore was selected for the tests. The main process variables adopted in the tests are listed in Figure 10-9, which also includes the main results obtained, namely, gold enrichment, effect on productivity, and Work Index – WI.

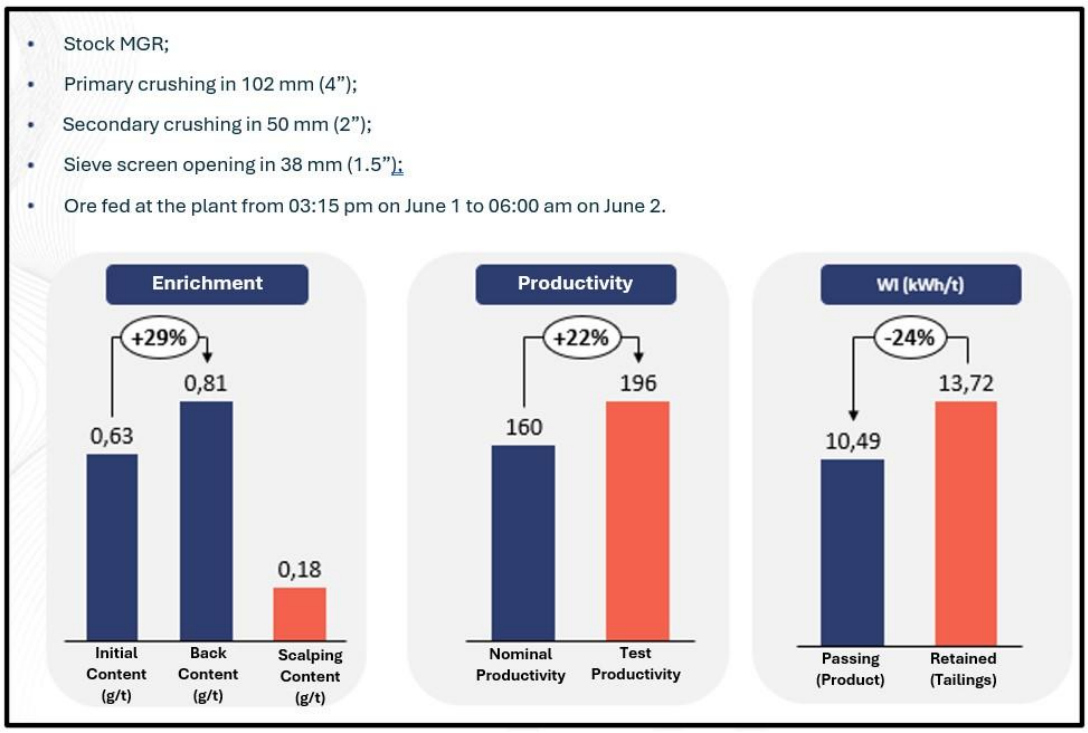


Figure 10-9: Summary of Operating Conditions and Results of Sieving Separation Tests

The summary of test results indicated that:

- The gold enrichment in the passing fraction in relation to the sieving feed was 29%, which would thus represent the ratio between the gold content in the new grinding feed in relation to the content of the primary crushing product. The content of the coarse fraction of the sieving, which would thus be discarded, was 0.18 g/t Au.
- 24% reduction in the Bond Work Index – WI of the material fed from the grinding formed by the fraction passing through the sieve in relation to the product of the primary crushing,22% increase in the grinding feed rate, that is, the ratio between the grinding feed flow and the fraction passing through the sieving (196 t/h) in relation to the flow without sieving (160 t/h).

In the case of implementation of this alternative, ores that currently have relatively high flows in the grinding circuit, the product of the primary crushing would be sent directly to the grinding without going through the additional crushing and sieving step.

The experimental data from the industrial tests performed were treated and balanced to obtain consistent granulometric flows and distributions. Data thus corrected was used by MinPro Solutions to evaluate operation scenarios of EPP circuits configured with secondary crushing.

Figure 10-10 shows the mass balance resulting from the simulation with the separation and disposal of the fraction retained in the sieving at 38 mm, while Figure 10-11 shows the simulation balance without the secondary crushing step of the EPP circuit. In both cases, the simulations were conducted based on metaconglomerate ore.

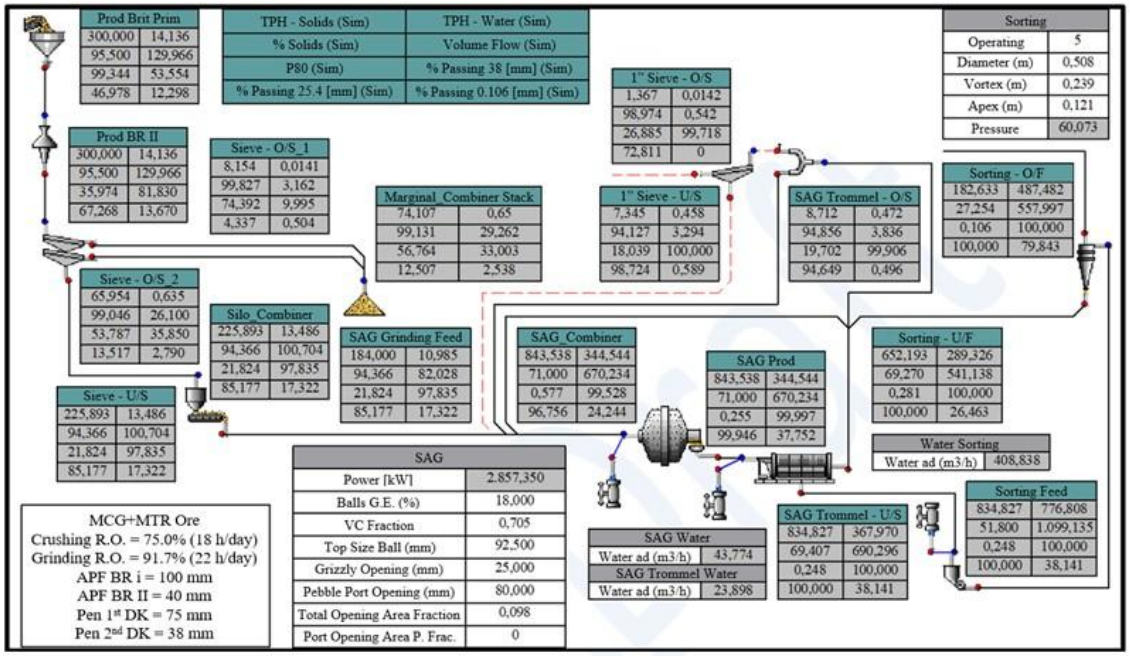


Figure 10-10: Simulation Mass Balance Including Disposal of the Retained Fraction in 38 mm

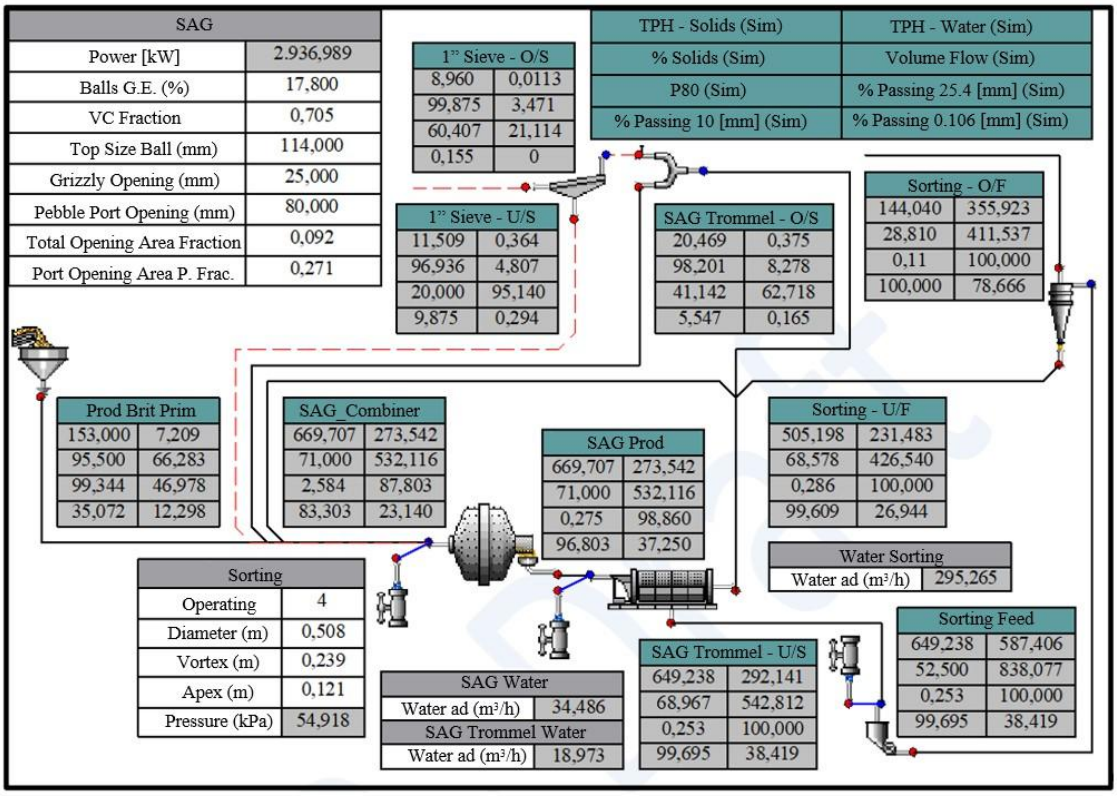


Figure 10-11: EPP Grinding Simulation Balance Considered as Base Case

The mass balance of the flowchart contained in Figure 10-11 indicates new feeding of the primary crushing of 300 t/h of solids, of which 74 t/h form the fraction retained in the 38 mm mesh of the sieving, being, therefore, discarded. In this same scenario, the grinding feed flow was estimated at 184 t/h, a value significantly higher than the 153 t/h of grinding feed without prior sieving, as shown in the balance shown in the flowchart of Figure 10-11.

Even greater additional simulations of circuit capacity increase were performed by MinPro based on the calibrated mathematical models. The results indicated flows of 350 t/h of feed solids from the primary crushing, with a consequent increase in the EPP grinding feed. As an example, Figure 10-12 shows the result of a simulation conducted by Metso of the EPP crushing circuit, in this case including primary and secondary steps for operation with 350 t/h.

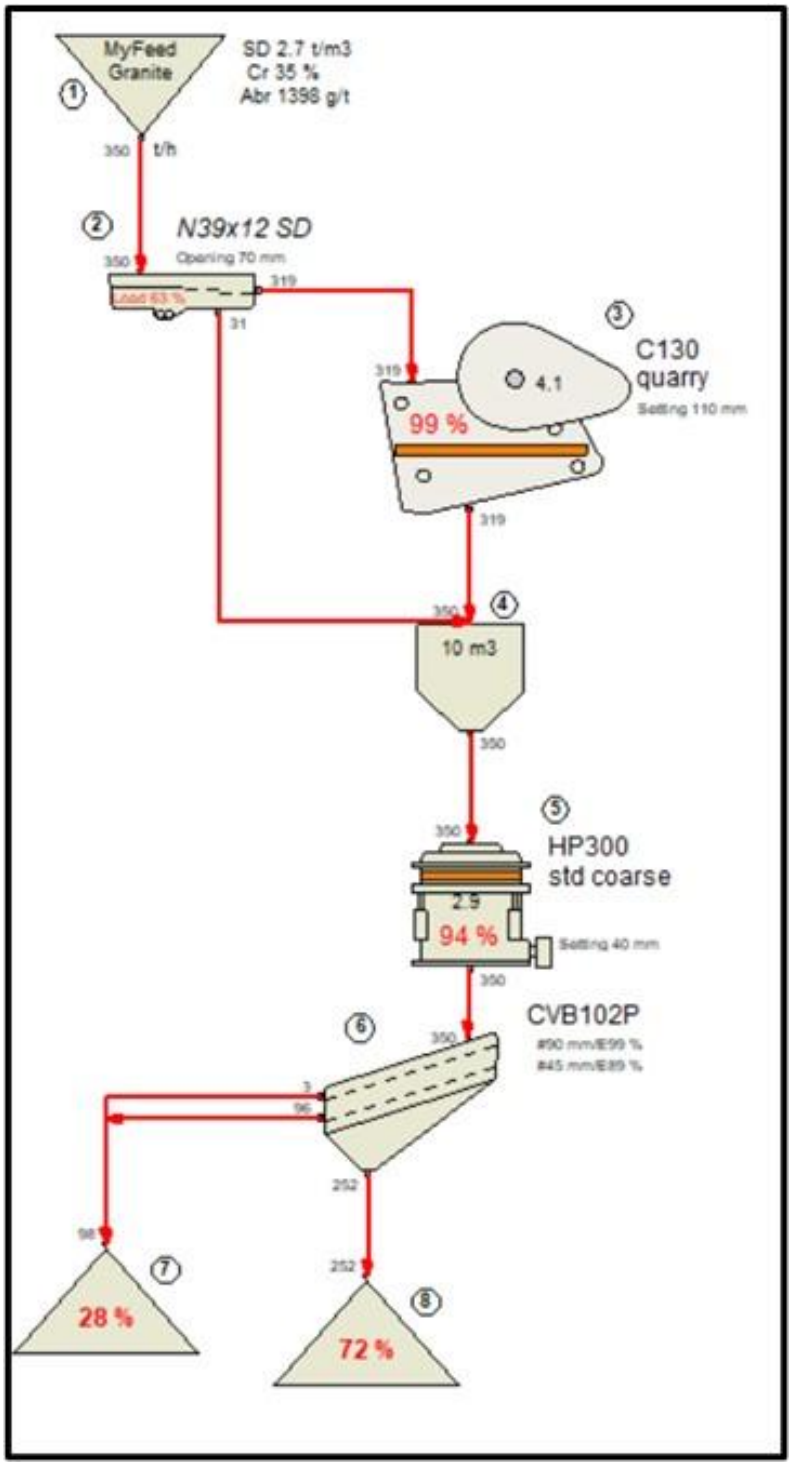


Figure 10-12: Process Flowchart and Balance for Primary and Secondary Crushing Circuit

Strategic level evaluations (Scope Study) are under development to dispose of pebbles with low gold content before feeding to the grinding circuit. To this end, determinations of granulochemical distributions were conducted, as well as tests performed on a pilot scale, which included primary crushing, secondary crushing in a cone crusher, followed by sieving. The tests resulted in a content of 0.20 g/t gold in the fraction retained in sieving at 38 mm after secondary crushing. Processing of this retained fraction resulted in 70% gold recovery, i.e., 0.14 g/t Au, which thus represents a lower added value than the cost of operating the EPP industrial plant. On the other

hand, the passing fraction in the 38 mm sieving showed lower tenacity (BWI), increased processing capacity in the grinding, in addition to gold enrichment between 20% and 30%. The studies revealed the disposal of about 30% of the mass fed to crushing, with a consequent reduction of 25% in the final processing cost for some types of ore. The loss of gold content in the fraction disposed of in this process may be offset by the increased recovery in the mine, owing to the reduction in the cut-off grade. Such promising studies have currently entered the pre-feasibility phase, called FEL 2.

11 MINERAL RESOURCE ESTIMATES

Mineral Resource Estimates in this section are considered to be new Mineral Resource Estimates for the Nosde and Lavrinha deposits compared with the previous estimate provided in Technical Report (NI43-101) under title of "*FEASIBILITY STUDY AND TECHNICAL REPORT ON THE EPP PROJECT MATO GROSSO, BRAZIL, January 13, 2017*"" by P&E) or to the Company's previous yearly Mineral Resource updated disclosure report (AIF). For other deposits the Mineral Resource Estimated reported herein are considered to be updated Mineral Resource Estimate as it was filed in in Annual Information Forms (AIF) in previous years.

11.1 Nosde and Lavrinha Mineral Resource Estimate

11.1.1 Introduction

The updated Mineral Resource Estimate for the Nosde and Lavrinha deposits were estimated by conventional 3D computer block modelling methods employing Leapfrog Seequent Software® (Geo & Edge) 2023.2 version. The Mineral Resource Estimate is based on surface diamond drilling, RC drilling, core sampling and gold assaying. Assaying was performed at the SGS and ALS commercial laboratories in Belo Horizonte and Ernesto's mine laboratory, all in Brazil.

The main gold mineralization in the Lavrinha mine developed mainly within of the Upper Trap zone. The Upper Trap, which is widely developed in the Lavrinha deposits, occurs in metapelitic rocks (hematite sericite schist) and metarnites (Inferior and Superior) in dilation zones of the intensely deformed synclinal troughs.

The main gold mineralization in the Nosde mine developed within the Bonus Trap zone near surface as well as sericite schist of Upper Trap zone. Aura's recent drilling and exploration confirmed continuity of Upper Trap between the Nosde and Lavrinha mines and create potential for a larger pit outline based on new updated Mineral Resources.

Coarse gold is probably a factor in the Nosde and Lavrinha deposits, as indicated by the gravimetric recoveries used by the garimpeiros.

11.1.2 Lavrinha Mineral Resource Database

Lavrinha's database is divided into three sub-categories including exploration or diamond drill hole database (LVR-EX), RC hole database (LVR-MP) and grade control database (LVR-CP). Table 11-1 shows that Lavrinha databases and numbers of holes, samples, and other related information.

The Lavrinha Lower Trap zone has been sampled by surface diamond drilling and core sampling. Core for the surface drilling is largely NQ (47.6 mm). The Lower Trap database contains 396 drill holes, totaling 59.973,97 metres drilled of which 134 (18.547,7m) are historic holes drilled from 1994 to 2014, mainly by Yamana Gold (85% of historical holes), and 262 were drilled by Aura since 2015 (PR series and LVR series starting in the hole LVR0092).

The total of 43,762 samples with assay results are included in the database totaling 46.081,07 metres assayed, 2,461 samples are included in the database with pending assay results and 11.091,9 m in the drill holes were not sampled.

Table 11-1: Lavrinha Mine Database Status Summary

DATABASE	YEAR	TYPE	HOLES	DEPTH	SAMPLES	SAMPLES WITH AU RESULTS				
						ALS LAB	SGS LAB	SFR LAB	EPP LAB	UNK LAB
LVR-EX	1994-2014	DD	134	18 548	14 742	5 254	2 214		5 506	1 768
	2015	DD	23	997	845			845		
	2017	DD	22	1 386	1 106				1 106	
	2018	DD	68	9 323	5 475		5 331		144	
	2019	DD	27	4 134	2 189		2 189			
	2020	DD	15	2 102	1 232		1 232			
	2021	DD	17	3 034	2 937		2 937			
	2022	DD	47	10 664	9 521		9 521			
	2023	DD	43	9 786	8 176		6 314			
LVR-CP	2016	PW	352	5 230	5 159				5 159	
	2017	PW	4 854	69 651	68 703				68 703	
	2018	PW	6 630	113 037	111 416				111 416	
	2020	PW	2 402	35 944	35 230		540		34 690	
	2021	PW	436	7 958	7 876				7 876	
	2022	PW	260	4 714	4 709				4 709	
	2023	PW	36	835	830				830	
LVR-MP	2023	RC	58	2 043	2 038				2 038	
TOTAL			**15 424**	**299 386**	**282 184**	**5 254**	**30 278**	**845**	**242 177**	**1 768**

DD: Diamond Drilling ,RC;Rotary Core Drilling, PW: Pneumatic Drilling, SFR: Sao Francisco Mine Laboratory, EPPLAB: EPP Mines Laboratory, SGSLAB SGS laboratory, ALSLAB:ALS Laboratory.

11.1.3 Nosde Mineral Resource Database

Nosde database are divided into three sub-categories including exploration or diamond drill hole database (NSD-EX), RC hole database (NSD-MP) and grade control database (NSD-CP). Table 11-2 shows summary of Nosde mine database with samples and other related information.The Nosde Lower Trap zone has been sampled by surface diamond drilling and core sampling. Core for the surface drilling is largely NQ (47.6 mm). The Lower Trap database contains 414 drill holes, totaling 61.951,51 metres drilled of which 53 (8.821,38 m) are historic holes drilled from 1994 to 2013, mainly by Yamana Gold (94% of historical holes), and 361 were drilled by Aura since 2019 (NSD series).

A total of 52.015 samples are included in the database of which 48.706 have the assay results available and 4.274,77 metres of drill holes were not sampled.

Table 11-2 : Nosde Mine Database Status Summary

DATABASE	YEAR	TYPE	HOLES	DEPTH	SAMPLES	SAMPLES WITH AU RESULTS				
						ALS LAB	SGS LAB	SFR LAB	EPP LAB	UNK LAB
NSD-EX	1994 - 2013	DD	53	8 821	8 366	194	884	8		7 288
	2019	DD	100	8 305	6 325		6 325	6		
	2020	DD	77	6 544	5 321		5 321	5 321		
	2021	DD	34	4 843	4 440		4 440	4 440		
	2022	DD	125	26 814	22 330		18 894	19	3 189	
	2023	DD	25	7 624	5 233		2 191	219		
NSD-CP	2020	PW	2 147	41 520	41 408		9 450		31 958	
	2021	PW	3 699	66 774	66 004				66 004	
	2022	PW	778	12 811	12 223				12 223	
	2023	PW	434	10 941	10 406				10 406	
NSD-MP	2021	RC	98	6 291	6 069		5 168	5 168	901	
	2022	RC	156	7 382	7 060				7 060	
	2023	RC	54	1 625	1 595				1 595	
TOTAL			**7 780**	**210 295**	**196 780**	**194**	**52 673**	**15 182**	**133 336**	**7 288**

DD: Diamond Drilling ,RC;Rotary Core Drilling, PW: Pneumatic Drilling, SFR: Sao Francisco Mine Laboratory, EPPLAB: EPP Mines Laboratory, SGSLAB SGS laboratory, ALSLAB:ALS Laboratory.

11.1.4 Nosde and Lavrinha Geological and Domain Modelling

11.1.4.1 Lavrinha Deposit

The geological layout of the Lavrinha deposit area is subdivided into seven lithological domains, three of which are potentially mineralized (Figure 11-1B and C). These domains are inferior and superior metarenites (MAR) – Upper Trap Schists. Furthermore, local mineralization is observed in the metarenites (MAR), higher than metaconglomerate (MGL), but has not been considered as a potentially mineralized host. The geological modeling of these domains is based on a drilling grid of 25x25 mesh, as well as on interpretations made by geologists from Aura

The modeling strategy was defined using an interpolator called Stratigraphic Sequences, within the LeapFrog Geo (Seequent) routine. In the Leapfrog Geo Software®.

The contact surfaces, associated with the types of contact between the units, was chosen as Erosion in Leapfrog Geo® software, which, the strata are defined, however, some limits can cut other contact surfaces on the oldest side of the contact surface with erosion, which is seen in some central portions of the deposit. Irregular contacts with the basal metatonalitic (Figure 11-1 A).

11.1.4.2 Nosde Deposit

Similar to Lavrinha, the geological layout of the Nosde deposit is subdivided into seven large domains, two of which are potentially mineralized (Figure 11-2 B and C). These domains are metarenite (MAR) – Upper Schist and Schist (MYL). Furthermore, gold mineralization also is

observed in the metarenites (MAR), with grade higher than meta-conglomerate (MGL), but has not been considered as a potentially mineralized host. The geological modeling of these domains is based on long-term geology with 25x25 drill spacing, as well as on interpretations made by geologists from Aura.

For methodological purposes, and because they are continuous sedimentary tracts of a rift-type basin, and specifically in the deposit by the basal unit of the Fortuna Formation Aguapeí Group) - transitional environment of shallow sea and tidal current, the modeling strategy was defined using an interpolator called Stratigraphic Sequences, within the LeapFrog Geo (Seequent) routine.

The contact surface, associated with the types of contact between the units, was chosen as Erosion in Leapfrog Geo® software. However, some strata can cut other contact surfaces on the oldest side of the contact surface with the Erosion, which is seen in some central portions of the deposit (Coarsening upward and Fining upward tracts), in addition to irregular contacts with the metatonalitic (basement) (Figure 11-1 A).

Bonus and Upper Trap are widely developed in the Lavrinha and Nosde deposits, occurring respectively in metarenitic (lithic) rocks, forming open folds in domes and basins, with ruptures in the axial and metapelitic planes (hematite sericite schist) in zones of intense syncline dilation deformed (Figure 11-1 B and C).

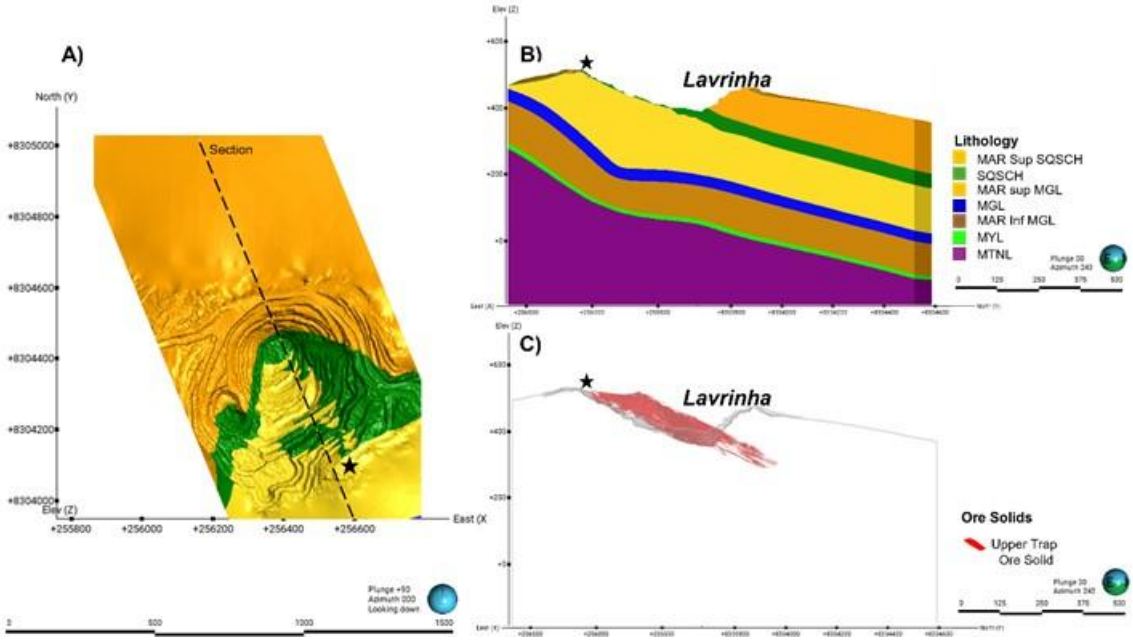


Figure 11-1: Geological Model of the Lavrinha Deposit

Legend: A) Plan map with lithological units in the pit region and northern extensions; in B) Section with the 7 lithological units of the deposit and C) Upper Trap Mineralized Schist Model.

Lithological and alteration domains were used to confine the grade shell models in Leapfrog Geo Software®. A nominal 0.2 g/t Au cut-off was used to constrain mineralization for Bonus Trap mineralization and a nominal 0.35 Au g/t cut-off was used to constrain mineralization for Upper Trap mineralization models.

Figure 11-2 shows Nosde and Lavrinha 3D Models, which were constructed for Mineral Resource estimation against current topography for these mines.

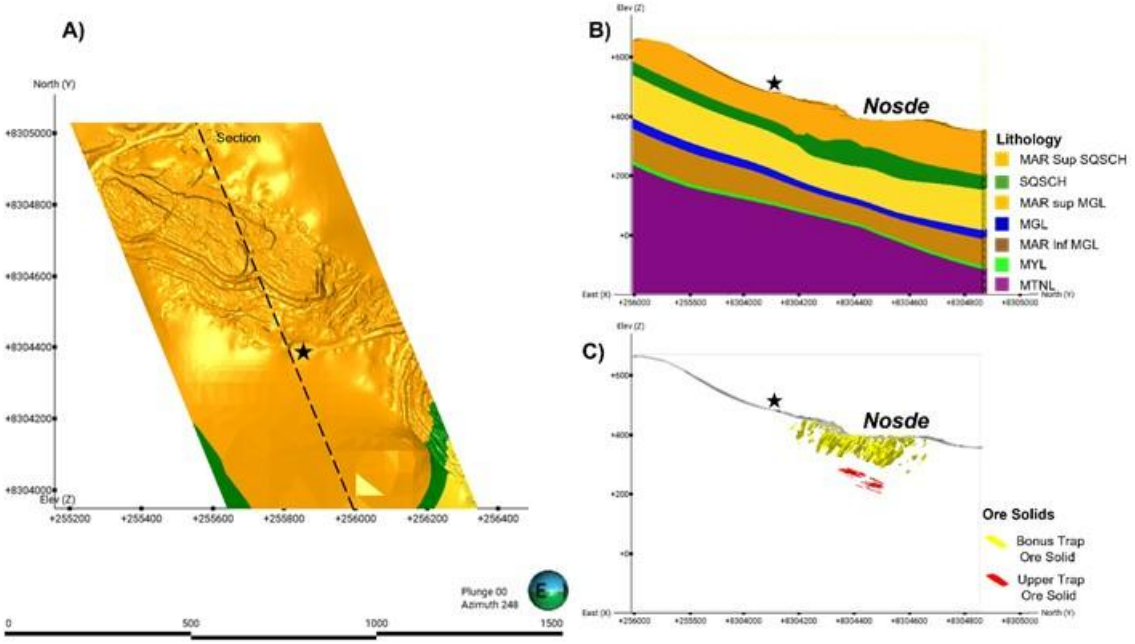


Figure 11-2:Geological model of the Nosde deposit

Legend: A) Plan map with lithological units in the pit region and northern extensions; in B) Section with the 7 lithological units of the deposit and C) Bonus Trap and Upper Trap Schist models.

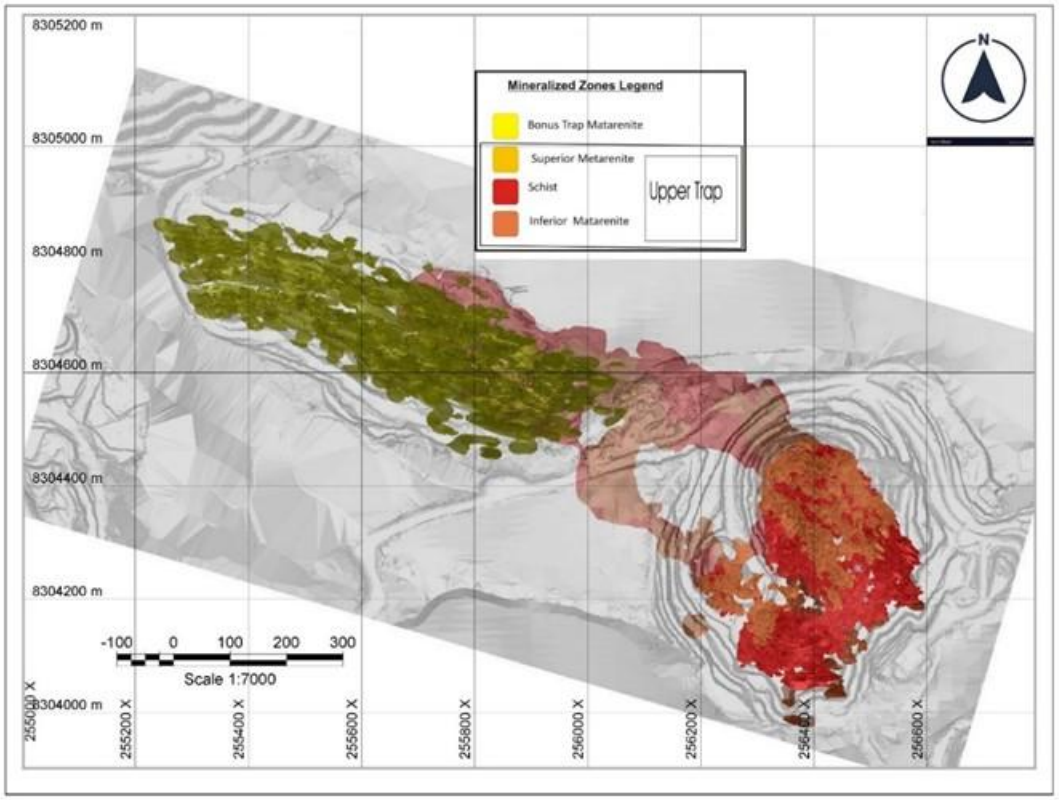


Figure 11-3: Nosde and Lavrinha 3D Models vs. Mines Topographic Surface

models are shown undepleted.

11.1.5 Bulk Density

Before Aura, water immersion bulk density testing was carried out at Lavrinha by Yamana Gold for a total of 318 core samples from 40 drill holes. Aura started to collect density samples in 2021 and during the operation until the end of 2023 for a total of 828 core samples from 72 drill holes.

Water immersion bulk density testing was carried out by Aura from 2021 to the end of 2023 at the Nosde Mine for a total of 1229 core samples from 108 drill holes.

Table 11-3 and Table 11-4 shows the average bulk densities for the main lithological units in the Nosde and Lavrinha mines.

Table 11-3: Average Bulk Densities for the Main Lithological Units in the Lavrinha Deposit

LITHO CODE	DESCRIPTION	Average Bulk Density (t/m^3)
SAP	Saprolite	2.34
SSCH/SQSCH	Sericite/Muscovite Schist	2.79
MAR	Metarenite	2.67
FMAR	Feldspar Metarenite	2.65
MGL	Metaconglomerate	2.69
QZV	Quartz Vein	2.73
MTNL	Metatonalite	2.83
BRXX	Breccia	2.57
CMAR	Conglomeratic Metarenite	2.62
MYL	Mylonite	2.92

Table 11-4: Average Bulk Densities for the Main Lithological Units in the Nosde Deposit

LITHO CODE	DESCRIPTION	Average Bulk Density (t/m^3)
SAP	Saprolite	2.42
SSCH/SQSCH	Sericite/Muscovite Schist	2.78
MPEL	Metapelite	2.49
MAR	Metarenite	2.60
MGL	Metaconglomerate	2.58
FMAR	Feldspar Metarenite	2.65
MYL	Muscovite Schist (Mylonite)	2.82
QZV	Quartz Vein	2.38
MTNL	Metatonalite	2.72
BRXX	Breccia	2.41
CMAR	Conglomeratic Metarenite	2.56

The average bulk densities were used in the block models for specific lithological units that are hosting the mineralization in the Nosde and Lavrinha mines. The average bulk densities used in the Nosde and Lavrinha models were 2.71 g/cm^3 for mineralized metarenite and 2.78 g/cm^3 for mineralized sericite-muscovite schists.

11.1.6 Exploratory Data Analysis

Exploratory analysis was done using Leapfrog Edge® Software 2023.2 version. Statistical analysis of the data was performed on each mineralized domain.

Table 11-5 shows the statistics of raw assay data for each mineralized domain in Nosde and Lavrinha which were used mainly for exploratory data analysis and variogram analysis using exploration diamond drill holes and RC dataset (EX & MP).

Table 11-6 shows the statistics of raw assay data for each mineralized domain in Nosde and Lavrinha which were utilized in final grade estimation using a full database (EX, MP, and CP). The Table 11-5 shows the statistics of data before depletion. The majority of data points related to the grade control database in Lavrinha Mine are mined out.

Sample lengths for diamond drill holes, RC and rotary production holes were 1.0 metre in both Nosde and Lavrinha database.

Table 11-5: Summary Statistics of Raw Au Assay Data of Mineralized Domains in Nosde and Lavrinha Deposits

Au (g/t) Statistics	Bonus Trap Metarenite	Inferior Metarenlte (MAR INF)	Schist	Superior Metarenite (MAR INF)
Count	6669.00	526.00	4651.00	834.00
Lenght (m)	6832.09	530.62	4643.04	822.26
Mean	0.81	1.29	1.41	1.18
SD	2.82	6.26	6.23	3.67
CV	3.49	4.85	4.43	3.10
Variance	7.93	39.17	38.82	13.44
Minimum	0.00	0.00	0.00	0.00
Q1	0.02	0.01	0.02	0.02
Q2	0.08	0.05	0.11	0.07
Q3	0.54	0.44	0.77	0.56
Maximum	80.47	114.53	240.60	34.25

Note: only EX and MP drill holes.

Table 11-6: Summary of Statistics for Raw Assay Data (All database)

Statistics	Bonus Trap Metarenite		Schist		Superior Metarenite (MAR INF)		Inferior Metarenite (MAR INF)	
	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght
Count	135165.00	135165.00	137288.00	137288.00	98039.00	98039.00	91752.00	91752.00
Mean	0.28	1.01	0.55	1.00	0.17	1.02	0.21	1.01
Standard deviation	1.41	0.10	3.34	0.10	1.43	0.14	1.67	0.14
Coefficient of Variation	4.98	0.10	6.04	0.10	8.60	0.14	7.87	0.14
Variance	2.00	0.01	11.16	0.01	2.04	0.02	2.78	0.02
Minimum	0.00	0.30	0.00	0.10	0.00	0.05	0.00	0.20
Lower Quartile	0.02	1.00	0.02	1.00	0.01	1.00	0.02	1.00
Median	0.03	1.00	0.05	1.00	0.02	1.00	0.02	1.00

Statistics	Bonus Trap Metarenite		Schist		Superior Metarenite (MAR INF)		Inferior Metarenite (MAR INF)	
	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght	Au_ppm	Interval Lenght
Upper Quartile	0.11	1.00	0.21	1.00	0.05	1.00	0.08	1.00
Maximum	101.62	7.15	278.76	3.88	161.67	4.90	130.08	3.14

Capping Strategy and Treating of Outliers

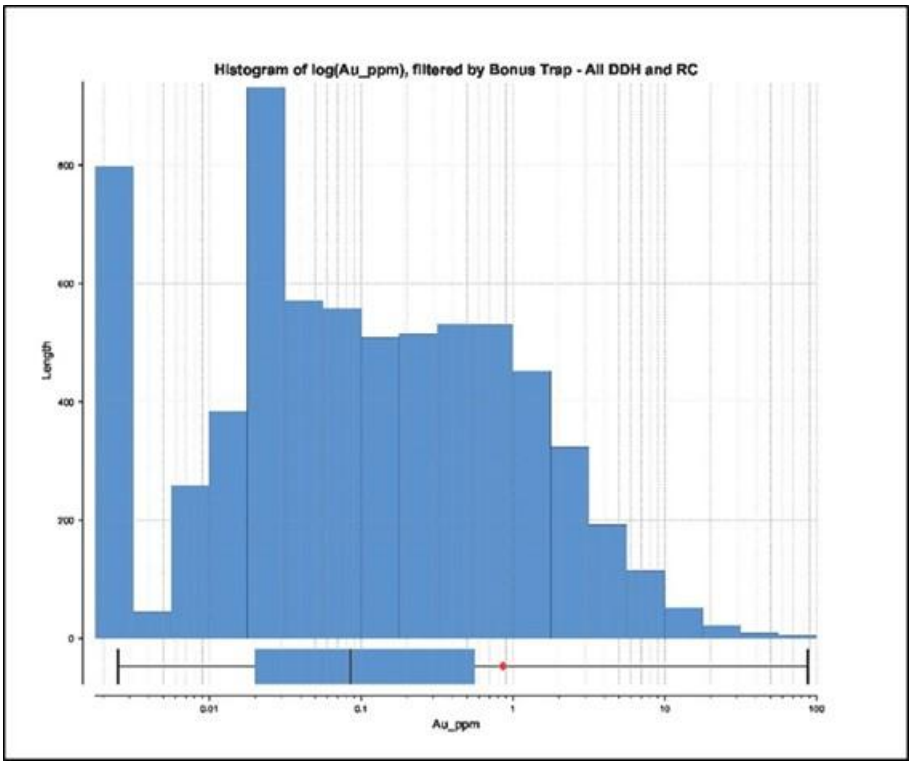
Capping is the process of artificially reducing high values within a sample population that are regarded as statistically anomalous with respect to the population as a whole (outliers), to avoid the distorting influence these values would have on the statistical characteristics of the population if left at their full value. The risk of including atypically high values in a Mineral Resource Estimate is that their contribution to the estimated grade will be disproportionate to their contribution to the tonnage, and therefore the grade of the resource as a whole will be overstated.

Log probability plots are commonly used to determine whether capping is appropriate. If a single sample population is present, the cumulative frequency curve is a relatively straight line; steps in the curve indicate the potential presence of separate or mixed populations.

The capping analysis mainly was done on a database including diamond drilling and RC holes (EX & MP) and then the obtained threshold value was applied for the entire database including grade control data (CP database).

There is noticeable break in the curves of log of probability plots for at 10.0 g/t Au and for Upper Trap schist at 13.0 g/t (Figure 11-4 and Figure 11-6). This values then are taken as capping values for each mineralized domain. For Bonus Trap and Inferior and Superior metarenites a lower capping value at 10.0 g/t Au was adopted based on reconciliation of data and previous operational experiences in the Lavrinha mine. Capping of outliers performed after compositing.

The majority of grade control data in Lavrinha Mine areas were mined out, therefore in Figure 11-5 to Figure 11-7 only log histogram and log probability plots of combination DDH and RC were shown.



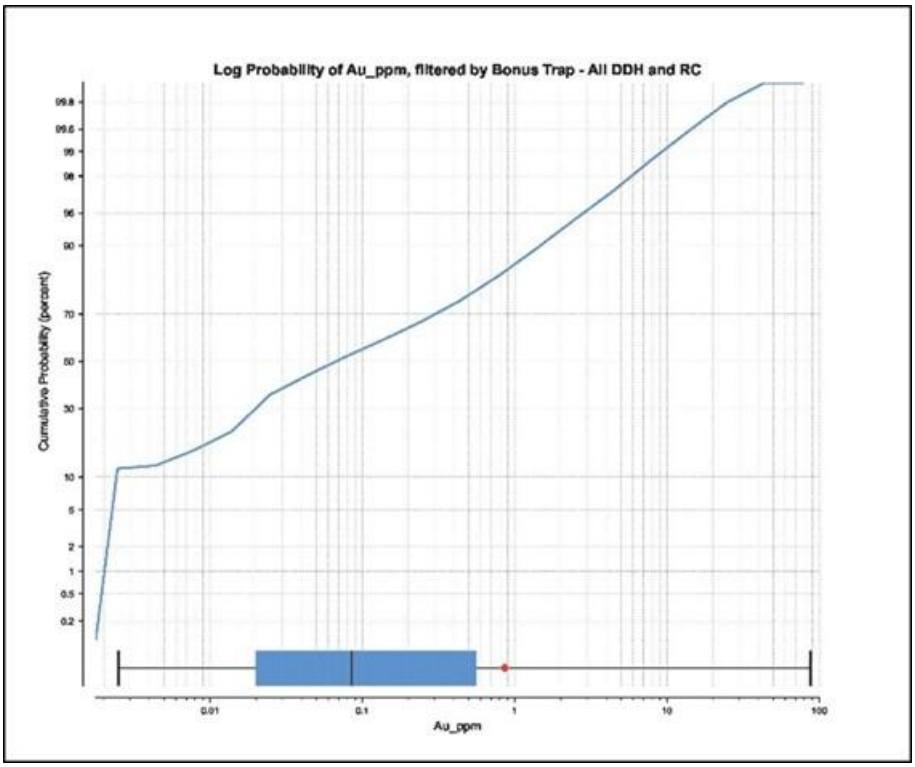


Figure 11-4: Histogram and Log Probability Plots for Raw Gold Assay Values (Nosde Bonus Trap)- All Assay Data

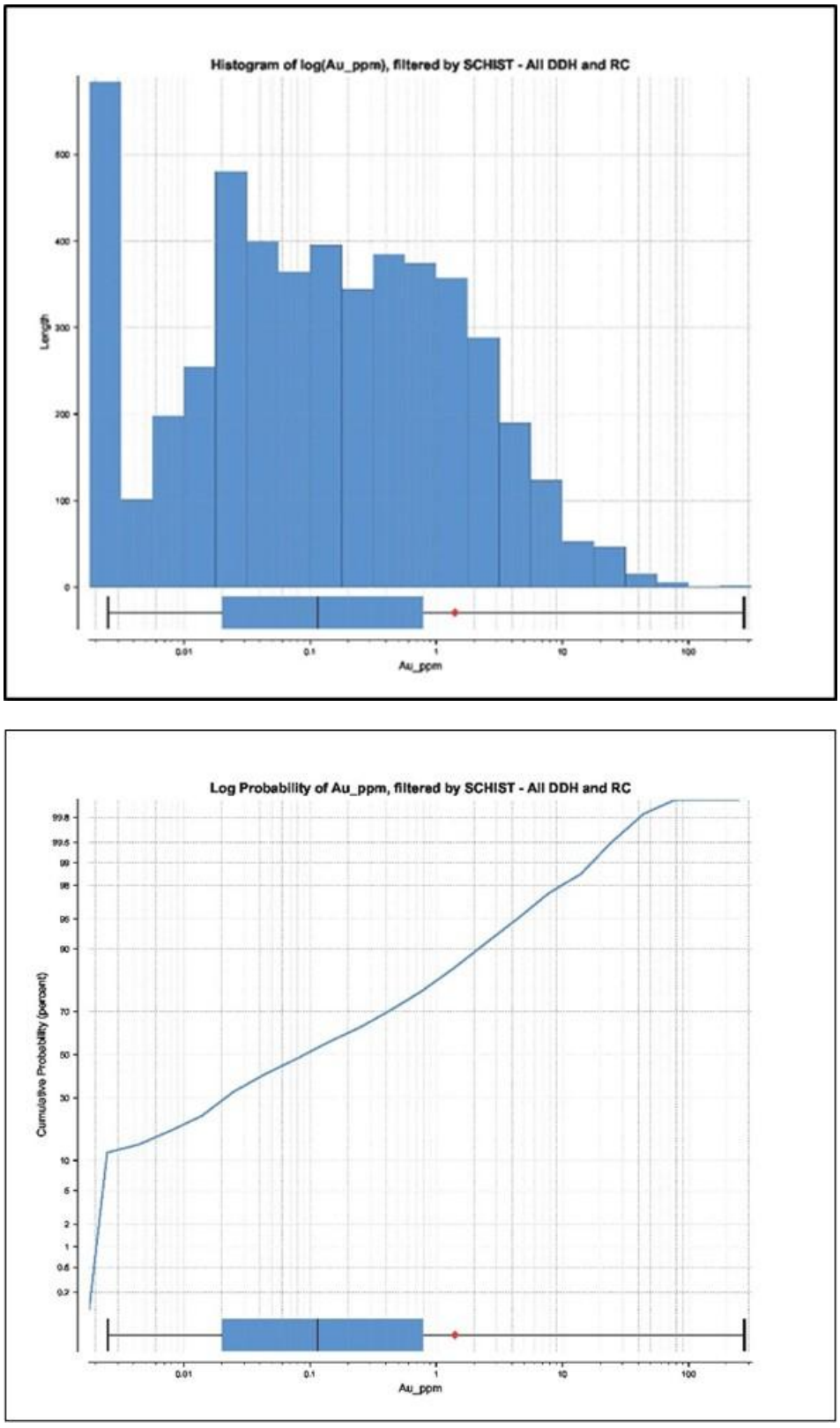


Figure 11-5: Histogram and Log Probability Plots Raw Gold Assay Values (Nosde and Lavrinha Schist)-All assay Data

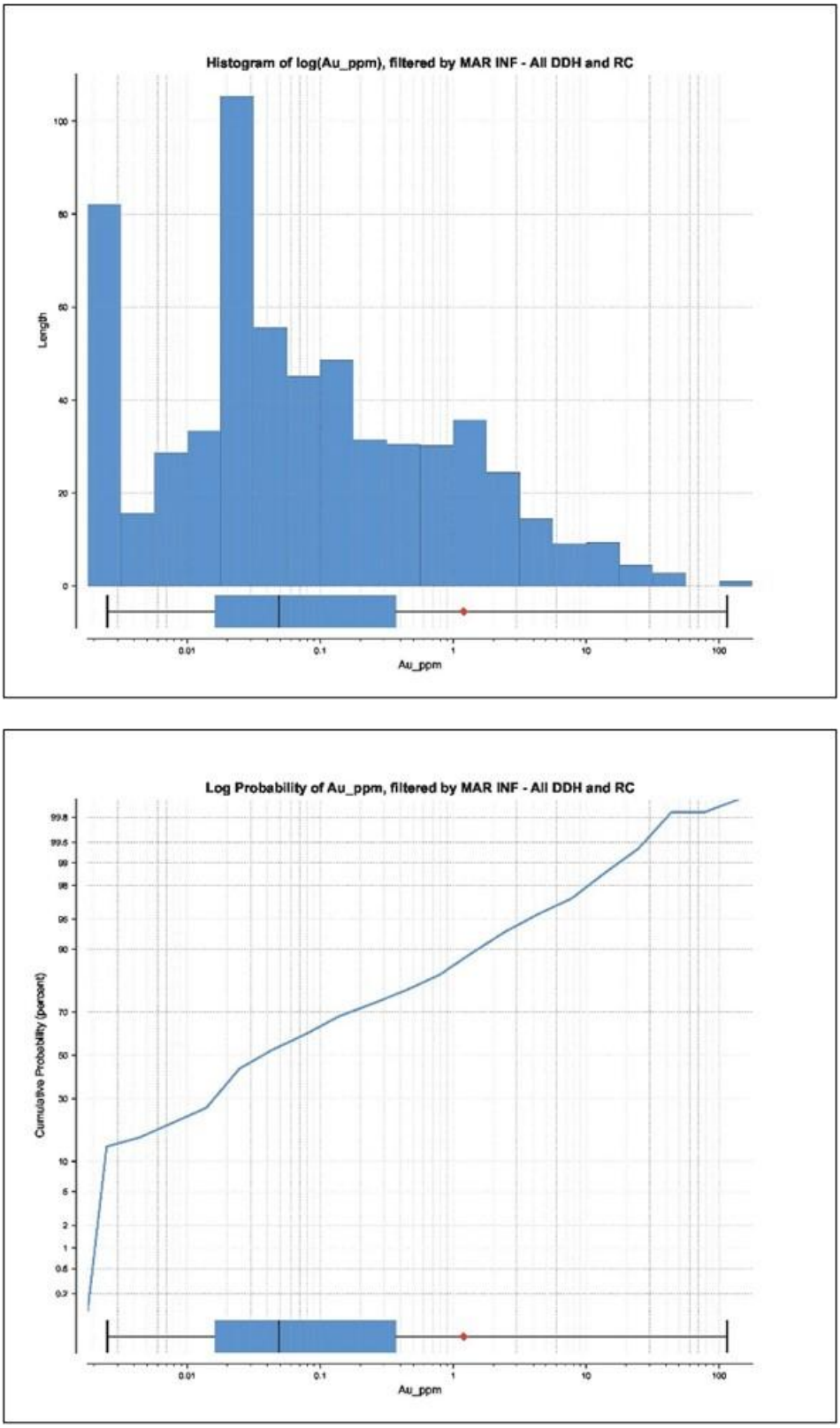


Figure 11-6: Histogram and Log Probability Plots Raw Gold Assay Values (Nosde and Lavrinha Inferior Metarenite)-All Assay Data

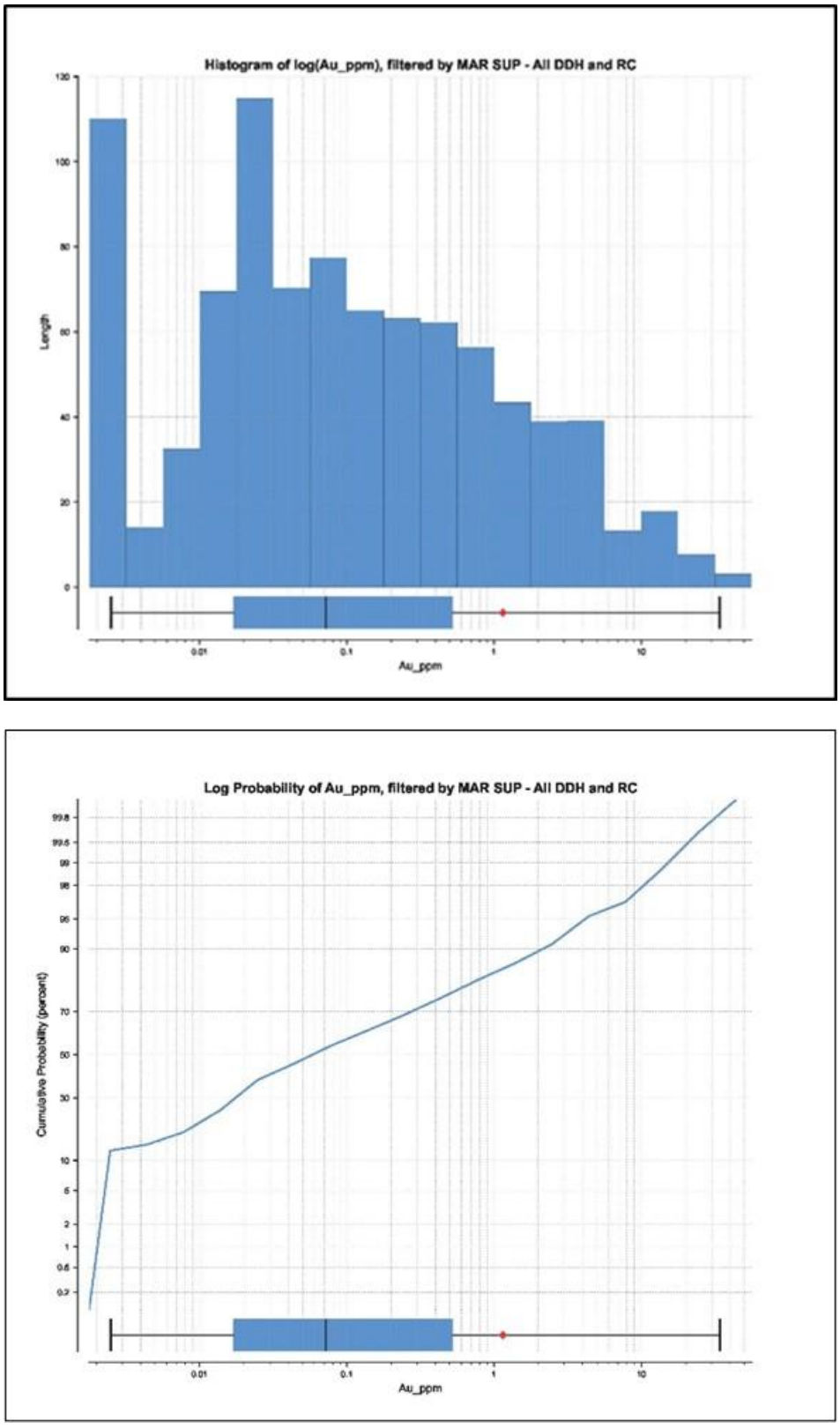


Figure 11-7: Histogram and Log Probability Plots Raw Gold Assay Values (Nosde and Lavrinha Superior Metarenite)-All Assay Data

11.1.6.1 Compositing

Samples within each Bonus Trap and Superior metarenites domains were composited into 2.50m intervals.

Samples within Upper Trap schist and Inferior metarenite domains were composited into 1.25m intervals.

All the short intervals merged into before and after composited values to avoid any bias resulting from short composited intervals.

A total of 89 assays for the Nosde Bonus Trap metarenite domain including grade control data (NSD-CP database) were capped after compositing. A total of 10 assays for the inferior metarenite domain, a total of 16 assays for Superior metarenite and a total of 99 for the Upper Trap schist domain assays were cut after compositing considering full database.

Table 11-7 shows the statistics of composited assay data for each mineralized domain in Nosde and Lavrinha which were utilized mainly for exploratory data analysis and variogram analysis using exploration diamond drill holes, RC dataset and grade control data.

Table 11-7: Summary Statistics of 2.5m and 1.25 Composited Gold Assay Data for Mineralized Domains in Nosde and Lavrinha Deposits

Au (g/t) Statistics	Bonus Trap Metarenite	Inferior Metarenlte (MAR INF)	Schist	Superior Metarenite (MAR INF)
Count	3120.00	506.00	4289.00	387.00
Lenght (m)	6742.00	534.10	4789.20	759.40
Mean	0.86	1.31	1.43	1.27
SD	2.03	5.18	5.43	2.51
CV	2.38	3.96	3.81	1.98
Variance	4.13	26.87	29.47	6.30
Minimum	0.00	0.00	0.00	0.00
Q1	0.09	0.02	0.05	0.08
Q2	0.34	0.12	0.30	0.42
Q3	0.83	0.82	1.08	1.24
Maximum	39.22	88.08	189.87	24.12

Figure 11-8- to Figure 11-11 show histograms and log of probability plots for composited assays of all the mineralized domains in Nosde and Lavrinha deposits.

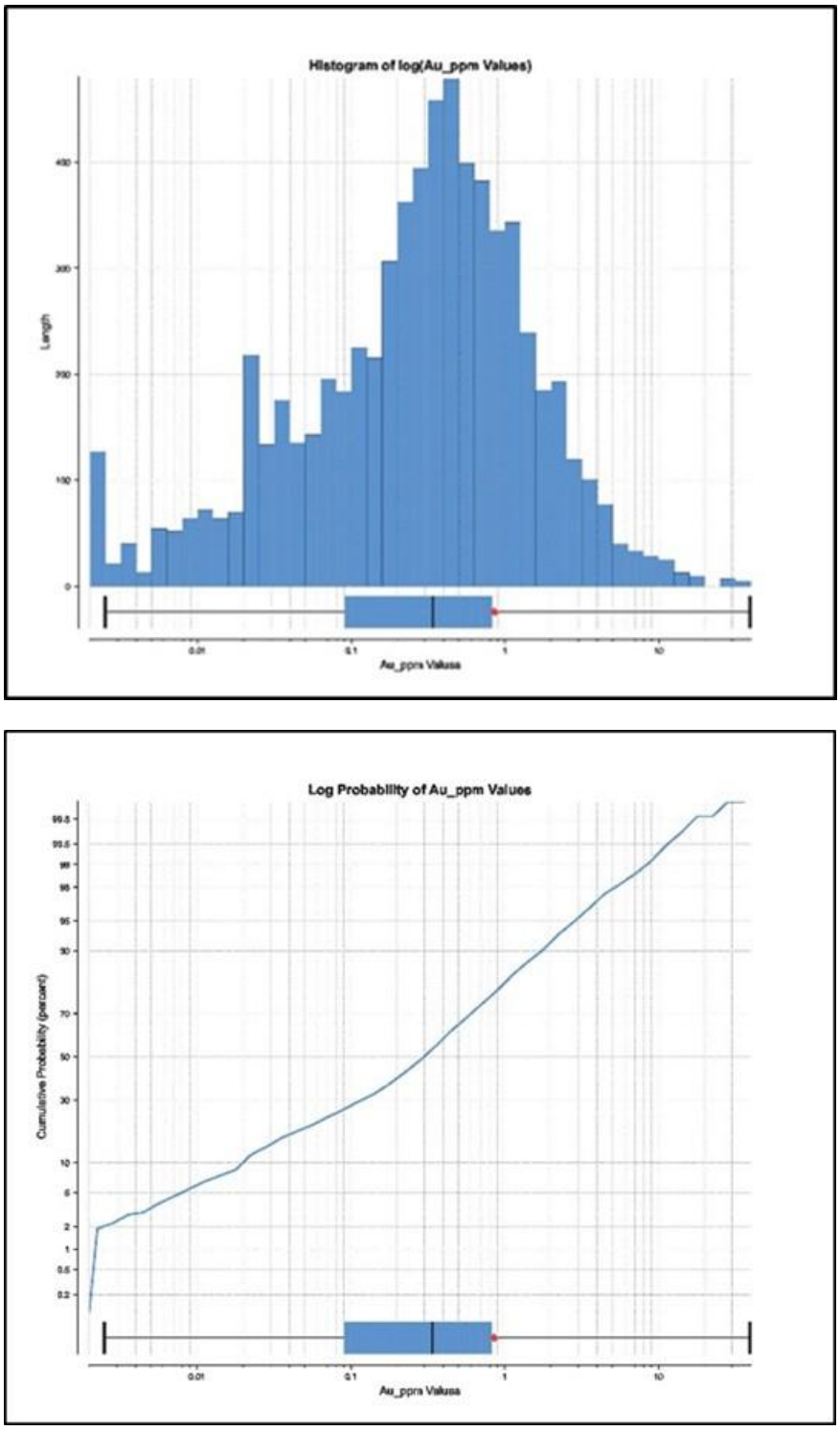


Figure 11-8-: Log Histogram and Log Probability Plots Composited Gold Assay Values (Nosde Bonus Trap)

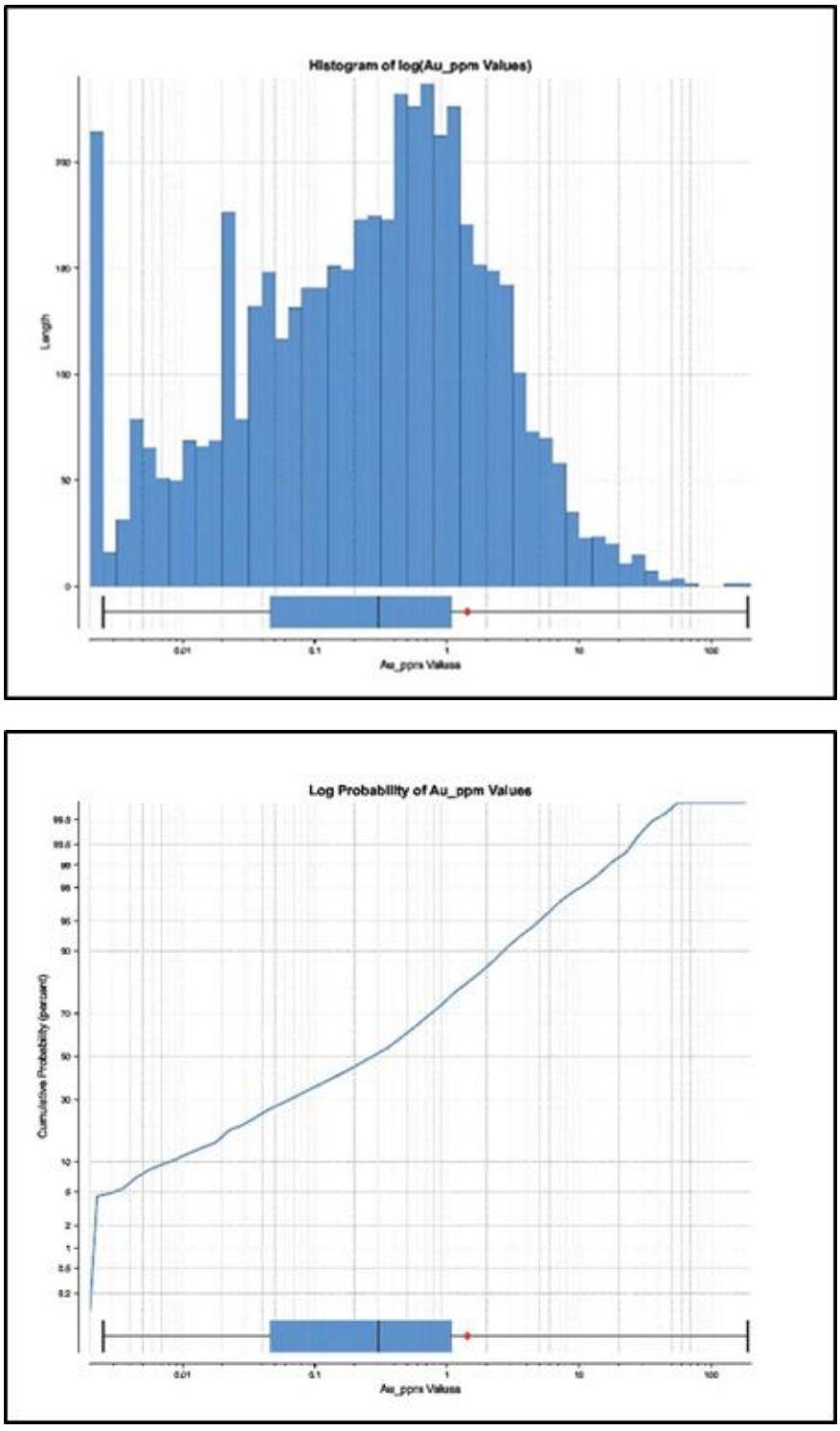


Figure 11-9: Log Histogram and Log Probability Plots Composited Gold Assay Values (Nosde and Lavrinha Schist)

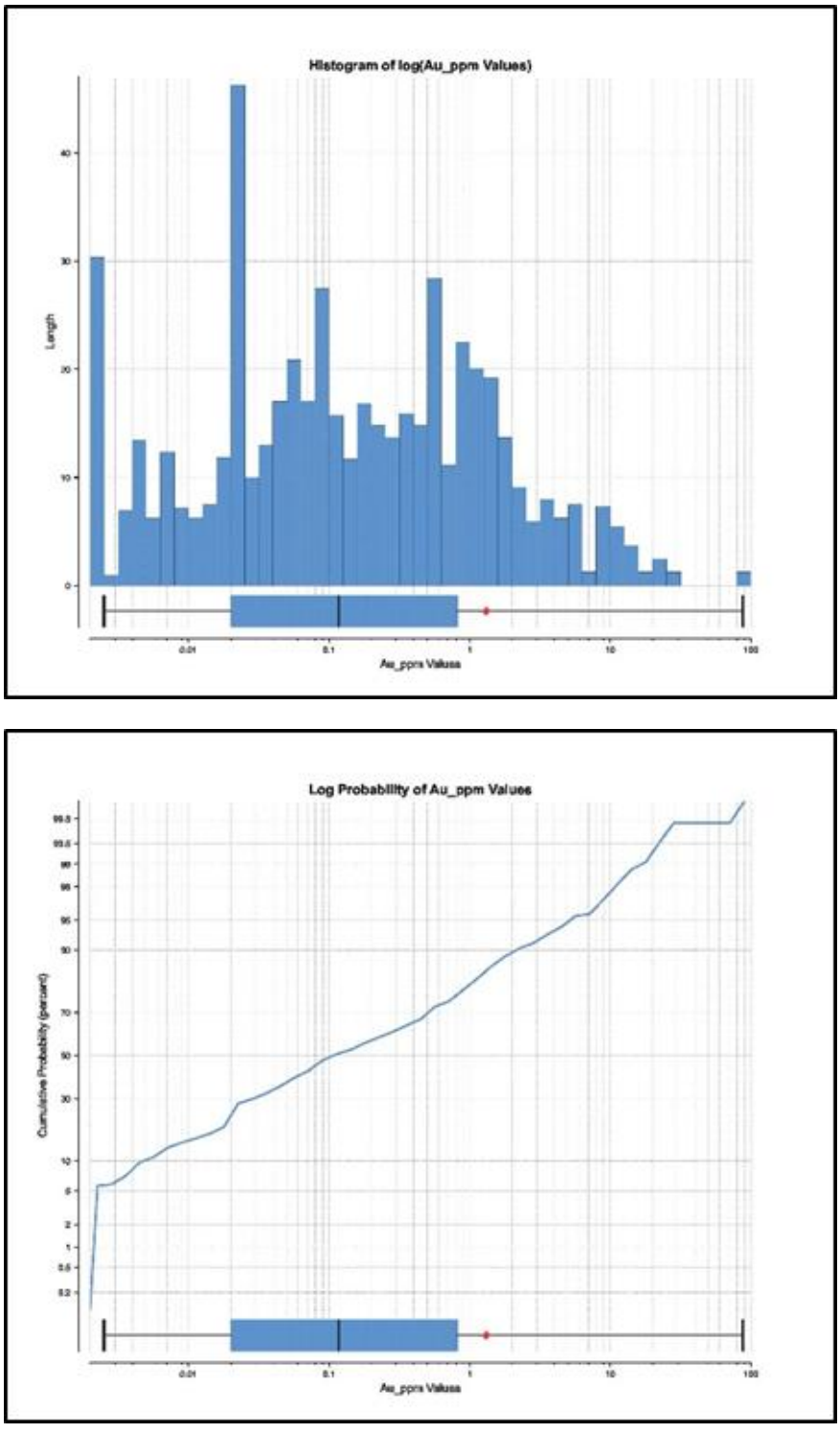


Figure 11-10: Log Histogram and Log Probability Plots Composited Gold Assay Values (Nosde and Lavrinha Inferior Metarenite)

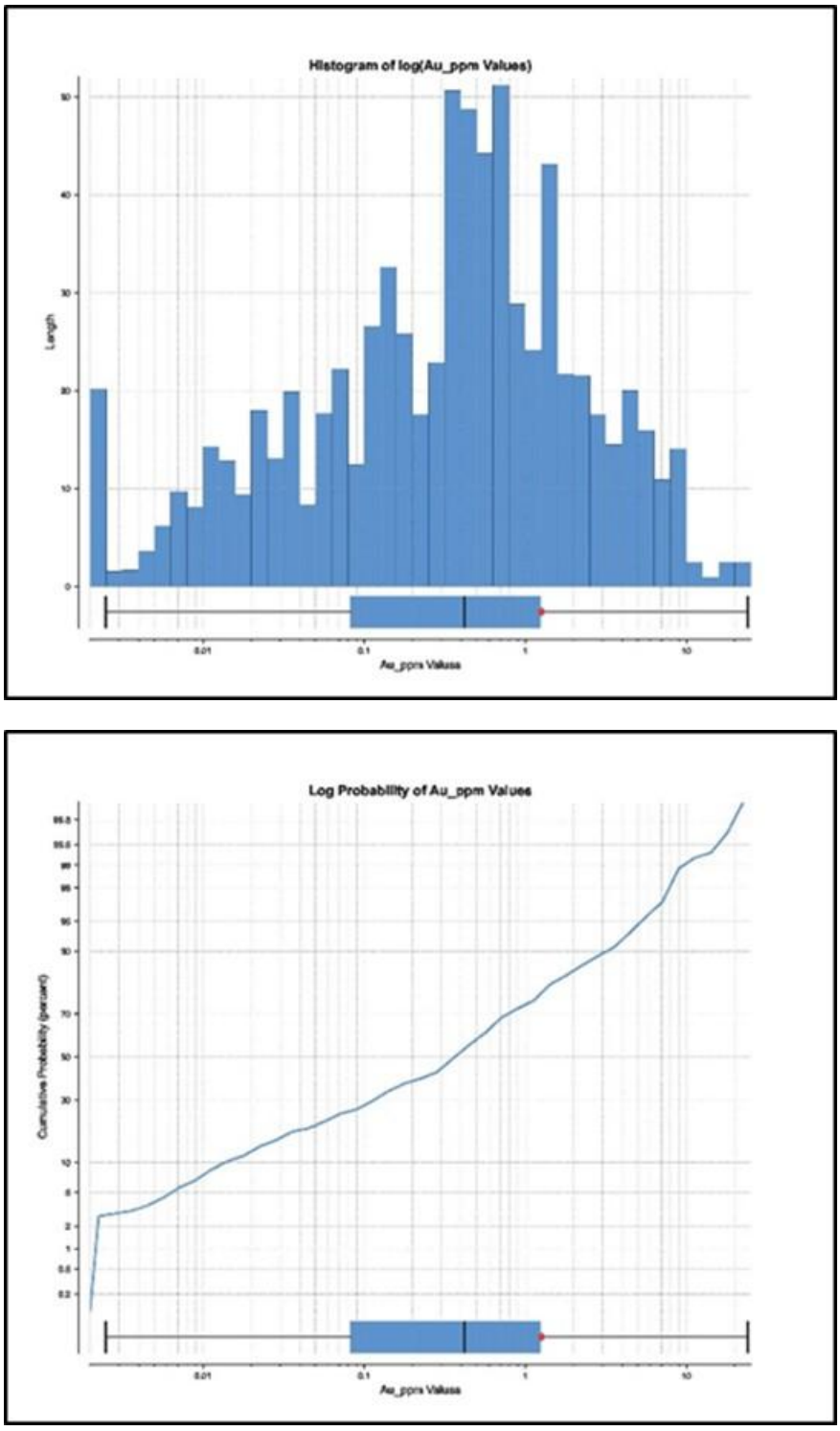


Figure 11-11: Log Histogram and Log Probability Plots Composited Gold Assay Values (Nosde and Lavrinha Superior Metarenite)

11.1.7 Variogram Analysis

As it was discussed before in section 11.1.6 the exploratory analysis of composited data and variogram analysis only were performed on dataset excluding grade control data. The search ellipsoids for grade estimation were developed using variograms for each domain. Variograms were established in each domain for gold in the same structural orientations used to develop the

mineralization solids. Gold was modeled using two spheroidal structures and a moderate nugget, both consistent with the grade continuity and known controls on mineralization.

