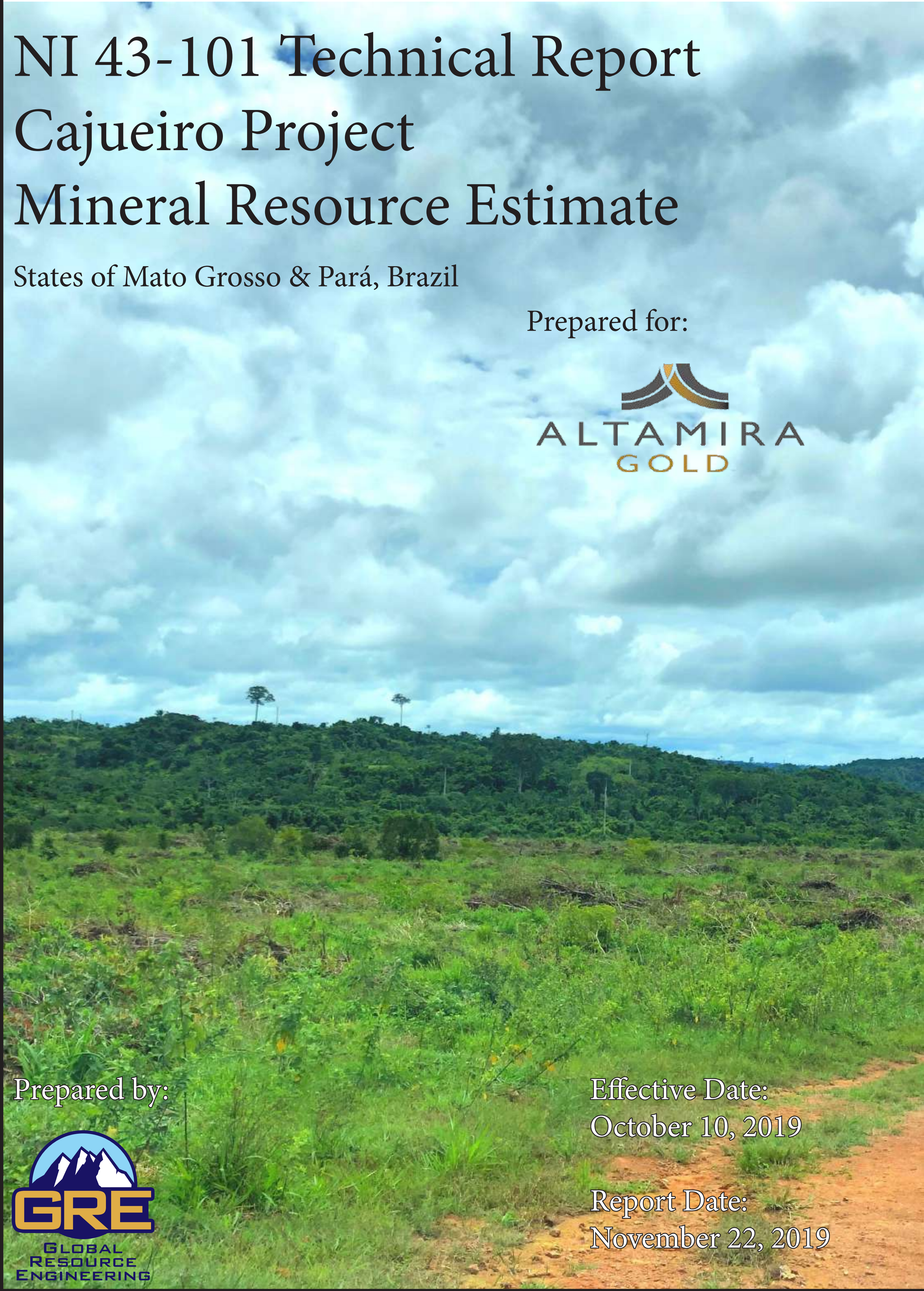
NI 43-101 Technical Report
Cajueiro Project
Mineral Resource Estimate

States of Mato Grosso & Pará, Brazil

Prepared for:

ALTAMIRA GOLD



Cajueiro Project

Prepared by:

GRE Global Resource Engineering

Effective Date:
October 10, 2019

Report Date:
November 22, 2019

Kevin Gunesch, PE; Hamid Samari, QP-MMSA; Todd Harvey, QP-MMSA

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1.0 Summary

1.1 Introduction

Altamira Gold Corp. (Altamira) retained Global Resource Engineering Ltd (GRE) in mid-2019 to complete an updated mineral resource estimate for their Cajueiro Project. The property is located near the town of Alta Floresta spanning the border of the states of Mato Grosso and Para in central Brazil. In April 2016, Equitas Resources Corp. (Equitas) acquired Alta Floresta Gold with 100% interest in Cajuerio. In April 2017, Equitas changed their company name to Altamira Gold Corp. Local operations are conducted by Alta Floresta Gold Mineração Ltd. (AFGM), the Brazilian operating company.

The most recent previous technical report on Cajueiro was completed by Gustavson Associates, LLC (Gustavson) in March 2016. Additional exploration since that report includes diamond core drilling and trenching completed by Altamira, primarily focused on Baldo. This report incorporates the additional exploration into an updated mineral resource estimate. The updated estimate is pit constrained, meaning the stated mineral resources are contained within a theoretical open pit based on mining costs, processing costs, recovery, and assumed pit slopes. This methodology represents the current industry best practice to determine a reasonable prospect of economic extraction for deposits amenable to open pit mining methods. The previous estimate in 2016 was not pit constrained.

1.2 Property Description, Access and Location

The Cajueiro Project area is located in the Juruena Gold Province in central Brazil, within the states of Para and Mato Grosso, near the town of Alta Floresta. The Teles Pires River runs through the project area. The total surface area of the Cajueiro property is 39,053 hectares. The exploration/mining permits are controlled by AFGM. The area is geographically centered at approximately N8,965,000 meters, E550,000 meters, UTM Zone 21L, WGS84. Access from Alta Floresta is via paved highway MT-208, 55 kilometers to the town of Paranaíta. From Paranaíta, another 40 kilometers of dirt road, crossing the Teles Pires River, provides access to the project.

1.3 Planned Trial Mining Partnership

In August of 2019, Altamira announced the signing of a binding agreement with FMS Investimentos e Participacoes Ltda. (FMS), an established Brazilian gold producer and strategic shareholder, to allow it to construct and operate a 1,000 tonne/day processing plant at Cajueiro for the purposes of small-scale gold production. Altamira retains ownership of the underlying hard rock resource. FMS will be responsible for funding all the initial construction capital (expected to be ~US$2.4M) and ongoing operating costs. Upon production, 70% of the net income will be allocated to pay back construction capital and Altamira will be entitled to 15%. Following payback, Altamira will earn 50% of net income. Plant start-up is expected in mid-2020.

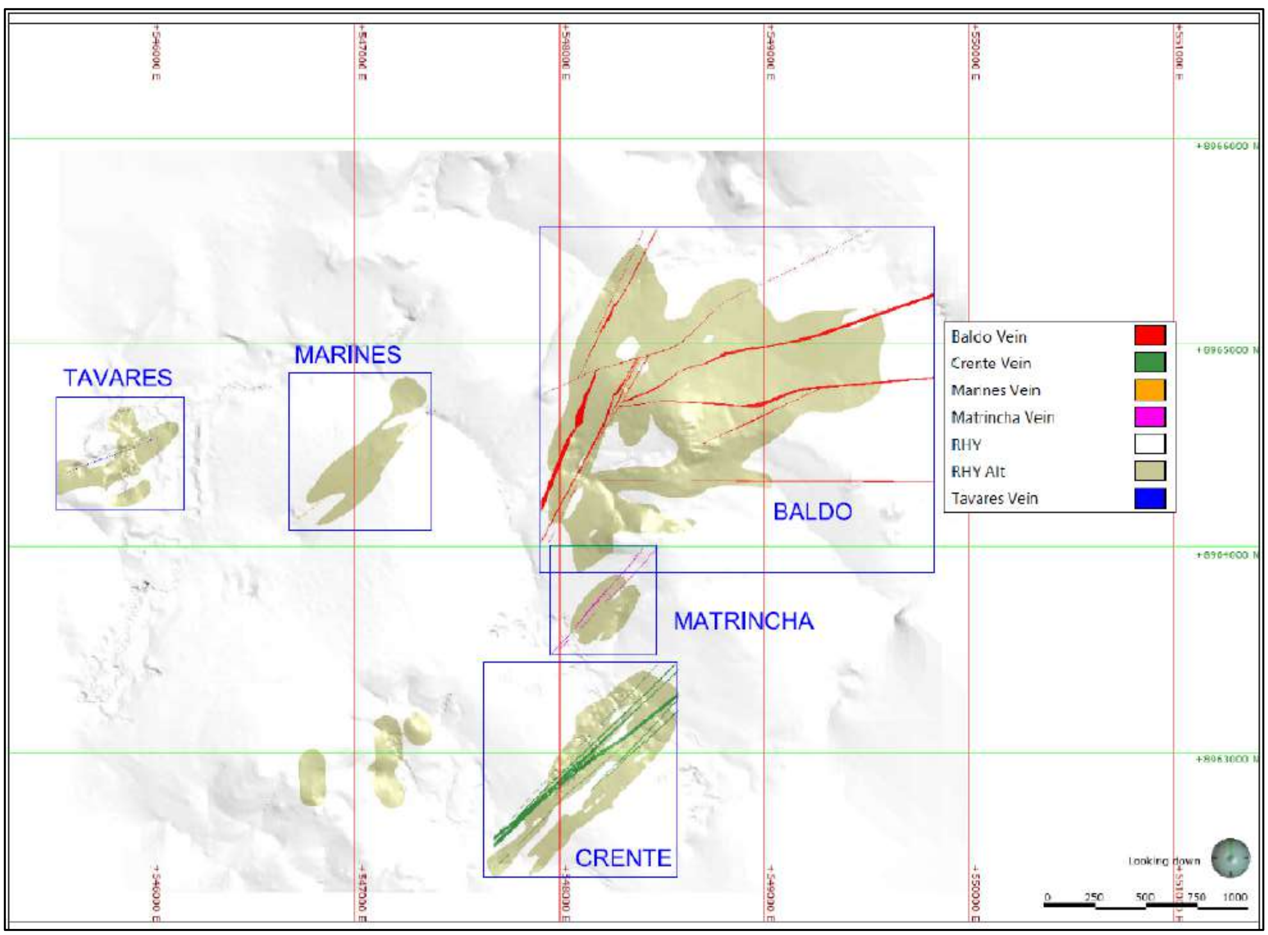
1.4 Geology, Mineralization, and Deposit Type

The Cajueiro Project forms part of the Amazon Craton. The main lithologies of this region are known as São Pedro and Juruena Intrusive Suites (monzogranites to granodiorites), Colider Suite (rhyolites, andesites, tuffs breccias and microgranites), Paranaita Suite (porphyritic monzogranites, Nhandu Granites), Teles Pires Intrusive Suite (sienogranites) and the Beneficente Group - the extensive sedimentary platform which forms the hills of the Serra do Cachimbo.

Colider Suite rocks have been mapped in the Cajueiro Project area and dominantly consist of microgranite and rhyolite, breccias, and tuffs. Zones of hydrothermal alteration with sericite alteration have been recognized on surface within the granites and are commonly coincident with fracture zones. Four main structural trends have been identified in the area: NE-SW, NW-SE, E-W and NNW-SSE.

Within the areas explored, eight distinct zones of quartz veining and alteration have been identified by diamond drilling and another six by mapping and soil sampling, all of which fall within five discrete target areas. The five discrete target areas are named by Altamira as Tavares, Marines, Baldo, Matrincha, and Crente as shown in Figure 1-1. Each area has a current mineral resource estimate.

Figure 1-1 Target Exploration Areas



Source – GRE (2019)

Source – GRE 2019

At Cajueiro, gold deposits are associated with strong sericite alteration in rhyolitic bedrock. Shearing in much of the altered rock is minor and the deposits are not shear zone hosted. Rather, alteration and mineralization appear to be related to brittle fractures in the rhyolites which formed prior to shearing. Gold occurs as both fine native gold and as inclusions in disseminated and stringer pyrite in quartz-pyrite veinlets. Alteration was caused by hydrothermal fluids, the flow of which was controlled by fracture sets parallel with the dikes.

1.5 Exploration

Exploration on the property consists of geologic mapping, geophysics, trenching, and diamond drilling. Table 1-1 summarizes the exploration for the project.

Table 1-1 Cajueiro Exploration Work Summary

Year	Owner	Description
2006	Chapleau	82 Rock samples taken and assays performed
2007	Chapleau	1,336 soil samples at 50 meter intervals, lines spaced 200 meters apart
2007	Chapleau	17 Trenches, total length 2,671 meters, depth 4-6 meters
2007	Chapleau	13 HQ diamond drill holes totaling 1,238 meters
2007-2012	ECI Exploration	5,225 soil samples at 50 meter intervals, lines spaced 200 or 400 meters apart
2010-2011	ECI Exploration	42 HQ diamond drill holes totaling 9,978 meters
2010-2011	ECI Exploration	386 rock samples taken and assayed
2011	ECI Exploration	Areomagnetic and Radiometric surveys covering 35,480 hectares
2011-2015	ECI Exploration	13 Trenches, total length 2,053 meters, depth 2-4 meters
2017-2018	Altamira	30 soil samples and 13 rock samples
2016-2018	Equitas/Altamira	34 Trenches, total length 5,357 meters, depth 2-4 meters
2016-2017	Equitas/Altamira	50 HQ diamond drill holes totaling 3,154 meters

1.6 Mineral Resource Estimate

The mineral resource estimate utilized both trench and diamond drill hole data. The geologic model, statistical analysis, and block gold grade estimate were performed in LeapfrogGeo and Leapfrog Edge software (Leapfrog3D), version 4.5.2. Inverse Distance Squared (ID2) was used to estimate the gold grade with capped values for 5 domains that varied from 5 to 10 gpt gold. The current estimate is presented in the table below.

Table 1-2 Mineral Resource Statement

Class	Rock Type	Domain	Tonnes 1,000s	*Gold* Grade g/t	*Gold* Troy Ounces 1,000s
Indicated	Fresh	Baldo Vein	1,094	1.00	35
		Crente Vein	2,425	1.30	101
		Baldo Rhyolite Alt	930	0.66	20
		Crente Rhyolite Alt	358	0.35	4
		Total	**4,806**	**1.04**	**160**
	Weathered	Baldo Vein	300	1.07	10
		Crente Vein	153	1.49	7
		Baldo Rhyolite Alt	254	0.74	6
		Crente Rhyolite Alt	148	0.34	2
		Total	**854**	**0.92**	**25**
	Total	**Baldo Vein**	**1,394**	**1.02**	**46**
		Crente Vein	**2,578**	**1.31**	**108**
		Baldo Rhyolite Alt	**1,183**	**0.67**	**26**
		Crente Rhyolite Alt	**505**	**0.35**	**6**
		Total	**5,661**	**1.02**	**185**
Inferred	Fresh	Baldo Vein	2,682	1.74	150
		Crente Vein	3,004	1.29	125
		Marines Vein	99	1.14	4
		Matrincha Vein	1,071	1.22	42
		Tavares Vein	9	0.74	0
		Baldo Rhyolite Alt	3,291	1.11	118
		Crente Rhyolite Alt	249	0.30	2
		Marines Rhyolite	270	1.02	9
		Matrincha Rhyolite	318	0.53	5
		Total	**10,992**	**1.29**	**455**

Class	Rock Type	Domain	Tonnes 1,000s	*Gold* Grade g/t	*Gold* Troy Ounces 1,000s
	Weathered	Baldo Vein	260	1.64	14
		Crente Vein	369	1.17	14
		Marines Vein	15	1.11	1
		Matrincha Vein	58	1.07	2
		Tavares Vein	4	0.62	0
		Baldo Rhyolite Alt	698	1.15	26
		Crente Rhyolite Alt	94	0.35	1
		Marines Rhyolite	25	0.41	0
		Matrincha Rhyolite	150	0.64	3
		Total	**1,673**	**1.12**	**60**
	Total	**Baldo Vein**	**2,941**	**1.73**	**163**
		Crente Vein	**3,373**	**1.28**	**138**
		Marines Vein	**114**	**1.14**	**4**
		Matrincha Vein	**1,129**	**1.21**	**44**
		Tavares Vein	**13**	**0.70**	**0**
		Baldo Rhyolite Alt	**3,988**	**1.12**	**143**
		Crente Rhyolite Alt	**343**	**0.32**	**3**
		Marines Rhyolite	**295**	**0.97**	**9**
		Matrincha Rhyolite	**468**	**0.57**	**9**
		Total	**12,665**	**1.26**	**515**

Differences may occur in totals due to rounding

Notes:

1) The effective date of the Mineral Resources Estimate is October 10, 2019.
2) The Qualified Persons for the estimate are Kevin Gunesch, PE, and Hamid Samari QP-MMSA of GRE.
3) Mineral resources are not ore reserves and are not demonstrably economically recoverable.
4) Mineral resources are reported at a 0.25 gpt cutoff, an assumed gold price of 1,500 $/tr. oz, an assumed mining cost of 1.5 to 2.0 $/tonne, processing cost of 12.0 $/tonne, an assumed metallurgical recovery of 92%, a saprolite pit slope of 45 degrees, and a fresh rock pit slope of 55 degrees.

1.7 Conclusions and Recommendations

The following is a direct copy of the conclusions and recommendations presented in Sections 25 and 26.

- The deposits at the project are associated with altered rhyolite. Alteration and mineralization appear to be related to fracture zones in the rhyolites. Gold mineralization is confined to these fractures zones which are comprised of vein like structures of hydrothermal breccias with altered zones containing more disseminated mineralization.
- Exploration of the property has mapped the vein like structure over several trenching programs since 2010. These structure have been confirmed at depth at several locations with diamond core drilling.
- A site visit was completed in April 2019 which verified select drill collars, showed good comparison of the physical core to the exploration database, and provided good comparison of the independent assays samples to the original assay values.
- The sampling, security, and QA/QC program are consistent the common industry practice. The minor deviations identified in the QA/QC program are within expected number of occurrence. The results of the program are adequate to estimate mineral resources for the property.
- The current mineral resource contains:
    - Indicated resources totaling 5,661,000t @ 1.02 g/t gold for a total of 185,000 oz of gold of which 854,000t @ 0.92 g/t gold (for 25,000 oz) is weathered rock and 4,806,000t @ 1.04 g/t (for 160,000 oz) is fresh rock.
    - Inferred resources totaling 12,665,000t @ 1.26 g/t gold for a total of 515,000oz of gold of which 1,673,000t @ 1.12 g/t gold (for 60,000 oz) is weathered rock and 10,992,000t @ 1.29 g/t (for 455,000oz) is fresh rock.
- The sulfide material from Cajueiro responds well to gravity separation, producing a concentrate with a grade as high as 121 g/t, and recovering as much as 80% of the gold.
- Gravity with tails leaching was good with recoveries as high as 85%. A maximum total recovery of 96% was observed.
- Sulfide material was sensitive to grind size, and both concentrate grades and leaching recoveries were improved when samples were ground to 75 microns compared to coarser material.
- Head grade sensitivity was seen where lower gold recoveries was noted from lower grade material and vice-versa. This sensitivity needs to be investigated further with additional leaching and variability testing.
- The oxide material was not amenable to flotation but leached well in direct cyanidation. Flotation recovered only 52% of the gold from the samples tested with a final concentrate grade of 51 g/t.
- Direct cyanidation of the oxide samples recovered 94% of the gold.
- It was determined through microscopy that the main gold-bearing mineral was Limonite. Gold deportment studies show that over 50% of the gold in the oxide material is sized under 5 microns, and around 48% of the gold is associated with Limonite.
- The current infrastructure is sufficient to support continued exploration activities. The planned process plant by FMS will require additional infrastructure for the plant footprint. Designated

areas for waste rock and tailings will also be required. The available space with the property limits is adequate for the planned small scale operation by FMS.

- There are no known factors related to metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, or political issues which could materially affect the mineral resource estimate.

The estimated costs for the next phase of exploration and testing are detailed below.

Table 1-3 Recommended Program Costs

Program	Budget
Exploration Drilling	$250,000
Trenching and Mapping	$50,000
Laboratory and Assaying	$100,000
Metallurgical Testing	$100,000
Total	$500,000

2.0 Introduction

Altamira Gold Corp. (Altamira) retained Global Resource Engineering Ltd (GRE) in mid-2019 to complete an updated mineral resource estimate for their Cajueiro Project. The property is located near the town of Alta Floresta spanning the border of the states of Mato Grosso and Para in central Brazil. In April 2016, Equitas Resources Corp. (Equitas) acquired Alta Floresta Gold with 100% interest in Cajuerio. In April 2017, Equitas changed their company name to Altamira Gold Corp. Local operations are conducted by Alta Floresta Gold Mineração Ltd. (AFGM), the Brazilian operating company.

The Cajueiro Project comprises a large land package located in the Juruena Gold Belt, a Proterozoic arc consisting of calc-alkaline granite-volcanic, and medium to high grade metamorphic crustal segments. Historic gold production in the belt is generally recognized to be in the range of 7-10MM ounces of gold, primarily from garimpeiro activity. At Cajueiro, rhyolites host a set of Northeast (NE) and East-West (E-W) brittle fracture zones exhibiting late brittle deformation. These are the primary structural controls of hydrothermal alteration and associated gold mineralization. Gold and pyrite in the bedrock is contained within alteration envelopes within and adjacent to the structures. Historic placer gold workings at the project previously produced around 250,000 ounces of gold. Modern exploration has been completed on the project since 2007 focused on five target areas: Baldo, Crente, Marines, Matricha, and Tavares.

The most recent previous technical report on Cajueiro was completed by Gustavson Associates, LLC (Gustavson) in March 2016. Additional exploration since that report includes diamond core drilling and trenching completed by Altamira, primarily focused on Baldo. This report incorporates the additional exploration into an updated mineral resource estimate. The updated estimate is pit constrained, meaning the stated mineral resources are contained within a theoretical open pit based on mining costs, processing costs, recovery, and assumed pit slopes. This methodology represents the current industry best practice to determine a reasonable prospect of economic extraction for deposits amenable to open pit mining methods. The previous estimate in 2016 was not pit constrained.

2.1 Purpose of the Report

The purpose of this report is to present the updated mineral resource estimate completed by GRE using all exploration information up to the effective date of this report which is October 10, 2019.

2.2 Sources of Information

In preparing this technical report, the authors relied on geological reports, maps, results of the past and new exploration programs, review and assessment of reports from other consulting companies, and other technical papers (including unpublished reports) listed in Section 27 (References) of this technical report. Where possible, the authors have confirmed the information provided through technical reviews, spot checks, field audits, comparison of geologic data to the physical core, and independent assay samples. During the course of the work, the authors did not encounter any errors or omissions that would materially affect the results of the mineral resource estimate.

2.3 Qualified Persons

The table below lists the responsible Qualified Persons (QPs) by report section.

Table 2-1 Qualified Persons

Section	Section Name	Qualified Person
1	Summary	ALL
2	Introduction	Kevin Gunesch – P.E.
3	Reliance on Other Experts	Kevin Gunesch – P.E.
4	Property Description and Location	Kevin Gunesch – P.E.
5	Accessibility, Climate, Local Resources, Infrastructure, and Physiography	Kevin Gunesch – P.E.
6	History	Kevin Gunesch – P.E.
7	Geological Setting and Mineralization	Hamid Samari – PhD
8	Deposit Types	Hamid Samari – PhD
9	Exploration	Kevin Gunesch – P.E.
10	Drilling	Kevin Gunesch – P.E.
11	Sample Preparation, Analyses and Security	Kevin Gunesch – P.E.
12	Data Verification	Kevin Gunesch – P.E.
13	Mineral Processing and Metallurgical Testing	J. Todd Harvey – PhD
14	Mineral Resource Estimates	Kevin Gunesch – P.E.; Hamid Samari – PhD
15	Mineral Reserve Estimates	NA
16	Mining Methods	NA
17	Recovery Methods	NA
18	Project Infrastructure	NA
19	Market Studies and Contracts	NA
20	Environmental Studies, Permitting and Social or Community Impact	NA
21	Capital and Operating Costs	NA
22	Economic Analysis	NA
23	Adjacent Properties	Kevin Gunesch – P.E.
24	Other Relevant Data and Information	Kevin Gunesch – P.E.
25	Interpretation and Conclusions	ALL
26	Recommendations	ALL
27	References	ALL

2.4 Details of Personal Inspection

Kevin Gunesch, P.E. completed a personal inspection of the Cajuiero property on April 11, 2019. Mr. Gunesch reviewed the main resources areas of Crente and Baldo, inspecting geologic outcrops and taking measurements of drill hole markers including GPS coordinates, strike, and dip. He also reviewed the hand drawn maps of several trenches which showing the sampling locations and strike/dip measurement of the mineralized structures intersected. A verbal explanation of the sampling, analysis, and quality control/quality assurance (QA/QC) sampling program was provided by the local geologist who was onsite during most of the modern exploration activities since 2007. Mr. Gunesch also review the core intervals for 9 holes and collected independent assay sampling for verification consisting of both half quarter core intervals and assay pulps stored onsite.

2.5 Abbreviations and Acronyms

Abbreviations and acronyms used throughout this report are shown in Table 2-2.

Table 2-2 Acronyms and Abbreviations

Abbreviation	Definition
µm	micron
AA	Atomic Adsorption
Ai	Abrasion Index
Altamira	Altamira Gold Corp.
ANM	National Minerals Agency
AFG	Alta Floresta Gold Ltd.
AFGM	Alta Floresta Gold Mineração Ltd.
Boart Longyear	Geoserv Pesquisas Geológicas S.A.
BWi	Bond Work Index
Chapleau	Chapleau Resources Limited
cm	centimeter
CWi	Crusher Work Index
DNPM	Departamento Nacional de Produção Mineral
ECI	ECI Exploration and Mining Inc.
Equitas	Equitas Resources Corp.
E-W	East – West
FMS	FMS Investimentos e Participacoes Ltda.
G	Gravitational force equivalent
Geologica	Geológica Sondagens Ltda.
Geosol	Geosol-Geologia e Sondagens S.A.
gps	global positioning system
gpt	grams per tonne
GRE	Global Resource Engineering Ltd.
GRG	gravity recovery of gold
g/t	grams per tonne
ha	hectare
ICP	Inductively coupled plasma
ID2	Inverse distance squared
IL	intensive leach
kg	kilogram
kg/t	kilograms per tonne
koz	thousands of ounces
kTonnes	thousands of tonnes
Layne	Layne do Brasil Sondagens Ltda.
LG	Lerchs & Grossman algorithm
LPM	liters per minute

Abbreviation	Definition
m	meters
min	minutes
MINPROCES	MINPROCES Ltda.
mm	millimeters
NE	North – East
NE-SW	Northeast - Southwest
NN	nearest neighbor
NNW-SSE	North-Northwest – South-Southeast
NS	North-South
NSR	net smelter return
NW-SE	Northwest – Southeast
oz	ounce
P.E.	Professional Engineer
ppm	parts per million
QA/QC	quality assurance/quality control
QP	Qualified Person
R^2	coefficient of determination
RQD	Rock Quality Designation
RY	Rhyolite
SEMA	State Department of Environment
SGS	SGS Geosol Mineral Services Laboratory Brazil
SX/EW	Solvent Extraction/Electrowinning
UTM	Universal Transverse Mercator
$	United States Dollar

All measurement units used in this report are metric, and currency is expressed in US dollars, unless stated otherwise.

3.0 Reliance on Other Experts

The authors have relied exclusively on information provided by Altamira regarding property ownership, mineral tenure, surface rights, royalties, and environmental liabilities. The authors have not independently verified the information provided by Altamira.

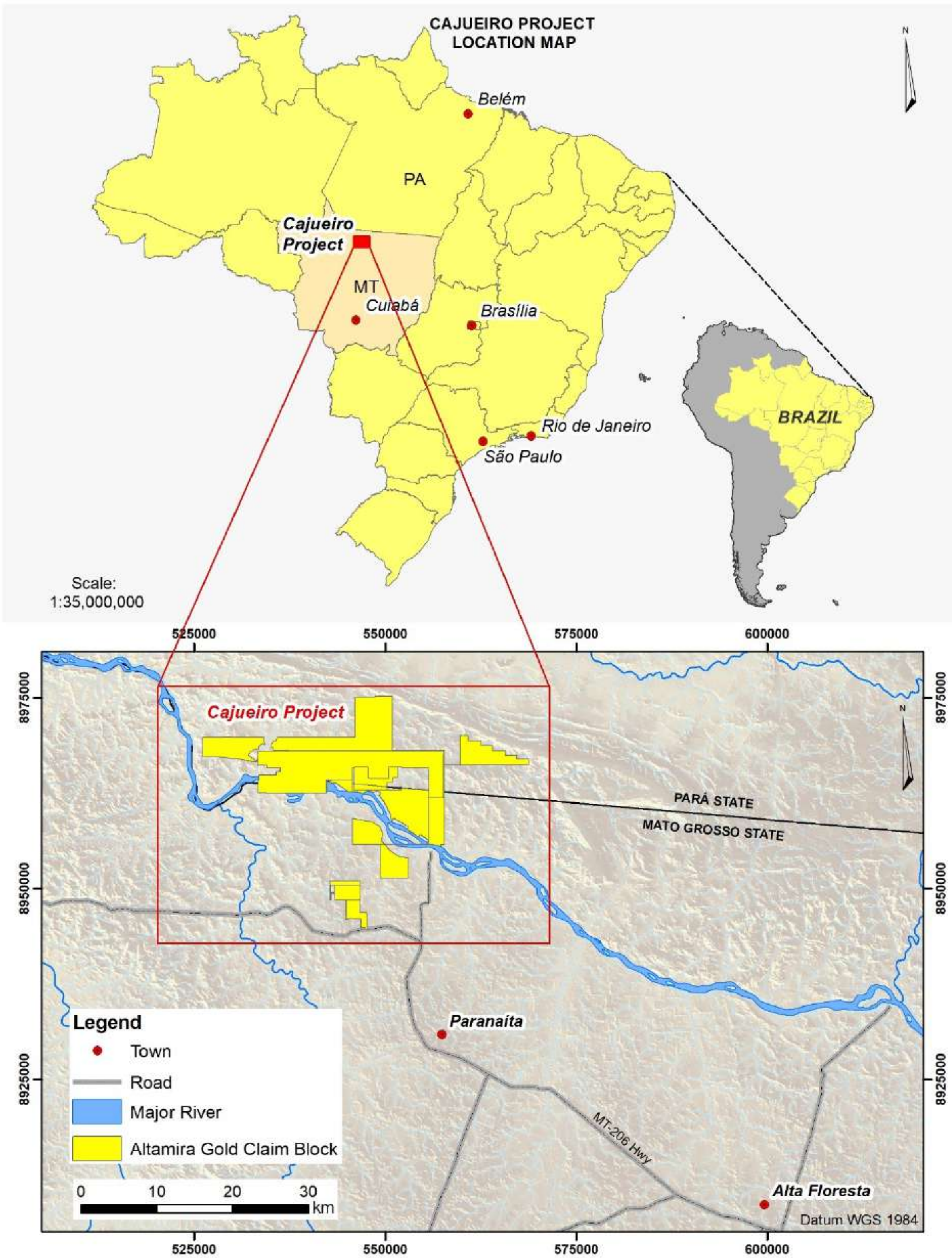
4.0 Property Description and Location

4.1 Property Description and Location

The Cajueiro Project area is located in the Juruena Gold Province in central Brazil, within the states of Para and Mato Grosso. The Teles Pires River runs through the project area (Figure 4-1).

The total surface area of the Cajueiro property is 39,053 hectares. The exploration/mining permits are controlled by AFGM. The area is geographically centered at approximately N8,965,000 meters, E550,000 meters, UTM Zone 21L, WGS84.

Figure 4-1 Cajueiro Property Location



Source – Altamira (2019)

4.2 Mineral Titles

The Cajueiro property is permitted for exploration by the Brazilian national mining agency, Agência Nacional de Mineração (ANM) in the name of AFGM. The National Mining Agency – ANM, was created on December 26, 2017, through Law No. 13.575 / 2017 and assumed the functions performed by the National Department of Mineral Production – DNPM. ANM is responsible for granting and inspecting mineral concessions in the Brazil. Exploration permit status for the Cajueiro Project was provided by Altamira in October 2019.

The Cajueiro property consists of a total permitted area of 28,559 hectares, consisting of 12 permits as shown on Figure 4-2 and Table 4-1. Four of these permits have the application to trial mining permit under review by ANM. One area, 866.160/2007, received the environmental permit for trial mining in October 2019. Based on information provided by Altamira in October 2019, all claims are in good standing with ANM. Some permits have been dropped and others granted since 2013. None of these are in areas that effect the mineral resource estimate presented herein.

On March 14, 2014 Alta Floresta Gold Ltd (AFG), a Vancouver based private limited company, entered into an Investment Agreement with ECI, whereby it took over operating and commercial control of AFGM. In January 2016 Equitas Resources ("Equitas"), a TSX-V public company, made an accepted offer to acquire all of the equity of AFG in return for Equitas shares. All permits have been successfully transferred to AFGM.

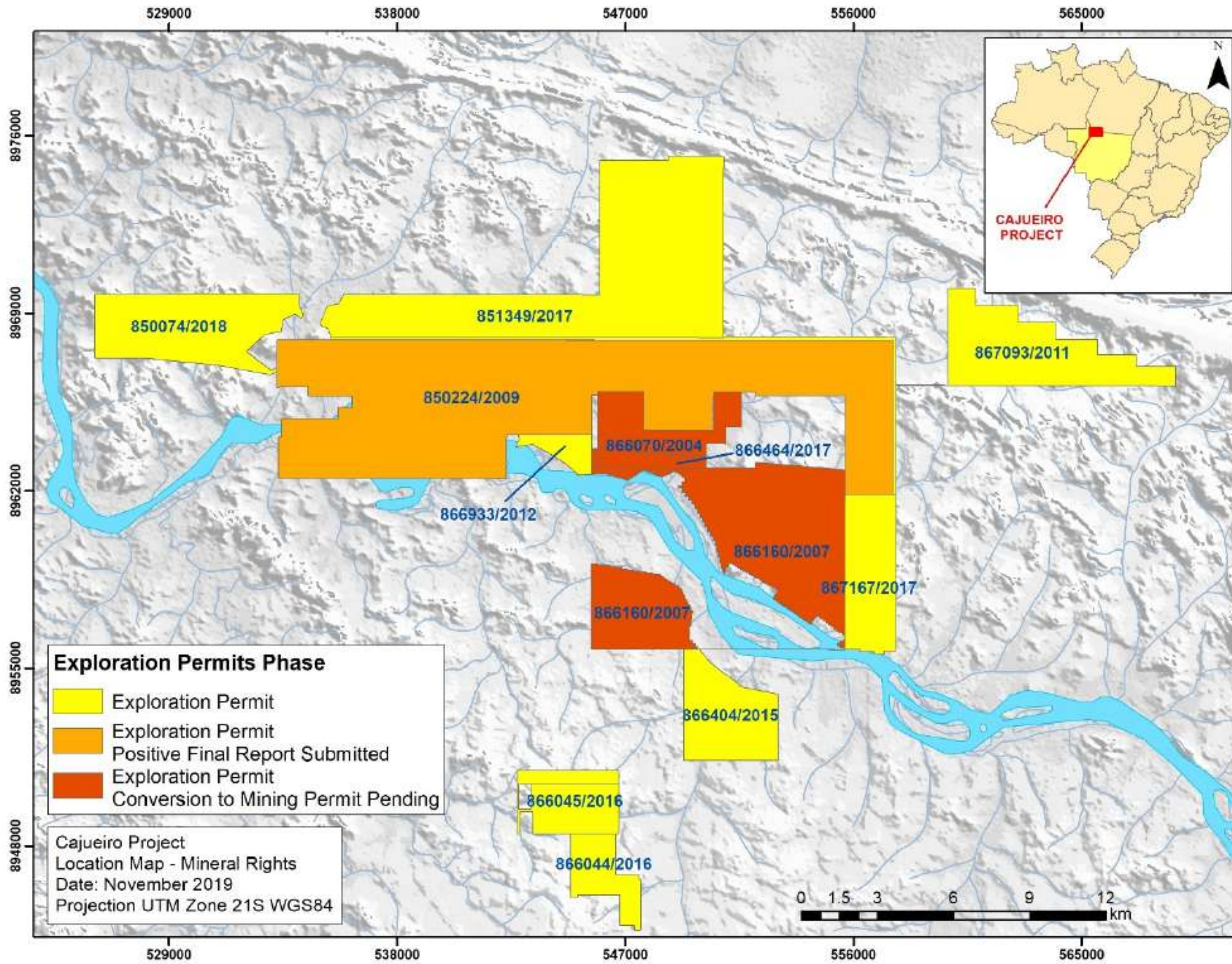
Table 4-1 Exploration Permits of the Cajueiro Project

Claim Number	Initial Permittee	Original Date of Claim	Expiration Date	Permit Type	Area (ha)
Permits Granted for Exploration					
866.070/2004	Carlos Fernando Ulema Ribeiro	Feb-04	Not applicable	Exploration (Application for trial mining concession while conversion to mining permit is pending)	252
866.464/2017	Alta Floresta Gold Mineração Ltda	Jun/17	Not applicable	Exploration (Application for trial mining concession while conversion to mining permit is pending)	854
866.160/2007	Chapleau Mineral Exploration Limited	Apr-07	Not applicable	Exploration (Application for trial mining concession while conversion to mining permit is pending)	4,143
850.224/2009	Carlos Fernando Ulema Ribeiro	Apr-09	Not applicable	Exploration (Positive final report submitted Pending analysis + Application for trial mining concession)	9,559
867.093/2011	ECI	Nov/11	Feb-20	Exploration	2,218
866.933/2012	ECI	Nov/12	Out/20	Exploration	270
866.404/2015	Alta Floresta Gold Mineração Ltda.	Jan/15	Mar/21	Exploration	1,265

Claim Number	Initial Permittee	Original Date of Claim	Expiration Date	Permit Type	Area (ha)
Permits Granted for Exploration					
866.044/2016	Alta Floresta Gold Mineração Ltda.	Jan/16	Out/20	Exploration	615
866.045/2016	Alta Floresta Gold Mineração Ltda.	Jan/16	Out/20	Exploration	906
867.167/2017	Alta Floresta Gold Mineração Ltda.	Out/17	Jun/21	Exploration	1,248
851.349/2017	ECI	Dec-17	Mar/21	Exploration	5,275
850.074/2018	ECI	Jan/18	Apr-21	Exploration	1951
				Total Area under Review by ANM	**28,559**

Source – Exploration permit data from data supplied by Altamira (2019).

Figure 4-2 Cajueiro Project Mineral Claims



Source – Altamira (2019)

4.3 Royalties, Agreements and Encumbrances

4.4 Royalties

Gold production from all permit areas is subject to 1.5% net smelter royalty, known as a CFEM tax. ECI also holds a 1.75% NSR royalty on all production from the project on the permit areas originally acquired from them. Any production from three permit areas (866.070/2004, 866.933/2012 and 850.224/2009) are subject to an additional 1% net smelter return payable to Elvio Schelle, Mr. Ulema, and vendors to ECI/Alta Floresta of the central part of the Cajueiro property. No additional royalties apply to the other claim blocks.

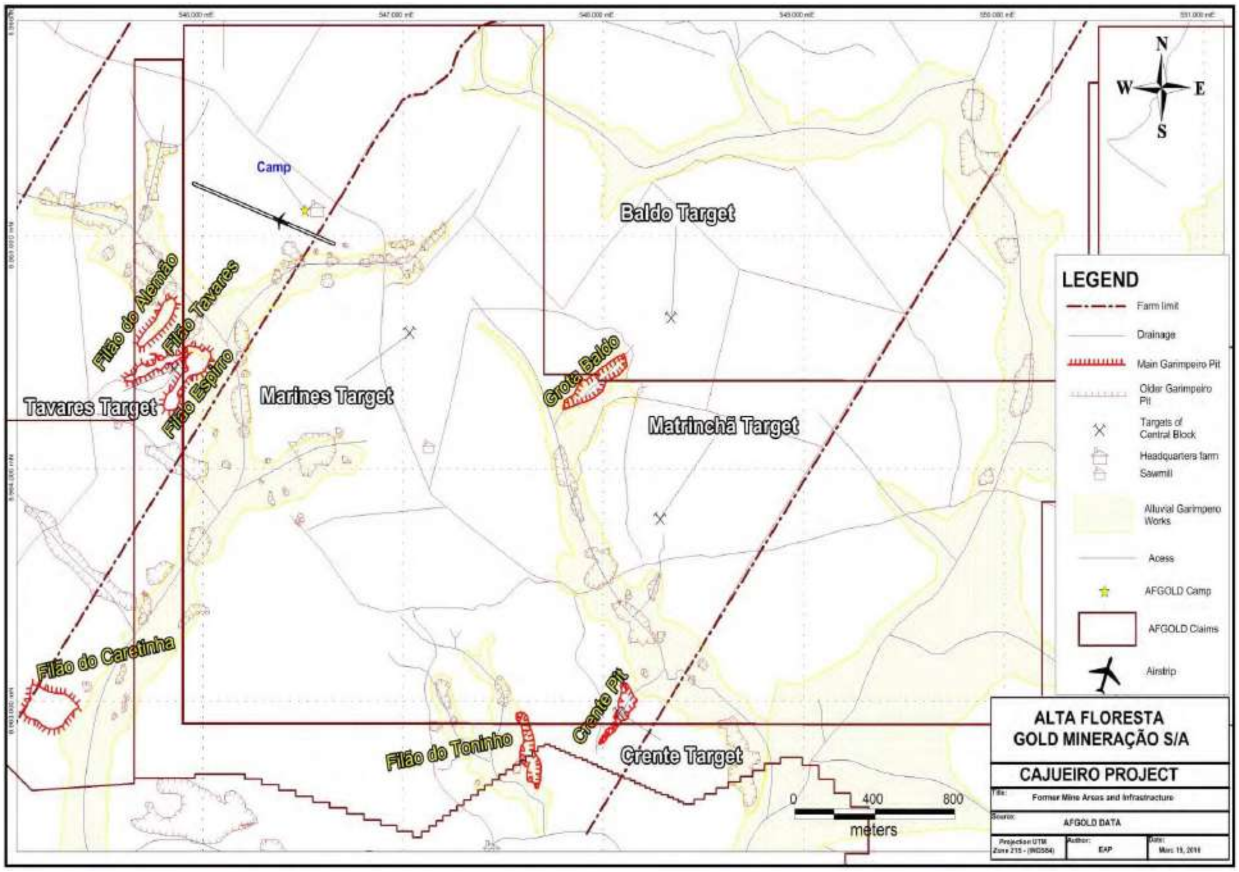
4.5 Agreements

In August of 2019, Altamira announced the signing of a binding agreement with FMS Investimentos e Participacoes Ltda. (FMS), an established Brazilian gold producer and strategic shareholder, to allow it to construct and operate a 1,000 tonne/day processing plant at Cajueiro for the purposes of small-scale gold production. The agreement is a lease which allows FMS to exploit the weathered surface material over a defined area of approximately 600 ha. Altamira retains ownership of the underlying hard rock resource. FMS will be responsible for funding all the initial construction capital (expected to be ~US$2.4M) and ongoing operating costs. Upon production, 70% of the net income will be allocated to pay back construction capital and Altamira will be entitled to 15%. Following payback, Altamira will earn 50% of net income. Plant start-up is expected in mid-2020.

4.6 Environmental Liabilities

As further described in Section 6, artisanal mining, also referred to as "garimpeiro" mining, at the Cajueiro property occurred from the 1970s to the 1990s. Historical mining activities have resulted in several pits, as shown on Figure 4-3, which have filled with water. Environmental impacts at the Cajueiro property are permitted by the State of Mato Grosso's Secretary of Environment (Secretaria de Estado do Meio Ambiente, or SEMA). In the project environmental permit (SEMA, 2012), SEMA generally describes the environmental impacts of the historically mined areas to be well mitigated. Specifically, erosion and sedimentation are being managed by natural vegetation in the drainage, waste, and pit areas. No reclamation requirements for the historically mined areas are identified in SEMA (2012).

Figure 4-3 Artisanal Mining Areas



Source – AFGM (2015)

Environmental requirements for on-site activities are permitted by SEMA (2012).

4.7 Required Permits - Exploration

As described in Section 4.2, AFGM currently holds exploration rights for all of the DNPM-permitted areas that are part of the Cajueiro project. Therefore, exploration of the property can continue under the permits already obtained.

4.8 Trial Mining License

Altamira has received the first Environmental Permit for the Trial Mining Licenses with respect to permit 866.160/2007. The environmental process LOPM No 320459 within permit 866.160/2007, was published on October 7, 2019 and is valid for three years until October 6, 2022. This permit covers the southern part of the Crente resource. The Environmental Permit has now been presented to the National Mining Agency (ANM) in Brazil and the Company is awaiting the approval of the first Trial Mining License. The license will allow Altamira and its partner FMS Investimentos e Participacoes Ltda. (FMS) to commence the construction of the 1000 tonne / day processing facility.

Altamira is also pursuing Trial Mining Licenses over three additional claim blocks which cover the resources in the northern part of the Crente deposit as well as the Baldo, Matrincha and Marines resource areas.

4.9 Other Significant Factors and Risks

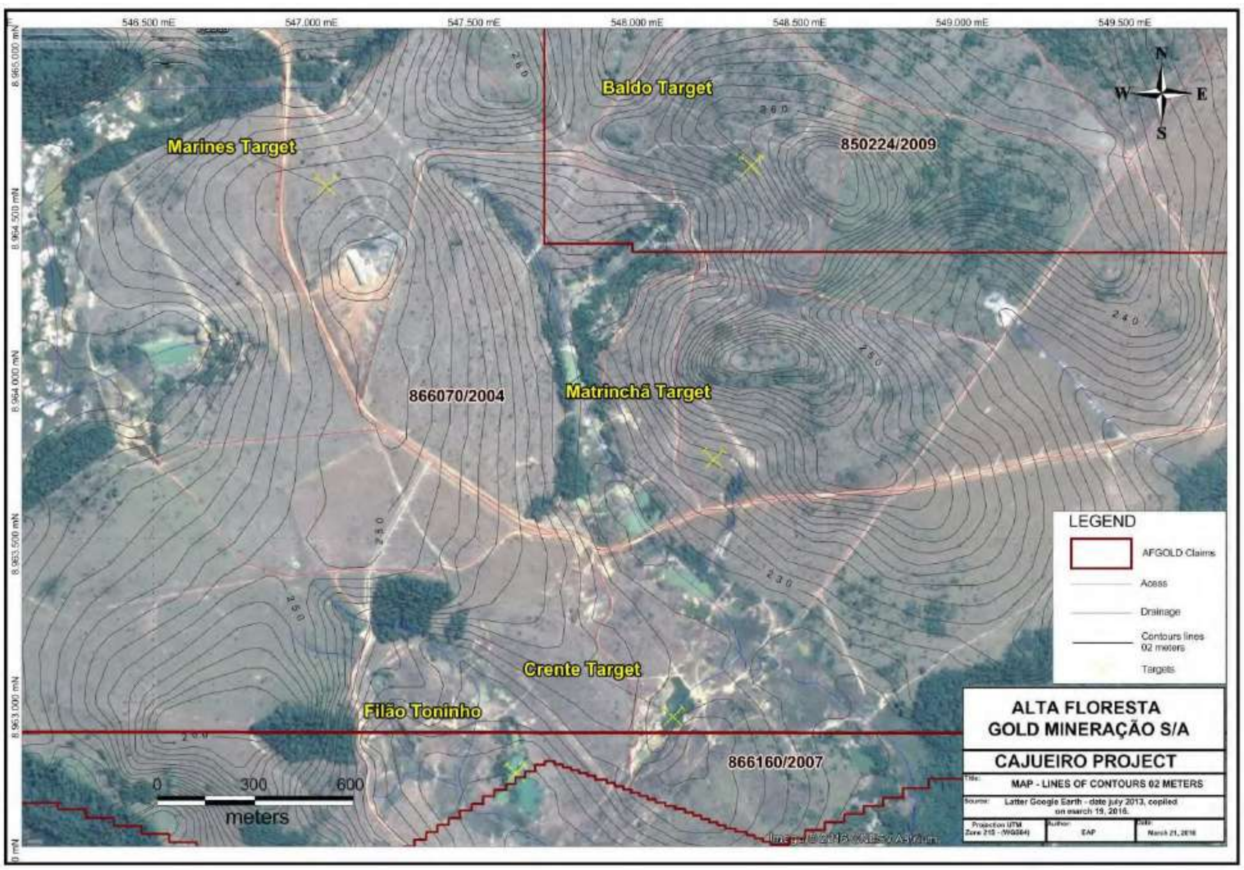
The authors are not aware of any significant risks that would affect Altamira's ability to continue exploration or trial mining on the property.

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Topography, Elevation and Vegetation

The Cajueiro Project is located in the valley of the Teles Pires River, which flows to the northwest where it drains into the Tapajos River, and ultimately to the Amazon River. Topography is characterized by hills with perennial and ephemeral streams that flow into the Teles Pires River. Elevation within the Cajueiro Project area ranges from 200 to 300 meters above sea level. The elevation of the target exploration areas is shown on Figure 5-1. Although located within the Amazon tropical rainforest, most of the project area has been cleared and is now planted with grass for cattle farming. A portion of the property is virgin tropical rainforest with the tree canopy reaching 30 meters in height.

Figure 5-1 Cajueiro Typical Topography and Vegetation



Source – AFGM (2016)

5.2 Climate and Length of Operating Season

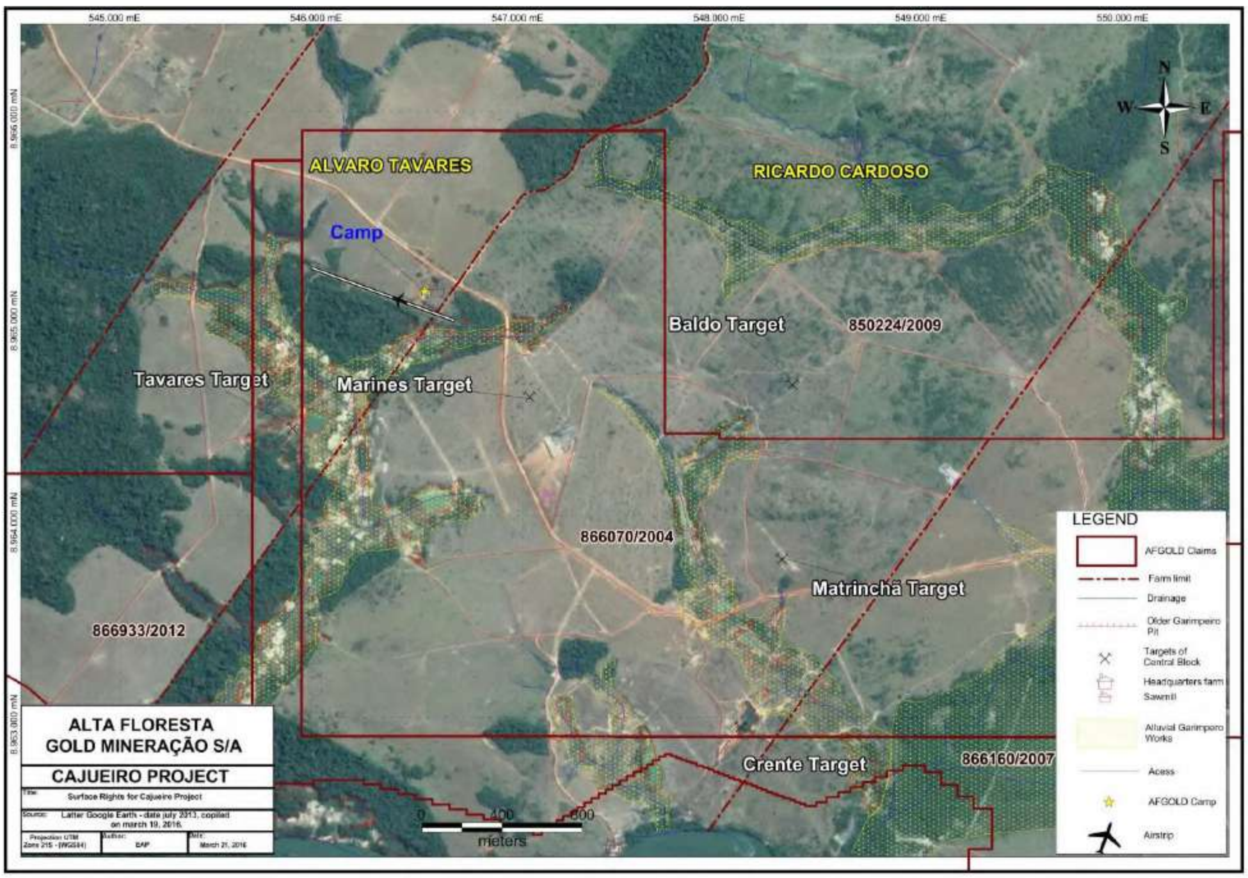
The climate at the Cajueiro Project is marked by a rainy season from December through May, and dry season that occurs from May through November. The average annual rainfall ranges between 1,500 to 2,000 millimeters per year. Annual average high temperature ranges from 30 to 34° Celsius, and annual average low temperature ranges from 18 to 22° Celsius (World Weather, 2013).

Exploration activities are conducted on the Cajueiro property year-round.

5.3 Surface Rights

AFGM has written agreements with Alvaro Tavares for use of his property for exploration, and with Ricardo Cardoso for use of his property for both exploration and production. The limits of the two areas are shown on Figure 5-2 and appear to be sufficient for foreseeable exploration and drilling activities.

Figure 5-2 Surface Rights for Cajueiro Project

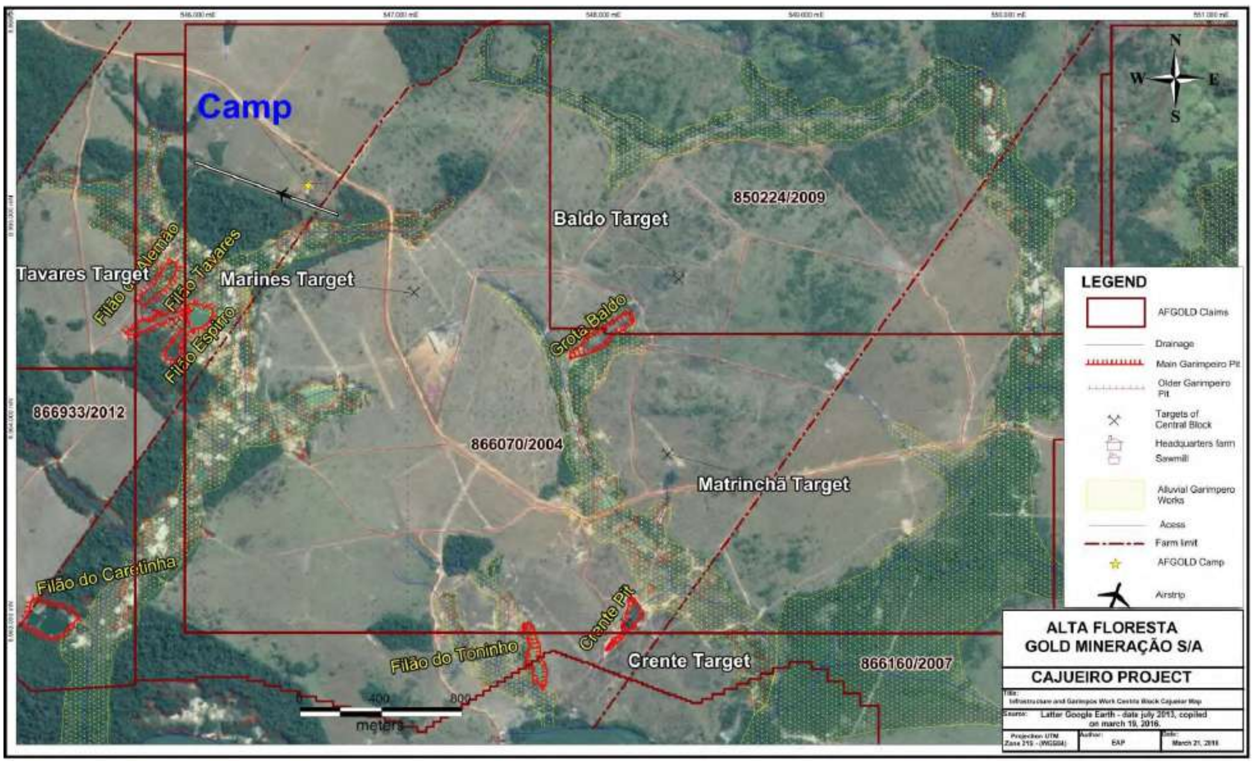


Source – AFGM (2016)

5.4 Accessibility and Transportation to the Property

The nearest international airport to the Cajueiro property is in the city of Cuiabá, in the state of Mato Grosso, as shown on Figure 4-1. Commercial daily flight service is available from Cuiabá to Alta Floresta, the nearest population center. Access from Alta Floresta is via paved highway MT-208, 55 kilometers to the town of Paranaíta. From Paranaíta, another 40 kilometers of dirt road, crossing the Teles Pires River, provides access to the project. Riving crossing requires a minimal fee and is completed by a local company operating a river barge and tugboat. The barge is of sufficient size to transport large tractor trailers and small scale mining and processing equipment. An airplane landing strip suitable for light 4-person aircraft, locally referred to as areotaxis, is located within the Cajueiro property, as shown on Figure 5-3.

Figure 5-3 Cajueiro Site Map



Source – AFGM (2016)

5.5 Infrastructure Availability and Sources

Infrastructure on the Cajueiro Project supported artisanal mining from 1970s to 1990s. Since 2007, modern exploration and drilling activities were completed. A camp is located within the Cajueiro Project to support exploration activities and is adequate for 30 people. General location of the camp is shown on Figure 5-2.

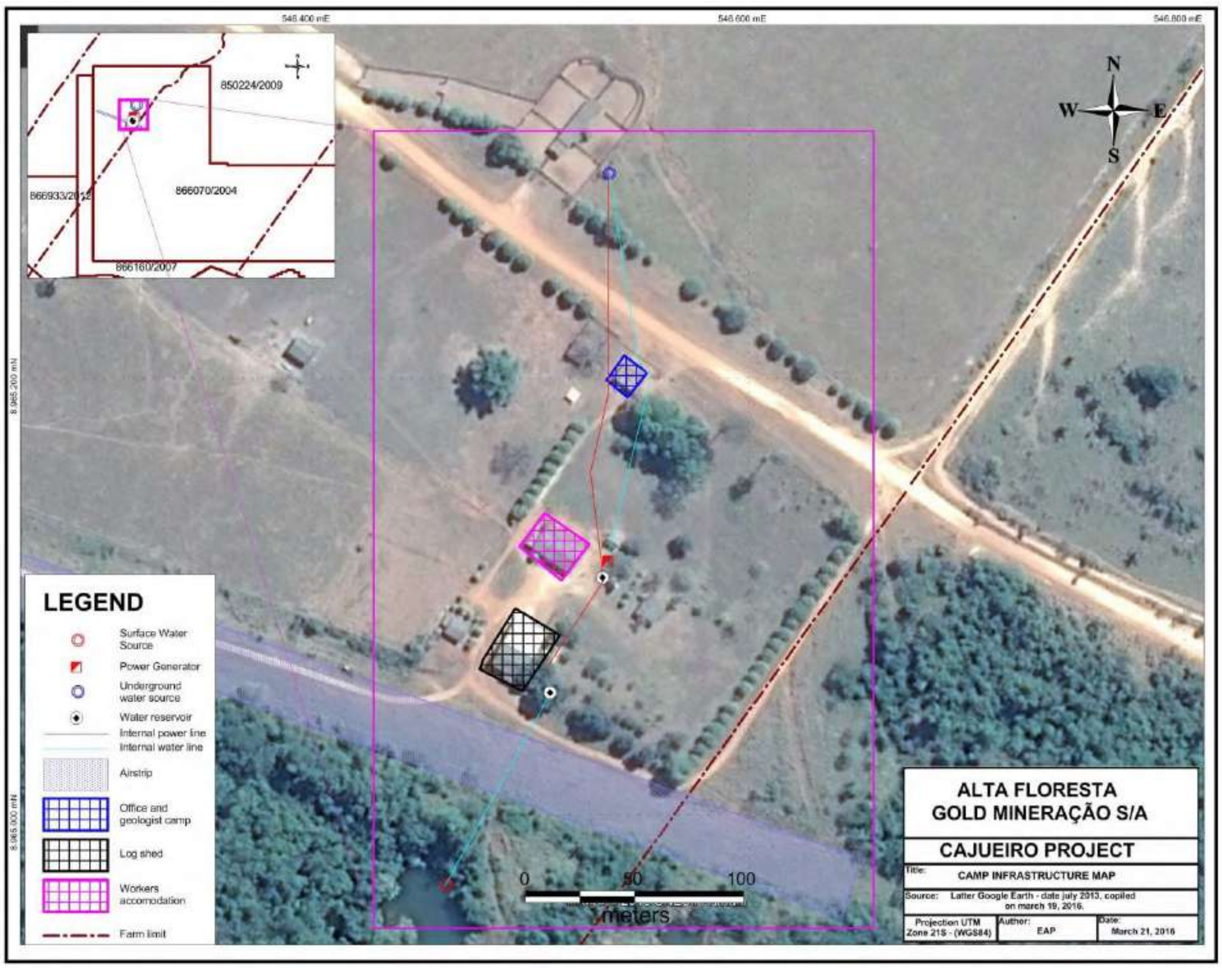
In the coming year, Altamira plans to conduct further exploration at Cajueiro, primarily via diamond core drilling. The construction of 1,000 tonne per day process plant is also planned by FMS under their binding agreement with Altamira. The plant will exploit the weathered surface material in the southern portion of the Crente resource area.

5.5.1 Power

The Project is provided with line power current by CENTRAIS ELETRICAS DO PARA S/A CELPA. This current is sufficient for lighting and operation of appliances at the camp. For building the electrical infrastructure for the processing plant Altamira is requesting the services of the company LÍDER CONSTRUÇÕES ELÉTRICAS LTDA.

There is also on site 33 KW generator that is powered by diesel fuel that is stored in a 10,000 liter tank with sufficient capacity for approximately 3 months of use. Diesel is brought to the Cajueiro property by truck and is refilled year-round.

Figure 5-4 Camp Infrastructure Map



Source – AFGM (2016)

Existing power infrastructure is not adequate for mining activities as the power demand is likely to be greater than what can be reasonably supplied by one diesel generator. Potential power source may be hydroelectric power along the Teles Pires River, such as the Teles Pires hydroelectric dam which is located approximately 22 kilometers west of the Cajueiro property. Unit one of the plant was commissioned in November of 2015 and a new power line serving the project area is planned. The design capacity is 1820 megawatts.

Existing power infrastructure is adequate for foreseeable exploration activities. Connection to the power grid or installation of a multiple unit diesel generating station will be required for the planned process plant by FMS.

5.5.2 Water

Process water, such as for drilling purposes, is pumped from shallow lakes or flooded pits to where the water is utilized. In some instances a water truck would transport water to the drilling site.

From ECI (2013b), drinking water is supplied in 20 liters bottles purchased in Paranaita or in Alta Floresta. Bath water is pumped from the well on site to tanks in the different blocks of the farm accommodation. There is no limit to the amount of water that can be used from the well.

Existing water supply is adequate for foreseeable exploration activities; however, it is not expected to be adequate for mining activities. Water rights may be claimed with DNPM for areas that are permitted for mining. The water source for the planned process plant by FMS is currently being investigated by Altamira.

5.5.3 Mining Personnel

The population centers in the vicinity of the Cajueiro Project include Paranaíta, located approximately 40 kilometers south of the Cajueiro Project area, and Alta Floresta, located approximately 95 kilometers south and east of the Cajueiro Project area. The populations in these two cities are approximately 10,000 in Paranaíta, and 40,000 in Alta Floresta. The capital city of the state of Mato Grosso is Cuiabá, located 900 kilometers from the Cajueiro Project area, with a population of 650,000.

In 2012, exploration and drilling personnel was adequate. Drilling crews, oversight and support personnel were mobilized from Belo Horizonte, Brazil. For the foreseeable activities, personnel are expected to be adequate.

For mining activities, several producing gold mines are located in the state of Mato Grosso; and mining personnel are expected to be available within the vicinity of the Cajueiro Project area. FMS plans to source experience personnel from their existing operations and supplement them with the local workforce.

6.0 History

6.1 Historical Development and Production

As described by Chapleau (2007), "During the late 1980s and 1990s, primary gold mineralization was worked from saprolitic material in the vicinity of mineralized fracture zones using high power hoses. Official government estimate of total placer gold production (to 1993) is between 7 million and 10 million ounces, but actual production is believed to be two to three times higher." "It is estimated that some 8 tons of gold were produced from alluvial and primary sources on the property of Alvaro Tavares where Filao Alemao, Filao Alvaro, Filao Espiro, Grota Baldo, Grota Crente, Filao do Torinho, and Garimpo do Caretinha were worked." GRE did not verify these historical production rates. Historical processing methods included gravity concentration and amalgamation of gold using mercury.

6.2 Ownership

The original owners of the areas covering the five mineral claims for exploration include Carlos Ulema, Chapleau Mineral Exploration Limited, and Caystar Exploracao Mineral Ltda. The interests of Chapleau were acquired by ECI Exploration and were controlled by Alta Floresta Gold. Alta Floresta Gold was acquired by Equitas in April 2016. In April 2017, Equitas changed their company name and became Altamira Gold Corp.

6.3 Historical Exploration

A tabulated summary of exploration activities including: rock sampling, soil sampling, trenching, and drilling is presented in Table 6-1 Cajueiro Exploration WorkTable 6-1. A more complete description of exploration completed by previous owners is contained in the most recent previous technical report (Gustavson, 2016).

Table 6-1 Cajueiro Exploration Work Summary

Year	Owner	Description
2006	Chapleau	82 Rock samples taken and assays performed
2007	Chapleau	1,336 soil samples at 50 meter intervals, lines spaced 200 meters apart
2007	Chapleau	17 Trenches, total length 2,671 meters, depth 4-6 meters
2007	Chapleau	13 HQ diamond drill holes totaling 1,238 meters
2007-2012	ECI Exploration	5,225 soil samples at 50 meter intervals, lines spaced 200 or 400 meters apart
2010-2011	ECI Exploration	42 HQ diamond drill holes totaling 9,978 meters
2010-2011	ECI Exploration	386 rock samples taken and assayed

Year	Owner	Description
2011	ECI Exploration	Areomagnetic and Radiometric surveys covering 35,480 hectares
2011-2015	ECI Exploration	13 Trenches, total length 2,053 meters, depth 2-4 meters
2017-2018	Altamira	30 soil samples and 13 rock samples
2016-2018	Equitas/Altamira	34 Trenches, total length 5,357 meters, depth 2-4 meters
2016-2017	Equitas/Altamira	50 HQ diamond drill holes totaling 3,154 meters

7.0 Geological Setting and Mineralization

7.1 Regional, Local and Property Geology

7.1.1 Regional Geology

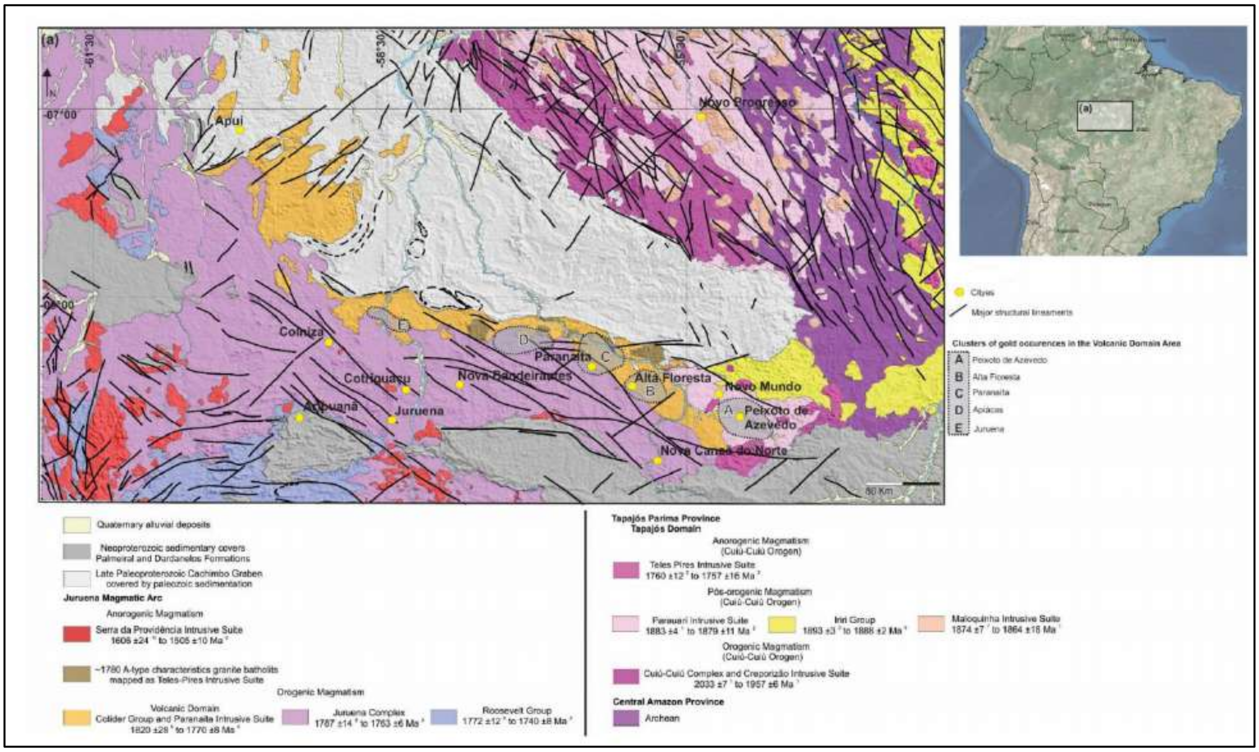
The Cajueiro Project forms part of the Amazon Craton (Figure 7-1). The main lithologies of this region are known as São Pedro and Juruena Intrusive Suites (monzogranites to granodiorites), Colider Suite (rhyolites, andesites, tuffs breccias and micrograniites), Paranaita Suite (porphyritic monzogranites, Nhandu Granites), Teles Pires Intrusive Suite (sienogranites) and the Beneficente Group - the extensive sedimentary platform which forms the hills of the Serra do Cachimbo.

The Cajueiro Project is located in the area known as the Juruena Arc, which is Proterozoic in age (1.75 Ga-1.85 Ga, Santos et al., 2000). The arc has a NW-SE structural trend and is composed of two crustal segments, granitic-volcanic and medium to high grade metamorphic rocks (Figure 7-1 and Figure 7-2).

Within the granite-volcanic group, rocks of a potassic, calc-alkaline magmatism are monzonites and granites of the Teles Pires Suite and the Paranaita Suite: these are associated with acid and intermediate volcanics of the Colider Suite, in which rhyolites, rhyodacites, andesites and microgranites predominate.