Variogram model parameters and orientation data of rotated variogram axes are shown in Table 11-8. Radial plots are shown in Figure 11-12 for each mineralized domain and gold grade variograms directions including downhole direction for each mineralized domain are shown in Figure 11-13 to Figure 11-6.

Table 11-8: Variograms Model Parameters (m)

Domain	Nugget	Spherical Structure 1				Spherical Structure 2			
		Sill	Major	Semi-Major	Minor	Sill	X	Y	Z
Bonus Trap	0.81	0.098	9	20	6	0.092	105	30	20
Schist	0.56	0.28	21	12	6.5	0.16	195	120	30
Inferior Metarenite	0.55	0.35	32	11	5	0.1	60	50	10
Superior Metarenite	0.8	0.13	90	30	2	0.07	120	100	20

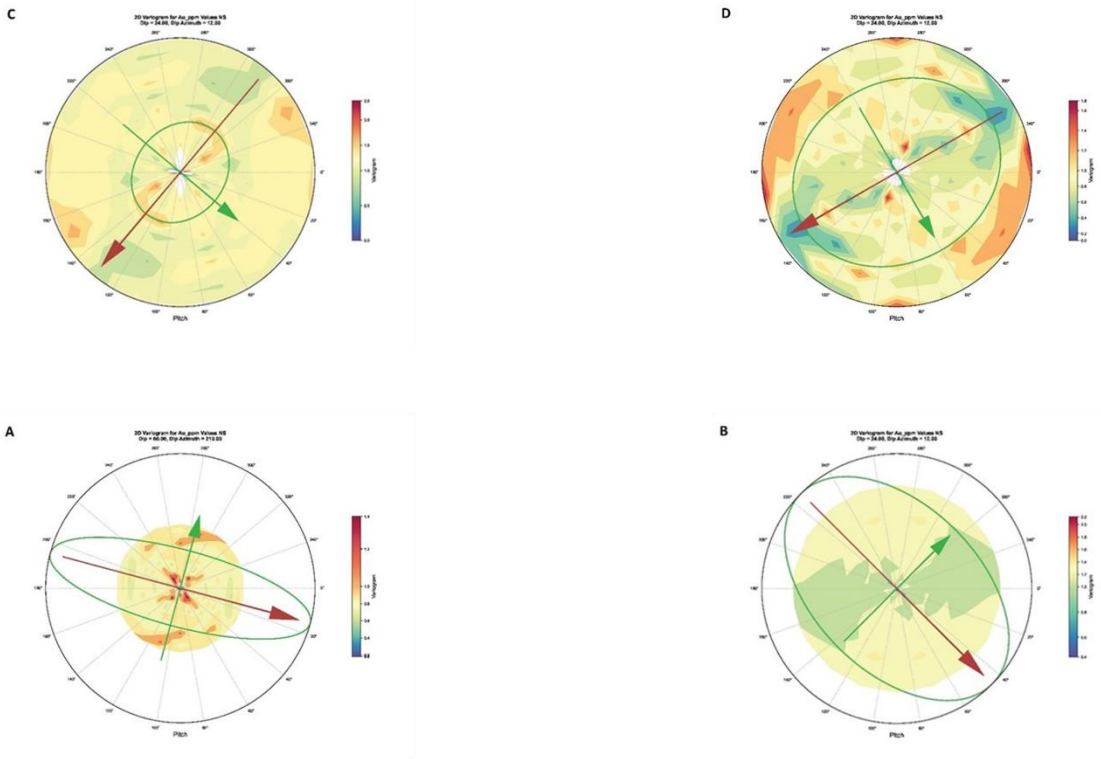
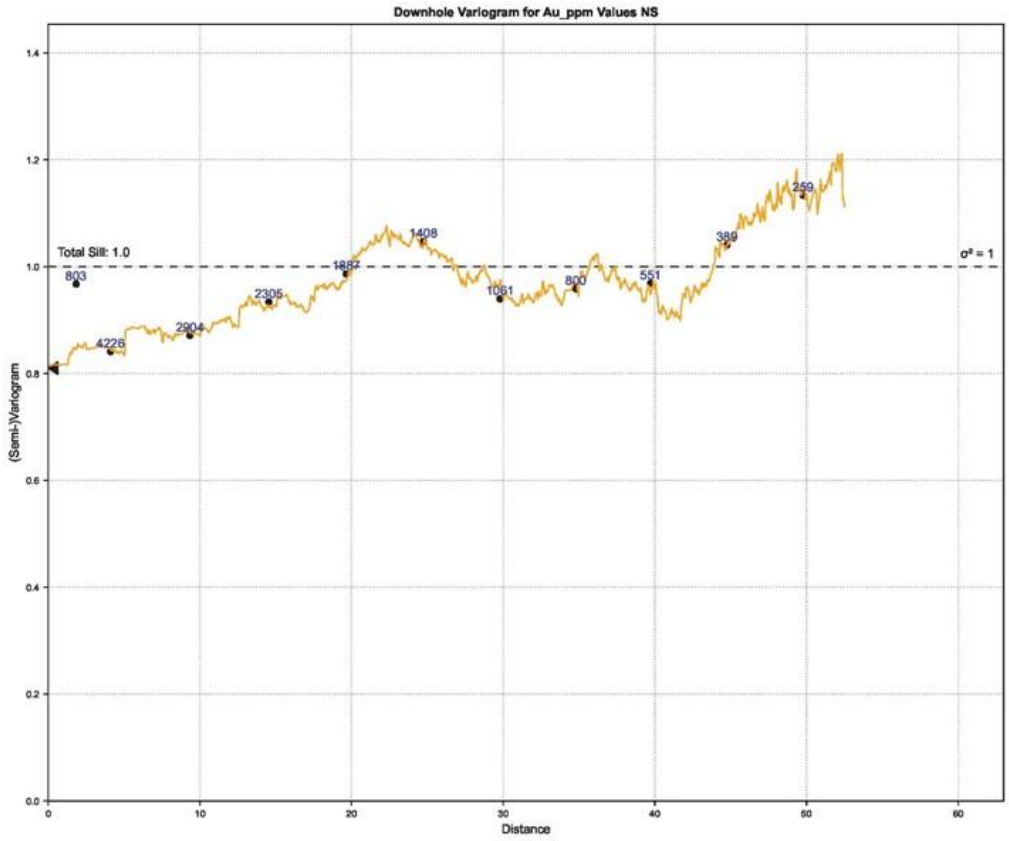
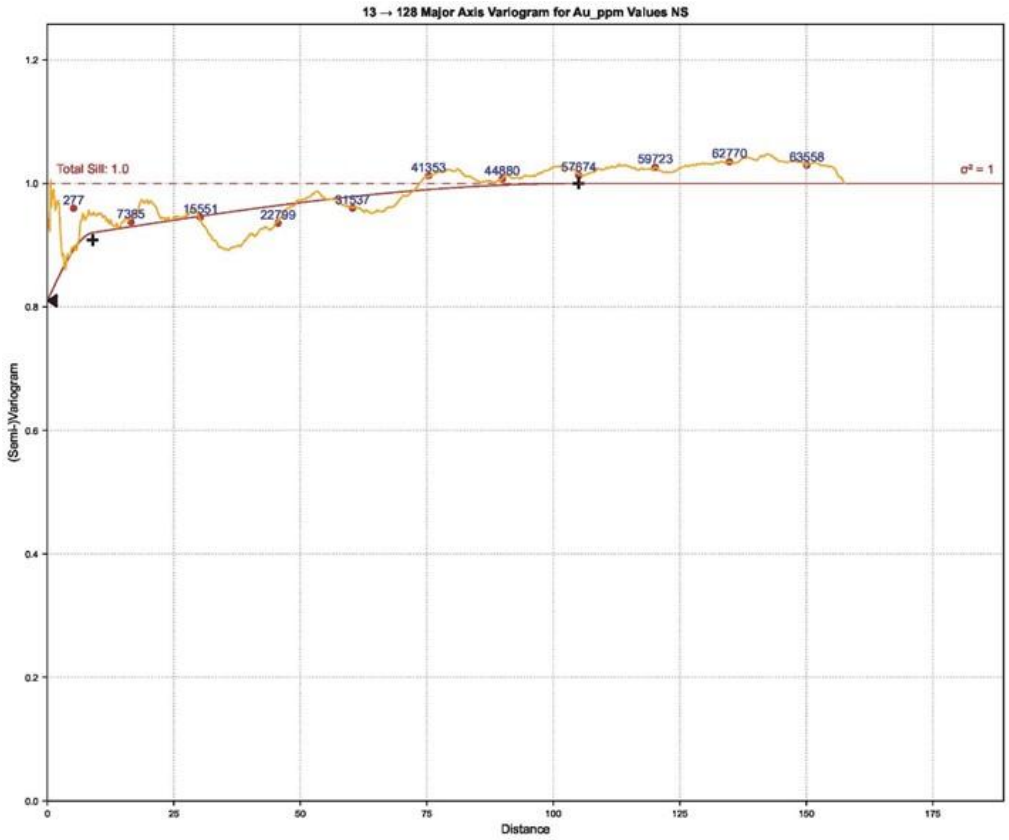


Figure 11-12: Radial Plots for Nosde and Lavrinha domains

Legend: A) Bonus Trap B) Schist C) Inferior metarenite and D) Superior Metarenite


Downhole Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
803
4226
2904
2305
1887
1408
1061
800
551
389
259
(Semi-)Variogram
Distance


13 → 128 Major Axis Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
277
7385
15551
22799
31537
41353
44880
57874
59723
62770
63558
(Semi-)Variogram
Distance

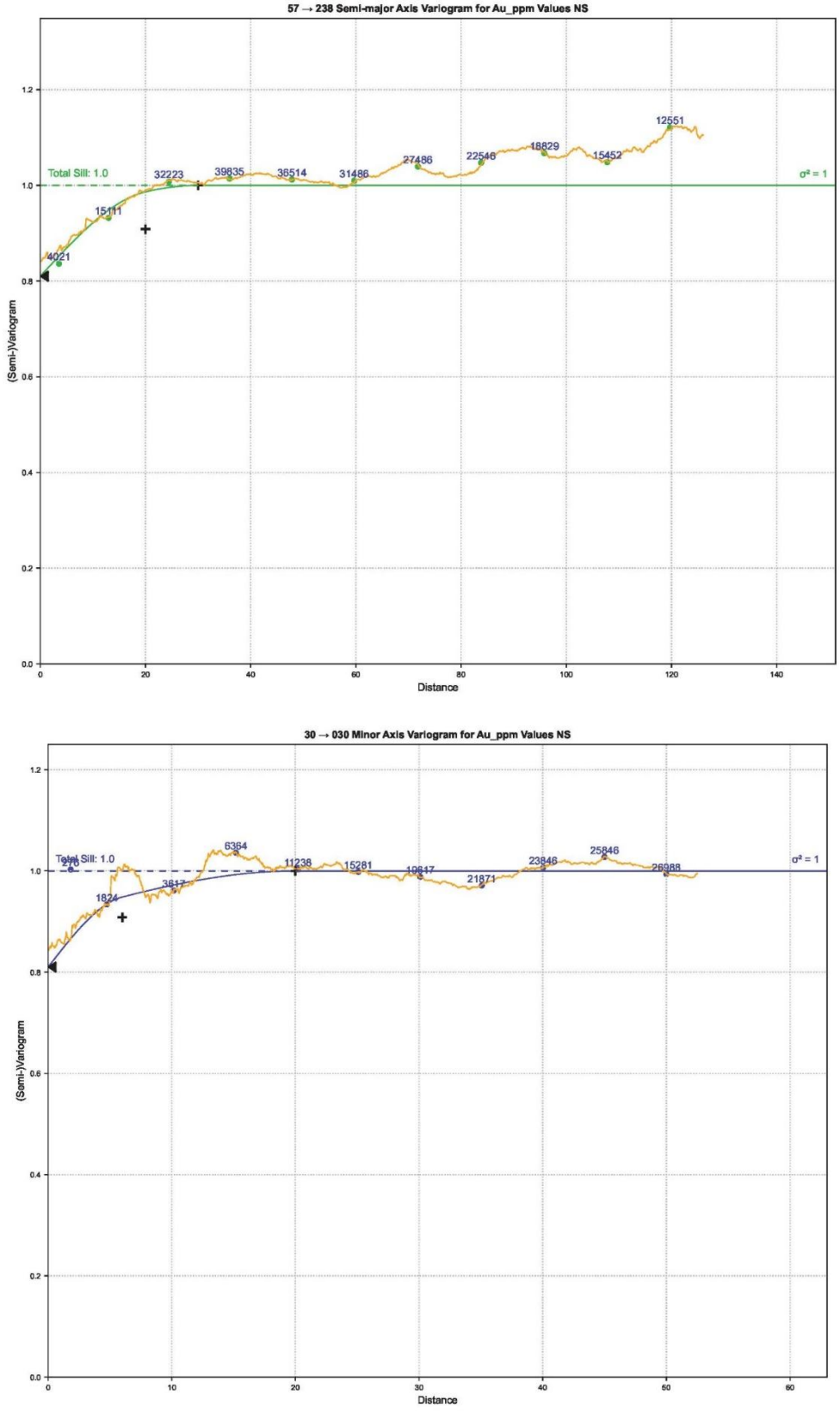
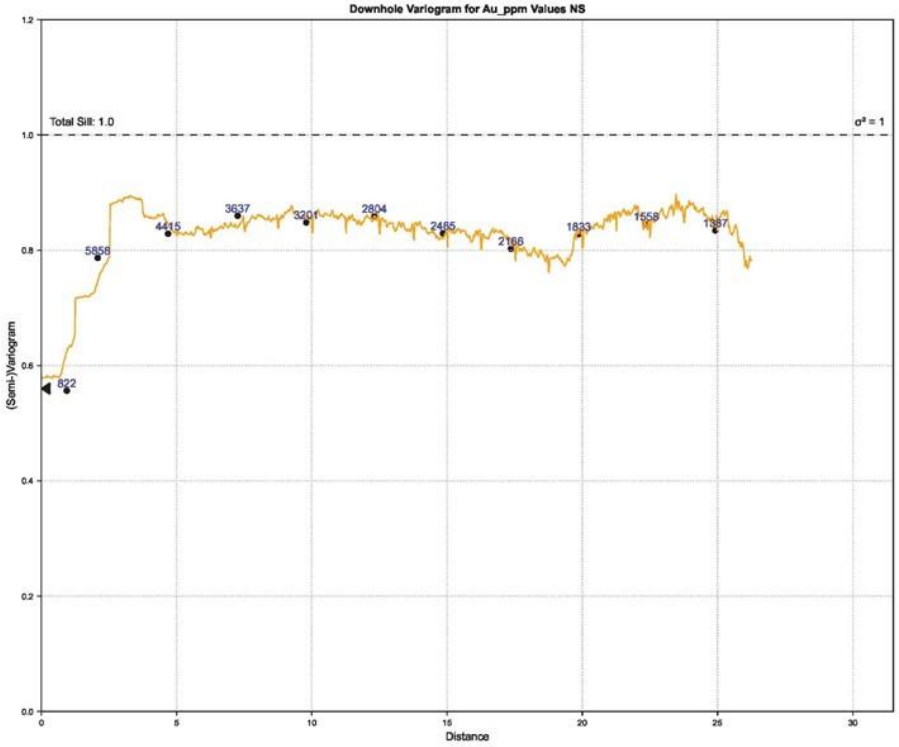
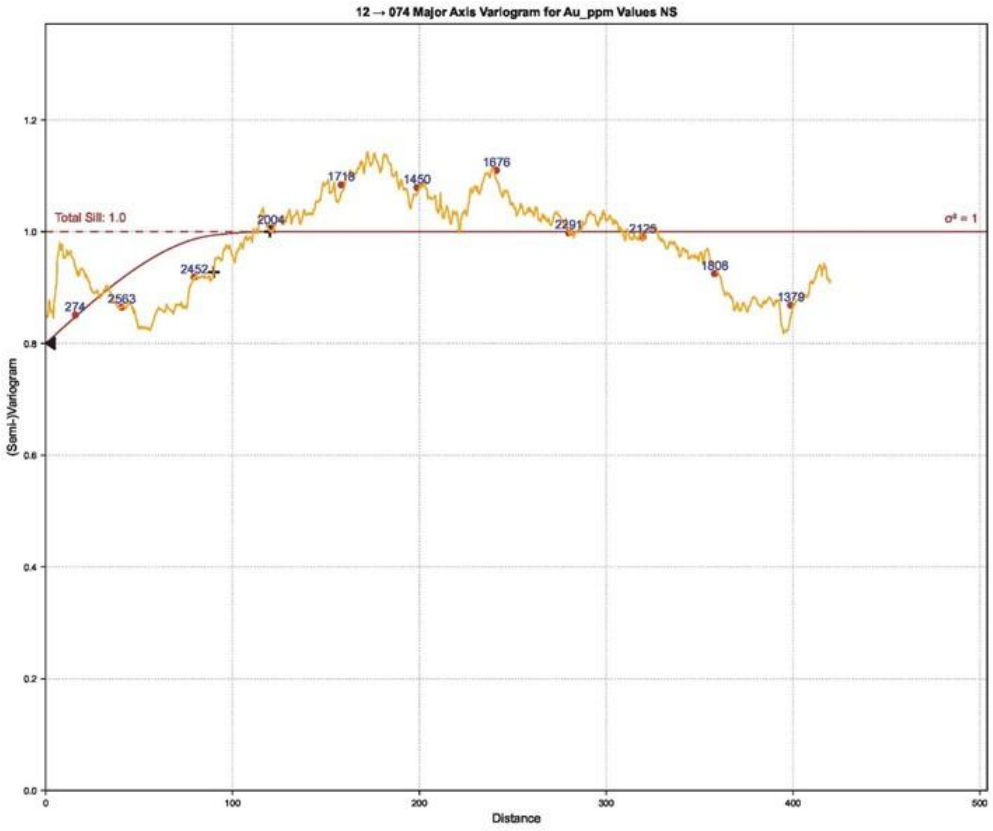


Figure 11-13 : Nosde Bonus Trap Variograms


Downhole Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
(Semi-)Variogram
Distance
822
5858
4415
3637
3201
2804
2485
2166
1833
1558
1387


12 → 074 Major Axis Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
(Semi-)Variogram
Distance
274
2563
2452
2004
1718
1450
1676
2291
2125
1808
1379

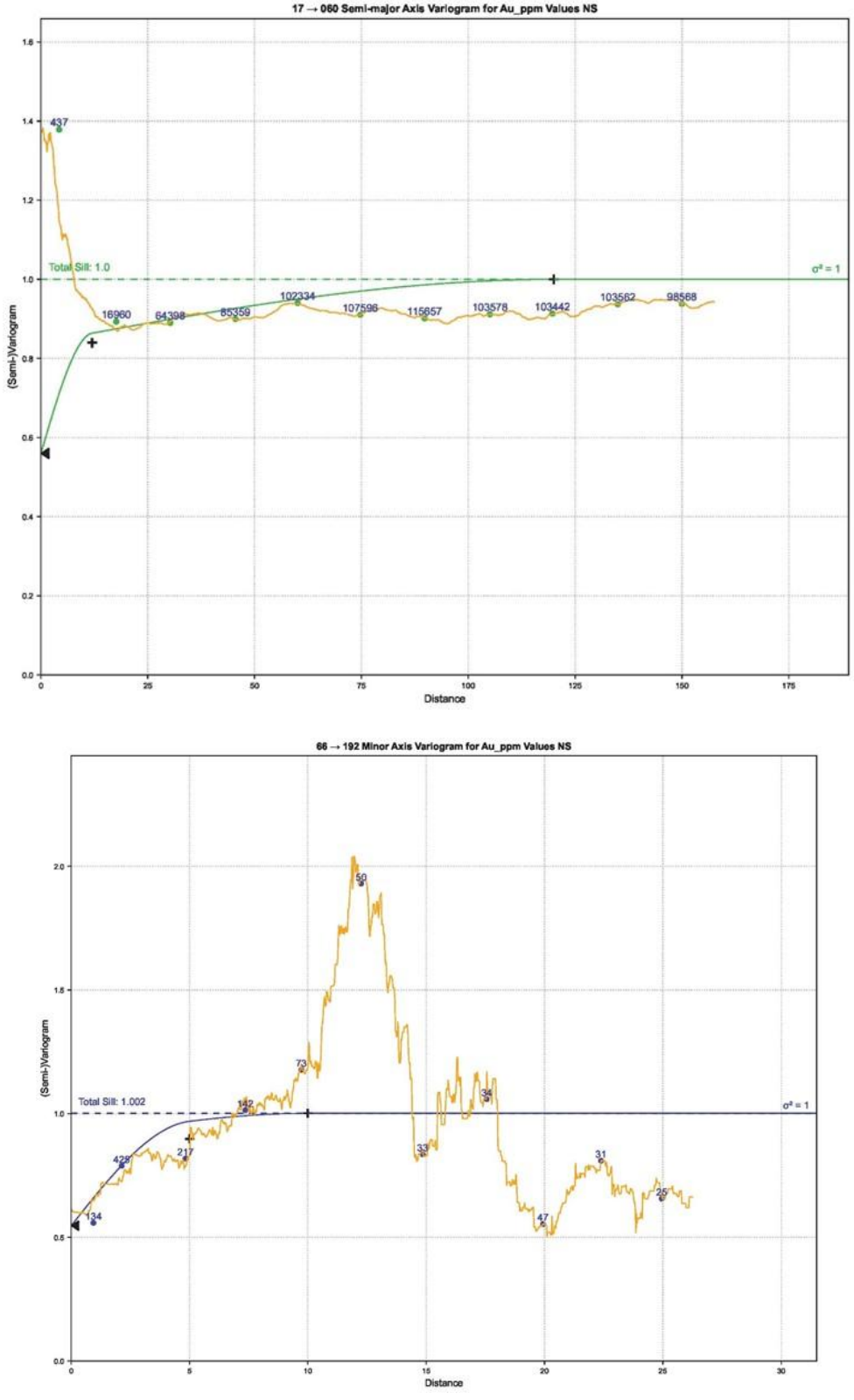
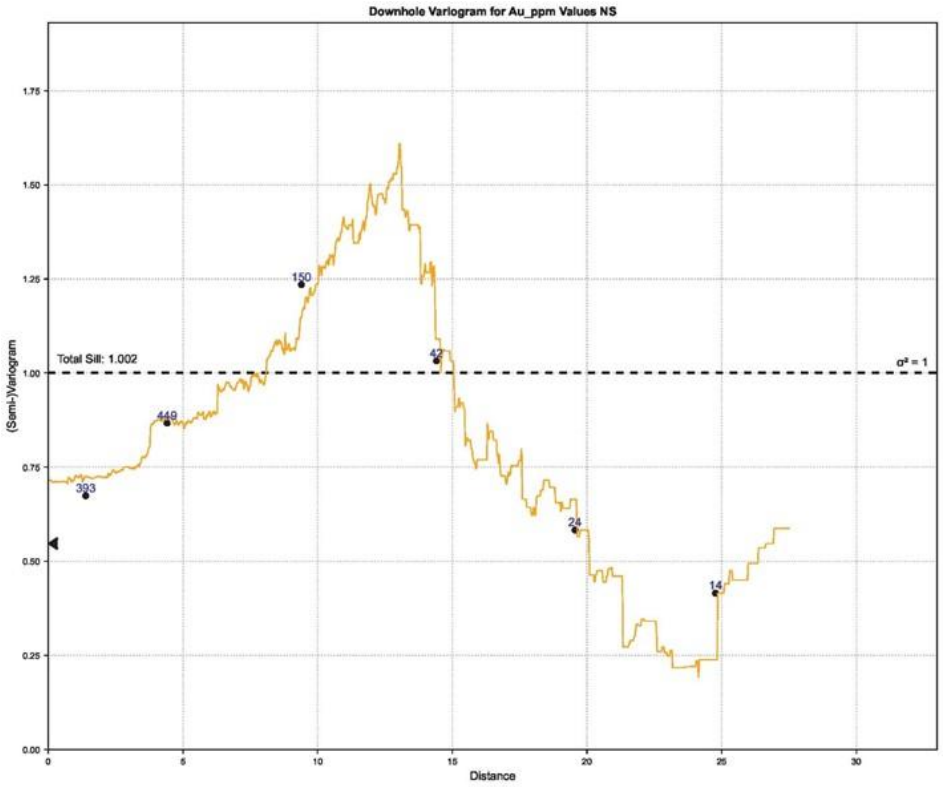
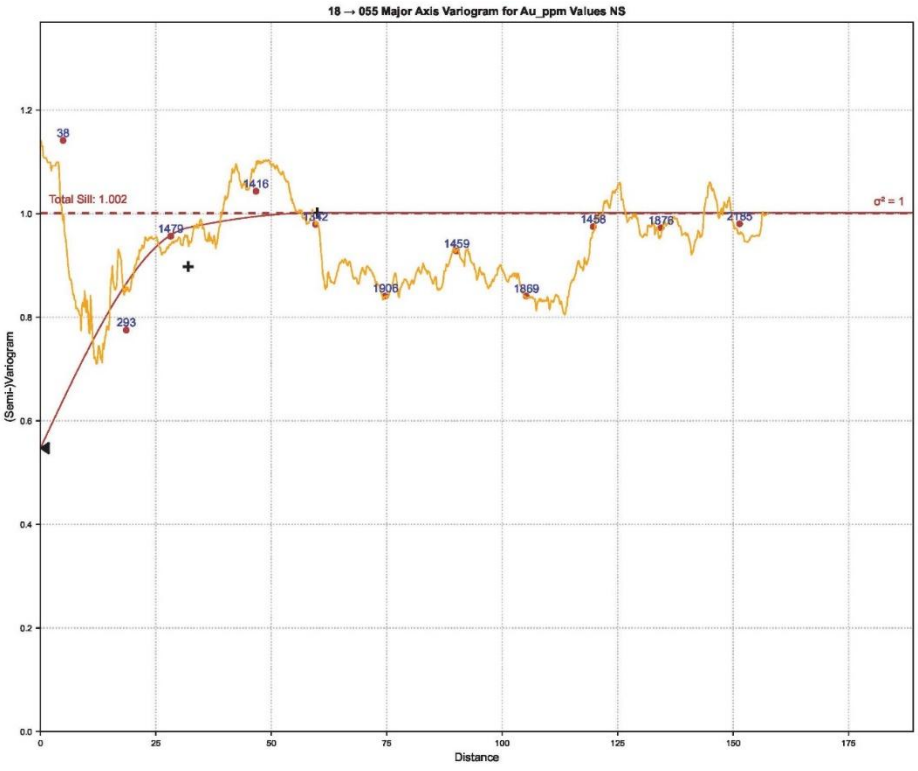


Figure 11-14: Nosde and Lavrinha Schist Variograms


Downhole Variogram for Au_ppm Values NS
(Semi-)Variogram
Distance
Total Sill: 1.002
σ² = 1
150
42
449
393
24
14


18 → 055 Major Axis Variogram for Au_ppm Values NS
(Semi-)Variogram
Distance
Total Sill: 1.002
σ² = 1
38
1416
1479
1742
1459
1908
1869
1458
1878
2155
293

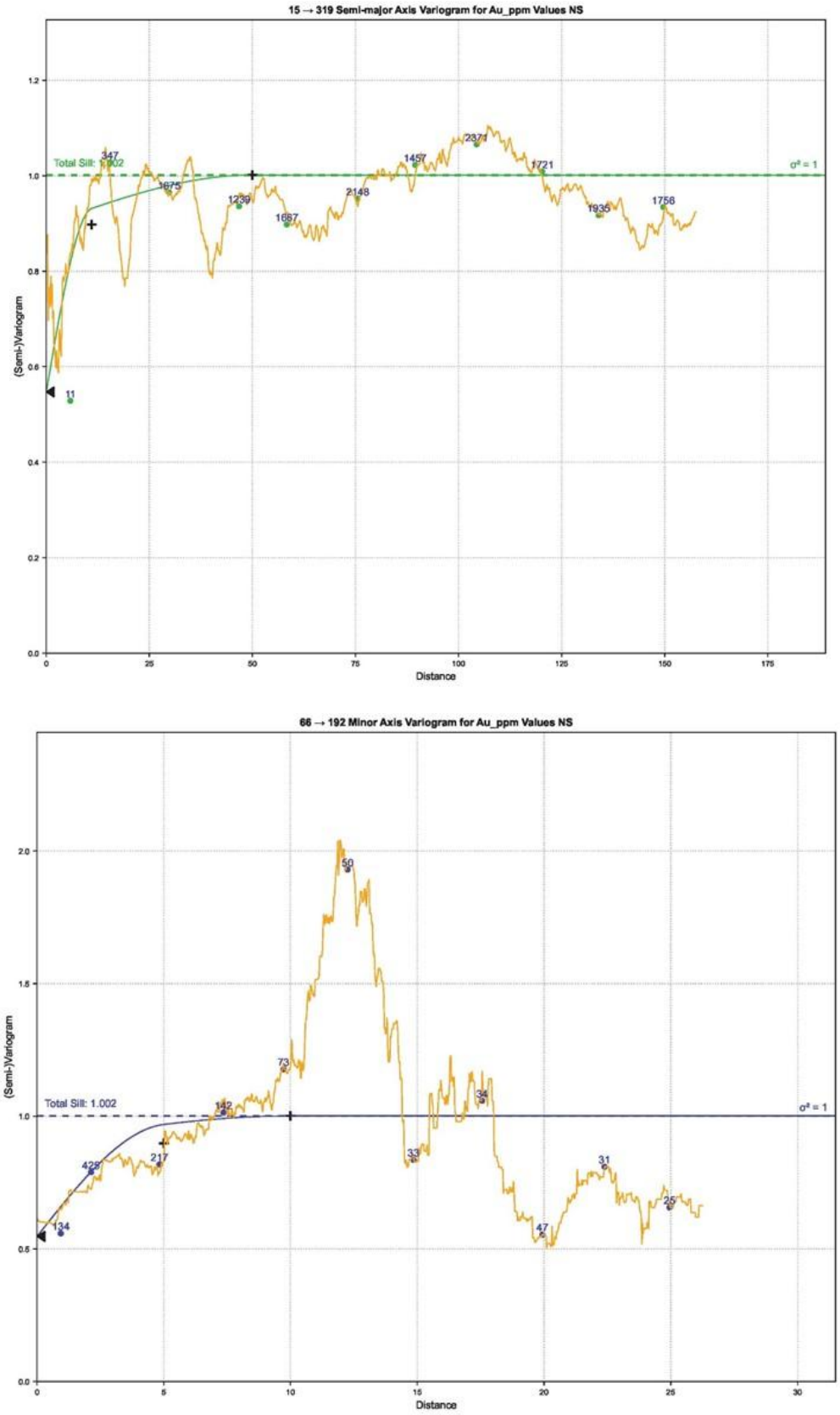
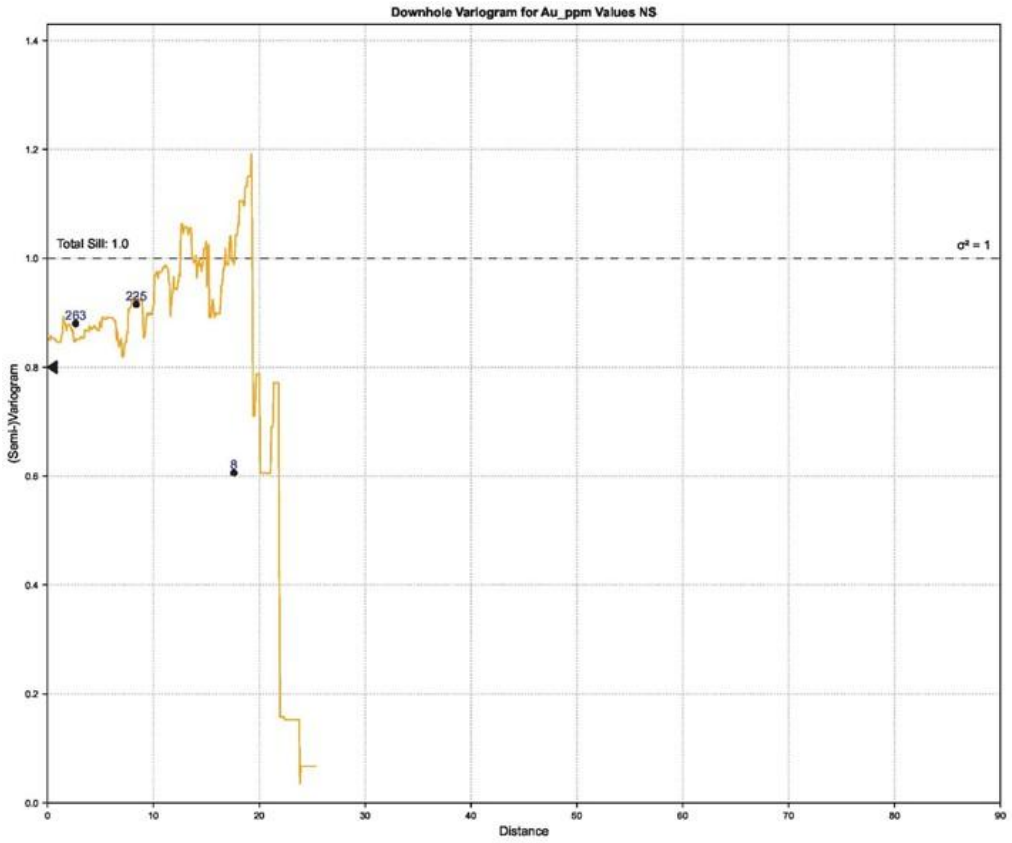
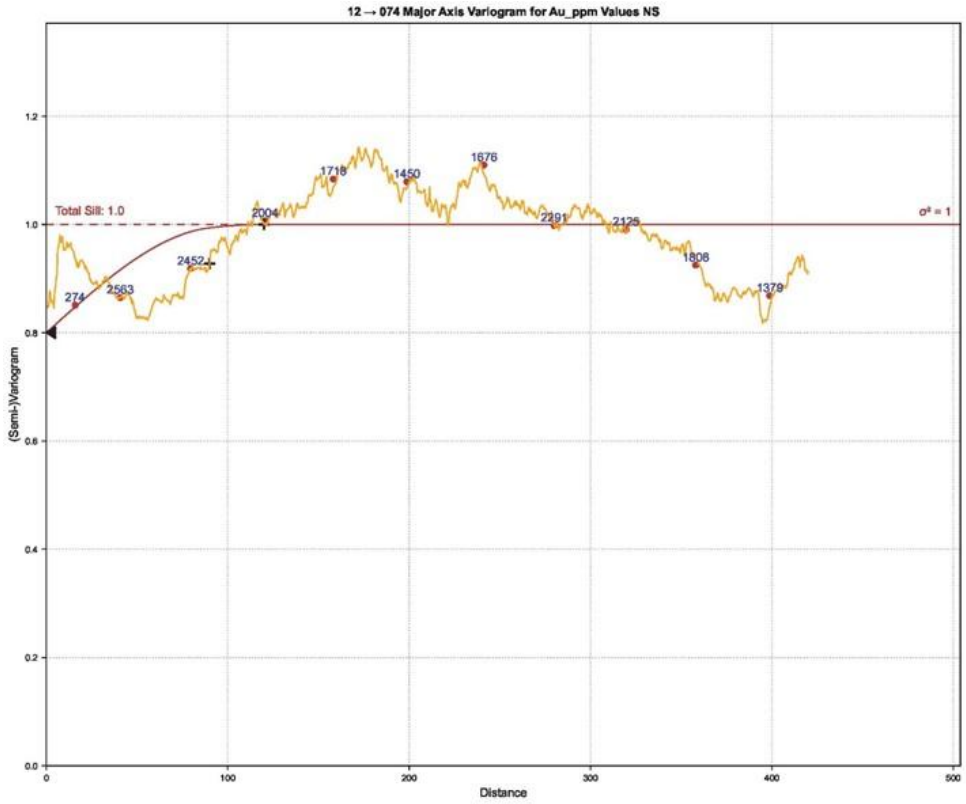


Figure 11-15: Nosde and Lavrinha Inferior Metarenite Variograms


Downhole Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
263
225
8
(Semi-)Variogram
Distance


12 → 074 Major Axis Variogram for Au_ppm Values NS
Total Sill: 1.0
σ² = 1
274
2583
2452
2004
1718
1450
1678
2291
2125
1808
1379
(Semi-)Variogram
Distance

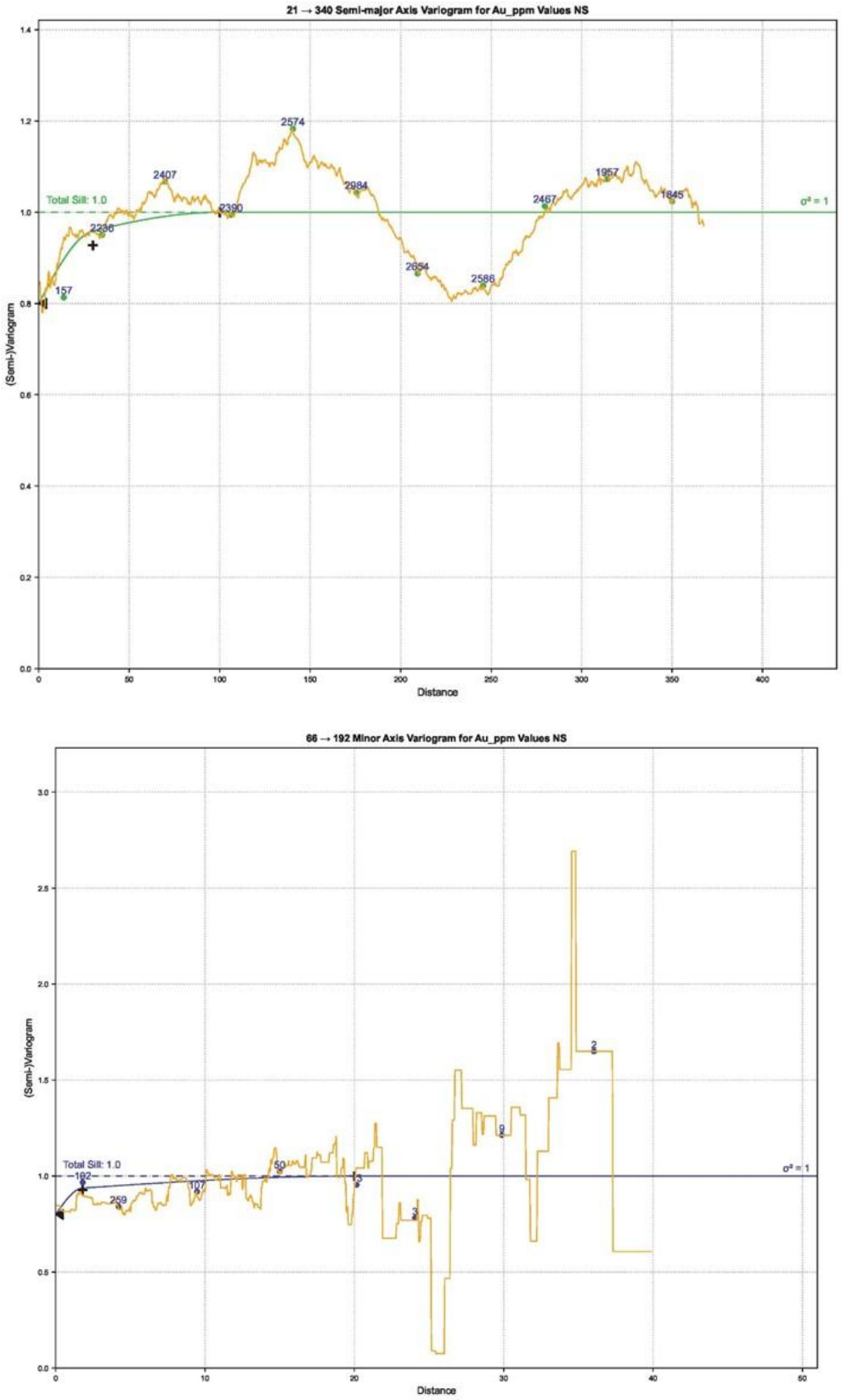


Figure 11-16: – Nosde and Lavrinha Superior Metarenite Variograms

Summary findings from the variography analyses includes:

- The nugget effect is high for Bonus Trap metarenite and Superior metarenite approximately at 80% of the sill regardless of grade shell, capping, or exclusion of grade control data. Given the known deposit style of orogenic gold, observed mineralization in the core, the two sets of quartz veins as dominant features of gold mineralization, free gold, and spatial distribution of grades, a high nugget effect is expected.
- The nugget effect is relatively high for Upper Trap Schist and Inferior metarenites approximately at 55% of the sill regardless of grade shell and capping. Given the known deposit style of orogenic gold, observed mineralization in the core, free gold, and spatial distribution of grades, a relatively high nugget effect is expected.
- First structure ranges are constantly short typically at 20 m (ranges from 5m to 20m depending on direction of continuity). However, the second structure ranges are relatively oMaximum of continuity (>200m) is shown for Nosde and Lavrinha schist along strike. This is also expected due to the nature of mineralization and the connection of the Upper Trap schist from Nosde to Lavrinha deposit.

11.1.8 Contact Plots

Contact plots were prepared at the boundary between each estimation domain to determine the nature of the contacts and how they should be treated during gold grade estimation. Some examples of the contact plot analysis are shown in Figure 11-17 and Figure 11-18. Contact plots showed hard boundaries for all mineralized domains.

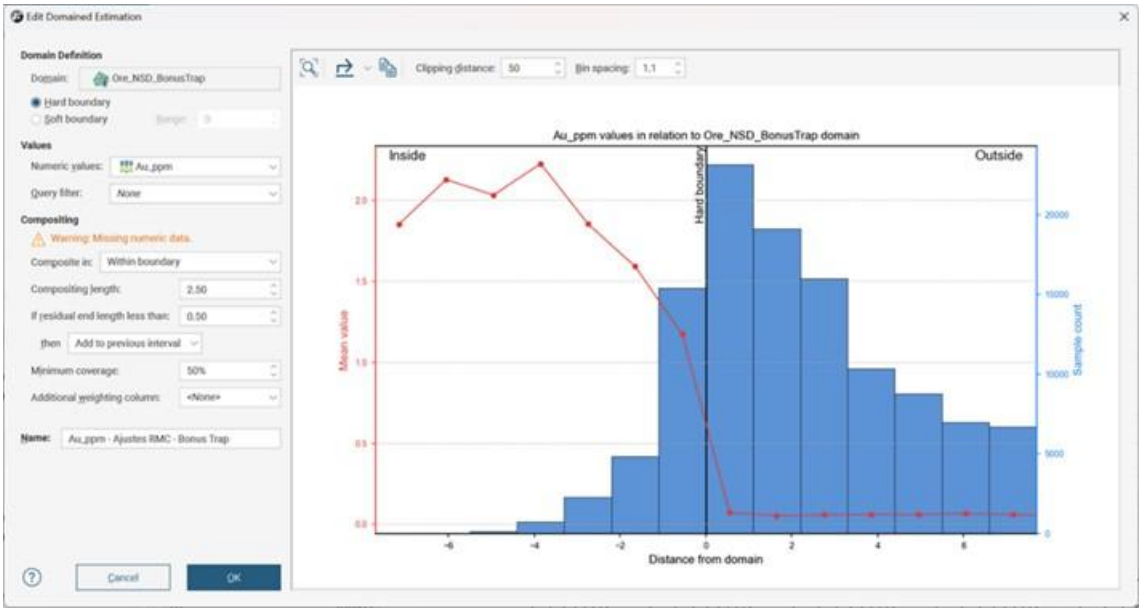


Figure 11-17: Contact Plots for Nosde Bonus Trap

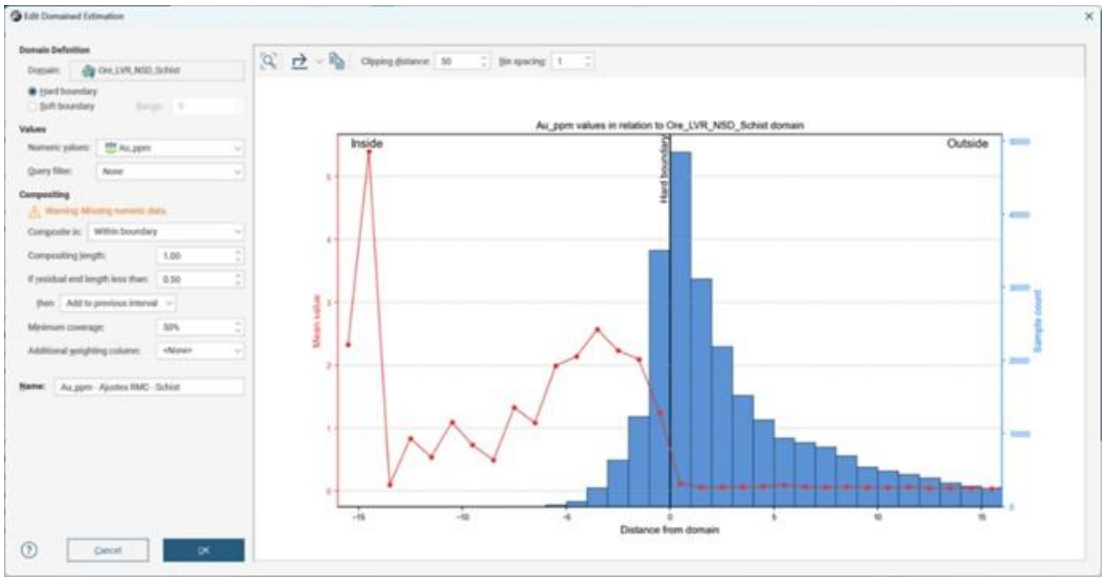


Figure 11-18: Contact Plots for Nosde and Lavrinha Schist

11.1.9 Block Model Set Up

Block model parameters which are assigned in Leapfrog Edge software® are given in Table 11-9. The origin is the block centroid for minimum X, Y, and Z. Each block was discretized 3 x 3 x 1 (x, y, z directions). The model is rotated. The rotation is 298.48 degrees clockwise around the Z axis when looking down, dip: 0 degrees (then rotate around the X' axis down from the horizontal plane) pitch: 0 degrees (then rotate clockwise around the Z'' axis when looking down).

Table 11-9: Nosde and Lavrinha Block Model Parameters

	East	North	Elevation
Origin	256,484	8,303,866	141.25
Block Size	2.5	2.5	2.5
No. of Blocks	224	638	155
Rotation			298.48

11.1.10 Grade Interpolation

Grade estimation was performed using the Ordinary Kriging (OK) function provided with the Leapfrog Edge® software. The block model was coded with the number of composites used during the estimation process. The sample search strategy was based upon analysis of the variogram model anisotropy, mineralization geometry and data distribution.

A three-pass strategy was adopted to estimate the grade within the mineralized domains. Dynamic anisotropy was applied, such that the search ellipse was oriented parallel to the mineralized zone, considering local variations in strike and dip.

Table 11-10 to Table 11-13 shows estimation parameters for all four mineralized domains in Nosde and Lavrinha mines.

Table 11-10: Nosde Bonus Trap Estimation Parameters

Nosde - Bonus Trap											
Pass	Search Ellipsoid			Directions			Samples		Sector Search: per Octant		Drill hole Limit
	Maximum	Intermediary	Minimum	Dip	Azimuth	Pitch	Minimum	Maximum	Max Samples Per Sector	Max Empty Sectors	Max Samples per Drill hole
P1	105	30	20	60	210	15	15	42	12	5	2
P2	210	60	20	60	210	15	8	24	8	6	2
P3	210	60	40	60	210	15	3	12	8	7	1

Table 11-11: Nosde and Lavrinha Schist Estimation Parameters

Nosde and Lavrinha Schist											
Pass	Search Ellipsoid			Directions - Variable Orientation where Possible			Samples		Sector Search: per Octant		Drill hole Limit
	Maximum	Intermediary	Minimum	Dip	Azimuth	Pitch	Minimum	Maximum	Max Samples Per Sector	Max Empty Sectors	Max Samples per Drill hole
P1	195	120	30	24	12	45	15	42	12	5	3
P2	390	240	30	24	12	45	8	24	8	6	3
P3	390	240	60	24	12	45	3	12	8	7	2

Table 11-12: Nosde and Lavrinha Inferior Metarenite Estimation Parameters

Nosde & Lavrinha Metarenite Inferior											
Pass	Search Ellipsoid			Directions - Variable Orientation where Possible			Samples		Sector Search: per Octant		Drill hole Limit
	Maximum	Intermediary	Minimum	Dip	Azimuth	Pitch	Minimum	Maximum	Max Samples Per Sector	Max Empty Sectors	Max Samples per Drill hole
P1	120	100	20	24	12	130	15	42	12	5	3
P2	240	200	20	24	12	130	8	24	8	6	3
P3	240	200	40	24	12	130	3	12	8	7	2

Table 11-13 – Nosde and Lavrinha Superior Metarenite Estimation Parameters

Nosde & Lavrinha Metarenite Superior											
Pass	Search Ellipsoid			Directions - Variable Orientation where Possible			Samples		Sector Search: per Octant		Drill hole Limit
	Maximum	Intermediary	Minimum	Dip	Azimuth	Pitch	Minimum	Maximum	Max Samples Per Sector	Max Empty Sectors	Max Samples per Drill hole
P1	120	100	20	24	12	150	15	42	12	5	3
P2	240	200	20	24	12	150	8	24	8	6	3
P3	240	200	40	24	12	150	3	12	8	7	2

11.1.11 Block Model Validation

The block model validation process included visual comparisons between block estimates and composite grades in plan and section, statistical comparison of composite assay value versus block grade values, QQ Plots of the block model estimated gold grade versus the composite, as well as swath plots. In addition, block estimates were visually compared to the drill hole composite data in all wireframes to ensure agreement. No material grade bias issues were identified, and the block model grades compared well to the composite data.

11.1.11.1 Visual Block Model Validation

The overall block metal grades were visually examined to confirm that all the estimation parameters were honoured and kept within the individual mineralized domains. Each of the cross-sections was reviewed and the underlying drill holes were checked to determine that the original metal grade closely matched the estimated block metal grade without exceeding it.

Figure 11-19 and Figure 11-20 show two representative cross sections within two main mineralized domains for the Nosde Mine.

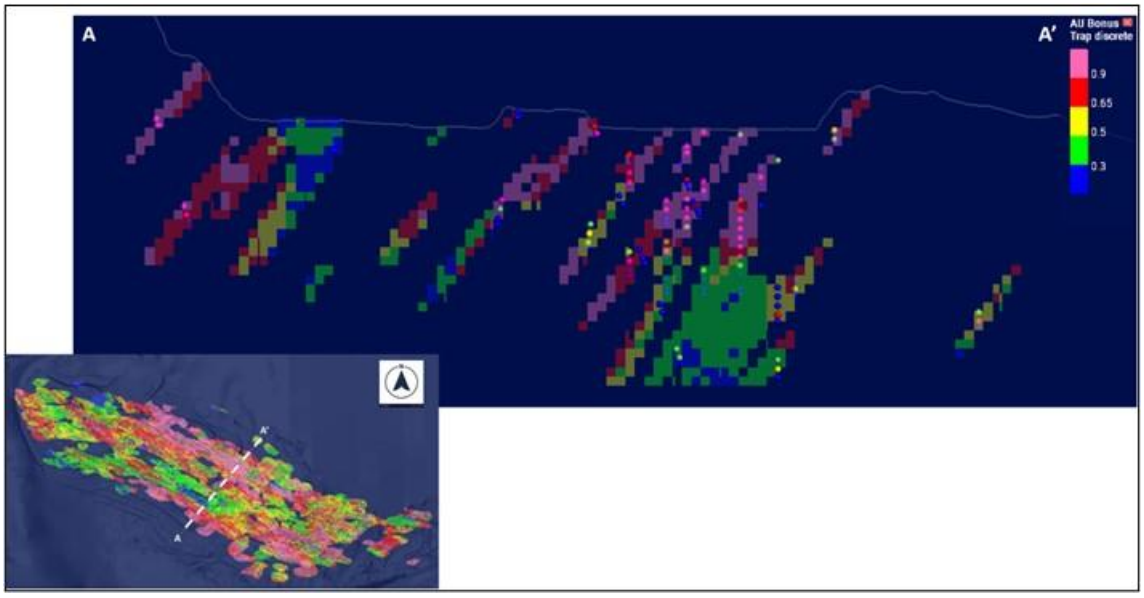


Figure 11-19: Visual Validation of Nosde and Lavrinha block model- Bonus Trap drill hole composites vs. block grade values (Looking NW)

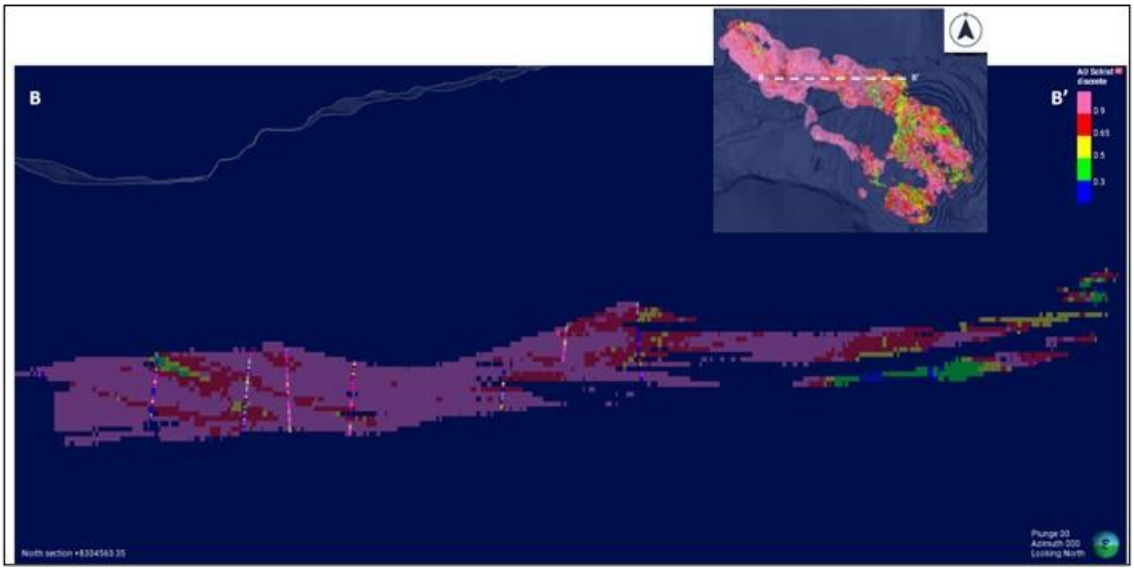


Figure 11-20: Visual validation of Nosde and Lavrinha block model - Upper Trap Schist drill hole composites vs. block grade values (Looking N)

11.1.11.2 Comparative Statistics and QQ Plots

A statistical comparison of the raw assay values versus the composite values versus the estimated block values was extracted from Leapfrog® Software and is shown in Table 11-14.

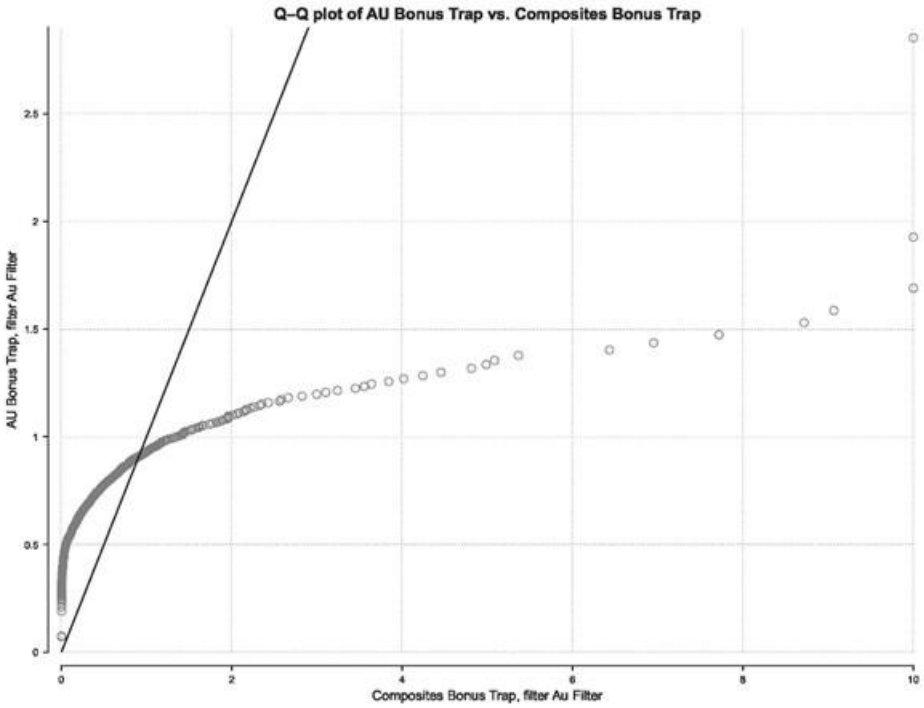
The block model checks indicate that the Mineral Resource Estimate matches the underlying composites at lower gold grade values. At higher gold grades, the block model gold grades are underestimated relative to the underlying composites.

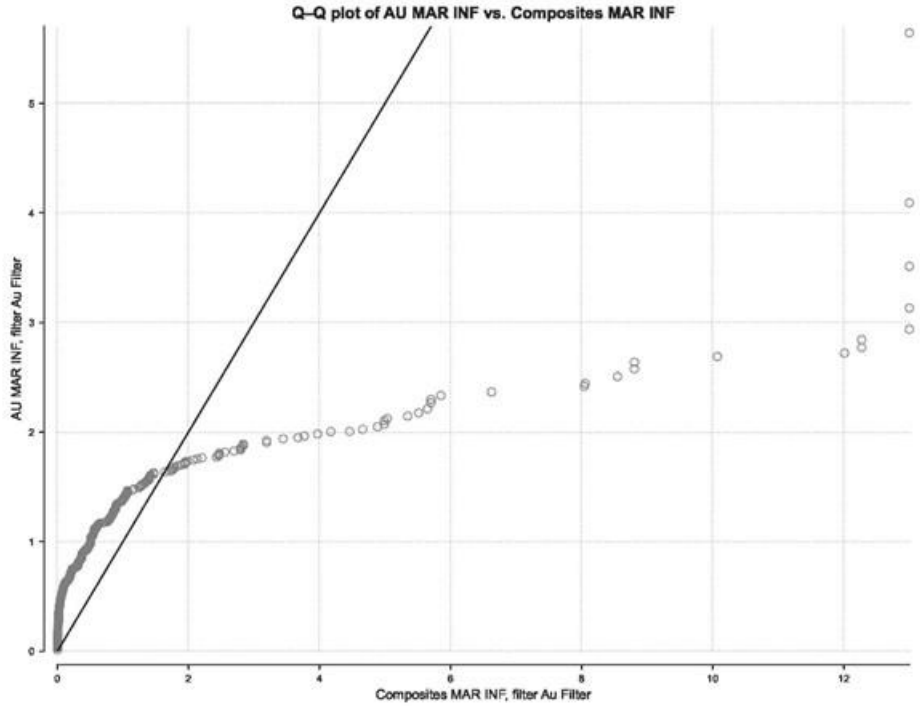
The various mineralized domain QQ plots of the block model estimated gold grades versus the composites are shown in Figure 11-21.

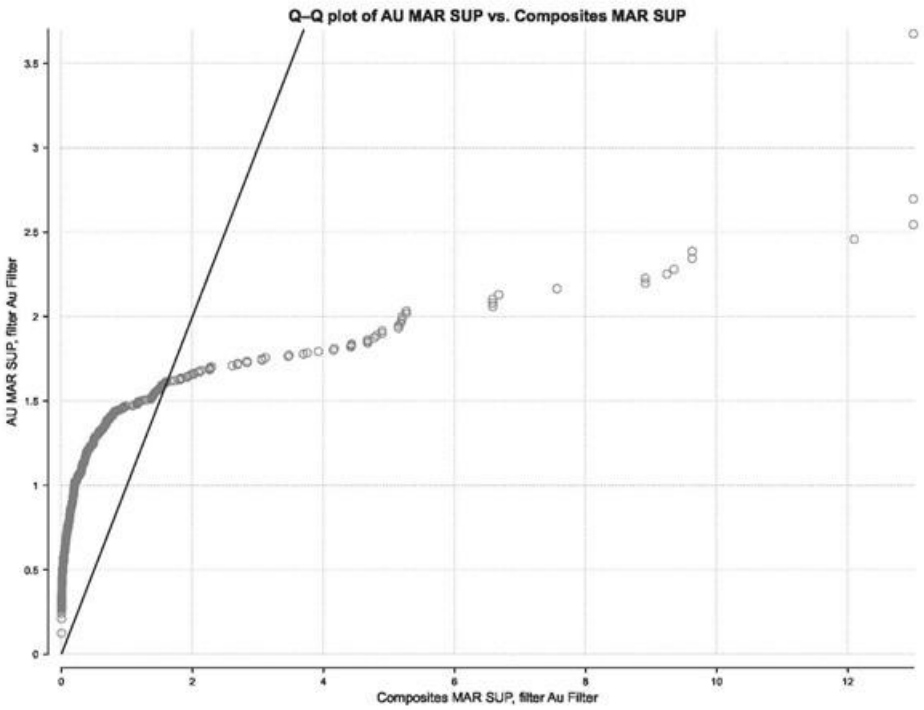
Table 11-14: Nosde and Lavrinha Block Mode Statistics (All Domains)

Item	Domain				
	All	Bonus Trap	MAR INF	MAR SUP	Schist
Block Model Results					
Number of blocks	407,720	148,154	23,301	34,035	202,230
Volume	6,370,625	2,314,906	364,078	531,797	3,159,844
Minimum	0.01	0.07	0.01	0.12	0.13
Maximum	5.64	2.85	5.64	3.67	4.86
Mean	0.93	0.70	0.80	1.09	1.09
Standard deviation	0.46	0.27	0.65	0.49	0.47
Variance	0.21	0.07	0.43	0.24	0.22
Coefficient of variance	0.50	0.38	0.81	0.45	0.43
Q1	0.59	0.50	0.33	0.67	0.76
Q2	0.84	0.66	0.60	1.14	1.02
Q3	1.19	0.85	1.15	1.43	1.36
Composites					
Count	8302	3120	506	387	4289

Item	Domain				
	All	Bonus Trap	MAR INF	MAR SUP	Schist
Length	12824.70	6742.00	534.10	759.40	4789.20
Minimum	0.00	0.00	0.00	0.00	0.00
Maximum	13.00	10.00	13.00	13.00	13.00
Mean	0.95	0.73	0.92	1.08	1.09
Standard deviation	1.97	1.39	2.30	2.07	2.24
Variance	3.87	1.94	5.30	4.27	5.01
Coefficient of variance	2.08	1.91	2.49	1.91	2.05
Q1	0.04	0.06	0.02	0.06	0.04
Q2	0.26	0.28	0.09	0.36	0.26
Q3	0.87	0.74	0.64	0.99	1.01
Raw Samples					
Count	13207	6720	602	914	4971
Length	13274.26	6804.08	607.96	899.15	4963.07
Minimum	0.00	0.00	0.00	0.00	0.00
Maximum	277.15	87.40	114.53	34.25	277.15
Mean	1.10	0.86	1.20	1.15	1.41
Median	0.09	0.09	0.05	0.07	0.12
Standard deviation	5.14	3.24	5.89	3.57	7.04
Variance	26.44	10.52	34.75	12.73	49.55
Coefficient of variation	4.67	3.77	4.92	3.10	4.99
Lower quartile	0.02	0.02	0.02	0.02	0.02
Upper quartile	**0.62**	**0.56**	**0.37**	**0.53**	**0.79**


Q–Q plot of AU Bonus Trap vs. Composites Bonus Trap
AU Bonus Trap, filter Au Filter
Composites Bonus Trap, filter Au Filter
0
0.5
1
1.5
2
2.5
0
2
4
6
8
10


Q–Q plot of AU MAR INF vs. Composites MAR INF
AU MAR INF, filter Au Filter
Composites MAR INF, filter Au Filter
0
1
2
3
4
5
0
2
4
6
8
10
12



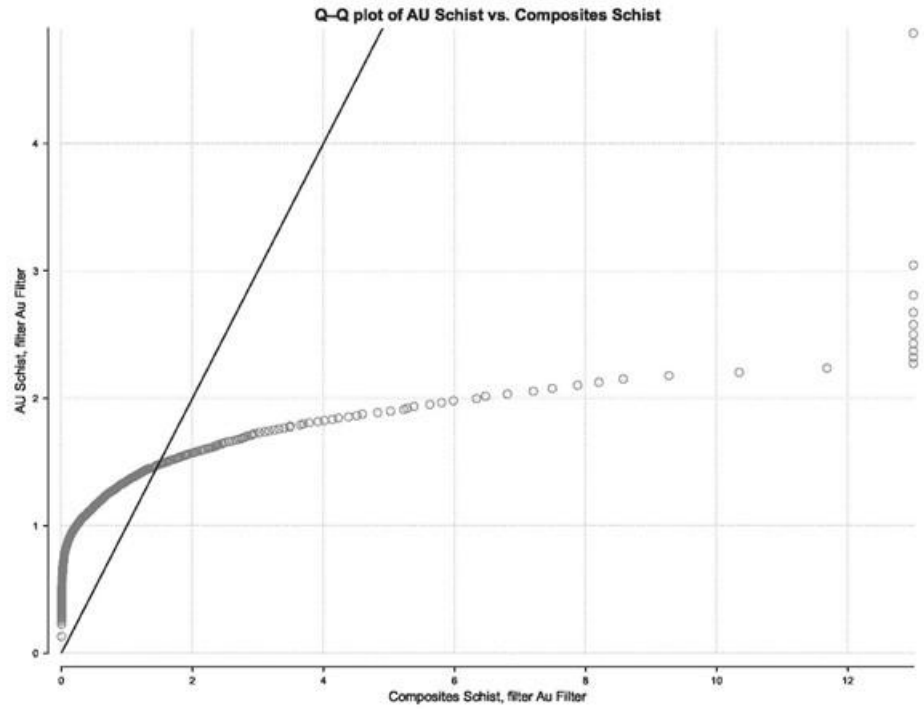


Figure 11-21: Nosde and Lavrinha QQ plots for mineralized domains

11.1.11.3 Swath Plots

A swath plot is a graphical representation of grade distribution derived by a series of sectional "swaths" throughout the deposit. Swath plots were generated for gold from slices throughout each

domain (Figure 11-22 through Figure 11-26). They compare the block model grades for Nearest Neighborhood (NN) and Ordinary Kriging (OK) estimation methods to the drill hole composite grades to evaluate any potential local grade bias. Review of the swath plots did not identify bias in the model that is material to the Nosde and Lavrinha Mineral Resource, as there was a strong overall correlation between the block model OK grade and the capped composites used in the estimation. The swath plots are prepared in 3 different directions (X, Y and Z) for the entire block model (Figure 11-22, Figure 11-23, Figure 11-24, Figure 11-25 and Figure 11-26).

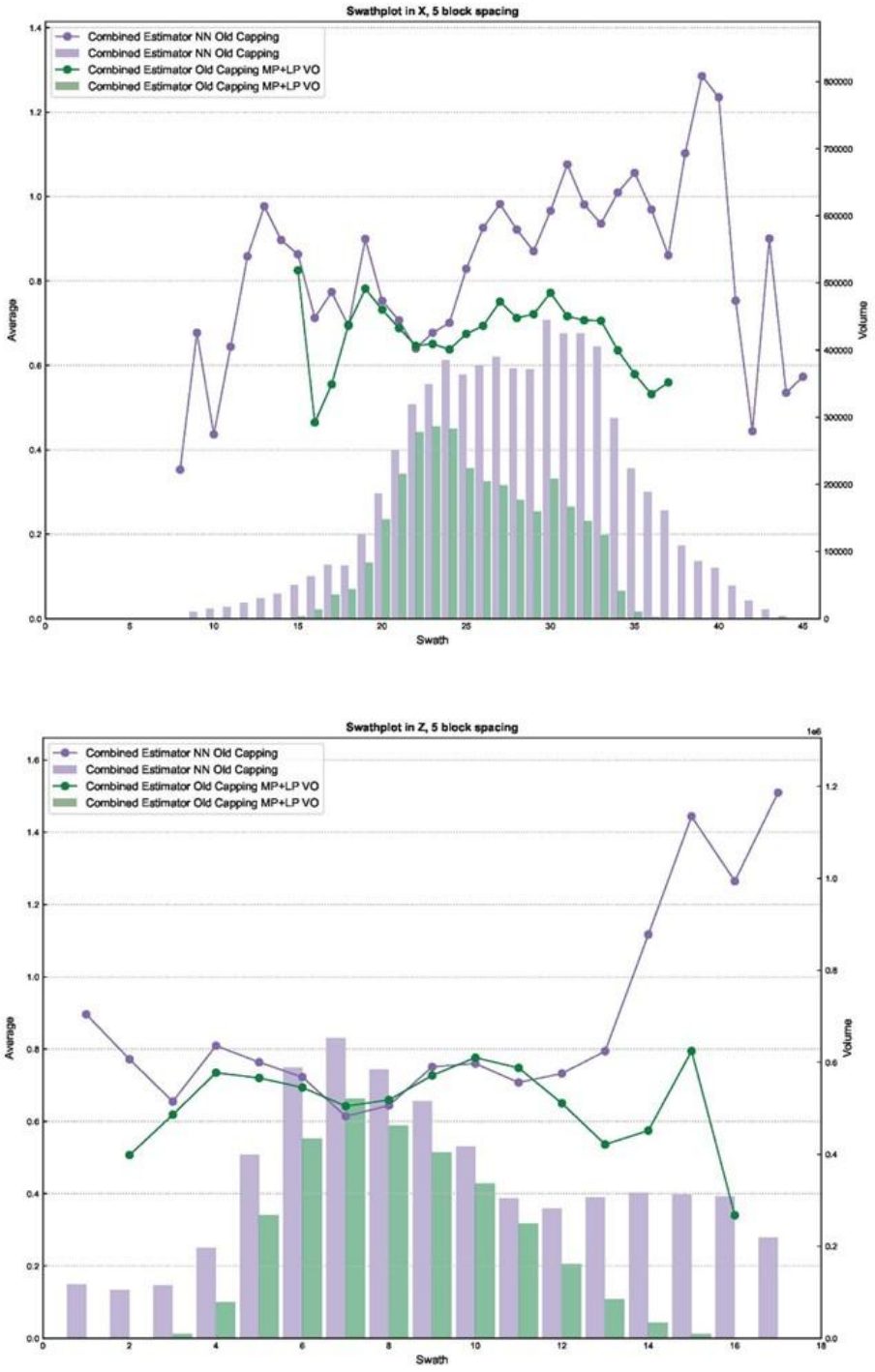


Figure 11-22: Nosde and Lavrinha Swath plots in X, Y and Z directions

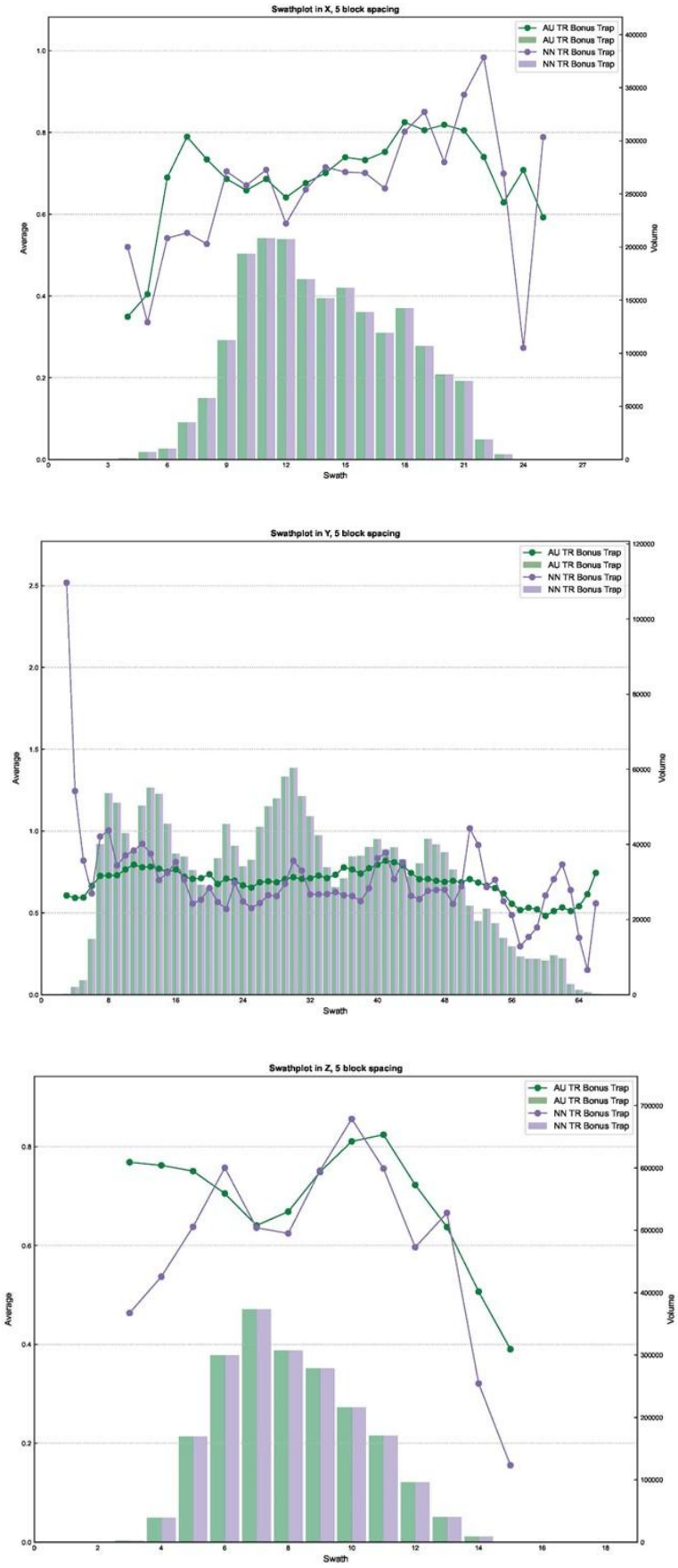


Figure 11-23: Nosde and Lavrinha Swath plots in X, Y and Z directions for Bonus Trap Metarenite

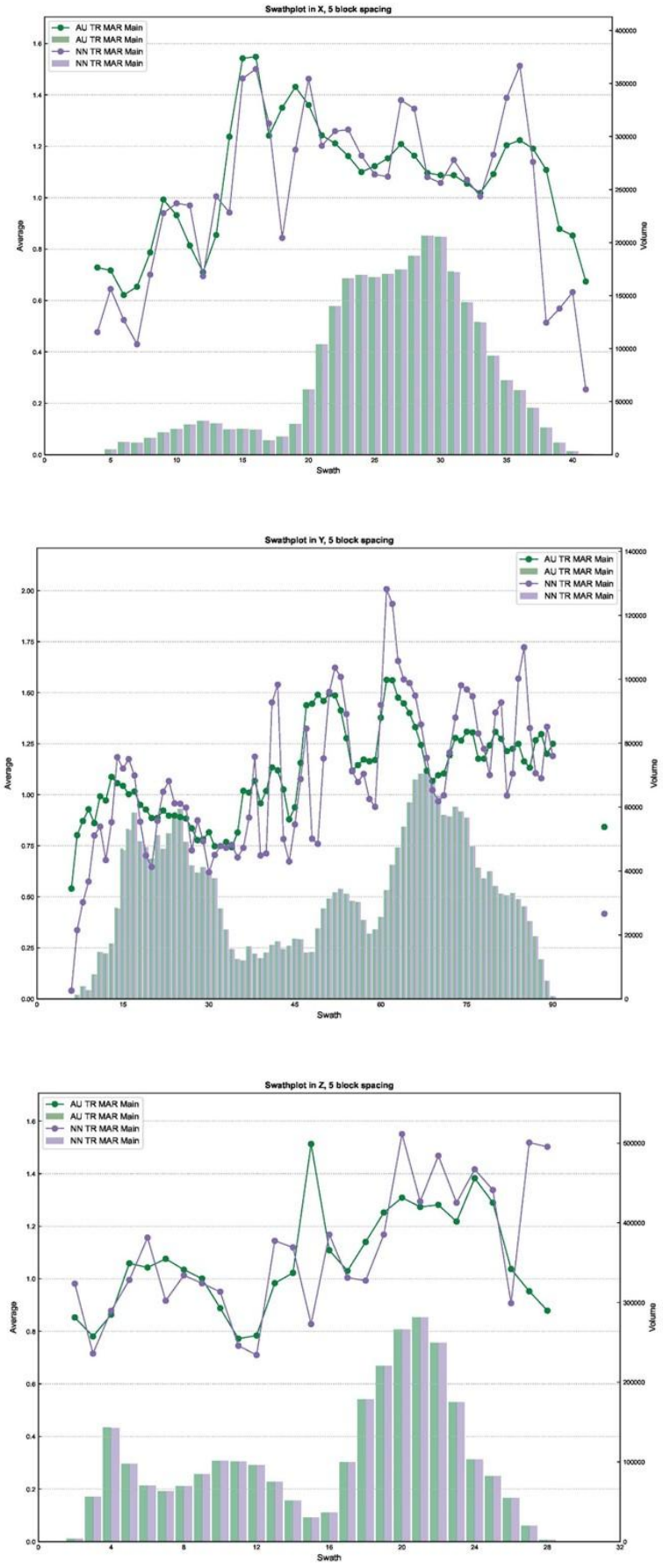


Figure 11-24: Nosde and Lavrinha Swath plots in X, Y and Z directions for Schist

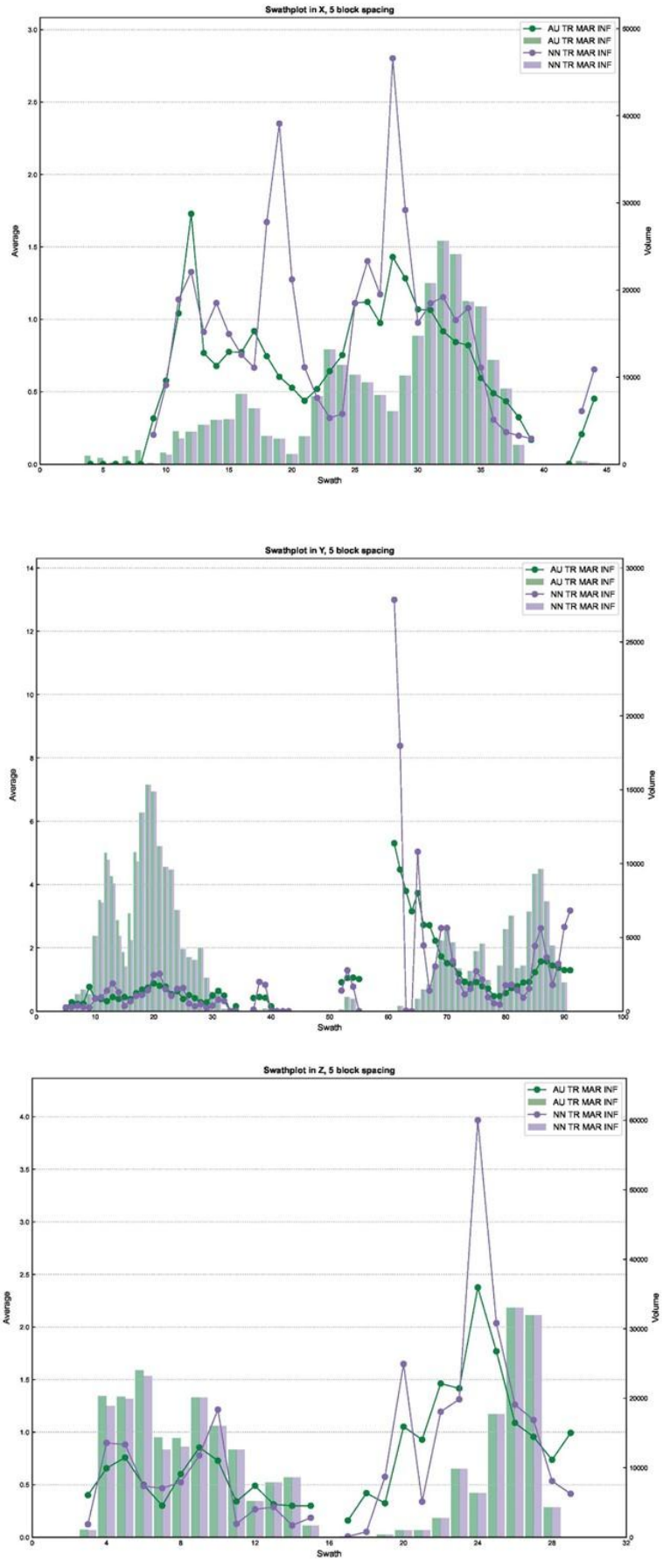


Figure 11-25: Nosde and Lavrinha Swath plots in X, Y and Z directions for Inferior Metarenite

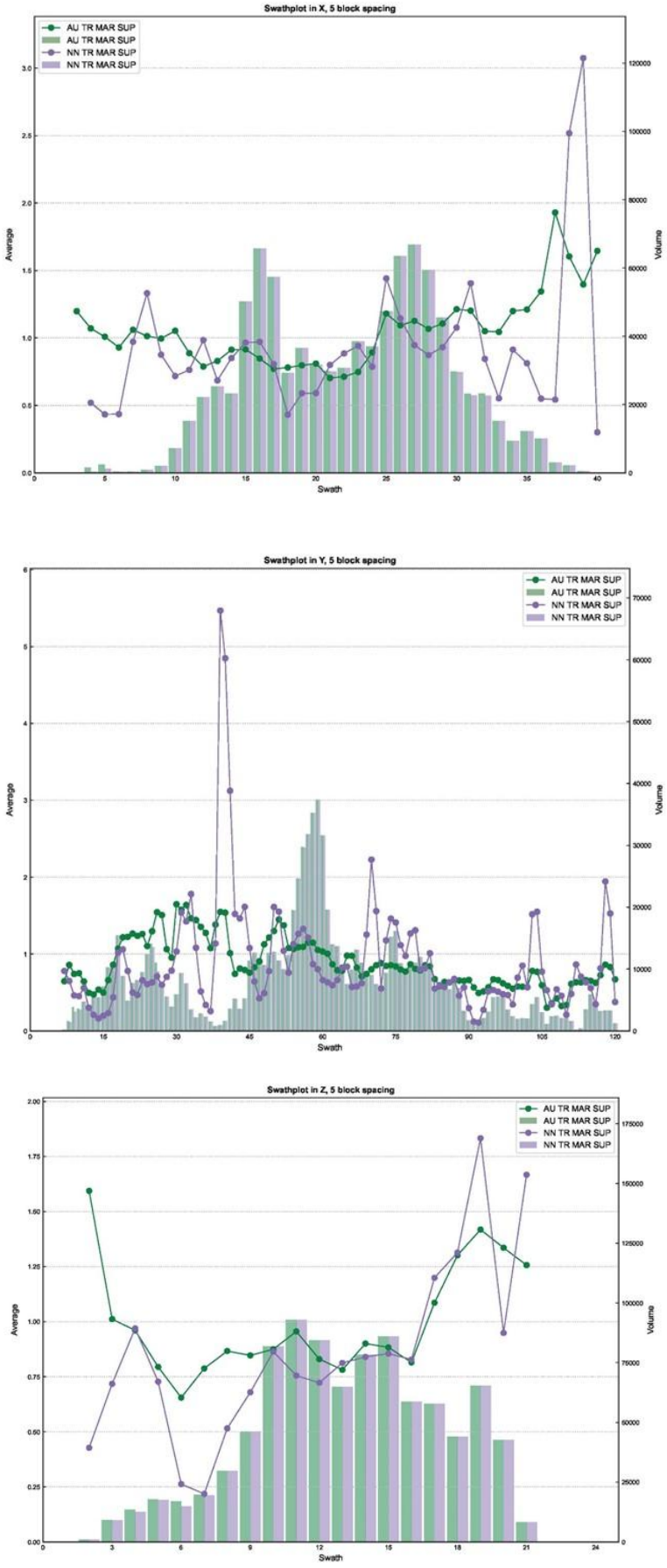


Figure 11-26: Nosde and Lavrinha Swath plots in X, Y and Z directions for Superior Metarenite

11.1.12 Mineral Resource Classification

Mineral Resources are classified in accordance with the definitions for Mineral Resources in S-K 1300 into Measured, Indicated, and Inferred classifications based on following criteria:

A minimum range of first and second passes was adopted to assign the blocks to the Measured category which is mainly limited to coverage of grade control data and the range of the third pass to the Indicated category. This was the result of the variography which was discussed in section 11.1.7. Other criteria such as the number of drill holes, distance from drill hole data, and minimum and maximum number of composites were also used to estimate a block.The Mineral Resource classification criteria applied in the current study are those shown in Table 11-15.

Table 11-15: Nosde and Lavrinha Block Model Classification Parameters

Category	Search Ellipsoid			Samples	Drillhole Limit
	Maximum	Intermedia	Minimum	Minimum	Max Samples per Drillhole
Measured	20	20	20	8	1
Indicated	40	40	40	3	1
Inferred	Everything Else				

Figure 11-27 shows the classification scheme in 3D for Nosde and Lavrinha block model.

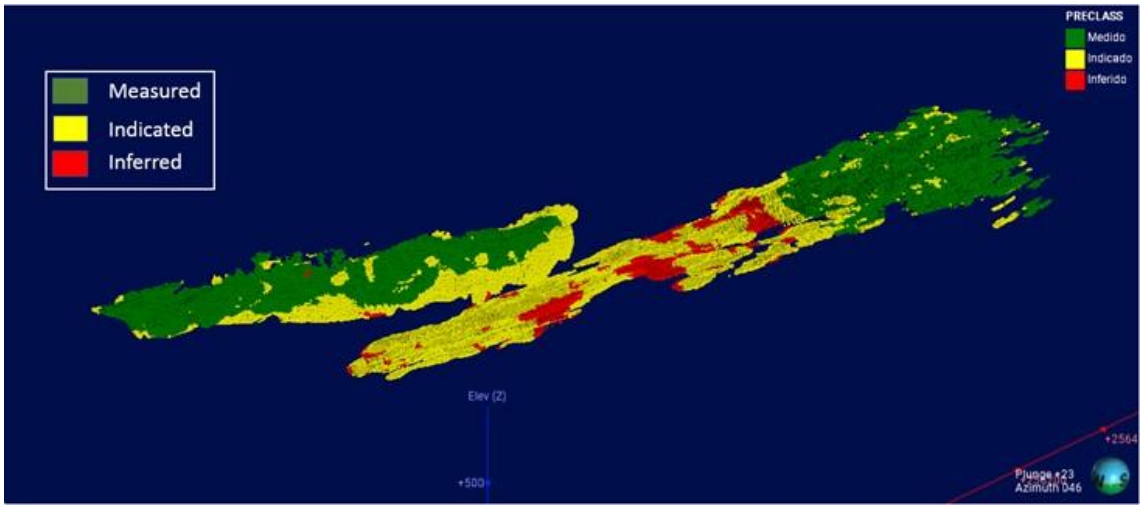


Figure 11-27: Classification Scheme in 3D (Looking NE)

Nosde and Lavrinha gold deposits contain Measured Mineral Resources based on the following criteria:

- Encompassed grade control data drill grid spacing (5m*5m).
- Drill spacing less than ≤ 20 m.
- Detailed topography survey for both mines.
- Existing operational reconciliation data.
- Confidence in geological interpretations.
- Quality and reliability of drilling and sampling data.

Nosde and Lavrinha gold deposits contain Indicated Mineral Resources based on the following criteria:

- Use of diamond drill core for sample assay.
- Drill spacing less than ≤ 40 m.
- Understanding of continuity of alteration and mineralization especially in mineralized schist domain.
- Confidence in geological interpretations.
- Quality and reliability of drilling and sampling data.

Nosde and Lavrinha gold deposits contain Inferred Mineral Resources based on the following criteria:

- Use of diamond drill core or RC drilling for sample assay.
- Mean drill spacing less than or >40 m.
- Lack of continuity mainly in Superior and Inferior matarenites.
- Quality and reliability of drilling and sampling data.

11.1.13 Mines Topographic Surfaces

Mine topographic surfaces are constructed using GPS total station and drone data. Topographic surfaces were provided triangulated meshes with different file formats (Figure 11-28). All topographic surfaces were reconstructed and visually validated. No major issues were identified. However, the resolution of topographic surfaces varies from one area to another, and there is no high-resolution topography surface covering the Nosde and Lavrinha mines. Surfaces of mining areas do not include any in-pit material and there is no way to accurately determine the volume of in-pit waste dumps with the information available.

The Mineral Resources were clipped to the base of mining on 31st October 2023.

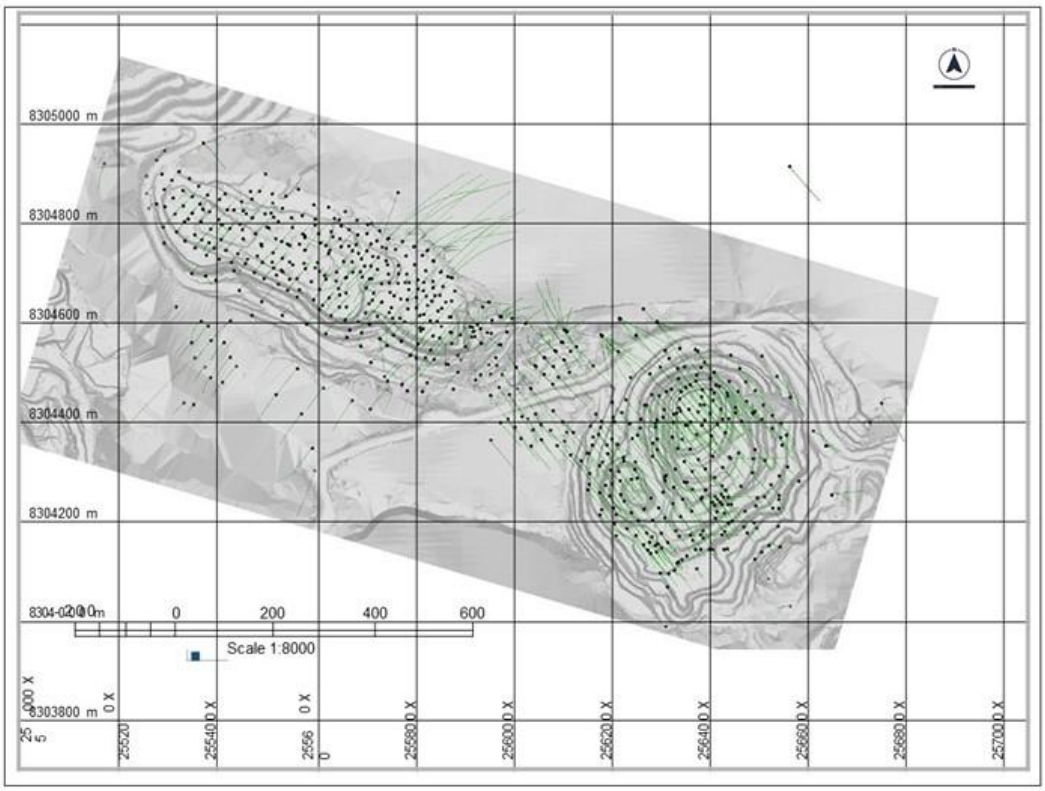


Figure 11-28: Nosde and Lavrinha mines Topographic surfaces (31, December 2023)

11.1.14 Reasonable Prospects for Economic Extraction

An open pit optimization was conducted using the Deswik® software (2023.1074 version) to determine the extent of the Mineral Resource with “reasonable prospects for economic extraction” by open pit mining methods.

For Mineral Resource estimation reporting, a cut-off grade (CoG) of 0.39 g/t gold was used for both open pit mines. CoG is derived from the economic parameters presented in Table 11-16 and 11-17 based on an open pit mining scenario. A long term consensus price was adopted for reporting of Mineral Resource and Mineral Reserves.

The operating assumptions are shown in Table 11-17. These assumptions are conceptual in nature, however. geotechnical parameters were revised based on local observations and technical studies done during 2023 (Geotech Consultoria e Projectos, 2023).

Table 11-16 – Nosde and Lavrinha Cut-off (CoG) Grade Assumptions

Input	Value	Unit
Metallurgical recovery	93.5%	%
Dilution	0%	%
Exchange rate	5.1	USD/BRL
Selling Cost	77.31	USD/oz
Resources Gold Price	1900	USD/oz
Costs		
Mining cost	2.26	USD/t mined
Mining fixed cost	1.53	USD/t mined
Total processing cost	11.87	USD/t processed
Variable processing cost	7.36	USD/t processed
General and administrative	3.79	USD/t processed
Premium cost for ore	1.54	USD/t processed
Sustaining cost for mine	0.39	USD/t processed (LOM)
Sustaining cost for process	2.04	USD/t processed (LOM)
Cut-off Grade		
Ore Grade	0.39	g/t
Marginal Ore	0.32	g/t

Table 11-17: Nosde and Lavrinha Optimization parameters

Input	Value / Unit
Gold price	US$ 1,900/oz
Gold Refining/Insurance/Transport Charge	US$ 77.3/oz
Royalties (CFEM')	1.5% of Gross Revenue
Exchange rate	R$ 5.10:US$ 1
Costs	
Mining fixed	US$ 1.53/t mined
Mining fresh rock ore	US$ 3.80/t mided
Mining fresh rock waste	US$ 2.26/t mined
Processing	US$ 11.87/t processed
G&A	US$ 3.79/t processed
Sustaining for Mine	US$ 0.39/t mined
Sustaining for Process	US$ 2.04/t processed
Mine and Plant Assumptions	
Plant recovery	93.5%
Mining recovery	100.0%
Total Dilution (planned and unplanned)	0.0%
Weathered rock pit design parameters	
Geotechnical Assumptions	
Weathered rock pit design parameters	
Face angle	60º
Bench height	10m
Berm width	6.5m
Overall slope angle	38º
Fresh rock pit design parameters	
Face angle	80º
Bench height	20 m
Berm width	8.5m
Overall slope angle	56º
Ramp width	13m

11.1.15 Mineral Resource Statement and Sensitivity

The updated Mineral Resource Estimate is based on 3D domains that encompassed all economic gold mineralization in the Nosde and Lavrinha deposits and is reported exclusive from Mineral Reserve.. These mineralized domains were analysed for grade capping and variography and then were interpolated using the ordinary kriging method. Once the block model was completed it was classified into Measured, Indicated, and Inferred Mineral Resources in accordance with the definitions for Mineral Resources in S-K 1300. This was followed by a pseudo-flow open pit optimization in Deswik® software which resulted in the updated Mineral Resource Estimate.

Figure 11-29 and Figure 11-30 shows Mineral Resource blocks within an optimized pit using US$1,900/oz.

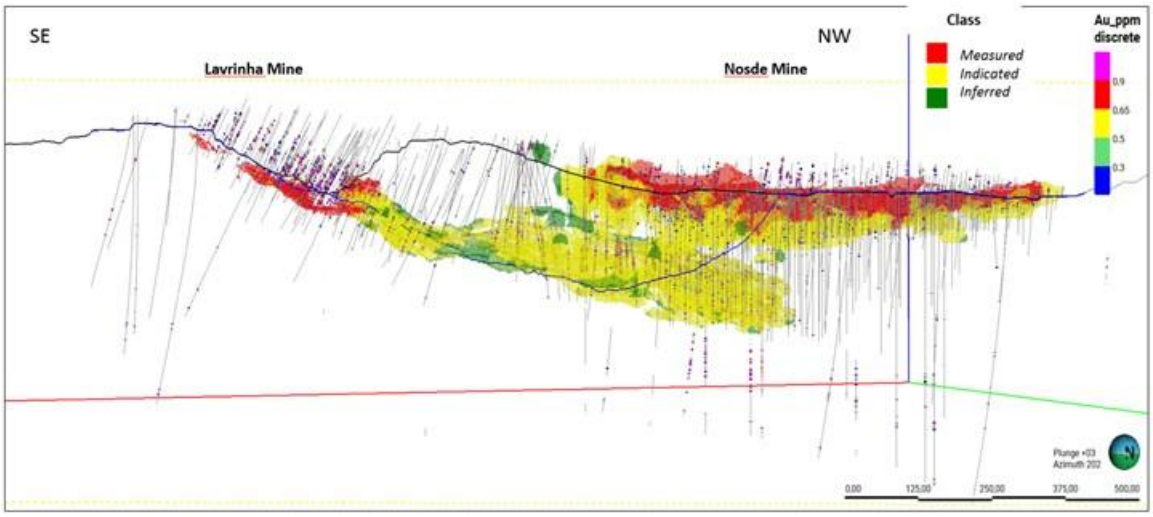


Figure 11-29: Nosde and Lavrinha mines cross section showing classified block model within Mineral Resources optimized Pit (1900$/oz)

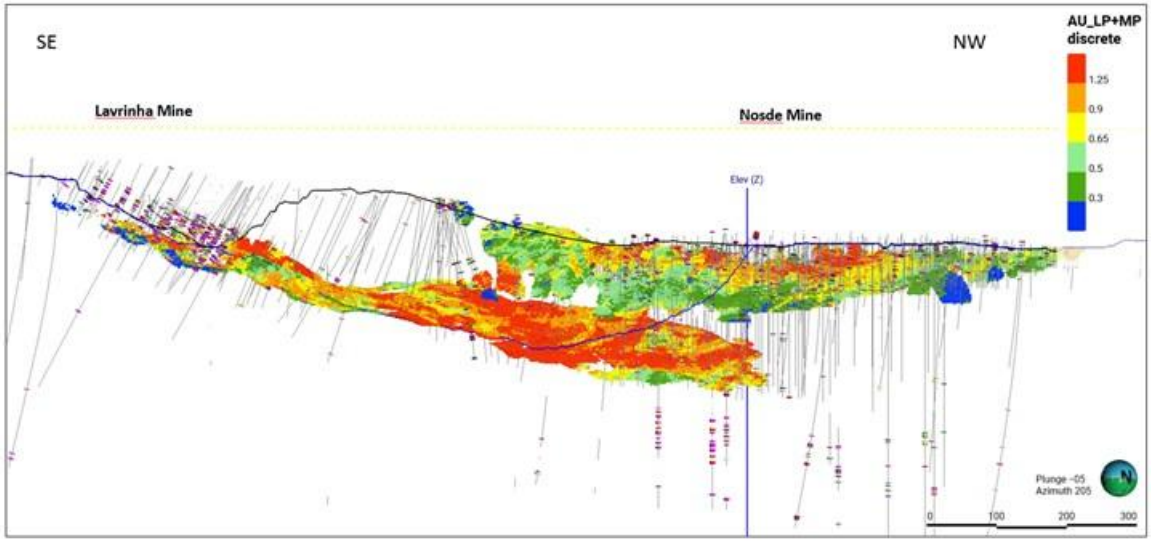


Figure 11-30: Nosde and Lavrinha mines cross section showing block grade within Mineral Resources optimized Pit(1900$/oz)

Mineral Resources of the Nosde and Lavrinha Mines as of October 31, 2023, are shown in Table 11-18.

Table 11-18 : Mineral Resources of the Nosde and Lavrinha Mines (Exclusive)

Mineral Resource Estimate for Nosde and Lavrinha Mines					
Effective October 31,2023					
Mines	**Classfication**	**Tonnage (t)**	**Grade Au Wt)**	**Contained Au (oz)**	**Recovery (%)**
Nosde	Measured	446 823	0.64	9 248	93.5
	Indicated	1 447 852	1.05	48 815	93.5
	M&I	**1 894 675**	**0.95**	**58 063**	**93.5**
	Inferred	194 516	1.33	8 305	93.5
Lavrinha	Measured	54 610	0.98	1 717	93.5
	Indicated	673 110	1.13	24 545	93.5

Mineral Resource Estimate for Nosde and Lavrinha Mines					
Effective October 31,2023					
Mines	**Classfication**	**Tonnage (t)**	**Grade Au Wt)**	**Contained Au (oz)**	**Recovery (%)**
	M&I	**727 720**	**1.12**	**26 262**	**93.5**
	Inferred	213 390	1.37	9 382	93.5
Nosde & Lavrinha	**Total (M&I)**	**2 622 395**	**1.00**	**84 326**	**93.5**
	Total (Inferred)	407 907	1.35	17 700	93.5

Mineral Resource Notes and Assumptions:
1. The Mineral Resources Estimate has an effective date of October 31, 2023.
2. Mineral Resources do not have demonstrated economic viability.
3. The definitions for Mineral Resources in S-K 1300 were followed for Mineral Resources.
4. The Mineral Resource estimate is reported on a 100% ownership basis.
5. Mineral Resources are exclusive of Mineral Reserves.
6. Metallurgical recoveries reported as the average over the life of mine.
7. The base case cut-off grade for the estimate of Mineral Resources is 0.39 g/t Au
8. The Measured, indicated and inferred mineral resources are contained within a limiting pit shell (using US1900 $ /oz. gold price) and comprise a coherent body.
9. A density model based on alteration and rock type was established for volume to tonnes conversion averaging 2.74 tonnes /m3.
10. Contained metal figures may not add due to rounding.
11. Surface Topography as of October 31, 2023.
12. The Mineral Resource Estimate for the Nosde and Lavrinha deposits was prepared under supervision of Farshid Ghazanfari, P.Geo., Aura;s Geology and Mineral Resources director, a Qualified Person as that term is defined in S-K 1300.

11.1.16 Factors that may affect the Mineral Resource Estimate

Areas of uncertainty that may materially impact the Mineral Resource Estimate include:

- Changes to long to term metal price assumptions.
- Changes to the input values for mining, processing, and general, and administrative costs to constrain the estimate.
- Changes to local interpretations of mineralization geometry and continuity of mineralized zones.
- Changes to the density values applied to the mineralized zones.
- Changes to metallurgical recovery assumptions.
- Changes in assumptions of marketability of the final product.
- Variations in geotechnical, hydrogeological, and mining assumptions.
- Changes to assumptions with an existing agreement or new agreements.
- Changes to environmental, permitting, and social licence assumptions.

11.1.17 QP's Opinion about Mineral Resource Estimate

The QP is not aware of any environmental, legal, title, taxation, socio or economic, marketing, political or other relevant factors that would materially affect the estimation of Mineral Resources that are not discussed in this TRS. The QP is of the opinion that the Mineral Resources were estimated using industry accepted practices and conform to the definitions for Mineral Resources in S-K 1300. Technical and economic parameters and assumptions applied to the Mineral Resource Estimate are based on parameters received from other consultants and reviewed by QP to determine if they were appropriate.

11.2 Ernesto and Ernesto Connection Mineral Resource Estimate

11.2.1 Introduction

The updated Mineral Resource Estimate for the Ernesto and Ernesto Connection were estimated by conventional 3D computer block modelling methods employing Dassault Systems Geovia mining software V6.4. The Mineral Resource Estimate is based on surface diamond drilling core sampling and gold assaying. Assaying was performed at SGS and ALS commercial laboratory in Belo Horizonte and at Ernesto mine laboratory as well as Aura Sao Francisco lab, all in Brazil.

The main gold mineralization in the Ernesto Mine developed within the Lower Trap zone and consists largely of free gold hosted by mylonite, muscovite schist, and quartz veins accompanied by sulphides that occur along the sheared contact between meta-tonalite and meta-arenite. In addition to Lower Trap, gold also occurs along the sheared contact between meta-conglomerate and meta-arenite in the Middle Trap in the Ernesto Mine.

The Ernesto Connection deposit is a continuation of the old Ernesto Mine towards the west that was historically mined by Yamana Gold and ceased operation in 2014 and remains abandoned. Gold mineralization in the Ernesto connection deposit occurs mainly in contact with the meta-conglomerate and meta-arenite of the Middle Trap and also partially in the muscovite schist of the Upper Trap.

Mineralization is epigenetic, hydrothermal in origin and is structurally controlled. The Ernesto mine rock foliation and mineralized contact trend NNW and have a shallow dip of approximately -25° NNE. The contact is not uniformly planar and is subject to rolling. The Lower Trap zone has been mined by Aura since 2020.

The Ernesto Connection mineralized zone trends E-W and has shallow dip of approximately -15° WSW.

11.2.2 Ernesto and Ernesto Connection Database

The Ernesto Mine database is divided into three sub-categories including exploration or diamond drill hole database (ERN-EX), RC hole database (ERN-MP) and grade control database (ERN-CP). Table 11-19 shows the Ernesto databases and numbers of holes, samples and other related information. Ernesto connection has only one exploration database (ERC-EX) (Table 11-20).

The Ernesto Lower Trap and Middle Trap zones has been sampled by surface diamond drilling and core sampling. Core for the surface drilling is largely NQ (47.6 mm). The Ernesto database contains 408 diamond drill holes, totaling 64,750 metres drilled of which 239 (38,264m) are historic holes drilled from 1994 to 2013, mainly by Yamana, and 169 were drilled by Aura since 2015.

A total of 52,015 samples are included in the database of which 48.706 have assay results and 4.274,77 metres of drill holes were not sample.

Table 11-19: Ernesto Mine Database Status Summary

PROSPECT	YEAR	TYPE	HOLES	DEPTH	SAMPLES	SAMPLES WITH AU RESULTS				
						ALS LAB	SGS LAB	SFR LAB	EPP LAB	UNK LAB
ERN-EX	1994-2014	DD	239	38 263.93	17 570	7 960	3 893		4 518	1 199
	2015	DD	21	3 076.95	614		614			
	2017	DD	25	2 998.63	729		537		192	
	2018	DD	12	1 823.44	323		323			
	2021	DD	37	5 146.8	2 856		2 856			
	2022	DD	74	13 440.2	9 521		8 603		490	
TOTAL			**408**	**64 750**	**31 613**	**7 960**	**16 826**	**0**	**5 200**	**1 199**
PROSPECT	**YEAR**	**TYPE**	**HOLES**	**DEPTH**	**SAMPLES**	**SAMPLES WITH AU RESULTS**				
						ALS LAB	**SGS LAB**	**SFR LAB**	**EPP LAB**	**UNK LAB**
ERN-EX	2019	PW	377	6 857	6 846		0		6 846	
	2020		3 284	63 976	63 904		3 143		60 761	
	2021		3 419	63 006	62 284		0		62 284	
	2022		1 006	17 371	16 997		0		16 997	
	2023		1 312	24 072	23 412		0		19 622	
	2020	RC	443	9 273	8 660		0		8 660	
	2021		309	4 808	4 803		0		4 803	
ERN-MP	2020	RC	203	10 383	10 255		4 718		5 537	
	2021		245	12 301	11 151		11 021		130	
	2022		189	12 089	7 928		0		7 928	
	2023		282	14 911	12 347		0		12 346	
TOTAL			11 069	239 047	228 587	0	18 882	0	205 914	0

D: Diamond Drilling, RC;Rotary Core Drilling, PW: Pneumatic Drilling, SFR: Sao Francisco Mine Laboratory, EPPLAB: EPP Mines Laboratory, SGSLAB SGS laboratory, ALSLAB:ALS Laboratory.

Table 11-20: Ernesto Connection Database Status Summary

PROSPECT	YEAR	TYPE	HOLES	DEPTH	SAMPLES	SAMPLES WITH AU RESULTS				
						ALS LAB	SGS LAB	SFR LAB	EPP LAB	UNK LAB
ERN-EX	1994-2014	DD	70	7 776.21	6 097	2 531	350		523	2 693
	2018	DD	9	816.43	374	0	374		0	0
	2021	DD	62	10 157.96	9 437	0	9 437		0	0
	2022	DD	4	593.27	490	0	490		0	0
TOTAL			**145**	**19 344**	**16 398**	**2 531**	**10 651**	**0**	**523**	**2 693**

11.2.3 Ernesto and Ernesto Connection Geological and Domain Modelling

Ernesto Deposit

The geological layout of the Ernesto deposit area is subdivided into seven lithological domains, two of which are potentially mineralized (Figure 11-31 B and C). These domains are metaconglomerate (MGL) and Mylonite (MYL). Furthermore, local mineralization is observed in the metarenites (MAR), higher than MGL and lower than MGL, but has not been considered as a potentially mineralized host. The geological modeling of these domains is based on long-term geology (25 x 25m drilling grid), as well as on interpretations made by geologists from Aura For methodological purposes, and because they are continuous sedimentary tracts of a rift-type

basin, specifically in the deposit by the basal unit of the Fortuna Formation (Aguapeí Group) - transitional environment of shallow sea and tidal current, the modeling strategy was defined using an interpolator called Stratigraphic Sequences, within the LeapFrog Geo® (Seequent) routine.

The contact surfaces, associated with the types of contact between the units, was chosen as erosion in Leapfrog Geo®, while the strata are defined, some units can cut other contact surfaces on the oldest side of the contact surface with erosion. This is seen in some central portions of the deposit. There are also irregular contacts with the basal metatonalitic (Figure 11-31 A).

All seven units exhibit dip (foliations) normally between 20 and 45º to the NE and deepen more significantly in the continuity of the N-NE trend (Figure 11-31 B and C). In an internal report (Carvalho, 2006) the author mentions that steps and ramps occur along the dip of the Trap foliation. This change in the dip of the foliation, in the Lower Trap, may be responsible for increasing the volume/grade of mineralization. This is a normal situation found in deposits associated with low-angle faults (both those related to thrust and normal faults).

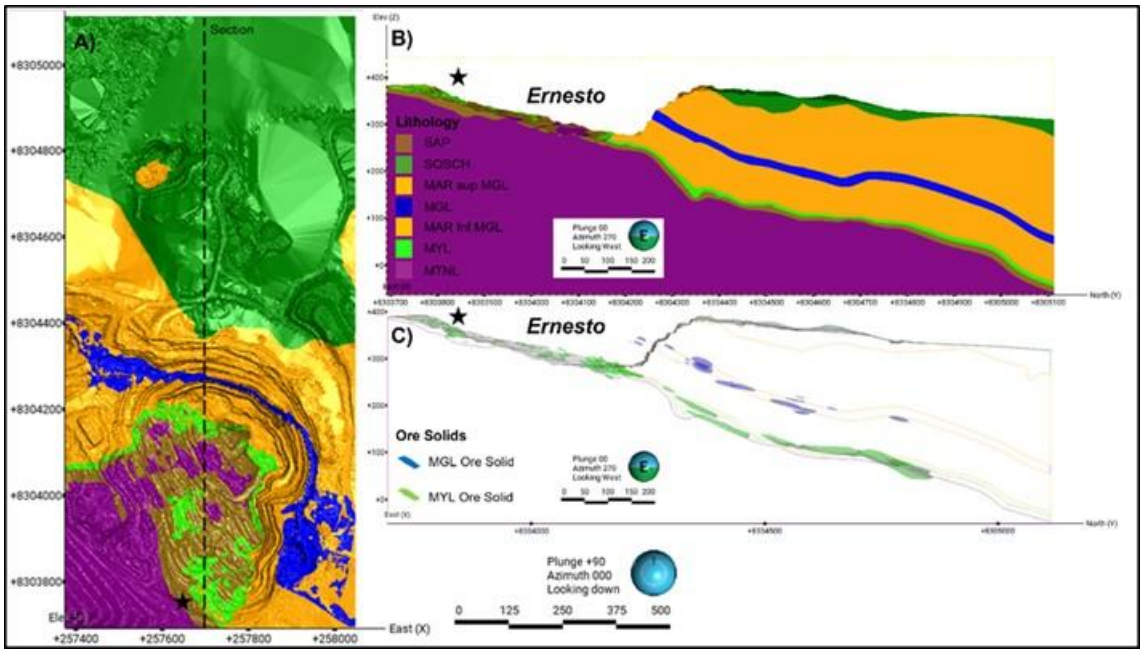


Figure 11-31: Geological Model of the Ernesto Deposit

Legend: A) Plan map with lithological units in the pit region and northern extensions; in B) Section with the 7 lithological units of the deposit and C) Lithological section of the two mineralized units associated.

The two potentially mineralized units (MGL and MYL), respectively Middle Trap and Lower Trap, have a permeable conglomeratic horizon, where it crosses dilatation structures developed by folding and faults. This horizon is composed of milky quartz veins with fresh and weathered pyrites, with alteration of the sericite and chlorite matrix and fissure hematite. Mylonite, on the other hand, consists of an intensely altered mylonite zone developed along detachment structures between the Lavrinha tonalite and the feldspathic metarenite of the Fortuna Formation. Alteration associated with gold mineralization within the mylonitic zone includes abundant veins (i.e. parallel to foliation) of quartz, and veins with coarse-grained euhedral pyrite and fine-grained bipyramidal crystalline magnetite, along with visible gold. In addition, there is sericite, chlorite, specularite and

fissure hematite and fine-grained limonite present. The presence of extensional faults at the time of mineralization caused the alteration of the tonalitic unit of the footwall. Tonalite is extensively weathered and historically recorded as saprolite.

Lithological models were used to confine the grade shell models in Leapfrog Geo® Software. A nominal 0.2 g/t Au cut-off was used to constrain mineralization within two main mineralized units (MYL and MGL). The local mineralization within metarenites (MAR) and Saprolite (SAP) was also modeled using the same nominal cut-off grade.

Figure 11-32 shows two grade shells for mineralization within mylonite (MYL) and meta-conglomerate (MGL).

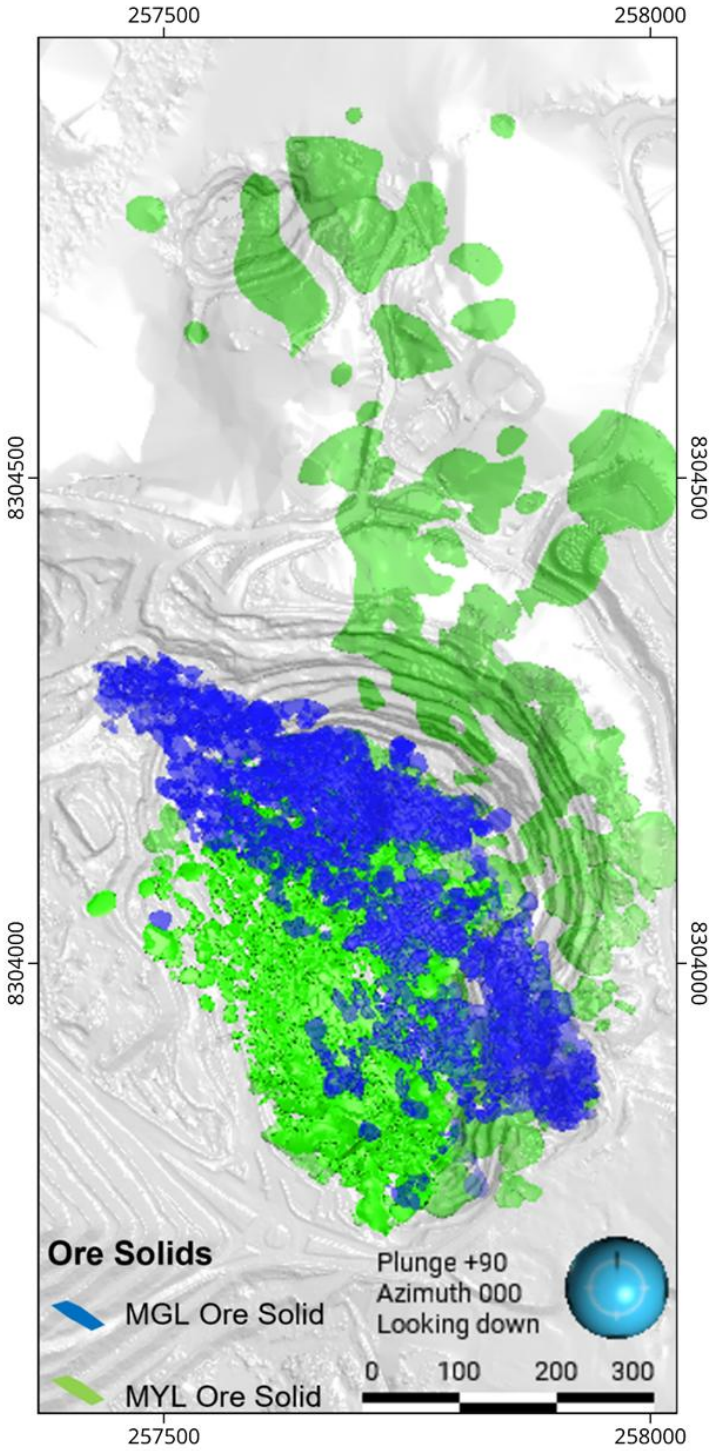


Figure 11-32: Ore Grade Shell Model of the Ernesto Deposit

Ernesto Connection Deposit

The Ernesto connection mineralization is associated with the eastern and western flanks of the Lavrinha anticline, which dip 20-60º to N-NW, parallel and discordant with the NW-trending foliation.

The main lithologies in the Ernesto connection are metarenite (MAR) and metaconglomerate (MGL) of the Middle Trap at the bottom and the schist of the Upper Trap on top.

The Middle Trap is associated with permeable conglomeratic horizons, where it intersects dilatation structures developed by possible folding and faulting (Figure 11-33). These conglomeratic horizons composed of milky quartz veins with fresh and weathered pyrites, with alteration of the sericite and chlorite matrix and fissure hematite. This trap appears in the old Ernesto pit and is recognized in drill holes in the Ernesto Connection, Nosde and Lavrinha deposits.

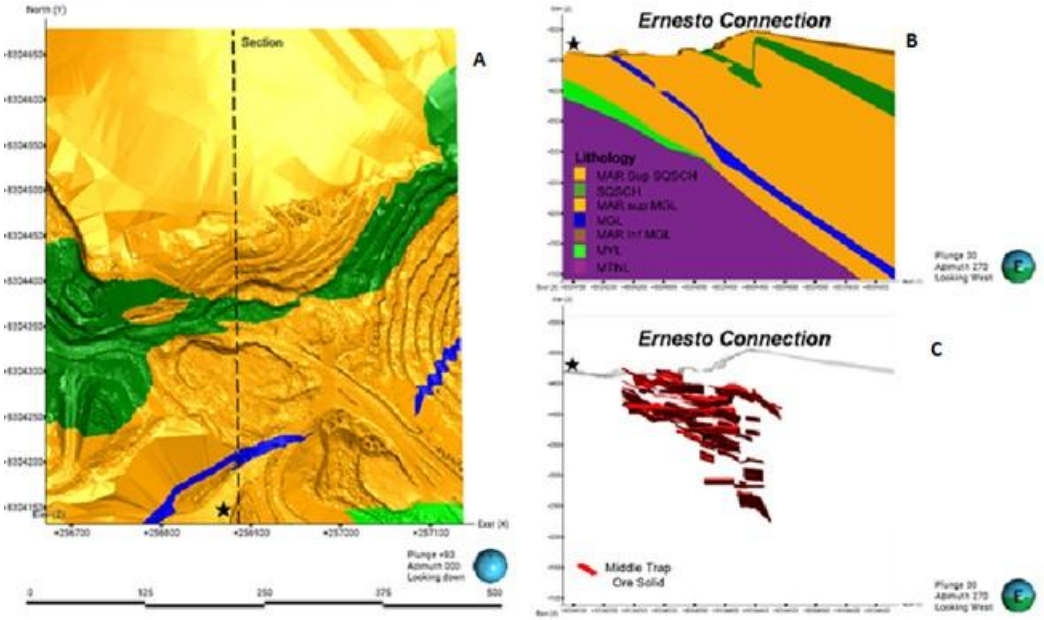


Figure 11-33: Geological Model of the Ernesto Connection Deposit

Legend: A) Plan map with lithological units in the pit region and northern extensions; in B) Section with the 7 lithological units of the deposit and C) Cross section of the lithological units associated.

11.2.4 Bulk Density

Before Aura, water immersion bulk density testing was carried out at Ernesto by MSE and Yamana for a total of 529 core samples in 66 ER series holes. An additional 25 tests were performed during Knight Piesold's geotechnical work in 2015 for the purpose of the feasibility study. Aura started to collect density samples in 2021 and continued during the operation until the end of 2023 for a total of 804 core samples from 71 drill holes.

For the Ernesto connection 98 core samples were collected from 17 drill holes by Yamana in 2006 and 2009. Aura collected 615 samples from 58 drill holes during the 2021 drill campaign.

Table 11-21 and Table 11-22 shows the average bulk densities for the main lithological units in the Ernesto and Ernesto connection area respectively.

Table 11-21: Average bulk densities for the main lithological units in the Ernesto deposit

LITHO CODE	DESCRIPTION	Average Bulk Density (t/m^3)
SAP	Saprolite	2.14
SSCH/SQSCH	Sericite/Muscovite Schist	2.73

LITHO CODE	DESCRIPTION	Average Bulk Density (t/m^3)
MPEL	Metapelite	2.72
MAR	Metarenite	2.65
MGL	Metaconglomerate	2.54
FMAR	Feldspar Metarenite	2.46
MYL	Muscovite Schist (Mylonite)	2.62
QZV	Quartz Vein	2.76
MTNL	Metatonalite	2.50
BRXX	Breccia	2.21
CMAR	Conglomeratic Metarenite	2.55
GRA	Granitoid	2.47
DBS	Mafic Rock/Diabase	2.48

Table 11-22: Average bulk densities for the main lithological units in the Ernesto connection deposit

LITHO CODE	DESCRIPTION	Average Bulk Density (t/m^3)
SAP	Saprolite	2.21
SSCH/SQSCH	Sericite/Muscovite Schist	2.51
MPEL	Metapelite	2.62
MAR	Metarenite	2.48
MGL	Metaconglomerate	2.53
FMAR	Feldspar Metarenite	2.41
MYL	Muscovite Schist (Mylonite)	2.44
QZV	Quartz Vein	2.38
MTNL	Metatonalite	2.35
BRXX	Breccia	2.39
CMAR	Conglomeratic Metarenite	2.41

11.2.5 Exploratory Data Analysis (Ernesto Mine)

Exploratory analysis was done using Snowden Supervisor Software V.8. Statistical analysis of the data was performed on each mineralized domain.

A total of 46,308 assay results from 553 diamond drill holes and 48,883 assay results from 919 RC holes have been recorded and stored in the database. In addition, a total of 187,368 assay results from 10,049 rotary production holes are recorded and stored in the database. From this number of assays only 14,298 assays fall inside the mylonite model and 13,708 assays fall inside the Middle Trap metaconglomerate model, which are used for Mineral Resource estimation. Sample lengths for diamond drill holes are quite variable, from 6 centimetres to 4.20 of metres with a mean of 1.1 metres. Sample lengths for both RC and rotary production holes are 1.0 metre.

Compositing

Samples within each mineralized envelope were composited into 2.0 m intervals. All the short intervals (<0.50 m) are removed from the dataset for Mineral Resource estimation to avoid local bias mainly in the fringe of the mineralized zones.

Figure 11-34 and Figure 11-35 show histograms and log of probability plots for composited assays of mylonite and metaconglomerate mineralized zones.

Capping Strategy and Treating of Outliers

Capping is the process of artificially reducing high values within a sample population that are regarded as statistically anomalous with respect to the population as a whole (outliers), to avoid the distorting influence these values would have on the statistical characteristics of the population if left at their full value. The risk of including atypically high values in a Mineral Resource Estimate is that their contribution to the estimated grade will be disproportionate to their contribution to the tonnage, and therefore the grade of the resource as a whole will be overstated.

Log probability plots are commonly used to determine whether capping is appropriate. If a single sample population is present, the cumulative frequency curve is a relatively straight line; steps in the curve indicate the potential presence of separate or mixed populations.

There is a noticeable break in curves of log of probability plots for mylonite at 45.0 g/t Au and for metaconglomerate at 15.0 g/t Au. These values are taken as capping values for each mineralized domain.

For the mylonite domain a total of 29 assays were cut and for the metaconglomerate domain a total 25 assay were cut after compositing.

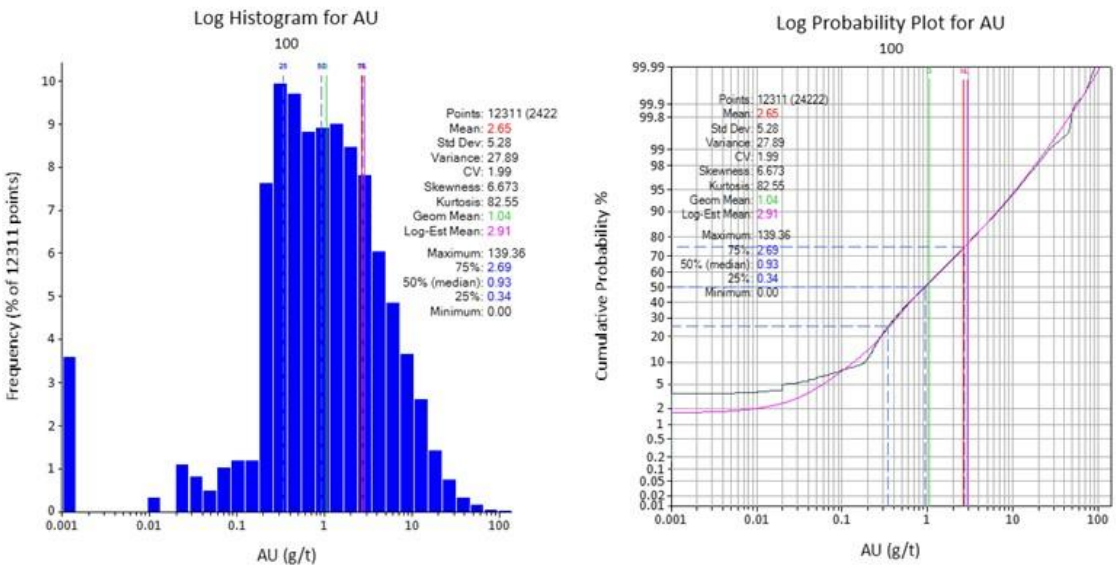


Figure 11-34: Histogram and Log Probability Plots for Composited Gold Assay Values (Mylonite Domain)

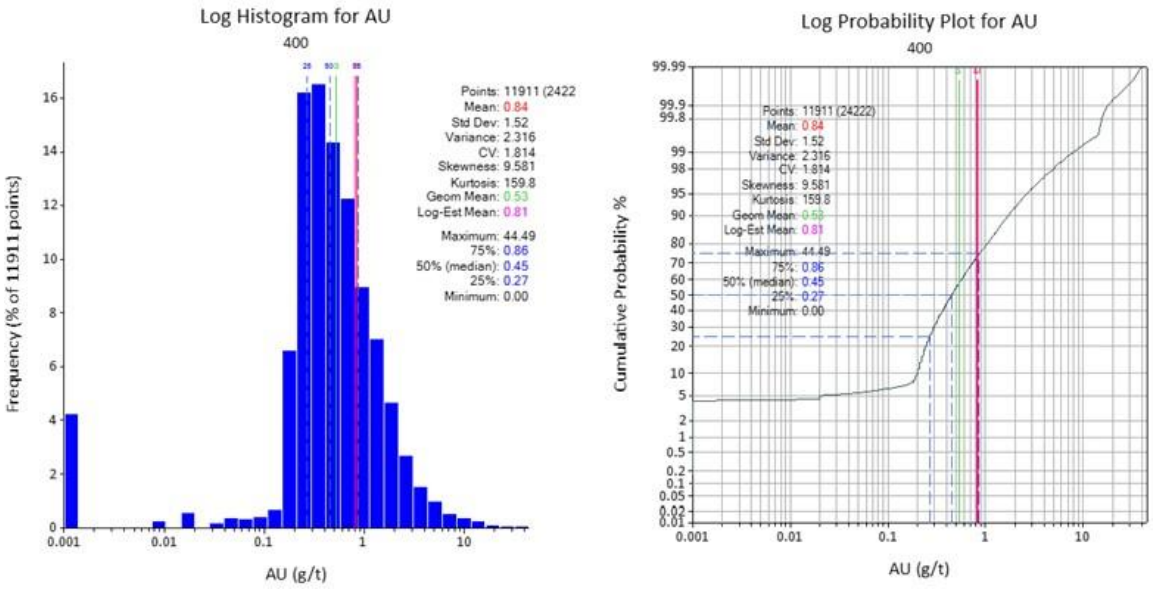


Figure 11-35: Histogram and Log Probability Plots for Composited Gold Assay Values (Metaconglomerate Domain)

Statistics of composited assay data (uncapped) for each mineralized zone are shown in Table 11-23.

Table 11-23: Summary statistics of Au (g/t) composited data in Ernesto deposit (only EX and MP data)

Composites	Mylonite	Metaconglomerate
Number of Composites	12,311	11,911
Minimum	0.00	0.00
Maximum	139.36	44.49
Mean	2.65	0.84
Standard deviation	5.28	1.52
Variance	27.89	2.32
Coefficient of variance	1.99	1.81
Q1	0.34	0.27
Q2	0.93	0.45
Q3	2.69	0.86

11.2.6 Exploratory Data Analysis (Ernesto Connection)

Exploratory analysis was done using Snowden Supervisor Software V.8. Statistical analysis of the data was performed on each mineralized domain.

A total of 16,398 assay results from 145 diamond drill holes are stored in the database. From this number of assays only 3,993 assays are inside the mineralized model which are used for Mineral Resource estimation. Sample lengths for diamond drill holes are quite variable, from 0.2 centimetres to 2.80 of metres with a mean of 1.0 metres.

Samples within each mineralized envelope were composited into 2.0 m intervals. All the short intervals (<0.50 m) are removed from the dataset for Mineral Resource estimation to avoid local bias mainly in the fringe of the mineralized zones.

Figure 11-36 and Figure 11-37 show histograms and log probability plots for raw and composited assays for the metaconglomerate and metarenites of Middle Trap zone of the Ernesto connection deposit.

Capping Strategy and Treating of Outliers

The break in curves of log of probability plots for mineralized domains of metarenite and metaconglomerate was estimated at 10.0 g/t (Figure 11-36 and Figure 11-37). These values are taken as capping values for the mineralized domains. A total of 14 assays within mineralized domains was capped after compositing.