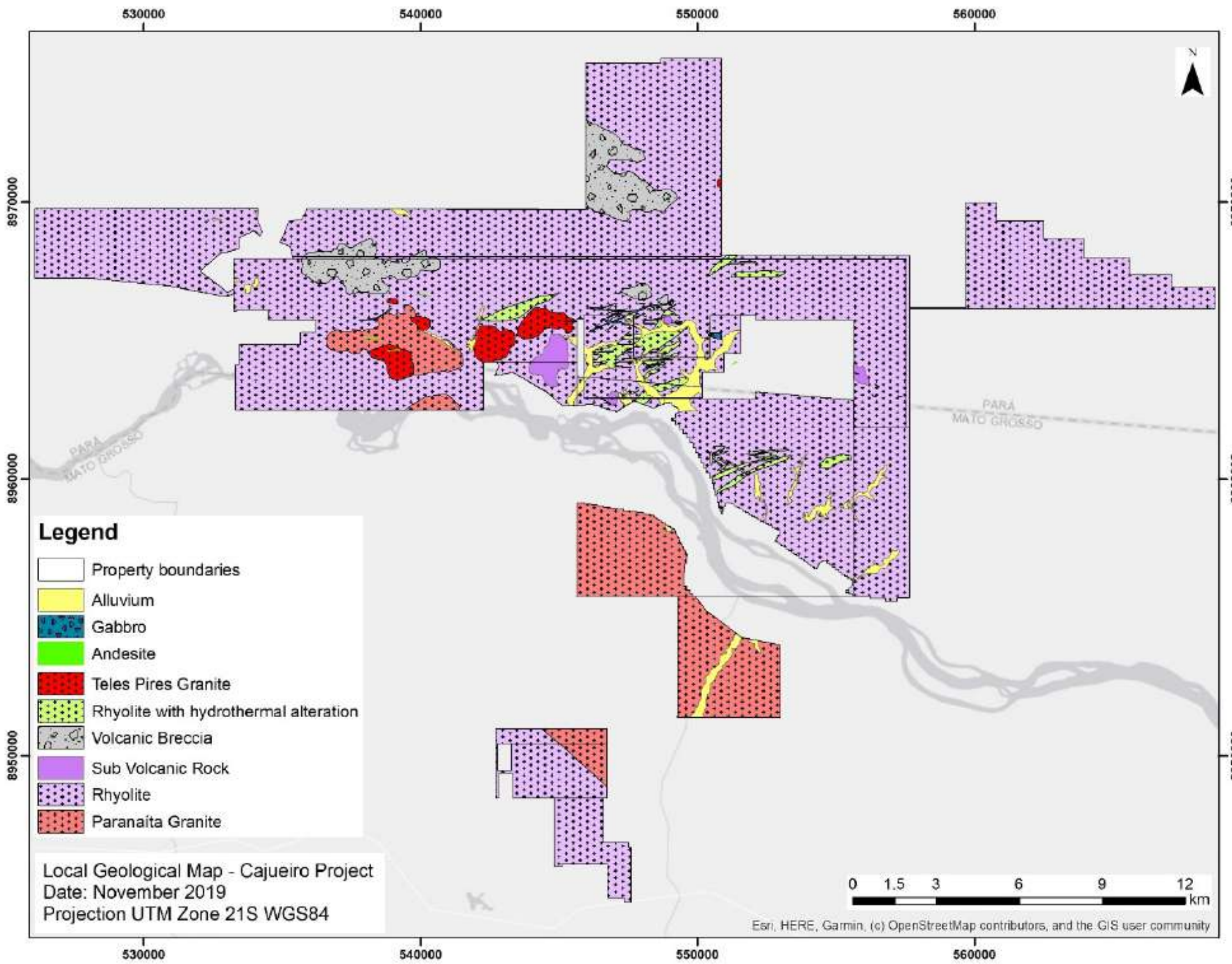
Alkaline granites of the post orogenic stage intrude into rocks of the Colider Suite and into granitoids of the Paranaita Suite. The final stage of stable sedimentation within this unit is marked by the Transamazonic platform sedimentation of the Beneficente Group which is distributed in W-E to NW-SE directions.

Figure 7-1 Regional Geologic Map



Source: Adapted from Duarte 2015

Figure 7-2 Local Geology Map



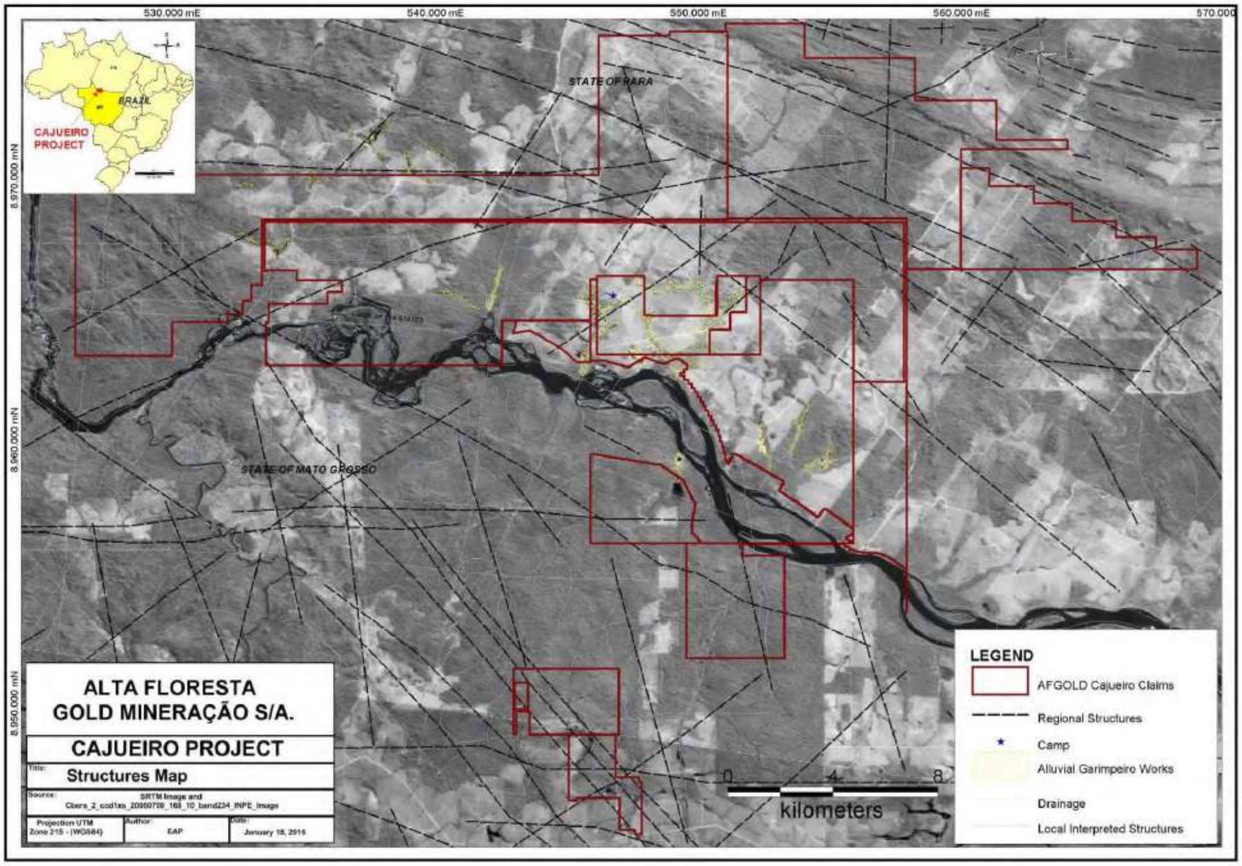
Source – Altamira (2019)

7.1.2 Local Geology

Colider Suite rocks have been mapped in the Cajueiro Project area and dominantly consist of microgranite and rhyolite, breccias, and tuffs. Zones of hydrothermal alteration with sericite alteration have been recognized on surface within the granites and are commonly coincident with fracture zones. Rock samples collected from these zones which display box-work after pyrite gave high gold assays.

Four main structural trends have been identified in the area: NE-SW, NW-SE, E-W and NNW-SSE (Figure 7-3), which control the location and orientation of drainages along which artisanal mining took place. Localized gossanous boulders are also mapped over the areas of mineralized fracture zones. Garimpeiros have mined alluvial or placer gold in many drainages which likely overlie or are adjacent to bedrock mineralized zones.

Figure 7-3 Cajueiro Structural Trends

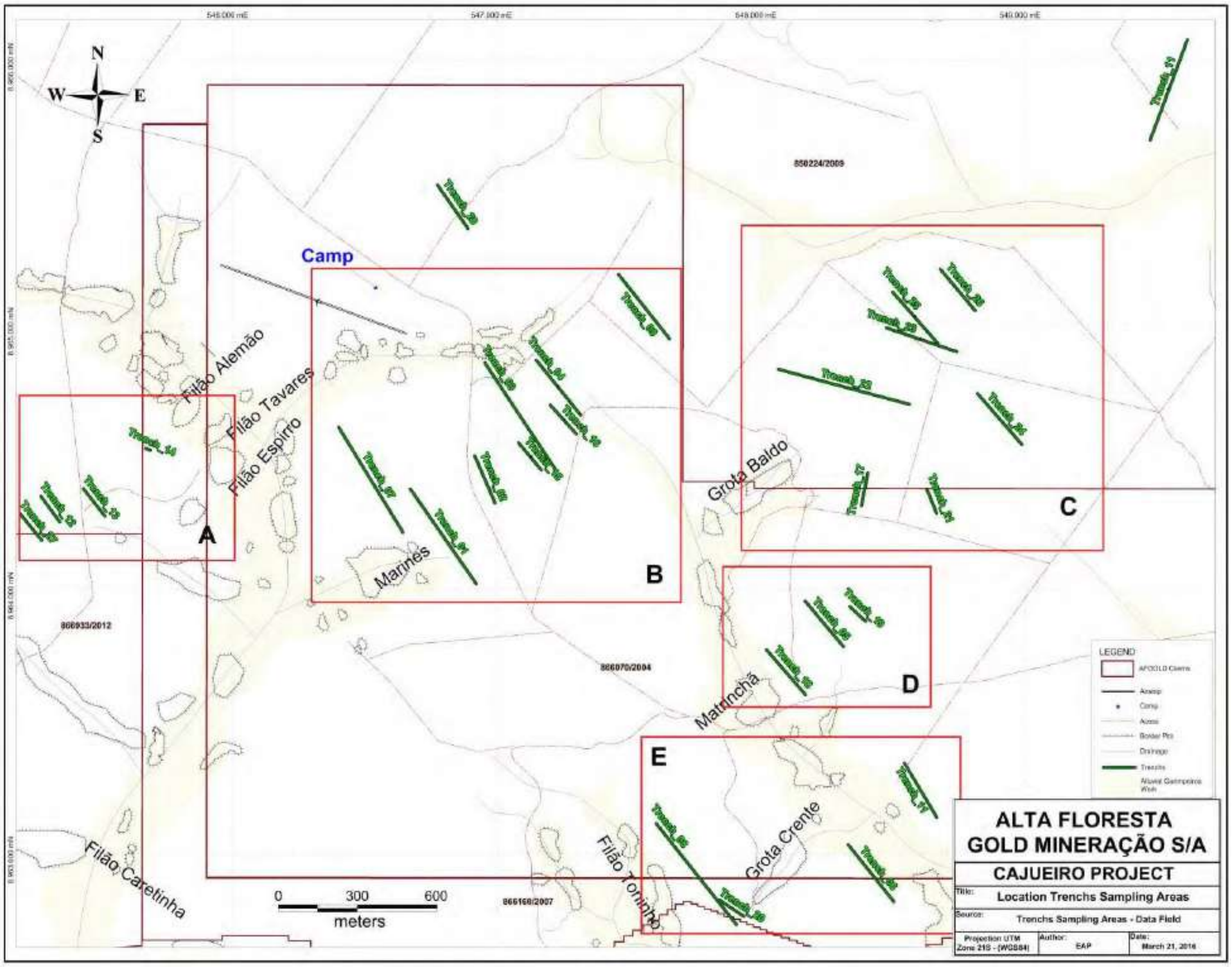


Source – AFGM (2016)

7.1.3 Property Geology

Within the areas explored, eight distinct zones of quartz veining and alteration have been identified by diamond drilling and another six by mapping and soil sampling, all of which fall within five discrete target areas (Figure 7-4). The five discrete target areas were identified by Chapleau as “A” through “E”, but more contemporarily were named by Altamira as Tavares (Area A), Marines (Area B), Baldo (Area C), Matrincha (Area D), and Crente (Area E). Each area has a current mineral resource estimate.

Figure 7-4 Cajueiro Target Exploration Areas



Source – AFGM (2016)

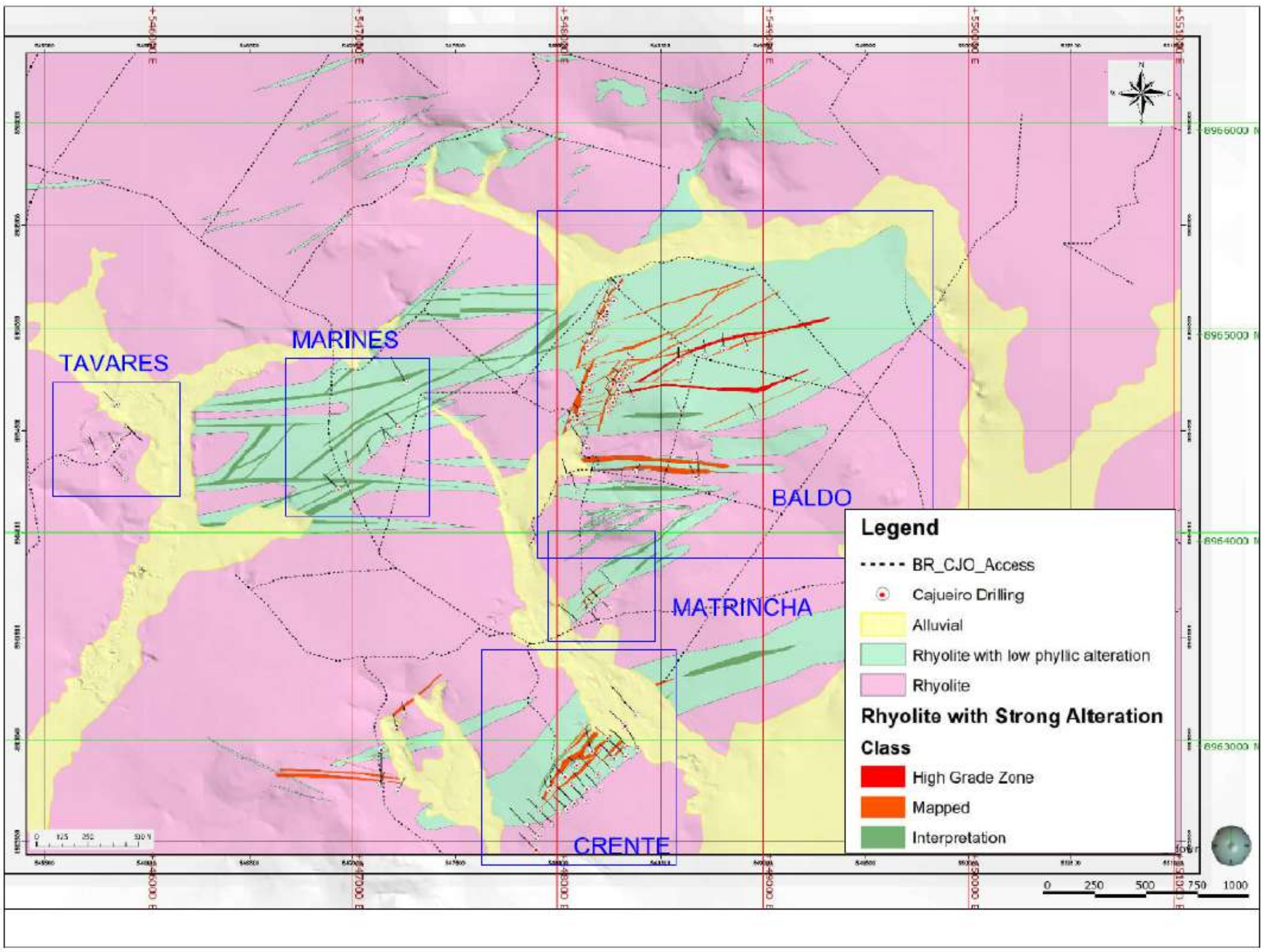
The Collider Suite covers the resource area. Although this suite mainly includes rhyolites and microgranites, in the resource areas, no granite was mapped in the last updated geologic map (Figure 7-5) or logged in the core samples. In (Figure 7-6), (Figure 7-7), and (Figure 7-8) some of the geologic logs prepared by Leapfrog software are given for the Baldo, Crente, and Marines areas respecitvley. The logs logs illustrate the different type of rhyolites, veins, breccias, and their alterations. No intrusive rocks have been logged to date.

In the resource areas, two variations of the felsic rocks are present. The dominant type is rhyolite which is reddish in color with no quartz veining and negligible pyrite. These rhyolites are oxidized and contain abundant fine Fe-oxide minerals in the matrix and phenocrysts.

The second common felsic rock type is green rhyolite altered with sericite, epidote, chlorite and quartz. These rocks are reduced versions of the red oxidized rhyolites and occasionally have relict faintly reddish feldspars, however, more commonly, visible feldspars are sericitized. The rocks commonly have disseminated pyrite clusters, some of which are pseudomorhs after biotite phenocrysts. Other pyrite clusters and coarse cubic crystals occur with gray-white quartz in veinlets along fractures. The green rocks are coincident with strong fracture sets, which generally trend NE-SW. Most drainages and garimpos are aligned with these orientations and strong linear aeromagnetic high anomalies dominantly have these two orientations. A secondary structural trend runs E-W.

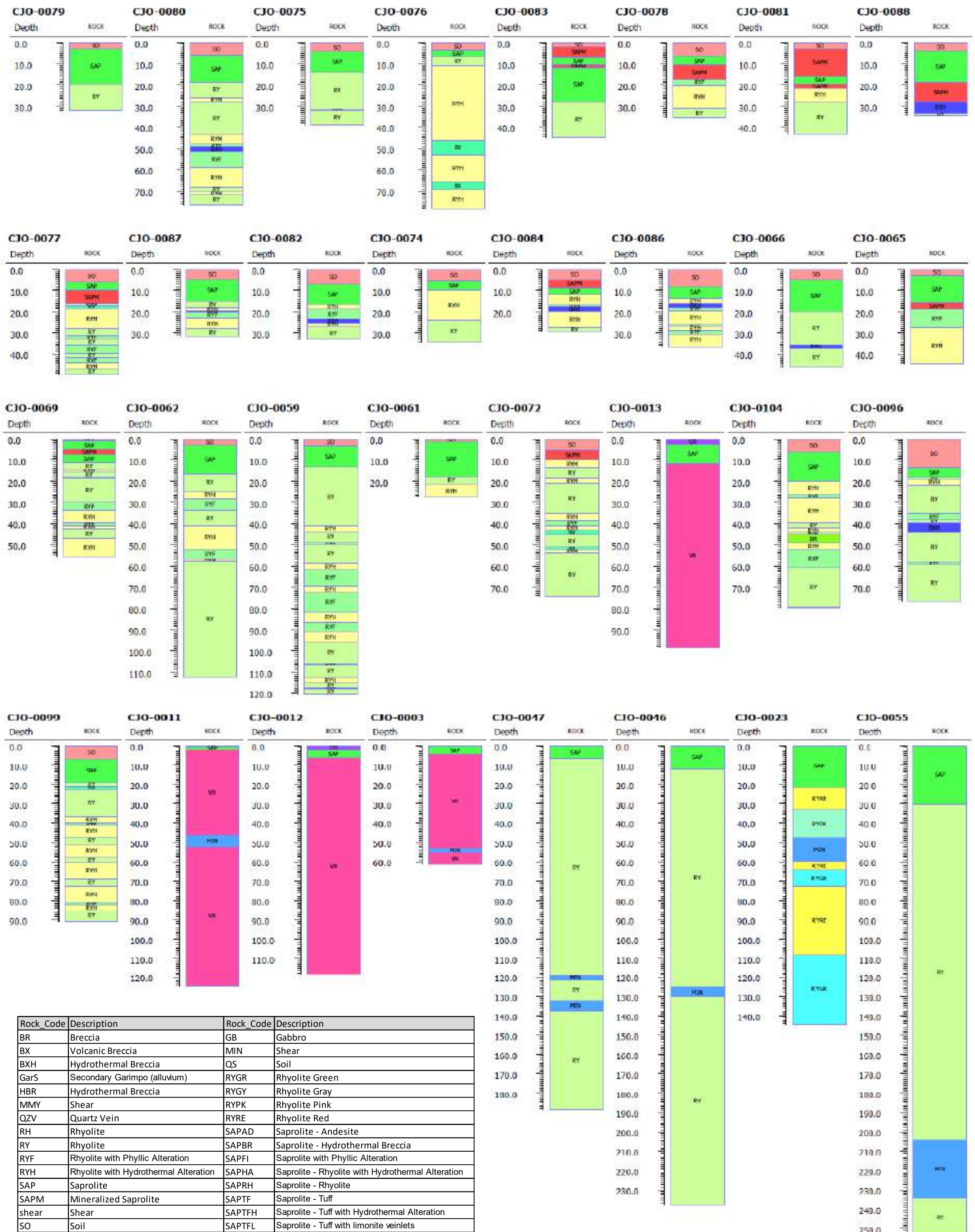
Some of the drainages appear to have developed directly on top of alteration zones, although in several locations drainages are adjacent to ridges underlain by sericitized and weakly silicified gray-green rhyolites. Some garimpos and soil anomalies adjacent to ridges may reflect gold transported off the alteration highs.

Figure 7-5 Geologic Map of Cajueiro Target Exploration Areas



Source – AFGM (2016)

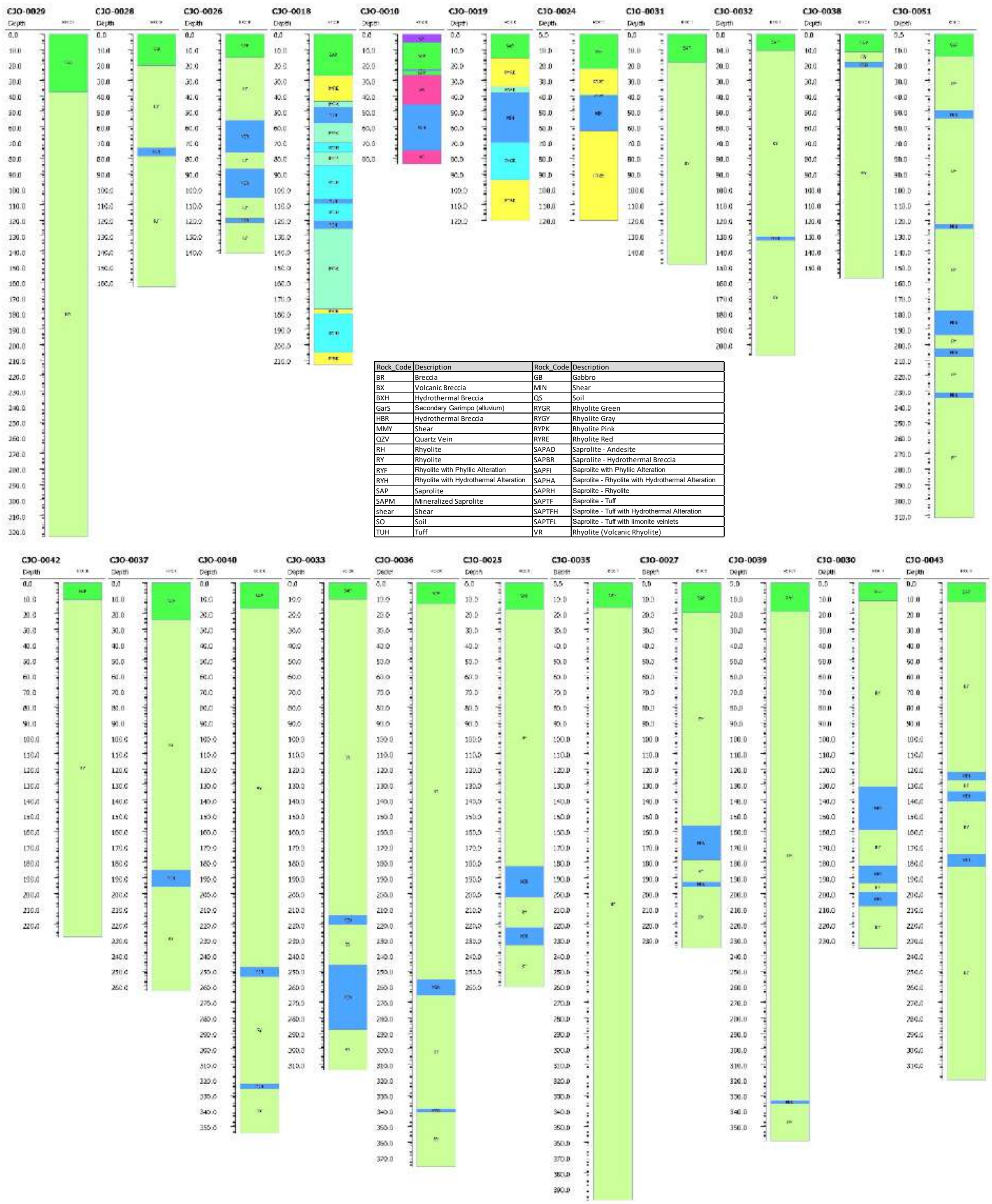
Figure 7-6 Example Geologic Logs of Baldo Target Exploration Area



Rock_Code	Description	Rock_Code	Description
BR	Breccia	GB	Gabbro
BX	Volcanic Breccia	MIN	Shear
BXH	Hydrothermal Breccia	QS	Soil
GarS	Secondary Garimpo (alluvium)	RYGR	Rhyolite Green
HBR	Hydrothermal Breccia	RYGY	Rhyolite Gray
MMY	Shear	RYPK	Rhyolite Pink
QZV	Quartz Vein	RYRE	Rhyolite Red
RH	Rhyolite	SAPAD	Saprolite - Andesite
RY	Rhyolite	SAPBR	Saprolite - Hydrothermal Breccia
RYF	Rhyolite with Phyllic Alteration	SAPFI	Saprolite with Phyllic Alteration
RYH	Rhyolite with Hydrothermal Alteration	SAPHA	Saprolite - Rhyolite with Hydrothermal Alteration
SAP	Saprolite	SAPRH	Saprolite - Rhyolite
SAPM	Mineralized Saprolite	SAPTF	Saprolite - Tuff
shear	Shear	SAPTFH	Saprolite - Tuff with Hydrothermal Alteration
SO	Soil	SAPTFL	Saprolite - Tuff with limonite veinlets
TUH	Tuff	VR	Rhyolite (Volcanic Rhyolite)

Source: GRE 2019

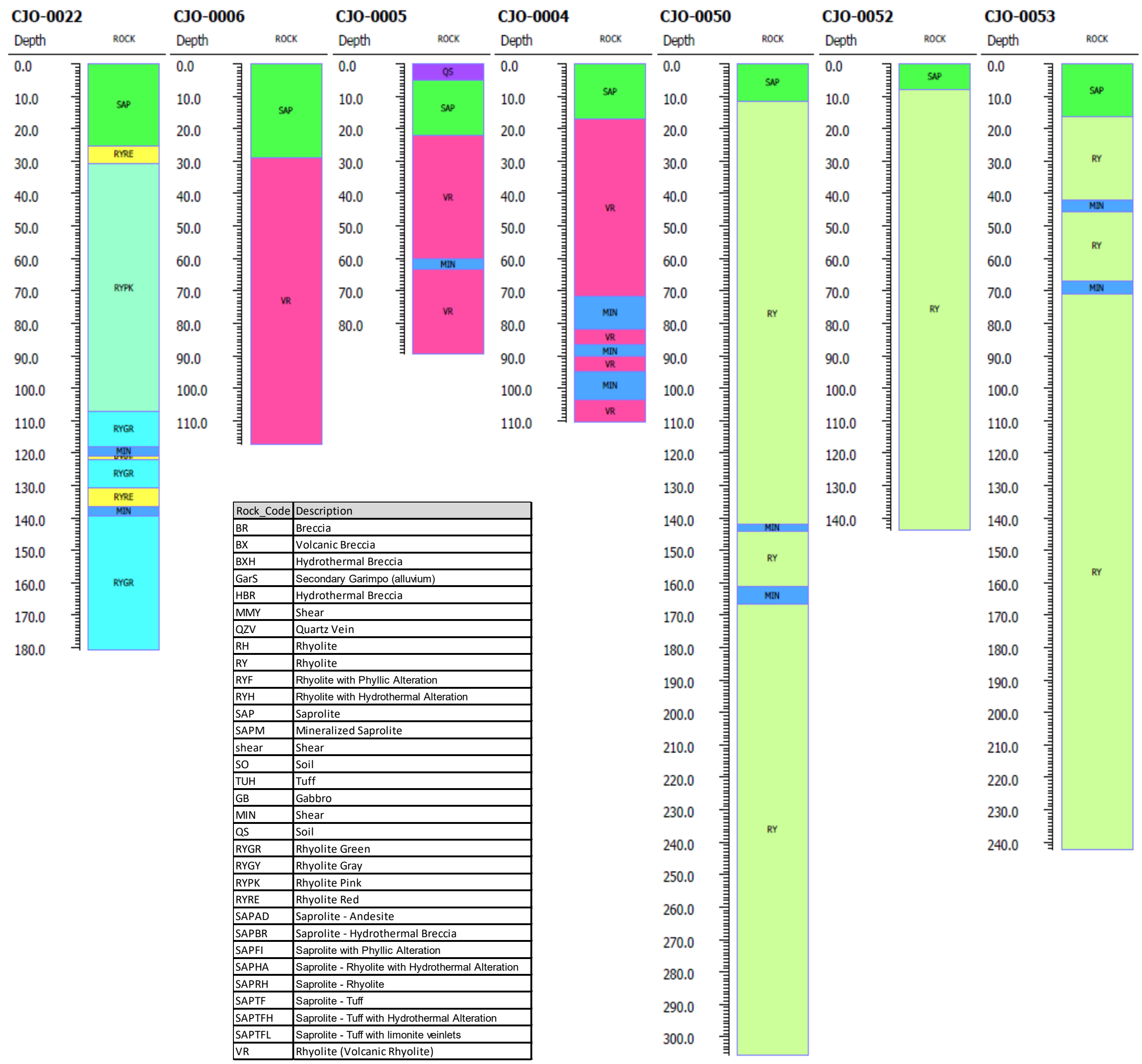
Figure 7-7 Some of the Geologic Logs of Crente Target Exploration Areas



Rock_Code	Description	Rock_Code	Description
BR	Breccia	GB	Gabbro
BX	Volcanic Breccia	MIN	Shear
BXH	Hydrothermal Breccia	QS	Soil
GarS	Secondary Garimpo (alluvium)	RYGR	Rhyolite Green
HBR	Hydrothermal Breccia	RYGY	Rhyolite Gray
MMY	Shear	RYPK	Rhyolite Pink
QZV	Quartz Vein	RYRE	Rhyolite Red
RH	Rhyolite	SAPAD	Saprolite - Andesite
RY	Rhyolite	SAPBR	Saprolite - Hydrothermal Breccia
RYF	Rhyolite with Phyllic Alteration	SAPFI	Saprolite with Phyllic Alteration
RYH	Rhyolite with Hydrothermal Alteration	SAPHA	Saprolite - Rhyolite with Hydrothermal Alteration
SAP	Saprolite	SAPRH	Saprolite - Rhyolite
SAPM	Mineralized Saprolite	SAPTF	Saprolite - Tuff
shear	Shear	SAPTFH	Saprolite - Tuff with Hydrothermal Alteration
SO	Soil	SAPTFL	Saprolite - Tuff with limonite veinlets
TUH	Tuff	VR	Rhyolite (Volcanic Rhyolite)

Source: GRE 2019

Figure 7-8 Geologic Logs of Marines Target Exploration Areas



Rock_Code	Description
BR	Breccia
BX	Volcanic Breccia
BXH	Hydrothermal Breccia
GarS	Secondary Garimpo (alluvium)
HBR	Hydrothermal Breccia
MMY	Shear
QZV	Quartz Vein
RH	Rhyolite
RY	Rhyolite
RYF	Rhyolite with Phyllic Alteration
RYH	Rhyolite with Hydrothermal Alteration
SAP	Saprolite
SAPM	Mineralized Saprolite
shear	Shear
SO	Soil
TUH	Tuff
GB	Gabbro
MIN	Shear
QS	Soil
RYGR	Rhyolite Green
RYGY	Rhyolite Gray
RYPK	Rhyolite Pink
RYRE	Rhyolite Red
SAPAD	Saprolite - Andesite
SAPBR	Saprolite - Hydrothermal Breccia
SAPFI	Saprolite with Phyllic Alteration
SAPHA	Saprolite - Rhyolite with Hydrothermal Alteration
SAPRH	Saprolite - Rhyolite
SAPTF	Saprolite - Tuff
SAPTFH	Saprolite - Tuff with Hydrothermal Alteration
SAPTFL	Saprolite - Tuff with limonite veinlets
VR	Rhyolite (Volcanic Rhyolite)

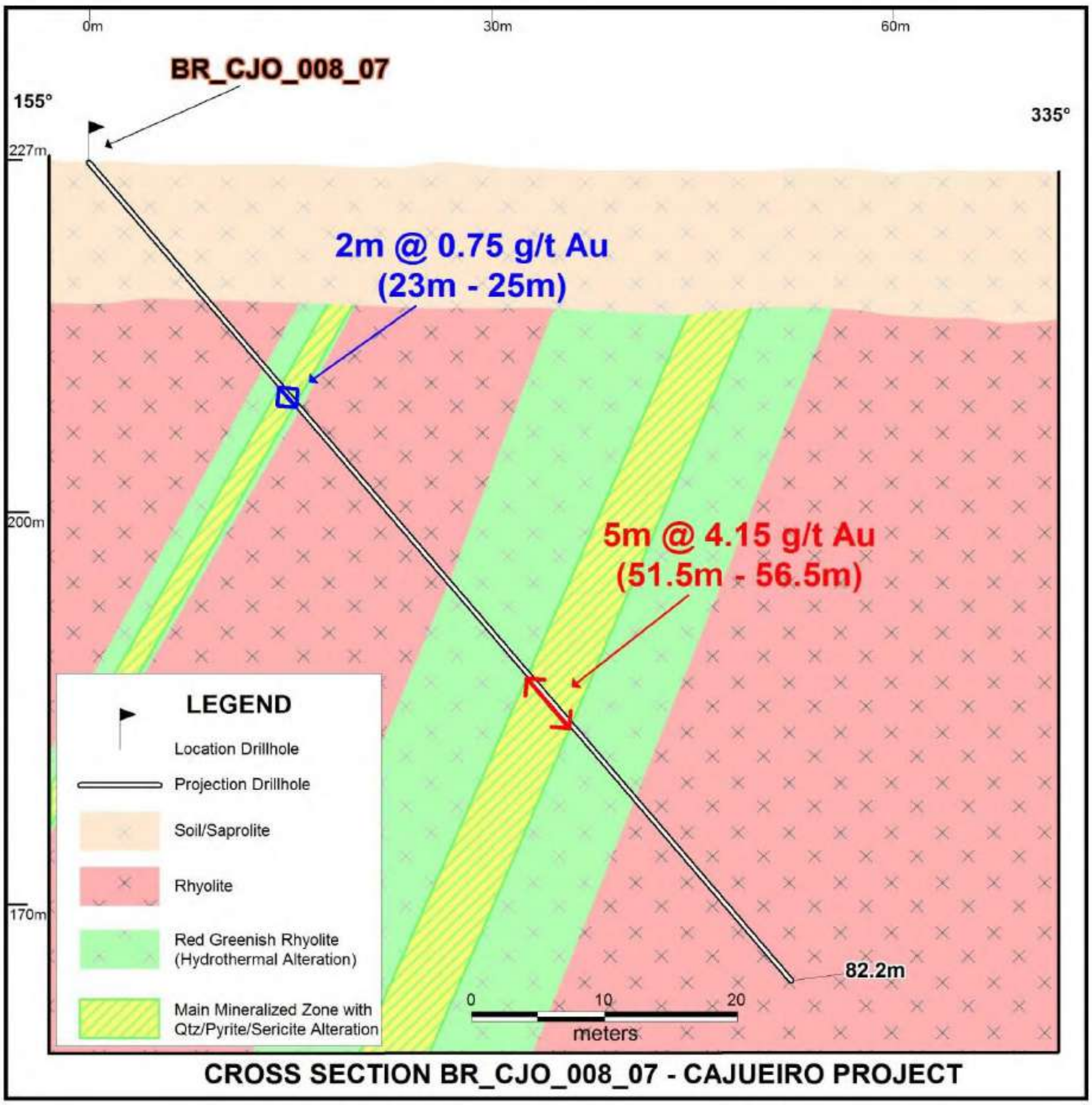
Source: GRE 2019

To date, diamond drilling carried out on the Cajueiro property shows intercepted zones of strong hydrothermal alteration within the rhyolites, where sericite, epidote, chlorite, and pyrite alteration are predominant. These altered zones vary in width from 1 to 50 meters and are easily identified due to the strong color change from red in unaltered /rhyolite to green in the altered zones.

Gold mineralization is hosted by strongly sericite-altered, fine-matrix rhyolite rocks. Gold primarily occurs in the form of fine native gold and is also associated with pyrite. Some zones are narrow and show signs of incipient shearing, but mineralization also occurs in zones of sericite-chlorite-quartz alteration up to 50 meters wide with associated disseminated pyrite. These wider zones are fractured but show little evidence of shearing. Thin quartz-pyrite veins are common and also carry gold. The overall pyrite content of the mineralized zones varies from 1 to 20 percent.