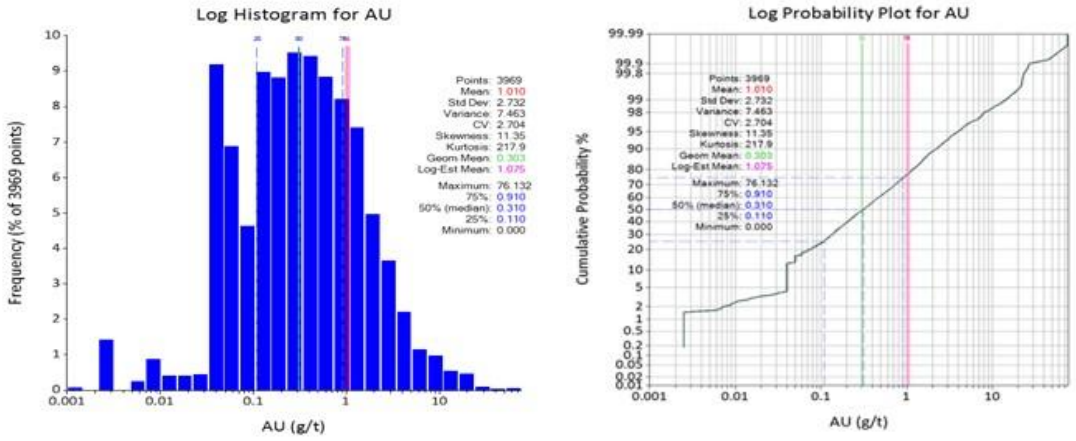


Figure 11-36: Histogram and Log Probability Plots for Raw Gold Assay Values (Ernesto Connection)

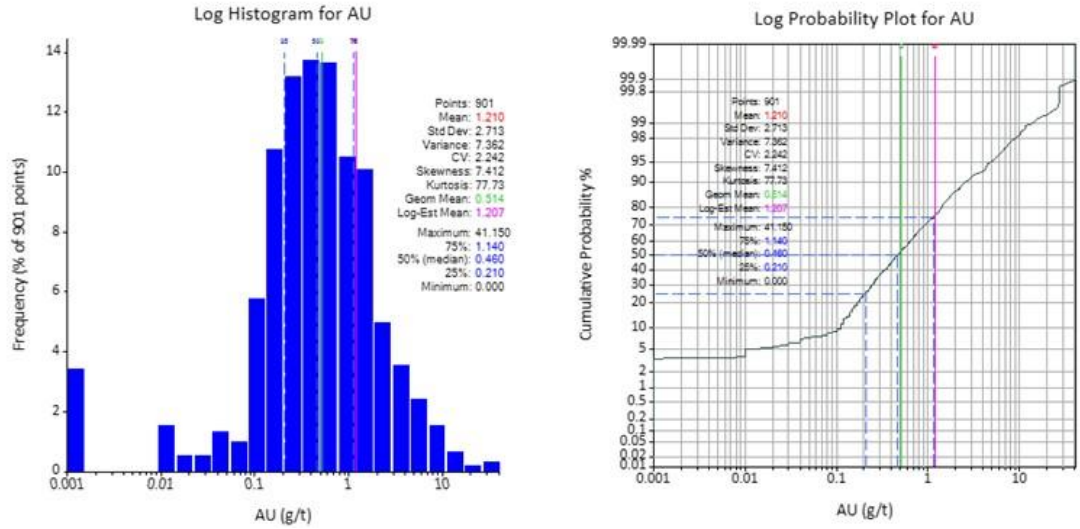


Figure 11-37: Histogram and Log Probability Plots for 2m composited Gold Assay Values (Ernesto Connection)

11.2.7 Variogram Analysis

Exploratory analysis of composited data and variogram analysis only was performed only on exploration and infill dataset, excluding grade control data for the Ernesto and Ernesto connection deposits. The search ellipsoids for grade estimation were developed using variograms for each domain. Variograms were established in each domain for gold in the same structural orientations used to develop the mineralized solids. Gold was modeled using two spheroidal structures and a moderate nugget, both consistent with the grade continuity and known controls on mineralization.

In the Ernesto connection deposit, mineralization in conglomeratic metarenite is divided into two sets of domains for estimation and variogram analysis. The flat domain is where mineralization has an E-W strike direction and a slightly angled domain with an E-W strike and a 10 to 20 dip to the west.

Variogram model parameters and orientation data of rotated variogram axes are shown in Table 11-24 for Ernesto and Table 11-25 for Ernesto connection. Gold grade normal score variograms for Ernesto and Ernesto connection including downhole direction for each mineralized domain as shown in Figure 11-38 to Figure 11-41.

Table 11-24: Variograms Model Parameters (Ernesto deposit)

Domain	Nugget	Spherical Structure 1				Spherical Structure 2			
		Sill	Major	Semi-Major	Minor	Sill	Major	Semi-Major	Minor
Mylonite	0.66	0.3	20	20	3	0.04	100	100	10
Metarenite	0.71	0.19	20	20	10	0.1	110	75	25

Table 11-25: Variograms Model Parameters (Ernesto connection deposit)

Domain	Nugget	Spherical Structure 1				Spherical Structure 2			
		Sill	Major	Semi-Major	Minor	Sill	Major	Semi-Major	Minor
Conglomeratic Metarenite (Flat)	0.49	0.44	25	25	5	0.07	65	60	15
Conglomeratic Metarenite (Angled)	0.87	0.11	35	40	5	0.02	100	100	35

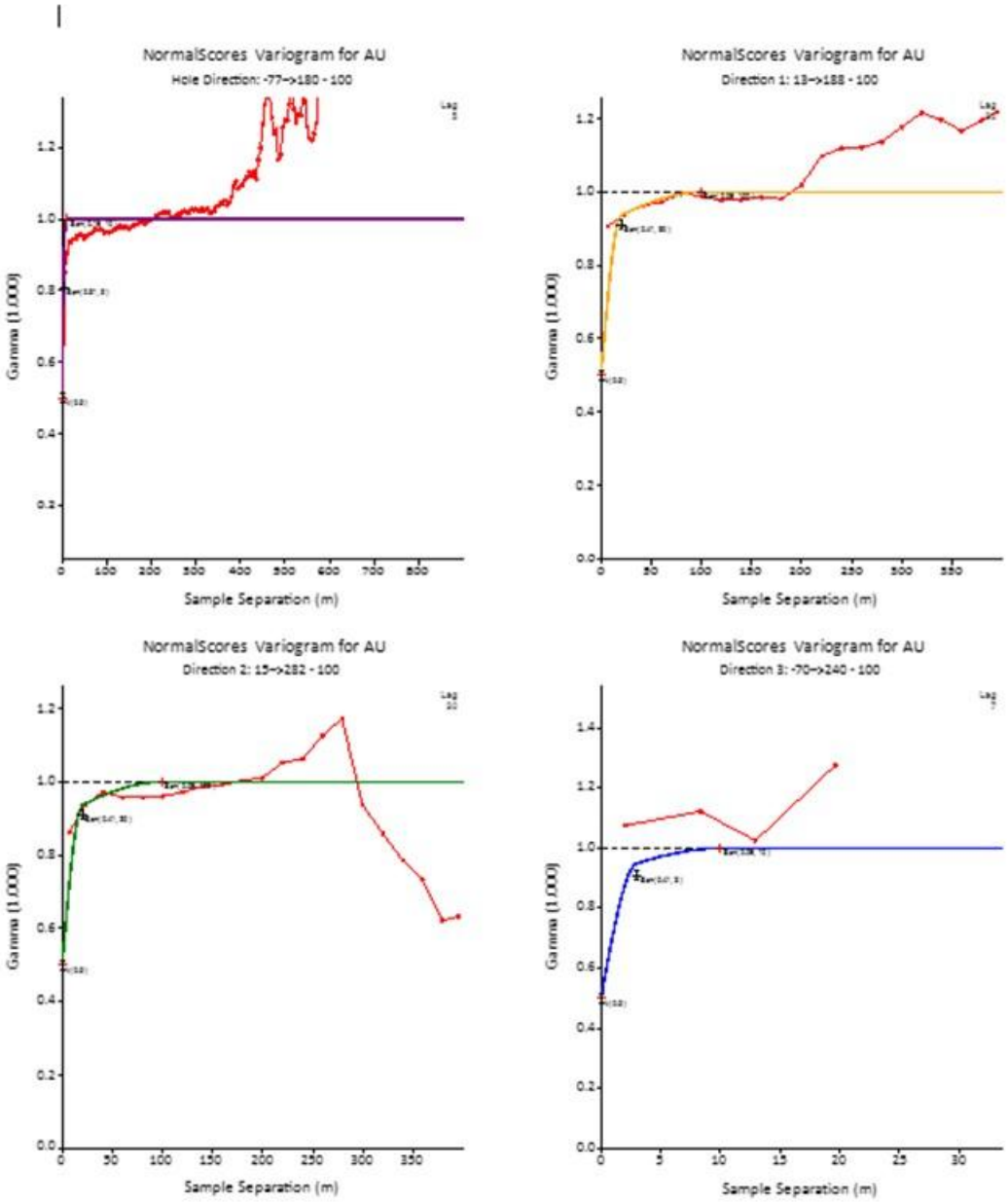


Figure 11-38: Ernesto Variograms (Lower Trap Mylonite Domain)

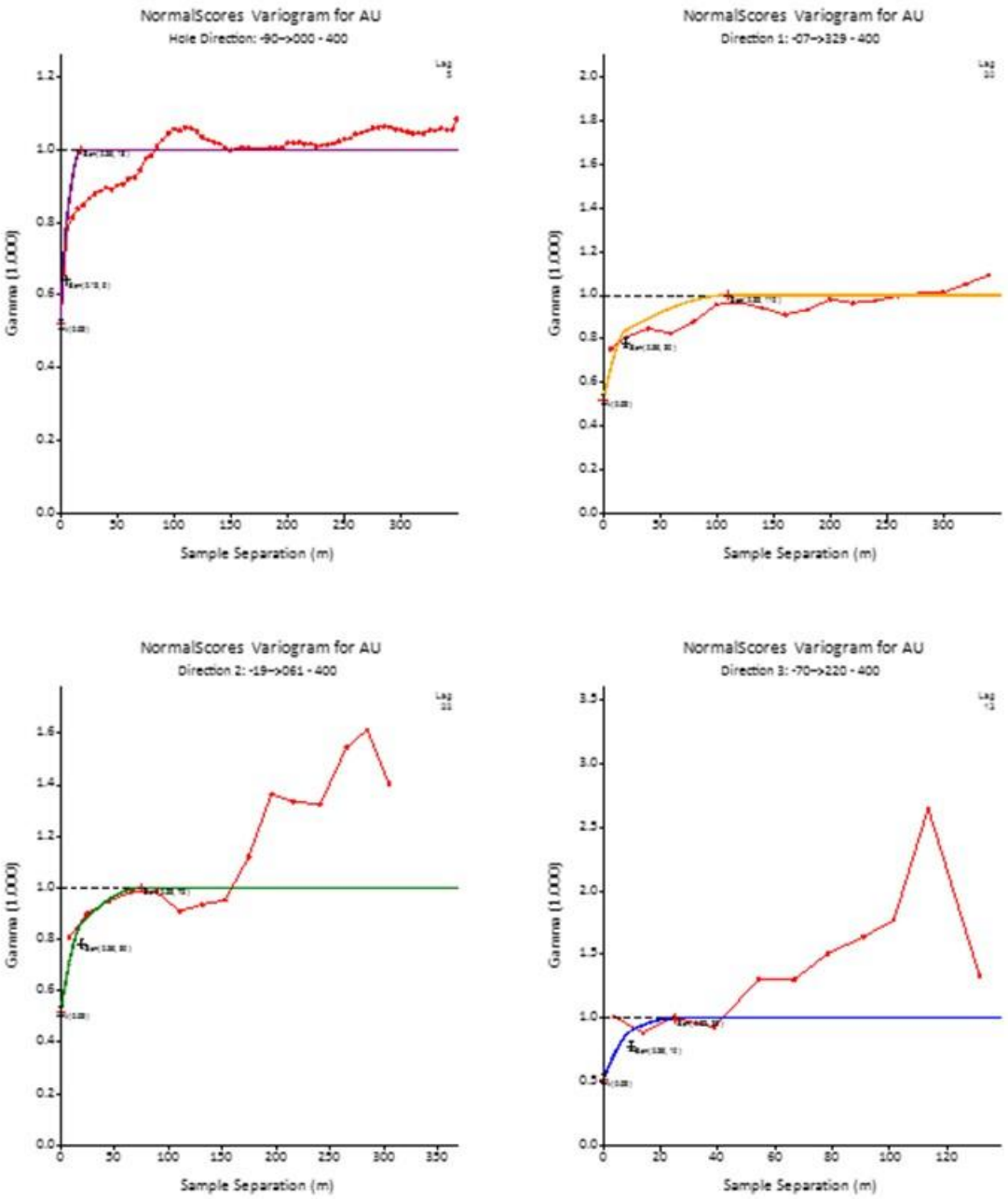


Figure 11-39 : Ernesto Variograms (Middle Trap Metarenite Domain)

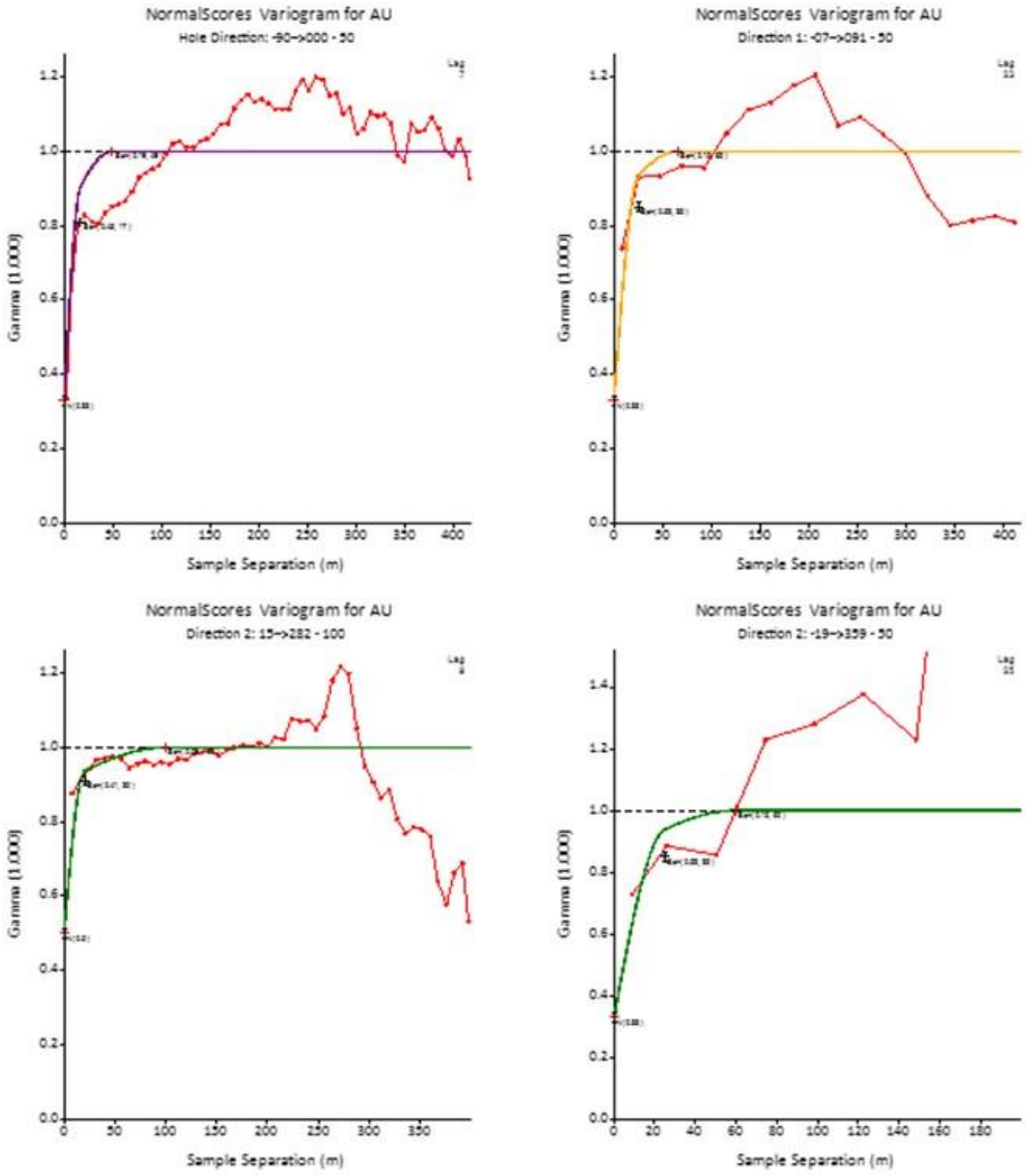


Figure 11-40: Ernesto Connection Variograms (Flat Conglomeratic Metarenite Domain)

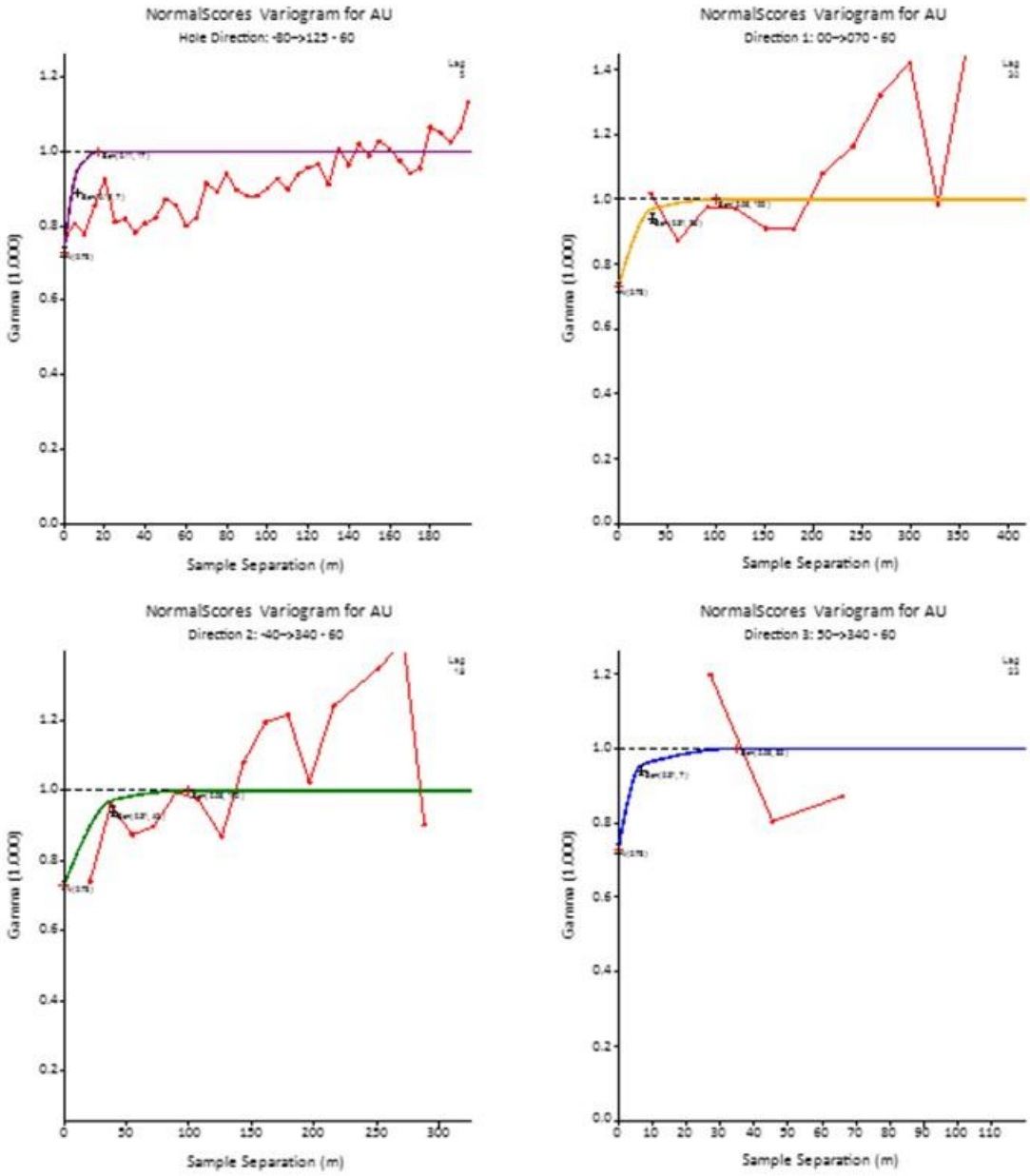


Figure 11-41: Ernesto Connection Variograms (Angled Conglomeratic Metarenite Domain)

Summary findings from the Ernesto variography analyses includes:

- The nugget effect is high for both Lower Trap mylonite and Middle Trap metarenite at approximately 0% of the sill regardless of capping, or exclusion of grade control data. Given the known deposit style of orogenic gold, observed mineralization in the core, swarms of quartz veins as dominant features of gold mineralization, free gold, and spatial distribution of grades, a high nugget effect is expected.
- First structure ranges are constantly short, typically at 20 m. However, the second structure ranges are relatively long ranges from 25 m to 100 m (depending on the direction of continuity). This is also expected given the known deposit style where

continuity in short distances is weak and improves over longer distances for each pair in variograms.

- Minor direction of continuity is always short and variograms are poor even with the inclusion of tight spacing grade control data. This is a signature of the type of mineralization in the entire EPP complex. However, in mineralization within the Middle Trap metarenite ranges are even smaller.

Summary findings from the Ernesto connection variography analyses includes:

- The nugget effect is high for both flat and angled conglomeratic metarenite at approximately 87% of the sill regardless of capping, or exclusion of grade control data. Given the known deposit style of orogenic gold, observed mineralization in the core, presence of quartz veins as dominant features of gold mineralization, free gold, and spatial distribution of grades, a high nugget effect is expected.
- First structure ranges are constantly short typically ranges between 25 m to 35 m. However, the second structure ranges are relatively long ranges from 65 m to 100 m (depending on the direction of continuity). This is also expected given the known deposit style where continuity in short distances is weak and improves over longer distances for each pair in variograms.
- Minor direction of continuity is always short and variograms are poor even with the inclusion of tight spacing historical grade control data. This is a signature of the type of mineralization in the entire EPP complex. However, for the Middle Trap conglomeratic metarenite ranges are even smaller.

11.2.8 Block Model Set Up

Block model parameters which are assigned in Geovia Gem software® are given in Table 11-26 and Table 11-27. The origin is the block centroid for minimum X, Y, and Z. Each block was discretized 5 x 5 x 1 (x, y, z directions). Block models are not rotated.

Table 11-26: Ernesto Connection Variograms (Angled Conglomeratic Metarenite Domain)

	East	North	Elevation
Origin	256,950	8,303,400	500
Block Size (m)	10	10	2
No. of Blocks	175	240	250
Rotation	None		

Table 11-27: Ernesto Connection Block Parameters

	East	North	Elevation
Origin	256,375	8,303,715	526
Block Size (m)	10	10	2
No. of Blocks	180	135	275
Rotation	None		

11.2.9 Grade Interpolation

The grade interpolation used Ordinary Kriging with variography as set out in Section11.2.6. The updated 3D model coded in the block model, was interpolated, using just the data points from inside that zone as the data source. The mineralized domains were modelled using 3 interpolation runs. Given the latest average grid spacing of about 25 m by 25 m for the Lower Trap domain in Ernesto, the short 1st structure in the variograms was adopted for the first pass which was used later for classification purpose. The second pass adopted the full range of the correlogram model both for the Ernesto and Ernesto connection. The third pass was approximately set at two times the range of the correlogram model both for Ernesto and Ernesto connection (Figure 11-38 to Figure 11-41). The entire model was populated by gold grade using the three passes. At least six holes were used to estimate the blocks for first pass and 3 holes were used to estimated blocks in second pass (defining three composites per hole as a maximum of samples used in grade interpolation). Estimation parameters for Ernesto and Ernesto Connection are shown in Table 11-28 and Table 11-29.

Table 11-28: Ernesto Estimation Parameters

SEARCH REFERENCE	Domain	SEARCH DISTANCES (m)			MINIMUM N° COMPOSITES	MAXIMOUS N° COMPOSITES	MINIMUM DRILLHOLES	MAXIMUM COMPOSITES PER HOLE
		X	Y	Z				
1	Mylonite (Lower Trap)	20	20	3	9	24	6	3
2		100	100	5	9	24	3	3
3		160	220	30	1	24	1	_
1	Metarenite (Middle Trap)	20	20	10	9	24	6	3
2		110	75	25	9	24	3	3
3		200	200	40	1	24	1	_

Table 11-29: Ernesto Connection Estimation Parameters

SEARCH REFERENCE	Domain	SEARCH DISTANCES (m)			MINIMUM N° COMPOSITES	MAXIMOUS N° COMPOSITES	MINIMUM DRILLHOLES	MAXIMUM COMPOSITES PER HOLE
		X	Y	Z				
1	Mylonite (Lower Trap)	25	25	5	9	24	6	3
2		65	60	15	9	24	3	3
3		120	120	30	2	12	1	_
1	Metarenite (Middle Trap)	35	30	5	9	24	6	3
2		100	100	35	9	24	3	3
3		100	100	35	2	12	1	_

11.2.10 Block Models Validation

The block model validation process included visual comparisons between block estimates and composite grades in plan and section, statistical comparison of raw assay values, composite

assay values versus block grade values (Table 11-30 and Table 11-31). In addition, block estimates were visually compared to the drill hole composite data in all wireframes to ensure agreement. No material grade bias issues were identified, and the block model grades compared well to the composite data.

Table 11-30: Ernesto Block Mode Au (g/t Statistics (All Domains)

Ernesto	Domain		
	All	Mylonite	Metarenite
Block Model Results			
Number of blocks	35,258	18,801	16,457
Minimum	0.00	0.00	0.00
Maximum	14.49	14.49	5.55
Mean	1.21	1.67	0.68
Standard deviation	1.18	1.42	0.39
Variance	1.39	2.02	0.15
Coefficient of variance	0.98	0.85	0.57
Q1	0.52	0.83	0.45
Q2	0.84	1.29	0.58
Q3	1.45	2.09	0.79
Composites			
Count	24222	12311	11911
Minimum	0.00	0.00	0.00
Maximum	139.36	139.36	44.49
Mean	1.76	2.65	0.84
Standard deviation	4.02	5.28	1.52
Variance	16.14	27.89	2.32
Coefficient of variance	2.28	1.99	1.81
Q1	0.29	0.34	0.27
Q2	0.59	0.93	0.45
Q3	1.52	2.69	0.86
Raw Samples			
Count	28006	14298	13708
Minimum	0.00	0.00	0.00
Maximum	190.48	190.48	55.56
Mean	1.96	3.00	0.88
Standard deviation	5.14	6.84	1.69
Variance	26.38	46.74	2.59
Coefficient of variance	2.61	2.28	1.91
Q1	0.29	0.34	0.27
Q2	0.59	0.88	0.45
Q3	1.54	2.70	0.88

Table 11-31: Ernesto Connection Block Model Au (g/t) Statistics (Conglomeratic Metarenite Domains)

Ernesto Connection	Domain		
	All	Metarenite (flat)	Metarenite (Angled)
Block Model Results			
Number of blocks	65,431	40,918	20,668
Minimum	0.00	0.00	0.00
Maximum	6.10	5.13	6.10
Mean	0.97	0.77	1.41
Standard deviation	0.71	0.59	0.74
Variance	0.50	0.35	0.54
Coefficient of variance	0.73	0.77	0.52
Q1	0.43	0.33	0.93
Q2	0.84	0.64	1.30
Q3	1.35	1.13	1.69
Composites			
Count	3485	2954	495
Minimum	0.01	0.01	0.01
Maximum	41.15	26.70	41.15
Mean	0.88	0.81	1.30
Standard deviation	1.78	1.48	2.96
Variance	3.17	2.20	8.74
Coefficient of variance	2.03	1.84	2.28
Q1	0.15	0.13	0.23
Q2	0.38	0.36	0.47
Q3	0.92	0.90	1.17
Raw Samples			
Count	3993	3488	555
Minimum	0.00	0.00	0.00
Maximum	76.13	45.49	76.13
Mean	1.01	0.92	1.69
Standard deviation	2.73	2.17	5.32
Variance	7.46	4.70	28.33
Coefficient of variance	2.70	2.35	3.15
Q1	0.11	0.10	0.18
Q2	0.31	0.30	0.41
Q3	0.91	0.88	1.26

11.2.11 Mineral Resource Classification

The Mineral Resources for the Ernesto and Ernesto connection deposits have been classified in accordance with the definitions for Mineral Resources in S-K 1300. The classification parameters consider the proximity and number of composite data. The block model then is coded accordingly for Measured (1), Indicated (2) and Inferred (3) for all three deposits.

Measured Mineral Resource only was classified for the Ernesto deposit for the area which has coverage by grade control drilling of 5m X 5m drill spacing. The second pass is to assign the

Indicated category using a range of variograms for both Ernesto and Ernesto connection. Third passes are used to fill the remaining blocks within each mineralized domain for Ernesto and Ernesto Connection. No measured category classified for Ernesto connection. The full range of variograms was used for classification of Mineral Resources as Indicated category. The passes were the result of the variography which was discussed in section 11.2.6. Other criteria such as several drill holes, and the minimum and maximum number of composites were also used to estimate a block. The Mineral Resource classification criteria applied for both Ernesto and Ernesto connection deposits are shown in Table 11-32.

Table 11-32: Ernesto and Ernesto Connection Block Model Classification Criteria

CATEGORY	PASS NO. (OKPASS)	Drill Spacing	APPROXIMATE DISTANCE (m)	MIN NO. COMPS	MAX. NO. COMPS	NO. OF DH
Measured	1	5m*5m	≤ 25m	9	24	6
Indicated	2	25m*25m	>25 and ≤ 60	9	24	3
Inferred	3	>50m	No limit	1	24	1

11.2.12 Mines Topographic Surfaces

The Ernesto Mine and Ernesto connection deposit area topography were provided by Apoena mines survey department as a digital terrain model (DTM) in DXF format. The DTM was of sufficient quality for the mines and surrounding areas. Survey team in Apoena provide DTM files on monthly basis for mine planning and reconciliation purposes. Topographic surveys are prepared using Total Station GPS and drone (UAV).

11.2.13 Reasonable Prospects for Economic Extraction

An open pit optimization was conducted using the Deswik® software (2023.1074 version) to determine the extent of the Mineral Resource with “reasonable prospects for economic extraction” by open pit mining methods.

For Mineral Resource estimation reporting, a cut-off grade (CoG) of 0.40 g/t gold was used for both open pit mines. CoG is derived from the economic parameters presented on Table 11-33 based on an open pit mining scenario.

The operating assumptions are shown in Table 11-34 These assumptions are conceptual in nature, however, geotechnical parameters were revised based on local observations during the operation for the Ernesto mine.

Table 11-33: Ernesto and Ernesto Connection Cut-off (CoG) Grade Assumptions

Inputs	Value	Unit
Metallurgical recovery	93.5%	
Dilution	10%	
Exchange rate	5.3	USD/BRL
Selling Cost	69.98	USD/Oz
Resources Gold Price	1900	USD/Oz
Costs		

Inputs	Value	Unit
Mining cost	2.26	USD/t mined
Mining fixed cost	1.74	USD/t mined
Total processing cost	11.37	USD/t processed
Variable processing cost	8.58	USD/t processed
General and administrative	3.63	USD/t processed
Premium cost for ore	1.45	USD/t processed
Sustaining cost for mine	0.37	USD/t processed (LOM)
Sustaining cost for process	1.98	USD/t processed (LOM)
Cut-off Grade		
Full Grade Ore	0.40	
Marginal Ore	0.34	

Table 11-34: Ernesto and Ernesto Connection Optimization Parameters

Price	Velue/unit
Gold price	US$ 1,900/oz
Gold Refining/Insurace/Transport Charge	US$ 69.98/oz
Royalties (CFEM)	1.5% of Gross Revenue
Exchange rate	R$ 5.30:US$ 1
Costs	
Mining fixed	US$ 1.74/t mined
Mining fresh rock ore	US$ 3.70/t mided
Mining fresh rock waste	US$ 2.26/t mined
Processing	US$ 11.37/t processed
G&A	US$ 3.63/t processed
Sustaining for Mine	US$ 0.37/t mined
Sustaining for Process	US$ 1.98/t processed
Mine and Plant Assumptions	
Plant recovery	93.5%
Mining recovery	100.0%
Total Dilution (planned and unplanned)	10.0%
Weathered rock pit design parameters	
Geotechnical Assumptions	
Weathered rock pit design parameters	
Face angle	55º
Bench height	10m
Berm width	10m
Overall slope angle	30º
Fresh rock pit design parameters	
Face angle	80º
Bench height	20 m
Berm width	6m
Overall slope angle	56º
Ramp width	13m

11.2.14 Mineral Resource Statement

Based on the cut-off grade calculation (Table 11-33), Mineral Resources above 0.40 g/t Au cut-off grades summarized in Table 11-35 and Table 11-36, while a grade tonnage curve for the Ernesto and Ernesto connection deposit is shown in Figure 11-42 and Figure 11-43.

Table 11-35 – Mineral Resources of the Ernesto Mine

MINERAL RESOURCES CLASS	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery(%)
Measured	-	-	-	-
Indicated	427,100	2.11	24,720	93.5
Measured and Indicated	**427,100**	**2.11**	**24,720**	**93.5**
Inferred (Open Pit)	118,430	0.78	2,980	93.5
Inferred (Underground)	423,581	2.26	30,790	93.5

Notes:
1. The definitions for Mineral Resources in S-K 1300 were followed for Mineral Resources
2. Effective date of Mineral Resources is October 31, 2023.
3. The Mineral Resource estimate is reported on a 100% ownership basis.
4. Metallurgical recoveries reported as the average over the life of mine
5. Mineral Resources are reported from an optimized pit at US$ 1,900/oz gold price and at a cut-off grade of 0.40 g/t Au.
6. Density models based on rock types were used for volume to tonnes conversion with resources averaging 2.62 tonnes/m3.
7. Inferred Resources are reported in two parts, inferred (OP) which is mineable by an open pit operation and Inferred (UG) which only can be mined by an underground operation. Inferred (UG) Mineral Resources are reported at a cut-off grade of 1.5 g/t.Au. and minimum thickness of 2m and metallurgical recovery of 93.5%;
8. Surface topography is based on December 31, 2023.
9. The disclosure of the Mineral Resource Estimates and related scientific and technical information has been prepared under the supervision by Farshid Ghazanfari, P.Geo. as a Qualified Person.
10. Contained metal figures may not add due to rounding.

Table 11-36: Mineral Resources of the Ernesto Connection Deposit

MINERAL RESOURCES CLASS	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery(%)
Measured	-	-	-	-
Indicated	1,232,480	1.18	46,840	93.5
Measured and Indicated	**1,232,480**	**1.18**	**46,840**	**93.5**
Inferred	99,037	0.87	2,770	93.5

Notes:
1. The definitions for Mineral Resources in S-K 1300 were followed for Mineral Resources
2. Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Effective date of Mineral Resources is October 31, 2022.
4. The Mineral Resource estimate is reported on a 100% ownership basis.
5. Metallurgical recoveries reported as the average over the life of mine
6. Mineral Resources Estimate are based on an optimized pit shell using US$1,900/oz gold and at a cut-off grade of 0.40 g/t Au and metallurgical recovery of 93.5%; .
7. Density models based on rock types were used for volume to tonnes conversion with resources averaging 2.73 tonnes/m3.
8. Surface topography based on December 31, 2022.
9. The disclosure of the Mineral Resource Estimates and related scientific and technical information has been prepared under the supervision or is approved by Farshid Ghazanfari, P.Geo. as a Qualified Person.
10. Contained metal figures may not add due to rounding.

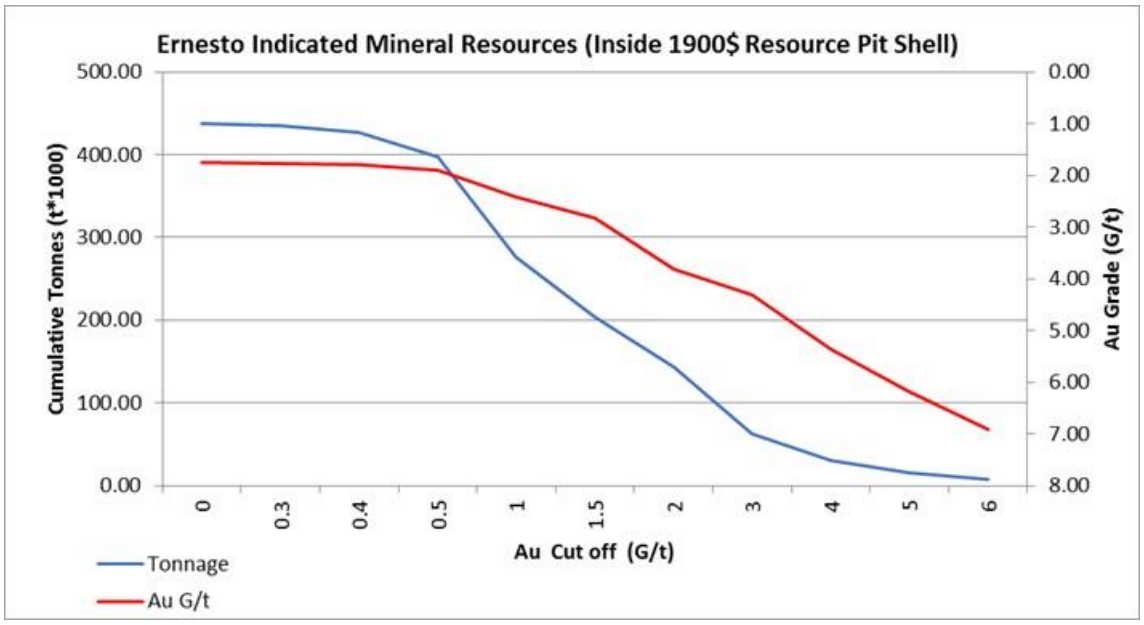


Figure 11-42: Sensitivity of Ernesto Indicated Mineral Resources within optimized Pit (1900$/Oz)

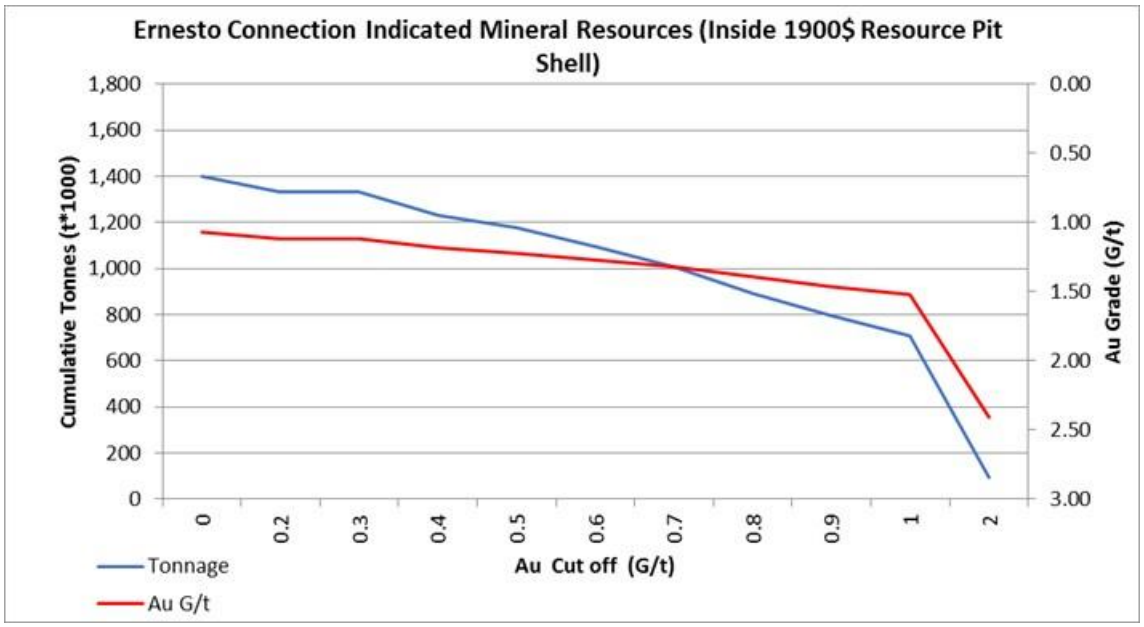


Figure 11-43: Sensitivity of Ernesto Connection Indicated Mineral Resources within optimized Pit(1900$/Oz)

Figure 11-44 and Figure 11-45 show a 3D illustration of block model grade distribution and current mine topography for Ernesto and Ernesto deposits.

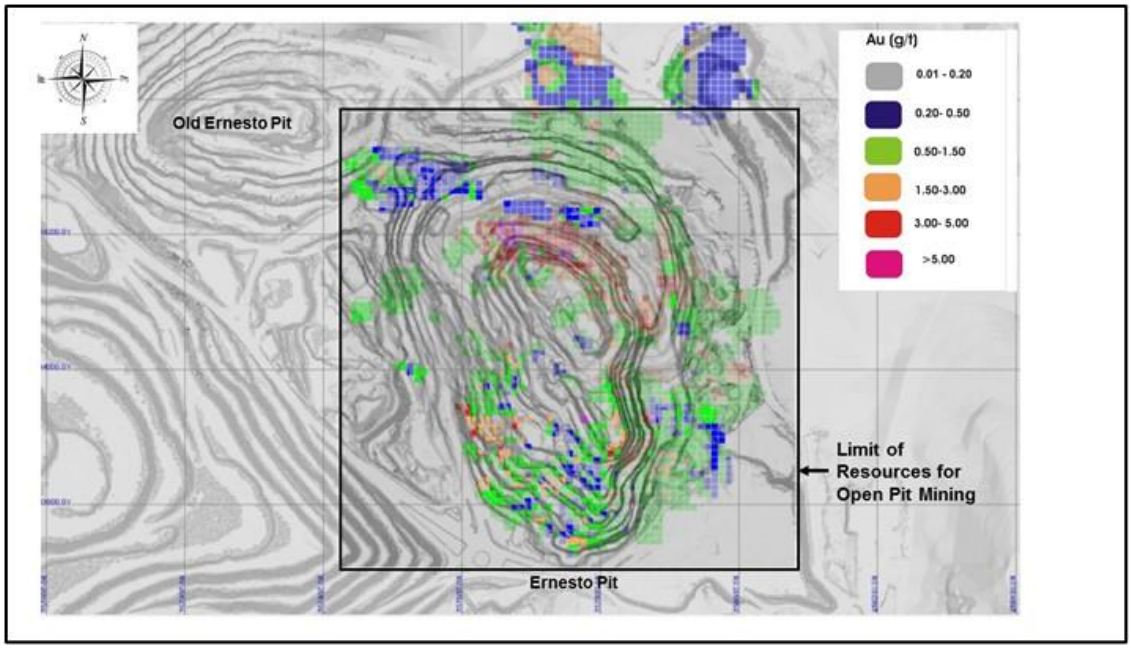


Figure 11-44: Ernesto Mine Remaining Mineral Resources by end of 2023 versus Current Mines Topography

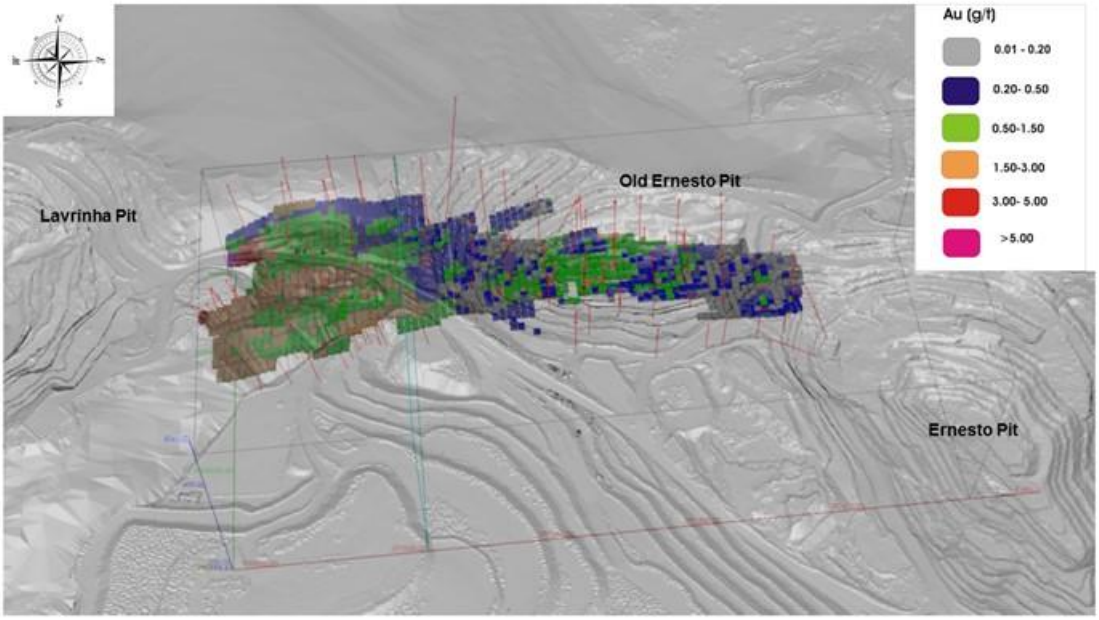


Figure 11-45: Ernesto Connection Block Model Grade Distribution, Ernesto Connection DDH traces and Current Mines Topography

The QP is of the opinion that with consideration of the recommendations summarized in Sections 1 and 23 of this TRS, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

11.3 Japonês Mineral Resource Estimate

11.3.1 Japonês Mineral Resource Estimate

Japonês Mine is depleted and the remaining Mineral Resources are not material to the operation and Aura at time of preparation of this TRS. Therefore, remining Mineral Resources are disclosed here as of end of 2022 using updated mine topography DTM file.

The Mineral Resources at Japonês Mine as of December 31, 2022, are shown Table 11-37.

Table 11-37 – Mineral Resources of the Japonês Mine

MINERAL RESOURCES CLASSIFICATION	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery (%)
Measured	-	-	-	-
Indicated	215,325	1.40	9,690	93.5
Measured and Indicated	**215,325**	**1.40**	**9,690**	**93.5**
Inferred	4,370	1.37	190	93.5

Notes*`
1. The definitions for Mineral Resources in S-K 1300 were followed for Mineral Resources
2. There are no Mineral Reserves estimated for the Japonêsdeposit. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The Mineral Resource estimate is reported on a 100% ownership basis.
5. Metallurgical recoveries reported as the average over the life of mine6. The disclosure of the Mineral Resource estimates and related scientific and technical information has been prepared under the supervision or is approved by Farshid Ghazanfari, P.Geo. as a Qualified Person.
7..Contained metal figures may not add due to rounding.
8..Mineral Resources Estimate based on an optimized pit shell using US$1,900/oz gold and at a cut-off grade of 0.40 g/t Au.
9..Density models based on rock types were used for volume to tonnes conversion with resources averaging 2.76 tonnes/m3.10. The Mineral Resources Estimate has an effective date of December 31, 2022. Surface topography based on December 31, 2022.

11.4 Pau-a-Pique (PPQ) Mineral Resource Estimate

The Pau-a-Pique Mine (PPQ) has been in care and maintenance since August 2022 due to a collapse in one of the development areas and some geotechnical issues. The updated Mineral Resources are based on all the information available up to the end the of 2022.

11.4.1 Summary

The updated Mineral Resource Estimate for the Pau-a-Pique underground Mine (“PPQ”) was estimated by conventional 3D computer block modelling methods employing Dassault Systems Geovia mining software V6.4. The Mineral Resource Estimate is based on surface diamond drilling and underground fan diamond drilling, core sampling and assaying as well as underground face channel chip sampling and assaying. Assaying was performed at SGS commercial laboratory in Belo Horizonte, at the Yamana mine laboratories Ernesto and MFB, as well as the Aura Sao Francisco Mine and EPP mines laboratory, all in Brazil. First Mineral Resources were initially estimated by P&E in October 2015. A follow up in-fill drill program in May 2016 added 3,211.44 m of drilling in 28 holes to the previous drilling database. Since re-opening of the mine in 2018, a total of 3,211.44 m of exploration and infill drilling was performed by Aura.

The PPQ gold mineralization consists largely of free gold hosted in mylonite, muscovite schist, biotite schist and quartz veins accompanied by sulphides that occur along a sheared contact between meta-tonalite and meta-conglomerate. Mineralization is epigenetic, hydrothermal in origin and is structurally controlled. The mineralized contact trends SSE and dips steeply SW.

The meta-conglomerate unit pinches out to the SSE where three additional zones, named herein as P3, P4 and P5, are in the footwall to the principal zone P2 and narrow hanging wall zone (P1). The latter was mined from 2011 to 2014. P1, P2 P3, P4 and P5 were all subject to mining activities by Aura before suspension of operation in PPQ Mine. The narrow widths of the steeply dipping mineralization all but preclude open cast mining and the mineralization at PPQ is amenable to underground mining.

Five Mineral Resource wireframes were constructed from mineralization intersections in channels and drill holes at a cut-off grade of 1.0 g/t Au over a minimum horizontal mining width of 2.0 m. The cut-off grade represents a marginal operating cut-off based on 75% of the currently estimated mining cost. Mineralization widths are commonly narrower than minimum mining width and were “bulked out” to at least minimum width using adjacent assays. The 2 m minimum mining width was selected to permit use of the scooptrams available at the mine during the operation.

Assay composites were generated for the zone intersections from the assays captured by GEMS software in the mineral wireframes. Composites were prepared down hole dynamically at nominal 1.0 m down-hole. This method ensures that the grade weighting is correctly applied for bulked out lode widths but results in variable composite lengths. The composite length less than 0.25 m was omitted to avoid the local bias at the edge of the wireframes.

A resource block model with dimensions of 3m X 3m X 3m was created which was suitable for selective mechanized mining methods. The X-axis of the resource block model is rotated to 60° azimuth anticlockwise. Ordinary kriging (“OK”) interpolation was carried out using multiple search distances and search ellipses oriented to the NNW mineralization plunge. Inverse distance squared (“ID2”) and nearest neighbour (“NN”) interpolation methods were employed for model validation.

The Mineral Resource Estimate was classified as Measured, Indicated and Inferred based on drill hole spacing and data quality, channel sampling locations, confidence in the assaying and geologic confidence in the zone’s interpretation and grade continuity. The QP cautions that the Indicated Mineral Resource held in remnant pillars, sills and “skins” left in stopes may not all be recoverable pending an engineering study. The hanging wall (P1) and footwall lenses P3, P4 and P5 tend to be lower grade than P2. The lower grades and their narrower widths affect the interpretation of mineral continuity and confidence in the estimation of the Mineral Resource for these lenses which is lower with respect to P2.

For PPQ Mine a total Measured Mineral Resource of 42,180 tonnes averaging 3.19 g/t Au and Indicated Mineral Resource Estimate of 601,660 tonnes averaging 2.71 g/t Au were estimated. In

addition, the total Inferred Mineral Resource of 71,330 tonnes averaging 2.47 g/t Au was estimated.

Validation of the grade interpolation and the block model was carried out by on-screen review of block grades versus drill hole composites and other block model estimation parameters, by comparison of resource grades to the grades of assays, composites and zone intersections, comparison to alternate ID2 and NN interpolations, and review of the wireframes volumes versus reported resources.

11.4.2 PPQ Database

The PPQ deposit has been sampled by surface and underground diamond drilling and underground face chip sampling. Core for the surface drilling is largely NQ (47.6 mm) and for the underground fan drilling is NQ (47.6 mm). The database contains some 1,067 holes for totalling 110,242.74 m. The PPQ deposit exploration database contains 1,067 holes for totalling 110,242.74 m of which there are 92 surface holes for totalling 25,378.88 m and 975 underground holes for totalling 84,863.86 m (Table 11-38). Assayed intervals for drill core total 47,959 records over 48,060.30 m.

Table 11-38: Summary of PPQ Drill Hole Database

Drill Hole Database	Count	Length (m)	% (by m)
Database	1,067	110,242.74	100
Holes with No Assays, No Surveys	17	2,841.46	3
PPQ Surface	92	25,378.88	23
PPQ Underground	975	84,863.86	77

Much of the sampling below 310 elevation (135 m depth) has been done by UG definition fan drilling resulting in a relatively high number of shallow angle and down dip intersections that make correlation hole to hole difficult/uncertain and de-regularizes the number of core samples per intercept. In addition, some surface holes are 450 m to 550 m long and thus the position of the toe and resource intersections is subject to the accuracy of deviation surveys and instrument accuracy tolerances. P&E in 2016 and Aura afterwards examined the down hole surveys with respect to deviation (Table 11-39). From Table 11-39, it is clear that a review of the down hole surveys is recommended, implausible readings should be removed, and the resulting re-positioning of the hole toe reviewed for impact. With readings taken at 3 m intervals down hole, excessive deviation is not obvious on screen or from simple hole trace plots unless the successive differences between readings is plotted.

Table 11-39: Down hole survey and deviation review

DOWN HOLE SURVEY AND DEVIATION REVIEW	
Number of Holes Reviewed	1,067
Number of records	33,334
Total Length Drilled (m)	110,243
Number of Unsurveyed Holes	153

DOWN HOLE SURVEY AND DEVIATION REVIEW		
Deviation Review	Deviation Threshold	
	5º/30 m	10º/30 m
No. Of Excessive Azimuth Deviations	2,608	387
No. Of Excessive Dip Deviations	2,311	265
Minimum Azimuth Deviation º/m	0.17	0.34
Maximum Azimuth Deviation º/m	3.36	3.36
Minimum Dip Deviation o/m	0.17	0.34
Maximum Dip Deviation o/m	4.77	4.77
No. of Holes Affected	621	252
No. of Holes with no Azimuth Change	0	0
No. of Holes with no Dip Change	0	0

Face chip “channel” sampling underground was carried out at 3 m intervals in production headings during mining operations. The channels are entered in the database as pseudo drill holes totalling 2,315 records for 11,619.29 m of which 76 for 352.17 m were not assayed.

Field QAQC work for the chip sampling was undertaken after start of operation by Yamana and supported the sampling as industry standard based on P&E’s opinion in previous report. No field QAQC was done for years 2011 to 2013. During this time two Yamana mine labs were used: Ernesto Mine lab and MFB lab. In 2016, P&E reviewed the lab internal QAQC blanks and reference standards, and lab results was very comparable to the 2014 internal lab QAQC, resulting in and the acceptance of the chip sampling assays for resource estimation. P&E prepared QQ plots of the core and chip sample assays distributions for assays contained within the resource wireframes and believe the data sets are compatible for Mineral Resource estimation with the channel samples showing a slight low bias with respect to the core assays (P&E Mining Consultants Inc., FEASIBILITY STUDY AND TECHNICAL REPORT ON THE EPP PROJECT, MATO GROSSO, BRAZIL, Report no316, Aura EPP Project).

Aura continued the chip sampling program during the mine operation between 2018 and 2022 before the mine was put under care and maintenance. During this time all the samples were analyzed in mine lab at Ernesto mine and no QAQC were inserted except for about 100 samples in 2022.

In the opinion of the QP, this is a major shortcoming in terms of QAQC measures in the PPQ Mine, however, the QP believes that the chip samples data point was incremental to the production during the operation and helped as an additional data point in the estimation and using the same analogy as P&E (2017) used them in Mineral Resource estimation.

Drill holes and channels completely lacking assays were omitted from Mineral Resource estimation. Nine of these drill holes appear to have been planned but not executed since there are no down hole surveys or assays. Some 20 exploration holes drilled SW and elsewhere are not in the immediate resource area but are also included in the database. Partially assayed holes and channels with explicit or implicit missing assays were used for Mineral Resource Estimation and the explicit/implicit missing intervals were assigned zero grade.

In addition, three surface (PQ-2, PQ-9 and PQ-12) diamond drill holes and one UG (PPQ0886) diamond drill hole were excluded from Mineral Resources due to excessive deviation of down hole survey data.

11.4.3 PPQ 3D Mineralized Models

Gold Mineralization in the Pau-a-Pique (PPQ) deposit is developed along a set of shear zones in contact with meta-tonalite and meta-conglomerate within the mylonitic rock type unit. From a lithostratigraphic standpoint, the PPQ deposit is developed within the Lower Trap, similar to the Ernesto deposit, but the lithostratigraphic units in the PPQ deposit are folded and overturned and meta-tonalites are located mainly on the hanging wall side of shear zones and mineralized domains (Figure 11-46). From a structural standpoint, the deposit is developed within a ductile-brittle to ductile shear structural regime compared with the Ernesto deposit which was developed within a brittle shear zone.



Figure 11-46: PPQ underground stope showing mineralized shear zone in the contact (a) and Quartz boudinage withing mylonite unit (b)

Gold mineralization at potentially economic grades and widths may be found in tonalite or conglomerate metres into the hanging wall or footwall of the contact schists, however, these are likely minor separate shears or splays off the contact shear zone and 3D continuity may not be demonstrated resulting in these isolated occurrences being ignored for the purpose of resource estimation.

Free gold is common and gold distribution is erratic both laterally and vertically within the host narrow to broad, mylonitic and schistose tonalite-conglomerate contact zone, particularly at

marginal cut-off grades (≥1.0 g/t Au). Gold at potentially economic grades is hosted in a number of rock types in and on the margins of the contact zone and grade distribution is strongly skewed.

The main shear zone and hanging wall splay is vertical to sub-vertical zones with an azimuth of 320°. The subparallel footwall shear zones that are developed SE of the PPQ deposit are dipping and azimuth ranges from 70° to 80° and 330° to 340° respectively.

The basis for mineral zone delineation and wireframing is a cut-off of 1.0 g/t Au over a minimum horizontal mining width of 2 m. This grade is considered as an incremental or marginal cut-off for an end of mine life cost of 75% of normal mining operating cost.

After reviewing of drill hole spacing, vertical cross sections were cut at 12.5 m spacing transverse (320° azimuth) from SE to NW. Wireframing was carried out in Vulcan® (version9) Software by snapping to assay limits in 3D space where cumulated assays achieved cut-off grade over the minimum mining width.

Geologic interpretation and following of the contact zone using the lithologic block model was a key aspect of the wireframing. In cases where sub cut-off/width material in a drill hole occurred within the zone between adjacent resource grade intersections, the wireframe was carried through to maintain zone continuity. Similarly, the nominal 3 m width was maintained where practicable but may be less at zone inflection points.

Level plans were established at the production drift elevations and polylines were constructed on levels by snapping to channel chip sample limits based on the marginal cut-off grade and minimum mining width.

The 3D wireframes based on drilling were extended halfway to adjacent drill holes internally within the wireframed deposit or on the margins where barren holes exit. Where no sampling was available at reasonable distances (12 m - 25 m) at the margins on strike, as occurs in the fragmented area at the SSE area of the deposit, the wireframes were projected half the section spacing to 6 m past the drill hole intersections.

A total of five mineralized zones (P1, P2, P3, P4, and P5) were interpreted and modeled in Vulcan® software and exported for the purpose of Mineral Resource estimation. P2 is the main mineralized model with better grade continuity and in terms of volume and gold content. The majority of produced ounces from the PPQ Mine came from this zone. P3, P4, and P5 are footwall shear zones mainly located in the SE of the PPQ Mine and P1 is a hanging wall mineralized zone with poor continuity parallel to the P2 zone.

Figure 11-47 and Figure 11-48 show the plan view and longitudinal section of mineralized zones (undepleted) in the PPQ Mine respectively.

Wireframes volumes and estimated tonnage for a bulk density of 2.78 t/m^3 are presented in Table 11-40.

Table 11-40: PPQ wireframes Volumes

PPQ Wireframe Volumetric (Un-depleted)		
Solid	**Volume (m^3)**	**Tonnes***
P1 (100)	109,231	303,662
P2 (200)	517,692	1,439,184
P3 (300)	14,087	39,162
P4 (400)	52,117	144,885
P5 (500)	59,001	164,023
Total	752,128	2,090,916

* Bulk density of 2.78 t/m^3 applied

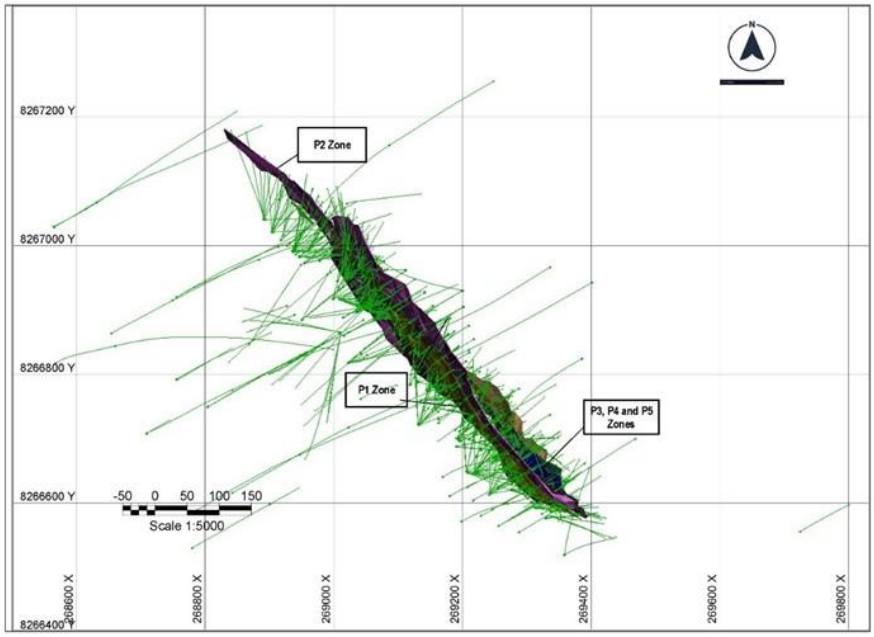


Figure 11-47: PPQ Planview map showing the Mineralized 3D Wireframe Models

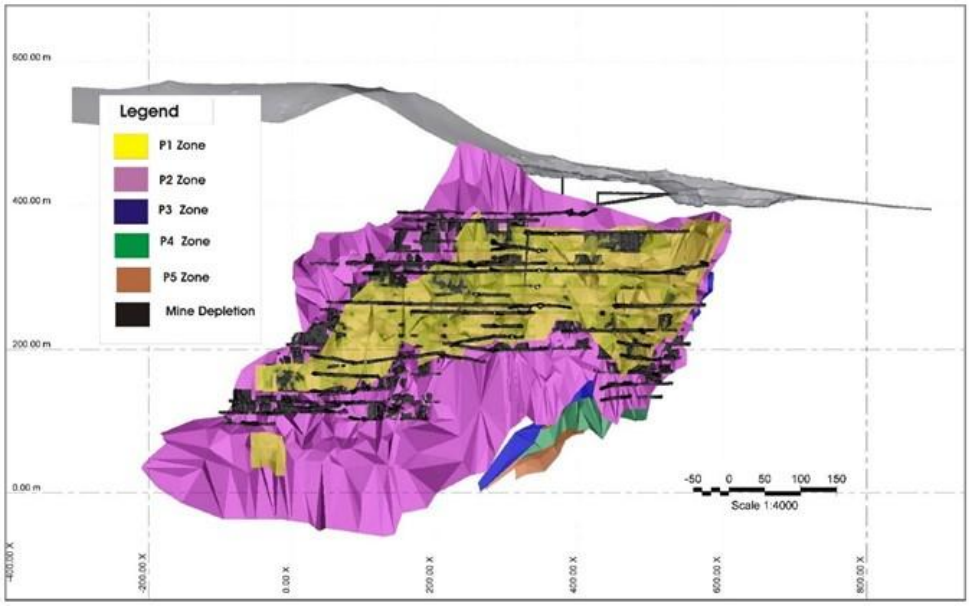


Figure 11-48: PPQ Longitudinal section showing the Mineralized 3D Wireframe Models and Mine Developments and Workings

11.4.4 Exploratory Data Analysis (PPQ)

Exploratory analysis was carried out using Snowden Supervisor Software V.8. Statistical analysis of the data was performed on each mineralized domain.

A total of 48,652 assay results from 1,067 drill holes are recorded and stored in the database. From this number of assays only 7,652 assays fall inside the geological models and are used for Mineral Resource estimation. In addition, a total of 20,220 assay results from 2,315 channels are recorded and stored in the database. Sample lengths for diamond drill holes are quite variable, from 10 cm centimetres to 4.68 of metres with mean of 1.0m. Short sample intervals, which can represent a mineralized vein, are geologically important and they are more probable than high values in longer samples.

Samples within each mineralized envelope were composited into 1.0 m intervals. All the short intervals (<0.25 m) were removed from the dataset for Mineral Resource estimation to avoid local bias mainly in the fringe of the mineralized zones.

Figure 11-49 to Figure 11-53 show histograms and log of probability plots for each mineralized zone (P1, P2, P3, P4 and P5) for PPQ.