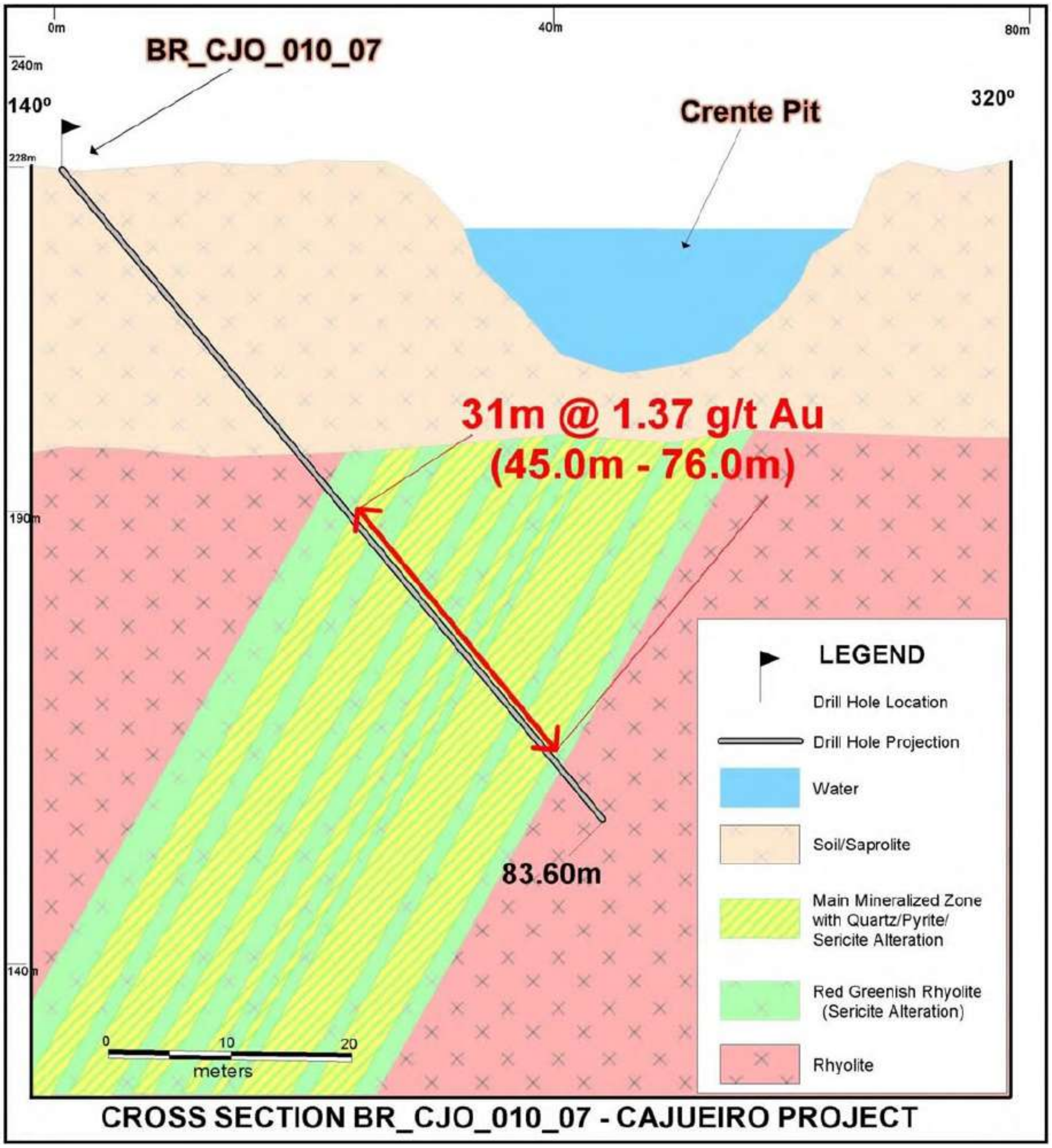
The best single assay value is seen in hole DDH CJO 026, with one meter assaying 32.9 g/t Au. Diamond drill hole BR_CJO_DDH10, drilled beneath the Crente pit by Chapleau, intersected a wider zone of alteration which assayed 1.37 g/t Au over 31 meters. Examples of significant intercepts and drill hole orientations are presented graphically in Figure 7-9 through Figure 7-11.

Figure 7-9 Drill Hole BR_CJO_008_07



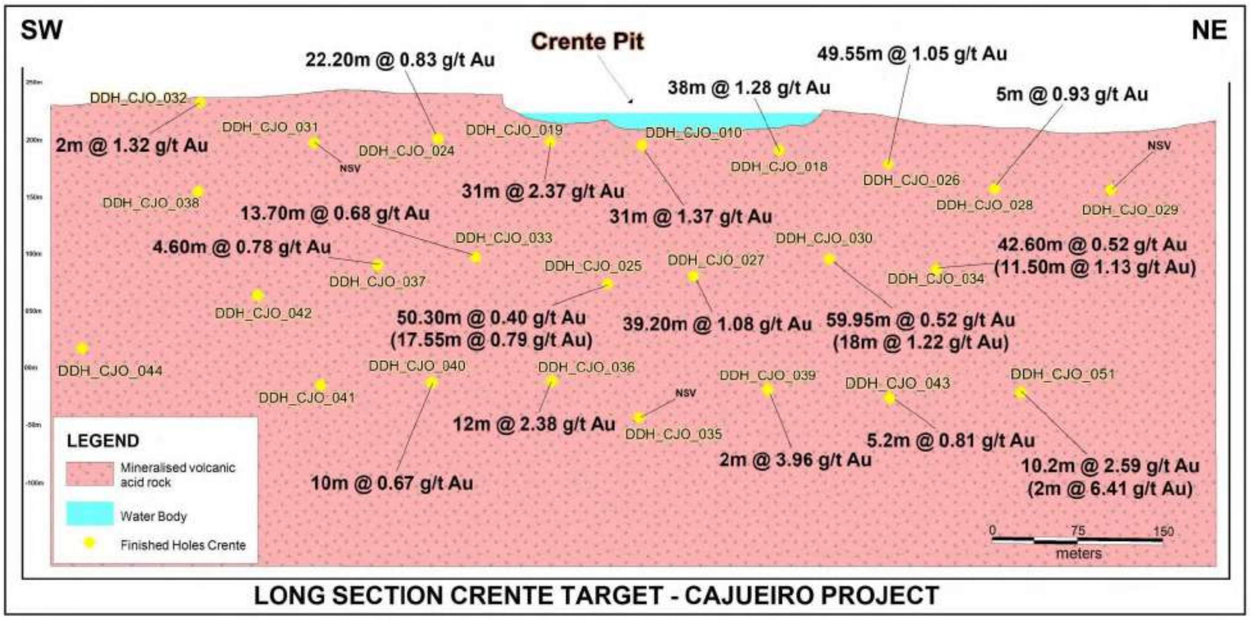
Source: Gustavson (2016)

Figure 7-10 Drill Hole BR_CJO_010_07



Source: Gustavson (2016)

Figure 7-11 Grota Crente Section



Source: Gustavson (2016)

8.0 Deposit Types

8.1 Mineral Deposit

At Cajueiro, gold deposits are associated with strong sericite alteration in rhyolitic bedrock. Shearing in much of the altered rock is minor and the deposits are not shear zone hosted. Rather, alteration and mineralization appear to be related to brittle fractures in the rhyolites which formed prior to shearing. Shearing is more evident in narrow zones, 1 to 8 meters wide. However, mineralization is associated with sericite-epidote-chlorite alteration and minor silicification in wider fractured zones (up to 50 meters wide). Gold occurs as both fine native gold and as inclusions in disseminated and stringer pyrite in quartz-pyrite veinlets (Figure 8-1) and (Figure 8-2).

The deposits appear to be related to hydrothermal alteration by sulfur-rich fluids rising along brittle fracture zones. In terms of depth of formation, the deposits appear to be epithermal to mesothermal.

Figure 8-1 Altered and Intact Rhyolite in Core Boxes, Cajueiro

Source – GRE (2019)

Figure 8-2 Pyrite Stringers in Altered Rhyolite in Cut Core Sample, Cajueiro

Source – Gustavson (2016)

8.2 Geological Model

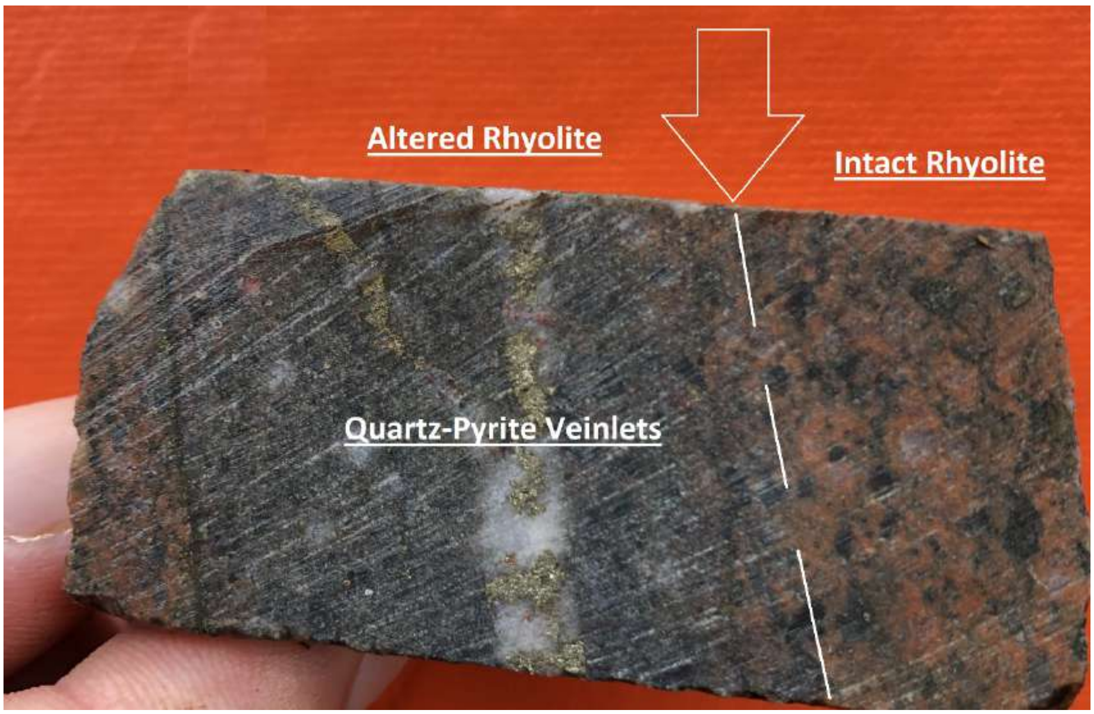
Gold mineralization at Cajueiro is associated with coarse crystals or aggregates of pyrite, either disseminated or clustered in quartz-pyrite veinlets. This gold-pyrite mineralization occurs in zones of green reduced sericite-epidote-chlorite altered rhyolite in brittle fractured zones up to 50 meters wide. The green altered zones are commonly adjacent to or intercalated with unaltered red rhyolite, which appears to be responsible for strong linear aeromagnetic highs in the area (Figure 8-3). Alteration was caused by hydrothermal fluids, the flow of which was controlled by fracture sets parallel with the dikes. Detailed ground magnetic surveys are recommended which may be able to differentiate mineralized sericite-quartz-pyrite altered zones (magnetic lows) from nearby magnetic high zones.

The mineralized zones at Crente, Matrincha and Marines generally strike NE and dip steeply SE. At Baldo, two mineralized trends appear to intersect – one striking NE and dipping very steeply SE and the other striking ENE and dipping moderately steeply to the SE. A third mineralized E-W striking zone is seen in Baldo and Marines and dipping vertical to very steeply NE.

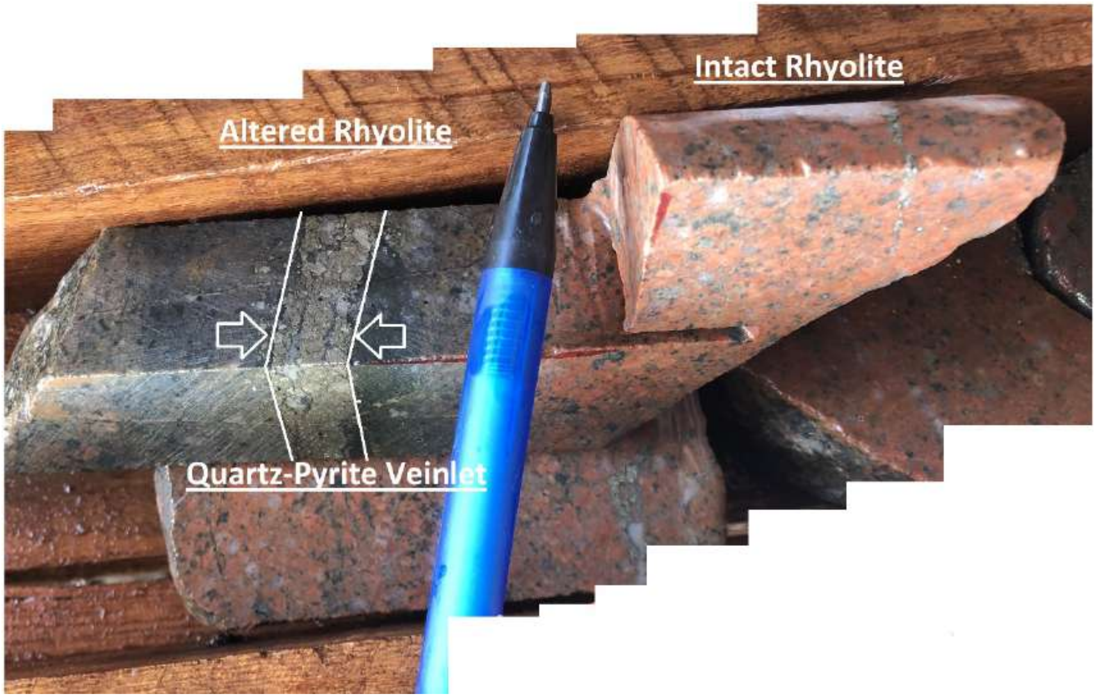
Areas where NE-striking and ENE-striking fracture zones intersect are thought to be the locations of focused fluid flow and may host high-grade ore shoots which would generally be plunging moderately to steeply SSW. Such areas are recommended for targeting in future exploration.

The geologic model and its relation to the resource modeling is discussed in Section 14.

Figure 8-3 Quartz- Pyrite veinlets in Altered Rhyolite, Cajueiro



Source – GRE (2019)



Source – GRE (2019)

9.0 Exploration

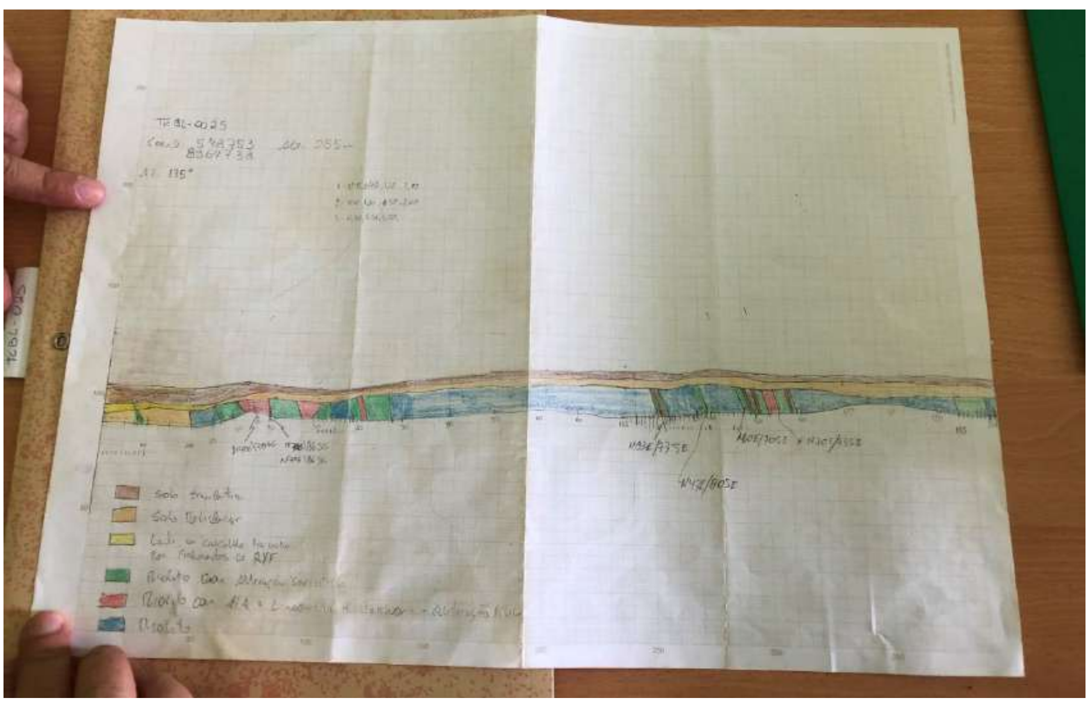
Since acquiring the property, Altamira has completed 34 additional trenches on the property totaling 8,314 meters. The trenches were focused on the Matrincha and Baldo targets to investigate the extent of the mineralized structures in those areas.

The trenching procedures were as follows:

- Layout of trench by base point by handheld GPS and azimuth direction;
- Excavation of trench to depth ranging from 2-4 meters;
- Geologist measures length along trench with survey tape, completes a lithologic log with from/to intervals noting the rock type and structures, and completes a hand sketch of the trench lithology;
- Geologist marks the intervals to be sampled; type channel sampling with samples at 1.5 meters intervals in the mineralized zone and every 5 meters in the non-mineralized zones, with samples to 3 kg bags identified numerically and described in sample card;
- Preparation of sample batches with a maximum of 40 samples including 2 blanks and 1 standard (alternating patterns of high oxide and low oxide) for each batch;
- Input of data into database (samples, batches and QA/QC information);
- Send samples to the lab for analysis (50g Fire Assay with 10 to 20% of analysis with ICP);
- Receipt of results and update of the database accordingly.

Figure 9-1 provides an example of the hand drawn lithology log from trench TCBL-0025.

Figure 9-1 Example Hand Drawn Trench Section for TCBL-0025



Source – GRE (2019)

10.0 Drilling Programs

The subsections below detail the exploration drilling complete at the Cajueiro Project. The authors did not encounter any drilling, sampling, or recovery factors that would materially impact the accuracy of the assay results. Drilling recovery is reported to average 95%.

10.1 Chapleau 2007

Drilling was conducted by Geoserv Pesquisas Geologicas S.A., a Brazilian subsidiary of Boart Longyear, whose base is in Rio de Janeiro, Brazil. Geoserv used a Longyear 38 skid-mounted hydraulic rig capable of drilling 250+ meters of HQ core. Holes were drilled to produce HQ core from surface down to the end of all 13 holes. The weathering profile in the project area is such that unweathered unoxidized bedrock was encountered at between 10 and 50 meters. The upper levels, where saprolite was well developed, required casing of the drill holes to prevent caving. None of the holes drilled in the Chapleau drill campaign were downhole surveyed.

All cores were cut in half on site using a water-cooled diamond bladed saw. Core cutting and sampling were supervised by both the Chapleau project geologist and the Chapleau technicians. One half of the core was sent for assay while the second half has been kept on site for geological studies.

A total of 13 HQ diamond drill holes tested eight individual structures for a total of 1,238 meters of drilling.

Drill Hole Summary for Chapleau's 2007 Drill Program

BOREHOLE ID	EASTING (meters)	NORTHING (meters)	ELEVATION (meters)	AZIMUTH (°)	DIP (°)	LENGTH (meters)	Target Area
CJO-001	545873	8964457	235	55	-50	100	Alvaro Tavares
CJO-002	545596	8964339	248	345	-60	38.6	Alvaro Tavares
CJO-003	548378	8964311	250	40	-50	61.3	Baldo
CJO-004	547170	8964438	248	345	-50	110.5	Marines
CJO-005	547096	8964373	248	345	-50	89.5	Marines
CJO-006	546985	8964328	244	345	-50	117.5	Marines
CJO-007	548666	8964281	243	335	-50	128	Baldo
CJO-008	548153	8963626	227	335	-50	82.2	Matrincha
CJO-009	548211	8963679	230	325	-50	85	Matrincha
CJO-010	548093	8962876	228	320	-50	83.6	Crente
CJO-011	548969	8964561	268	335	-50	124.5	Baldo
CJO-012	548600	8964594	282	335	-50	118.5	Baldo
CJO-013	548369	8964664	267	335	-50	98.5	Baldo

Note - Drill hole locations are shown on WGS84 datum, in the 21L UTM Zone.

10.2 ECI Exploration 2010 - 2012

In 2010, ECI completed an 11-hole HQ-size diamond drill program. The drilling was performed by Geologica Sondagem Ltda. located in Nova Lima, Minas Gerais, Brazil using Macsondas 1200 drills. The drillholes were surveyed for downhole deviations at approximatly 50 meter intervals by Geologica Sondagens.

A 31-hole program was completed in 2011. The HQ-size diamond core holes were drilled by Albecht e Albecht – Centergeo, located in Cuiabá, Mato Grosso, Brazil; GEOSOL Geologia e Sondagem S/A, located in Belo Horizonte, Minas Gerais, Brazil; and Fuad Rassi Engenharia Industria e Comercio Ltda, located in Goiana, Goias, Brazil. ECI conducted downhole surveys for the 2011 drillholes.

Survey deviations for both programs were generally between 1-3 degrees in both azimuth and dip.

All cores samples were cut in half on site using a water-cooled diamond bladed saw. Core cutting and sampling were supervised by both the ECI project geologist and the ECI technicians. One half of the core was sent for assay while the other half has been kept on site for geological studies.

ECI completed a drilling program of 42 HQ-size diamond drill holes for a total of 9,977 meters between 2010-2012.

Drill Hole Summary for ECI Exploration 2010-2012 Drill Program

BOREHOLE ID	EASTING (meters)	NORTHING (meters)	ELEVATION (meters)	LENGTH (meters)	AZIMUTH (°)	DIP (°)	TARGET AREA
CJO-014	545847	8964427	242	120	335	55	Alvaro Tavares
CJO-015	545894	8964268	236	153	315	55	Alvaro Tavares
CJO-016	545756	8964386	248	152	335	55	Alvaro Tavares
CJO-017	545851	8964629	234	150	315	55	Alvaro Tavares
CJO-018	548166	8962942	227	213	330	50	Crente
CJO-019	548035	8962817	229	120	320	55	Crente
CJO-020	548107	8963572	224	224	310	54	Matrincha
CJO-021	545895	8964528	227	219	135	60	Alvaro Tavares
CJO-022	546934	8964216	241	181	315	55	Marines
CJO-023	548046	8964276	234	144	345	50	Baldo
CJO-024	547962	8962751	228	120	320	55	Crente
CJO-025	548144	8962758	228	260	320	65	Crente
CJO-026	548242	8963006	225	142	315	55	Crente
CJO-027	548197	8962827	228	235	315	65	Crente
CJO-028	548330	8963066	220	163	315	50	Crente
CJO-029	548381	8963120	220	324	320	55	Crente
CJO-030	548275	8962908	225	235	315	65	Crente
CJO-031	547913	8962655	223	148	315	55	Crente
CJO-032	547849	8962583	217	207	315	55	Crente
CJO-033	548083	8962687	227	314	315	65	Crente
CJO-034	548338	8962969	223	272	315	65	Crente
CJO-035	548208	8962758	227	397	315	75	Crente
CJO-036	548140	8962703	227	376	315	75	Crente

BOREHOLE ID	EASTING (meters)	NORTHING (meters)	ELEVATION (meters)	LENGTH (meters)	AZIMUTH (°)	DIP (°)	TARGET AREA
CJO-037	548005	8962642	225	263	315	65	Crente
CJO-038	547905	8962530	217	157	315	50	Crente
CJO-039	548268	8962849	226	359	315	70	Crente
CJO-040	548046	8962661	226	354	315	75	Crente
CJO-041	547981	8962586	226	344	317	76	Crente
CJO-042	547927	8962573	226	228	315	65	Crente
CJO-043	548333	8962918	233	397	315	70	Crente
CJO-044	547895	8962464	224	266	315	65	Crente
CJO-045	548688	8964261	243	315	355	65	Baldo
CJO-046	548090	8964209	236	238	355	65	Baldo
CJO-047	548316	8964238	253	188	40	65	Baldo
CJO-048	548209	8963569	229	297	320	66	Matrincha
CJO-049	548283	8963747	228	177	315	50	Matrincha
CJO-050	547214	8964450	270	306	315	70	Marines
CJO-051	548392	8962954	231	312	330	65	Crente
CJO-052	547231	8964517	272	144	315	50	Marines
CJO-053	547260	8964735	262	242	330	55	Marines
CJO-054	548253	8963637	227	343	315	65	Matrincha
CJO-055	548141	8964418	257	254	325	50	Baldo

10.3 Equitas/Altamira 2016 - 2017

From 2016 through 2017, Equitas/Altamira completed 46 HQ diamond drill holes totaling 2,780 meters. The drilling was performed by Layne do Brasil Sondagens LTDA. Collars were located using handheld gps. The majority of the drillholes were surveyed for downhole deviations using Maxibor II and Ezsershot survey tools on 3 meter intervals by Layne. Survey deviations were generally between 1-3 degrees in both azimuth and dip.

Core samples were cut and sampling was supervised by the geologist or technician. Half of the core was sent for assay at SGS Geosol, while the other half was kept on site in a secured facility.

The following is a summary of the logging protocols in place.

- Core logging took place in a well-lit and secure facility.
- The drilling contractor provided core recovery, and the company’s technician checked and verified the information.
- Core photography was completed at this stage.
- A project geologist logged lithology, alteration, mineralogy, and structures and marked the core samples.

- Data from the core logging was added to the drill hole data base.
- The core was stored in secured, well labeled racks.

Drill core logs contain the following information:

- Drilling header information: drill-hole number, collar coordinates and elevation, location, azimuth, dip, length, geologist, drilling dates, and core diameter.
- Core recovery.
- Sample data: sample number with from-to intervals.
- Letter codes for digital data base for lithology (rock type, composition, form, and texture), alteration (type, style, intensity, and mineralogy), mineralization (type, style, mineralogy, and %), and structures (type and angle to core).
- Geotechnical data: RQD, weathering and resistance

Figure 10-1 Example of Core Logging at Site

Source – Altamira (2016)

Starting in 2016, Equitas/Altamira has drilled 50 HQ diamond drill holes totaling 3,157 meters.

Drill Hole Summary for Altamira 2016-2017 Drill Program

BOREHOLE ID	EASTING (meters)	NORTHING (meters)	ELEVATION (meters)	LENGTH (meters)	AZIMUTH (°)	DIP (°)	TARGET AREA
CJO-0057	548111	8964599	248	71	315	50	Baldo
CJO-0058	548127	8964668	253	54	315	45	Baldo
CJO-0059	548129	8964581	247	120	315	51.6	Baldo
CJO-0060	548139	8964715	256	43	315	45	Baldo
CJO-0061	548095	8964553	243	28	315	45	Baldo
CJO-0062	548157	8964699	256	112	315	47.4	Baldo
CJO-0063	548075	8964568	245	26	315	45	Baldo
CJO-0064	548053	8964520	242	38	315	45	Baldo
CJO-0065	548165	8964773	258	44	315	45	Baldo
CJO-0066	548186	8964827	258	46	315	46.9	Baldo
CJO-0067	548270	8964724	261	59	315	45.7	Baldo
CJO-0068	548277	8964658	258	60	315	46.2	Baldo
CJO-0069	548300	8964721	262	56	315	46.8	Baldo
CJO-0070	548306	8964770	263	46	315	46.2	Baldo
CJO-0071	548330	8964806	261	32	315	45.8	Baldo
CJO-0072	548351	8964781	263	74	315	43.9	Baldo
CJO-0073	548361	8964858	259	39	315	44.6	Baldo
CJO-0074	548164	8964950	252	35	315	45	Baldo
CJO-0075	548181	8965012	249	39	315	45.7	Baldo
CJO-0076	548184	8964941	253	79	315	44.9	Baldo
CJO-0077	548221	8965057	247	50	315	48.5	Baldo
CJO-0078	548265	8965146	243	36	315	45.2	Baldo
CJO-0079	548275	8965136	243	32	315	45	Baldo
CJO-0079B	548275	8965136	243	65	315	46.1	Baldo
CJO-0080	548236	8965039	248	77	315	44.9	Baldo
CJO-0081	548245	8965112	244	43	315	44.9	Baldo
CJO-0082	548200	8965008	249	33	315	45.5	Baldo
CJO-0083	548295	8965207	240	45	315	45.1	Baldo
CJO-0084	548148	8964910	253	29	315	44.8	Baldo
CJO-0085	548245	8964615	253	40	315	46.3	Baldo
CJO-0086	548132	8964877	254	36	315	45	Baldo
CJO-0087	548207	8965029	248	32	315	45.9	Baldo
CJO-0088	548240	8965083	246	35	315	49.8	Baldo
CJO-0089	548297	8964753	262	45	315	45.8	Baldo
CJO-0090	548322	8964722	263	49	315	45	Baldo
CJO-0091	548295	8964682	261	28	315	45	Baldo
CJO-0092	548270	8964638	256	37	315	50	Baldo
CJO-0093	548243	8964587	251	57	315	45	Baldo
CJO-0094	548069	8962775	236	177	320	55	Baldo

BOREHOLE ID	EASTING (meters)	NORTHING (meters)	ELEVATION (meters)	LENGTH (meters)	AZIMUTH (°)	DIP (°)	TARGET AREA
CJO-0095	548002	8962785	236	75	320	50	Baldo
CJO-0096	548720	8964866	256	77	355	50	Baldo
CJO-0097	548810	8964895	252	72	355	50	Baldo
CJO-0098	548970	8965952	280	113	315	45	Baldo
CJO-0099	548928	8964895	249	91	344	50	Baldo
CJO-0100	547147	8962951	231	229	180	45	Toninho
CJO-0101	547219	8963051	237	120.2	345	50	Toninho
CJO-0102	547267	8963133	240	70.57	25	50	Toninho
CJO-0103	547128	8962778	238	81.2	25	50	Toninho
CJO-0104	548588	8964835	260	80	0	50	Baldo
CJO-0105	547242	8962764	250	101.5	25	50	Toninho

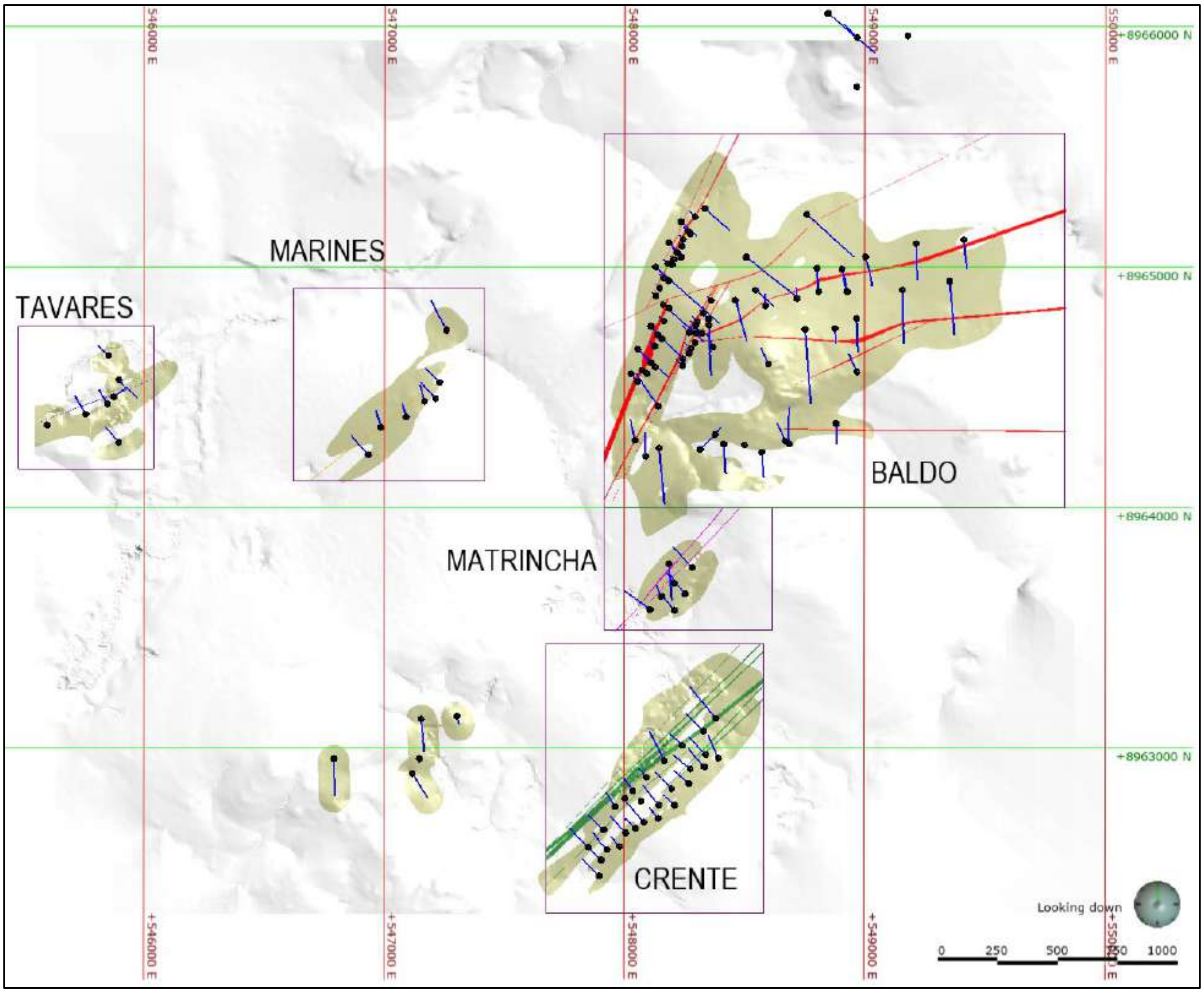
Note - Drill hole locations are shown on WGS84 datum, in the 21S UTM Zone.

10.4 Drill Hole Map and Example Section

The plan map in Figure 4-1 shows all the location of all drill collars with drill hole projection. Figure 10-3 through Source – GRE (2019)

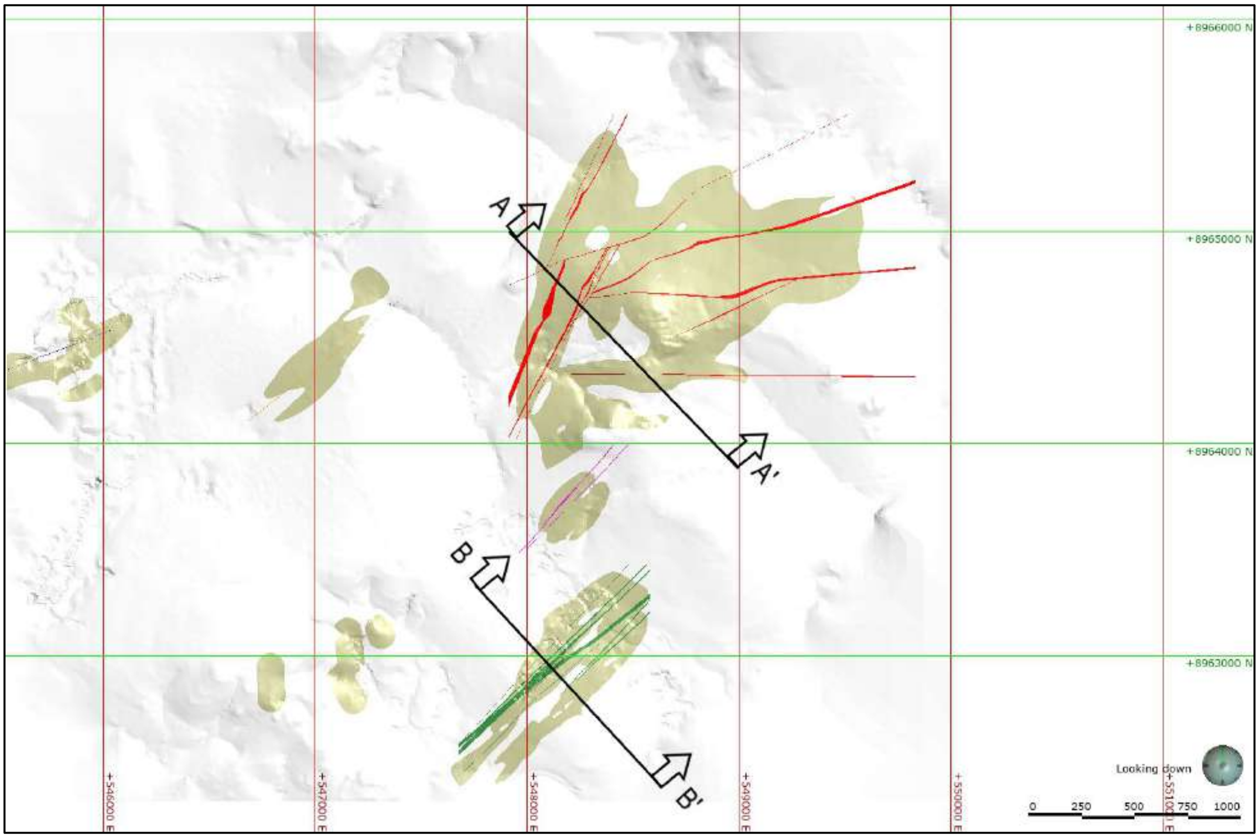
Figure 10-5 provide examples cross sections through the main resource areas of Baldo and Crente.

Figure 10-2 Drill Hole Location Map



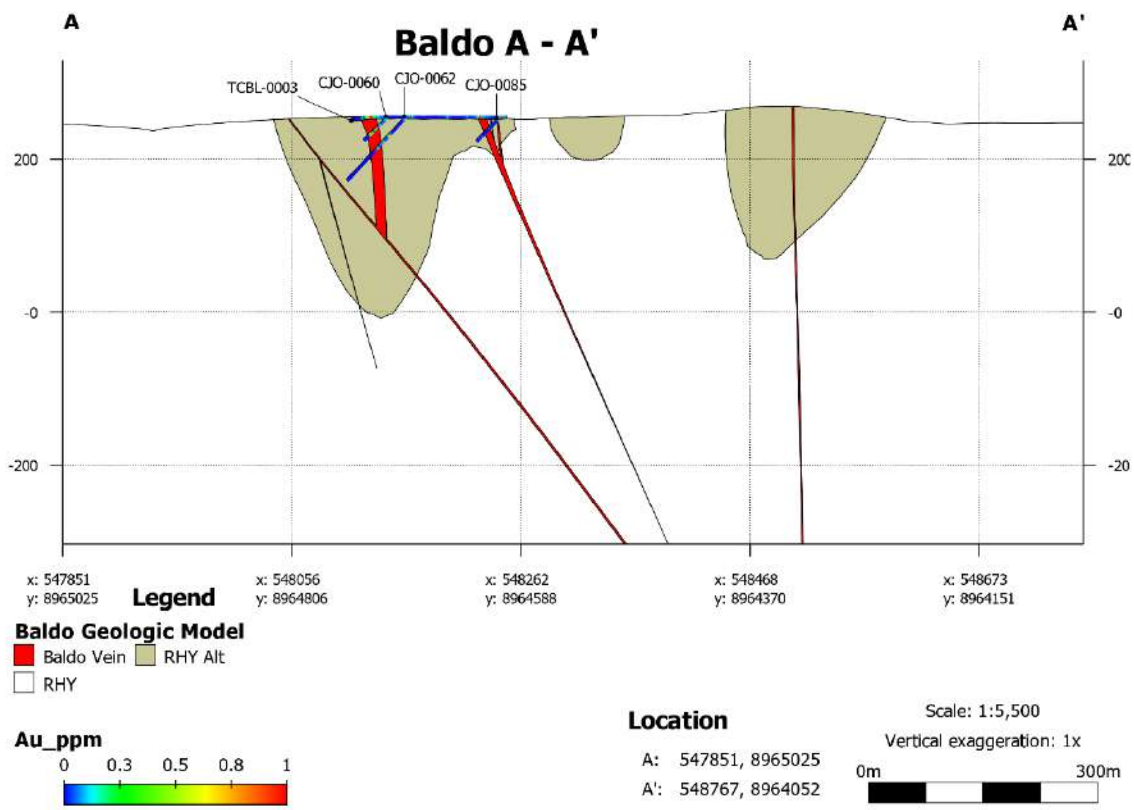
Source – GRE (2019)

Figure 10-3 Example Section Locations



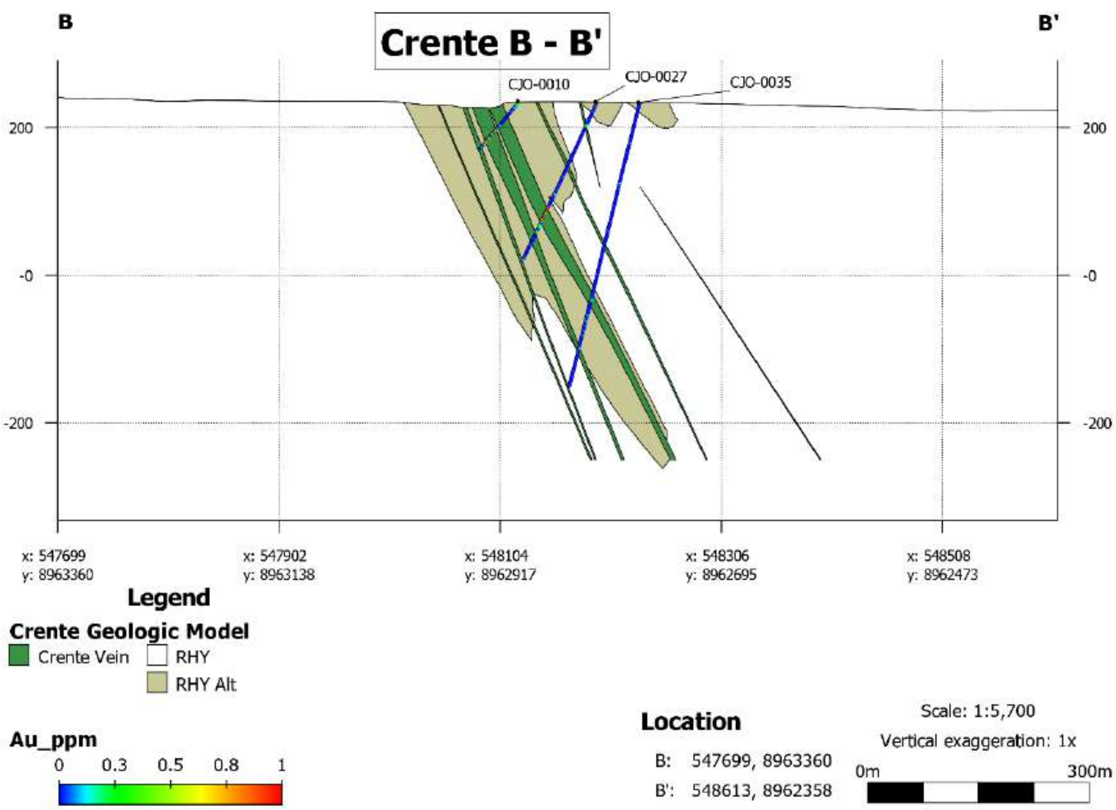
Source – GRE (2019)

Figure 10-4 Example Section Baldo



Source – GRE (2019)

Figure 10-5 Example Section Crente



Source – GRE (2019)

11.0 Sample Preparation, Analysis and Security

This section describes sample preparation, analysis, and security utilized by Altamira, Chapleau, and ECI. In general, the same local exploration group has been maintained despite changes in the project ownership.

11.1 Core Handling and Splitting Methods

Drill core is stored at the on-site core shack. Core boxes are marked sequentially with the hole number, box number and depth. In the core shack, each box was photographed to provide a visual record of the core.

The core was cut in half along the indicated line using a water-cooled diamond-bladed rock saw. The geologist or technician would indicate the cutting line on the core using permanent marker. The line was oriented to bisect the mineralized structures. All core was cut in half. After cutting, both halves of the core back were placed back into the core-box and the core-box was transferred to a logging table (Figure 11-1).

Figure 11-1 Core Sample Protocol

Source – Altamira (2016)

The cut core was then logged by the project's geologist. A specially prepared log sheet was used and the geologist made note of the lithology, structural information, alteration, mineralization and other important features of the core. The geologist also marked the core boxes with the intervals to be sampled. The core was sampled at intervals ranging from 0.2 to 8.9 meter intervals. The sampling technicians placed half of the core into new plastic sample bags and clearly marked the interval on the rib of the core box. Aluminum tags showed the sample number and are attached to the core boxes to identify the sample intervals. The bagged sample was marked and tagged, the bag being sealed with a special plastic fastener. Groups of bagged samples were placed in larger sacks. These large sacks were marked as individual lots and sent to the laboratory. Chain of custody documentation is kept for each lot showing the shipper, receiver, lot number, and samples contained within each shipment.

Detailed core logs are stored in a computer data base along with sample intervals and numbers.

11.2 Trench Sampling

After the opening of the trench using an excavator, a technician together with a field assistant would conduct a safety assessment. After that, the real length of the trench is measured using wood stakes to the eastern wall. Stakes are spaced approximately 10m apart and located around 80cm from the ground. The first stake is always located and the northern most end regardless of trench direction and represents station 0+00m.

A string is tied to all stakes in order to form one continuous line that will serve as a reference for the sampling. The trench survey is then completed by measuring the azimuth and dip of the line from the 1st stake to the 2nd and so on. At the same time, the geologist maps the exposed lithologies and measures the structures, registering all relevant information.

The sampling plan is then defined. The samples inside a mineralized zone are sampled on 1.5m lengths and with samples outside that zone on 5.00m respecting lithological contacts. The QAQC criteria are similar to those of diamond drilling.

For the sampling procedure, first the area that follows the reference line is cleaned by scraping the material. The beginning and the end of the samples are marked on the wall using stakes. Using a hoe, a channel is dug in the wall of the trench having 5cm of height and 5cm deep inside the wall following the reference line determined by the string. The material is collected on a tray, transferred to a plastic bag with an ID tag and sealed.

Figure 11-2 Trench Sample Protocol

A) measuring and placing stakes every 10m; B & D) sampling; C) geological mapping. **Source – Altamira (2019)**

11.3 Security Measures

Samples and returned laboratory samples are stored in an open-air covered building dedicated for storage. The core is well protected from rain. The building is located on private property manned year-round.

Figure 11-3 Photo of Onsite Core Storage Building

Source – GRE (2019)

11.4 Sample Preparation and Analysis

A summary of Chapleau and ECI's sample preparation and assay requirements is provided in Table 11-1.

Table 11-1 Summary of Sample Preparation and Assay Procedures

Exploring Party	Sample Date	Medium	Sample Preparation		Sample Analysis	
			Laboratory	Sample Preparation	Laboratory	Analysis
Chapleau	Aug 2006 - Feb 2007	Rock, channel, soil samples	ALS Laboratory, Belo Horizonte, Brazil	Dried, crushed, to - 200 mesh	ALS Laboratory, Lima, Peru	Gold by fire assay and atomic absorption (AA), metals by ICP1
Chapleau	Mar 2007 - Jun 2007	Drill core	SGS Geosol Laboratories, Belo Horizonte, Brazil (SGS)	Dried, crushed to 2 mm, quartered, pulverization to 95% -150 mesh	SGS	Gold by fire assay and AA, metals by ICP1

Exploring Party	Sample Date	Medium	Sample Preparation		Sample Analysis	
			Laboratory	Sample Preparation	Laboratory	Analysis
ECI	2011	Drill core	SGS	Dried, crushed to 2 mm, quartered, pulverization to 95% -150 mesh	SGS	Gold by fire assay and AA, and Metals by ICP
ECI	2008, 2011 - 12	Rock samples	SGS	Dried, crushed to 2 mm, quartered, pulverization to 95% -150 mesh	SGS	Gold by fire assay and AA
ECI	2011	Trench samples	SGS	Dried, crushed to 2 mm, quartered, pulverization to 95% -150 mesh	SGS	Gold by fire assay and AA
Altamira	2016-2017	Trench and Drill Core samples	SGS	Dried, crushed to 2 mm, quartered, pulverization to 95% -150 mesh	SGS	Gold by fire assay and AA

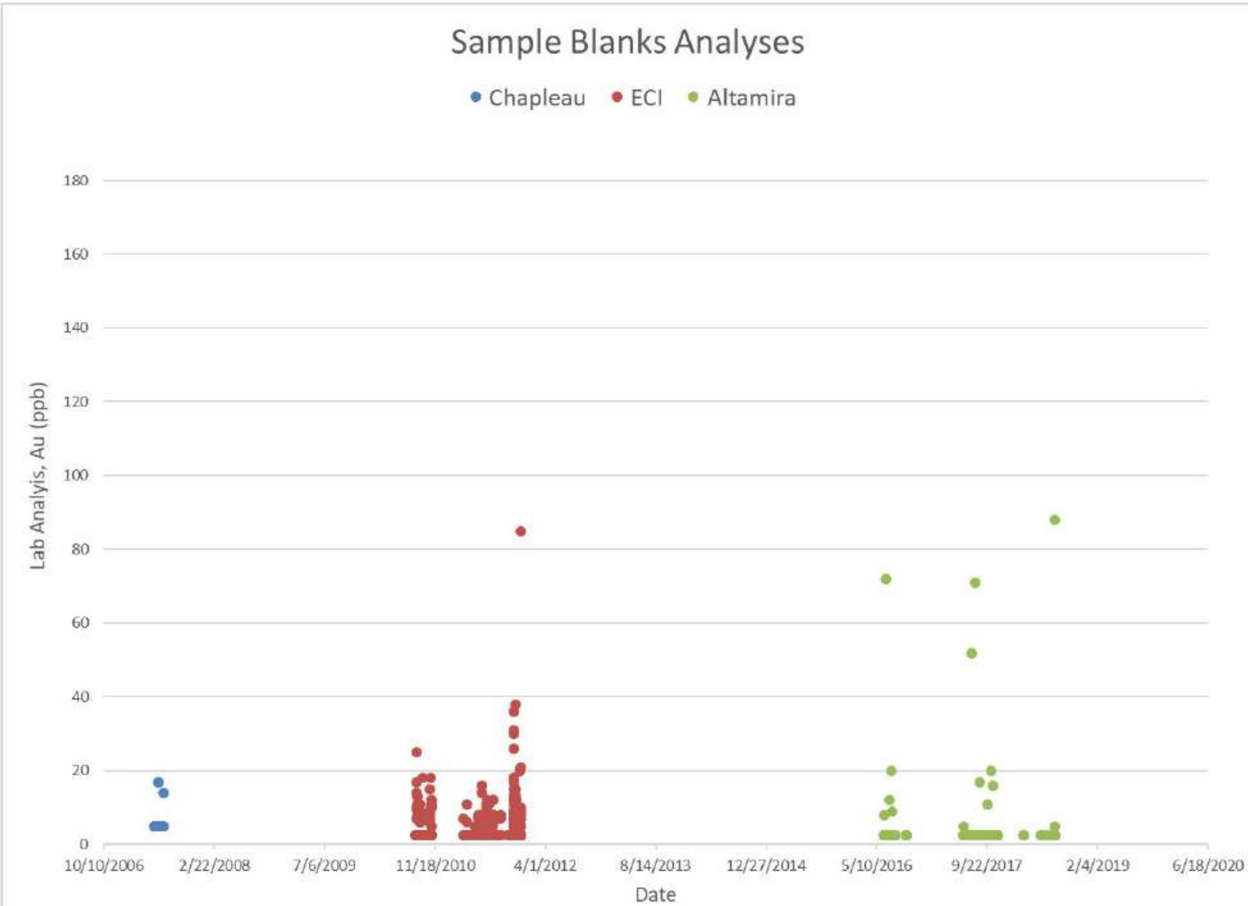
ALS Brasil Ltda, ALS Peru S.A. and SGS Geosol hold current ISO certification. Laboratories utilized by each company were third-party entities and independent of the exploring parties.

11.5 Sampling QA/QC Program

GRE completed an independent review of the standards, blanks, and duplicate samples for the entire data set covering all owners. QA/QC samples for the drilling completed by Chapleau is limited to blank samples only. The later programs completed by ECI and Altamira are comprised of standards, blanks, and duplicates, which cover the majority of the data set. GRE reviewed the control sheets for the most recent exploration completed by Altamira which show a control sample insertion rate of 15%. The overall sample control rate is 11%. The authors believe continuing the 15% sample insertion rate is adequate; however, increasing to 20% is recommended.

The results of the blanks sample are presented graphically in Figure 11-4. The first blank sample by Chapleau returned a value over 15 gpt gold. Altamira is unaware of how the results of this sample were handled by Chapleau's exploration team. All other samples are within the acceptable deviation. The authors believe the results of the blank control sample program are adequate.

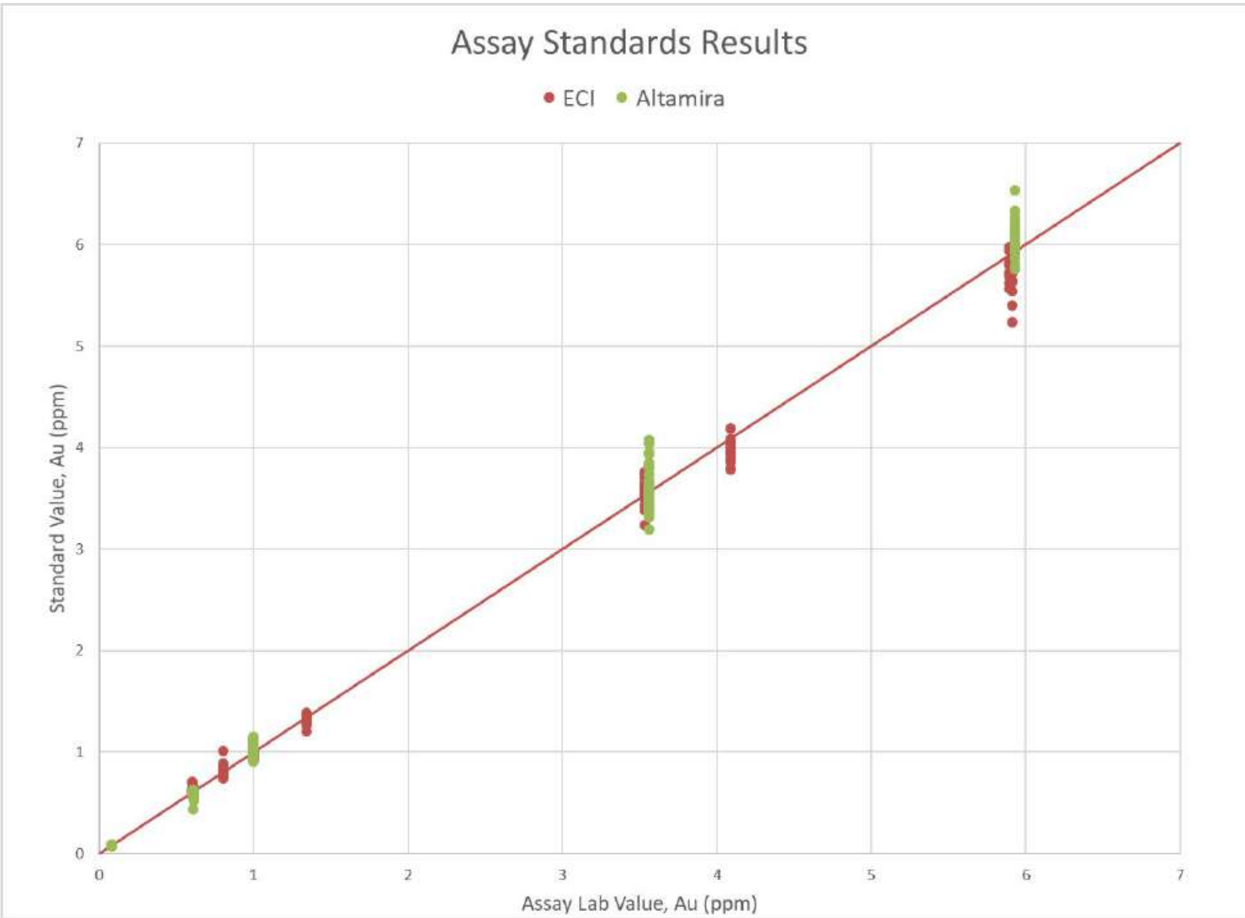
Figure 11-4 Results of Blank Samples by Company



Source – GRE (2019)

Commercially prepared standard control samples were utilized in both the ECI and Altamira QA/QC programs. The standard values range from 0.8 to 5.9 gpt gold which provide a good range when compared the grade of mineralization at Cajueiro. No significant deviations are present from the standard value control samples. The authors believe the results of the standard sample control program are adequate. Figure 11-5 illustrates the results of the standard control samples by company.

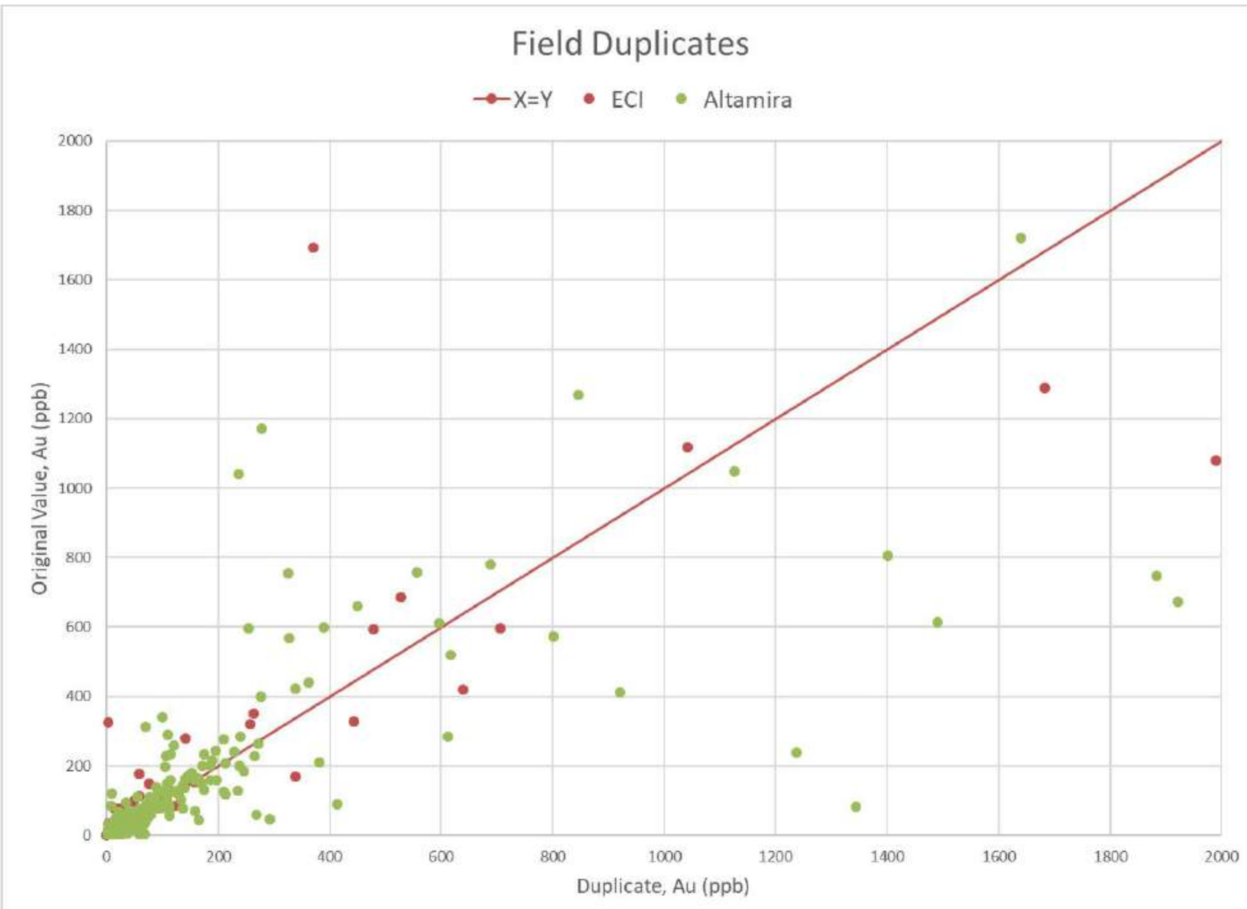
Figure 11-5 Results of Standard Samples by Company



Source – GRE (2019)

Duplicate samples were collected in the field for both the ECI and Altamira QA/QC programs. Three samples with high grade gold (16-50 gpt Au) showed significant deviation in the duplicates. The assay results of these duplicate samples were confirmed by Altamira by repeat analysis by the laboratory. The likely source of the difference is large gold particles in the mineralization. The results of the program, excluding 3 outliers are presented in Figure 11-6. The authors believe the results of the duplicate sample control program are adequate.

Figure 11-6 Results of Field Duplicate Samples by Company



Source – GRE (2019)

In addition to the QA/QC samples by the exploration companies, standard, blanks, duplicate, and repeat samples were completed at the assay laboratory as part of their internal quality control procedure. No significant deviations for these control samples were reported.

11.6 Opinion on Adequacy

In the opinion of the QP responsible for this section, the analytical procedures were appropriate and consistent with common industry practice. The sampling has been carried out by trained technical staff under the supervision of the project geologist and in a manner that meets industry standards. Samples are properly identified and transported in a secure manner from the site to the lab. There are no fatal flaws that would preclude the estimation of a Mineral Resource.

The QPs recommend the following items for future exploration programs.

- Before each new exploration campaign the company should:
  - Complete a review of the sampling program including method, preparation for dispatch, security, and chain of custody documentation
  - Determine the planned control sample type and insertion rate
  - Establish an action plan for deviations
  - Reeducate the workforce on the program
- The company should review the results of the program at least monthly
- The insertion rate of the QA/QC samples should be increased to 20%

12.0 Data Verification

12.1 Procedures

GRE utilized trench and drill hole data from the exploration database to complete the mineral resource estimate. This section discusses the procedures completed to independently verify data which included, drill hole collars, lithology, and assays.

12.1.1 Collar

Kevin Gunesch, P.E. of GRE visited the project on April 11th, 2019. Mr. Gunesch completed a general reconnaissance of the project area primarily focused on the two main resource areas of Crente and Baldo and took measurements of the physical markers from the past drill hole exploration programs. The markers are comprised of a concrete pad with metal plate designating the drill hole number, location, orientation, total depth, start and end date drilled, and drilling contractor. A PVC pipe protruding from the marker provides a physical record of the drill hole orientation. Figure 12-1 provides an example of the drill hole marker for CJO-062. Mr. Gunesch measured the coordinates, azimuth, and dip for comparison to the exploration database. The field measurements agree favorably with the drill hole database. Table 12-1 provides the details of the measurement and database comparison.

Figure 12-1 Example Drill Hole Marker

Source – GRE (2019)

Table 12-1 Drill Hole Collar Verification

BHID	Data Source	Easting (m)	Northing (m)	Azi (deg)	Dip (deg)
CJO 24	Plate	547966	8962752	320	55
	GPS/Compass	547962	8962750	320	55
	DH Database	547962	8962751	328	53
	Difference GPS to DB	0	1	8	2
CJO 95	Plate	548002	8962785	320	50
	GPS/compass	548002	8962785	300	50
	DH Database	548002	8962785	320	50
	Difference GPS to DB	0	0	20	0
CJO 10	Plate	548093	8962876	320	50
	GPS/compass	548095	8962874	325	55
	DH Database	548092	8962874	310	55
	Difference GPS to DB	3	0	15	0
CJO 057	Plate	548111	8964599	315	50
	GPS/compass	548113	8964602	320	55
	DH Database	548110	8964598	315	50
	Difference GPS to DB	3	4	5	5
CJO 062	Plate	548157	8964699	315	45
	GPS/compass	548157	8964702	315	50
	DH Database	548156	8964699	315	47
	Difference GPS to DB	1	3	0	3
CJO 096	Plate	548720	8964866	355	50
	GPS/compass	548719	8964870	355	NA
	DH Database	548720	8964866	355	50
	Difference GPS to DB	1	4	0	NA
CJO 055	Plate	Concrete monument missing plate			
	GPS/compass	548146	8964418	320	60
	DH Database	548141	8964418	325	50
	Difference GPS to DB	5	0	5	10

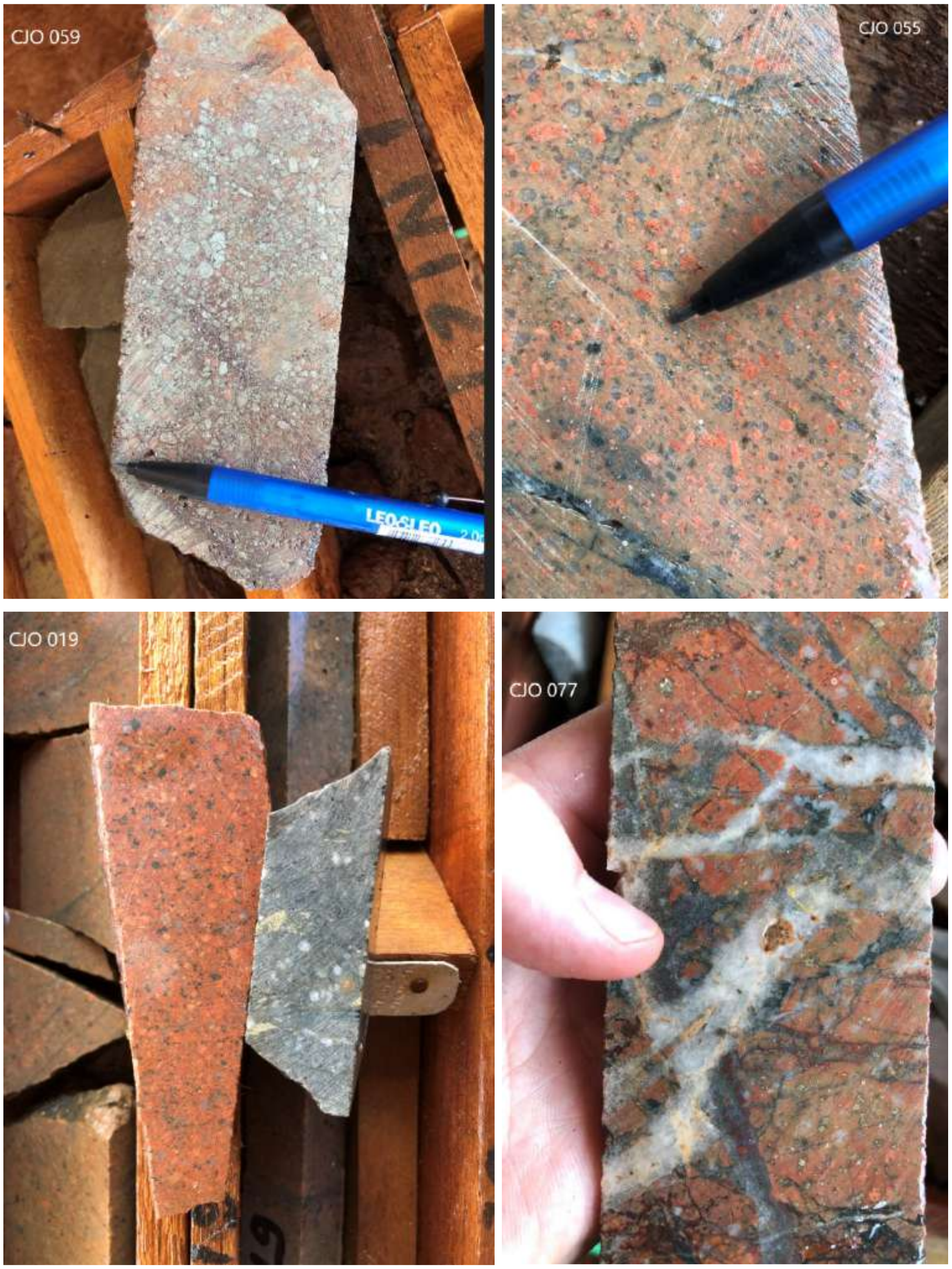
12.1.2 Lithology

Mr. Gunesch also completed a review of the physical drill core stored onsite which was later compared to the database. A total of 9 drill holes were reviewed. The observations of the mineralization agree favorably in both the extent and type of mineralization logged in the exploration database. Table 12-2 details the drill hole review and observation made during the site visit. Figure 12-2 provides example photographs of the mineralization from the core review.

Table 12-2 Drill Core Review

DH	From	To	Observation
CJO 010	40.1	80.93	Mineralized quartz breccia with pyrite
CJO 019	30.3	80.3	Mix of altered and unaltered rhyolite, pyrite veinlets
CJO 024	28.8	71.75	Altered rhyolite
CJO 055	200.75	241.8	Sericitic altered rhyolite, disseminated pyrite in both altered and fresh rock
CJO 059	55.25	94	Sericitic altered rhyolite with pyrite, one section of massive pyrite
CJO 077	14.45	32.25	Hydrothermal breccia changing to altered rhyolite with pyrite
CJO 080	44.1	57.6	Disseminated pyrite with pyrite veinlets
CJO 096	34.4	48.6	Altered rhyolite with pyrite and quartz veinlets
CJO 097	34.07	45.67	Sericitic altered rhyolite with pyrite

Figure 12-2 Core Review Photographs



CJO-059: Concentrated pyrite; CJO-055: Disseminated pyrite in fresh rhyolite; CJO-019: Fresh and altered rhyolite; CJO-077: Hydrothermal breccia, Source – GRE (2019)

12.1.3 Assays

GRE verified the assays from the database by comparing the original assay certificates to the database. This step checks for errors in the data transfer from the certificate to the databased. GRE also took independent samples for verification of the sampling and assay methods. The results show minimal errors in the data transfer from the assay certificates and good agreement of the database assay values with the independent samples.

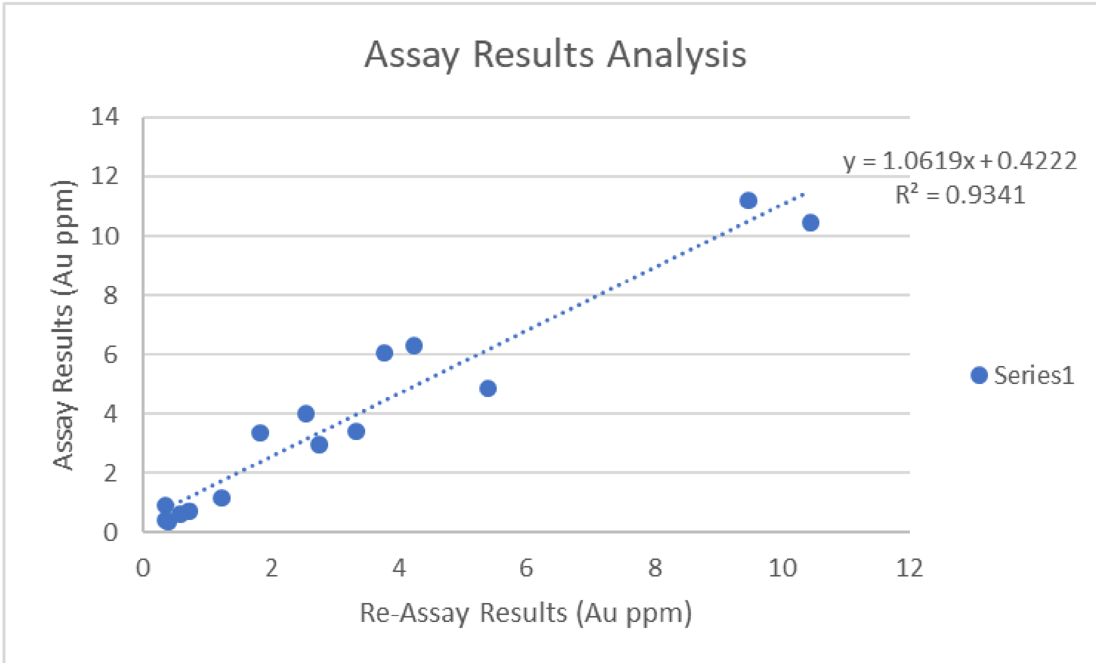
GRE compared the original assay certificates for 1,158 samples to the database, or about 11% of the total assays. Only 3 errors were found.

Samples from 4 core holes and 11 pulps were selected as the independent samples. The core hole samples consisted of ¼ core samples from the half core stored onsite. Mr. Gunesch supervised the sample collection, preparation for shipment, and chanin of custody documentation. All samples were double bagged with the sample number written on both bags. The samples were shipped from Alta Floresta to SGS Geosol in Belo Horizonte for analysis. The assay results of the independent samples compare favorably to the database. Table 12-3 and Figure 12-3 detail the results of the analysis and comparison by providing the drill hole number, interval, original and re-assay value, as well as graphical comparison showing a coefficient of determination (R^2) value of 93%.