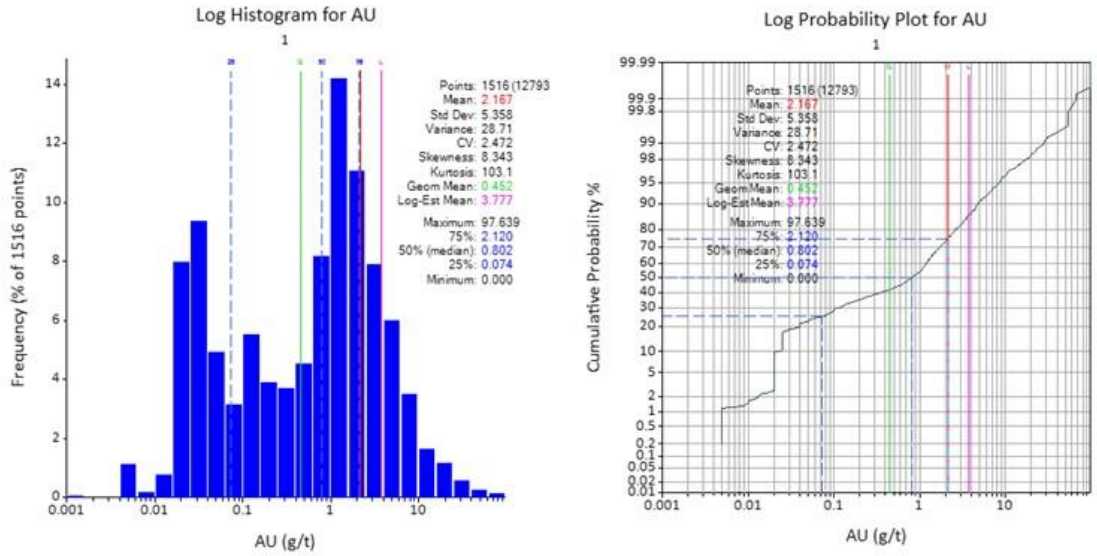


Figure 11-49: Histogram and Log Probability Plots for Composited Gold Assay Values (P1 Domain)

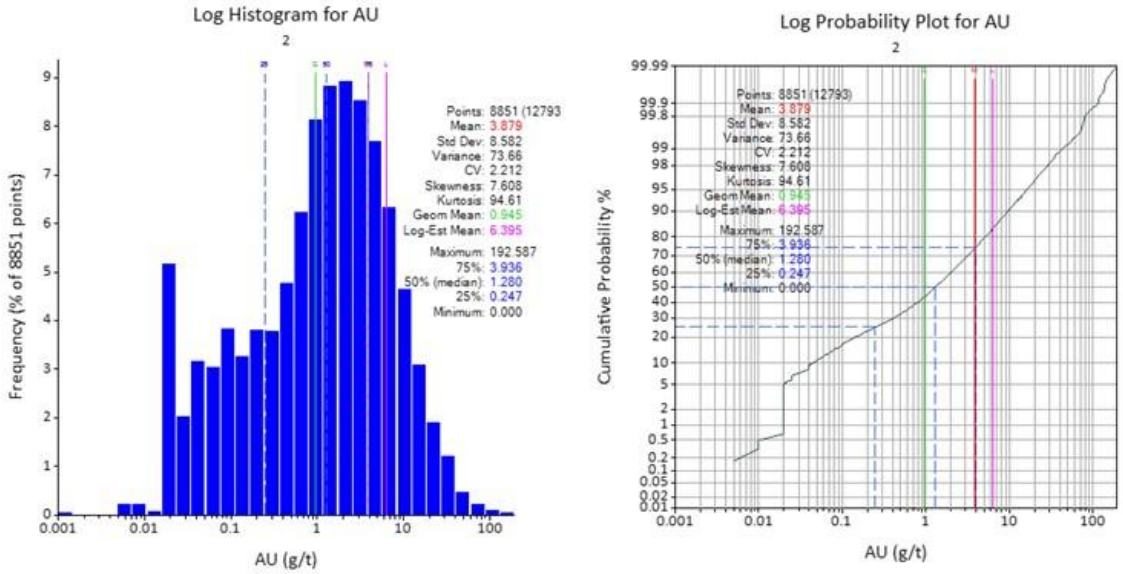


Figure 11-50: Histogram and Log Probability Plots for Composited Gold Assay Values (P2 Domain)

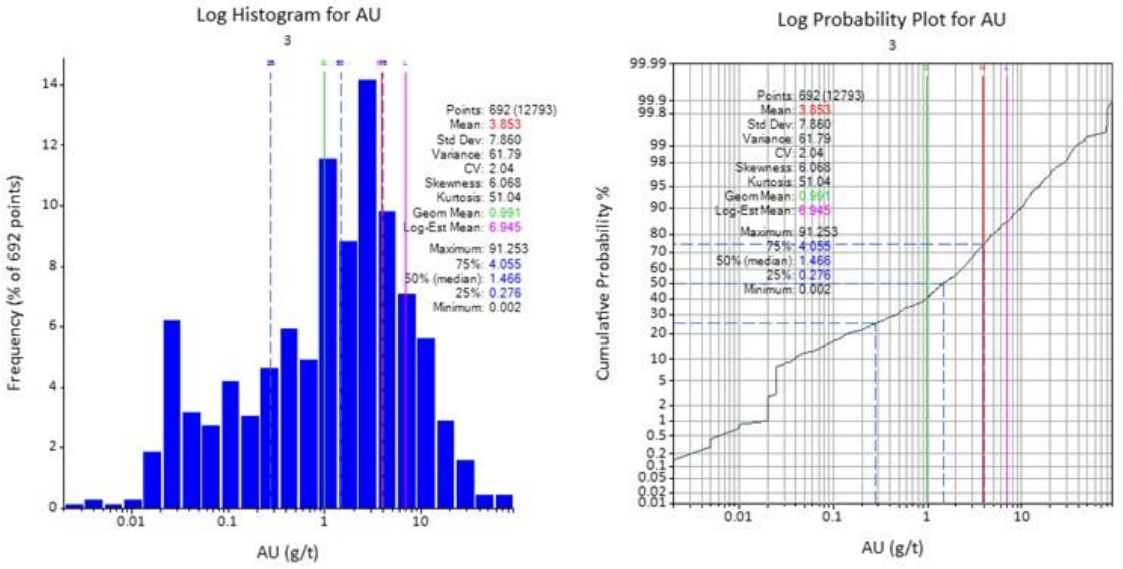


Figure 11-51: Histogram and Log Probability Plots for Composited Gold Assay Values (P3 Domain)

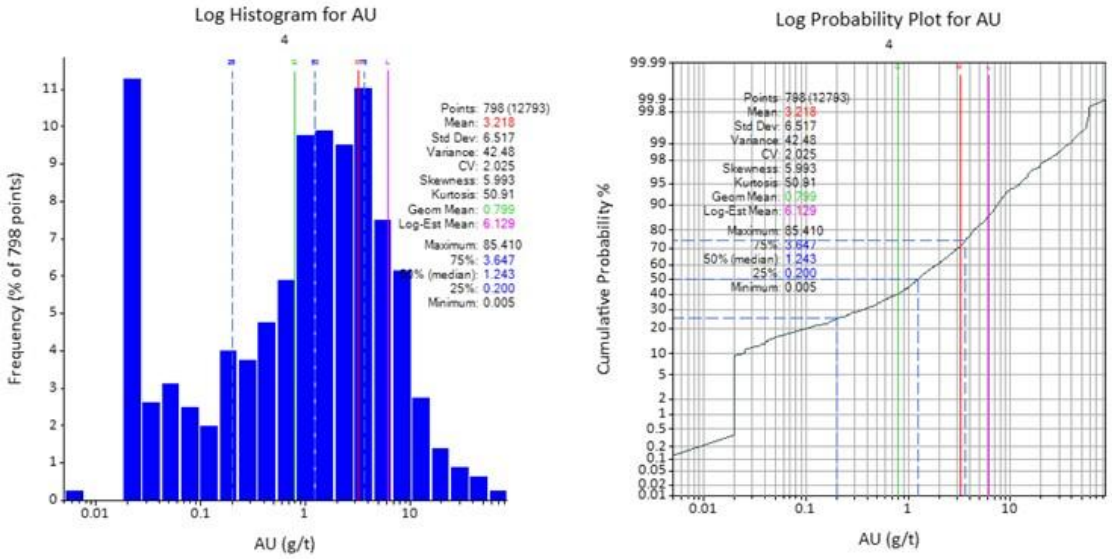


Figure 11-52: Histogram and Log Probability Plots for Composited Gold Assay Values (P4 Domain)

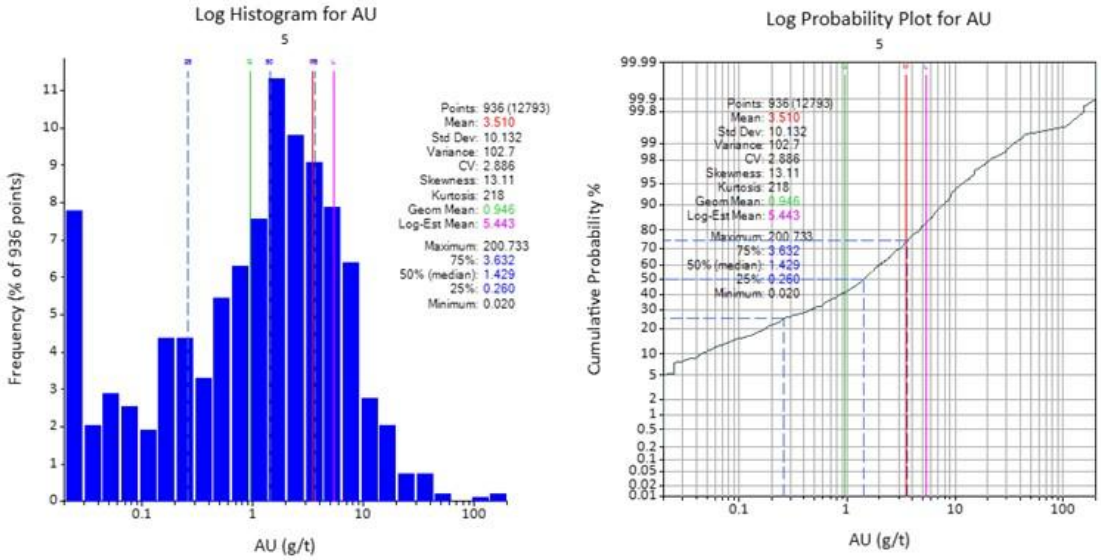


Figure 11-53: Histogram and Log Probability Plots for Composited Gold Assay Values (P5 Domain)

Statistics of composited assay data (uncapped) for each mineralized zone are shown in Table 11-41 to Table 11-45.

Table 11-41: Core and Channel Au (g/t) Composite Basic Statistics Summary (P1 Zone)

Core and Channel Composite Basic Statistics Summary for Au(g/t) (P1 Zone)	
Count	1,516
Mean	2.17
Minimum	0.00
25th Percentile	0.07
Median	0.80
75% Percentile	2.12
Maximum	0.98
Variance	28.71
Coefficient of Variation (CV)	2.21

Table 11-42: Core and Channel Au(g/t) Composite Basic Statistics Summary (P2 Zone)

Core and Channel Composite Basic Statistics Summary for Au (g/t) (P2 Zone)	
Count	8,851
Mean	3.88
Minimum	0.00
25th Percentile	0.25
Median	1.28
75% Percentile	3.94
Maximum	192.59
Variance	73.66
Coefficient of Variation (CV)	2.47

Table 11-43: Core and Channel Au(g/t) Composite Basic Statistics Summary (P3 Zone)

Core and Channel Composite Basic Statistics Summary for Au (g/t) (P3 Zone)	
Count	692
Mean	3.85
Minimum	0.00
25th Percentile	0.28
Median	1.47
75% Percentile	4.05
Maximum	91.25
Variance	61.79
Coefficient of Variation (CV)	2.04

Table 11-44: Core and Channel Au (g/t) Composite Basic Statistics Summary (P4 Zone)

Core and Channel Composite Basic Statistics Summary for Au(g/t) (P4 Zone)	
Count	798
Mean	3.22
Minimum	0.00
25th Percentile	0.20
Median	1.24
75% Percentile	3.65
Maximum	85.41
Variance	42.48
Coefficient of Variation (CV)	2.03

Table 11-45: Core and Channel Au (g/t) Composite Basic Statistics Summary (P5 Zone)

Core and Channel Composite Basic Statistics Summary for Au (g/t) (P5 Zone)	
Count	936
Mean	3.51
Minimum	0.02
25th Percentile	0.26
Median	1.43
75% Percentile	3.63
Maximum	200.73

Core and Channel Composite Basic Statistics Summary for Au (g/t) (P5 Zone)	
Variance	102.70
Coefficient of Variation (CV)	2.89

The capping strategy summary for the combined diamond drill holes and chip sample data for each mineralized zone are shown in Table 11-46 to Table 11-50.

Table 11-46: Core and Chip Au (g/t) Composited Sample Capping Summary (P1 Zone)

Core and Chip Composited Sample Capping Summary for Au (g/t) (P1 Zone)	
No. of Composites	1,516
Average Grade (g/t)	2.17
Coefficient of Variation	2.47
Cap Level (g/t Au)	10.00
No. of Assays Capped	56
% Capped	3.69%
% Metal Lost	22%
Average Grade of Capped Assays (g/t Au)	1.70
Coefficient of Variation Capped	1.43

Table 11-47: Core and Chip Au (g/t) Composited Sample Capping Summary (P2 Zone)

Core and Chip Composited Sample Capping Summary for Au (g/t) (P2 Zone)	
No. of Composites	8,851
Average Grade (g/t)	3.88
Coefficient of Variation	2.21
Cap Level (g/t Au)	18.00
No. of Assays Capped	361
% Capped	4.07%
% Metal Lost	18%
Average Grade of Capped Assays (g/t Au)	3.20
Coefficient of Variation Capped	1.43

Table 11-48: Core and Chip Au (g/t) Composited Sample Capping Summary (P3 Zone)

Core and Chip Composited Sample Capping Summary for Au (g/t) (P3 Zone)	
No. of Composites	692
Average Grade (g/t)	3.85
Coefficient of Variation	2.04
Cap Level (g/t Au)	10.00
No. of Assays Capped	66
% Capped	9.53%
% Metal Lost	28%
Average Grade of Capped Assays (g/t Au)	2.79
Coefficient of Variation Capped	1.15

Table 11-49: Core and Chip Au (g/t) Composited Sample Capping Summary (P4 Zone)

Core and Chip Composited Sample Capping Summary for Au (g/t) (P4 Zone)	
No. of Composites	798

Core and Chip Composited Sample Capping Summary for Au (g/t) (P4 Zone)	
Average Grade (g/t)	3.22
Coefficient of Variation	2.03
Cap Level (g/t Au)	10.00
No. of Assays Capped	47
% Capped	5.89%
% Metal Lost	24%
Average Grade of Capped Assays (g/t Au)	2.46
Coefficient of Variation Capped	1.19

Table 11-50: Core and Chip Au (g/t) Composited Sample Capping Summary (P5 Zone)

Core and Chip Composited Sample Capping Summary for Au(g/t) (P5 Zone)	
No. of Composites	936
Average Grade (g/t)	3.51
Coefficient of Variation	2.89
Cap Level (g/t Au)	10.00
No. of Assays Capped	58
% Capped	6.19%
% Metal Lost	27%
Average Grade of Capped Assays (g/t Au)	2.55
Coefficient of Variation Capped	1.15

11.4.4.1 Capping Strategy and Treating of Outliers

Composites captured in wireframes that were constructed pre-fill-in drilling were used for gold grade distributions and capping review. Grade distribution shows extended skew (Poissonian) with possibly two populations, a low-grade set up to 1 g/t Au and a second higher-grade population. The latter represents the deposit mineralization whereas the former set may be an artefact of bulking up the zone intersections and/or varied assay detection limits.

Histograms and log-probability plots first were used to evaluate gold grade distribution of composited assays and capping curves were utilized to show the impact of capping levels on composited assay average grade. 3D distribution of high-grade assays was examined on-screen to ensure that “outlier” assays were not spatially correlated. Aura concurs that capping has a significant impact on average grade and grade variability.

Throughout the operation of the PPQ Mine, several times the capping values that were predicted from the Log of probability plots were revised to address the on-going issues with production and reconciliation. Therefore, a very conservative approach was adopted to address the amount of metal lost in mining, stockpiling, and proceeding of PPQ ore materials.

11.4.5 Bulk Density (PPQ)

Water immersion bulk density tests were carried out on 379 drill core samples from 30 drill holes. Samples of seven rock types were tested as well as saprolite of undisclosed precursor rock units. Averages for the rock types tested are shown in Table 11-51.

Table 11-51 : Average bulk densities for the main lithological units in PPQ mine

Rock type	Average Density (t/m^3)
Biotite Schist/Sheared Tonalite	2.83
Meta-Conglomerate	2.65
Feldspathic Arenite	2.73
Mylonite, Muscovite Schist/Host Rock	2.81
Quartz Veining	2.71
Saprolite	2.44
Meta-Tonalite	2.79
Mineral Wireframe	2.78

An average bulk density value of 2.72 t/m^3 was the default for minority rock types not tested. The default is the average between tonalite and conglomerate. The average bulk density which was used for the wireframe material is 2.78 t/m^3. This value was used for all five zones in the block model.

11.4.6 Variograms

A down-hole linear semi-variogram was prepared for the 1.0 m composites to determine the nugget effect for each zone. This nugget effect was used for the 3D semi-variograms prepared to evaluate the range of continuity of gold grades. Table 11-52 lists the ranges for the semi variograms prepared. Normal Score semi-variograms, based on two-model nested spherical modelling, were prepared for strike and dip of the all the mineralized zones (P1, P2, P3, P4 and P5).

Table 11-52: PPQ Variograms Model Parameters

Zones	Domain Code	Nugget	Spherical Structures 1				Spherical Structures 2			
			Sill	X	Y	Z	Sill	X	Y	Z
P1	100	0.62	0.26	20	20	2	0.11	60	60	5
P2	200	0.78	0.04	20	10	3	0.18	60	55	10
P3	300	0.77	0.09	15	10	2	0.14	50	20	5
P4	400	0.60	0.26	20	10	2	0.14	60	30	5
P5	500	0.77	0.14	15	5	2	0.09	50	20	5

11.4.7 Block Model Set Up

A block model was set-up to encompass the five mineralized wireframes and historic workings (Table 11-53). A block size of 3 m cubed represents a workable size for selective mining methods and the zone widths as well as being approximately ¼ of the detailed drill hole density on 12.5 m section spacing, a common industry practice. Model rotation is Geovia (GEMS) convention whereby the X axis is rotated clockwise 60° to 150°.

Table 11-53: PPQ Block Model Parameters

	X (COL)	Y (ROW)	Z (level)
Origin	268,768	8,267,229	500
Block Size (m)	3	3	3

	X (COL)	Y (ROW)	Z (level)
No. of Blocks	310	150	200
Distance	930	450	600
Rotation	-60		

11.4.8 Grade Interpolations

The grade interpolation used Ordinary Kriging (OK) with variography as set out in Section 11.4.6. The updated 3-D models for each zone coded in the block model, was interpolated, using just the data points from inside that specific zone as the data source.

The search strategy (Table 11-54) was designed for the anisotropic capture of close spaced composites in tight UG fan drilling (<12.5 m spacing) and channel chip sampling at 3 m as well as in wider spaced drill holes, and to preserve local grade diversity given the high nugget effects for mineralized zones and use of OK to declutter, the latter is important where chip samples are available.

The short 1st structure in the variograms was adopted for the first pass and used to classify the Mineral Resource in the Measured Resource category. From variogram model, ellipsoid search distances were obtained using of the range of the first structure for the first pass and range of the second structure of variogram model for the second pass. The third pass adopted two times the range of the variogram models. All blocks in the wireframes were populated by the third pass. Interpolation parameters, including number of composites used, number of holes used, distance to the nearest composite, and interpolation pass were recorded in the block model attributes for review and model validation.

The distribution of block grades is shown on inclined longitudinal section in Figure 11-54.

Table 11-54: PPQ Estimation Parameters

Zones	Search Reference	Search Distances (m)			Minimum No. of Composites	Maximum No. of Composites	No. Drill Holes	Maximum Composites per Hole
		X	Y	Z				
P1	1	20	20	2	12	36	3	4
	2	60	60	5	6	24	3	3
	3	120	120	10	2	12	3	1
P2	1	20	10	3	12	36	3	4
	2	60	55	10	6	24	3	3
	3	120	110	20	2	12	3	1
P3	1	15	10	2	12	36	3	4
	2	50	20	5	6	24	3	3
	3	100	40	10	2	12	3	1
P4	1	15	10	2	12	36	3	4
	2	50	20	5	6	24	3	3
	3	100	40	10	2	12	3	1
P5	1	15	10	2	12	36	3	4
	2	60	30	5	6	24	3	3

Zones	Search Reference	Search Distances (m)			Minimum No. of Composites	Maximum No. of Composites	No. Drill Holes	Maximum Composites per Hole
		X	Y	Z				
	3	120	60	10	2	12	3	1

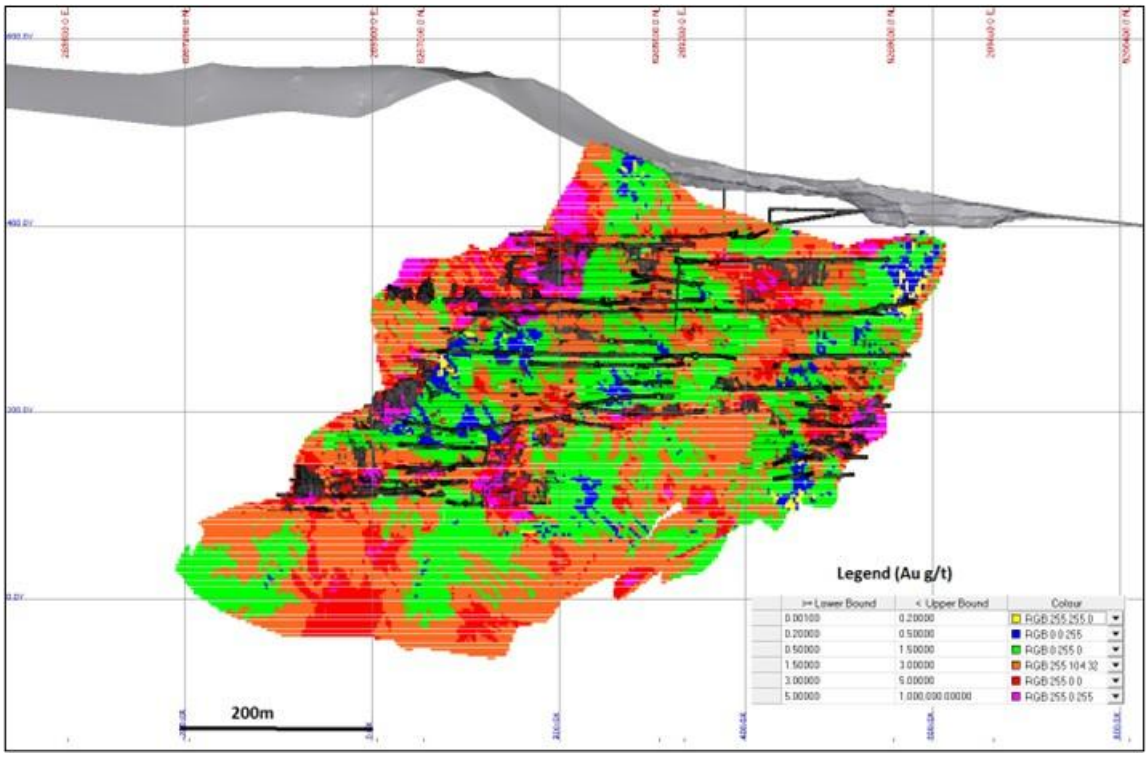


Figure 11-54: Longitudinal Cross section of PPQ mine showing block model grade distribution (Looking NE)

11.4.9 Mineral Resource Classification

The Mineral Resources for the Pau-a-Pique(PPQ) deposithave been classified in accordance with the definitions for Mineral Resources in S-K 1300.. The classification parameters consider the proximity and number of composite data. The block model then is coded accordingly for Measured (1), Indicated (2) and Inferred (3) for all three deposits.

Resource block classification was based on a review of interpolation parameters, variogram ranges and drill hole/sampling density (Figure 11-55). Most the main zone (P2 zone) is Indicated and was 95% interpolated after the second pass with search distance at the variogram range of 60 m along strike and dip, and has a drill hole density of 25 m or tighter, except for the down plunge segment at the NW extreme end of the deposit that is defined by several down dip holes only.

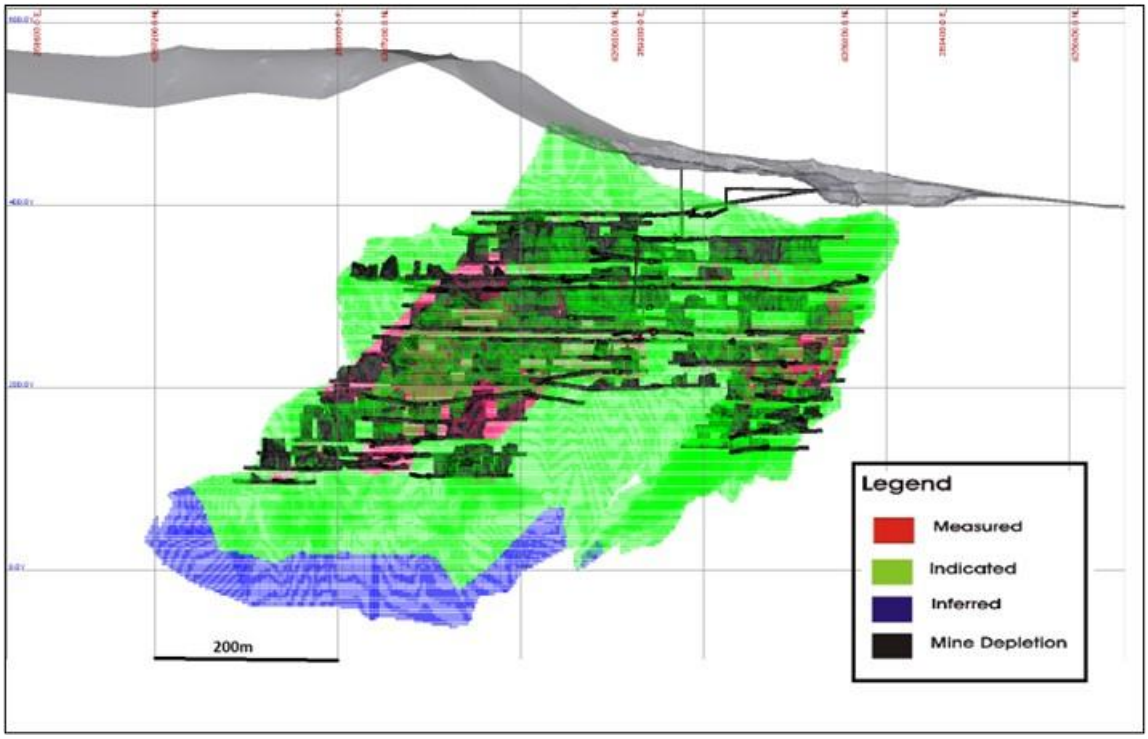


Figure 11-55: Longitudinal Cross section of PPQ mine showing block model Classification (Looking NE)

The Pau-a-Pique model used the first and second passes to assign the Measured and Indicated classification respectively. The passes were determined based on the variography discussed in the previous section. Additionally, other criteria were considered in estimating a block, including the number of drill holes, the distance from the drill hole data, and the minimum and maximum number of composites. The Mineral Resource classification criteria applied in the current study are those shown in Table 11-55.

Table 11-55: PPQ Block Model Classification Parameters

Class	Pass No. (Okpass)	Approximate Distance (m)	Min No. Comps	Max. No. Comps	Max. No. Samples per Hole	Comments
Measured	1	≤ 12.5 m	12	36	4	Only limited to Area of active mining with high density of samples
Indicated	2	>25 and ≤ 60	6	24	3	Supported by DDH
Inferred	3	> 60m	2	12	1	Down Plunge of Ore bodies

11.4.10 Block Model Validation

The Pau-a-Pique (PPQ) block models were validated visually and statistically. The visual validation, through cross-section and plan view comparisons of composite grade versus block grade, confirmed that the block models honour the drill hole composite data and provide an appropriate local estimate of grades.

The statistical comparisons between composites and respective model interpolations were completed for each block model. The differences between mean grades of blocks and composites

were within a range of 7% to 20%. Table 11-56 presents the basic statistics of the composites and the interpolated blocks for the most important resource domains of all of the deposits. The statistical discrepancies were examined, and it was determined that the mean grades of the interpolated grade model are acceptable for considering production history and reconciliation in the PPQ Mine.

Table 11-56: PPQ Block Model Au (g/t) Statistics (All Domains)

Zones	Support	Count	Min	Max	SD	Mean	Mean (Δ%)
P1	Composites	1516	0.00	10.00	2.44	1.70	7.06%
	Blocks	14462	0.02	6.87	1.03	1.58	
P2	Composites	8851	0.00	18.00	4.56	3.20	12.50%
	Blocks	53775	0.05	15.34	1.84	2.80	
P3	Composites	692	0.00	10.00	3.19	2.79	15.41%
	Blocks	3968	0.18	8.08	1.18	2.36	
P4	Composites	798	0.00	10.00	2.92	2.46	19.92%
	Blocks	5060	0.08	7.59	1.22	1.97	
P5	Composites	936	0.00	10.00	2.94	2.55	10.59%
	Blocks	5704	0.05	6.74	1.10	2.28	

11.4.11 Mineral Resource Statement

In the first quarter of 2022, a new cut-off grade was established for the Pau-a-Pique (PPQ) mine using all of the cost information available to that date fromm Apoena operation and using $US 1,750 gold price, 5.30 R$/US$ FX rate, 90% mining recovery, 1.50 sales tax, and 93.0 % plant recovery.

The Pau-a-Pique (PPQ) Mineral Resource Estimate at a breakeven cut-off grade of 1.34 g/t Au is summarized in Table 11-57. Mineral Resource Estimate sensitivity to cut-off grade and tonnage-grade profiles for Measured and Indicated Mineral Resources are shown in Figure 11-56.

Table 11-57: Mineral Resources of the PPQ Mine

MINERAL RESOURCES CLASS	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery (%)
Measured	242,180	3.19	24,850	93.0%
Indicated	601,660	2.71	52,450	93.0%
Measured and Indicated	**843,840**	**2.85**	**77,300**	93.0%
Inferred	71,330	2.47	5,660	93.0%

Notes:
1. The definitions for Mineral Resources in S-K 1300 were followed for Mineral.
2. There are no Mineral Reserves estimated for the PPQ Deposit. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The Mineral Resource estimate is reported on a 100% ownership basis.
5. Metallurgical recoveries reported as the average over the life of mine
6. The disclosure of the Mineral Resource estimates and related scientific and technical information has been prepared under the supervision or is approved by Farshid Ghazanfari, P.Geo. as a Qualified Person.
7. Contained metal figures may not add due to rounding.

8. Mineral Resources are based on a Cut-Off Grade of 1.34 g/t Au and minimum width of 2m and metallurgical recovery of 93.0%.
9. Mineral Resources are estimated from the 410 m EL to the 65 m EL, or from approximately 30 m depth to 500 m depth from surface.
10. The Mineral Resources Estimate has an effective date of October 31, 2023. End of the 2022 mining depletion shapes used to estimate remaining resources.
11. End of the year mining depletion shapes used to estimate remaining resources.
12. Density models based on rock types were used for volume to tonnes conversion with resources averaging 2.78 tonnes/m^3.

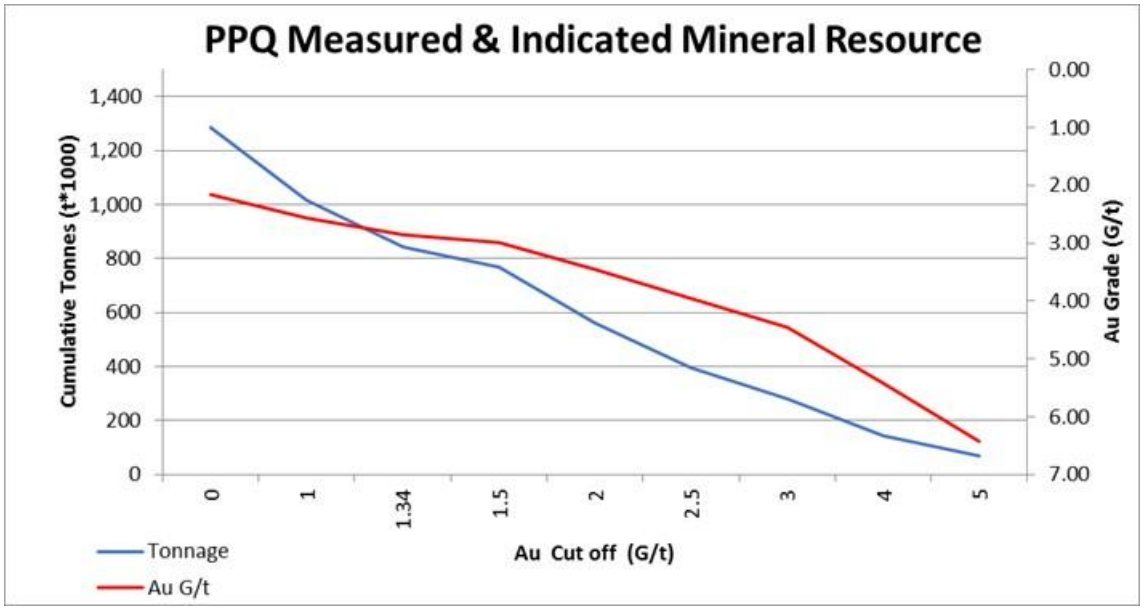


Figure 11-56: Sensitivity of Measured and Indicated Mineral Resources in PPQ mine

11.5 Apoena Mines and EPP Complex Combined Mineral Resource Estimate

The total of combined Mineral Resources of the Apoena mines (EPP Project) as of December 31, 2024, are shown in Table 11-58. Measured and Indicated Mineral Resources in Lavrinha and Nosde mines are reported as exclusive of Mineral Reserves.

Table 11-58: Apoena Mines (EPP complex Combined Mineral Resources)

MEASURED	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery (%)
Lavrinha	54,610	0.98	1,717	93.5%
Ernesto	0	0.00	0	93.5%
Ernesto-Lavrinha Connection	0	0.00	0	93.5%
Pau-A-Pique	242,180	3.19	24,850	93.5%
Japonês	0	0.00	0	93.5%
Nosde	446,823	0.64	9,248	93.5%
Total Measured	743,613	1.50	**35,815**	93.5%
INDICATED	**Tonnes (t)**	**Au (g/t)**	**CONTAINED Au oz**	**93.5%**
Lavrinha	673,110	1.13	24,545	93.5%
Ernesto	427,100	2.11	24,720	93.5%
Ernesto-Lavrinha Connection	1,232,480	1.18	46,840	93.5%
Pau-A-Pique	601,660	2.71	52,450	93.5%
Japonês	215,325	1.40	9,690	93.5%

MEASURED	Tonnes (t)	Au (g/t)	CONTAINED Au oz	Metallurgical Recovery (%)
Nosde	1,447,852	1.05	48,815	93.5%
Total Indicated	4,597,527	1.40	207,060	93.5%
Total Measured and Indicated	5,341,140	1.41	242,876	93.5%
INFERRED	**Tonnes (t)**	**Au (g/t)**	**CONTAINED Au oz**	**93.5%**
Lavrinha	213,390	1.37	9,382	93.5%
Ernesto(Open Pit)	118,430	0.78	2,980	93.5%
Ernesto(UG)	423,581	2.26	30,790	93.5%
Ernesto-Lavrinha Connection	99,037	0.87	2,770	93.5%
Pau-A-Pique	71,330	2.47	5,660	93.5%
Japonês	4,370	1.37	190	93.5%
Nosde	194,516	1.33	8,305	93.5%
Total Inferred	**1,124,643**	**1.66**	**60,067**	93.5%

Notes:
1. The definitions for Mineral Resources in S-K 1300 were followed for Mineral Resources
2. Mineral Resources are Exclusive of Mineral Reserves for Nosde and Lavringa.. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. No Mineral Reserves were estimated for Ernesto, Ernesto connection, Japones and PPQ deposits.
3. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The Mineral Resource estimate is reported on a 100% ownership basis.
5. Metallurgical recoveries (93.5) reported as the average over the life of mine6. The disclosure of the Mineral Resource Estimates and related scientific and technical information has been prepared under the supervision or is approved by Farshid Ghazanfari, P.Geo. as a Qualified Person.
7. Contained metal may not sum in the above table due to rounding.
8. Surface Topography as of October 31, 2023, for Nosde and Lavrinha and as of December 31, 2023, for the rest of the mines and deposits.

11.5.1 Factors That May Affect the Mineral Resource Estimate

Areas of uncertainty that may materially impact the Mineral Resource Estimate include:

- Changes to long to term metal price assumptions.
- Changes to the input values for mining, processing, and general, and administrative costs to constrain the estimate.
- Changes to local interpretations of mineralization geometry and continuity of mineralized zones.
- Changes to the density values applied to the mineralized zones.
- Changes to metallurgical recovery assumptions.
- Changes in assumptions of marketability of the final product.
- Variations in geotechnical, hydrogeological, and mining assumptions.
- Changes to assumptions with an existing agreement or new agreements.
- Changes to environmental, permitting, and social licence assumptions.

11.5.2 Opinion QP About Mineral Resource Estimate

The QP is of the opinion that with consideration of the recommendations summarized in Sections 1 and 23 of this TRS, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

The QP is of the opinion that the Mineral Resources were estimated using industry accepted practices and conform to definitions for Mineral Resources in S-K 1300. Technical and economic

parameters and assumptions applied to the Mineral Resource Estimate are based on parameters received from other consultants and reviewed by the QP to determine if they were appropriate.

12 MINERAL RESERVE ESTIMATES

12.1 Introduction

Mineração Apoena S.A. hired Dompieri Tecnologia em Mineração (DTM) to draft a TRS for the Nosde/Lavrinha Mineral Reserves, located in the State of Mato Grosso, Brazil. DTM, through engineer Luiz Eduardo Campos Pignatari, Qualified Person, was hired by Mineração Apoena S.A. to prepare an independent TRS and estimate the Mineral Reserves of the Nosde/Lavrinha mine, located near the municipality of Pontes e Lacerda. Engineer Luiz Eduardo Campos Pignatari visited the mine in December 2023. The mine, called Nosde/Lavrinha, consists of a gold mineral deposit. Mining issues are summarized in this section and section 13 (Mining Method) of this TRS, including:

- data validation;
- pit optimization;
- mining schedule;
- mining method;
- detailing of fleet and workforce required to accomplish the plan;
- mining operating and capital costs.

12.2 Inventory of Mineral Reserves

The Mineral reserve estimate of the Nosde/Lavrinha Mine is stated in Table 12-1.

Table 12-1: Mineral Reserve Estimate of the Nosde/Lavrinha Mine

Mineral Reserve Estimate for the Nosde and Lavrinha Mines Effective December 31, 2024					
Mines	**Classification**	**Tonnage (kt)**	**Grade Au (g/t)**	**Contained Au (kOz)**	**Metallurgical Recovery (%)**
Nosde	Proven	1,793	0.74	42.7	93.5
	Probable	5,362	0.97	168.1	
	P&P	7,155	0.92	210.8	
Lavrinha	Proven	216	0.78	5.4	
	Probable	189	0.87	5.4	
	P&P	405	0.83	10.9	
Nosde and Lavrinha	Total (2P)	7,560	0.91	221.7	

Notes:
1. The definitions for Mineral Reserves in S-K 1300 were followed for Mineral Reserves.
2. Mineral Reserves have an effective date of December 31, 2023.
3. Mineral Reserves were prepared under the supervision of Luiz Pignatari, P.Eng. as an independent Qualified Person, competent to sign as defined by S-K 1300.
4. The base case cut-off grade for the estimate of Mineral Resources is 0.45 g/t Au.
5. Mineral Reserves are confined within an optimized pit shell that uses the following parameters: gold price USD 1800, exchange rate of 5.1 BRL: USD 1, total process cost: USD 11.87/t; mining costs: USD 2.26/t, general and administrative costs: USD 3.79/t; sustaining costs: USS 0.39/t processed; metallurgical recovery of 93.5%; mining recovery 95% for metarenite and 98% for schist, mining dilution of 10%; overall slope angle 38°.
6. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
7. Surface Topography as of October 31, 2024.

Mineração Apoena has been operating in Pontes e Lacerda, Mato Grosso, for over than ten years, mining mineral bodies with geological and geotechnical formations very similar to those of Nosde

and Lavrinhas. A very important factor that has been learned is how to ensure selective mining combined with good grade control practices.

Based on the existent documentation, the visit in the mine site, the operation with other similar orebodies for over than 10 years, QP does not see any risk factors associated with, , or changes to, any aspects of the modifying factors such as mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

12.2.1 Documents and Information Provided

The reserve was estimated based on information provided by Apoena and includes:

- Technical report of geomechanics performed by Geotech in July 2023.
- Power plant feed plan provided for in the 2024 budget.
- Topographic surface on December 31, 2023.
- December 2023 Resource Block Models t.
- Physical constraints (concession limits, environmental constraints, etc.).
- Metallurgical recoveries and processing plant costs.
- General and administrative costs.
- Costs of mining subcontracted operation.
- Diesel price per liter in the project region.
- Exchange rates and discounts.

12.3 Geotechnical Studies

The geotechnical studies developed by Geotech were organized to contemplate the following topics and their respective considerations, the level of reliability in this subsection refers to the quality of the data, not the level of the feasibility study as a whole:

- Geological model – The pit has geological mapping and exploration drilling, while the lithologies are modeled in 3D. eStructural model (singular discontinuities) – Singular discontinuities are not modeled in 3D but are presented as lineaments in the topographic map. The structural model (singular discontinuities) was considered a product of photointerpretation and field evidence and, therefore, has a level of conceptual reliability.
- Structural model (family of discontinuities) – The pit has a mapping of discontinuities and a defined database. However, no stereographic analysis was performed, and the structural domains eHydrogeological model – There is no information about the hydrogeology of the pit.
- Strength of intact rock – The strength of intact rock is estimated by the geotechnical description of holes, following the scale proposed in the geomechanical classification of the RMR system (Bieniawski, 1989). The strength of the intact rock was considered with a level of conceptual reliability.
- Strength of structures – There is no information on the strength of the surfaces of the discontinuities of the Nosde/Lavrinha pit.
- Geotechnical characterization – There is a geomechanical classification of the exploration holes of the Nosde/Lavrinha pit. However, there is no initial 3D model. The geotechnical characterization was considered with a level of conceptual reliability.

12.3.1 Slope Angle Selection

A sectorization was carried out to determine the slope angles, considering the final pit, which was divided into sectors in which the geometric tendency of the slopes is similar. Such sectors, numbered from 1 to 6 (Figure 12-1), were used in the kinematic and stability analyses of the pit.

The direction and maximum slope of each sector are represented in the analyses by their respective central sections. The average directions of each sector are shown in Table 12-2.

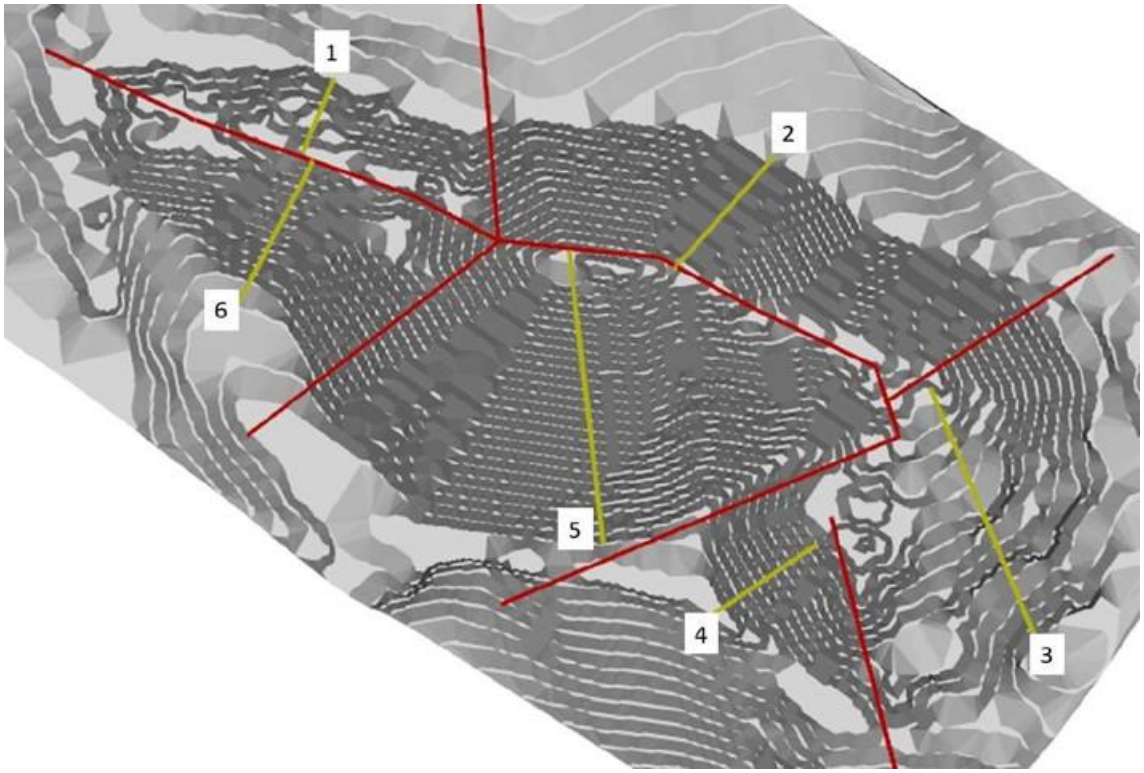


Figure 12-1: Sectors Considered for the Resource Pit

Table 12-2: Average Directions of Each Sector of the Resource Pit

SECTOR	AZIMUTH
1	180°
2	200°
3	290°
4	050°
5	340°
6	020°

The kinematic analysis considered the six geometric sectors of the final pit and the structural mapping divided by region. A great variation in the structures at different points of the pit was observed. For this reason, all measurements sent by the technical staff of Mineração Apoena were classified according to the coordinates of each point.

The concentrations of polar points were defined for each sector, representing the different families of discontinuities. Points outside the concentration zones were interpreted as random structures.

In the calculation of the safety factor, the families of discontinuities were considered, as the analyses derive from deterministic analyses. Still, the probabilistic calculation of the occurrence of each rupture mechanism considered all mapped discontinuities.

The results of the kinematic analyses are presented, then, in deterministic and probabilistic form, according to Table 12-3. The deterministic classification considers whether or not the mechanisms of rupture occur according to the average values of the families of discontinuities.

The probabilistic classification considers all measures of each sector. Three risk factors associated with this analysis were defined. Up to 10%, low risk (GREEN); between 10 and 20%, medium risk (YELLOW); and above 20%, high risk (RED). Although there is no calculation of safety factors for probabilistic risks, these were considered in the geotechnical risk map as a warning for each sector.

Table 12-3: Deterministic and Probabilistic Results of Kinematic Analyses

SECTOR	PLANAR		WEDGES		TIPPING	
	DETERM	PROBAB	DETERM	PROBAB	DETERM	PROBAB
1	No	2.27%	Yes	8.25%	No	0%
2	Yes	12.50%	Yes	31.93%	No	0%
3	Yes	12.95%	Yes	29.14%	No	4.67%
4	Yes	13.51%	No	21.60%	No	2.70%
5	No	0.83%	Yes	17.66%	No	2.50%
6	Yes	7.25%	No	15.10%	No	10.41%

12.3.2 Geotechnical Parameters

The results of the stability analyses showed high potential for optimization, with little variability of the safety factor as a result of the increase in the overall slope. Thus, the determining aspect of the operational parameters becomes the infrastructure.

Apoena's technical staff observed instability problems in the shale test to bench heights of 20 m. Therefore, ten-metre benches were chosen in this lithology, regardless of the results of the analyses. In addition, the level of reliability of the database (conceptual) implies significant variability of the results. Therefore, a conservative approach was adopted in relation to shale.

Another important fact about the operational issues is the deviation of drilling for slopes of 20 m. To reduce this loss, blastings are carried out every ten metres, requiring an offset of 1.5 metres between the blastings, reducing the final width of the berm. The defined design criteria are displayed in Table 12-4.

Table 12-4: Design Criteria of the Reserve Pit (Nosde/Lavrinha)

PARAMETERS	MATERIAL	
	METARENITE	SHALE
Global angle (°)	56*	38
Inter-ramp angle (°)	59	39
Face angle (°)	80	60

PARAMETERS	MATERIAL	
	METARENITE	SHALE
Bench height (m)	20	10
Berm width (m)	8.5	6.5
Ramp width (m)	13	13
Ramp slope (%)	10	10

Note: *The overall angle was calculated considering the slope composed of the same material. In the case of composite slopes with shale outcropping at the bottom, the overall angle will be different.

12.3.3 Climate and Hydrology

The climate in the area of the Nosde/Lavrinha Mine is predominantly hot, tropical, and semi-humid, typical of the Midwest region of Brazil. In this context, there are two well-defined seasons during the year: dry and rainy.

The dry season occurs during the period from April to October, with an average monthly rainfall of approximately 50 mm, as illustrated by Figure 12-2. This period has average temperatures between 20 °C and 22 °C.

The rainy season is defined by the months of November to March, receiving an average of approximately 220 mm, as illustrated by Figure 12-2. This period has higher average temperatures, with daily highs between 30 °C and 40 °C.

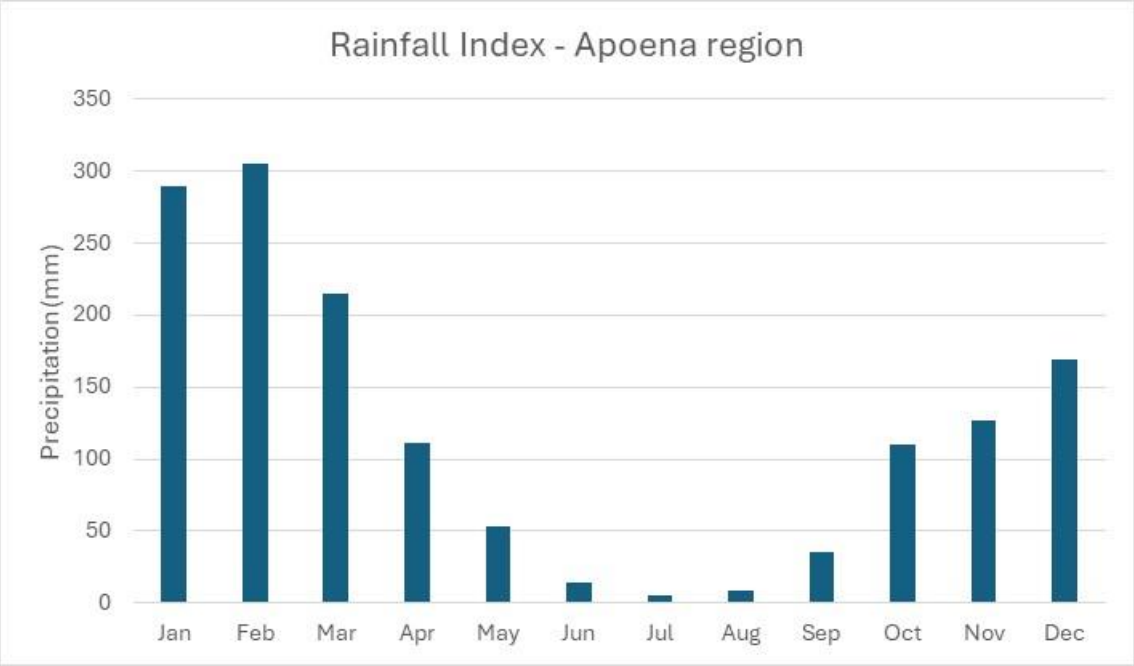


Figure 12-2: Average Monthly Rainfall in the Region Between 2008 and 2023

12.4 Mine Planning for Reserve Estimation

The metal prices to be used in mineral reserves calculations was discussed intensively with Mineração Apoena S.A. market people department. A reasonable safety margin was adopted to assure a robust mineral reserva calculation. In relation to the costs basis for reserve calculation,

the values are the same those related to the existent contracts in the nowadays operation, and still valids, for the Mineração Apoena S.A., Pontes e Lacerda, MT

The optimization of the pit involved the cut-off analysis for gold grades based on the information provided by Apoena pursuant to Table 12-5.

Table 12-5: Pit Optimization Parameters

Input	Description	Forward Values	
oz	Troy ounce	31.10348 g	
m	MCF	100%	
mlg	MCF for low-grade	100%	
r	Metallurgical recovery	93.50%	
rlg	Metallurgical recovery (low-grade)	93.50%	
ovb	Dilution	10%	
fx	Exchange rate (BRL/USD)	5.10	
Cs	Cost of selling gold (refining, royalties, Management Fees) in (USD/oz)	77.31	
P	Reserve Gold Price (USD/oz)	1,800	
Pres	Resource Gold Price (USD/oz)	1,900	
	Costs	**BRL**	**USD**
Cm	Mining Cost per mined t	11.50	2.26
Cmf	Mine fixed cost (Administration) per mined t	7.81	1.53
Cp	Total Processing Costs per processed t	60.54	11.87
Cpvar	Variable Processing Cost per processed t	37.53	7.36
Ca	G&A + Overhead + SHE per processed t	19.35	3.79
Cr	Rehandle per moved t	0.00	0.00
Clh	Cost For long Haulage per hauled t	0.00	0.00
Com	Premium cost for ore per processed t	7.85	1.54
Csism	Sustaining cost/ton (mine) per mined t	1.97	0.39
Csisp	Sustaining cost/ton (process) per processed t	10.41	2.04
Cmc	New Mine Closure cost incurred	0.00	0.00
		CoG Grade	
MO	Marginal Ore	0.34	
FGO	Full-Grade Ore	0.45	
MW	Mineralized Waste	0.32	
IO	Incremental Ore/Stockpile	0.20	

12.4.1 Cut-Off Grade

- The economic cut-off grade for Marginal Ore is the grade for which processing, and G&A costs are equal to revenue, discounting metallurgical recovery.
- The economic cut-off grade for Full-Grade Ore includes the cost for ore mining, processing, G&A, and metallurgical recovery, compared to revenue.
- The cost of mining for Mineralized Waste had already been incurred when the decision to extract the ore was made.

- When processing the ore (directly or subsequently from piles), the mining operation has already been paid for by the Incremental Ore/Stockpile.

12.5 Pit Optimization Results

Several pits were generated for a range of revenue factors in the price of gold. Preliminary cash flows are estimated by the NPV Scheduler optimizer based on a 5% discount rate and a nominal gold price of USD 1,800/ounce.

In the following sections, a summary of the optimization results per deposit is presented. The cut-off grade was calculated considering the mining dilution, processing costs, metallurgical recovery, metal price, and royalties. Processing costs include G&A and recovery costs.

A set of pits, illustrated in Table 12-6, has been developed to determine the design sensitivity and basis for the final designed pit. As the cut-off grades decrease, the rock tonnage increases, resulting in a reduction of the grade average

Table 12-6: Selection of Optimum Pits in NPV Scheduler

Revenue Factor	Mass (kt)	Total Mass (kt)	Volume (km³)	Total Volume (km³)	Ore Mass (kt)	Total Ore Mass (kt)	Grade (g/t)	Total Grade (g/t)	Waste (k/t)	Total Waste (k/t)	SR
0.1	-	-	-	-	-	-	-	-	-	-	
0.2	0.5	0.5	0.2	0.2	0.4	0.4	2.26	2.26	0.1	0.1	0.3
0.3	10	11	4	4	6	6	1.68	1.71	4	5	0.7
0.4	73	84	27	31	33	39	1.38	1.44	40	45	1.2
0.5	313	397	115	146	122	161	1.11	1.19	191	236	1.6
0.6	1,231	1,629	454	600	466	627	0.95	1.01	765	1,001	1.6
0.7	2,564	4,192	945	1,545	1,195	1,823	0.77	0.85	1,369	2,370	1.1
0.8	38,068	42,260	13,997	15,542	5,447	7,270	0.95	0.93	32,621	34,990	6.0
0.9	5,410	47,670	1,988	17,531	834	8,104	0.83	0.92	4,576	39,567	5.5
1	3,473	51,143	1,276	18,807	473	8,577	0.78	0.91	3,000	42,567	6.3

Pit 10 was chosen because it presents the best result for the revenue factor parameter, representing the best scenario for a more profitable operation. This comparison can also be checked in Figure 12-3.

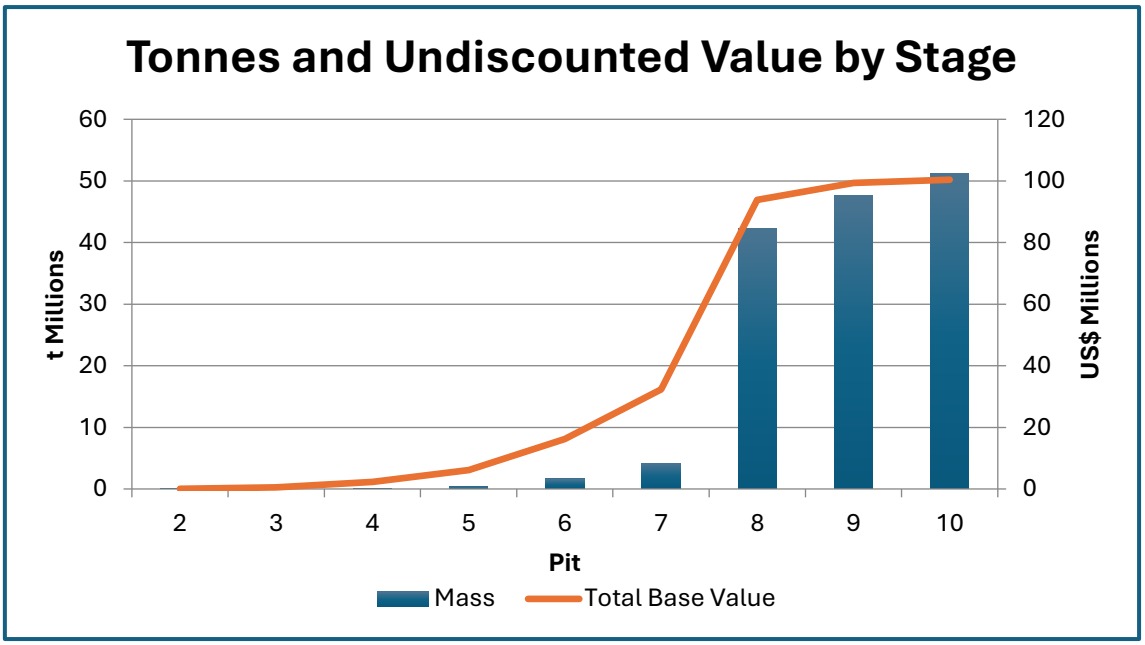


Figure 12-3: Selection of Pit 10 as Final Pit

With the selection of the final pit, financial analyses were performed to ascertain the cash flow, according to Table 12-7 and Figure 12-4.

Table 12-7: Discounted Cash Flow

Discount Rate	5.00%	per Year	
Mining Rate	10,000,000	Mass per Year	
Revenue Factor	**Best Case DCF**	**Worst Case DCF**	**Average Case DCF**
0.2	34,088	34,088	34,088
0.3	386,811	386,810	386,810
0.4	1,814,569	1,814,536	1,814,552
0.5	5,359,966	5,358,983	5,359,475
0.6	15,084,307	15,073,068	15,078,687
0.7	30,640,265	30,568,914	30,604,589
0.8	77,700,658	74,487,053	76,093,855
0.9	81,950,005	76,332,702	79,141,353
1.0	82,740,167	75,392,989	79,066,578

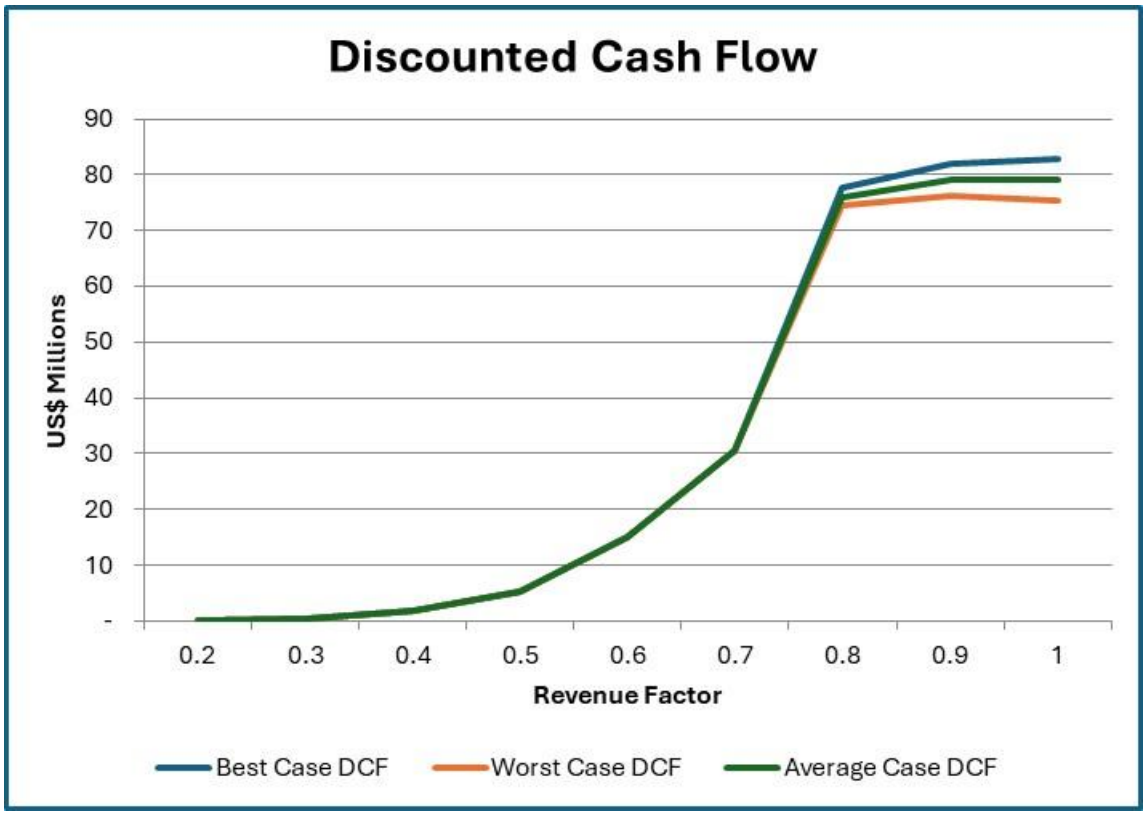


Figure 12-4: Discounted Cash Flow

12.6 Final Pit

After the selection of the final pit, an operationalization was performed, as illustrated by the top view of the pit, shown in Figure 12-5.

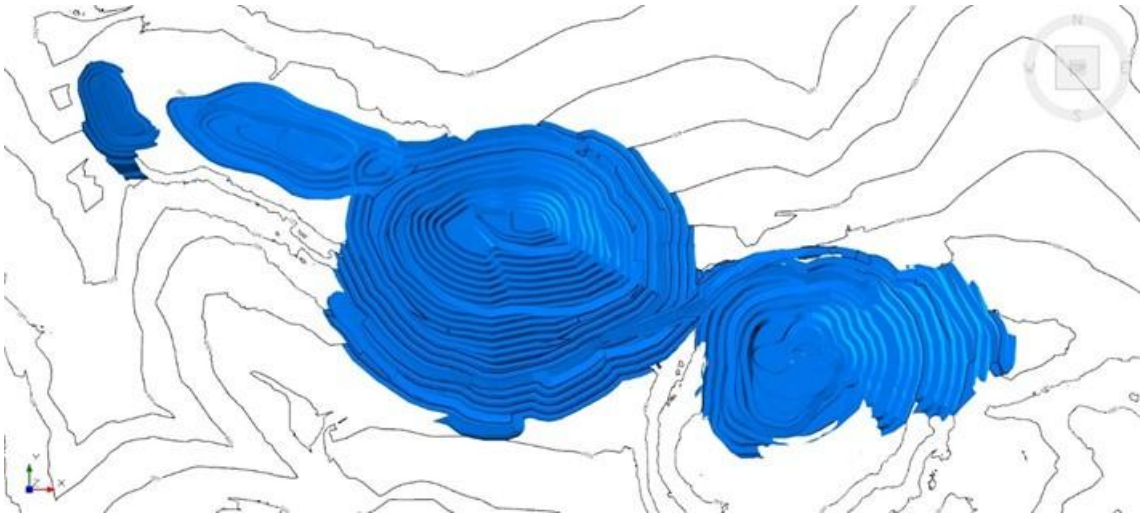


Figure 12-5: Final Operationalized Pit

AA' and BB' sections of Figure 12-6, Figure 12-7, and Figure 12-8 illustrate the annual advance of the pit according to the color legend available in the image. Figure 12-9 through Figure 12-12 represent illustrate the projected mine progression from 2024 to 2027, respectively.

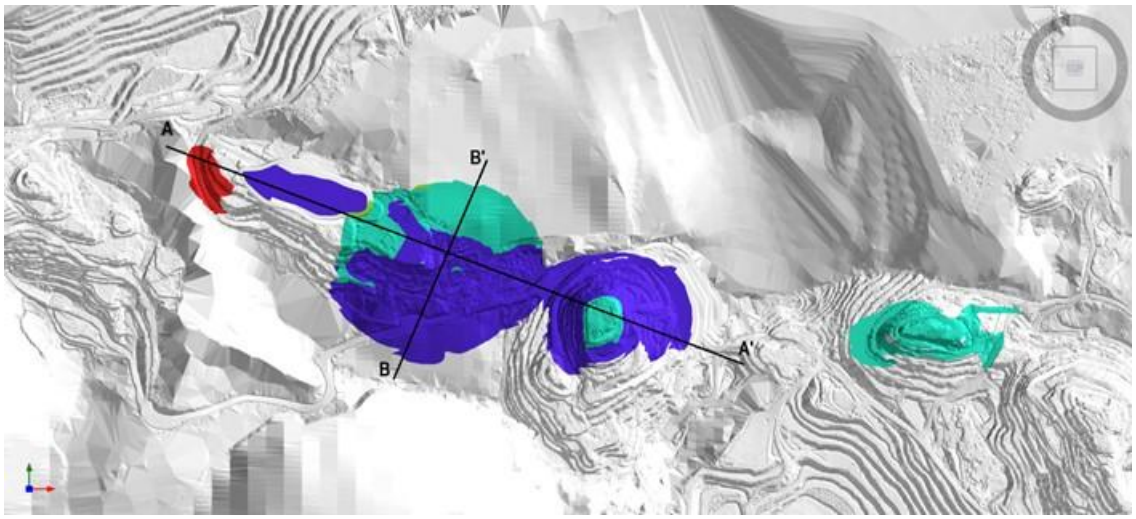


Figure 12-6: NW-SE and SW-NE Sections with Annual Progress of Pit

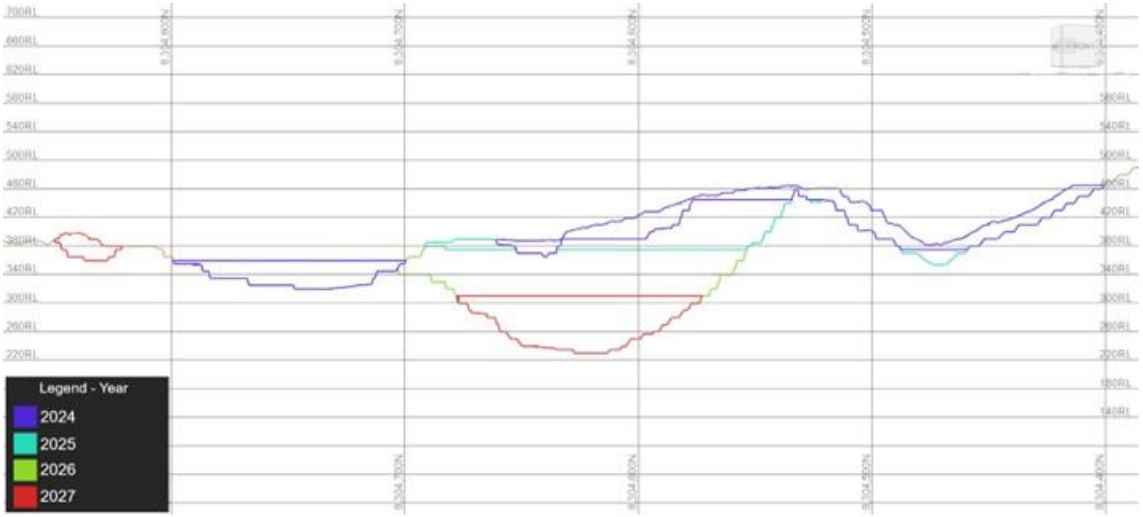


Figure 12-7: NW-SE Section with Annual Progress of Pit

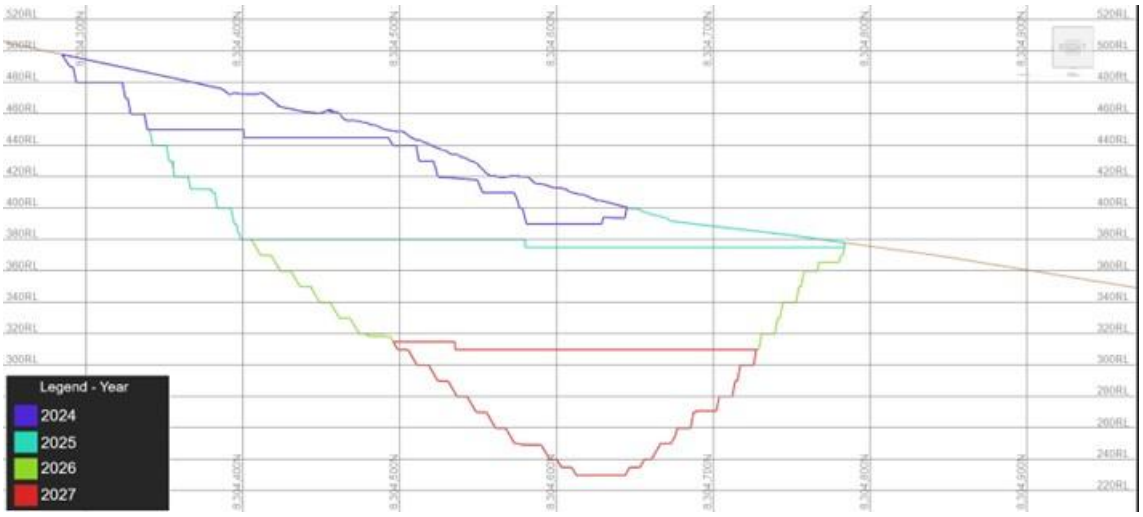


Figure 12-8: SW-NE Section with Annual Progress of Pit

Figure 12-9 to Figure 12-12 display the operationalized pits from 2024 to 2027, respectively.

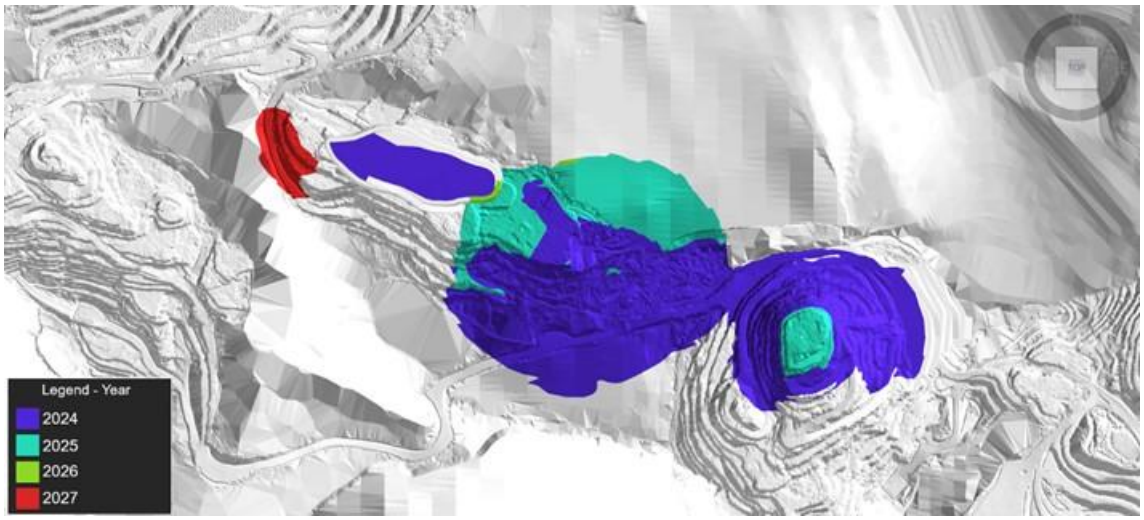


Figure 12-9: 2024 Operationalized Pit

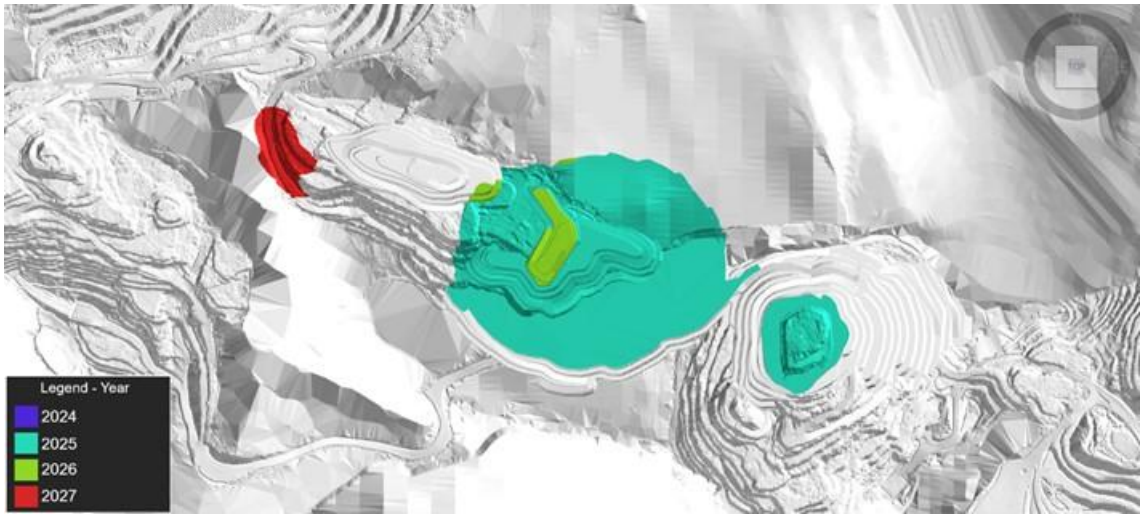


Figure 12-10: 2025 Operationalized Pit

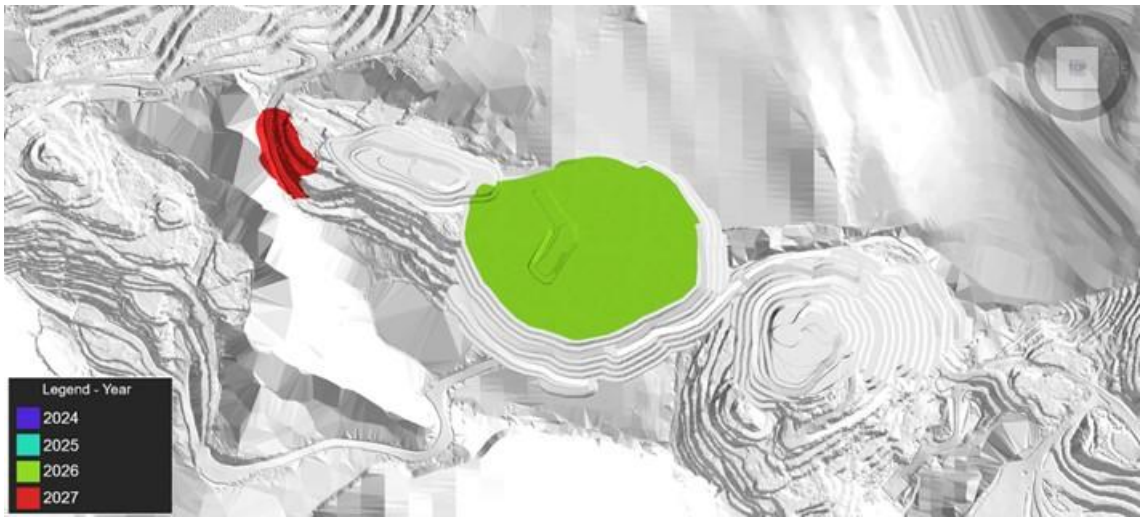


Figure 12-11: 2026 Operationalized Pit

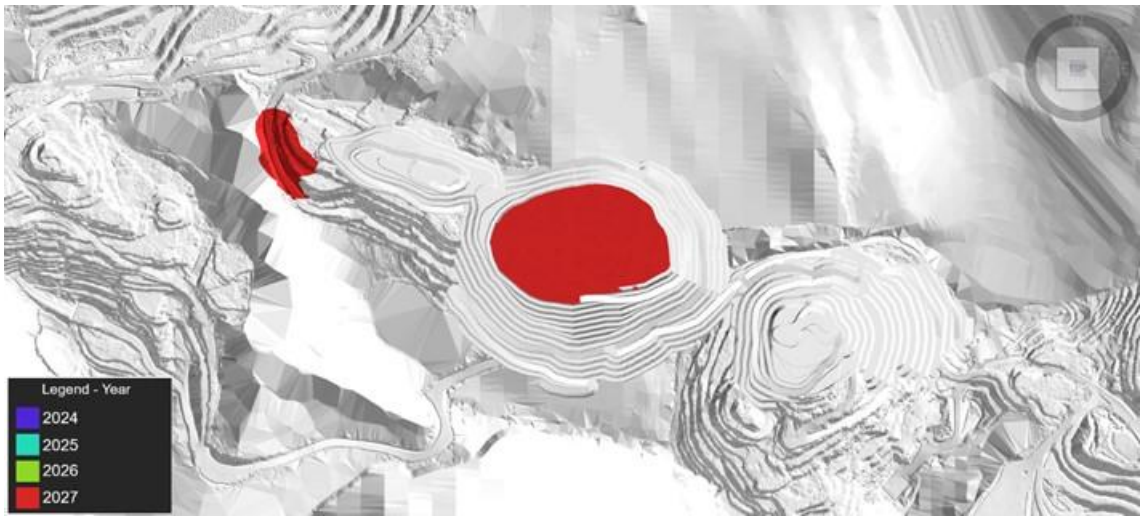


Figure 12-12: 2027 Final Operationalized Pit

12.7 Life of Mine

shows the production table for the four years of life of mine (LOM), with the 2023 value representing actuals. Excess ROM in the years 2024 and 2027 must be stored in a buffer cell for plant processing in the following years.

Table 12-8 shows the production table for the four years of life of mine (LOM), with the 2023 value representing actuals. Excess ROM in the years 2024 and 2027 must be stored in a buffer cell for plant processing in the following years.

Table 12-8: Life of mine

YEAR	Ore production		Waste	SR	Au contained in the production
	kt (dry)	Grade (g/t Au)	kt (dry)	t : t	Au (kOz)
2023	387.9	0.74	1,940.8	5.00	9.3
2024	1,781.7	0.77	12,201.6	6.85	44.0
2025	812.7	0.71	16,810.9	20.69	18.5
2026	1,355.8	0.79	17,833.3	13.15	34.3
2027	3,222.3	1.12	4,984.1	1.55	115.6
Total	7,560.4	0.91	53,770.7	7.11	221.7

12.8 Mine Infrastructure

The structures covered in Figure 12-13 represent the infrastructure present in Mineração Apoena, of which the Nosde/Lavrinha Mine is part.



Figure 12-13: General Infrastructure of Mineração Apoena (EPP Project)

Figure 12-14 shows a representation of the waste pile that directly serves the Nosde/Lavrinha mine. This pile has ten-metre-high benches, a slope inclination angle (natural angle of material rest) of 35°, and a safety berm between benches with ten metres to allow greater stability of the pile. The compaction of material will be pursuant to the transit of loaded trucks, which will provide densification of material from 1.8 t/m³ in the natural state to 1.9 t/m³ compacted. The pile will be 60 metres high overall and 23°.

The Nosde/Lavrinha pile has the capacity to receive a total of 11.3 million tons of waste. However, the mass does not meet the demand of the Nosde/Lavrinha mine, which is equivalent to a total of 53.7 million tonnes.

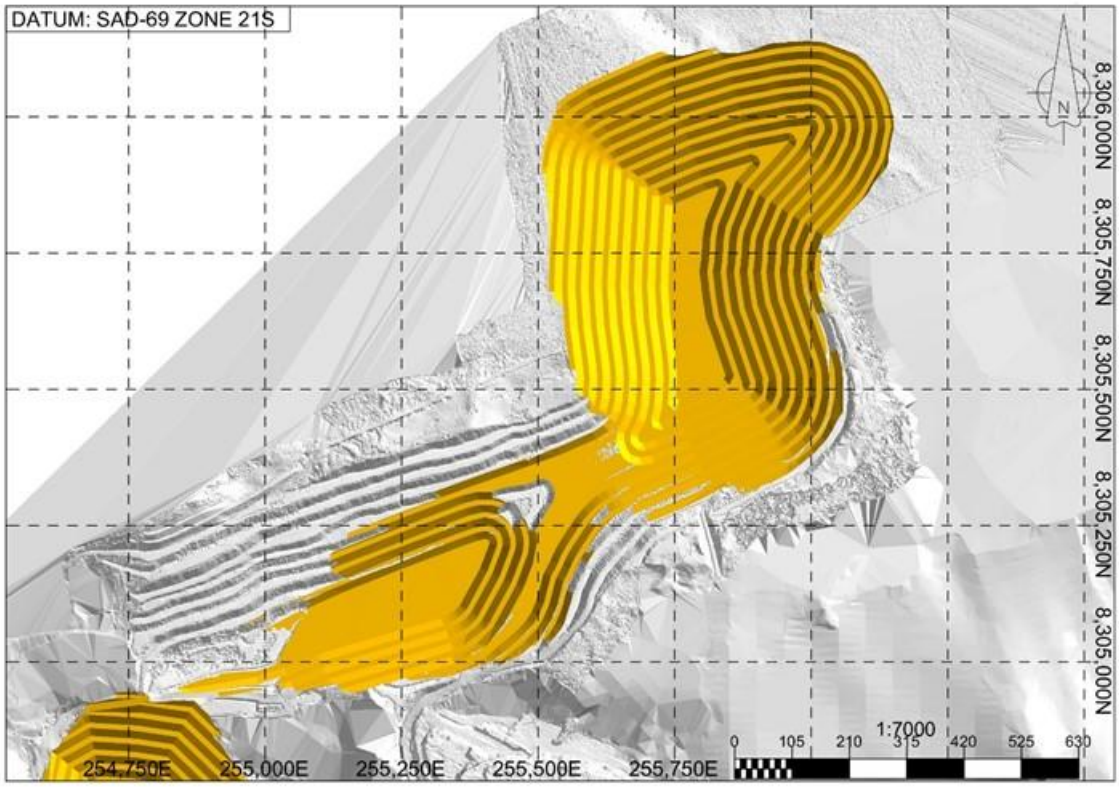


Figure 12-14: Waste Pile from the Nosde/Lavrinha Mine

To make up for this deficit, three distinct strategies were devised:

- Japonês, Lavrinha, and Ernesto Conect pits, belonging to Mineração Apoena, should receive a filling with material from Nosde/Lavrinha, containing about 16.4 million tonnes of waste, according to Table 12-9.
- Ernesto pile (Figure 12-15) should receive a part of Nosde/Lavrinha waste, containing about 8.0 million more tonnes of waste.
- Three deposition piles (Pit 1, Japonês, and Leste), displayed in Figure 12-16, Figure 12-17, and Figure 12-18, are in the process of environmental licensing and should house about 18.6 million tonnes of waste, according to Table 12-10.

Table 12-9: Filling Capacity of Mineração Apoena Pits

Pit	Actual Capacity (km³)	Apparent Density (t/m³)	Actual Capacity (kt)
Lavrinha	7,264.6	1.80	13,076.3
Ernesto Conect	868.9	1.80	1,564.1
Japonês	985.2	1.80	1,773.3
TOTAL	9,118.8	1.80	16,413.8

Table 12-10: Piles in Environmental Licensing Process

Pile	Actual Capacity (km³)	Apparent Density (t/m³)	Actual Capacity (kt)
Japonês	6,616.1	1.80	11,909.1
Pit 1	1,762.5	1.80	3,172.6
Leste	1,928.8	1.80	3,471.8
TOTAL	10,307.5	1.80	18,553.5

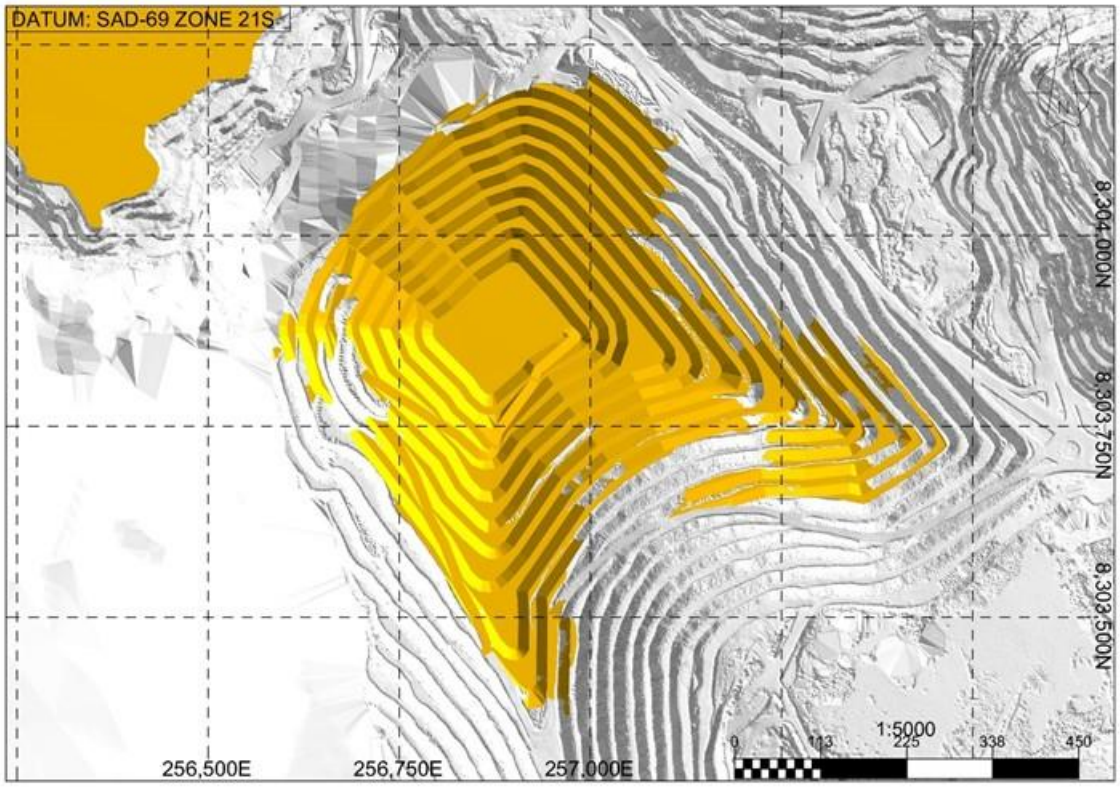


Figure 12-15: Ernesto Pile Representation

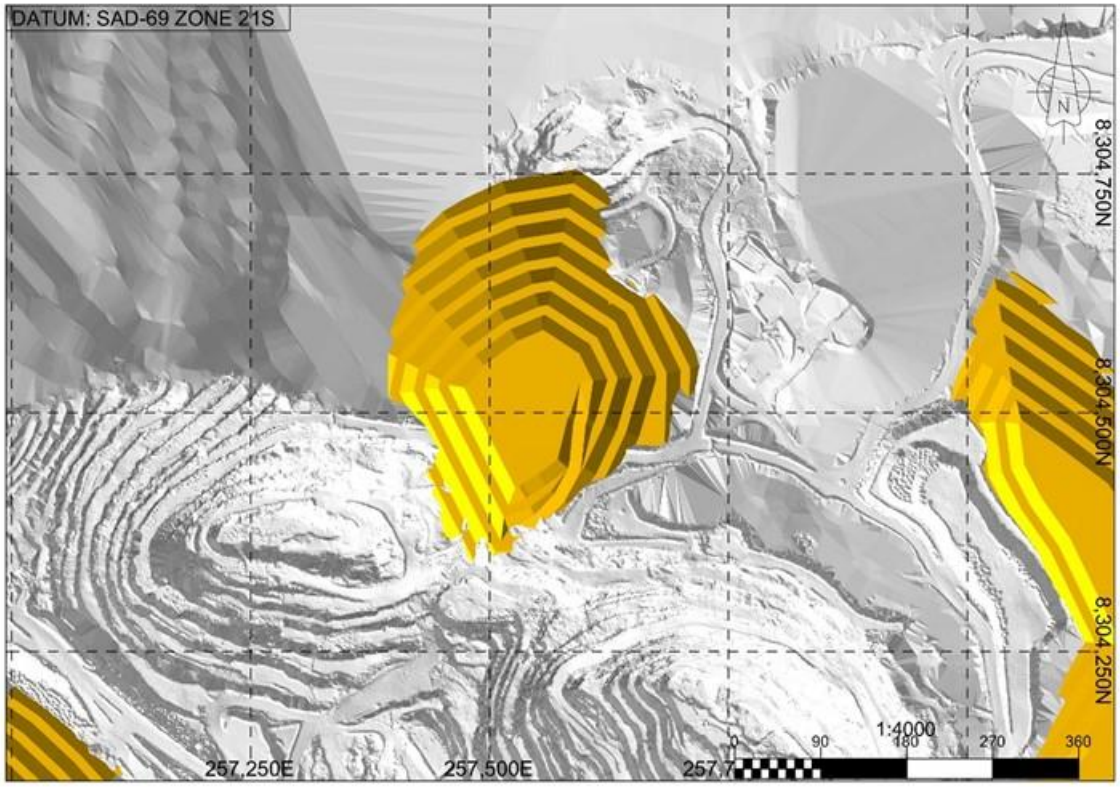


Figure 12-16: Representation of Pit 1 Pile

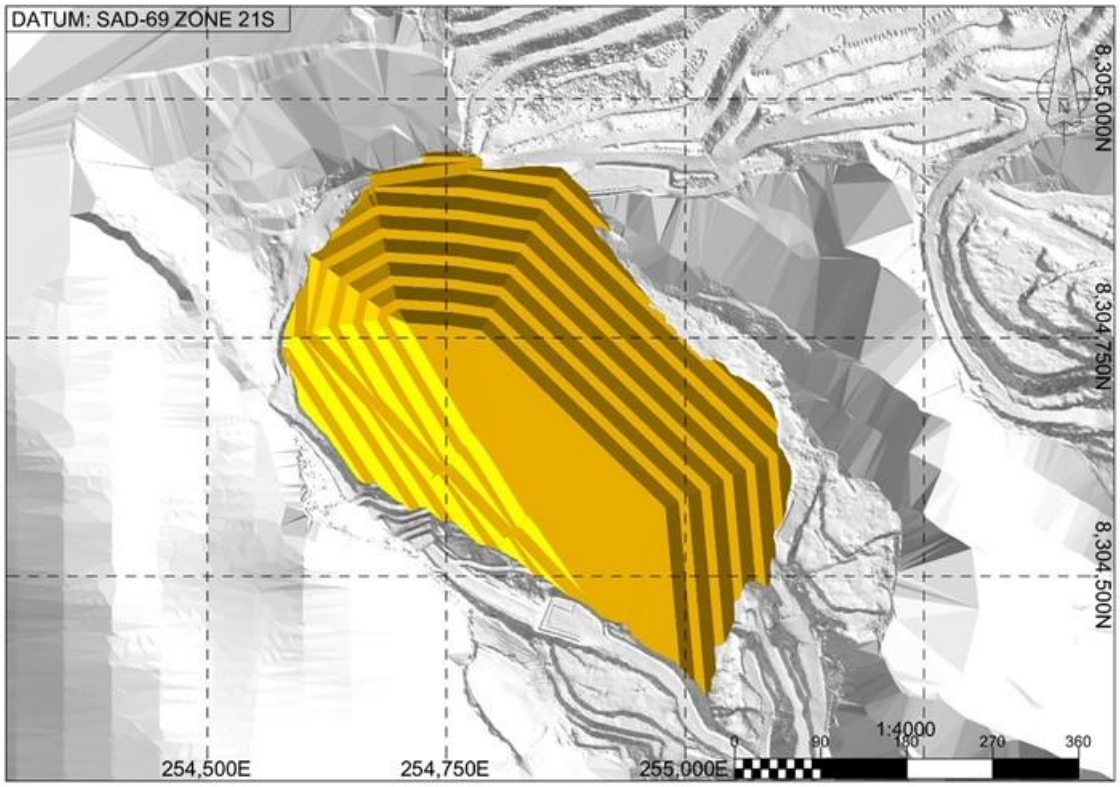


Figure 12-17: Representation of Pit 1 Pile

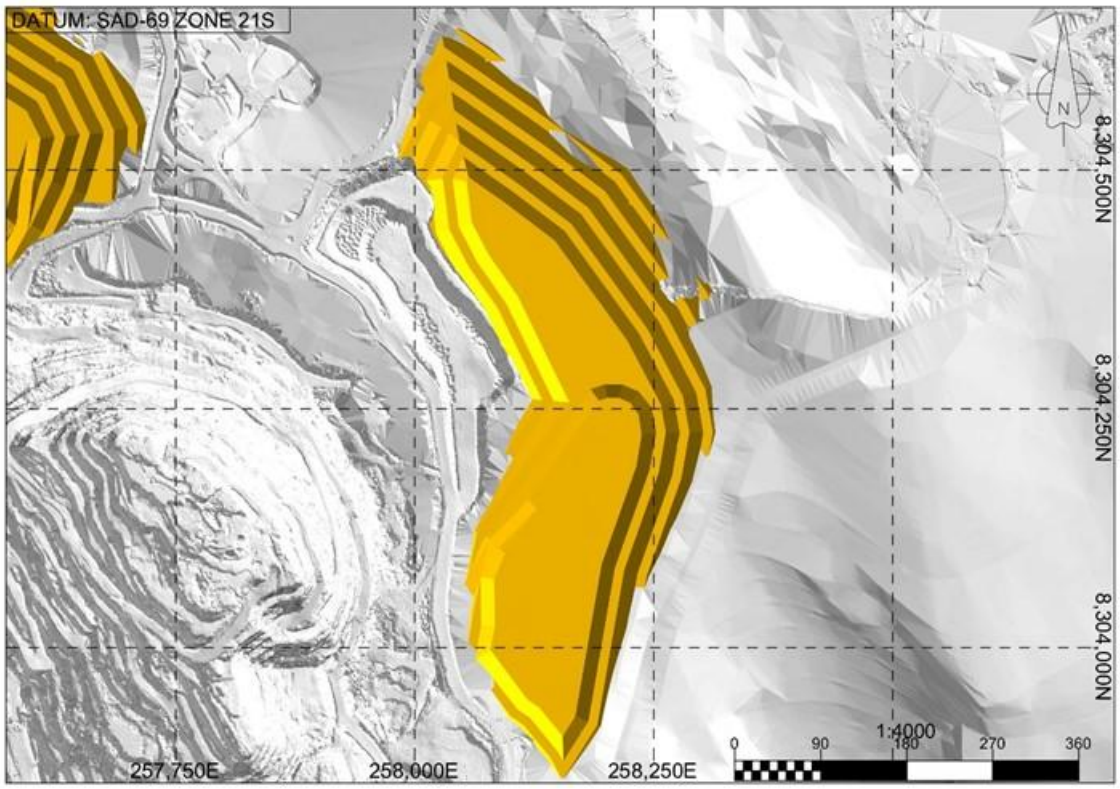


Figure 12-18: Leste Pile Representation

13 MINING METHODS

Mining costs are based on the extraction of Nosde/Lavrinha rocks, including drilling, blasting, loading, and transportation to the crushing yard and specific stockpiles; also including the necessary infrastructure to enable the mined production.



Figure 13-1: Nosde/Lavrinha Mine

The tonnages planned to be extracted and the basis for all cost calculations are expanded upon below.

13.1 Handling of Mined Rock

Table 13-1 shows the annual ore production of Nosde/Lavrinha pertaining to their respective average gold grade, the total waste to be removed, the waste ore ratio, and the metallic gold planned to be recovered at the plant. Gold grade is defined by ranges of high-grade (above 0.9 g/t), medium-grade (between 0.9 and 0.7 g/t), and low-grade (between 0.7 and 0.34 g/t).

Table 13-1: Annual Production for Years 2023, 2024, 2025, 2026, and 2027

Gold Grade	Unit	2023	2024	2025	2026	2027
High Grade	Ton of Ore (kt)	66.9	298.7	96.2	330.6	2,044.8
	Grade (g/t)	1.15	1.14	1.13	1.21	1.32
	In Situ Ounces (kOz)	2.5	11.0	3.5	12.8	86.8
Medium Grade	Ton of Ore (kt)	162.3	870.4	323.0	467.1	920.0
	Grade (g/t)	0.76	0.78	0.78	0.78	0.81
	In Situ Ounces (kOz)	3.9	21.9	8.1	11.7	24.1
Low Grade	Ton of Ore (kt)	158.8	612.5	393.5	558.1	257.5

Gold Grade	Unit	2023	2024	2025	2026	2027
	Grade (g/t)	0.56	0.56	0.55	0.54	0.57
	In Situ Ounces (kOz)	2.8	11.1	6.9	9.7	4.7
Total Ore	Ton of Ore (kt)	387.9	1,781.7	812.7	1,355.8	3,222.3
	Grade (g/t)	0.74	0.77	0.71	0.79	1.12
	In Situ Ounces (kOz)	9.3	44.0	18.5	34.3	115.7
Total Waste	Ton of Waste (kt)	1,940.8	12,201.6	16,810.9	17,833.3	4,984.1
SR		5.00	6.85	20.69	13.15	1.55

13.1.1 Destination of Raw Ore (ROM)

The destinations of the raw ore (ROM) extracted are:

- High and medium-grade ore stockpile to the crushing area: The material will be transported by a loader to feed crushing, pursuant to the planned mass and grade specifications.
- Low-grade ore stockpile: The low-grade ore will be sent to an ore stockpile to strategically feed the plant over periods when medium and high-grade materials are absent.

The mass of ROM by destination and Average Hauling Distance (AHD) are shown in Table 13-2.

Table 13-2: Masses of ROM Extracted in Pit and Average Hauling Distance by Classification

Source	Mine					
Destination	Ore Yard/Stacks					
Ore/Waste	High- and medium-grade ore (for the plant)		Low-grade ore (for stockpile)		Waste (for waste deposits)	
Year	Tonnage	AHD	Tonnage	AHD	Tonnage	AHD
	t	m	t	m	t	m
2023	229,169	3,249	158,801	3,937	1,940,756	3, 242
2024	1,169,175	3,249	612,514	3,937	12,201,627	3,242
2025	419,169	3,249	393,518	3,937	16,810,920	3,242
2026	797,770	3,249	558,026	3,937	17,833,307	3,242
2027	2,964,735	3,249	257,533	3,937	4,984,070	3,242

13.2 Mine Operation

The operating concept for the Nosde/Lavrinha Mine is conventional open pit mining. Commercial operation started in 2022.

The development of the mine was planned to allow access to the high-grade level to maximize gold production and enable operational flexibility, allowing the mining of several benches simultaneously.

Disposal material includes soil, saprolite, altered rock mass, and fresh rock. The excavation of these deposits is planned for drilling and blasting with explosives, for all fresh rock. The loading and transportation will be carried out mainly by hydraulic excavators, complemented by loaders. The transportation will be carried out by 8 x 4 trucks.

The benches are set up as follows:

- For metarenite, a width of 8.5 m and a height of 20 m is maintained.
- For shale, a width of 6.5 m and a height of 10 m is maintained.
- The benches have a slight inclination from the top to the base of the top face of the bench, towards the open side, to drain rainwater and maintain the designed inclination angles. A good drainage design within the pit and in the rainwater collection contribution areas around the pit allows minimization of operational disturbances during heavy rains.

The processing plant is located about 3.2 km from the Nosde/Lavrinha pit.

The mining fronts are accessed by ramps with a width of 13 m and a slope of 10%. The road conditions are consistent with good practices for the operation of mining equipment.

The gold extraction concept of Nosde/Lavrinha Mine is based on the application of conventional techniques of excavation of shallow rock masses with a maximum level of mechanization:

- Grade control with dedicated drilling: Sample collection to provide good support to grade control engineering and short-term mining plan.
- Blasting holes: They are drilled by a Top Hammer hydraulic drilling platform.
- Primary rock blasting: Most rock, ore, and waste rock is fragmented using explosives. Ore fragmentation has special requirements.
- Mechanical excavation of rock: To be performed by excavators with the aid of bulldozers, if necessary.
- The loading operation is preferably performed by a hydraulic excavator with a backhoe bucket profile, complemented by loaders.
- The transportation of rocks is performed by conventional 8 x 4 road trucks.
- The development and preparation of the mine are carried out by bulldozers, graders, road rollers, and water trucks.

The destinations of the extracted materials are:

- ROM stock in the primary crusher area;
- waste disposal stockpile; and
- low-grade stock.

The ore is handled from the storage yard using a loader that will feed the primary crusher. Direct feeding by trucks to the crusher was not considered.

The mining operation is carried out by an outsourced company using hydraulic excavators with an operating weight of 50 and 75 tons in backhoe configuration, which load 8 x 4 trucks with a bucket capacity of 22 m³ (heaped), which means about 10% more for the total capacity, for 58 tons of TGW (Total Gross Weight).

When necessary, the material of the low-grade piles is moved again and feeds the beneficiation plant. Risk mitigation strategies over the rainy season are developed; otherwise, problems with potential loss of access to mining areas and operational difficulties may occur.

Short-term grade control is performed by a dedicated team responsible for sample collection and ore quality analysis prior to processing.

The pumping infrastructure that is used in Nosde/Lavrinha is similar to the one that is installed in the Ernesto Mine, which is made up of three different pumps with a capacity of 200 m³/h, including an ITU-86C17 CABIN DIESEL MOTOR PUMP, with a suction capacity of 6" x 8", discharge equipped with a 17" SCANIA rotor. In addition, two ITU-63C17 DIESEL MOTOR PUMPS are part of the system, with a suction capacity of 6"x4", discharge and rotor also of 17". Complementing the system, there are about 500 metres of 8” HDPE piping, providing a robust and efficient structure for water management.

13.3 Mine Equipment Selection

As in other Apoena operations, mining is outsourced. Apoena is responsible for contractor management to achieve required production pursuant to the mine plan. The sizing of the fleet required to perform the operation is summed up in Table 13-3.

Table 13-3: Annual Equipment Fleet

Equipment	Model	2024	2025	2026	2027
Digger	SY750H	6	9	9	
Digger	KOMATSU PC 500	2			3
Dump Truck	AROCS 4851	27	30	31	15
Drilling Rig	DP1500i	5	5	5	3
Crawler Tractor	D8/D61 AX	4	4	4	4
Wheel Loader	CAT 966	2	2	2	2
Motor Grader	CAT 140	2	2	2	2
Infrastructure Excavator	CAT 336	1	1	1	1
Water Truck	AXOR 3131	3	3	3	3
Fuel Truck	AXOR 3131	2	2	2	2
Compactor Roller	DYNAPAC/CA25	1	1	1	1
Hydraulic Breaker	SY215C	1	1	1	1

For optimized operation, complete synchronization of:

- Grade control drilling.
- Drilling for production.
- Mine development and preparation by crawler bulldozers/motor graders/water trucks, and others.
- Loading by excavators.
- Transportation of ore and waste by 8 x 4 trucks.

Road conditions affect the speed and safety conditions for transporting ROM and waste ore.

As the unloading of the ore takes place in a yard, a loader feeds the ore into the concentration plant. No queues are expected at the unloading point of the ore trucks.

13.3.1 Drilling and Blasting

Considering the operations in Nosde/Lavrinha, the blasting of waste rock and ore abides by different parameters for each of these materials, according to Table 13-4 and Table 13-5. Both

operations are performed with pumped emulsion, and loading ratio of 227 g/t for ore and 249 g/t for waste.

Table 13-4: Ore Blasting Parameters

PARAMETER	AMOUNT
ROCK DENSITY (kg/m³)	2.610
HOLE DIAMETER (")	4.00
BURDEN (m)	3.10
SPACING (m)	3.60
SUBDRILLING (m)	0.15
CLOSURE (m)	1.80
OVERBREAK (m)	1.50
BENCH HEIGHT (m)	5.00

Table 13-5: Waste Rock Blasting Parameters

PARAMETER	AMOUNT
ROCK DENSITY (kg/m³)	2.610
HOLE DIAMETER (")	5.50
BURDEN (m)	4.00
SPACING (m)	4.60
SUBDRILLING (m)	0.15
CLOSURE (m)	2.00
OVERBREAK (m)	1.50
BENCH HEIGHT (m)	5.00

Fragmentation quality monitoring occurs during operation to optimize the total rock excavation in the mine and the grinding process. Different blasting patterns for waste rock and ore, along with knowledge of lithology, were used for fleet selection of blasting hole drilling rigs.

Hydraulic drilling rigs are a high-productivity alternative and allow the possibility of technologies that control dust generation, with high-efficiency “dust collector” systems. The generation of dust by the operation can cause environmental problems, in addition to significantly increasing the maintenance costs of equipment.

13.3.1.1 Drilling Rig for Grade Control

For Grade Control drilling, used to update the short-term mining plan and perform grade control, the use of reverse circulation has been shown to be the most effective in supporting mining reconciliation. Reverse Circulation (RC) drilling has become standard practice in most mines worldwide to perform grade control for mining reconciliation.

For very short-term information, a hydraulic drill with a dust collection system is used, for drillings up to 10 m long and a mesh of 5 m x 5 m. Sample collection is carried out from metre to metre. In this case, a PW Lobo model machine is being used, with 3" holes.

13.3.2 Loading and Transportation

Table 16.9 shows the parameters used to select the loading and transportation fleet for the ROM on the mining fronts. Fleet sizing depends on the number of days of the month and the transport distance for each type of material. In Table 13-6, as a reference, a transport distance of 3,500 m and a month of 30 days was used.

Table 13-6: Fleet Selection Parameters

EXCAVATORS	50 t Excavator	75t Excavator
Excavator Bucket Capacity (^{m3})	3.0	4.4
In Situ Material Density (t/^{m3})	2.62	2.62
Swelling (%)	32%	32%
Material Moisture (%)	2%	2%
Swollen Material Density (t/m^3)	1.98	1.98
Bucket Fill Factor (%)	100%	100%
Volume per Pass (m^3)	3.00	4.40
Metric Tonnes per Dry Pass (t)	5.95	8.73
Metric Tonnes per Wet Pass (t)	6.05	8.92
Maximum Truck Capacity (m^3)	22	22
Maximum Truck Capacity (t)	40	40
Truck Passes	7	5
Tons per Truck (wet)	40	40
Tons per Truck (Dry)	39	39
Waiting Time for Truck Positioning (min.)	2.00	2.00
Cycle Time per Pass (min.)	0.45	0.40
Total Cycle Time per Truck (min.)	5.15	4.00
Effective Unit Productivity (m^3/h)	176	227
Effective Unit Productivity (t/h)	461	594
Days per Month	30	30
Hours per Day	24	24
Calendar Time (h)	720	720
DF (%)	85%	85%
UT (%)	71%	75%
OEE (%)	60%	64%
Available Time (h)	612	612
Planned Production Time (h)	435	459
Operational Efficiency (%)	85%	85%
Operating Unit Productivity (m^3/h)	150	193
Operating Unit Productivity (t/h)	392	505
TRUCKS (8 x 4)	50 t Excavator	75t Excavator
DMT (m)	3500	3500
Average Empty Speed (km/h)	30.0	30.0
Average Loaded Speed (km/h)	18.0	18.0
Empty Travel Time (min.)	7.00	7.00
Loaded Travel Time (min.)	11.67	11.67

EXCAVATORS	50 t Excavator	75t Excavator
Maneuver for Loading (min.)	2.00	2.00
Loading (min.)	3.15	2.00
Maneuver for Dumping (min.)	0.40	0.40
Dumping (min.)	1.10	1.10
Queue Time (min.)	2.00	2.00
Cycle Time (min.)	27.32	26.17
Travels / hour	2.20	2.29
Bucket Factor	39.00	38.76
Days per Month	30	30
Hours per Day	24	24
Calendar Time (h)	720	720
DF (%)	85%	85%
UT (%)	71%	71%
OEE (%)	60%	60%
Available Time (h)	612	612
Planned Production Time (h)	435	435
Operating Unit Productivity (m^3/h)	33	34
Productivity for 2000m DMT (t/h)	86	89

13.3.3 Auxiliary Equipment

13.3.3.1 Motor Grader

The selection of motor graders should not only consider the sum of the lengths of all accesses to be maintained, but also the various tasks that the motor grader performs in a mining operation. It is also important to consider appropriately sized equipment for mining operations, with a minimum blade width of 14 feet (CAT 140).

13.3.3.2 Flatbed Truck

Considering the various equipment moved by caterpillar tracks that need to move constantly for greater distances, either due to the arrangement of the operation fronts or the maintenance needs in the workshop, the mine has a flatbed truck to meet these requirements of the mining operation. The flatbed truck can also be used to transport large components of the concentration plant during large-scale maintenance. The truck's width should consider the ability to safely transport the widest equipment in the mine.

13.3.3.3 Water Truck

Despite the high rainfall rates in the region, prolonged periods of drought require the use of many hours of water trucks. Therefore, the mine has three units, aiming to cover the entire operation. Typically, the watering system used is the "peacock tail" sprinkler type, properly adjusted to

moisten the soil and not to "wash" the ground. It is important that water trucks also have a nozzle system to help put out fires during the dry season.

13.3.3.4 Bulldozers

For current production levels, bulldozers weighing 35 tons (CAT D8) and 20 tons (CAT D6) are used. This need is heightened in the rainy season.

13.4 Workforce

13.4.1 Workforce to be Contracted by Mineração Apoena S.A.

As the mine operation is intended to be sub-contracted, the mine labor force is related to management, grade control and mine planning (Table 13-7).

Table 13-7: Workforce Requirements for the Outsourced Mining Operation Alternative.

Sector	Job Title	Formation	Quantity
Management	Mine manager	Mining Engineer	1
Grade Control	Department Chief	Geologist Sr	1
	Coordinator	Geologist full	1
	Grade control technician	Mining Technician	2
Mine Planning	Department Chief	Mining Engineer Sr	1
	Mine planning engineer	Mining Engineer full	1
	Topography Specialist	Topographer	1
	Mine planning engineer	Mining Technician	2
Mine Production	Department chief	Mining Engineer Sr	1
	Production Engineer	Mining Engineer	1
	Production Supervisor	Mining Technician	4

13.4.2 Operational Workforce Expected to have in Mine Site by Contractor

The contractors must follow the Mineração Apoena S.A. standards related to Health, Environment and Communities (HEC) and the personnel from one contractor to other, based on similar fleet, is not different from each other.

The working schedule considered is three shifts per day, seven days a week by operational people, 12 months per year. For vacation and absenteeism, it was considered one index of 12 %.

The Table 13-8 present the personnel staff related to contractors expected to be working in mine site.

Table 13-8: Contractors operational personnel staff expected to work for mining operation

	Equipment	Model	2024	2025	2026	2027
Contractor Mining Operational Labors	Excavator	SY750H	24	36	36	-
	Excavator	KOMATSU PC 500	8	-	-	12
	Dump Truck	AROCS 4851	108	120	124	60
	Drilling Rig	DP1500i	20	20	20	12
	Crawler Tractor	D8/D61 AX	16	16	16	16
	Wheel Loader	CAT 966	8	8	8	8
	Motor Grader	CAT 140	8	8	8	8
	Infrastructure Excavator	CAT 336	4	4	4	4
	Water Truck	AXOR 3131	12	12	12	12
	Fuel Truck	AXOR 3131	8	8	8	8
	Compactor Roller	DYNAPAC/CA25	4	4	4	4
	Hydraulic Breaker	SY215C	4	4	4	4

	Equipment	Model	2024	2025	2026	2027
	Grade Control	Top Hammer Drilling	6	6	6	6
	Vacations/ Absenteeism	12%	28	30	30	18
	Total Operational estimated		**258**	**276**	**280**	**172**
Contractor Managements	Site Manager		1	1	1	1
	Production Manager		1	1	1	1
	Maintence Manager		1	1	1	1
	Production Supervisor		4	4	4	4
	Maintence Supervisor		4	4	4	4
	Mechanics		84	90	92	56
Total Contractors Personnel			**356**	**380**	**386**	**242**

14 PROCESSING AND RECOVERY METHODS

14.1 Process Summary

The concepts used in the selection of the route and flowchart of the metallurgical process for the Aura APOENA Minerals' plant, also referred to as EPP – Ernesto & Pau-a-Pique, were based on technological test programs conducted with samples of the Ernesto and Japonês mineralized bodies. The results of the technological characterization used to outline the design criteria for the Feasibility Study, as conducted by Ausenco Limited in 2010, the summary of which is shown in Table 14-1.

The selected flowchart represented a typical application of the medium-scale gold beneficiation and extraction industry, with the leaching of the entire ROM - Run of Mine, after the comminution stage. In the flowchart there are two extraction phases. The first begins with a gravimetric concentration installed in the milling circuit, followed by intensive leaching in a reactor, using sodium cyanide and auxiliary oxidizing chemical agents. In the second extraction phase, the milling product is subjected to classical cyanide leaching in stirred tanks, pursuant to the configuration called CIL – Carbon in Leach. In this process, the gold leached by sodium cyanide is adsorbed by activated carbon.

Opportunities for performance, metallurgical, or cost improvements are under constant evaluation in the EPP operation, such as gains in milling scale, increased gravimetric concentration capacity, in addition to selective disposal of pebbles from the SAG mill.

The EPP ore treatment flowchart consists of a primary crushing step, followed by a semi-autogenous milling step – SAG in a closed circuit with cyclones, in order to obtain a product with P80 of 0.106 mm. The milling circuit includes a gold gravimetric concentration step, formed by a scalping sieving of the underflow of cyclones, the passing fraction of which is routed to the gravimetric concentration in centrifuges, followed by intensive reactor leaching for processing the gravimetric concentrate. The overflow of cyclones, which is the product of the milling, then goes to a step of cleaning harmful, organic substances, in a linear sieve, with the undersize being directed to the step of pulp thickening. The thickened pulp is then leached with sodium cyanide (cyanidation), in a circuit with seven tanks in series and cascade arrangement, with a residence time of currently 16 hours, compared to 24 hours of the original design. This reduction is a consequence of the increase in the feed rate of the EPP plant. In this circuit, the addition of activated carbon is conducted, which runs through the circuit in countercurrent to adsorb the leached gold into the pulp. The charcoal charged with gold is subjected to elution, electrolysis, and casting, the latter resulting in the "bullion". The waste from the hydrometallurgical process is treated to reduce the residual cyanide, pursuant to the applicable environmental laws, to then be deposited in a dam.

Table 14-1: Summary of Project Criteria - Ausenco FS 2010

Criterion Unity	Unit	Source
Plant capacity - Ernesto (Mt/y)	1	Yamana
Operating time – Ernesto (days)	360	Yamana
Crushing (%)	75-90	Ausenco proposed value
Grinding (%)	90	Client-agreed value
CIL and elution( )%	90	Client-agreed value
Au production capacity (oz/y)	100 000	Yamana
Ore gold grade		
Pau-a-Pique (g/t)	4-6	Yamana
Ernesto (g/t)	1-5	Yamana
Overall gold recovery (%)	95	Yamana
ROM Storage Capacity – Ernesto		
Mass		
ROM Pad (t)	6240	Client-agreed value
Emergency stockpile (t)	2080	Client-agreed value
Hours of mill feed		
ROM Pad (h)	48	Client-agreed value
Emergency stockpile (h)	16	Client-agreed value

In the Feasibility Study, the rated capacity of EPP industrial plant was defined based on the following three main types of ore: feldspathic metarenite, metaconglomerate, and quartz veins, as found in the pits planned for the Ernesto and Japonês mining area. The advance of the operation and the consequent opening of new pits, as well as the use of the Pau-a-Pique underground mine, resulted in the inclusion of the sericite shale and mylonite typologies, with two main consequences in the industrial process. The first was a lower recovery of gold in the gravimetric concentration step, compared to metarenite and metaconglomerate, while the lower tenacity resulted in greater milling capacity installed in the industrial plant. This increase in the feed rate of the plant implied adaptations in the previously existing industrial circuits of gravimetric concentration and hydrometallurgical extraction.

The current flowchart of the EPP ore industrial processing plant is shown in Figure 14-1. Details of each of the processing steps are described in the following sections.

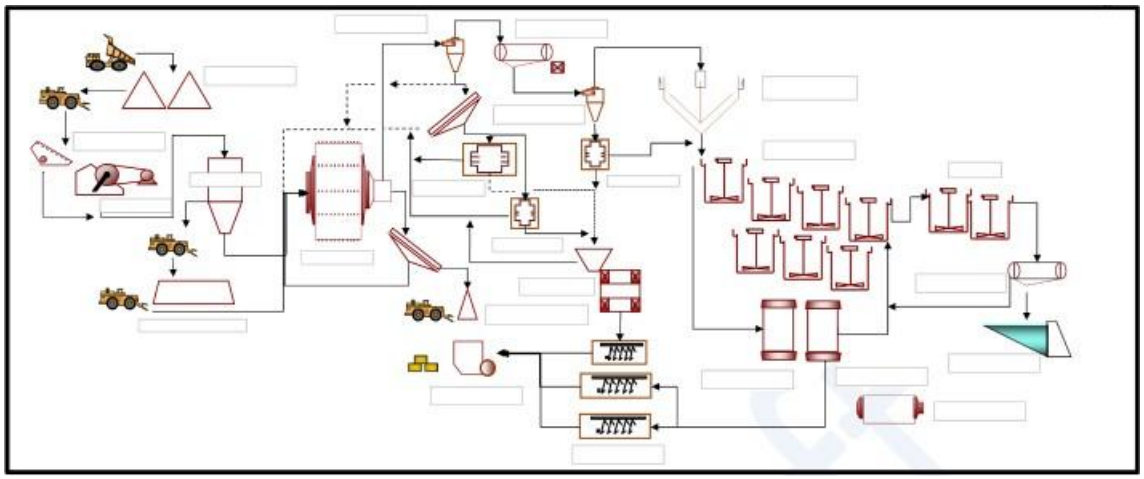


Figure 14-1: Process Flowchart of EPP Industrial Plant

14.2 Crushing

The loaded trucks from different areas of the mine unload the ore in several piles in the crushing square, thus allowing the blending of the typologies and control of the fed contents. The stacked ore is taken up by a loader that feeds the hopper of the vibratory grizzly, the latter with an average opening of 100 mm. The fraction retained in the grizzly feeds a 106-mm opening jaw crusher into the closed position. The maximum size of the material fed into the crusher is about 0.5 m. The crusher product, together with the passing fraction on the grizzly is driven by belt conveyors to the milling silo. The conveyor system is furnished with a scrap extractor and magnetic detector. The main equipment of the crushing circuit and its specifications are described in Table 14-2.

Table 14-2: Main Equipment of Crushing Circuit

Area	Equipment	Component	Specification
Crushing	Vibratory Grizzly	Motor	Motor - WEG 15 CV
	C 110 Metso Crusher	Motor	Motor - 200 HP – 1190 RPM – 315S/M 4P WEG
	Metso Mac-Belt CV 01	Belt	36”
		Motor	Nord 20 HP 1775 RPM – 160 L / 4 – 4P
		Reducer	Nord
	CV 02 ThecnoWood Mac-Belt	Belt	24’’
		Motor	SEW 40 HP 1800 RPM – 4P
		Reducer	SEW
	Buffer Hopper	FE 05 Feeder Motor	WEG 7.5 HP 1740 RPM – 112 M – 4P

The operating criterion adopted in the primary crushing of EPP is to keep the feed hopper filled with material taken up by the loader, to keep the milling silo also full. Excess crushed material is stacked in an emergency stack and resumed as needed.

14.3 Milling

The new feed rate of the milling is modulated by the speed variation of the feeders installed under the silo. A scale installed on the mill feed belt conveyor monitors this operation. The discharge from the SAG mill is sent to the trommel of the mill itself, thus resulting in the retained fraction (pebbles), which returns to the mill feed, while the passing fraction flows to a pulp box, from which it is pumped to the cyclone battery, the overflow of which constitutes the milling product, while part of the underflow is sent to scalping sieving, and the passing fraction of it flows to the centrifugal concentrators. The remaining fraction of the underflow of the cyclones, as well as the fraction retained in the scalping sieving and tailings of the centrifugal concentrators return to the mill feed, as well as the tailings from the intensive leaching of the centrifuge concentrate. The milling operation has a system for real-time control and adjustment of operating parameters called Smart Control LEAF, developed by iSystems. Figure 14-2 shows the main screen of the supervisory control system of the milling circuit of the EPP industrial plant.

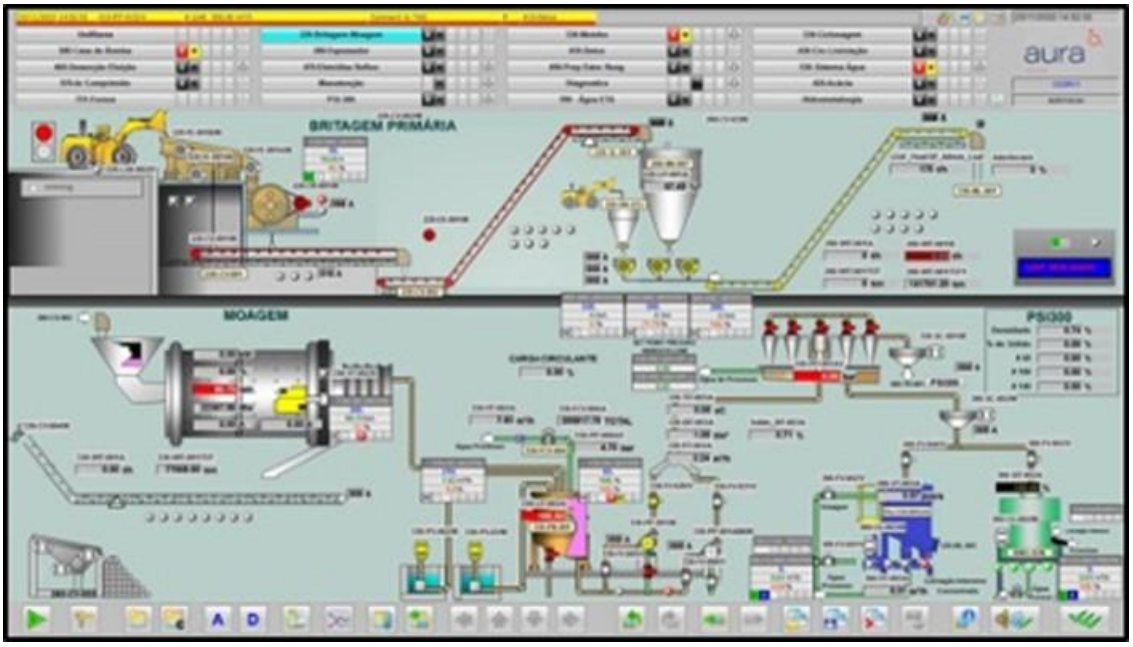


Figure 14-2: Crushing and Milling Circuit Control Supervisory Screen

The main design and operation characteristics of the SAG mill and the EPP plant cyclones are described in Table 14-3, while Table 14-4 shows the main sets of equipment and devices installed in the same circuit.

Table 14-3: Main Design and Operation Characteristics of the Milling Circuit

SAG Mill	
Polysius Mill	SAG/19' x 20'
Inside Liner Diameter (m)	5.42
Inside Liner Length (m)	6.19
Rotation (percentage of critical speed)	70.5
Grinding Media Charge (percentage of mill internal volume)	17.8

SAG Mill	
Diameter of Spare Grinding Media	50%-5" and 50%-4"
Discharge Type	Grizzly
Size of Grizzly Openings (mm)	25
Total Grizzly Opened Area (%)	9.2
Size of Pebble Ports (mm)	80
Area of pebble ports over total opening area (%)	27.1
Installed Power (kW)	3000
Experimental Demanded Power (kW)	2937
Calculated Demanded Power (kW)	2436
Cyclone Nest	
Manufacturer/Model	Krebs/GMAX20
Rated Diameter (inch)	20
Equivalent Inlet Diameter - (mm)	203
Vortex Diameter (mm)	239
Apex Diameter (mm)	121
Conical Section Angle (degrees)	20
Number of Installed Hydrocyclones	5
Number of Operating Hydrocyclones	4
Operation Pressure (kPa)	55

Table 14-4: Main Sets of Equipment and Devices of the Milling Circuit

Area	Equipment	Component	Specification
Milling	Silo Capacity 6 h – 596 m³	FE 02 Vibratory Feeder Motor	WEG 7.5 HP 1740 RPM – 112 M 4P
		FE 03 Vibratory Feeder Motor	WEG 7.5 HP 1740 RPM – 112 M 4P
	CV 03 ThecnoWood Mac-Belt	Belt	24“
		Motor	WEG 25 HP – 1770 RPM – 4P
		Reducer	
		Drive Drum	
		Diverting Drum 1	
		Diverting Drum 2	
		Tensioning Drum	
	19’ x 20’ SAG Mill	Main Motor	Siemens 4,000 HP – 1194 RPM – 6.6 kV
		Main Coupling	
		Main Reducer	Renk Zannini
		Main Crown (Pinion)	
		Auxiliary Motor Drive	
		Reducer Auxiliary Drive	
		Lubrication Hydraulic Pump	
		Hyd Lub 20 HP 1770 RPM Pump Motor	
		Hydraulic Pump Lifting	
		Flow Divider	
		Hyd Lift 10 HP 1150 RPM Pump Motor	
		Heat Exchanger	
	3 m³ Mill Housing	PP 0001 Motor	600 HP Weg Motor
		PP 0001 Pump	250ST-MCU Warman Weir Pump

Area	Equipment	Component	Specification
		PP 0001 R Motor	450 HP Weg Motor
		PP 0001R Pump	250ST-MCU Warman WEIR PUMP
	Primary Cyclones	Nest with 5 GMAX-20 Cyclones	GMAX-20 FLSmidth Cyclones

Figure 14-3 shows the process flowchart and a typical mass balance of the EPP milling circuit as developed by consulting firm MinPro Solutions. The balance does not include centrifugal concentrator flows, as they are internal and recirculation flows.

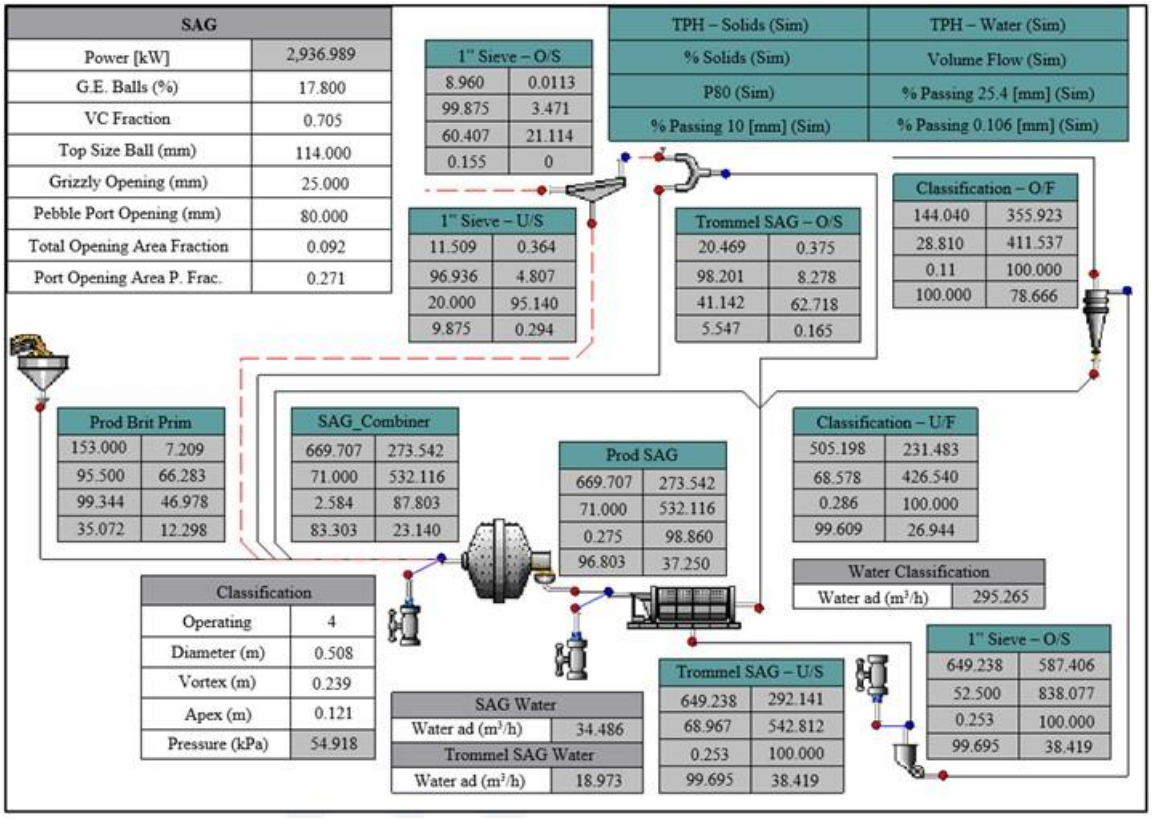


Figure 14-3: Flowchart of EPP Milling Circuit with Typical Operation Mass Balance

14.4 Pre-leaching Thickening

The milling product with rated P_{80} of 0.106 mm is directed to a linear sieve for removal of harmful elements to leaching, such as organic material and possible coarse particles. Owing to the increase in the capacity of the milling circuit in the treatment of less tenacious typologies – shale sericite and mylonite, the pulp densification step started to include a cyclone prior to thickening. Thus, the passing fraction in the protective sieving started to be pumped to a new cyclone, the overflow of which then goes to the existing vertical thickener, while the underflow feeds a new stage of concentration in centrifuges, called scavenger. The thickener underflow along with the scavenger centrifuge tailings form a pulp with 50% solids by weight which is then routed to leaching.

The main equipment that make up EPP pulp densification circuit, as well as the respective specifications are shown in Table 14-5.

Table 14-5: EPP Densification Circuit Main Equipment

Area	Equipment	Component	Specification
Thickening	Cyclone Pump 2	PP-002 WEIR Pump	AH-8/6 Warman Weir Pump
		PP-002 300 HP 1770 RPM Pump Motor	
	SC-001 Linear Sieve	Linear Sieve Motor	
		Linear Sieve Reducer	KH87/T DRE132S4/RS REDUCER
	12-m Diameter Thickener	Altaflo Westech 12-m Diam. Thickener	
		PP-004 Pump Motor	100 HP 1760 RPM
		PP-004 WEIR Pump	AH-8/6 Warman WEIR Pump
		PP-04R Pump Motor	75 HP 1760 RPM
		METSO PP-04R Pump	METSO HM-150 Pump

14.5 Gravimetric Concentration

The EPP gold gravimetric concentration circuit was installed according to a classical configuration. In this circuit, 25% of the cyclone underflow is diverted to a scalping sieve with an opening of 3 mm, installed to remove coarse particles and organic contamination. While the oversize of this sieving returns to the mill, the undersize goes to feed the centrifugal concentrators, the tailings of which then return to the mill feed and the concentrates feed the fluidized bed cone of an intensive leaching reactor, "Intensive Cyanidation Unity" (ICU). Intensive leaching is carried out in batches and the obtained rich liquor is directed to the electrolysis step, where the concentrate generated in the cathodes, after filtration, is melted to form the bullion.

The original centrifuge considered in the EPP design had a capacity of up to 150 t/h of solids, while the reactor had a capacity of about 1.5 t of gravity concentrate. The intensive leaching residence time considered was 16 hours. Owing to the increase in the milling feed rate provided by the processing of ores such as shale sericite and mylonite, two additional centrifugal concentrators were installed. The larger equipment, with three times the capacity of the original, was installed in parallel to the then existing centrifuge, to treat the milling's circulating load. A smaller centrifuge, called scavenger, was installed to process the secondary cyclone underflow.

To adapt the leaching capacity of the reactor to the new conditions, the leaching time of ICU was reduced from 16 hours to 6 hours. The specifications and characteristics of the main equipment of gravimetry and intensive leaching steps are shown in Table 14-6.

Table 14-6: Main Equipment of Gravimetry and Intensive Leaching Circuit

Area	Equipment	Component	Specification
Gravimetry	SC-002 Vibrating Sieve	25 HP 1160 RPM Motor	
	Falcon SB-750B Concentrator	Falcon SB-750B 12.5 HP 1760 RPM Concentrator Motor	12.5 HP 1760 RPM
	Falcon SB-5200 Concentrator	Falcon SB-5200 100 HP Concentrator Motor	100 HP 1760
	KNELSON XD-30 Concentrator	KNELSON XD-30 Concentrator Motor	15 HP 1760 RPM
	330-PP-002	Pump motor reduces production	Weg motor, 300 HP, 1790 RPM
	330-CV-004	Conveyor Belt Motor	SE Motor, 7.5 HP, 1750 RPM
	Acácia CS1000	420-AG-001	Weg Motor, 1 HP, 1710 RPM

14.6 Leaching in Tanks (CIL)

The EPP carbon in leach (CIL) circuit consists of seven tanks, each with a capacity of 567 m^3. These tanks have mechanical stirring in order to produce internal pumping and pulp revolutions to provide better contact with the reagents – sodium cyanide and oxygen. In the first tank, the cyanide concentration is maintained around 130 mg/l. After purification, oxygen is injected through a radial system of rods, called Slamjet. Purification, or increase in oxygen concentration, is conducted to increase the reaction kinetics, thus compensating for the higher feed rates of the plant and, consequently, decrease the residence time of the pulp in the existing tanks. All tanks have an activated carbon concentration between 10 kg/m^3 and 30 kg/m^3. The activated carbon, responsible for the adsorption of complexed gold, is retained in the tanks by means of inter-stage sieves, of the rotating cage scraper type. In this process, the movement of charcoal is prevented in the direction of the pulp current and moved, in countercurrent, with the aid of transfer pumps, for its enrichment, to the first tank of the circuit. The enriched charcoal is separated from the pulp by a vibrating sieve and sent to the final concentration operations, which are elution, electrolysis, and smelting. The complexation of gold for extraction from the solid phase to the liquid phase is indicated in the following equation:

$$2\ Au(s) + 4\ CN^{-}(aq) + 1/2\ O_2(g) + 2\ H+(aq) = 2\ Au(CN)^{-2}(aq) + H_2O(l) \quad (14\text{-}1)$$

Table 14-7 presents the characteristics of the main equipment of EPP CIL cyanidation circuit.

Table 14-7: Characteristics of Main Equipment of Leaching Circuit in EPP Tanks

Area	Equipment	Component	Specification
Cil	Leach Tanks	7 tanks	Capacity 567 m³
	PS-010 Pump	Pump Motor of Transfer of Coal Pulp 430-SC-003	WEH 25 HP Motor
		Vertical Pump of Transfer of Coal Pulp 430-SC-003	Vertical Pump Model 3-14VNR WEIR
	PS-011 Pump	Pump Motor of Transfer of Pulp	WEH 25 HP Motor
		Vertical Pump of Transfer of Coal Pulp For Tanks	Vertical Pump Model 3-14VNR WEIR
	PS-12,13,14,15,18 Pumps	Pump Motor of Transfer of Pulp	WEG 20 HP Motor
		Vertical Pump of Transfer of Coal Pulp for Tanks	Vertical Pump Model 3-14VNR WEIR
	PS-017 Pump	Vertical Pump Motor - Leach Drainage	50 HP 1760 RPM WEG Motor
		Vertical Pump- CIL Leach Drain	Vertical Pump Model SP-100 Series WH11-10754 WEIR
	PP-068 Pump	CIL/DETOX Pulp Transfer Pump Motor	75 HP 1760 RPM is not Weg
		CIL/DETOX Pulp Transfer Pump	AH-6/4 WEIR Centrifugal Pump
	PP-68R Pump	CIL/DETOX Pulp Transfer Pump Motor	WEG Motor
		CIL/DETOX Pulp Transfer Pump	AH-6/4WEIR Centrifugal Pump
	CIL 3;5;7;9 Tank Stirrers	(3;5;7;9) Stirrer Motor	WEG 50 HP Motor
		(3;5;7;9) Stirrer Reducer	Reducer Model 98Q50 SPX FLOW TECHNOLOGY

Area	Equipment	Component	Specification
	CIL 4;6;8 Tank Stirrers	(4;6;8) Stirrer Motor	WEG 50 HP Motor
		(4;6;8) Stirrer Reducer	X3FS140/HU/B SEW-EURODRIVE Reducer
	Dewatering Sieve of Charged Coal SC-003	Dewatering Sieve of Coal Motors	
		Counterweights (Vibrator Set)	
	6 m³ Interstage Sieves SC-004 Coal Retention	6 m³ Interstage Sieves Motor	12.5 HP 1760 RPM
		6 m³ Interstage Sieves Reducer	
	4.25 m³ Interstage Sieves SC-05.06.07.08.09.10 Coal Retention	4.25 m³ Interstage Sieves Motor	SEW EURODRIVE, 5 HP, 1775 RPM Three-Phase Electric Motor
		4.25 m³ Interstage Sieves Reducer	Parallel Shaft Reducer Model FHF-87 SEW EURODRIVE

14.7 Elution

The charcoal removed from the leach tanks in an amount of about 4 t presents between 1,000 to 1,500 g/t of gold. This charged carbon is directed to an acid wash step, performed on a fluidized bed column with a solution of about 3% w/v of hydrochloric acid. After acid washing and neutralization, the charcoal goes to another column where the gold is extracted from the charcoal by the Anglo American Research Laboratories (AARL) process. In this AARL circuit, a solution with a high concentration of sodium cyanide and caustic soda is injected into the column, which remains in contact with the charcoal for about 30 minutes. After this period, the elution itself begins, by injecting into the water column heated to 130 ºC to wash the desorbed gold. The solution obtained is stored in a rich solution tank to proceed to the electrolysis phase. At the end of the process, the charcoal is washed, cooled, and then returned to the leach tanks to begin the countercurrent enrichment process. Two batches of elution are performed daily. EPP has a thermal regeneration process of the eluted charcoal, but it is deactivated. The main characteristics of the elution circuit equipment are described in Table 14-8.