Table 12-3 Independent Assay Results

BHID	FROM	TO	SAMPLE_NO	Type	Original	Re-Assay
					Au_ppm	Au_ppm
CJO-0024	41.2	42.2	16342	core	3.984	2.538
CJO-0030	156.15	157.15	21698	pulp	0.39	0.335
CJO-0030	157.15	158.15	21699	pulp	3.418	3.331
CJO-0030	158.15	159.15	21700	pulp	11.201	9.478
CJO-0033	259	259.7	22259	pulp	0.699	0.707
CJO-0033	261.7	262.7	22265	pulp	1.175	1.224
CJO-010	64.0	65.0	22373	core	0.89	0.344
CJO-0055	205.3	206.3	35995	pulp	0.596	0.578
CJO-0055	210.3	211.3	36000	pulp	0.345	0.394
CJO-0055	222.1	223.1	36008	pulp	4.833	5.396
CJO-0055	229.1	230.1	36018	pulp	2.952	2.753
CJO-0055	230.1	231.15	36019	pulp	10.431	10.44
CJO-0096	40.5	41.4	51118	core	6.309	4.232
CJO-0096	41.4	42.3	51119	core	6.065	3.773
CJO-0096	42.3	43.2	51120	core	3.34	1.839

Figure 12-3 Comparison of Original and Independent Assays



Source – GRE (2019)

12.2 Data Adequacy

Based on the results of the QP's check of the sampling practicing, verification of drill hole collars in the field, results of the check assay analysis, visual examination of selected core intervals, and the results of both manual database audit efforts, the QP considers the collar, lithology, and assay data contained in the project database to be reasonably accurate and suitable for use in estimating mineral resources.

13.0 Mineral Processing and Metallurgical Testing

The Cajueiro project had three main campaigns of metallurgical testing – those performed in 2011, 2012, and 2015. In general good gold recoveries were achieved for all samples tested using a combination of gravity separation and cyanide leaching. This is a relatively low grade deposit and higher grade materials tended to have higher recoveries due to a potential constant tail influence.

A summary of the results is given below in Table 13-1:

Table 13-1 Summary of Metallurgical Tests Performed on Cajueiro Samples

Year	Samples Tested	Tests Conducted	Conclusions
2011	Composite made from "Crente" area drill hole samples (sulphide material)	Gravity Separation and Leaching at two different sizes (75 and 150 microns)	Gravity separation for finer material produced a concentrate with a higher grade but did not significantly increase recovery. Leaching of finer material improves recovery by ~5%.
2012	Four drill-hole samples from the Crente area (sulphide material)	Gravity Separation and Leaching at two different sizes (75 and 150 microns)	Gravity recovery and leaching of tails were improved with finer grinding, and overall recoveries were seen to be a function of head grade.
2015	Oxidized material from the Cajueiro deposit, no details given	Gold deportment and diagnostic leaching, and flotation	Limonite found to be the main gold-bearing mineral. Direct cyanidation of the oxidized material produced 94% recovery, and flotation was not found to be a viable recovery method.

13.1 2011 Testing

In September 2011, SGS Geosol Laboratorios Ltda (SGS) in Brazil received a series of drill hole samples from Cajueiro for metallurgical analysis and testing (SGS GEOSOL LABORATÓRIOS LTDA., 2011). This included head assays, grind analysis, gravity separation, and cyanide leaching.

13.1.1 Samples

For this campaign, a 15 kg sample of gold bearing sulfide material was selected, crushed to 2 mm, and split into fifteen 1-kg sub samples. The samples that were used are described below in Table 13-2 (SGS GEOSOL LABORATÓRIOS LTDA.):

Table 13-2 Crente Samples Submitted for Metallurgical Testing

BHID	SAMPLE_NO	REF.	FROM (m)	TO (m)	Au (ppm)
DDH_CJO_019	15733	AM_001	61	62	1.34
DDH_CJO_019	15734	AM_001	62	63	4.09
DDH_CJO_019	15735	AM_001	63	64	4.83
DDH_CJO_019	15736	AM_001	64	65	0.17
DDH_CJO_019	15737	AM_001	65	66	6.02
DDH_CJO_019	15738	AM_001	66	67	4.28
DDH_CJO_019	15739	AM_001	67	68	1.13
DDH_CJO_019	15740	AM_001	68	69	3.42

13.1.2 Sample Representativeness

The samples came from the “Crente” area, which was the main resource area at the time of writing the 2011 report. No other indication of representativeness (e.g. discussion of mineralogy) is given. The length-weighted head grade of the samples was 3.16 ppm gold.

13.1.3 Results

Grinding tests were conducted in an 8 by 10-inch mill with a 10 kg ball load. The test was conducted at 67 rpm at 60% solids. Gravity separation was conducted in a Falcon L40 concentrator which was run at 71.43 Hz, producing a force of 250 G. with 14 LPM of flush water. The cyanide bottle-roll leaching tests were conducted at pH 10, 1000 ppm NaCN dosage and samples taken at 16 hours and 48 hours. Table 13-3 below gives results for all tests conducted in this campaign (SGS GEOSOL LABORATÓRIOS LTDA., 2011) (SGS GEOSOL LABORATÓRIOS LTDA., 2011).

Table 13-3 2011 Results of Gold Recovery by Gravity and Leaching

Gravity Separation	Note	Sample Size	
		75 µm	150 µm
Head Grade – Gold (g/t)	Head grade of samples.	2.29	
Grind Time (min)	Time required to grind sample to P80 of 150 microns.	60	32
Gravity Recovery	Amount of gold recovered from processing the ground sample through a Falcon concentrator.	32.8%	29.3%
Grade Gravity Concentrate (ppm)	Grade of the concentrate from the Falcon concentrator.	61.1	38.8
Grade Tailings (g/t)	Grade of tailings from the Falcon concentrator.	1.14	1.41
Leach Recovery			
Leach Recovery 1 (16 hours)	Gold recovered from leaching the Falcon concentrator tailings in cyanide.	80.2%	75.3%
Leach Recovery 2 (16 hours)		81.8%	75.4%
Leach Recovery 1 (48 hours)		80.4%	75.5%
Leach Recovery 2 (48 hours)		82.6%	75.0%
Overall Recovery			
Overall Recovery 1	Sum of gold recovery from gravity recovery and tailings cyanide leach.	86.8%	82.7%
Overall Recovery 2		86.3%	82.3%
Residue			
Grade Leach Residue1 (g/t)	Gold grade in the tailings following cyanide leach.	0.22	0.35
Grade Leach Residue2 (g/t)		0.20	0.35

13.1.4 Significant Factors

The gravity tests for the samples in 2011 showed a marked improvement of gold grade in concentrates with a decreased particle size, with 61.1 ppm gold produced from 75-micron material compared to 36.8 ppm from 150-micron material. However, recovery was basically unchanged with particle size reduction.

The results of the cyanide leaching tests on the gravity tails indicate that near-complete leaching is achieved at 16 hours. The “global” or overall recovery (gravity plus cyanide leaching) show that the sulfide material achieves over 82% gold recovery at a P80 grind size of 150 µm with an improvement to 86% at a P80 of 75 µm material. The impact of finer grind size appears to improve the gravity separation moderately and improved the leach recovery by approximately 5%. Given the limited sample size these results are not statistically significant.

13.2 2012 Testing

Further testing was commissioned by ECI in early 2012, these tests included comminution, gravity separation, and cyanide leaching (SGS GEOSOL LABORATÓRIOS LTDA., 2012). The testing was reported on April 5, 2012.

13.2.1 Samples

On December 14, 2011, ECI submitted four samples identified as AM002 through AM005 to SGS. These samples were taken from the mineralized zone in the Crente area. Drill holes and depth ranges as shown in Table 13-4 (SGS GEOSOL LABORATÓRIOS LTDA.). Each sample consisted of a quarter of the drill core.

Table 13-4 Samples Submitted for Metallurgical Testing

Sample Name	Drill Hole	Depth Interval (m)	Observed Lithology
AM002	CJO_010	45.5 – 57.5	Rhyolite (RY)
AM003	CJO_025	182.6 – 191.75	Rhyolite (RY)
AM004	CJO_030	154.15 – 162.15	Rhyolite (RY)
AM005	CJO_033	249 – 262.7	Rhyolite (RY)

The samples were said to be hydrothermally altered rhyolite with pyrite. The pyrite occurred disseminated in the rock mass and in quartz veins.

13.2.2 Sample Representativeness

The four samples that were submitted for metallurgical testing represented rhyolite/microgranite from the Crente target area. The SGS report indicates that the samples tested in this campaign were representative of the material extracted from the deposit up to the time of writing; the head grades of the four samples span the average gold grade in the resource estimates for all four target areas, as shown in Table 14-2 of this report.

13.2.3 Results

Gravity recovery gold (GRG) followed by cyanide leaching of tailings was conducted on the four samples ground to a P80 particle size of 150 and 75um (100 and 200 mesh Tyler, respectively). SGS developed timed grind curves to attain the P80 of 150 and 75 microns using 2-kilogram samples. Six kilograms of samples at P80 of 150 and 75 microns were subject to gravity recovery using a Falcon Concentrator L40 operated with a centripetal force of 250-G with a water flow rate of 14 liters per minute.

An aliquot of approximately 1,500 grams of the gravity tailings underwent a 48-hour cyanide leaching in a rolling bottle. The solids were mixed with approximately 2,300 milliliters of cyanide solution such that the free cyanide concentration was fixed at 1,000 ppm at a pH of 10.5 to 11. No carbon was used for these tests.

Recoveries from the gravity recovery and direct leaching of gravity-tails, along with an overall recovery. Results as reported by SGS are provided in Table 13-5 and Table 13-6 (SGS GEOSOL LABORATÓRIOS LTDA., 2012).

Table 13-5 Results of Gold Recovery by Gravity and Leaching for P80 = 150 Microns

Gravity Separation	Note	Sample Name			
		AM002	AM003	AM004	AM005
Head Grade – Gold (g/t)	Head grade of samples.	1.06	1.07	3.48	0.40
Grind Time (min)	Time required to grind sample to P80 of 150 microns.	40	38	36	42
Gravity Recovery	Amount of gold recovered from processing the ground sample through a Falcon concentrator.	47.4%	46.3%	58.4%	32.2%
Grade Gravity Concentrate (ppm)	Grade of the concentrate from the Falcon concentrator.	32.0	31.3	93.6	9.4
Grade Tailings (g/t)	Grade of tailings from the Falcon concentrator.	0.59	0.58	1.48	0.27
Leach Recovery					
Leach Recovery 1 (16 hours)	Gold recovered from leaching the Falcon concentrator tailings in cyanide.	78.2%	71.2%	77.4%	68.0%
Leach Recovery 2 (16 hours)		78.1%	72.8%	83.5%	71.2%
Leach Recovery 1 (48 hours)		79.3%	71.7%	77.9%	69.4%
Leach Recovery 2 (48 hours)		78.9%	73.8%	84.6%	71.6%
Overall Recovery					
Overall Recovery 1	Sum of gold recovery from gravity recovery and tailings cyanide leach.	89.2%	84.8%	90.8%	79.3%
Overall Recovery 2		88.9%	85.9%	93.6%	80.7%
Residue					
Grade Leach Residue1 (g/t)	Gold grade in the tailings following cyanide leach.	0.12	0.17	0.33	0.08
Grade Leach Residue2 (g/t)		0.12	0.15	0.22	0.08

Table 13-6 Results of Gold Recovery by Gravity and Leaching for p80 = 75 Microns

Gravity Separation	Note	Sample Name			
		AM002	AM003	AM004	AM005
Head Grade – Gold (g/t)	Head grade of samples.	1.06	1.07	3.48	0.40
Grind Time (min)	Time required to grind 2 kg sample to P80 of 150 microns.	72	72	64	72
Gravity Recovery	Amount of gold recovered from processing the ground sample through a Falcon concentrator in a 250 G field and water flow of 14 liters per minute.	42.5%	53.7%	80.2%	40.4%
Grade Gravity Concentrate (ppm)	Grade of the concentrate from the Falcon concentrator.	45.2	81.8	121.9	13.1
Grade Tailings (g/t)	Grade of tailings from the Falcon concentrator.	0.61	0.5	0.7	0.24
Leach Recovery					
Leach Recovery 1 (16 hours)	Gold recovered from leaching the Falcon concentrator tailings in cyanide.	84.1%	84.3%	79.7%	75.4%
Leach Recovery 2 (16 hours)		84.2%	84.1%	78.9%	75.5%
Leach Recovery 1 (48 hours)		84.6%	84.5%	80.1%	75.6%
Leach Recovery 2 (48 hours)		85.2%	84.3%	79.5%	75.9%
Overall Recovery					
Overall Recovery 1	Sum of gold recovery from gravity recovery and tailings cyanide leach.	91.1%	92.9%	96.1%	85.4%
Overall Recovery 2		91.4%	92.8%	96.0%	85.7%
Residue					
Grade Leach Residue1 (g/t)	Gold grade in the tailings following cyanide leach.	0.1	0.08	0.14	0.06
Grade Leach Residue2 (g/t)		0.09	0.08	0.15	0.06

13.2.4 Significant Factors

The results of this testing program indicate that good recovery can be obtained from the Crente material using a combination of gravity and cyanide leaching. For the 75-micron material, gravity recovery ranged from 40 to 80% and cyanide leach recovery on the gravity tailings ranged from 76% to 85%. These results were better than those achieved with coarser material. Overall recoveries ranged from 86 to 96% with the lower recoveries being a function of the lower grade samples.

Reagent consumption (i.e., amount of cyanide added to maintain target free cyanide and pH levels) was not provided in the SGS report. For future testing, it is important to provide this data to accurately assess the economics and feasibility of the project.

13.3 2015 Testing

At the end of 2014, samples of oxide material from the Cajueiro project were sent to MINPROCES for analysis, and in 2015 a report was published detailing the test-work completed for this material (MINPROCES LTDA., 2015). Chemical assays, grinding tests, microscopy/mineralogy, diagnostic leaching, and flotation tests were conducted.

13.3.1 Samples

No indication of the type of samples that were tested, or from where in the mineral deposit they came from, except to say that they were from the oxidized "zones" in the Cajueiro project. The results of the chemical analysis and basic mineralogy analysis of the head sample are given below in Table 13-7 and Table 13-8 (MINPROCES LTDA., 2015).

Table 13-7 Results of Chemical Analysis of Oxidized Material from Cajueiro

Element	Value
Au (g/t)	8.9
Ag (ppm)	6.0
Pb (%)	0.010
Zn (%)	0.012
Se (%)	0.007
Bi (%)	< 0.005
Cu_T (%)	0.011
Fe (%)	7.730
S (%)	0.080
As (%)	0.043

Table 13-8 Results of Mineralogy Examination by Microscopy

Mineral	Percent
Chalcopyrite	0.03
Blende/Sphalerite	1.09
Rutile (TiO_2)	Trace
Pyrite	0.03
Hematite	2.43
Limonite	10.90
Gangue	85.53
Total	**100**

As shown above, the majority of the iron oxide material is Limonite (FeO(OH)) and Hematite (Fe_2O_3), and all copper associated primarily with Chalcopyrite ($CuFeS_2$). Through microscopy, Limonite has been identified as the gold-bearing mineral in the oxide and a gold deportment size analysis was conducted. The results are given below in Table 13-9.

13.3.2 Sample Representativeness

The sample or samples used for the 2015 report have not been described with enough detail to comment on the representativeness of the project. It is suggested by the MINPROCES report that the material used was indicative of the oxide material in the appropriate zones of the deposit, but this could not be confirmed.

13.3.3 Results

The SGS/MINPROCES report does not give a detailed description of the procedures used for the metallurgical tests performed on the oxide material. It is assumed that standard mineral process techniques were used.

Table 13-9 below shows the results a basic gold deportment study for oxide material from Cajueiro (MINPROCES LTDA., 2015).

Table 13-9 Size Analysis and Gold Deportment Study Results

Size Interval (um)	Liberated	Associated		Occluded			Total			Total
	%	Limon.	Other	Limon.	Other	"Gangue Limon."	Lib.	Ass.	Occ.	%
0 – 5		21.53		16.63	16.15			21.53	32.77	54.31
5 – 10			5.92	6.04	11.06	11.18		5.92	28.29	34.21
10 – 20	5.80						5.80			5.80
20 – 30			5.68					5.68		5.68
Total	5.80	21.53	11.60	22.67	27.21	11.18	5.80	33.13	61.06	100

The results above indicate that a significant portion of the gold in the oxidized material is extremely fine, below 10 microns. Limonite is confirmed to be the primary gold-bearing mineral. It is not clear what was meant by "gangue Limonite", but it is likely that not all the Limonite that was leached in the course of this gold deportment study. The majority of gold occurs in association with other mineral grains.

A diagnostic leach test was also conducted. The description of each step as well as the results are given in Table 13-10 below (MINPROCES LTDA., 2015).

Table 13-10 Results of Diagnostic Leach Test on Oxide Material from Cajueiro

Step	Gold Extraction (%)	Gold Association
Direct cyanidation	94.0	Free gold
Sulfuric acid digestion followed by cyanidation	4.9	Carbonates and secondary sulfides such as pyrrhotite
Nitric acid digestion followed by cyanidation	0.6	Primary sulfides such as pyrite and arsenopyrite
Residue (Fire Assay)	0.5	Silicates (occluded)
Calculated Head Grade	8.8	g/t Au
Analyzed Head Grade	8.9	g/t Au

The results indicate that the majority of the gold is free milling and very little gold is associated with sulfides (pyrite and arsenopyrite), or silicates.

Two flotation tests were conducted on the material at two different P80 sizes: 75 and 125 um. No grade results are available for the coarser material. The cumulative concentrate recoveries are shown in Table 13-11 below (MINPROCES LTDA., 2015).

Table 13-11 Gold Recovery Results of Flotation Tests

Time	Au Recovery %		Au Grade (g/t)	
Minutes	75 µm	125 µm	75 µm	125 µm
0	0	0	-	-
3	37	21	177	-
7	45	29	90	-
11	48	33	65	-
15	50	35	-	-
20	52	38	51	-

The oxide sample was not conducive to flotation at either grind size achieving only 52% recovery on the finest sample.

13.3.4 Significant Factors

No consumptions of reagents are given for the tests above. Limonite was shown to be the main gold-bearing mineral in the oxidized samples tested from Cajueiro. The proportion of free gold was approximately 6%, with Limonite-associated gold making up another 48% of the total gold deportment. Gold recovery using gravity separation and tails leaching is good at 94%. Flotation is not an effective gold recovery technique for the oxide samples.

14.0 Mineral Resource Estimate

The Cajueiro mineral resource estimate was completed by Kevin Gunesch, PE and Hamid Samari, QP-MMSA of Global Resource Engineering (GRE). It includes the additional exploration performed at Cajueiro since the previous resource estimate published in 2016. The geologic model, statistical analysis, and block gold grade estimate were performed in LeapfrogGeo and Leapfrog Edge software (Leapfrog3D), version 4.5.2.

14.1 Exploration Data

The drilling and trench exploration database was transmitted to GRE in April 2019. Both boreholes and trench samples were included in the same data files. The database consisted of four csv files: Collar, Survey, Assay, and Litho. Table 14-1 summarizes the quantity and types of assay samples contained within the database. Hand drawn trench diagrams were also provided. All data was imported to Leapfrog and checked for missing intervals, duplicate records, interval overlaps, and non-numeric or less than zero values. Missing assay data was replaced with 0.005 ppm Au based on the assumption that the geologist logging did not identify any lithology, alteration, or mineralization that warranted assay and therefore the interval is assumed to be barren. This grade was a common value in the assay distribution and is likely a detection limit from one of the laboratories. Topography, comprised of areological survey from GeoSan from August 2016 was provided from Altamira. Surface geology maps were also provided as overlays to the topography. The drillhole data, topography, and trench scans were loaded into LeapfrogGeo™ for geologic modeling and resource estimation.

Table 14-1 Number and Length of Gold Assay Samples

Type	Hole/Trench Count	Assay Count	Length
Drillhole	101	9,025	13,390
Trench	36	2,485	5,282

14.2 Geologic Model

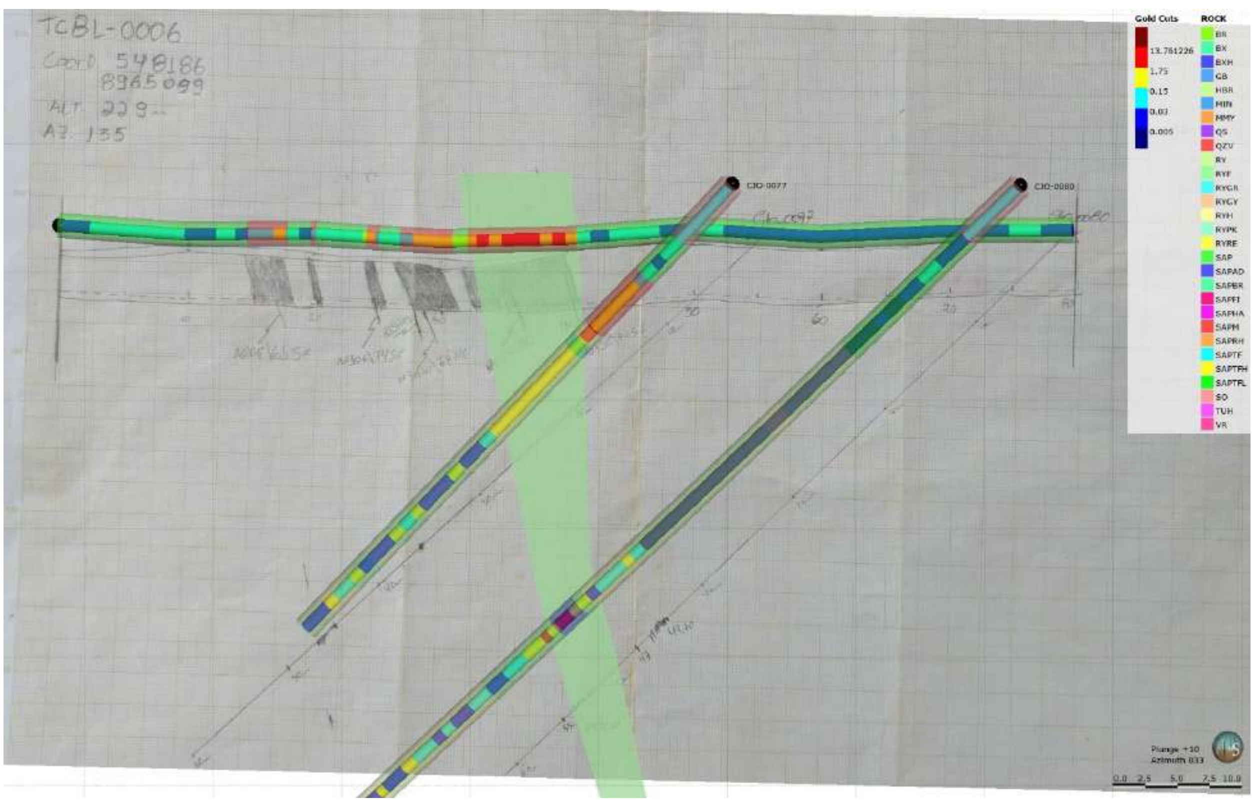
Drillhole data, trench data, trench scans, and surface geology were used to create the geologic model. The drilling data and trench data contained gold assay and lithology intervals. Trench scans showed vein locations and structural data of the veins. The surface geology mapped vein outcrops. Together, these were used to define the veins, altered rhyolite, and saprolite domains in the geologic model.

At Cajueiro, gold deposits are associated with strong sericite alteration in rhyolitic bedrock. Shearing in much of the altered rock is minor and the deposits are not shear zone hosted. Rather, alteration and mineralization appear to be related to brittle fractures in the rhyolites which formed prior to shearing. The geologic interpretation of the mineral deposit includes steeply dipping vein-like structures along fractured zones with surrounding disseminated mineralization.

The location and orientation of the vein structures was based primarily off of the surface maps and trench long sections. A grade indicator function was used to model the disseminated mineralization surrounding the veins using a cutoff of 0.005 ppm gold, or the detection limit. The indicator function used the vein solids as a structural trend. This created a three dimensional volume were measurable gold mineralization is present. This volume is the basis for the “Altered Rhyolite” zone at Cajueiro. Separate models were created for each resource area: Baldo, Crente, Matrincha, Marines, and Tavares. Marines, Matrincha, and Tavares did not include the altered rhyolite indicator as a part of their geologic models. The data for these model zones was too sparse to create an indicator domain. Marines data consisted of 6 drillholes; Matrincha data consisted of 6 drillholes and 1 trench; and Tavares consisted of 5 drillholes.

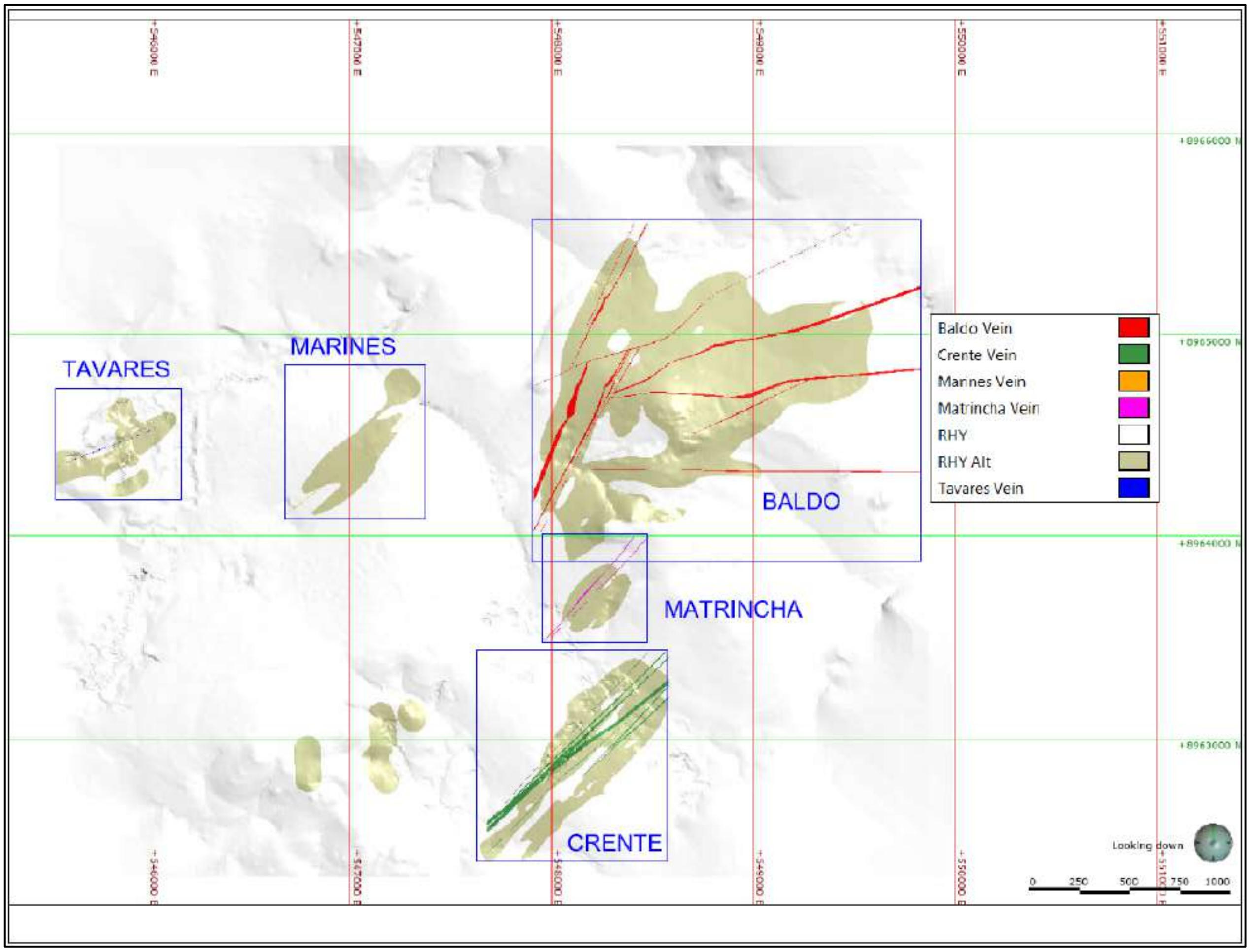
Figure 14-1 shows an example of vein modeling using drillhole data, trench data, and trench scans. The structural measurement on the trench scan indicates mineralized structure locations and dip direction. These locations and orientations were aligned with the drillhole and trench intervals used both lithology and assay values. Figure 1-1 shows a rendering of the project geologic model from LeapfrogGeo.

Figure 14-1 Correlation of Geologic model with Trench and Drill Hole Data



Source – GRE (2019)

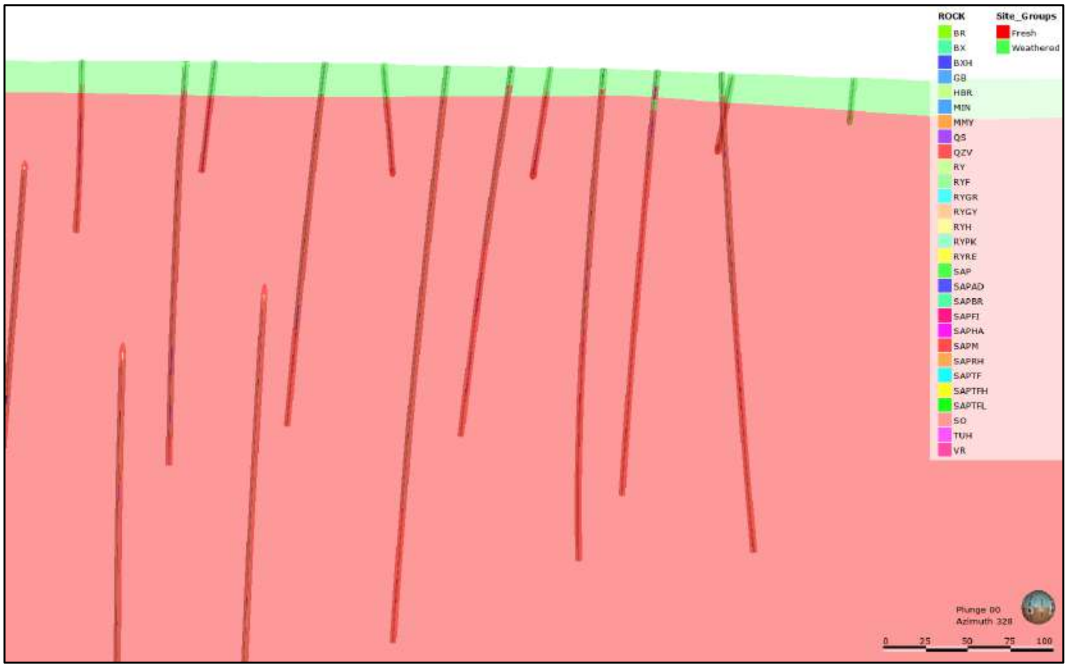
Figure 14-2 Geologic Model



Source – GRE (2019)

In addition to the veins and altered rhyolite, the entire project site was divided into saprolite and fresh rock in a site-wide geologic model. The lithologies were divided into two groups: all weathered rock and all fresh rock. The contact between the saprolite and fresh rock was based on the drill hole lithologies. Saprolite was modeled from the topography to the contact surface with fresh rock beneath. See Figure 14-3. This model was used to assign density as described in Section 14.4.

Figure 14-3 Site Geology: Fresh vs Weathered



Source – GRE (2019)

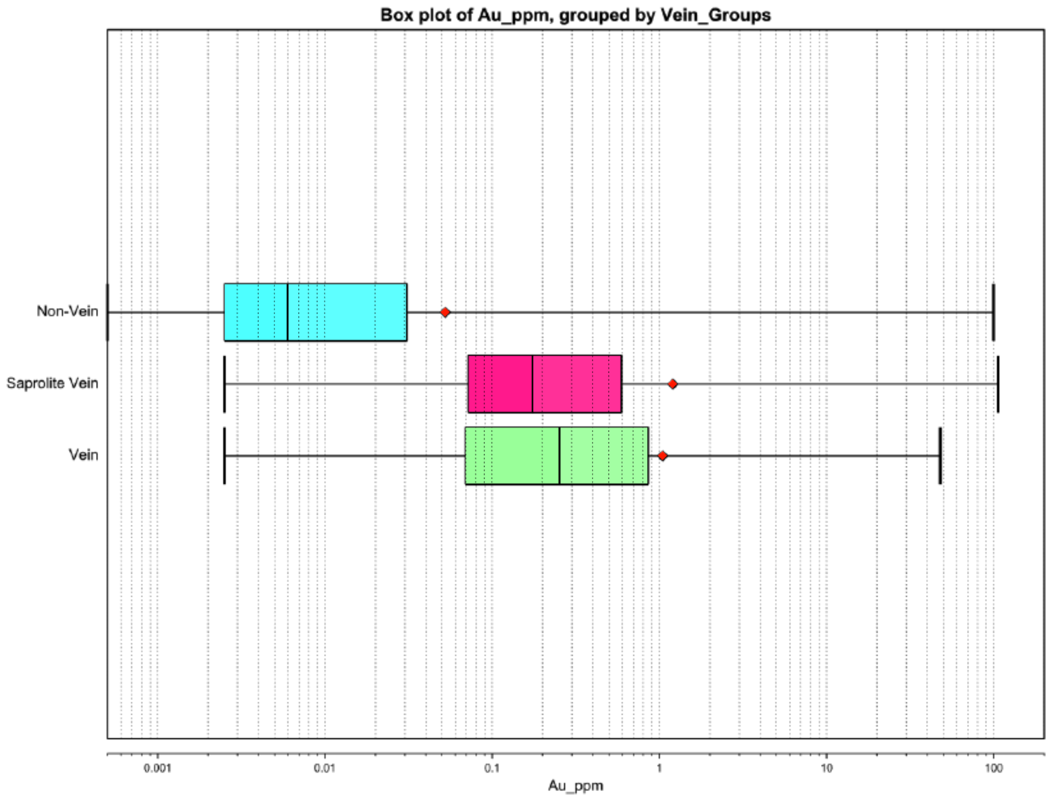
14.2.1 Drilling and Trench Data Analysis

GRE analyzed assay and lithology data to find a correlation between high grade zones and logged rock types. Lithology codes used in the drillhole database are similar; however, they differ by each drilling campaign. GRE has identified four groups in the drillholes and three groups in the trenches of similar lithology logging:

- CJO-0001 through CJO-0013 – Drillhole Group 1
- CJO-0014 through CJO-0025 – Drillhole Group 2
- CJO-0026 through CJO-0055 – Drillhole Group 3
- CJO-0057 through CJO-0105 – Drillhole Group 4
- TCBL-0001 through TCBL-0008 – Trench Group 1
- TCBL-0010 through TCBL-0023 – Trench Group 2
- TCBL-0024 through TCBL-0038 – Trench Group 3

By examining these groups, the similar lithology codes were combined in Leapfrog into vein and non-vein groups. The vein group includes lithology codes: RYF, MIN, BXH, HBR, and MMY in fresh rock and SAPM and SAPFI in saprolite. Figure 14-4 shows box plots of the lithology groups, and Table 14-2 shows gold statistics by lithology group. Both show that higher grade mineralization is contained within the vein-type structures and therefore should be modeled as a separate domain.

Figure 14-4 Box Plots of Lithology Groups



Source – GRE (2019)

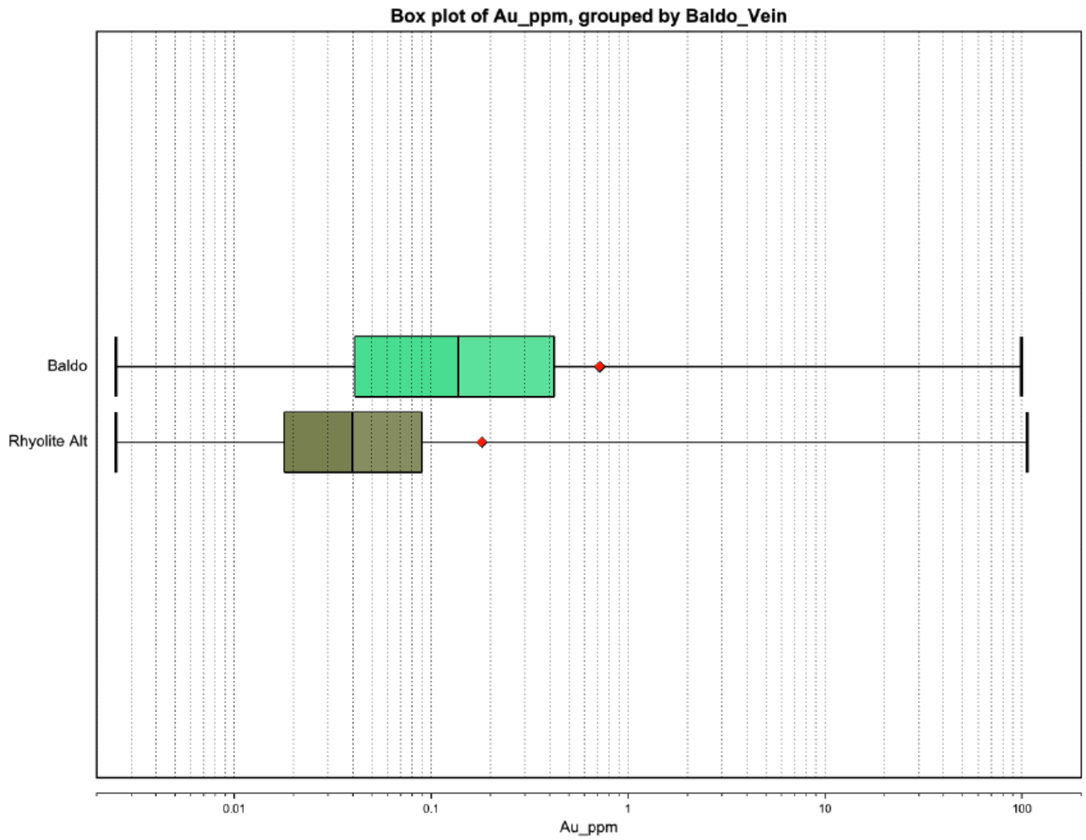
Table 14-2 Gold Grade Descriptive Statistics by Lithology

Lithology	Count	Length	Mean	Standard deviation	Minimum	Lower quartile	Median	Upper quartile	Maximum
Saprolite Vein	661	625.7	1.203	5.852	0.0025	0.072	0.175	0.594	106.32
Vein	961	834.6	1.048	2.749	0.0025	0.069	0.254	0.861	47.83
Non-Vein	10,892	17,378.3	0.052	0.654	0.0005	0.0025	0.006	0.031	99.62
Total	12,521	18,904.2	0.134	1.393	0.0005	0.0025	0.008	0.042	106.32

14.2.2 Domain Analysis

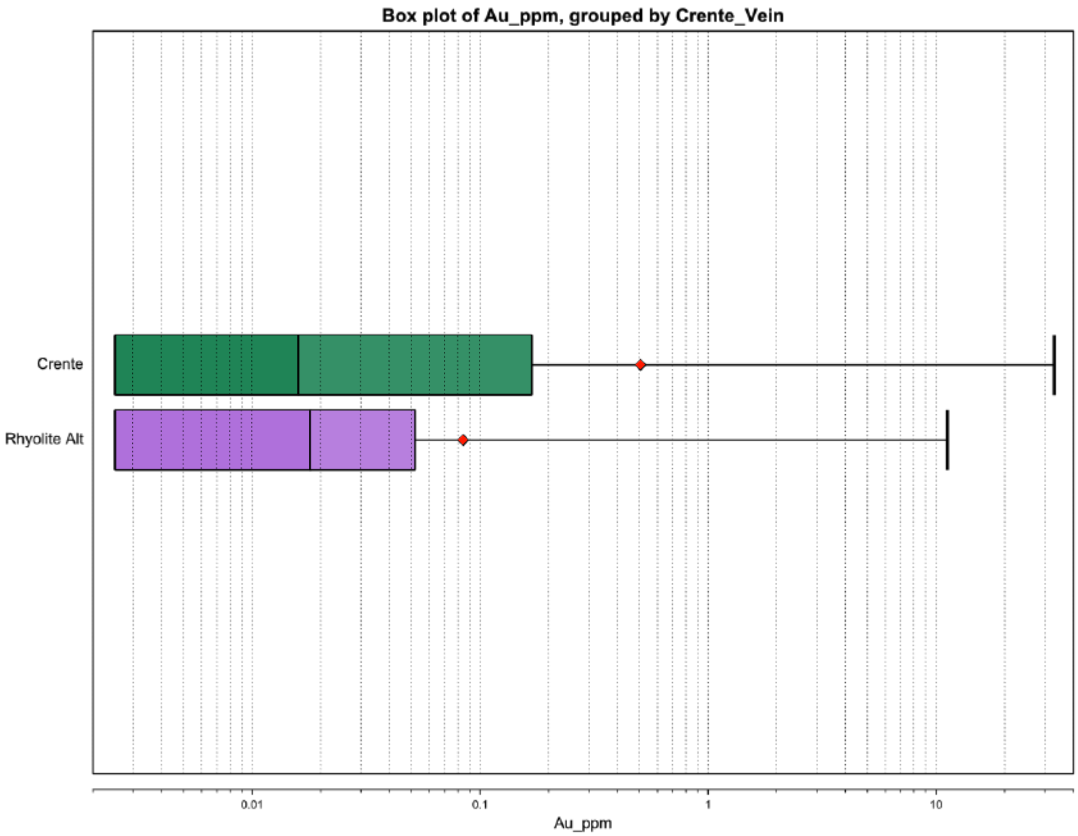
Figure 14-5 through Figure 14-9 show box plots of the veins along with the altered rhyolite for each deposit zone. As shown in the plots below, each vein system has a higher average gold grade than the surrounding altered zone containing disseminated mineralization. Table 14-3 summarizes the numeric statistics for each domain.

Figure 14-5 Gold Grade (ppm) Box Plot of Baldo Vein and Altered Rhyolite



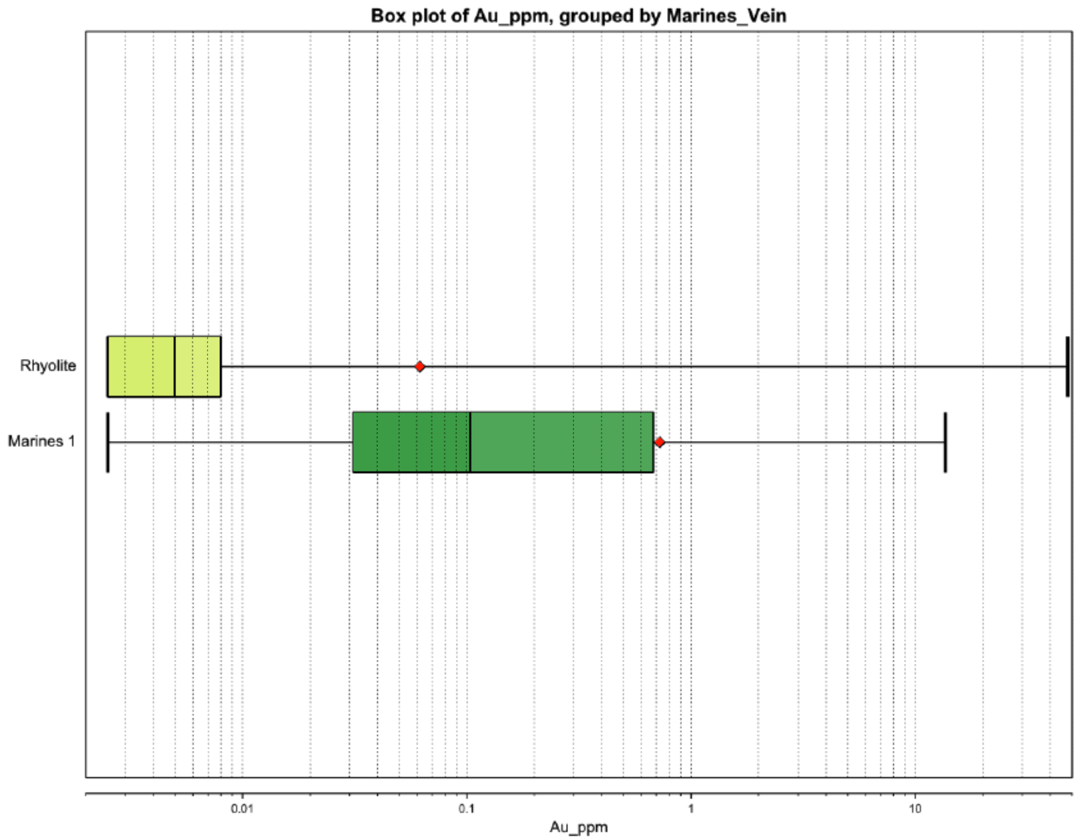
Source – GRE (2019)

Figure 14-6 Gold Grade (ppm) Box Plot of Crente Vein and Altered Rhyolite



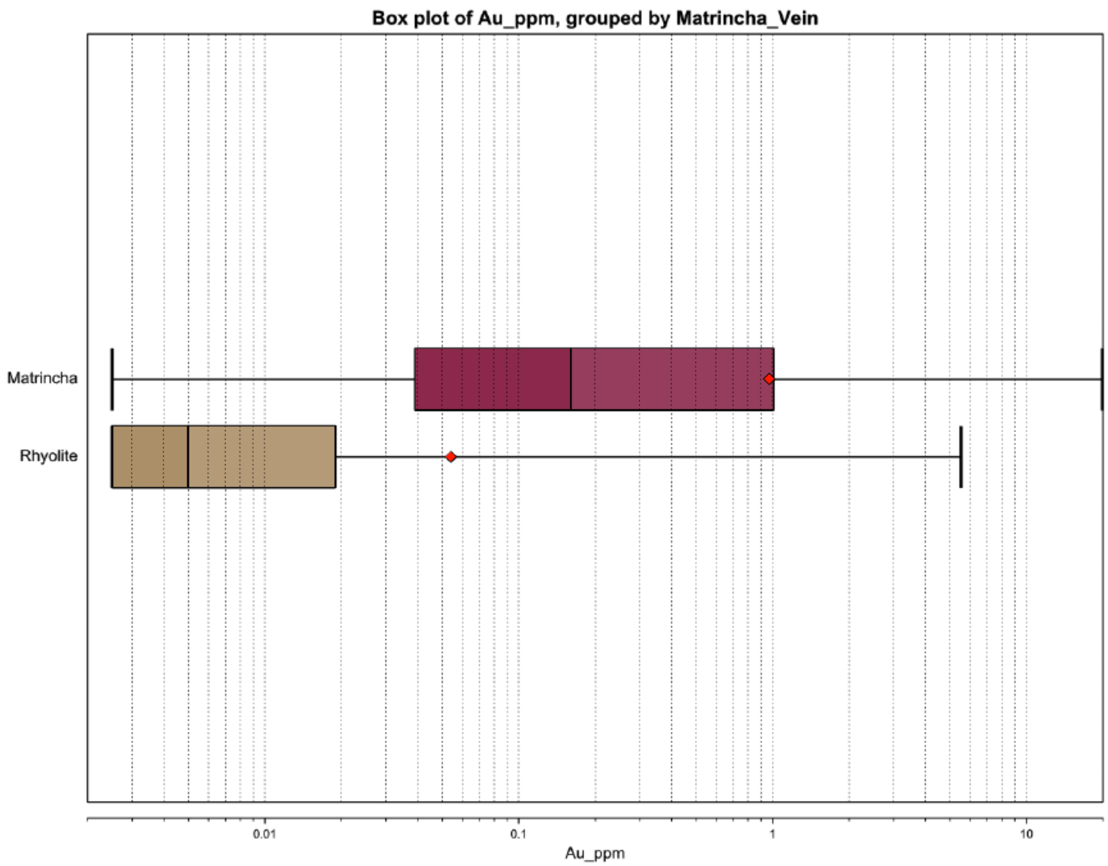
Source – GRE (2019)

Figure 14-7 Gold Grade (ppm) Box Plot of Marines Vein and Surrounding Rhyolite



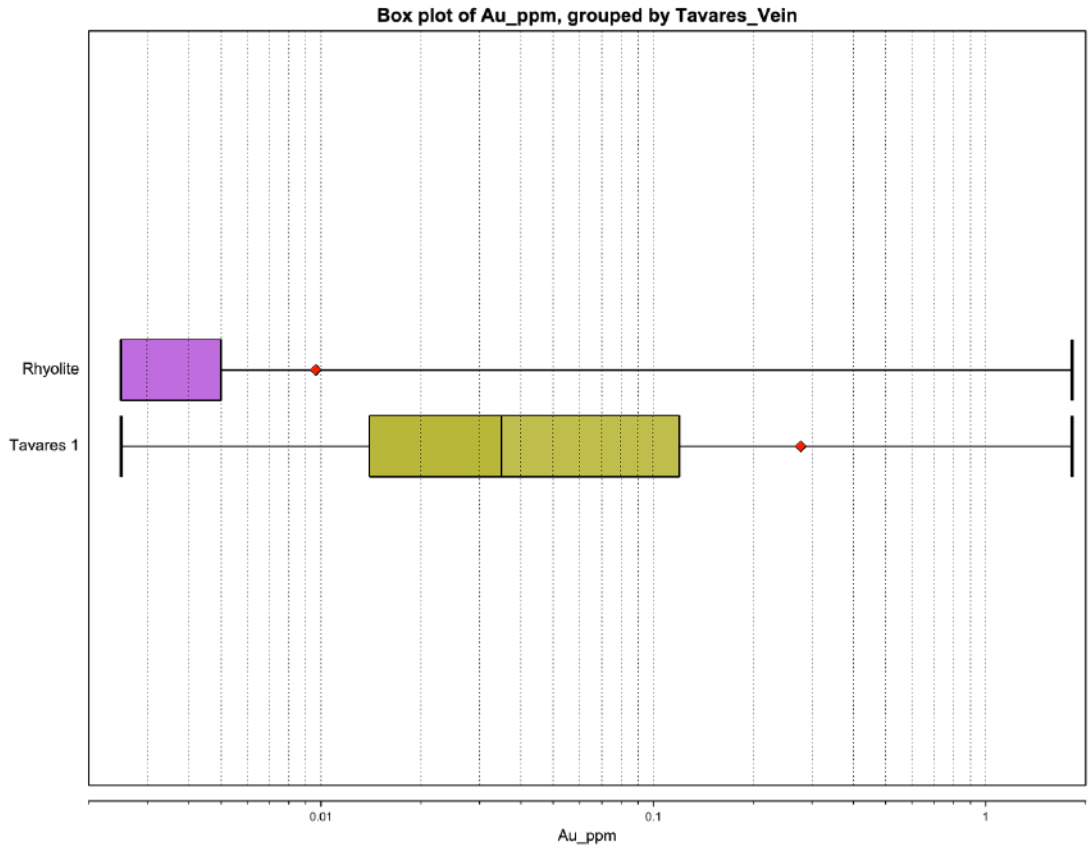
Source – GRE (2019)

Figure 14-8 Gold Grade (ppm) Box Plot of Matrincha Vein and Surrounding Rhyolite



Source – GRE (2019)

Figure 14-9 Gold Grade (ppm) Box Plot of Tavares Vein and Surrounding Rhyolite



Source – GRE (2019)

Table 14-3 Assay Statistics by Geologic Model Domains

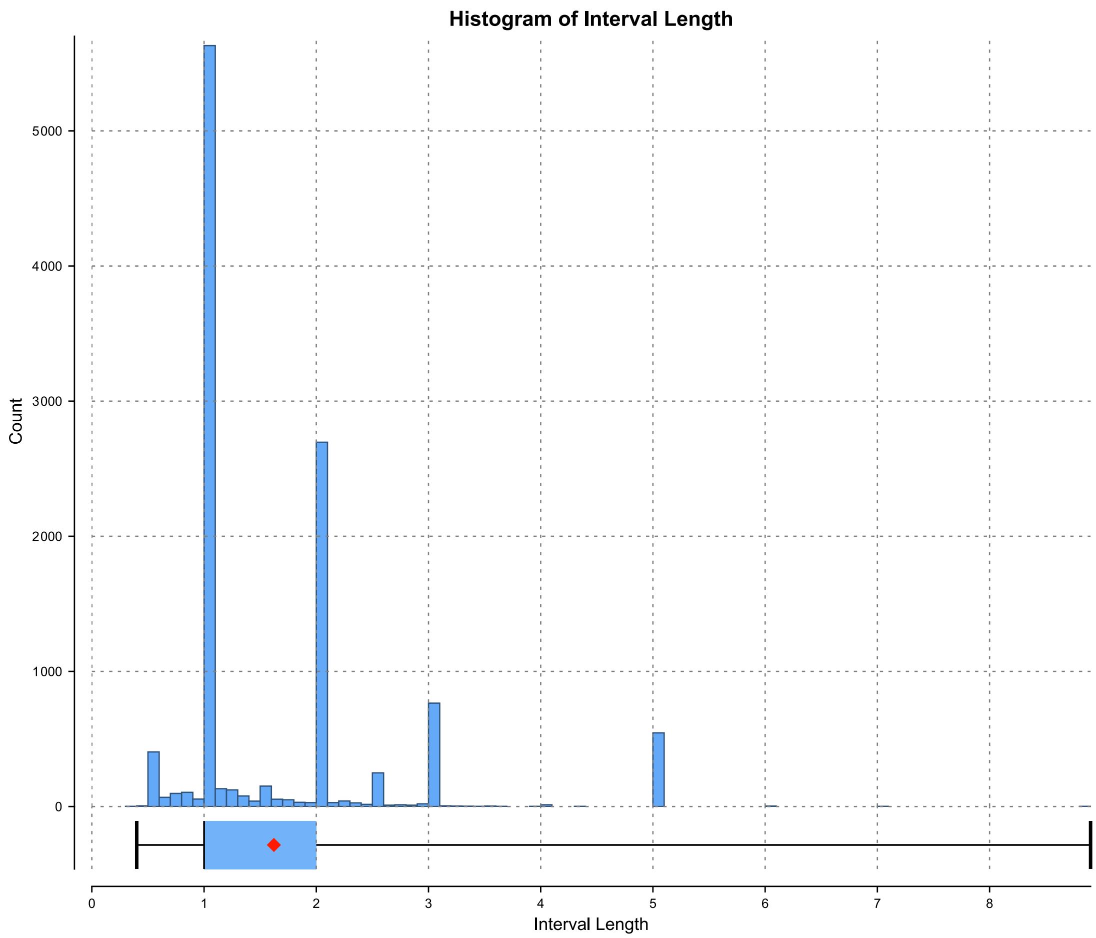
Zone	Count	Length	Mean	Standard deviation	Minimum	Lower quartile	Median	Upper quartile	Maximum
Baldo Vein	853	854.9	0.719	2.981	0.0025	0.041	0.138	0.422	99.619
Baldo Altered Rhyolite	2,882	4,818.4	0.181	2.132	0.0025	0.018	0.040	0.090	106.315
Crente Vein	739	875.1	0.504	2.091	0.0025	0.0025	0.016	0.174	32.978
Crente Altered Rhyolite	1,293	1,690.8	0.084	0.363	0.0025	0.0025	0.018	0.051	11.201
Marines Vein	40	25.1	0.726	1.977	0.0025	0.031	0.104	0.680	13.604

Zone	Count	Length	Mean	Standard deviation	Minimum	Lower quartile	Median	Upper quartile	Maximum
Marines Altered Rhyolite	844	1,165.0	0.062	1.153	0.0025	0.0025	0.005	0.008	47.834
Matrincha Vein	111	99.3	0.973	1.999	0.0025	0.039	0.161	1.013	19.895
Matrincha Altered Rhyolite	905	1,264.4	0.054	0.287	0.0025	0.0025	0.005	0.019	5.519
Tavares Vein	22	17.2	0.278	0.571	0.0025	0.014	0.035	0.120	1.819
Tavares Altered Rhyolite	681	917.6	0.010	0.035	0.0025	0.0025	0.0025	0.005	1.819

14.3 Assay Capping and Compositing

Assay intervals contained within each modeling domain were composited to 3 meter lengths, starting and ending on geologic contacts. Any composite at the end of a geologic unit less than 1.5 meters was added to the previous composite, creating composites from 1.5 to 4.5 meters. From the histogram of assay interval length (Figure 14-10), most of the assay samples are 1 and 2 meters in length. The selected composite length of 3 meters does not split the majority of the assays.

Figure 14-10 Gold Assay Sample Length Interval Distribution



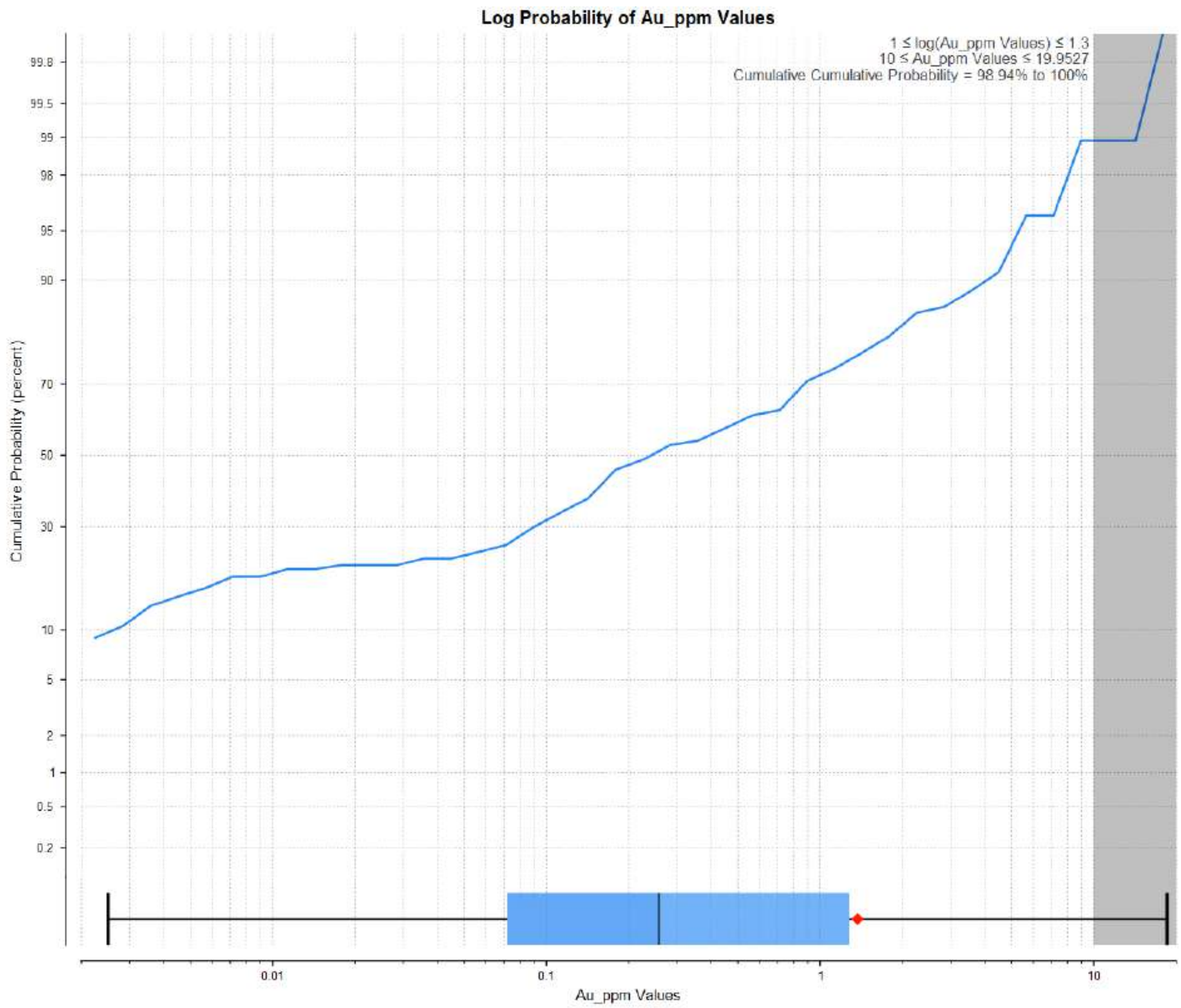
Source – GRE (2019)

GRE completed an outlier analysis on each vein and altered rhyolite domain using the composited gold assays. Outliers were determined by examining the log probability plot for each domain to visually determine the grade threshold for different populations. Samples above the determined threshold were capped at the threshold value. Table 14-4 shows capping analysis by domain, and Figure 14-11 through Figure 14-15 show the log probability plots of domains with composite capping.

Table 14-4 Composite Capping Parameters

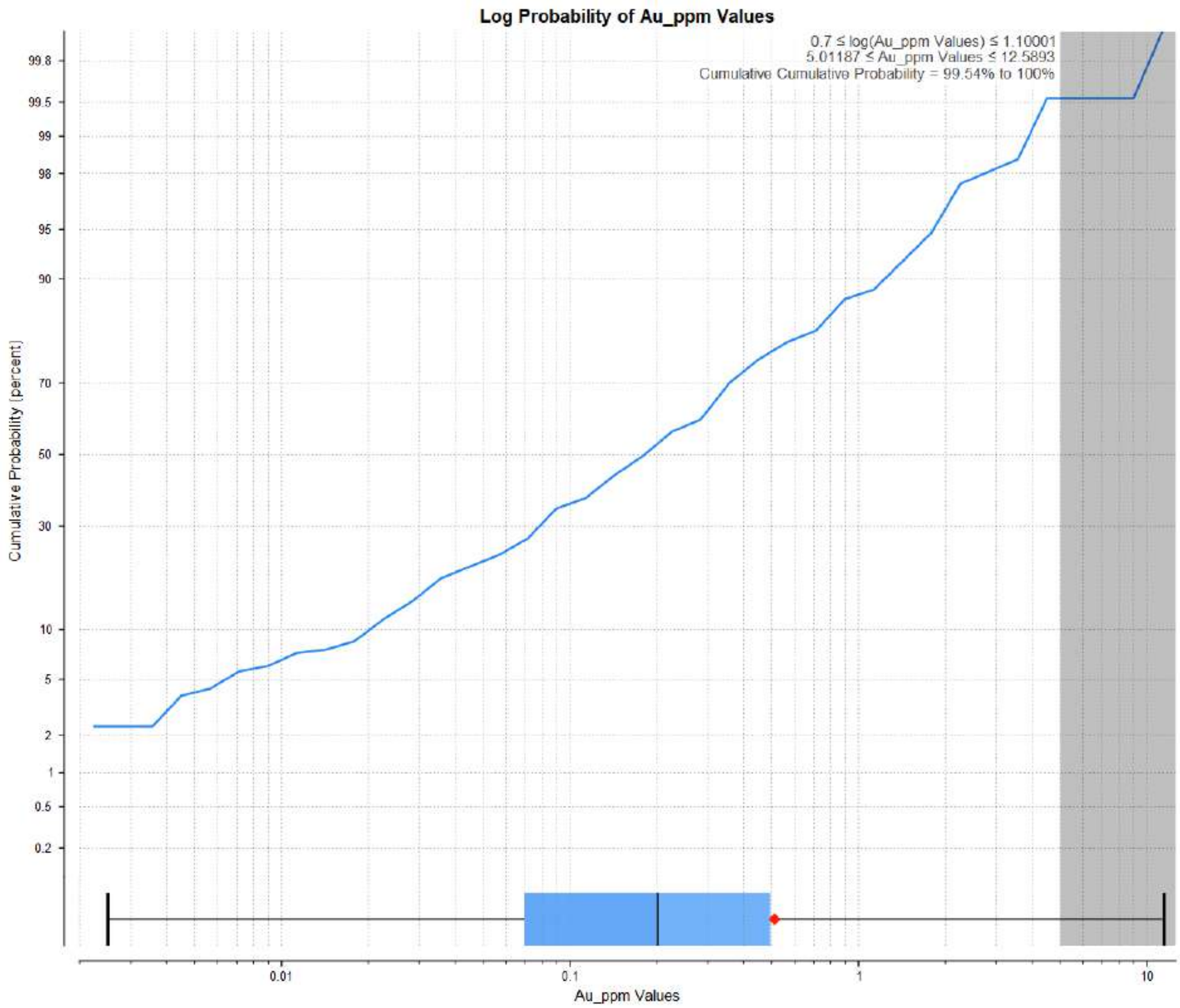
Zone	Capping Value ppm	Number of Composites Capped
Baldo EW Vein	10	1
Baldo NS Vein	5	1
Baldo Altered Rhyolite	10	3
Crente Vein	10	1
Crente Altered Rhyolite	-	-
Marines Vein	-	-
Marines Altered Rhyolite	5	1
Matrincha Vein	-	-
Matrincha Altered Rhyolite	-	-
Tavares Vein	-	-
Tavares Altered Rhyolite	-	-

Figure 14-11 Baldo East-West Veins Gold Log Probability (ppm)



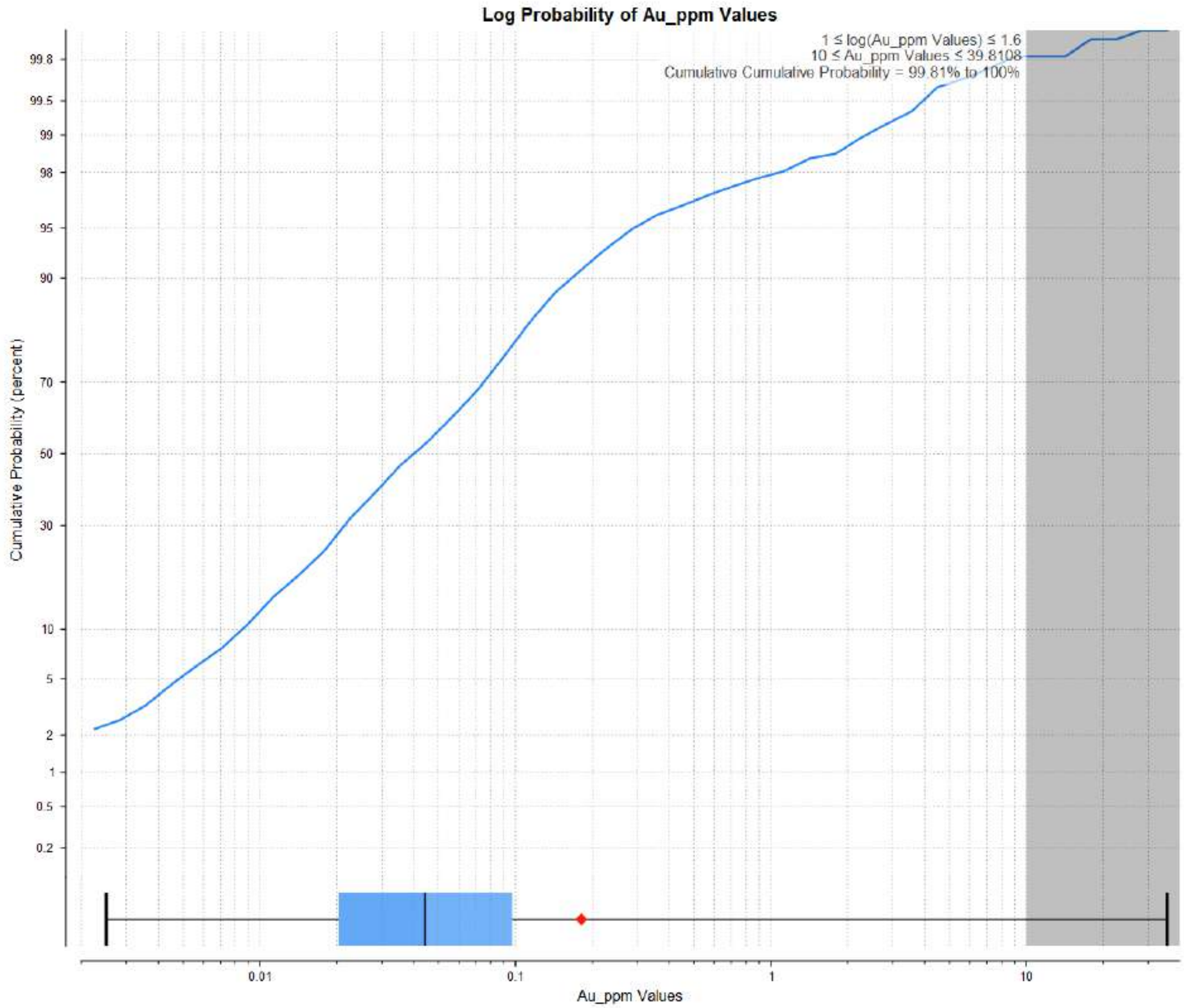
Source – GRE (2019)

Figure 14-12 Baldo North-South Veins Gold Log Probability (ppm)



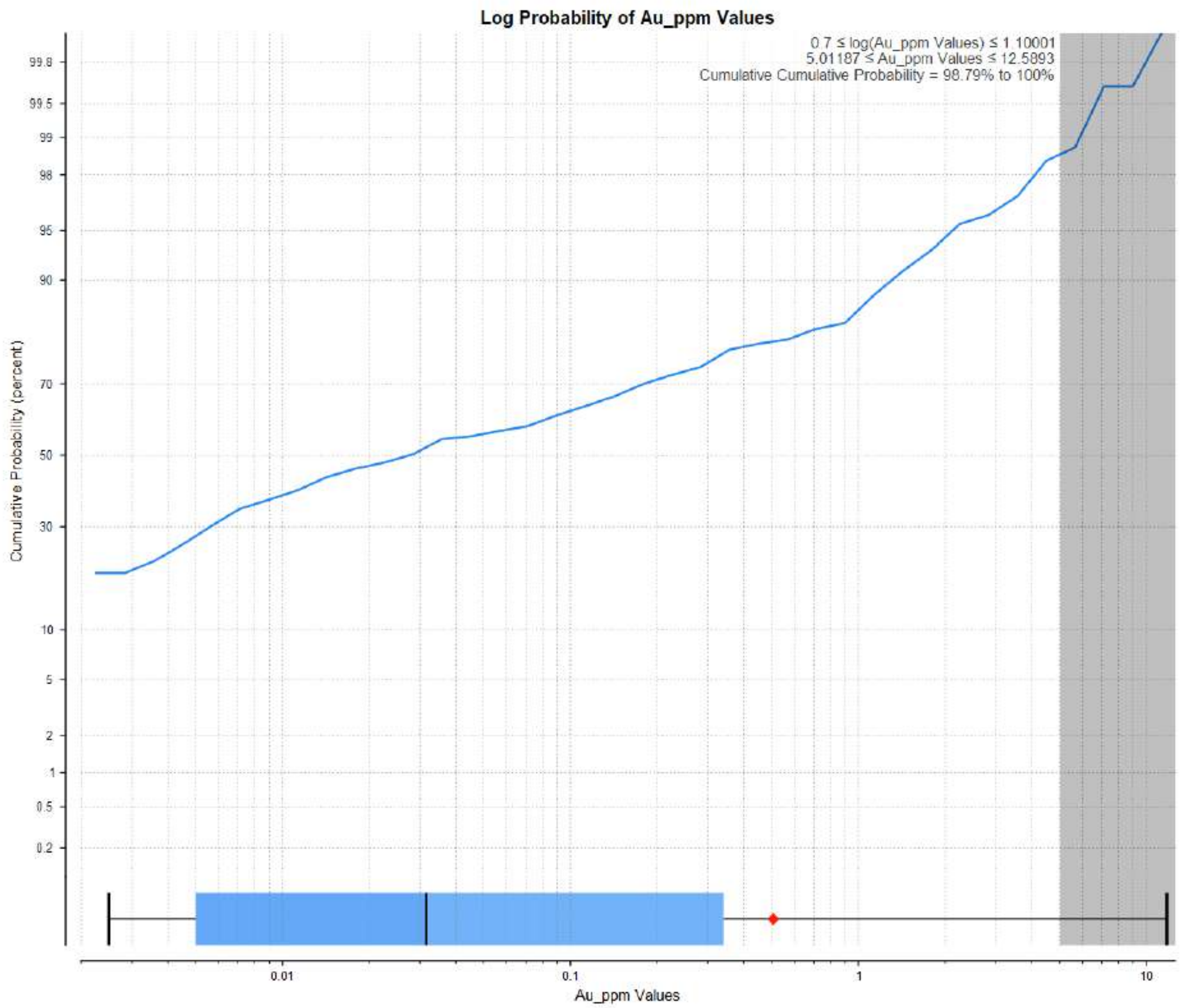
Source – GRE (2019)

Figure 14-13 Baldo Altered Rhyolite Gold Log Probability (ppm)