Table 14-8: Characteristics of Main Equipment of Elution Circuit

Equipment	Component	Specification
1 acid wash column	stainless steel	12 m³
2 elution columns	carbon steel	12 m³
rich solution tank		60 m³
hydrochloric acid tank		8 m³
caustic soda and cyanide tank		8 m³
boiler water tank		50 m³
poor solution tank		60 m³
boiler heating system	AQ 150 PSIG 150 ºC generator	
heated solution storage tank		30 m³
460-PP-022	Cyanide recirculation pump	WEG 10 HP, 3515 RPM Motor
460-PP-022 R	Cyanide recirculation pump	WEG 10 HP, 3515 RPM Motor
461-PP-008	Pump to send water to TK 52	WEG 20 HP 1760 RPM Motor

14.8 Electrolysis and Smelting

In EPP, the rich solution electrolysis step is conducted in a circuit with three electrolytic cells, which operate in parallel, so that there are equitable retention times in each cell. The electrolytic cell vats have eight cathodes and nine anodes. The volume of each cell is 1,300 L, being equipped with rectifiers, which provide voltage from 3.8 V to 4.5 V in direct current. Each batch of the reduction process lasts six hours and, at the end, the cathodes are removed and washed. The collected sludge is filtered, and the cake obtained mixed with the fluxes – sodium nitrate (1:0.6), borax (1:0.4), sodium carbonate (1:0.3), and silica (1:0.3). This mixture is transferred to a graphite crucible and then smelted in a kiln at a temperature of 1250 °C provided by liquefied petroleum gas (LPG). After complete smelting, the flux is poured into forms, where the slag is separated from the metal, the latter forming the bullion.

14.9 Cyanide Neutralization and Tailing Pumping Circuit

The waste from the leaching and adsorption circuit flows by gravity from the last tank of the CIL circuit to the cyanide neutralization circuit, also called Detox.

The EPP Detox circuit in the original Design consisted of two tanks with a volume of 110 m^3 each. Two reserve tanks of the same capacity were subsequently installed, in order to maintain the pulp residence time for increases in feed rate.

In this process, the cyanide residue present in the leach tailings is treated using the SO_2/Air method, also called Inco process. Free cyanide (CNFree) and dissociable by weak acid action (CNwad - Weak Acidic Dissociable), are oxidized to cyanate (OCN-) through sulphur dioxide (SO_2) and air. The tailings of EPP CIL circuit that fed the detox circuit contain values close to 100 mg/L of CNwad. The object of the treatment is the oxidation of CNwad to cyanate (OCN-) until residual concentrations of CNwad lower than 2 mg/L. Such residual concentration has as reference the supernatant of the dam lake and subsequently in the percolate of the dam and

monitoring wells, according to practices defined by the company, environmental laws, and the International Cyanide Code, to which Aura is a signatory and certified.

The reagents required for the neutralization of cyanide are as follows: sodium metabisulphite (which, solubilized, is a source of SO_2), copper sulphate pentahydrate (source of copper ions – reaction catalyst), and hydrated lime (lime milk) to regulate the pH and Eh required for the reaction. A large amount of air (O_2 source) is injected into the tanks to facilitate the reaction. The main reactions involved are listed below.

Dissolution $Na_2S_2O_5 + H_2O \rightarrow 2\ NaHSO_3$ (17.2)

Metabisulphite $2\ NaHSO3 \rightarrow 2\ NaOH + 2\ SO_2$ (17.3)

Neutralization $CN + SO_2 + O_2 + H_2O \rightarrow OCN + H_2SO_4$ (17.4)

The pulp that feeds the neutralization circuit is directed to a safety screen to retain any charcoal charged with gold that may have passed through the interstage sieves. The charcoal recovered at this point returns to the circuit by pumps or manually. The pulp passing through the safety screen is pumped to the dam for tailings deposition.

The main characteristics of the Detox circuit equipment are described in Table 14-9.

Table 14-9: Characteristics of Main Equipment of Detox Circuit

Area	Equipment	Component	Specification
Detox	Detox Tanks		4 110 m³ Tanks
	SC-0116 m LINEAR SIEVE	Linear Sieve Motor	7.5 HP
	Linear Sieve Reducer	KH87/T DRE132S4/RS REDUCER	
	tk 410-tk17, ag-009 Stirrer Motor	Sew 15 kw 1777 rpm Electric Motor	Sew 15 kw 1777 rpm Electric Motor
	tk 410-tk37, ag-010 Stirrer Motor	Sew 15 kw 1777 rpm Electric Motor	Sew 15 kw 1777 rpm Electric Motor
	tk 410-tk43, ag-018 Stirrer Motor	Sew 15 kw 1777 rpm Electric Motor	Sew 15 kw 1777 rpm Electric Motor
	tk 410-tk44, ag-019 Stirrer Motor	Sew 15 kw 1777 rpm Electric Motor	
	PP-18 Dam Tail. Motor	150 hp 1790 rpm	175 hp 1790 rpm Electric Motor
	PP-18r Dam Tail. Motor	175 hp 1790 rpm	175 hp 1790 rpm Electric Motor

14.10 Reagent Storage and Preparation System

The main reagents and inputs used in the EPP industrial processing and hydrometallurgy plant are shown in Table 14-10.

Table 14-10: Main Reagents and Inputs Used in EPP Plant

Main Reagents/Inputs	Application	GPT Consumption
Sodium Cyanide	CIL, ICU, Elution	394
Hydrated Lime	CIL/Detox	775
Sodium Hydroxide	Cyanide Preparation, ICU, Elution, Electrolysis	211
Hydrochloric Acid	Acid Washing	30
Sodium Metabisulphite	Detox	128
Copper Sulphate	Detox	1.4
Flocculant	Thickening	27
Leach Aid	ICU	1.4
Grinding Media	Milling	982
Active Carbon	Milling	96

The reagents used in EPP are received and stored in facilities designed and built in accordance with the respective physicochemical characteristics. The storage and preparation tanks of these reagents are separated according to chemical incompatibilities and inside containment basins. All reagent solution preparation and storage tanks have level indicators, alarms, and well pumps within the respective containment basins. Safety devices, such as emergency showers and eye washers, are available, as well as wind direction monitoring system. The handling and preparation of reagents occurs in accordance with operational instructions considering occupational safety, environmental, and chemical safety data sheet (MSDS) aspects.

14.10.1 Sodium Cyanide (NaCN)

The cyanidation process for hydrometallurgical extraction of gold contained in ores has been employed since 1898. The cyanide process is based on the ability of cyanide to form a complex with gold, extracting it from the solid phase.

The cyanide used in EPP is received in the form of briquettes and/or powder with purity of 98%. This reagent is supplied in one-ton big bags as packaged within cartons. Upon receipt, these boxes/bags are stored in a warehouse, following criteria and guidelines established by the International Cyanide Management Institute (ICMI).

The storage of cyanide in EPP is performed in its own warehouse and with controlled access. The boxes, with the big bags, are taken to the preparation area, according to the demand of the reagent by the operation. For the preparation, which is conducted daily, the big bag containing the reagent is hoisted to a tear bag, above the preparation tank that has a stirring system. Sodium cyanide solutions are prepared from a basic solution formed with high pH sodium hydroxide/buffer, considering safety protocols, in order to prevent the formation of hydrocyanic gas (HCN). Fixed and mobile sensors monitor any formation of this gas with occupational protection.

The solution prepared at a concentration of 10% w/w is transferred from the preparation tank to the dosing tank, from which it is pumped to the consuming points: leaching circuit, gravimetry, and elution. The entire operation of handling, preparation, and storage of the cyanide solution is

carried out in exclusive warehouses and containment basins. The company has standards and rules for disposal of boxes and bags in accordance with environmental legislation and the International Cyanide Code, by which it is certified.

14.10.2 Hydrated Lime (Calcium Hydroxide - $Ca(OH)_2$)

Hydrated lime, calcium hydroxide $Ca(OH)_2$, is applied to the leach tanks to ensure a basic pH buffer environment (pH > 10.5). With the pH at this level, the transformation of ionic cyanide (CN^-) into hydrocyanic gas (HCN) is avoided, which has high toxicity and high occupational risk. Lime milk, calcium hydroxide solution, is also used in the Detox circuit for pH correction due to the formation of the sulphate ion (SO_4^{-2}) during the cyanide neutralization process, using the metabisulphite that is a source of SO_2.

The hydrated lime is received in bulk and transferred pneumatically to a silo. From this silo the lime is fed to the lime milk preparation tank for dosing and application at a concentration of 12.5% w/w.

14.10.3 Sodium Hydroxide (NaOH)

Sodium hydroxide (NaOH) is used for pH adjustments in the preparation of sodium cyanide solution and in the elution and electrolysis processes.

This reagent is received in liquid form in 50% w/w concentration solution in Intermediate Bulk Container (IBC) with a capacity of 1000 L. IBCs are received and stored in a suitable area. In the preparation step, the contents of IBCs are transferred to a tank for dilution with water to the concentration of 25% w/w. The solution thus prepared is applied in the elution, electrolysis, and intensive leach reactor.

14.10.4 Hydrochloric Acid (HCl)

Hydrochloric acid is used in the acid washing process of charcoal, which precedes the elution process. In this wash, calcium (Ca) ions are mainly removed from the activated carbon.

Hydrochloric acid is received in liquid form, in 33% w/w solution and density of 1.16 g/cm^3. This solution is received in the form of IBC which is stored in a suitable area within a containment basin. According to operational demand and consumption need, IBCs are transported to the preparation tank, where the reagent is diluted to a concentration of 25% w/w. From this preparation tank, the solution is directed to the acid washing solution tank, where it is diluted to a concentration of 3% w/w, before its application.

14.10.5 Sodium Metabisulphite ($Na_2S_2O_5$)

Sodium metabisulphite - NaMBT or SMBS ($Na_2S_2O_5$) is used in the treatment/slump of residual cyanide present in the final tailings, called Inco method. This reagent is a source of SO_2 that promotes the oxidation of cyanide (CN^-) to cyanate $(OCN)^-$.

Sodium metabisulphite is received in solid form in crystalline granules/powder in bags weighing one ton. This reagent, with a purity of around 97.5%, is stored in a warehouse, with a containment basin and considering aspects of chemical incompatibility. According to production needs, metabisulphite bags are transferred to the preparation area where the dissolution of this reagent occurs up to a concentration of 3.7% w/w. This dissolution occurs in a stirred tank using water. After the preparation step, the metabisulphite solution is transferred to a solution storage tank, from which it is pumped to the cyanide slump circuit - Detox.

14.10.6 Copper Sulphate Pentahydrate ($CuSO_4.5H_2O$)

The copper sulphate pentahydrate ($CuSO_4.5H_2O$) used in the EPP operation is supplied in bluish colored crystals contained in big bags (500 kg). This reagent is added to provide soluble copper to the Detox circuit, catalyst in the residual cyanide slump reactions. Copper sulphate, with a purity of 99.5%, is received and stored in a warehouse, in its own basin.

According to the daily needs, this reagent is transferred to the preparation area, in which it is solubilized with water to a concentration of 5% w/w, in a stirred tank. The resulting solution is transferred to a dosing tank, from which it is pumped into the Detox circuit.

14.10.7 Flocculant

The flocculant is an auxiliary reagent to the settling process that occurs in the thickener. The flocculant is received in bulk powder and stored. On demand, it is transferred to a preparation station, where it is diluted up to 0.025 % w/w. From this station, the diluted flocculant is stored and transferred to the thickener feed well.

14.10.8 Fluxes

In the fusion process for forming the bullion, reagents called fluxes are used. The reagents used for fusion of the cathode concentrate cake, resulting from the process in the electrolytic cells, are sodium nitrate, borax, carbonate, and silica. These inputs are received in plastic packaging from 25 kg to 50 kg and stored appropriately in the warehouse or in containers, inside the foundry. The estimated proportions of these reagents in relation to the cake to be smelted are: Sodium nitrate (1:0.6), Borax (1:0.4), Carbonate (1:0.3), and Silica (1:0.3).

14.10.9 Leach Aid

Leach Aid is the name of a mixture of oxidizing agents used in the intensive leaching of gravimetric concentrate. This mixture is supplied in 10l containers and is added directly and manually in the reactor solution tank, according to the dosage to be practiced.

14.10.10 Activated Carbon

The activated carbon used in the gold adsorption process comes from the processing of coconut shell. This input, with a size of 6 x 16 mesh Tyler, has high porosity and is supplied in big bags, which are stored in suitable warehouses considering their flammability characteristic, and later

transferred to the leaching system. In EPP, there is no thermal regeneration system. However, charcoal treatment consists of acid washing to eliminate chemical compounds with calcium that clog the pores of the charcoal.

14.10.11 Grinding Media - Steel Ball

The EPP SAG mill holds a filling of up to 20% of its volume with steel balls. Current operation includes replacement of 4” or 5” diameter balls. This input is supplied in big bags of 1000 kg capacity that are stored in the yard, until their addition in the mill.

14.10.12 Reagent Tanks

The volumetric capacities of the reagent tanks in the solution preparation and storage steps for distribution and dosing are listed in Table 14-11.

Table 14-11: Capacities of Reagent Preparation and Storage Tanks

Reagent Preparation Area		
FLOCCULANT DISTRIBUTION TANK	13	m³
CYANIDE SOLUTION PREPARATION TANK	30	m³
CYANIDE SOLUTION DISTRIBUTION TANK	30	m³
CAUSTIC SODA PREPARATION AND DISTRIBUTION TANK	12	m³
HYDROCHLORIDE SOLUTION PREPARATION AND DISTRIBUTION TANK	18	m³
SODIUM METABISULPHITE SOLUTION PREPARATION TANK	10	m³
SODIUM METABISULPHITE SOLUTION DISTRIBUTION TANK	10	m³
COPPER SULPHATE SOLUTION PREPARATION TANK	5	m³
COPPER SULPHATE SOLUTION DISTRIBUTION TANK	5	m³
LIME MILK PREPARATION TANK	15	m³
LIME MILK DISTRIBUTION TANK	15	m³

14.11 Utilities

14.11.1 Instrument Air and Process Air

The air system at the EPP Plant has two dedicated compressors and dryers for instrument air generation. There are also three process air compressors, one of which is a backup. In addition to these compressors, EPP has a compressor to supply air to the oxygen purification system according to a Pressure Swing Adsorption (PSA) system applied in CIL. The main equipment of the air system is shown in Table 14-12.

Table 14-12: Characteristics of Main Air System Equipment

Equipment	Component	Specification
01/01R Instrumentation Compressor	CPD100/8	Chicago
570 -CP-06 Process Air Compressor	GA 160	Atlas Copco
570-CP-07/07R Process Air Compressor	GA 160	Atlas Copco
575- CP-05/05R Process Air Compressor - compressors that generate oxygen	GA75	Atlas Copco
3 Oxygen Purification Tanks	Danas Tank	PSA Atlas Copco

Equipment	Component	Specification
570-DR-001 Instrument Air Dryer		
575-DR-002 Oxygen Purifier Air Dryer		FX19 (E17) Atlas Copco

14.11.2 Water Supply

Apoena Mining adopts a comprehensive and sustainable approach to water management, encompassing the intake, usage, recirculation, and discharge of water in full compliance with environmental regulations. Water is sourced from both surface water (Lavrinha Stream) and groundwater (PT Dinex), under authorizations aligned with Ordinance No. 779/2017 and Ordinance No. 768/2021, respectively. All abstraction activities are licensed by SEMA-MT, the state environmental authority of Mato Grosso.

Raw water required for ore processing is collected from the Lavrinha Stream via a licensed pipeline system (Process No. 326795/2016), located approximately 3 km from the operational site. The effective consumption rate is approximately 0.5 m^3 per ton of processed ore. Due to process requirements, the water must exhibit low salinity, low conductivity, and minimal particulate content. It is used across several critical operations in the EPP circuit, including:

- Pump and mill sealing
- Cooling systems
- Reagent preparation
- Charcoal acid washing and elution
- Dust suppression
- Firefighting systems
- Eye wash stations
- Potable water treatment

Most of the water utilized in the plant is recirculated from internal sources such as clarified water from the thickener and dam supernatant, thereby significantly reducing the need for fresh water intake and enhancing operational sustainability. The plant's water balance and details on tailings dam operations are documented in relevant infrastructure and environmental sections of this report.

Domestic water use is supported by groundwater from PT Dinex and is strictly limited to administrative and partner company needs. Water consumption is monitored through hydrometers and logged in an internal control system to ensure adherence to licensed volumes and operational efficiency.

For potable water, quality is managed according to Ordinance No. 888/2021. In addition to in-house treatment, mineral water is provided to employees and contractors, sourced from Águas Lebrinha in Chapada dos Guimarães, and distributed in 20-liter and 500 ml formats.

Wastewater is managed through two separate treatment systems:

- A licensed Wastewater Treatment Plant (WWTP, Process No. 4377/2024) for domestic effluents.

- An industrial effluent system integrated with the Tailings Storage Facility (TSF), operated in compliance with CONAMA Resolution No. 430, which regulates discharge standards.

All water intake, usage, and discharge data are formally reported to the environmental authorities, fulfilling legal and environmental obligations. Apoena Mining's water management practices reflect a strong commitment to operational responsibility, environmental stewardship, and regulatory compliance.

14.12 Electricity Facilities

The EPP facilities are supplied with electricity by a 34 kV transmission line installed by Grupo Energisa. The primary transformation reduces the voltage to 13.8 kV and, subsequently, leads to a further reduction to the voltage for milling at 6.6 kV. Subsequently, two CCM and two busbars complete the final reduction up to 440 V. The main power elements and equipment of this system are described in Table 14-13.

Specific energy consumption at the plant ranges between 0.024 and 0.032 MWh per tonne of ore processed, varying according to the abrasiveness of the ore. The estimated total annual energy consumption is approximately 45,600 MWh, reflecting the plant's continuous operations and energy-efficient practices.

Table 14-13: Main Elements of Electric Power System

Area	Equipment	Component	Specification
Substation	610-DJ-002	34.5 kV Transformer Circuit Breaker (2000 A)	N/A
	310-XF-001	12.5 MVA Transformer (34.5 kV to 13.8 kV)	N/A
	610-RE-001	Current Transformer	N/A
	Cooling System		N/A
	General Circuit Breaker		N/A
	Mill Drive Inverter Circuit Breaker		N/A
	613-XF-001	CCM First Transformer Circuit Breaker	N/A
	613-XF-002	CCM First Transformer Circuit Breaker	N/A
	Circuit breaker (water collection, dam, reception, office)		N/A
	Circuit breaker (chemical laboratory)		N/A
CCM	13.8 kV to 480 V Transformer	2500 KVA Transformer	N/A
	13.8 kV to 480 V Transformer	2500 KVA Transformer	N/A
	480 to 380 and 220 V Transformer	225 kKVA Dry Transformer	N/A
	Cooling System		N/A
	613-QD-001	Weg ABW 40FS 3 4000 A Circuit Breaker	N/A
	613-QD-002	Weg ABW 40FS 3 4000 A Circuit Breaker	N/A
	400-MC-001	Weg ABW 20E S3 2000 A Circuit Breaker	N/A
	Capacitors Bank	Weg ABW 20E S3 2000 A Circuit Breaker	N/A
	CCM Utilities	Weg ABW 16DN3 1600 A Circuit Breaker	N/A
	Capacitors Bank	Weg ABW 16DN3 1600 A Circuit Breaker	N/A
	CCM Milling	Weg ABW 16DN3 1600 A Circuit Breaker	N/A
	CCM Crushing	Weg ABW 16DN3 1600 A Circuit Breaker	N/A
	CCM Emergency	Weg ABW 16DN3 1600 A Circuit Breaker	N/A
	Crushing Feeder	Weg 58.5 A Inverter	N/A

14.13 Chemical Laboratory

EPP operation includes a chemical laboratory divided into two areas, called Laboratory 01 and Laboratory 02. For gold quantification, the Fire Assay method is used, with an analysis capacity of 6,500 samples per month. The samples are analyzed in duplicate and the simplified flowchart of the method adopted for preparation and analysis is shown in Figure 14-4.

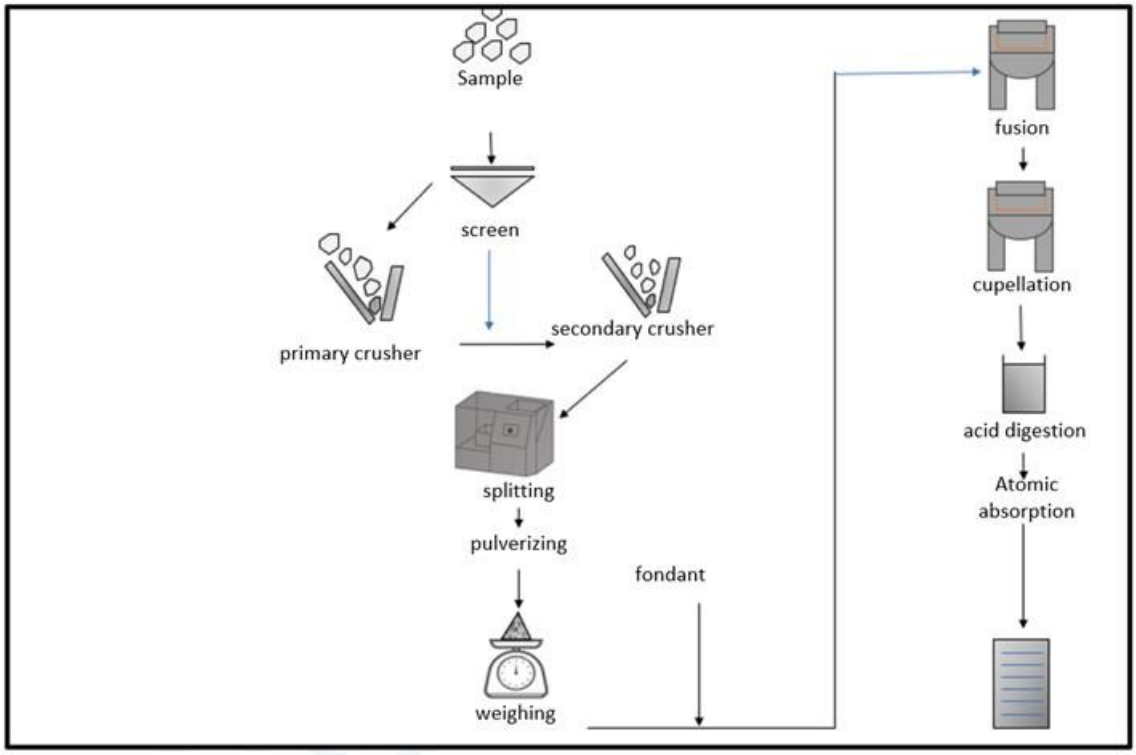


Figure 14-4: Simplified Flowchart of the Method of Preparation of Samples and Chemical Analysis

The EPP chemical laboratory has the following main equipment: Two primary crushers; five secondary crushers; two flow homogenizers; three vibrating sieves; three screening mills; eight sprayers; three splitters; three melting furnaces with 50 crucibles; three cupellation furnaces with 50 cupels, and three atomic absorption analysis equipment. In addition, the laboratory has a dedusting system - filter sleeves for collecting particulate matter and four gas scrubbers generated in the chemical attack processes.

Quality controls are adopted throughout the analytical process (QA/QC), such as: Control of the granulometry of the crushed material (85% pass) and of the pulverized material (95% pass in the control mesh); flux test prepared in each batch; blank tests; preparation and analytical duplicates; control of the weight of the lead button generated in the fusion; use of Certified Reference Material standards; calibration standard and checking of atomic absorption equipment; calibration of equipment such as scales; among others.

14.14 Mass and Water Balance

Figure 14-5 and Table 14-14present the simplified and approximate mass and water balance for the current EPP plant. The two most important points of this balance are the entry of new water into the Fresh Water plant, collected from the Lavrinha River, and the recirculation of water through the tailings dam. Details on the storage of tailings in the dam and on water collection are presented in the infrastructure section of this TRS.

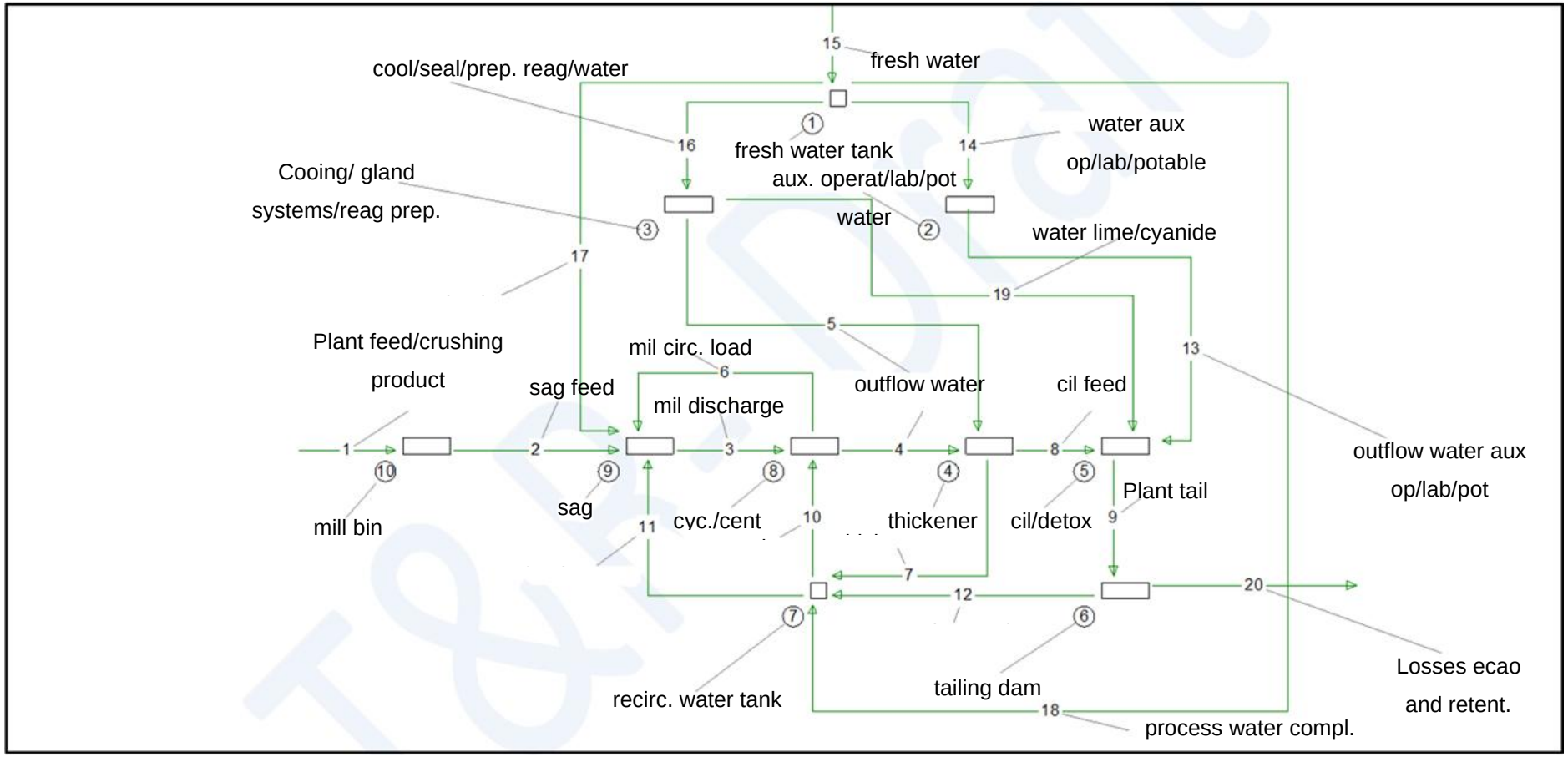


Figure 14-5: Simplified Flowchart with Mass and Water Balance

Table 14-14: Simplified Mass and Water Balance – Base 200 t/h of Milling Feed

# stream	Stream definition:	ore mass tph	water m³/h	Solid conc. %
1	plant feed	200	10	95,2%
2	sag feed	200	10	95,2%
3	mill discharge	900	338	72,2%
4	cicl over	200	414	32,6%
5	outflow water cool/gland/reag.	0	10	0,0%
6	mill circ. load	700	322	68,5%
7	thick. recov. water.	0	227	0,0%
8	cil feed	200	200	50,0%
9	plant tail	200	206	49,30%
10	clas. water	0	371	0,0%
11	feed water sag	0	32	0,0%
12	water dam recirc.	0	107	0,0%
13	outflow water aux op/lab/pot	0	7	0,0%
14	water aux op/lab/potabel	0	15	0,0%
15	fresh water	0	89	0,0%
16	cool/seal/prep reag/water	0	11	0,0%
17	dedusting water	0	1	0,0%
18	process water compl.	0	62	0,0%
19	water lime/cyanide	0	1	0,0%
20	losses evap and retent. Water	200	99	66,9%

15 INFRASTRUCTURE

15.1 Site Access and Control

The Ernesto and Lavrinha deposits are contiguous and are located 12 km south of the city of Pontes e Lacerda, which is approximately 450 km west of Cuiabá, capital of the State of Mato Grosso, Brazil. The Pau-a-Pique deposit is located approximately 47 km southwest of Ernesto.

The federal highway BR-174, which connects Cuiabá to Pontes e Lacerda, is also used to reach Ernesto and Lavrinha from Pontes e Lacerda, which crosses less than 2 km from the Project. In addition to the BR-174 highway, the development is served by a network of good gravel and dirt roads that provide year-round access for two-wheel drive vehicles.

Figure 15-1 shows the location of Ernesto and Lavrinha Deposits, as well as the various access roads.

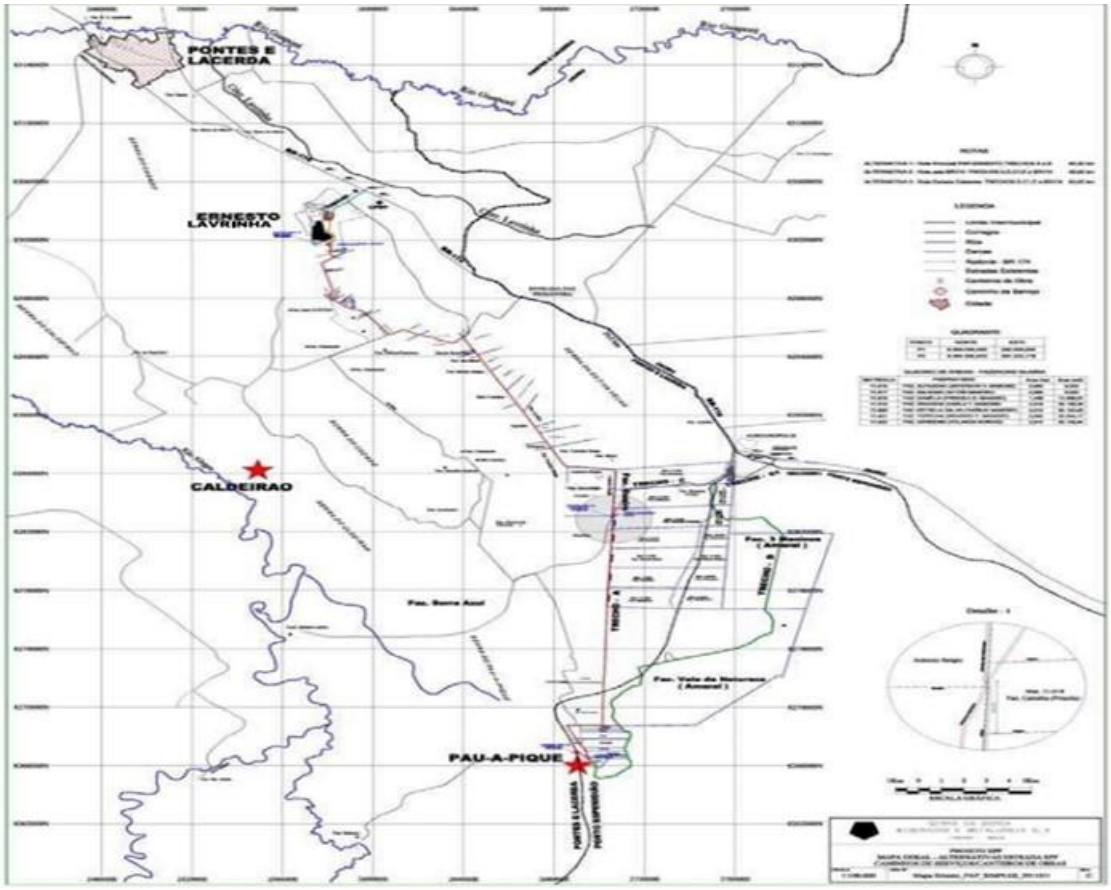


Figure 15-1: Location of Ernesto, Lavrinha, and Pau-a-Pique Access Roads

Pontes and Lacerda has a local airport that can be used by small aircraft. The nearest international airport with connecting flights to all major cities in Brazil and internationally is located in Cuiabá.

15.2 Water Collection and Distribution

The Lavrinha stream ("Córrego Lavrinha"), located near the BR-174 highway, about 3.8 km from the processing plant, is the water source for the EPP Project.

The water is collected and directed by a channel to a "pump house" concrete box that is built in unevenness with respect to the channel. The Pump Room consists of two Imbil INI 50-315 100hp centrifugal pumps, with a rated flow of 70 m^3/h (maximum capacity of 120 m^3/h) and an Imbil BEW125-4 250hp multi-stage pump with a rated flow of 200 m^3/h. Water is pumped through a PN 16 8” HDPE pipe with a length of 3724.7 metres from the collection point to the new water tank located at the processing plant facilities.

The new water tank had three main water pumps that feed the following points:

- crushing;
- milling;
- preparation of reagents;
- elution;
- foundry;
- fuel station; and
- water treatment plant.

The firefighting system consists of electric and diesel water pumps that feed the hydrants and hose reels throughout the plant. The firefighting water jockey pump maintains the pressure in the main water ring piping for firefighting.

The process water is recovered from the tailings dam by two Imbil 125hp pumps, of INI150-400 model, through an HDPE pipe of 500 m in length and 8” diameter at a rated flow rate of 250 m^3/h.

Figure 15-2 shows the traces of the new water and recycling water lines of the tailings dam. The bottom of the raw water tank is reserved for use as fire water.

There are two water treatment plants in the Project, one in the Ernesto facility with a treatment capacity of 6 m^3/h and a second water treatment plant installed in the Pau-a-Pique field with a treatment capacity of 3 m^3/h. The two plants provide drinking water for the facilities of the kitchens, bathrooms, offices, and emergency showers throughout the Project.

The drinking water tank of the Ernesto plant has a capacity of approximately 100 m^3. The treated water tank of the Pau-a-Pique unit has a capacity of approximately 50 m^3. The relatively low retention time ensures that the treated water maintains drinking water standards.



Figure 15-2: Route of Freshwater and Dam Water Pipelines

15.3 Communications

The Project's communications system is based on fiber optics, category-6 cabling, and infrastructure of wireless network, radiocommunications, telephone system, and mobile telephony.

15.3.1 Distribution

A 66-m high distribution tower is located at the Ernesto site, communicating cameras for security monitoring, radios to receive a redundancy link, and radios to provide communication with the Pau-a-Pique project through point-to-point connection by microwave.

There is also a 30-m tower in the Ernesto area, which provides mobile and radio communication in the Ernesto and Lavrinha Projects.

Pau-a-Pique has two 15-m and 24-m distribution towers furnished with radios, antennas, and cameras to provide radio and mobile communication, with point-to-point connections, internet redundancy, and security monitoring.

All communication links are connected to a switch core located in each shelter at both locations and on the distribution switches of each area; this connection is via optical fiber and then distributed by category-6 cabling and wireless to the buildings.

15.4 Electrical Power Supply

The power supply to the mine is carried out through a transmission line 12 km long and of 138 kV, connected to the Pontes e Lacerda substation.

The main substation of ENERGISA, which is the public utility of Power Services in the region, is located on the property of the mine and is fed by the 138-kV transmission line, which is then lowered to 34.5 kV for internal distribution, according to the following configuration:

- Distribution line with 48 km of extension to Pau-a-Pique.
- Connection to the Ernesto main substation, operated and maintained by the local team.

From the Ernesto main substation, the voltage is lowered to 13.8 kV, supplying the main distribution circuit of the plant. The transformer installed in the Ernesto substation has a power of 10/12.5 MVA, cooled by natural oil. Under forced ventilation, this transformer guarantees a reserve of 25% power for future mine expansions.

The installed capacity in Ernesto is 7.35 MW (existing plant and infrastructure on site). The installed substation and existing electrical infrastructure will be suitable for meeting the future power requirements of the mine.

The installed capacity in Pau-a-Pique is 1.91 MW. The current transmission line is suitable to provide sufficient power for the operation of the facilities. The transformer installed in Pau-a-Pique has a power of 3 MVA.

15.5 Tailings Dam

The purpose of the dam is to dispose of the tailings generated during the gold ore beneficiation process. About 1.5 million t/year of ore is processed.

The project was designed in six stages, with downstream raisings up to the final elevation at El 375.00 m (Figure 15-3).

In the 1st stage, the dam was built up to El. 355.00 m, consisting of a homogeneous landfill supported on the foundation land. The dam crest is 6.0 m wide, with upstream and downstream slopes with a 1V:2H inclination, having been completed in 2012.

In the 2nd stage, the dam was raised to El. 358.00 m, with the downstream fill partially built with mine waste. The dam crest is 6.0 m wide with upstream and downstream slopes with 1V:2H and 1V:1.8H inclination, respectively. The works were completed in 2017.

In the 3rd stage, completed in 2018, the dam was raised to El. 364.00 m using partially mine waste for the construction of the downstream fill. The dam crest is 6.0 m wide with upstream and downstream slopes with 1V:2H and 1V:1.8H inclination, respectively. Executive design prepared by GEOHYDROTECH Engenharia.

In the 4th stage, completed in 2020, the dam was raised to El. 367.50 m in compacted soil from borrow areas, with upstream and downstream slopes with an inclination of 1V:1.50 H and 1V:1.8H, respectively. As in the previous step, the downstream back was constructed with mine waste. Executive design prepared by DAM Projetos de Engenharia.

The dam is furnished with an internal drainage system consisting of a vertical sand septum filter and a sandwich drainage mat of sand and gravel "0" under the downstream flank.

The drainage mat is connected downstream to the percolate pumping wells. These wells consist of reinforced concrete pipes with an internal diameter of 1.50 m. Pumps were installed inside the

wells to return the water collected by the internal drainage system to the reservoir. Around the pumping wells, a basin lined with HDPE geomembrane was created. In the case of well overflow, the water is contained in this basin.

It has drainage channels in its surroundings. The water collected is sent downstream of the dam without risk of contamination.

The dam was sized to minimize the risk of spillage. However, for safety reasons, it was furnished with an emergency spillway consisting of a trapezoidal channel excavated in the soil, discharging into the peripheral channel of the left abutment, with a trapezoidal section with 6.0 m of base, 1.50 m of height, and 1V:1H slopes. The weir is located at El. 366.00 m.

Tailings are launched from the crest of the dam and from points located on the left abutment and in the upstream region of the reservoir. The water is pumped back to the plant, being used in the industrial process.

To monitor the behavior of the dam, piezometres and water level metres (WL) were installed in the fill and foundations. Wells were also installed to collect and monitor groundwater downstream of the dam.

To monitor any landfill deformations and detect signs of possible instabilities, surface deformation landmarks were planned on the crest and berms of the downstream slope.

15.5.1 5th STAGE – EL. 370.50 M

As of April 2023, the raising of the dam from EL. 367.50 m to EL. 370.50 m was started, based on the downstream method, using compacted and waste earth material from the mine. The earth materials will come from borrow areas around the reservoir. The mine waste will consist basically of rocky material, with a maximum diameter of 0.30 m.

The crest width is 9.2 m, and the upstream slopes have 1V:1.5H and the downstream, 1V:1.8H, with 3.0 m-wide berms for every 10 m of unevenness.

After raising, the reservoir capacity was increased to 2.7 Mm^3, occupying an area of 92.0 ha.

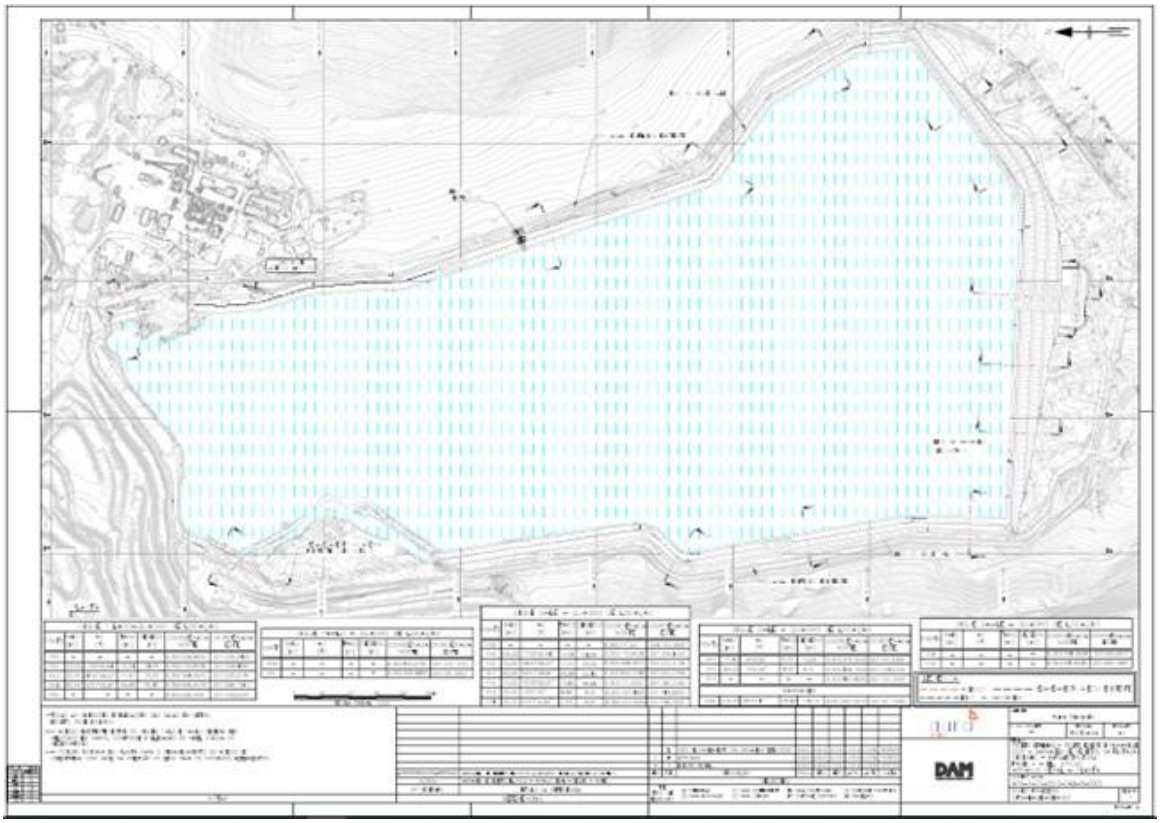


Figure 15-3: General Dam Layout

15.5.2 New Raising

Owing to the increase in reserves and the useful life of the development, the dam will be expanded, and several locational alternatives have been studied. The expansion and adjustment of the current dam was the option chosen, with minimization of interference with the existing structures in the contour of the reservoir, such as peripheral channels, legal reserve areas, and roads.

With the new project, the reservoir will have the capacity to store the tailings generated in the ore beneficiation plant for approximately ten years.

The new configuration will have a crest width of six metres, with an upstream slope with a 1V:2He downstream inclination, which should have a 1V:1.8H inclination, with 3.0-m wide berms for every ten metres of unevenness.

15.6 Waste Piles and Buffer Piles

15.6.1 Waste Piles

The waste generated in the mining is transported by trucks and discharged into the waste piles according to the evolution and sequence defined by the mine planning. The material is spread by a bulldozer. The geometric parameters used for the projects of the waste deposit area are:

- bench height: 10 m;
- berm width: 10 m;

- ramp width: 13 m;
- ramp inclination: 10%;
- face angle: 35°.

The EPP Complex has a storage capacity of 21 Mt and is in the licensing phase with the responsible agency, with an additional capacity of 18.5 Mt, thus sufficient to meet LOM.

In the future, the technical and economic feasibility of disposing of the waste rock in exhausted pits will be studied, with the potential to increase capacity by another 14.6 Mt.

15.6.2 Buffer Piles

The mined ore is transported by trucks to the ore storage yard and is directly transported to the plant depending on the recommendation of the geology/planning of the mine. The material should be tilted and stacked when necessary. In addition to the ore from the mine, there should also be a loading and transport operation from the buffer pile to the plant when necessary.

Currently, the EPP complex has a capacity of 800 kt of ore storage.

16 MARKET STUDIES

16.1 Gold Price

'The Purchase Price for the Material shall equal the agreed upon per ounce price of the returnable gold and silver estimated by the Seller to be contained therein (the "Estimated Quantity"). less the refining and treatment charges for the material as well as the reasonable costs of transport and insurance from Delivery Point (Brinks Vault Sao Paulo, Brazil) to Refinery.

Gold and Silver pricing: Seller may price the estimated returnable gold and silver contained in the Material at Buyer's current spot market bid price during New York trading hours (8:30 a.m. to 4:30 p.m. Eastern Time) on any business day (defined as *any business day that the New York COMEX is open for business"). Also. at Seller's direction. Auramet will work Seller's firm orders to price the gold 24 hours a day on a good until cancelled basis.

The base case financial model for the Project utilizes a gold price of US$1,910/oz for 2024, US$1,876 for 2025 and US$1,819 from 2026 onwards. For comparison, the 10-month trailing average price for gold that existed on the effective date of this TRS was approximately US$1,986/oz.

16.2 Refining and Treatment Charges

If the material is to be refined at Metalor Technologies S.A., the following Refining and Treatment Charges will apply: $0.30 per ounce of material received at the Refinery. Returnable amount - Gold: 99.95% Returnable amount - Silver: - 99.5% Metal Outturn: Gold and Silver 7 business days following receipt at the Refinery.

If the material is to be refined at PAMP S.A., the following Refining and Treatment Charges will apply:

If the material is a minimum of 90% Au. the treatment charge will be $0.30 per ounce. If the material is a minimum of 95 % Au. the treatment charge will be $0.28 per ounce. Returnable amount - Gold: If the material is a minimum of 90% Au: 99.95%

If the Material is a minimum of 95% Au: 99.975% Returnable amount - Silver - 99.5% Metal Outturn: Gold and Silver 3business days following receipt at the Refinery.

16.3 Brink’s Bullion Transport Contract

Seller may act as Buyer's agent in managing the shipment of the material to the refinery.

In such instances where the Seller acts as Buyer's agent. Buyer shall be the shipper of record and shall pay the shipper (Brinks) directly for the costs thereof. Upon transfer of title and risk to Buyer Seller shall endorse to Buyer the insurance policy covering the material sold to Buyer. or otherwise assign or convey to Buyer the right to collect the insurance payments from the insurance company.

Apoena has a contract with Brink's - Segurança e Transporte de Valores Ltda. ("Brink's") for the shipment of up to 120 kg of doré or R$10,500,000 value per shipment. The charge is R$68,840 per shipment, plus there is a custody fee of 0.004% of the shipment value and an ad valorem tax of 0.07% of the invoice amount.

16.4 G3 Open Pit Mining Contract For EPP

Aura has contracted G3 Construção Pesada Ltda. ("G3") to mine the EPP open pit deposit. The contract is based on haul distances and unit costs per tonnes for waste and ore applied to the EPP mine plan, plus unit costs for auxiliary equipment usage. Equipment maintenance is included in the unit costs. Table 16-1 lists the expected average unit costs by operating area.

Table 16-1: Summary of Lom Contract Mining Costs for Epp

SUMMARY OF LOM CONTRACT MINING COSTS FOR EPP	
Operating Cost Area	Ore/Waste (US$/t)
Drilling	0.47
Blasting	0.35
Loading	0.28
Hauling	0.83
Aux. Equipment	0.31
Geology	0.22
Planning	0.04
G&A (Overhead)	0.06
TOTAL Mining Operating Cost	**2.57**

The major equipment in the fleet is specified as Sany excavators, CAT dozers, Mercedes trucks and Sandvik drills.

The contract term is 62 months and is to be done at least 1000kt/month. There are various performance specifications under the contract, including schedule, safety, productivity, and execution of Aura's mine plan and daily operating procedures. Included in the contract is an escalating scale of penalties for lower achievement than contract target values in the various performance specifications, up to 20% of contract billing.

17 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

This section describes the results of the environmental and socioeconomic assessment of the Project. The analysis conforms with applicable federal, state, and municipal legislation regarding environmental aspects, such as water, effluent, flora, fauna, noise, natural, cultural, historical, and archaeological heritage, environmental education, Indigenous and Quilombola territories, and traditional populations. The analysis was conducted within the scope of the mandatory environmental licensing in Brazil for mineral extraction activities and in accordance with Federal Decree No. 99274/90, which regulates Federal Law No. 6938/81, which, in turn, established the Brazilian National Environmental Policy. The information in this section is based on public sources and information provided by EPP.

17.1 Introduction

Aura is a company focused on the development and operation of gold and base metals projects in the Americas. The Company's producing assets include the San Andres gold mine in Honduras, the Ernesto/Pau-a-Pique gold mine in Brazil, and the Aranzazu copper, gold, and silver mine in Mexico. In addition, the Company has two more gold projects in Brazil, Almas and Matupá, and one gold project in Colombia, Tolda Fria. Currently, the company employs over 3,000 people in the Americas.

The mineral sector, owing to its scope and importance in the domestic economy, has historically played an important role in the country's effort to reduce regional inequalities and increase the integrated growth of all regions.

The permanence of part of the wealth yielded through the mineral activity in the location of the enterprise is a relevant factor for local development, facilitating income distribution and improving the quality of life of the population.

The identification of the structure of charges of mineral activities in relation to the payment of taxes and the generation of income, in addition to the quantity and quality of employment generated by this activity, is an important source for studies of impacts, both economic and social, of the wealth generated by mining.

In addition to the taxes levied on mining companies and mineral products with a social intent, the Financial Compensation for the Exploration of Mineral Resources (CFEM) has a percentage that should be applied in the municipality that generates the revenue and can, therefore, play an important role as a catalyst for change and economic growth.

The Ernesto and Pau-a-Pique Complex is a duly licensed operating project that contributes to socioeconomic development through the generation of jobs and income, tax collection, and

performs socio-environmental programs and sustainable efforts, maximizing the benefits of sustainable mining.

17.2 Location

The Aura EPP Project consists of two deposits, one open-air and one underground. Currently, the underground mine is shut down. However, exploration and feasibility studies are still being carried out. The open-air pit is located in the Ernesto mine, and the underground deposit is located in the Pau-a-Pique mine.

The Pau-a-Pique underground mine, shutdown and under maintenance since October 2022, is located about 40 kilometres south of Ernesto and Lavrinha and the beneficiation plant. Another three additional areas, called Nosde, Japonês, and Pombinhas, are less than five kilometres from the beneficiation plant.

The beneficiation plant is in a central area for reserves and additional areas, with a capacity of 3,000 tons per day, through a conventional leaching process. Facilities include gold crushing, grinding, extraction, and recovery areas, as well as tailings/waste piles and tailings dam.

The EPP project – called Ernesto and Pau-a-Pique – consists of the gold extraction activity carried out by the company Mineração Apoena S.A., a subsidiary of the company Aura Minerals. The enterprise is located on the edge of Highway BR-174, at Fazenda Ernesto Soares de Carvalho, in the rural area of the municipality of Pontes e Lacerda (Figure 17-1). Access to the site is approximately 15 km from the urban area of the city of Pontes e Lacerda, in the State of Mato Grosso.

Ernesto/Pau-a-Pique has a significant structure in its surroundings, which includes paved roads between all deposits and the center of Pontes e Lacerda.

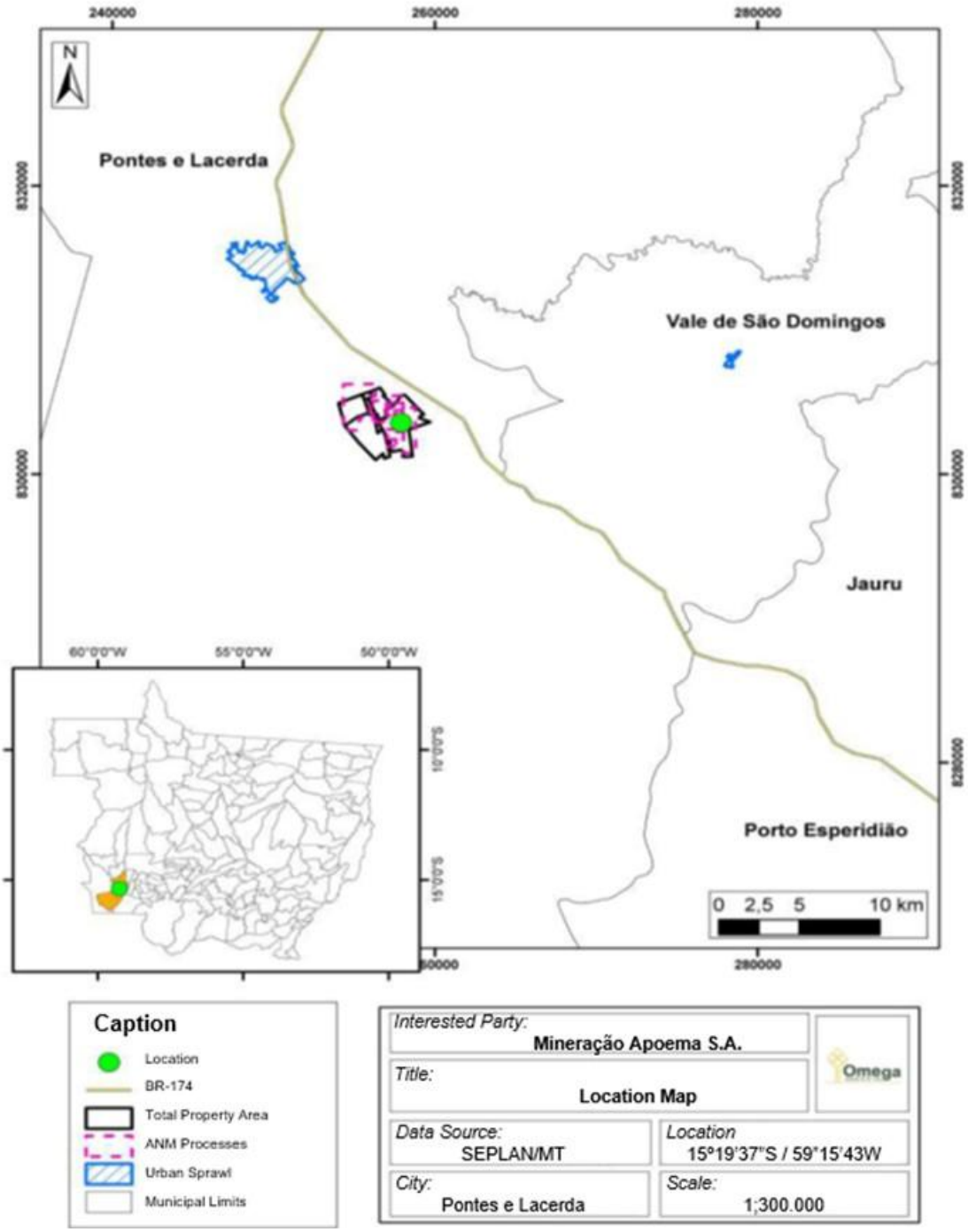


Figure 17-1: Location map of EPP Complex

17.3 Brazilian Mining Regulatory Framework

Mining in Brazil is governed by the Brazilian Federal Constitution of 1988, the Brazilian Mining Code and other decrees, laws, ordinances, and regulations. This legal and regulatory framework imposes several obligations on mining companies relating to, among others, the manner in which mineral deposits are exploited, the health and safety of workers and local communities where mines are located, and environmental protection and remediation measures.

Mining activities within Brazil are regulated by the Ministry of Mines and Energy (MME) and the National Mining Agency (ANM). The MME is responsible for formulating and coordinating Brazilian public policies regarding mineral resources and energy production and has jurisdiction over the government agencies and federal public companies in charge of executing such policies in the electric, oil and gas, mining, and other energy sectors.

The ANM is a federal agency linked to the MME, and it is responsible for, among other matters, monitoring, analyzing, and promoting the performance of the Brazilian mineral economy, awarding rights for the exploration and exploitation of mineral resources, as well as planning and inspecting mineral exploration and exploitation activities in Brazil.

Under the Brazilian Federal Constitution, surface property rights are distinct from mineral rights, which belong exclusively to the Brazilian federal government, the sole entity responsible for governing mineral exploration and mining activity in Brazil.

The Brazilian Mining Code currently establishes different regimes for regulating mineral exploration and mining activities in Brazil, which may vary according to mineral type and project size. The regimes applicable to the Project are (i) exploration authorization, (ii) mining concessions, and mining licenses.

For mining activities, it is also necessary for the entrepreneur to prove that he is the holder of the right to exploit the intended mineral substance, which is granted by the National Mining Agency, considering that the mineral resources are Union property, pursuant to art. 20, IX of the Federal Constitution of 1988.

17.3.1 Land Access and Occupation

The surface rights owner is obligated by law to provide access to the mineral rights holders to conduct mineral exploration and mining activities. If a holder of mineral rights or mining concession does not own title to the surface land where the mineral interest or mining-related infrastructure is located, they can gain access and/or occupy the land pursuant to mining easements granted by ANM under the Brazilian Mining Code or have their access rights enforced by the Brazilian courts.

Mineral rights holders must pay the surface right owner a fee to access and use the surface rights and must indemnify it against any damage to the property. The amount of such fees may be negotiated between the parties subject to certain parameters established by the Mining Code, and the ANM must be subsequently informed. In the absence of an agreement, after granting the exploration authorization or mining concession, as the case may be, the mineral rights holder may request that a competent court determine the indemnification amounts to be paid.

17.3.2 Legal Reserve

The Brazilian Forest Code sets forth that, on rural properties, a minimum percentage rate of the local vegetation must be preserved as a Legal Reserve, aimed at the sustainable use of natural resources, the conservation of biodiversity, and the protection of native fauna and flora.

17.3.3 Mine Closure

In Brazil, pursuant to Federal Decree No. 97632/1989, the enterprises dedicated to the exploitation of mineral resources shall submit a Degraded Area Recovery Plan together with the EIA during the environmental licensing. Accordingly, the environmental recovery of the degraded areas caused by mineral exploitation activities must be planned from their conception. Mining companies must present their PAE to ANM in order to receive a mining concession. These studies must address the reclamation and decommissioning of the mined areas, describing the measures to be implemented throughout the mining process in order to prevent severe degradation of the area and minimize impacts on the environment. Mining companies are required to regularly update the mining decommissioning. Approval for mine closure is granted by the MME when the applicant can prove compliance with the decommissioning plan, especially environmental conditions.

17.3.4 Environmental Licensing and Approval

The Brazilian Federal Constitution establishes the division of powers between the federal, state, and municipal governments to issue environmental laws and regulations. While the Brazilian federal government has the authority to issue environmental regulations, each state is legally competent to promulgate specific regulations governing environmental licensing procedures under its jurisdiction. Municipal governments may only issue regulations regarding matters of local interest or as a supplement to federal or state laws.

Under Brazilian law, the construction, installation, expansion, and operation of any establishment or activity that uses environmental resources or is deemed to be or potentially polluting, as well as those capable of causing any kind of environmental degradation, is subject to a prior licensing process.

The Brazilian National Council (CONAMA) regulates the environmental licensing process. CONAMA Resolution No. 237/1997 establishes the types of authorizations, procedures, and criteria for environmental licensing, which is divided into a three-stage permitting process:

The Preliminary License (LP) certifies the environmental viability of the activities proposed in terms of their design and location. It is the most important part of the process and requires environmental baseline studies, community engagement, public hearings, and preparation of an Environmental Impact Study and Environmental Impact Report (collectively referred to as “EIA”).

- The Installation License allows the construction, installation, and commissioning of the proposed project.
- The Operating License authorizes the project to operate after it has been constructed and commissioned and requires inspection of the project to ensure that it complies with the Preliminary License, Installation License, and any other applicable permits.

The Project must first obtain the Preliminary License as determined by CONAMA regulations. An EIA must be prepared by a technical team of specialists from different areas of expertise to support the analysis of the technical, environmental, and locational viability of the Project. The

EIA must meet the objectives set by the National Environmental Policy in accordance with Law No. 6938/81.

The Environmental Impact Study (EIA) is a technical document that thoroughly evaluates the relevant socio-environmental aspects such as water and effluents, flora and fauna, noise, natural, cultural/historical, and archaeological heritage, indigenous lands, quilombolas, and traditional populations.

In the preliminary analysis and environmental feasibility stage of the enterprise, the document referred to as RIMA is also prepared. RIMA is an abridged and accessible version of EIA aimed at the general audience's understanding. It clearly and objectively expands upon the main results and conclusions of the study, allowing the community to understand the expected environmental impacts of the project. RIMA is often used in public hearings, providing the population with the opportunity to participate in the licensing process, expressing their opinions and contributing to the final decision.

Once the technical, locational, and environmental feasibility is attested by EIA/RIMA evaluations, the environmental agencies are able to grant the preliminary license, which concerns the feasibility of the enterprise.

Especially on the EPP project, the environmental licensing history of the Ernesto and Pau-a-Pique Mine Complex is presented below, of which the licensing process was submitted to the State Secretariat for the Environment of Mato Grosso (SEMA) under the terms of State Complementary Law 214/05.

Initially, the Preliminary License (LP) process of the Ernesto Mine was formalized on September 16, 2009, under protocol number 667221/2009. The EIA/Rima filing was carried out on September 16, 2009, under number 667221/2009.

After analyzing the Environmental Impairment Study (EIA) and its Environmental Impact Report (RIMA), the Preliminary License (LP) No. 299344/2010 was granted to SEMA/MT on August 24, 2010.

Once the requirements of the Preliminary License were met and the executive design was completed, the Environmental Control Plan (PCA) was prepared, a requirement for the granting of the Installation License (LI) of the enterprise. After assessing the mitigating, control, and environmental monitoring actions, as well as the proposals for environmental compensation, the enterprise obtained, on January 10, 2011, the Installation License No. 58859/2010.

Subsequently, the effective installation of the enterprise and compliance with the Environmental Control Plan (PCA) began. Once the implementation stage and environmental control measures were completed, the Provisional Operating License (document authorizing the operation of the activities) was granted under No. 67/2012 on August 20, 2012, with effectiveness until August 20, 2013.

In the same year, concomitantly with obtaining the provisional license, Mining Ordinance No. 192 was issued, referring to the ANM process No. 866022/2001, published in the Official Gazette on June 7, 2013.

On July 22, 2013, Operating License No. 307127/2013 was issued, effective until July 21, 2016. After the accomplishment of the Total Assignment of Mining Concession Area referring to ANM process No. 866022/2001, on July 6, 2021, the request was made to change the corporate name of the enterprise that was on behalf of Serra da Borda transferred to Mineração e Metalurgia S.A. In view of this, Operating License No. 314006/2016 was issued by SEMA/MT, with effectiveness until December 22, 2019.

It should be noted that, in 2017, an environmental licensing process was concomitantly carried out, for the expansion of the waste pile of the Ernesto Mine. For the performance of the said activity, Preliminary License No. 308184/2017 and Installation License No. 66951/2017 were also granted on March 8, 2017, both of them effective until March 7, 2020. Together with the Preliminary License (LP), the project obtained Vegetation Suppression Authorization No. 492/2017 issued on March 15, 2017, with effectiveness until March 14, 2020.

Over the term of the Operating License (LO), the performance of the socio-environmental control and monitoring efforts was carried out, which were duly proven to SEMA/MT and made it possible, on July 19, 2019, to renew Operating License No. 319944/2019, effective until July 18, 2022.

In compliance with the guidelines for requesting renewals of Operating Licenses, on February 7, 2022, the request for the Renewal of the Operating License of Aura Apoena enterprise was filed with SEMA, a License in force until August 9, 2025.

It is important to note that there are currently environmental licensing processes already completed for mineral research, such as Target Lavrinha, expiring on August 9, 2025; Paiol Pit expiring on June 20, 2025; Ernesto Conect Pit, expiring on August 9, 2025; Japonês Nosde Project expiring on April 19, 2026; and Japonês Oeste Project, expiring on February 13, 2026. Below is the current Figure 17-2 of the status of the environmental licenses in force.

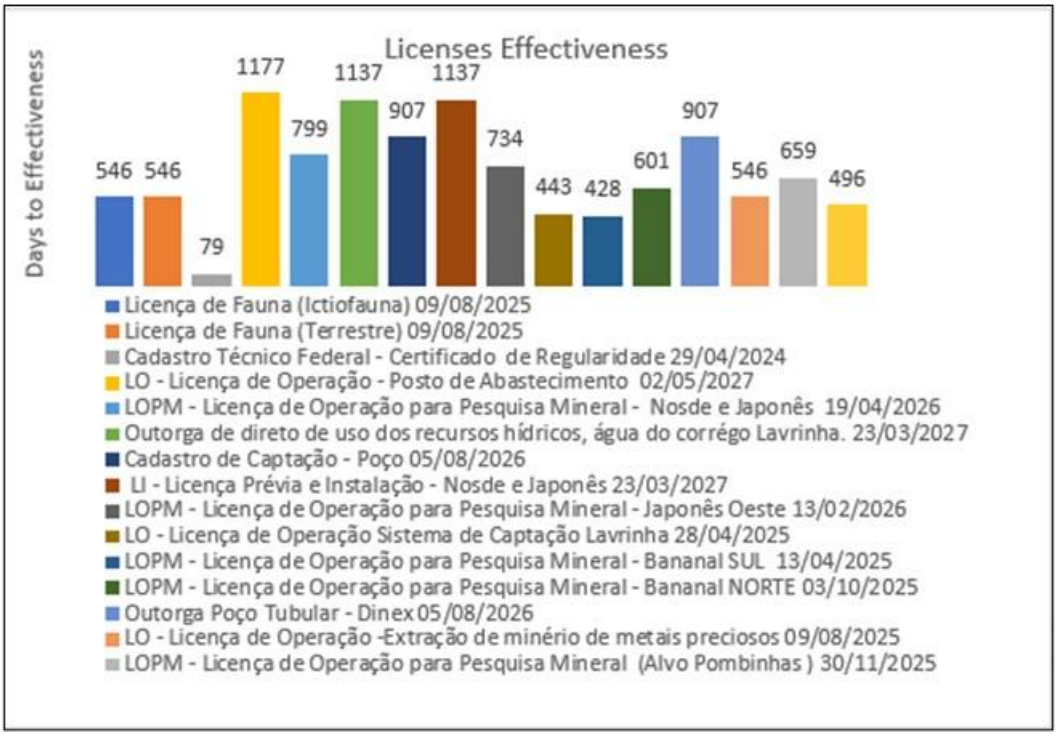


Figure 17-2: Status of the Environmental License

It should be noted that the Nosde Mine is the main target of the resource assessment object of this TRS, and its operational feasibility is attested by the effective environmental license coupled with the implementation of environmental control actions.

Nevertheless, for the exploitation of the entire mineral resource, the technical environmental studies should be prepared in light of the new environmental intervention authorizations to subsidize the vegetation suppression, required for the expansion of the pit.

At this point, it is worth noting that, for the expansion of the pit for the use of all mineral resources, there is an exclusive need to comply with the requirements of applicable laws, including specific technical studies, such as forest inventory, respective compensation proposals, and other procedures to obtain the necessary authorizations.

17.4 Summary Of Environmental Diagnosis

Below is a summary of the socio-environmental characteristics of the insertion area of the Aura Apoena Unit, according to EIA (Mineral, 2009).

The climate of the region of insertion of the enterprise is considered in the hot semi-humid category, with humid summer and dry winter, average temperatures ranging from 22 ºC to 24 ºC, and relative humidity ranging from 75 to 85%. Based on data from the rainfall station of CPRM (Geological Survey of Brazil) located in the municipality of Pontes e Lacerda, it was possible to check that the rainfall index is relatively high, with an average value of 1.440 mm/year.

In Pau-a-Pique, the predominant geology is Metatonalites/metamafics, Metaconglomerates, Metarenites and Metapelites, Muscovite schists, Biotite schists, quartz veins, and Quartz-albite-chlorite veins.

The Ernesto target is drained mainly by the Lavrinha and Cágado Streams, with some tributaries of these drains under the direct influence of the enterprise area. In Pau-a-Pique, the main watercourse that has a direct influence on the extraction processes is the Corridor Stream.

The relief is characterized as wavy to strongly wavy, with a low degree of dissection. In the areas of influence, slopes covered by undergrowth, shrubs, and/or trees are identified. However, with several locations of exposed soil, revealing a high degree of landscape change.

Based on the diagnosis, the land of the Ernesto complex is susceptible to the occurrence of events of surface dynamics triggered naturally or by the action of man. The predominant soils are easily disaggregated and carried, being more prone to surface erosion. In the survey carried out at the Pau-a-Pique Mine, the studies demonstrated the high susceptibility to the occurrence of surface dynamics processes, such as erosion and silting.

To certify the quality of the soil, samples were collected in the areas of influence of Ernesto and Pau-a-Pique projects, where there was no contamination. The parameters were compared according to the guidelines of the Environmental Company of the State of São Paulo (CETESB), which is the state government agency responsible for the control, inspection, monitoring, and licensing of pollution-generating activities, with the main concern of preserving and recovering the quality of water, air, and soil.

It is important to note that the project does not affect areas protected by law. The Aura Apoena unit is inserted in the transition area between the Amazon and Cerrado biomes, with the predominance of Cerrado and Anthropic Field vegetation being observed in the areas of influence.

Some animals found in the environmental diagnosis belonged to the group of endangered species, including the Giant Anteater (Tamanduá-bandeira), Three-banded Armadillo (Tatu-bola), Maned Wolf (Lobo-guará), and Cougar (Onça-parda). As a measure of environmental control and monitoring, the company monitors these and other species through semi-annual campaigns, where the appearance of the individuals mentioned is observed.

Regarding the territorial dynamics of land use and occupation, EIA (Mineral, 2009) reveals that the enterprise intercepts areas of extensive livestock use, with no indigenous lands, traditional communities, or archaeological or speleological sites being identified.

17.5 Socio-Environmental Control Actions

To support the maintenance of operating licenses, the Aura Apoena unit has a management system for socio-environmental indicators, which aims to guarantee the environmental quality of the enterprise in accordance with applicable laws, as well as compliance with the legal obligations set out in current environmental authorizations.

Out of the potential negative impacts addressed in EIA (Mineral 2009), the continuity of the performance of socio-environmental control actions deserves special attention from the entrepreneur. Among them, the maintenance of Legal Reserve areas, air quality monitoring, fauna monitoring, noise and vibration monitoring, water and effluent monitoring, water consumption control, control of their properties, degraded area recovery program, environmental education program, social program, seedling nursery, dam monitoring, and closure plan.

It is important to highlight that all efforts, whether they are for environmental control or monitoring, are strictly carried out so that, in the case of possible anomaly, it is promptly corrected.

17.5.1 Legal Reserve

In compliance with the Brazilian Forest Code at the Aura Apoena Unit, just over 260 ha of the surface property owned by the Company is a Legal Reserve earmarked exclusively for the conservation of native vegetation. The maintenance of the conservation of native vegetation is carried out through the monitoring of these Legal Reserve areas by the company itself.

17.5.2 Air Quality Monitoring

Air pollution can be defined as the result of altering the normal physical, chemical, and biological characteristics of the atmosphere. It can cause damage to humans, fauna, flora, and materials, restrict the full use and enjoyment of property, and/or negatively affect the well-being of the population. The general objective of this monitoring is to analyze the characterization of air quality based on primary data measured during the monitoring carried out over a period of six months in light of potential existing receptors, which can potentially be impacted during the life cycle of the enterprise.

The company informs that according to the results obtained during the monitored period, they did not present significant changes or changes above the limits established by the legislation, CONAMA Resolution No. 491/2018.

17.5.3 Fauna Monitoring

This aims to monitor the fauna in the area at the Aura Apoena Unit. The document is part of the integrated environmental assessment process, aimed at observing possible impacts on fauna over mining activities in that area. The fauna monitoring campaign is carried out every six months by biologists legally certified and registered with the competent body.

According to the results obtained in the monitoring, it was possible to certify the absence of negative changes in the fauna resulting from mining activities, suggesting that there was no loss of biodiversity with the operation of the mine.

17.5.4 Noise and Vibration Monitoring

Noise pollution can be defined as a set of sounds without harmony or any unpleasant and undesirable auditory sensation that bothers or disturbs man in his activities (GERGES, 2000).

Noise pollution occurs when changes in the acoustic environment result in potential harm to humans, negatively impacting the well-being of the population or restricting the full use and enjoyment of private property. The company carries out two monitoring campaigns over the year, one in the rainy season and the other in the dry season. The purpose is to certify that the blasting activities carried out in the process of blasting rocks for mining do not impact the communities neighboring the enterprise.

The results of the monitoring support compliance with applicable laws and did not exceed the limits established by CONAMA No. 1, dated March 8, 1990.

17.5.5 Control of Water Consumption

The water used in the beneficiation process and also in the administrative demand comes from two main sources, namely, the catchment of the Lavrinha river and a tubular well called Dinex. The management of water resource consumption is carried out through daily readings of the water metres installed at the catchment points. The monitoring of water consumption is qualitative and quantitative and pursuant to the limits established by the Grant.

17.5.6 Water and Effluent Monitoring

The campaign to monitor the quality of surface water and effluents is carried out monthly, of which data are sent to an external laboratory certified by ISO/IEC 17025.

According to the last monitoring report, the results reveal patterns of discharge in accordance with applicable laws, CONAMA resolution No. 430 of May 13, 2011.

17.5.7 Control of Properties (Surface-Right Owners)

Aura Apoena has existing surface rights over the entire area of the project, where of the 1,636.69 hectares of the Aura Apoena Unit, about 921.96 ha are owned by mining and another 714.73 ha take place through agreements with owners of the abutting lands, where some pits and piles of waste are located. For the Pau-a-Pique unit, 41.20 ha are part of the mining property. There are no communities or permanent dwellings within the project area. As shown in the Figure 17-3.

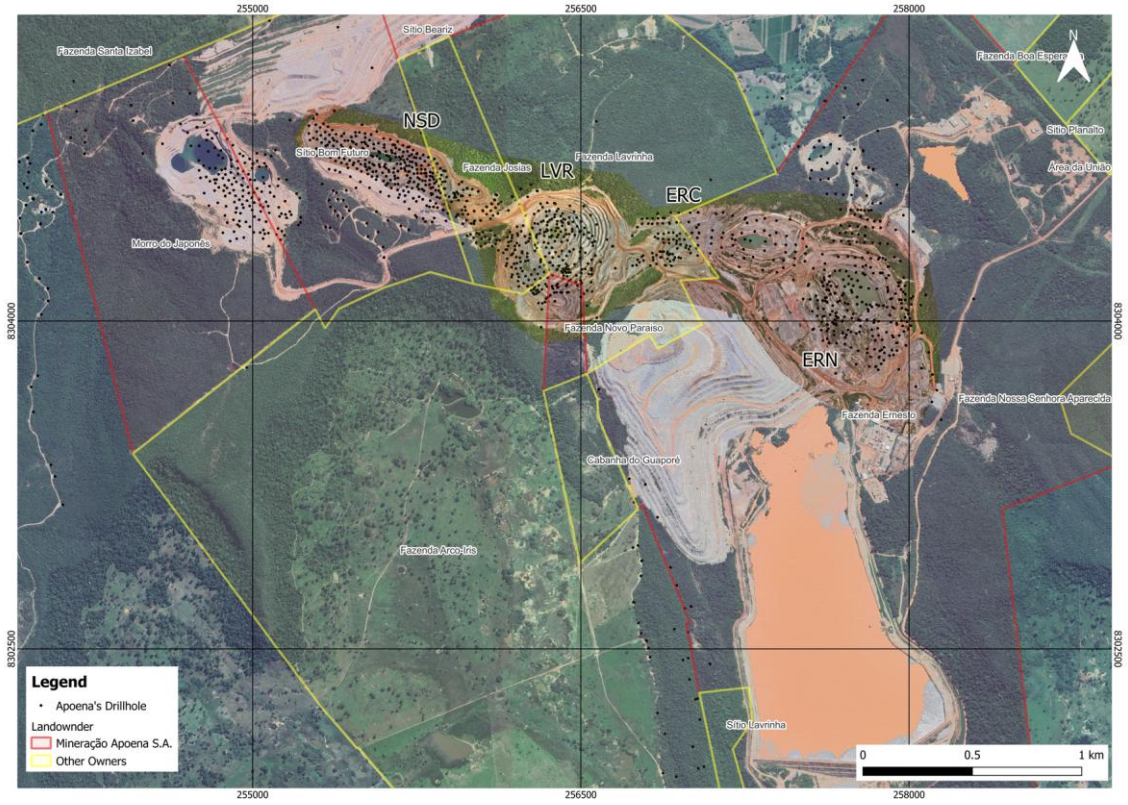


Figure 17-3: Apoena's Drillhole

17.5.8 Tailings Dam

The main objective of the tailings dam is to contain and manage the tailings resulting from the wet processing process. In compliance with ANM (National Mining Agency)'s regulatory standards, RESOLUTION No. 95, DATED FEBRUARY 7, 2022, the tailings dam has a strict monitoring system. Visual inspections and monitoring of safety instruments are carried out daily, such as Piezometers and surface landmarks, a key measure to control the stability of the structure. The data is compiled and sent monthly to a specialized consulting firm to issue stability reports. As a measure to control the quality of surface and groundwater, analyses of samples collected at strategic points are carried out, that is, in places where it could possibly present changes due to the influence of the dam.

The Company informs that the dam does not present changes in its structures, a condition attested by the check of safety factors, being duly formalized with the Integrated Management System of Mining Dams (SIGBM) through the Declaration of Stability Condition (DCE).

It should also be noted that the quality of the watercourses in the areas of influence of the dam is also evaluated quarterly, with no significant changes in the sampled points.

17.5.9 Solid Waste Management

PGRS is an instrument of the National Solid Waste Policy (Federal Law 12305/10) that aims to establish procedures for the environmentally appropriate management of waste and bring waste

generators to the current technical and legal reality. EPP's PGRS is prepared in accordance with the content established in Article 21 of the National Solid Waste Policy.

All waste generated by the enterprise is managed in accordance with the National Solid Waste Policy.

17.5.10 Recovery Program for Degraded Areas

The recovery of degraded areas aims to provide new dynamic balance conditions for the environment to be recovered in order to accelerate the formation of vegetation cover. The strategies for the recovery of degraded areas aim to facilitate the containment of erosive processes that may be caused by the enterprise, the prevention of new processes of the same character and the integration of the areas to be recovered to the landscape surrounding the Project in question.

The environmental recovery work currently carried out by EPP targets the physical stabilization and reintegration of the landscape of the areas supporting the enterprise and immediate surroundings, from the planting of herbaceous species, grasses, and legumes, with the simultaneous planting of pioneer native tree species, preferably fruitful with a view to attracting fauna. The monitoring of these areas is carried out every six months, covering periods of drought and rain, the purpose being to certify that the planted seedlings have developed satisfactorily. According to the latest survey, about 27 hectares of degraded areas have already been recovered by 2022, with maintenance and monitoring carried out by the company and duly evidenced to the environmental licensing agency SEMA-MT.

The results of the last monitoring point out that there was no evidenced occurrence of anthropic intervention and much less erosive processes in the area undergoing environmental rehabilitation.

In 2023, the planting of about 5,000 seedlings of native and fruit species in the areas surrounding the mine already suitable for recovery stood out.

17.5.11 Seedling Nursery

Aura Apoena Unit has a forest nursery, where seedlings of native and fruit species are grown and produced, which are used in the program for the recovery of degraded areas and in environmental education campaigns. The structure of the seedling nursery has the capacity to manage 22,000 seedlings ready for planting.

17.5.12 Environmental Education

The actions of the Environmental Education Program (PEA) allow the nurturing of "social values, knowledge, skills, attitudes, and competencies aimed at the conservation of the environment, a common good of the people, essential to a healthy quality of life and its sustainability," as recommended by the National Environmental Education Policy, under Federal Law 9795/1999.

Thus, in accordance with the National Environmental Education Policy, the company maintains its commitment to the environment and development in a sustainable way and carries out several environmental education campaigns in schools, institutions, and within the unit itself. Environmental education actions include donations of native seedlings, fruit trees, and even food condiments, in addition to lectures on the conscious consumption of natural resources and excessive waste generation.

Among the environmental awareness campaigns carried out by the company are "World Water Day – March 22," "National Environment Week – 05/31 to 06/05", and "International Tree Day – September 21."

17.5.13 Social Program

Among the strategies for acknowledging the workforce, the company carries out programs such as the young apprentice and trainee. The main objective of the young apprentice program is the social inclusion of young people in the labor market, aiming at the development of theoretical and practical skills that help prepare them for the professional world.

The trainee program, on the other hand, aims to recruit, develop, and retain special minds with remarkable managerial capacity to undertake strategic positions in the future. In 2023, the young apprentice program selected several young people to experience the mining industry, some of whom were hired even before finishing the process. In the trainee program, the company recruited six young people aged between 25 and 27 years, newly graduated in different segments, including Environmental, Mining, Mechanical, Processing, and PCP Engineering.

In partnership with the local economy, some inputs and products used in the company are purchased in local commerce, which generates a positive impact, bringing gains for both traders and rural producers. In addition, the company participates in marketing events, workshops, and fairs and promotes specialization courses in partnership with the rural union, municipal, and federal institutions.

17.6 Mine Closure Plan

In a general context, the recovery of degraded areas can be defined as the set of actions aimed at reestablishing the ecological conditions of the altered areas, aiming to establish a new dynamic balance and their landscape reintegration.

The conceptual strategies proposed for the recovery of future degraded areas by the Aura Apoena Unit aim to establish an ecological succession process capable of accelerating the formation of native vegetation cover. It seeks, primarily, the integration of the areas to be recovered into the landscape surrounding the Project in question.

In turn, environmental recovery aims to restore the degraded area resulting from anthropic interventions in compliance with the legal provisions in force that determine the mandatory revegetation of areas subject to changes that resulted from ore extraction.

The Mine Closure Conceptual Plan provides for the evaluation of activities necessary to minimize the impacts associated with the closure phase of the activity. The main purpose of this conceptual plan is to establish guidelines and corporate criteria for the closure of activities licensed by the National Mining Agency and the State Secretariat for the Environment of Mato Grosso, spurring on technical and financial conditions for the closure of the mine, until the post-closure status and respective future use is reached.

The project's closing costs are estimated at BRL 45 million for the Ernesto unit and BRL 4.8 million for the Pau-a-Pique unit. These costs were reviewed according to the balance sheet carried out by the company's financial sector. The cost model assumes some expenses pertaining to the preparation of mine closure executive designs, degraded area recovery designs (PRAD), the performance of PRAD, decommissioning of structures, and other executive activities necessary for closure. Among the main activities of the Closure Plan are the demolition of civil facilities, removal of infrastructures and foundations, land regularization, drainage for rainwater runoff, initial soil coverage with grass and legume species to aid in the stabilization of areas, and soil preparation for subsequent planting of tree and shrub species.

To ensure the establishment of reforestation, and in compliance with CONAMA Resolution No. 429/2011, the monitoring and maintenance of areas will be carried out until the complete rehabilitation of degraded environments is proven.

18 CAPITAL AND OPERATING COSTS

18.1 OPEX

18.1.1 Mine Opex

Apoena has decided that the mine operation will be outsourced, the entire mining operation will be contracted. Costs are broken down in Table 18-1, Table 18-2 and Table 18-3.

- iExplosives and accessories will be provided by Apoena and the costs the costs deducted from the monthly payment to the contractor.
- The grade control drilling activities are contracted per metre. The diesel will be supplied by Apoena and the cost deducted from the monthly payment to the contractor.

The actual overall mine operating cost for the period between November and December 2023 was BRL 12.32, while for the year 2027, the corresponding figure was estimated at BRL 12.50. All mining costs include inputs: diesel and explosives. Estimated mining costs are detailed by year for 2024 to 2026 in Table 18-1 to Table 18-3 and Figure 18-1 to Figure 18-3.

Table 18-1: Mine Operating Costs for the Year 2024

Mine Operation	Cost (BRL)
Drilling (BRL/t mined)	2.35
Blasting (BRL/t mined)	1.77
Load (BRL/t mined)	1.42
Transportation (BRL/t mined)	4.15
Auxiliary Equipment (BRL/t mined)	1,57
Geology (BRL/t mined)	1.09
Technical Services (BRL/t mined)	0.20
Mine Management (BRL/t mined)	0.30
TOTAL 2024 (BRL/t mined)	12.85



Figure 18-1: Mine Operating Costs for Year 2024

Table 18-2: Mine Operating Costs for Year 2025

Mine Operation	Cost (BRL)
Drilling (BRL/t mined)	2.19
Blasting (BRL/t mined)	1.65
Load (BRL/t mined)	1.33
Transportation (BRL/t mined)	4.45
Auxiliary Equipment (BRL/t mined)	1.46
Geology (BRL/t mined)	1.02
Technical Services (BRL/t mined)	0.19
Mine Management (BRL/t mined)	0.29
TOTAL 2025 (BRL/t mined)	12.59



Figure 18-2: Mine Operating Costs for Year 2025

Table 18-3: Mine Operating Costs for Year 2026

Mine Operation	Cost (BRL)
Drilling (BRL/t mined)	2.23
Blasting (BRL/t mined)	1.69
Load (BRL/t mined)	1.35
Transportation (BRL/t mined)	4.20
Auxiliary Equipment (BRL/t mined)	1.49
Geology (BRL/t mined)	1.04
Technical Services (BRL/t mined)	0.19
Mine Management (BRL/t mined)	0.29
TOTAL 2026 (BRL/t mined)	12.48



Figure 18-3: Mine Operating Costs for Year 2026

18.1.1.1 Diesel Consumption

The costs due to diesel consumption were included in the items of the mine's unit operations, referred to in Table 18-1, Table 18-2, and Table 18-3. Diesel use by mine operation is listed in Table 18-4, consumption by equipment use and type in Table 18-5, and for 8 x 4 Truck use in Table 18-6.

Table 18-4: Diesel Consumption by Category

Operation	Diesel Consumption (L/t mined)
Other	0.01
Geology	0.01
Drilling	0.05
Auxiliary Equipment	0.09
Loading	0.11
Transportation	0.21
TOTAL OPERATION	**0.48**

Table 18-5: Diesel Consumption by Equipment

DIESEL CONSUMPTION BY EQUIPMENT			
Operation	**Equipment**	**Consumption**	**Unit**
Auxiliary Equipment	Motor Grader	25	L/h
Auxiliary Equipment	D6T Tractor	25	L/h
Auxiliary Equipment	D8T Tractor	40	L/h
Transportation	6 x 4 Truck	21	L/h
Transportation	8 x 4 Truck	26	L/h
Rockbreaker	30-ton Hydraulic Excavator	40	L/h
Rockbreaker	50-ton Hydraulic Excavator	48	L/h
Rockbreaker	75-ton Hydraulic Excavator	60	L/h

Table 18-6: Diesel Consumption by Distance Range for 8 x 4 Truck

DIESEL CONSUMPTION BY DISTANCE			
Operation	**Equipment**	**Consumption**	**Unit**
Transportation	From 0 to 250 metres	0.02	L/t
Transportation	From 251 to 500 metres	0.04	L/t
Transportation	From 501 to 750 metres	0.06	L/t
Transportation	From 751 to 1000 metres	0.08	L/t
Transportation	From 1,001 to 1,250 metres	0.10	L/t
Transportation	From 1,251 to 1,500 metres	0.12	L/t
Transportation	From 1,501 to 1,750 metres	0.15	L/t
Transportation	From 1,751 to 2,000 metres	0.17	L/t
Transportation	From 2,001 to 2,250 metres	0.19	L/t
Transportation	From 2,251 to 2,500 metres	0.21	L/t
Transportation	From 2,501 to 2,750 metres	0.23	L/t
Transportation	From 2,751 to 3,000 metres	0.25	L/t
Transportation	From 3,001 to 3,250 metres	0.27	L/t
Transportation	From 3,251 to 3,500 metres	0.29	L/t
Transportation	From 3,501 to 3,750 metres	0.31	L/t
Transportation	From 3,751 to 4,000 metres	0.34	L/t
Transportation	From 4,001 to 4,250 metres	0.36	L/t
Transportation	From 4,251 to 4,500 metres	0.38	L/t
Transportation	From 4,501 to 4,750 metres	0.40	L/t
Transportation	From 4,751 to 5,000 metres	0.42	L/t

18.1.1.2 Manpower

The mine operates through an organizational structure composed of four distinct, coordinated groups termed coordinations, Planning, Mine Geology, Mine Operation, and Infrastructure. These coordinations include a total of 25 employees, including engineers, geologists, technicians, and administrative staff members. The staff is subdivided between administrative assignments and is organized into four shifts, alternating between four days of work and four days of rest.

Critical activities, including loading, transportation, drilling, and auxiliary services, are performed by the outsourced company G3, which relies on a robust staff of 336 employees. The operation follows a cycle of four twelve-hour shifts, alternating between two working days during the day, two days during the night, and four days off.

The blasting operation, in turn, is entrusted to the expertise of the outsourced company Nitronel, with a staff of 20 specialized employees to conduct this important phase of the process.

The outsourced companies operating in the mine are managed by the mine management and work according to the technical assumptions and operations defined by the Aura engineering staff. Mine management is responsible for the overall oversight of operations at the mine, including the coordination of outsourced company activities. The Aura engineering staff plays a key role in defining the technical practices, operating standards, and guidelines that should be followed to ensure safety, efficiency, and environmental compliance.

This approach to manpower was chosen because of the specialization of outsourced companies in specific tasks, while the internal staff focuses on the broader strategic and technical management of the mine.

Manpower costs are included in the items of the mine's unit operations, referred to in Table 18-1, Table 18-2, and Table 18-3.

18.1.2 Plant Operating Costs

The operating costs of EPP Plant are classified into two categories: fixed and variable. Table 18-7 and Table 18-8 show a summary of the cost breakdown for both categories – from 2024 to 2028. Variable costs include inputs, maintenance costs, part of the power cost (real demand consumed), among others. Another part of the power cost is considered fixed, owing to the minimum contracted demand. The average plant operational cost estimate is within the USD 11 - USD 12 range per processed ton (USD/t) therefore consistent with industrial practices for similar operations in terms of design and capacity.

Table 18-7: Fixed OPEX Plant costs breakdown

	2024	2025	2026	2027	2028
Manpower (USD 000)	3,040.00	2,980.42	2,923.11	2,923.11	2,923.11
Contracts (USD 000)*	1,063.08	1,042.24	1,022.20	1,022.20	1,022.20
Contingency (USD 000)	56.40	55.29	54,229	54,229	54,229
Total fixed costs (USD 000)	4,159.52	4,077.96	3,999.54	3,999.54	3,999.54

(*) includes a fixed part of the power supply agreement for the minimum contracted demand.

Table 18-8: Variable OPEX Plant Costs Breakdown

	2024		2025		2026		2027		2028	
	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t	USD (000)	Costs USD/t
Maintenance cost	4,582.40	3.24	4,405.54	3.17	4,478.39	3.11	5,225.64	3.11	4,929.67	3.11
Input costs	5,578.79	3.94	5,363.47	3.86	5,452.17	3.79	6,361.89	3.79	6,001.56	3.79
Power cost (*)	1,566.79	1.11	1,506.32	1.08	1,531.23	1.06	1,786.72	1.06	1,685.53	1.06
Variable contracts	1,163,.60	0.82	1,118.69	0.81	1,137.19	0.79	1,326.93	0.79	1,251.78	0.79
Contingency	-	0.00	-	0.00	-		-		-	
TOTAL VARIABLE COSTS	**12,891.57**	**9.10**	**12,394.02**	**8.93**	**12,598.97**	**8.75**	**14,701.18**	**8.75**	**13,868.53**	**8.75**

(*) includes a fixed part of the power supply agreement for the minimum contracted demand.

18.1.2.1 FIXED PLANT COSTS

The two main components of plant fixed costs are labor and power, the latter referring to the part of the power cost related to the minimum contracted demand sum and consumption amounts in and out of peak hours). Other fixed costs represent minimum sums, such as consulting.

Table 18-9 shows a summary of the total headcount for the EPP Plant. The costs associated to the Chemical Laboratory staff were not included in Table 18-9, as they were associated with General and Administrative Expenses (G&A).

Table 18-9: Total Headcount for EPP Plant – Headcount for 2024 Budget

Position and Assignment	Annual Cost BRL/t fed	Headcount Planning 2024
Plant	**10.89**	**108**
Coordinator	**0.32**	**1**
Maintenance coordinator	0.32	1
Manager	**0.41**	**1**
Beneficiation manager	0.41	1
Operators	**8.59**	**97**
Senior	**0.38**	**2**
Supervisor	**1.18**	**7**
Planning analyst	0.14	1
Junior industrial automation supervisor	0.23	1
Beneficiation supervisor	0.15	1
Electrical maintenance supervisor	0.18	1
Mechanical maintenance supervisor	0.15	1
Mechanical maintenance supervisor	0.15	1
Plant supervisor	0.18	1
Grand Total	**10.89**	**108**

Table 18-10 shows the headcount considering the distribution of labor on a 4x4 shift basis, based on the 2024 budget.

Table 18-10: Headcount in 4x4 Shift Basis for the PPE Plant – 2024 Budget

Position and Assignment	Annual Cost BRL/t fed	Headcount Planning 2024
Plant	**5.12**	**58**
Operators	**4.94**	**57**
Maintenance inspector I	0.08	1
Electrician inspector II	0.12	1
Industrial mechanic II	0.57	7
Heavy equipment operator	0.07	1
Process operator I	1.12	17
Process operator II	0.64	8
Process operator III	0.45	5
Welder II	0.08	1
Process technician	0.36	3
Process technician III	0.10	1
Electrical technician	0.19	2
Electrical technician I	0.10	1
Electrical technician II	0.60	5
Electrical technician III	0.14	1
Instrumentation technician III	0.12	1
Instrumentation technician II	0.09	1
Mechanical technician II	0.10	1

Position and Assignment	Annual Cost BRL/t fed	Headcount Planning 2024
Supervisor	**0.18**	**1**
Plant supervisor	0.18	1
Grand Total	**5.12**	**58**

Table 18-11 shows the headcount considering the distribution of labor on a 5x2 shift basis, also based on the 2024 budget.

Table 18-11: Headcount in 5x2 Shift Basis for PPE Plant – 2024 Budget

Position and Assignment	Annual Cost BRL/t fed	Headcount Planning 2024
Plant	**5.77**	**50**
Coordinator	**0.32**	**1**
Maintenance coordinator	0.32	1
Manager	**0.41**	**1**
Beneficiation manager	0.41	1
Operators	**3.65**	**40**
Junior pcp analyst	0.09	1
Maintenance scheduling assistant	0.07	1
Tooling assistant	0.06	1
Coppersmith III	0.10	1
Maintenance engineer	0.17	1
Process engineer	0.22	1
Electrical engineer	0.25	1
Mechanical engineer	0.22	1
Smelter I	0.09	1
Smelter II	0.10	1
Maintenance inspector III	0.11	1
Lubricator II	0.08	1
Industrial mechanic II	0.47	7
Heavy equipment operator III	0.17	2
Process operator I	0.11	2
Process operator II	0.06	1
Maintenance planner	0.08	1
Maintenance scheduler II	0.08	1
Maintenance scheduler I	0.07	1
Welder II	0.41	6
Mechanical technician II	0.09	1
Process technician III	0.10	1
Electrical technician I	0.08	1
Mechanical technician III	0.08	1
Process technician	0.10	1
Mechanical technician II	0.08	1
Mechanical technician III	0.10	1
Senior	**0.38**	**2**
Senior management analyst	0.15	1
Senior process engineer	0.23	1

Position and Assignment	Annual Cost BRL/t fed	Headcount Planning 2024
Supervisor	**1.00**	**6**
Planning analyst	0.14	1
Junior industrial automation supervisor	0.23	1
Beneficiation supervisor	0.15	1
Electrical maintenance supervisor	0.18	1
Mechanical maintenance supervisor	0.15	1
Mechanical maintenance supervisor	0.15	1
Grand Total	**5.77**	**50**

18.1.2.2 Variable Plant Costs

The variable costs of EPP Plant cover inputs, chemical reagents, maintenance materials, part of the power cost, and service agreements. The power cost and service agreements are presented in the OPEX breakdown table. Variable power costs related to consumption above the minimum contracted demand and consumption in and out of peak hours. Variable service agreements are associated with performance, such as the operation of stored– both in the primary crushing feeding area and in the emergency hopper for grinding feed.

The main inputs of EPP Plant and their relevant specific consumptions and costs are indicated in Table 18-12.

Table 18-12: Specific Consumption of Inputs in EPP Plant

ITEM	Specific Consumption (g/t)	Cost (USD/t)	ITEM	Specific Consumption (g/t)	Cost (USD/t)
Sodium hydroxide	218	0.18	Sodium metabisulphite	61	0.07
Hydrochloric acid	20	0.01	Copper sulphate	20	0.05
Sodium cyanide	367	1.06	Leach aid	1.0	0.02
Flocculant	26	0.13	Activated carbon	60	0.22
Lime	761	0.07	GLP	220	0.28
Grinding media	866	1.39	Mill liners	-	0.87
Other wear materials	-	0.45	Crusher liners	-	0.16

The average plant operational cost estimate is within the USD 11 - USD 12 range per processed ton (USD/t), therefore consistent with industrial practices for similar operations in terms of design and capacity. The breakdown between fixed and variable operating is approximately 25%/75%, therefor typical of a low-cost operation.

18.1.3 G&A Costs

G&A costs were estimated on the basis of the current operation as summarized in Table 18-13.

Table 18-13: G&A Operating Costs

	2024	2025	2026	2027	2028
G&A (USD 000)	9,622	7,276	8,829	8,829	8,829

18.1.4 Exploration Costs

The exploration costs were estimated based on historical costs and the expectation for the coming years, as showed in Table 18-14.

Table 18-14: Exploration Costs

	2024	2025	2026	2027	2028
Near Mine Exploration (USD 000)	3,40	1,649	2,474	2,695	599
Regional Exploration (USD 000)	1,218	898	1,762	1,322	-

18.1.5 Care and Maintenance Costs

Care and maintenance costs were estimated on the basis of the current operation as summarized in Table 18-15.

Table 18-15: Care and Maintenance Costs

	2024	2025	2026	2027	2028
Care and Maintenance (USD 000)	760	478	593	593	593

18.1.6 Selling Costs

The selling costs were estimated on the basis of the unit cost and the yearly estimated production as shown in Table 18-16.

Table 18-16: Selling Costs

	2024	2025	2026	2027	2028
Transportation and Bullion Insurance (USD 000)	1,253	824	1,084	1,598	1,613
Royalties (USD 000)	2,482	1,575	2,226	3,325	3,314

18.2 CAPEX

18.2.1 Plant Capital and Sustaining Costs

The Table 18-17 shows the estimated Capital costs (CAPEX) for the Plant. The installation of an intensive leaching reactor was included, together with the replacement of the interstage sieves due to the increase in the feed rate of the leaching circuit (CIL).

Table 18-17: Estimated Capital Costs of the Plant to Meet LOM

	2024	2025	2026	2027	2028
Miscellaneous projects	300	294	288	288	288
Additional leaching reactor	-	980	-	-	-
New interstage screen	700	-	-	-	-

The modification of EPP Apoena crushing circuit is currently being studied, involving a new primary crusher, together with, the installation of a conical crusher and a screen. The purpose of crushing expansion is to further increase the fragmentation of the SAG mill fresh feed, together with separating a specific size fraction, the latter consisting of low grade and relatively hard

material. The modified crushing plant will thus generate waste material, as well as a finer SAG mill fresh feed as compared to the current one. Such an aspect was detailed addressed in Section 13.5 of Chapter 13. The investment predicted in the Scope Study for the described modification was, BRL 20.6 million with a contingency between +30% and -20%.

CAPEX was not considered for the purchase of mine equipment, as the entire operation is outsourced. CAPEX was considered as sustaining of BRL 1.97 per tonne mined.

Mine Closure costs were not considered as part of the CAPEX and OPEX for all of Aura's assets.

19 ECONOMIC ANALYSIS

The economic analysis, for the EPP Project, is based on Mineral Resources and Mineral Reserves data, including annual mining scheduling, previously presented in this TRS. The economic analysis result is subject to known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from them. Information that this analysis is based upon are listed below:

- Mineral Resource Estimates.
- Assumed gold prices, Assumed currency exchange rates based on Focus Report by Central Bank of Brazil.
- The proposed mine production plan.
- Projected mining and process recovery rates.
- Fixed installed processing plant capacity.
- Assumptions as to closure costs and closure requirements.
- Assumptions regarding environmental, permitting, and social risks.
- Changes to costs of production from what is assumed.

This analysis is not based on:

- Unrecognized environmental risks.
- Unanticipated reclamation expenses.
- Unexpected variations in quantity of mineralized material, grade or recovery rates.
- Geotechnical or hydrogeological considerations during mining being different from what was assumed.
- Unexpected variations in quantity of mineralized material, grade, or metallurgic recovery and plant recovery efficiency.
- Assumptions regarding geotechnical or hydrogeological conditions during mining.
- Failure of mining methods to operate as anticipated.
- Failure of plant, equipment, or processes to operate as anticipated.
- Accidents, labour disputes, and other mining industry risks.
- Changes to tax rates.
- Assumption of a commercial discounts in the financial analysis.

19.1 Methodology

An economic model was developed to estimate annual post-tax cash flow and sensitivities analysis of the Project based on an assumed 10% discount rate. The capital and operating cost estimates were summarized in Section 18 of this TRS. The economic analysis has been run with no inflation.

The economic analysis was performed using the following assumptions:

- Year 0 is based on January, 2024.
- LOM of 4 yearly feed rate.
- Price inflation and escalation factors are ignored (constant dollar basis).
- Results are based on 100% ownership, under 100% equity assumption basis.
- Project revenue is derived from the sale of gold produced.
- All the production is exported.

19.2 Exchange Rate Forecast

The exchange rate used for the economic analysis was of based on Focus Report of Central Bank of Brazil issued on March 8, 2024 (Table 19-1).

Table 19-1: Exchange Rate

Assumptions	2024	2025	2026	2027	2028	2029
Exchange Rate (BRL/USD)	4.93	5.00	5.04	5.10	5.10	5.10

19.3 Taxes

Taxes due were estimated by applying existing tax laws to revenues associated with Complex production.

19.3.1 Financial Compensation for the Exploitation of Mineral Resources (CFEM)

The CFEM tax is a federal royalty paid to the Government of Brazil for the extraction and economic exploration of Brazilian mineral resources. The tax rate varies between 1 to 3% depending on the type of mineral product and is applied to the net revenues. For gold, the tax rate applied is 1.5%.

19.3.2 Income Tax

The income tax (Imposto de Renda sobre Pessoa Jurídica) applies to the profit earned by companies and other legal entities. It is calculated based on the accounting result determined by the legal entity at the end of a reporting period, such as a quarter or fiscal year. In Brazil, the corporate income tax rate for companies taxed under the Actual Profit (Lucro Real) regime is 15% of taxable income, with the possibility of an additional 10% on the portion of profit that exceeds the calculation base of BRL$20,000/month or BRL$240,000/year.

19.3.3 Social Contribution

The Social Contribution tax is directed to finance social security matters, which encompasses health, social security, and social assistance. The tax rate is 9% and it is also applied to the earnings before income taxes.

19.3.4 Tax for the Control, Monitoring, and Supervision of Research, Mining, Exploration, and Exploitation of Mineral Resources (TFRM)

The financial model includes TFRM tax due in Mato Grosso State. This tax is charged on the Run of Mine (ROM) production. The tax rate is BRL$ 2,66 per ton of ROM.

19.3.5 PIS, COFINS and ICMS

The PIS (Social Integration Program) and COFINS (Contribution for Social Security Financing) rates are social contributions levied on the gross revenue of companies in Brazil. These contributions have variable rates depending on the tax regime adopted by the company.

On the other hand, ICMS (Tax on Circulation of Goods and Services) is a Brazilian State tax that applies to the circulation of goods, interstate and intermunicipal transportation, communication, and services. The ICMS rate also varies according to each Brazilian state and the type of product or service.

PIS, COFINS, and ICMS are considered value aggregate taxes based on Brazilian tax law. The taxes paid for these concepts may be creditable when the project is in commercial operation.

The financial model does not consider these taxes because these taxes do not apply to exports.

19.4 Royalty Right

According to the earn-in agreement with the concessions' owners, there is a royalty right to be paid by Aura to the owners, a 0.5% of the NSR based on production from Lavrinha, Nosde and Pombinhas. Another royalty right to be paid by Aura to the Irajá, company also linked associated to Santa Elina Group, a 2.0% of the NSR based on total production.

19.5 Working Capital

A high-level estimation of working capital was incorporated into the cash flow based on accounts receivable (30 days), inventories (30 days), and accounts payable (30 days).

19.6 Closure Costs, Remediation Cost and Salvage Value

Aura has already the Conceptual Mine Closure Plan, which includes an assessment of activities necessary to minimize the impacts associated with the closure phase of the activity. The closure project costs are estimated at US$0,54 million for the Ernesto unit and US$12.72 million for the Pau-a-Pique unit. These costs were revised according to a balance carried out by the company's financial sector. The cost model assumes some expenses related to the elaboration of mine closure executive projects, degraded area recovery projects (PRAD), PRAD execution, decommissioning of structures, and other executive activities necessary for closure.

19.7 Results

19.7.1 Discounted Cash Flow

A simplified discounted cash flow base was developed to assess the Project based on economic-financial parameters, the results of the mine scheduling, sustaining and OPEX estimates are listed in Table 19-2. The base case estimates a post-tax NPV of US$91.38 million at a discount rate of 10% per year. The complete cash flow is provided in Table 19-3.

Table 19-2: Simplified Discounted Cash Flow Results (Post-Tax)

Initial Capex (million US$)	-
IRR (%)	N/A
Payback	N/A

Initial Capex (million US$)	-
Net Present Value Discounted at 10% (million US$)	91.38 million

Table 19-3: Cash Flow

Description	Unit	Total	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
			-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ROM (High-grade)	Mt	2.770,30				298,70	96,20	330,60	2.044,80	-	-																
Waste	Mt	51.828,92				12.201,6	16.810,92	17.833,31	4.984,07	-	-																
Strip Ratio		42,23				6,85	20,68	13,15	1,55	-	-																
Grade						0,74	0,69	0,76	1,08	-	-																
Production	kOz	223,69				41,70	26,61	32,81	54,77	55,35	12,45																
Gold Price	US$/oz	11.062,0				1.910,00	1.876,00	1.819,00	1.819,00	1.819,00	1.819,00																
Refining	R$/Oz	7,86				1,31	1,31	1,31	1,31	1,31	1,31																
Refining Cost	US$ 000	58,06				11,08	6,97	8,53	14,07	14,22	3,20																
Gross Revenue		**412,20**				**79,64**	**49,91**	**59,69**	**99,63**	**100,68**	**22,65**																
Revenue Deductions	%	0,00%				-	-	-	-	-	-																
Net Revenue		**412,20**				**79,64**	**49,91**	**59,69**	**99,63**	**100,68**	**22,65**																
Opex	M US$	113,51				22,06	19,69	20,56	25,25	24,47	1,48																
Mine Cost		0,15				0,04	0,04	0,05	0,02	-	-																
Plant Cost		86,69				17,05	16,47	16,60	18,70	17,87	-																
Logistics		26,67				4,97	3,17	3,91	6,53	6,60	1,48																
Gross Profit		**298,69**				**57,58**	**30,22**	**39,13**	**74,38**	**76,21**	**21,16**																
SG&A	M US$	44,12				9,62	7,28	8,83	8,83	8,83	0,74																
Royalties - OPEX		8,96				1,73	0,91	1,17	2,23	2,29	0,63																
Care and Maintenance		3,07				0,76	0,48	0,59	0,59	0,59	0,05																
CFEM		6,18				1,19	0,75	0,90	1,49	1,51	0,34																
TFRM		1,45				0,16	0,05	0,17	1,07	-	-																
EBTIDA		**234,91**				**44,12**	**20,76**	**27,46**	**60,17**	**62,99**	**19,40**																
Margin EBTIDA	%					0,55	0,42	0,46	0,60	0,63	0,86	-															
Depreciation	M US$	13,45					0,36	1,54	1,92	3,07	3,46	3,10															
Operational Result - EBIT		**221,46**				**44,12**	**20,40**	**25,93**	**58,25**	**59,92**	**15,94**	**-3,10**															
IRPJ	M US$	56,14				11,03	5,10	6,48	14,56	14,98	3,99	-															
CSLL		20,21				3,97	1,84	2,33	5,24	5,39	1,44	-															
Operating Profit		**145,11**				**29,12**	**13,47**	**17,11**	**38,44**	**39,54**	**10,52**	**-3,10**															
EBIT	M US$	**221,46**				**44,12**	**20,40**	**25,93**	**58,25**	**59,92**	**15,94**	**-3,10**															
(+) Depreciation		**13,45**				**-**	**0,36**	**1,54**	**1,92**	**3,07**	**3,46**	**3,10**															
(=) EBTIDA		**234,91**				**44,12**	**20,76**	**27,46**	**60,17**	**62,99**	**19,40**	**-**															
(-) Capex		**17,29**				**1,80**	**5,88**	**1,92**	**5,77**	**1,92**	**-**	**-**															
(-) ARO Ernesto		**12,72**	**0,33**			**-**	**9,00**	**0,64**	**0,44**	**0,42**	**0,42**	**0,42**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,10**	**0,03**	**0,03**
(-) ARO Pau-a-Pique		**1,57**		**0,84**	**0,19**	**0,08**	**0,06**	**0,06**	**0,06**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,02**	**0,01**	**0,01**			
(+-) Working Capital		**-**																									
(-) IR		**76,35**				**15,00**	**6,94**	**8,82**	**19,80**	**20,37**	**5,42**	**-**															
(+) Salvage Value		**-**																									
(=) Cash Flow		**126,64**	**-0,33**	**-0,84**	**-0,19**	**27,24**	**-1,12**	**16,02**	**34,09**	**40,26**	**13,54**	**-0,44**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,11**	**-0,11**	**-0,10**	**-0,03**	**-0,03**
(=) Accumulated Cash Flow (ACF)		**2.472,06**	**-0,33**	**-0,84**	**-0,19**	**27,05**	**25,93**	**41,95**	**76,04**	**116,30**	**129,84**	**129,40**	**129,28**	**129,16**	**129,04**	**128,92**	**128,79**	**128,67**	**128,55**	**128,43**	**128,31**	**128,19**	**128,08**	**127,97**	**127,87**	**127,84**	**127,81**
(=) Cash Flow (CF) pre-tax		**202,99**	**-0,33**	**-0,84**	**-0,19**	**42,24**	**5,82**	**24,84**	**53,90**	**60,63**	**18,96**	**-0,44**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,12**	**-0,11**	**-0,11**	**-0,10**	**-0,03**	**-0,03**
(=) Accumulated Cash Flow (ACF) pre-tax		**3.959,17**	**-0,33**	**-0,84**	**-0,19**	**42,05**	**47,86**	**72,70**	**126,60**	**187,23**	**206,19**	**205,75**	**205,63**	**205,51**	**205,39**	**205,27**	**205,14**	**205,02**	**204,90**	**204,78**	**204,66**	**204,54**	**204,43**	**204,32**	**204,22**	**204,19**	**204,16**

19.8 Sensitivity Analysis

The sensitivity analysis was undertaken to evaluate the impact of the resulting economic indicators for the following attributes, within the cash flow: Price, discount rate, CAPEX, OPEX, and exchange rate. The first four attributes were evaluated by varying their value from 80 to 120%, while discount rate was evaluated varying its value from 8 to 12% (Figure 19-1).

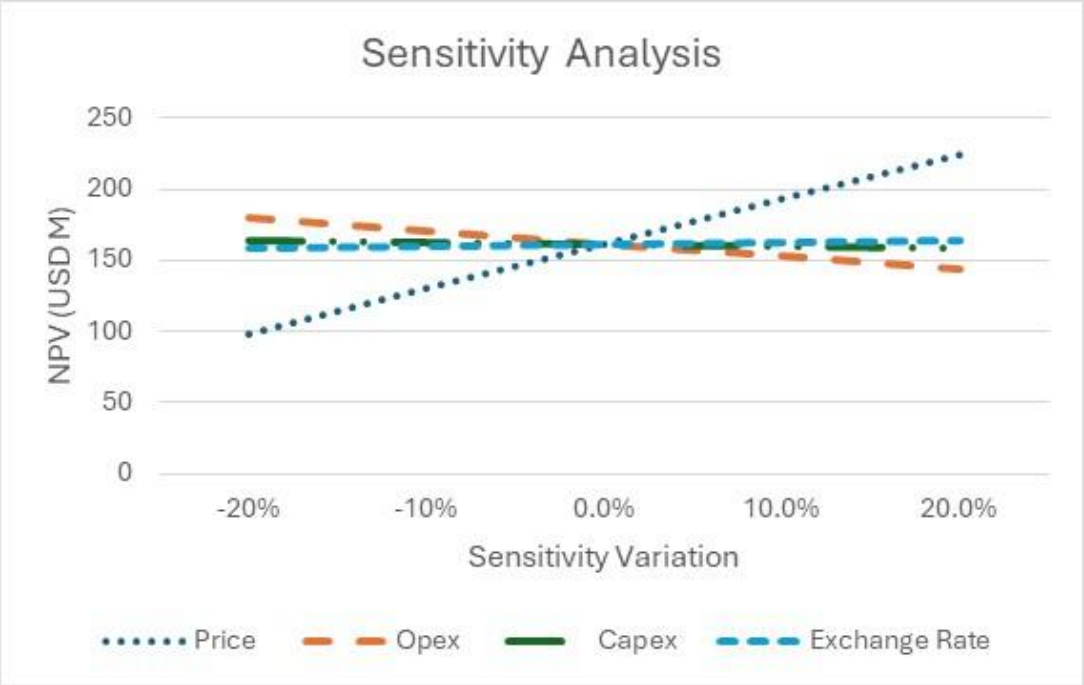


Figure 19-1: Sensitivity Analysis

The sensitivity analysis showed that the EPP Project is most vulnerable to volatility and uncertainties associated with the gold selling price, followed by the OPEX costs.

20 ADJACENT PROPERTIES

Not applicable.

21 OTHER RELEVANT DATA AND INFORMATION

Not applicable.

22 INTERPRETATION AND CONCLUSIONS

22.1 Geology, Exploration and Drilling

The geological layout of the Ernesto, Nosde and Lavrinha deposits is subdivided into 7 lithological domains from which two of them are mineralized. The mineralized domains are Metarenites of Bonus and Upper Traps and schists of Upper Trap.

Exploration and drilling at near mine targets in Apoena continued to deliver significant growth and extension of LOM. The recent drilling campaigns incorporate approximately 53,315 metres of both expansion and infill drilling between 2022 and 2023, focused primarily on the Lavrinha and Nosde Mines.

Gold mineralization in Apoena mines and surrounding areas occurs in four zones, which consists of the Lower Trap (Ernesto mine), Middle Trap (Ernesto mine and Ernesto connection deposit), Upper Trap (Lavrinha and Nosde Mines) and Bonus Trap (Nosde Mine).

The Upper Trap is widely developed in the Lavrinha and Nosde deposits and occurs in metapelitic rocks (hematite sericite schist) in dilation zones of the intensely deformed synclinal troughs. The Upper and Middle Traps share similar alteration and mineralization suites between the two deposits, though the Upper Trap seems to be eroded in the Ernesto deposit area.

Aura's recent exploration successfully confirmed the connection of the Upper Trap zone between the Nosde and Lavrinha mines and added additional resources to the Mineral Resources inventory at Apoena. At the Nosde mine, infill drilling successfully converted Mineral Resources, and tested the continuity of mineralized bodies at 300 and 450 metres (Middle and Lower Traps, respectively), confirming an average depth of 380 metres. The exploratory holes in the connection region between the Nosde and Lavrinha pits provided better understanding of local mineralization. Infill drilling at Lavrinha successfully converted Mineral Resources in the central area and NE ends of the pit and exploratory drilling tested and successfully confirmed the extent of the mineralized bodies at depth and between the Lavrinha and Nosde deposits.

Aura has had an on-going exploration program on regional targets since 2017 which resulted in some success in identifying similar deposits that can have potential ore feed into the existing process plant. The exploration and economic evaluation of these deposits continue throughout of coming years to extend the Life of Mine in Apoena.

22.2 Database, Sampling, QAQC and Data Verification

The verification of the drill databases conducted within AcQuire database management system (both at mine site and in corporate level) in preparation of the mineral resource estimates presented in Section 11 have shown the data to be reliable and accurate.

Apoena had a QA/QC protocol that met industry best practices using standards, blanks and, duplicates as well as a primary and a secondary lab. The Au analyte shows good results of the

data, in general, the accuracy for low, medium, and high-grade standards is observed near the reference value.

The quality of the blanks sampling was satisfactory, indicating that contamination during sample preparation is not a problem in SGS and EPP Laboratories. However, blank samples need to contain a very low or undetectable concentration of gold to ensure that there is no contamination during sample preparation or analysis which was observed during 2019, but then mitigated.

Analytical results showed that the reproducibility of gold analyse (field duplicates) is not as good, due the characteristics of the deposit or the analytical methods used. The increasing number of duplicate samples (from core, coarse rejects and pulps) to better evaluate the reproducibility should be considered in next drilling campaigns.

The qualified person therefore considers that the data collected and prepared by Apoena Mines team is adequate for the estimation of mineral resources in accordance with S-K 1300 definitions and guidelines.

22.3 Mineral Resources

The detailed geological interpretations made in support of Mineral Resource Estimation. The Mineral Resource Estimation for the Project incorporates industry-accepted practices and meets the requirements of the S-K 1300 guidelines. Apeona technical staff perform annual updates to the mineral resource model including information from infill drilling, blast hole data, and pit mapping. Interpreted wireframes for lithology and alteration were used to code the block model. Gold grades were estimated using OK method. Validation has been done using NN and ID methods as well. Estimated block grades were classified into Measured, Indicated and Inferred categories based on mineralized continuity and drill hole spacing.

Apoena mining team generated a conceptual pit shell to demonstrate reasonable prospects of eventual economic extraction. As of the effective date of this TRS, the Pau-Pique mine is in care and maintenance, the Japonês mine is depleted and the remaining Mineral Resources are not material to the operation. The remaining Ernesto Mineral Resource and Underground opportunities in Ernesto need detailed and separate technical study at the PEA level.

There is minimal risk associated with the resource statement and if there is any, is related to local variation of tonnages and grade. Local variation of tonnages perhaps will be more evident through mine operation as the mine will produce a considerable volume of low-grade materials from halo around shear zones which are excluded from ore models.

Measured and Indicated Mineral Resources also continue to increase, now at 478,000 oz of contained gold after 2023 depletion (Table 22-1).

The current LOM in Apoena is supported mainly by Mineral Resources and contains metal in the Nosde and Lavrinha deposits.

Areas of uncertainty that may materially impact the Mineral Resource Estimate include:

- Changes to the long-term gold price.
- Modifications to geotechnical parameters.
- Changes to metallurgical recovery assumptions.
- Changes to environmental, permitting, and social license assumptions.

Table 22-1: Combined Mineral Resources of Apoena Mines

Apoena Resources 2023			
Measured	**Tonnes (t)**	**Au (g/t)**	**Contained Au oz**
Lavrinha	231 684	0.89	6 661
Ernesto	0	0.00	0
Ernesto-Lavrinha Connection	0	0.00	0
Pau-A-Pique	242 180	3.19	24 850
Japonês	0	0.00	0
Nosde	2 322 823	0.75	56 062
Total Measured	**2 796 687**	**0.97**	**87 573**
Indicated	**Tonnes (t)**	**Au (g/t)**	**Contained Au oz**
Lavrinha	857 797	1.10	30 250
Ernesto	427 100	2.11	24 720
Ernesto-Lavrinha Connection	1 232 480	1.18	46 840
Pau-A-Pique	601 660	2.71	52 450
Japonês	215 325	1.40	9 690
Nosde	6 780 515	1.04	226 133
Total Indicated	**10 114 878**	**1.20**	**390 083**
Total Measured & Indicated	**12 911 565**	**1.15**	**477 656**
Inferred	**Tonnes (t)**	**Au (g/t)**	**Contained Au oz**
Lavrinha	213 390	1.37	9 382
Ernesto	542 000	1.94	33 760
Ernesto-Lavrinha Connection	99 037	0.87	2 770
Pau-A-Pique	71 330	2.47	5 660
Japonês	4 370	1.37	190
Nosde	194 516	1.33	8 305
Total Indicated	**1 124 643**	**1.66**	**60 067**

Notes:
1. Mineral Resources are reported based on the Annual Information Form for the year ended December 31, 2022, dated as of March of 2023 except for Nosde, Lavrinha, and Ernesto mines,
2. Mineral Resources for Ernesto mines are reported minus 2023 depletion,
3. Surface Topography Surface Topography as of October 31, 2023, for Nosde and Lavrinha and as of December 31, 2023, for rest of the mines,
4. The Mineral Resources Estimate was prepared under the supervision of Farshid Ghazanfari, P. Geo., a Qualified Person as that term is defined in S-K 1300.

22.4 Mineral Processing and Metallurgical Testing

The tests that supported the process design for the Feasibility Study (FS) produced by Ausenco in 2010, were conducted on typologies of mineralized bodies known as Ernesto and Japonês. For the Ernesto samples (Lower and Upper Trapp) the average levels obtained were between 4 g/t and 6 g/t of gold (Au). For the Japonês samples, the average gold content was around 1 g/t, with a strong nugget effect. In all the tests, a strong contribution of the gravity concentration was

confirmed. The same trend was obtained for the samples representing the Pau-a-Pique underground mine. The ore types tested were metarenite, metaconglomerate and quartz veins. The average gravity gold recovery was greater than 68%. Cyanidation tests, carried out on rolling bottles, showed gold recoveries greater than 97%.

In the 2010 FS it was assumed a plant feed grade of 3 g/t Au, for a plant throughput of 1 Mtpa and global average Au recovery of 95%. The processing route considered gravity concentration followed by leaching the concentrate in an intensive leaching reactor, whose rich liquor diverted to electrolysis and smelting of the cathode concentrate. The gravity concentration tailings, together with the single-stage SAG grinding circuit product at P80 of 0.106 mm is directed to leaching in tanks in an LCIL configuration, followed by elution, electrolysis and smelting. The processing route also considered the treating the residual cyanide occurring in the final tailings and its deposition in a dam - in accordance with environmental standards and the Cyanide Code.

The EPP plant operated between 2013 and 2014, with ROM content between 0.80 and 1.33 g/t of gold and recoveries between 80% and 97% of the gold contained. The difficulties in planning and mining control ended up in the interruption of operations.

New tests were conducted for the resumption of the operation, including studies for the new ore body - Lavrinha. The tests indicated high metallurgical performance of the Lavrinha ore with recoveries close to 94% of gold. However, the presence of sericite shale and milonite in the Ernesto Lower Trapp ore type indicated lower levels of gold recovery, due to the lower contribution of gravity gold. Other softer ore types than metaconglomerate resulted in estimations of 250 tph of mill throughput.

In the period between 2025 and 2028, the L.O.M. indicates that mining will be concentrated in the Ernesto and Nosde pits, where predominates metaconglomerate, metarenite and quartz veins ore types with significant incidence of gravimetric gold. Based on metallurgical testing and reconciliation, the gold recovery predicted for this period in the industrial plant is 93.5%.

A Scope Study is underway consisting of a pre-concentration stage comprising of a secondary crushing and screening. The characterization and testing indicated that the screen oversize represented 30% of the feed at a 0.20 g/t of Au. Due to the relative low grade and below 70% gold recovery such a fraction would be disposed off, while the screen undersize would feed the grinding circuit. Other benefits associated to the modified crushing circuit were the increase of more than 20% in the milling capacity and in the gold recovery of the plant. The estimated 25% reduction in processing costs will modulate the cut-off grade. Depending upon the ore type, the processing plant throughput is predicted to exceed 200 tph.

22.5 Mineral Reserves

22.5.1 Costs

The mining costs used for reserve definition, both for ore and waste, are highly robust and up-to-date. These are costs of outsourced operations with contracts based on 2023, encompassing the operation of production equipment, drilling, and rock blasting.

22.5.2 Long-Term Resource Model

The long-term model used as a basis for reserve calculation has been updated through a campaign with reverse circulation drilling and classified almost entirely as measured and indicated resources, necessary for the calculation of proven and probable reserves. In other words, the model is robust for reserve calculation.

22.5.3 Geotechnics

The geotechnical assessment of the deposit is consistent for defining the mining sequence and final pit design. The work was developed by the Geotech company, generating a sectorized geotechnical model in 6 areas, based on geological, lithological, and structural information of the rock mass.

22.6 Environmental, Permitting and Social Considerations

The Ernesto and Pau-a-Pique Complex is a duly licensed operating project that contributes to socioeconomic development through the generation of jobs and income, tax collection, and performs socio-environmental programs and sustainable efforts, maximizing the benefits of sustainable mining.

The Ernesto target is drained mainly by the Lavrinha and Cágado Streams, with some tributaries of these drains under the direct influence of the enterprise area. In Pau-a-Pique, the main watercourse that has a direct influence on the extraction processes is the Corridor Stream.

The relief is characterized as wavy to strongly wavy, with a low degree of dissection. In the areas of influence, slopes covered by undergrowth, shrubs, and/or trees are identified. However, with several locations of exposed soil, revealing a high degree of landscape change.

Based on the diagnosis, the land of the Ernesto complex is susceptible to the occurrence of events of surface dynamics triggered naturally or by the action of man. The predominant soils are easily disaggregated and carried, being more prone to surface erosion. In the survey carried out at the Pau-a-Pique Mine, the studies demonstrated the high susceptibility to the occurrence of surface dynamics processes, such as erosion and silting.

It is important to note that the project does not affect areas protected by law. The Aura Apoena unit is inserted in the transition area between the Amazon and Cerrado biomes, with the predominance of Cerrado and Anthropic Field vegetation being observed in the areas of influence.

Some animals found in the environmental diagnosis belonged to the group of endangered species, including the Giant Anteater (Tamanduá-bandeira), Three-banded Armadillo (Tatu-bola), Maned Wolf (Lobo-guará), and Cougar (Onça-parda). As a measure of environmental control and monitoring, the company monitors these and other species through semi-annual campaigns, where the appearance of the individuals mentioned is observed.

It should be noted that this is a project that has already been in operation since 2012, with the implementation of environmental control actions and in accordance with current environmental laws. Thus, the environmental feasibility of operating the mining activity is proven and supported by the effective Operating License issued by the State Secretariat for the Environment of Mato Grosso.

for the expansion of the pit to fully utilize the entire mineral resource, there is an exclusive need to comply with the requirements of current legislation, which include specific technical studies such as forest inventory, respective compensation proposals, and other procedures to obtain the necessary authorizations.

Aura has already the Conceptual Mine Closure Plan, which includes an assessment of activities necessary to minimize the impacts associated with the closure phase of the activity.

22.7 Economic Analysis

Based on economic-financial parameters and products generation, discounted cash flow scenario was developed to assess the Project. As the project do not need a plat construction neither a mine development, none amount of CAPEX was considered. The Project estimates an NPV (7%@10%) for Aura of US$ 91.28 million.

The economic model for the Project demonstrates that under the current set of economic assumptions the Project provides a robust positive post-tax Net Present Value (NPV). Thus, it can be concluded that the Project is economically viable under the base case technical, legal and economic parameters presented in this TRS. GE21 developed the TRS using S-K 1300 guidelines for the reporting of Mineral Resources and Mineral Reserves.

23 RECOMMENDATIONS

23.1 Exploration

In terms of exploration, Aura strongly believes that there is an exploration upside in the Project area to expand and improve the Mineral Resources, and consequently, the future Project's Life of Mine (LOM). Aura has 296,796 hectares along a 200 km trend, which represents a dominant land position controlling most of the belt, and an excellent opportunity for growth.

Surface sampling and mapping was completed further north of JPW, Cantina, Pombinhas, GP targets and BP anomaly to better define the near mine/regional potential. Aura completed 107 km of a ground magnetic survey and 10.5 km of IP ground survey. Results indicated new mineralization potential zones.

Continued exploration and drilling are recommended for the expansions of current mines and near mine targets to further delineate mineralization in the area. This recommendation is summarized in Table 23-1 which lists the type of work recommended and the expected costs involved as a proposed exploration budget next 3 years.

Table 23-1: 3 Years Proposed Exploration Budget

Activity EPP	Type	Estimated Cost (US$)	DD Drilling (m)
Near mine: Infill + Extension + Exploration Drilling in Nosde, Lavrinha and Ernesto mines: Extension and infill of mineralization delineated by historical drilling. Infill drilling of Pombinhas/JPW targets (step 2)	ADVANCED	15,000,000	50,000
Guaporé Disctric: Geological Mapping and surface Sampling following by exploration drilling in other early-stage gold target within Aura mineral rights / Concession holding costs	EARLY STAGE	4,000,000	15,000
TOTAL		**19,000,000**	**65,000**

23.2 Sampling, Security and QAQC Measures

- Apoena core shack is in desperate need of expansion in it is size and capacity to store any future drilling core boxes. The expansion should not be short-sighted as increases to the LOM, resulting in more drilling, and exploration drilling, requires additional core boxes from current or future drilling campaigns.
- Apoena core shack needs more space in storing and keeping all existing and future pulps from exploration drilling. All pulps from mined-out deposits as well as mines in operation, and current and future exploration targets need to be stored properly in dry and separate rooms. All pulps need to be easily accessible.
- Coarse rejects can be discarded for all mined-out deposits and after six months for deposits and mines that are subject to the current TRS. All coarse rejects from targets and deposits that are not subject to this TRS need to be kept in a dry location in the core shack facility area.

- Additional duplicate samples need to be collected especially for deposits such as Nosde, which has a high nugget effect, to understand the distribution of nuggets and its effect on gold grade distribution.
- Six percent of assay results reported by the SGS Lab returned with re-assays due to discrepancies in the results found. This fact may be associated with the presence of Coarse Au in the samples. Consider using a Screen-fire assay for high-grade checks.
- All the CRM used in the EPP Project are provided by Geostatys, consider reviewing the matrix of standards and purchasing the standards from other providers.
- Acquiring a set standard close to the matrix of mineralization and lithology of host rocks specifically for the Nosde and Lavrinha deposits and all other exploration targets.
- It's recommended to carry out a check using screen-fire assay to verify the effect of coarse gold on selected duplicate samples using coarse reject material.
- Apoena needs to send more samples for re-assaying to the external secondary laboratory (besides SGS) for data verification purposes. Ideally, these selected samples need to be analyzed by the EPP local lab, SGS, and a secondary lab in Brazil or Canada.
- Additional QAQC measures are recommended for local mine site laboratories as well including different internal standards than field Geostat standards.
- Consider including a Fine blank as CRM, since the unique blank used in the Project is coarse and also is not certified.

23.3 Database and Logging

- With the improvement of the logging facility in Apoena, the entire logging process needs to be automated and use state-of-the-art technology that was introduced to the Mine.
- Database management needs to gradually move from Corporate to Apoena database representative with monthly validation of underlying data.

23.4 Mineral Resource Estimation

- The Apoena team needs to pay more attention to details of the Mineral Resources Estimation practice and also implement fully Best Practices from data collection to Mineral Resource Estimation. Hiring a dedicated Resource Geologist is recommended.
- Nosde and Lavrinha's new Mineral Resources need to be updated with all pending assay information that is available in 2023 and 2024.
- Additional Infill drilling is required to further delineate the Mineral Resources between Nosde and Lavrinha Mines to unlock more resources.
- To increase the LOM, additional drilling and Mineral Resource estimation are required for near mine targets such as Pombinhas and Japonês W.
- Pau-a-Pique mine needs to go under a detailed geotechnical and geological study to revaluate the possibility of re-opening the mine.
- New Mineral Resources need to be established for Ernesto's underground potential based on the new cut-off grade to evaluate economic potential considering inferred Mineral Resources.
- A probabilistic grade model needs to be created to define blocks that showed some degree of certainty of being mineralized for deposits that are part of LOM (specifically for Nosde Bonus Trap).

23.5 Mining Method

23.5.1 Short-Term Model

The short-term model should be developed for a mining horizon projected over 3 months (1 quarter) and updated monthly. Sampling should be conducted (metre by metre) through reverse circulation drilling on a 15m x 30m drilling grid, supplemented with sampling using conventional drills on a 5m x 5m grid.

23.5.2 MSO

For mining sequencing with monthly horizons and annual budget definition, DTM recommends the use of the "Datamine MSO" tool, with dimensions to be validated by the technical team of Apoena.

MSO is the smallest solid to be mined compatible with the excavation equipment used. The solid generated by this tool includes planned dilution and recovery in the mining process intrinsic to the calculation of gold grades. In this process, dilution will be a cross-dilution between high-grade, medium-grade, and low-grade, as these ore types are adjacent.

23.5.3 Release vs. Rock Blasting vs. Reconciliation

For defining the solid to be released for mining, DTM recommends the use of the "Datamine MSO" tool. This solid should be designed through an analysis of the rock blasting to be carried out and will be classified based on typology between low-grade, medium-grade, and high-grade.

The result of the operation using releases will serve as the basis for the reconciliation process of mine operations and mine to plant. The reconciliation process suggested by DTM is a proactive reconciliation process already implemented at Mineração Apoena.

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25 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This TRS has been prepared by GE21. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to the QPs at the time of preparation of this TRS.
- Assumptions, conditions, and qualifications as set forth in this TRS.
- Data, reports, and other information supplied by Aura and other third-party sources.

The QPs have assumed and relied on the fact that all the information provided in existing technical documents listed in the References section of this TRS are accurate and complete in all material aspects. Although the Authors have carefully reviewed all the available information presented, the Authors cannot guarantee its accuracy and completeness. Information regarding the ownership, operating licenses, permits, and work contracts was provided by Aura and Apoena. The information presented regarding the tenure, status, and work permitted by permit type is based on information published by the National Mining Agency of Brazil as of the effective date, October 31st, 2023.

The QPs have relied on Aura for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from EPP Project in the Executive Summary and Section 19.

The QPs have taken all appropriate steps, in their professional opinion, to ensure that the above information from Aura is sound.