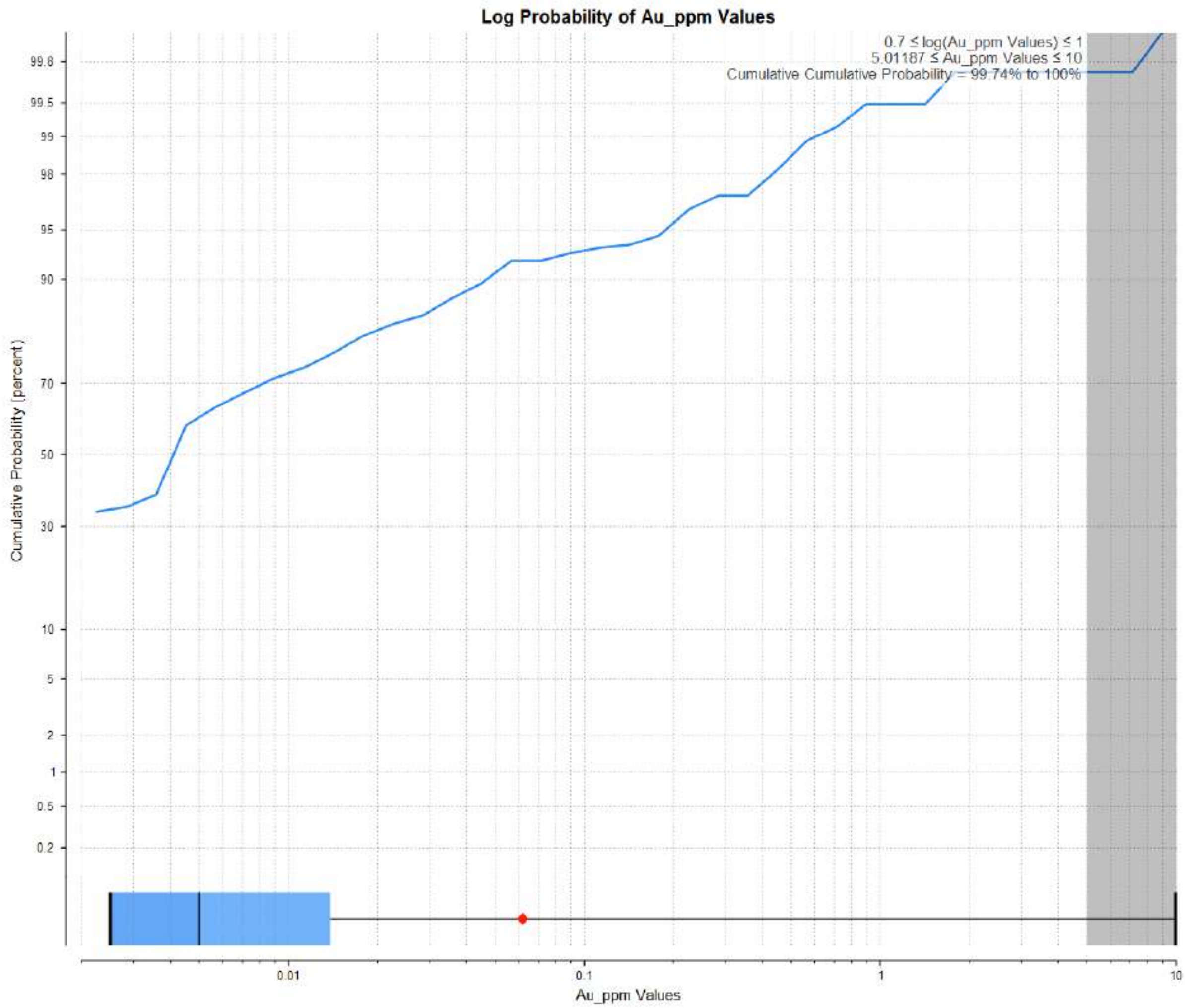
Source – GRE (2019)

Figure 14-14 Crente Vein Gold Log Probability (ppm)



Source – GRE (2019)

Figure 14-15 Marines Altered Rhyolite Gold Log Probability (ppm)



Source – GRE (2019)

Table 14-5 Composite Gold Statistics

Zone	Count	Length	Mean	SD	Min	Q1	Q2	Q3	Max
Baldo EW Vein	75	207.1	1.369	2.653	0.0025	0.072	0.257	1.276	18.515
Baldo NS Vein	226	647.8	0.511	1.029	0.0025	0.071	0.201	0.495	11.474
Baldo Altered Rhyolite	1,624	4,818.4	0.181	1.306	0.0025	0.020	0.044	0.098	35.568
Crente Vein	307	875.1	0.504	1.295	0.0025	0.005	0.030	0.324	11.763
Crente Altered Rhyolite	571	1,690.8	0.084	0.189	0.0025	0.011	0.026	0.073	1.897
Marines Vein	8	25.1	0.726	0.586	0.030	0.374	0.655	1.197	1.734

Zone	Count	Length	Mean	SD	Min	Q1	Q2	Q3	Max
Marines Altered Rhyolite	389	1,165.0	0.062	0.520	0.0025	0.0025	0.005	0.014	9.951
Matrincha vein	35	99.3	0.973	1.026	0.015	0.126	0.855	1.496	4.718
Matrincha Altered Rhyolite	423	1,270.6	0.064	0.223	0.0025	0.003	0.009	0.028	2.823
Tavares Vein	6	17.2	0.278	0.380	0.014	0.030	0.056	0.523	0.872
Tavares Altered Rhyolite	306	917.6	0.010	0.023	0.0025	0.0025	0.0025	0.005	0.253

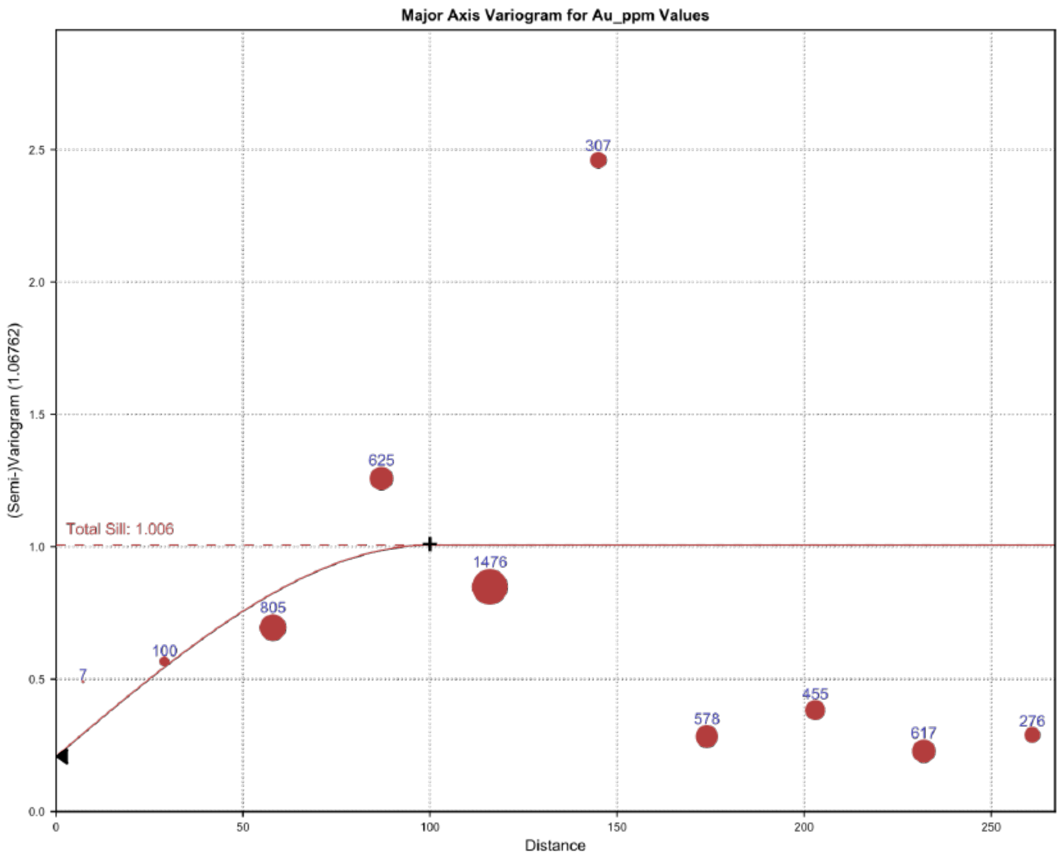
14.4 Density

GRE performed an analysis on the density data and selected an average density of 1.8 g/cm^3 for saprolite and 2.6 g/cm^3 for fresh rock. The density did not vary greatly across lithologies in the rock with gold grade.

14.5 Variography

GRE completed a variogram analysis of each geologic domain to determine the spatial correlation of data within said domain. Variogram search ellipse major axes were oriented along the strikes of the veins, and the semi-major axes were oriented along the dips of the veins. Experimental variograms were generated to estimate the ranges of correlation for the three ellipse axes used in grade modeling. See Table 14-6. Primary axis ranges for veins are from 100 to 125 meters. Secondary axis ranges for veins are from 50 to 90 meters. Correlation was not estimated along the tertiary ellipse axis due to the thin nature of veins.. Figure 14-16 shows an example of a variogram used to determine the primary axis length of a search ellipsoid.

Figure 14-16 Baldo North-South Vein Variogram



Source – GRE (2019)

14.6 Estimation Methodology

Inverse Distance Squared (ID2) was used to estimate the gold grade at Cajueiro. A minimum of 1 composite was needed to estimate grade, and a maximum limit of 10 composites was imposed to prevent excessive grade smoothing. Only 4 composites from any one drillhole could be used for a single block. Table 14-6 shows the modeling parameters for each domain in Cajueiro project.

Table 14-6 Grade Model Search Parameters

Zone	Azimuth	Dip	Third Rotation	Primary Length	Secondary Length	Tertiary Length
Baldo EW Vein	345	85	170	125	50	25
Baldo NS Vein	120	70	5	100	50	25
Baldo Altered Rhyolite	345	82	0	90	60	20
Crente Vein	140	67	25	115	90	20
Crente Altered Rhyolite	140	72	6	200	100	25
Marines Vein	325	90	16	100	90	20
Marines Altered Rhyolite	320	88	15	60	60	20
Matrincha Vein	135	70	10	115	90	20

Zone	Azimuth	Dip	Third Rotation	Primary Length	Secondary Length	Tertiary Length
Matrincha Altered Rhyolite	135	65	75	50	50	20
Tavares Vein	160	75	19	115	50	20
Tavares Altered Rhyolite	160	75	19	100	50	20

14.7 Block Model

The block model covers the entire estimated area of the project. It is a sub-blocked model with parent and sub-blocks defined in Table 14-7. Sub-blocks were triggered to split along vein-altered rhyolite contacts.

Table 14-7 Block Model Dimensions

Axis	Minimum	Parent Block Size	Number of Blocks	Sub Block Size
X	545,367	10	481	5
Y	8,962,165	10	357	5
Z	330	10	52	5

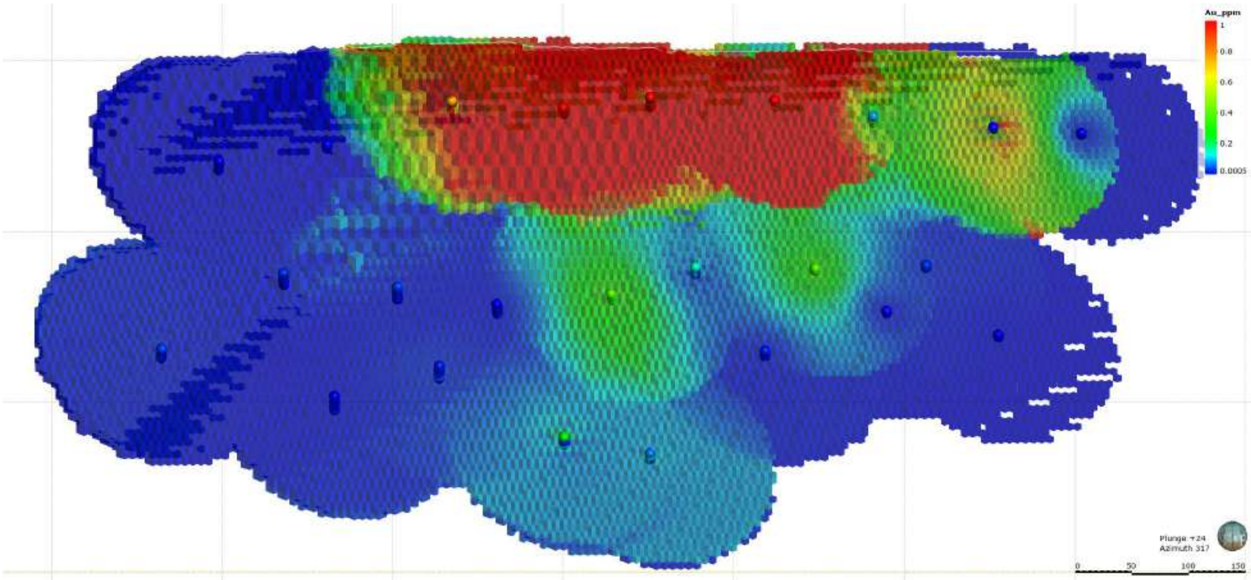
14.8 Model Validation

GRE validated the block model for each deposit area through 3 methods: visual inspection of the grade model and assay data, statistical comparison between the grade model and composite data, and swath plots comparing composite and block data. A description of each model validation method is presented in the following subsections.

14.8.1 Visual Inspection

The model was inspected visually along long sections of the veins and along parallel sections in the altered rhyolite. Visual inspection includes an examination of the block grades and the composite grades used to populate the blocks. Composite grades were compared to the surrounding block grades. Additionally, search distances and shapes were validated via visual inspection. An example of the visual inspection shown in Figure 14-17 shows the estimated gold grade in the block model and the composites used to estimate the block model. In general, the block grades correlate well with composite grades.

Figure 14-17 Example of Visual Inspection of Long Section in Crente



Source – GRE (2019)

14.8.2 Statistical Comparison

GRE compared the domain statistics of the composites used for block grade estimation to the block model (Table 14-5 in Section 14.3). Overall, the block grade average and distribution indicate that the block model is a good representation of the composite data. Mean and median values are close, and block grade population has lower variance than the composite grade. Table 14-8 shows the block gold grade statistics.

Table 14-8 Gold Statistics of ID2 Block Model Estimate (gpt)

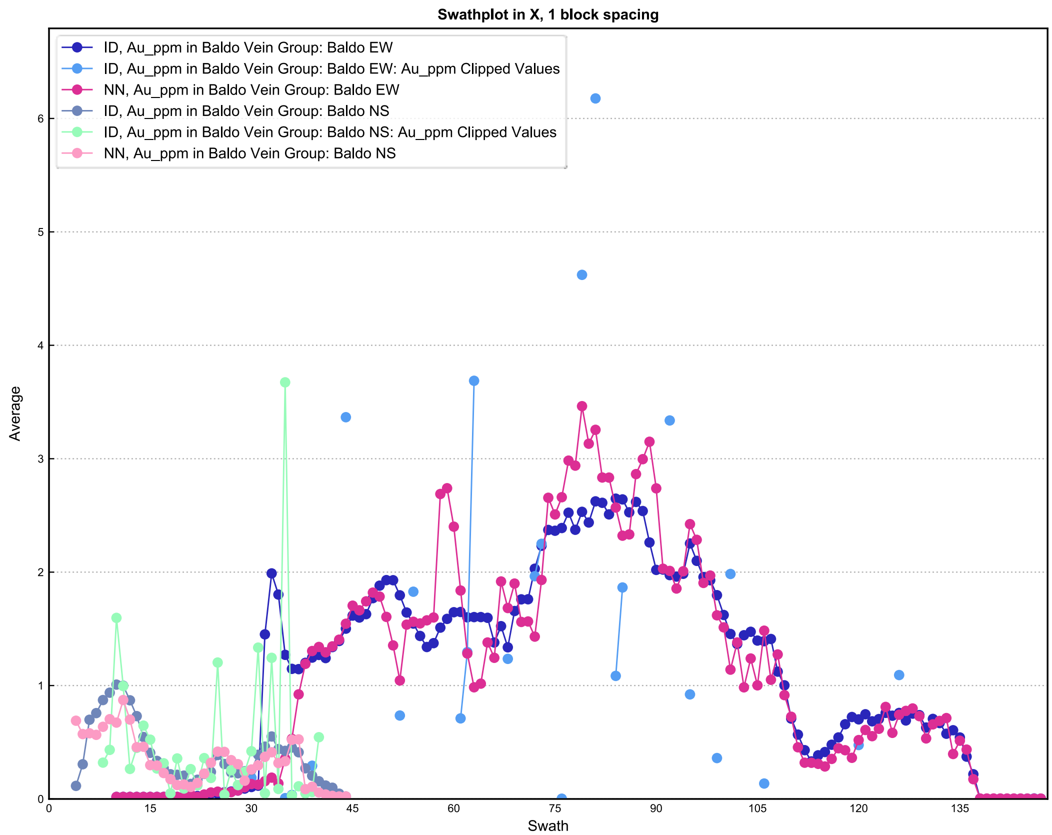
Zone	Volume	Mean	Standard deviation	Minimum	Lower quartile	Median	Upper quartile	Maximum
Baldo EW Vein	1,719,750	1.257	1.533	0.0025	0.188	0.696	1.641	9.813
Baldo NS Vein	1,526,875	0.563	0.623	0.0025	0.155	0.391	0.661	3.674
Baldo Altered Rhyolite	30,566,125	0.138	0.340	0.0025	0.029	0.060	0.111	7.961
Crente Vein	9,136,750	0.463	0.727	0.0025	0.009	0.089	0.654	7.562
Crente Altered Rhyolite	21,494,250	0.073	0.083	0.0025	0.021	0.041	0.096	1.713
Marines Vein	199,375	0.805	0.501	0.030	0.515	0.537	1.197	1.734
Marines Altered Rhyolite	7,945,000	0.048	0.158	0.0025	0.004	0.007	0.022	2.489

Zone	Volume	Mean	Standard deviation	Minimum	Lower quartile	Median	Upper quartile	Maximum
Matrincha Vein	1,039,750	0.890	0.536	0.0176	0.529	0.800	1.187	4.655
Matrincha Altered Rhyolite	7,597,500	0.054	0.144	0.0025	0.004	0.012	0.037	1.949
Tavares Vein	89,125	0.251	0.259	0.014	0.025	0.251	0.311	0.872
Tavares Altered Rhyolite	9,859,375	0.010	0.017	0.0025	0.0025	0.004	0.009	0.253

14.8.3 Swath Plots

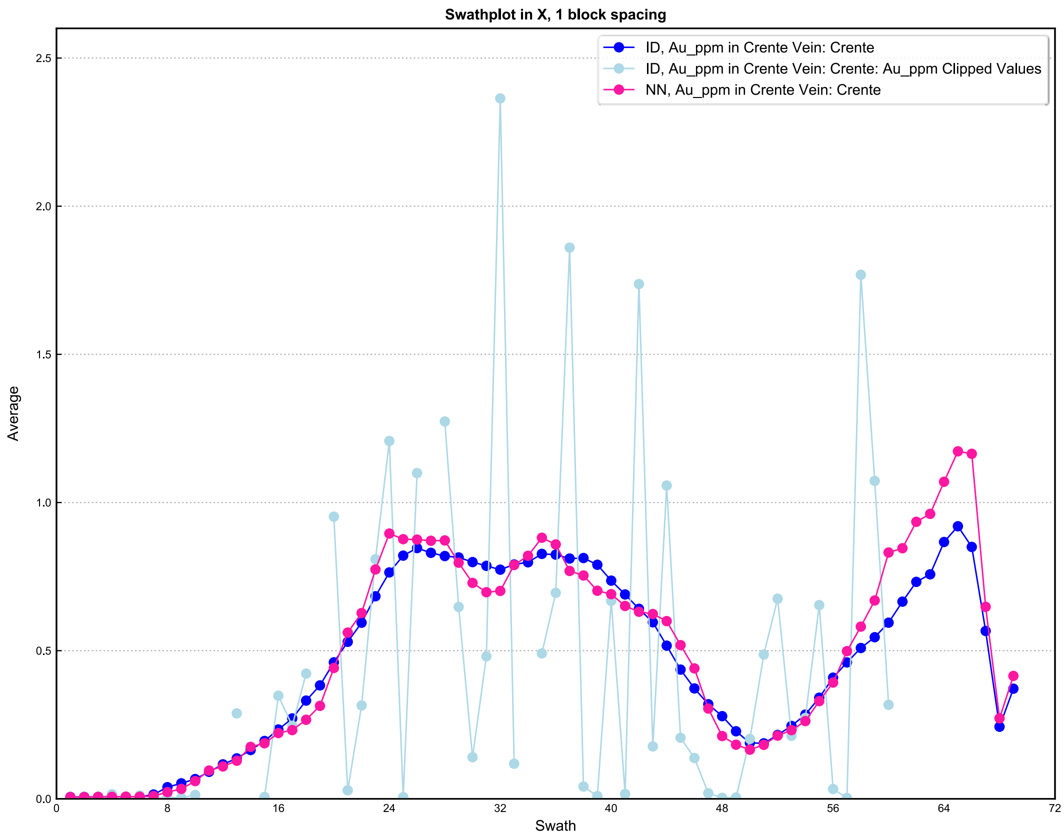
Swath plots are a way to graphically compare composited drilling data with blocks modeled with that data. The blocks were modeled with both a nearest neighbor (NN) method and inverse distance squared (ID2) method of estimation. The swath plot in Figure 14-18 shows the composite data, ID2 modeled grades, and NN modeled grades in the Baldo vein domains. Swath plots can often show a large spike in composite data that is not accompanied by a similar spike in block grades. For example, the 3 highest composite spikes in Figure 14-18 are due to 1, 3, and 3 samples from the highest to 3rd highest spike. These relatively isolated data show up in the swath plot, but do not influence a large number of blocks.

Figure 14-18 Baldo Vein Swath Plot



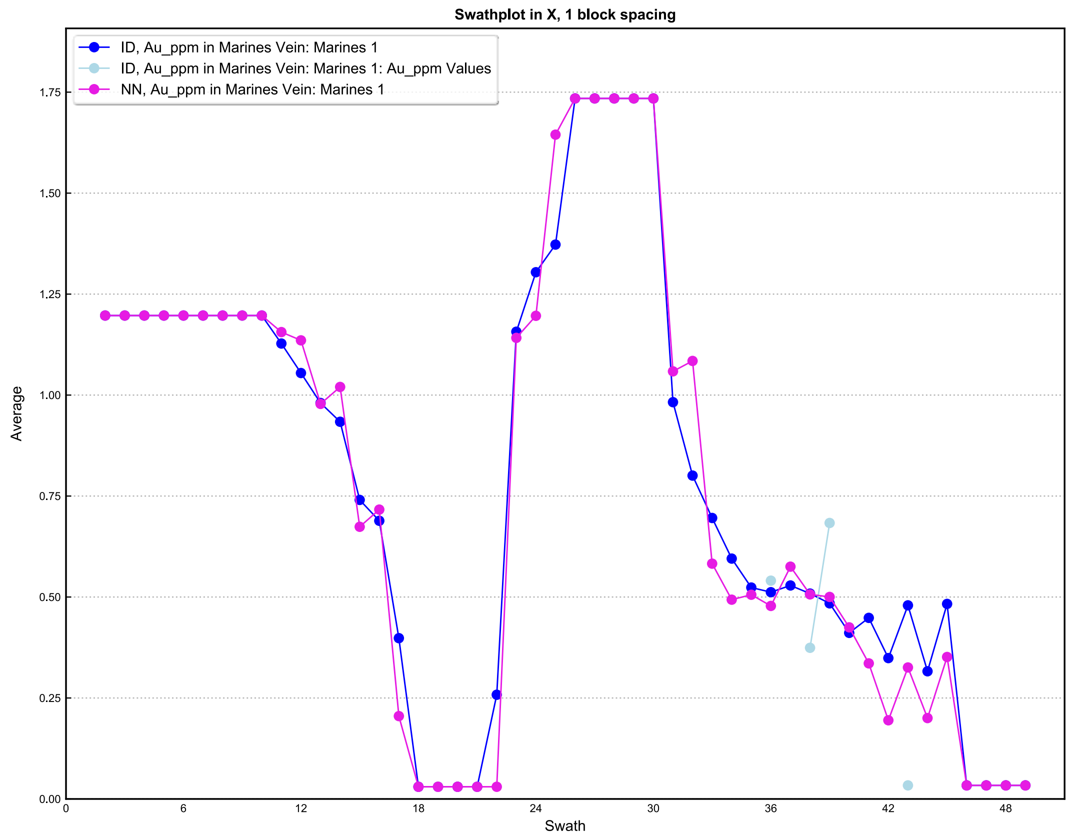
Source – GRE (2019)

Figure 14-19 Crente Vein Swath Plot



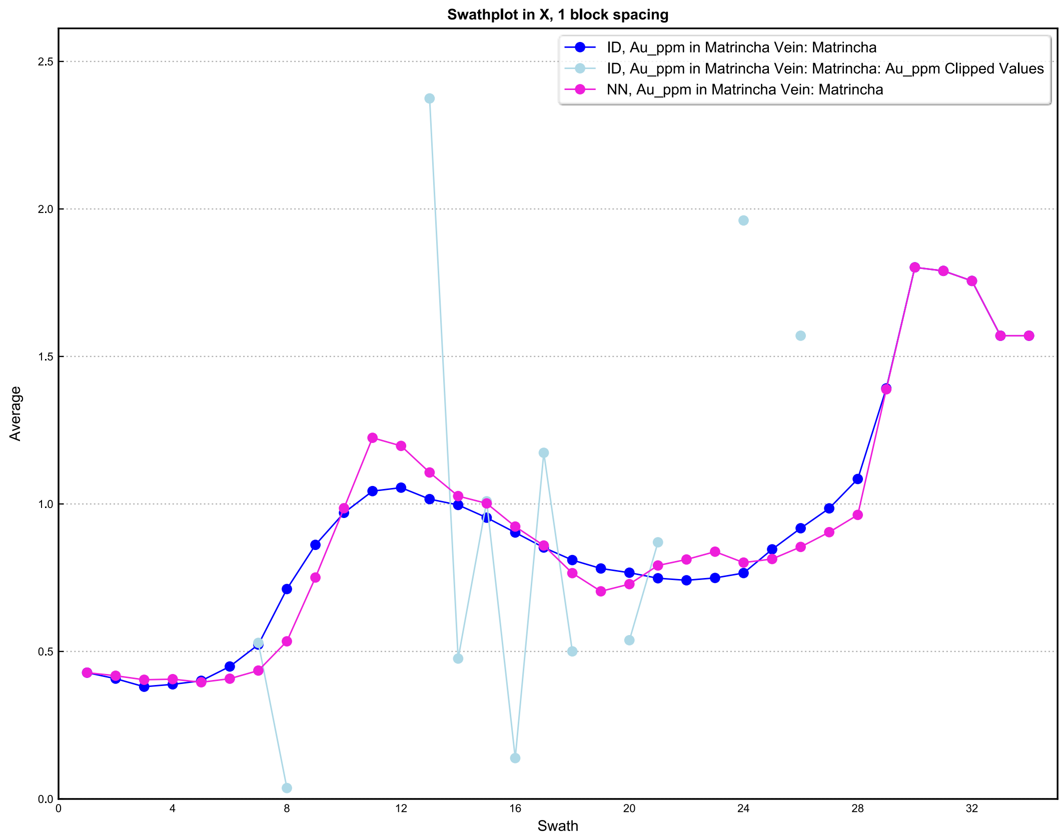
Source – GRE (2019)

Figure 14-20 Marines Vein Swath Plot



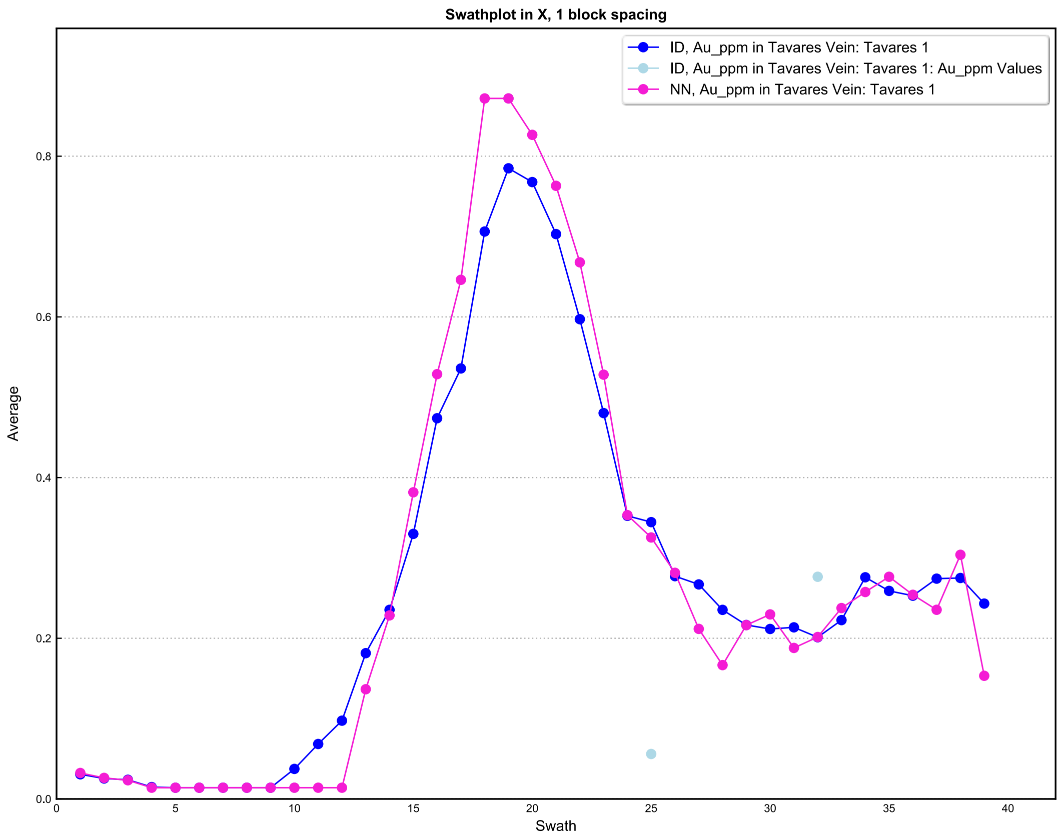
Source – GRE (2019)

Figure 14-21 Matrincha Vein Swath Plot



Source – GRE (2019)

Figure 14-22 Tavares Vein Swath Plot

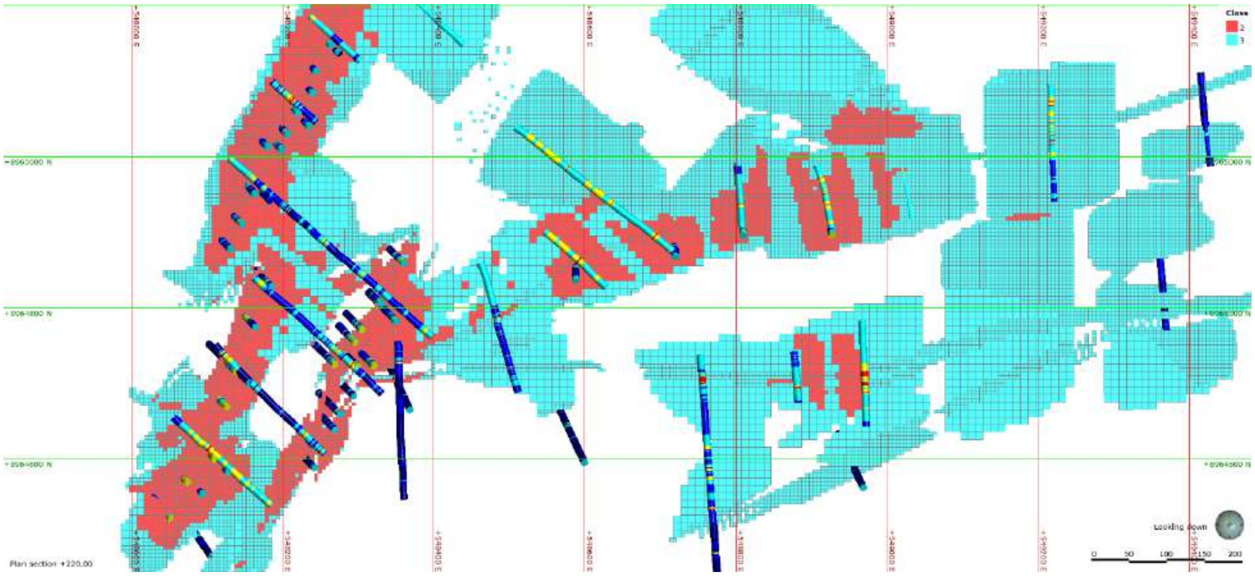


Source – GRE (2019)

14.9 Resource Classification

A minimum distance of 40 meters to the nearest composite sample and estimation using samples from at least two drillholes defined a resource block as indicated. All other estimated blocks were classified as inferred. Only drillhole data contributed to the resource classification of indicated. Figure 14-23 shows blocks colored red for indicated and blue for inferred resource classification at 240 meters elevation.

Figure 14-23 Level 240 Plan Section, Resource classification



Source – GRE (2019)

14.10 Resource Pit

The resource was constrained to a theoretical open pit using the LG (Lerchs & Grossman) algorithm using Maptek software, Vulcan. Inputs are shown in Table 14-9. Costs were estimate based on GRE's experience and comparisons to similar projects. The mining cost varied between weathered and fresh rock since saprolite will not require drilling and blasting. Pit slope also changed between weathered and fresh rock: 55 degrees for fresh rock, and 45 degrees for saprolite.

Table 14-9 LG Input Parameters

Item	Unit	Value
Gold Price	$/troy oz	1500
Processing Cost	$/tonne	12
Process Recovery	92	%
Mining Cost- Saprolite	$/tonne	1.5
Mining Cost - Rock	$/tonne	2.0
Pit Slope – Saprolite	Degrees	45
Pit Slope – Fresh Rock	Degrees	55

14.11 Statement of Mineral Resource

Table 14-10 Mineral Resource Statement

Class	Rock Type	Domain	Tonnes 1,000s	*Gold* Grade g/t	*Gold* Troy Ounces 1,000s
Indicated	Fresh	Baldo Vein	1,094	1.00	35
		Crente Vein	2,425	1.30	101
		Baldo Rhyolite Alt	930	0.66	20
		Crente Rhyolite Alt	358	0.35	4
		Total	**4,806**	**1.04**	**160**
	Weathered	Baldo Vein	300	1.07	10
		Crente Vein	153	1.49	7
		Baldo Rhyolite Alt	254	0.74	6
		Crente Rhyolite Alt	148	0.34	2
		Total	**854**	**0.92**	**25**
	Total	**Baldo Vein**	**1,394**	**1.02**	**46**
		Crente Vein	**2,578**	**1.31**	**108**
		Baldo Rhyolite Alt	**1,183**	**0.67**	**26**
		Crente Rhyolite Alt	**505**	**0.35**	**6**
		Total	**5,661**	**1.02**	**185**
Inferred	Fresh	Baldo Vein	2,682	1.74	150
		Crente Vein	3,004	1.29	125
		Marines Vein	99	1.14	4
		Matrincha Vein	1,071	1.22	42
		Tavares Vein	9	0.74	0
		Baldo Rhyolite Alt	3,291	1.11	118
		Crente Rhyolite Alt	249	0.30	2
		Marines Rhyolite	270	1.02	9
		Matrincha Rhyolite	318	0.53	5
		Total	**10,992**	**1.29**	**455**
	Weathered	Baldo Vein	260	1.64	14
		Crente Vein	369	1.17	14
		Marines Vein	15	1.11	1

Class	Rock Type	Domain	Tonnes 1,000s	*Gold* Grade g/t	*Gold* Troy Ounces 1,000s
		Matrincha Vein	58	1.07	2
		Tavares Vein	4	0.62	0
		Baldo Rhyolite Alt	698	1.15	26
		Crente Rhyolite Alt	94	0.35	1
		Marines Rhyolite	25	0.41	0
		Matrincha Rhyolite	150	0.64	3
		Total	**1,673**	**1.12**	**60**
	Total	**Baldo Vein**	**2,941**	**1.73**	**163**
		Crente Vein	**3,373**	**1.28**	**138**
		Marines Vein	**114**	**1.14**	**4**
		Matrincha Vein	**1,129**	**1.21**	**44**
		Tavares Vein	**13**	**0.70**	**0**
		Baldo Rhyolite Alt	**3,988**	**1.12**	**143**
		Crente Rhyolite Alt	**343**	**0.32**	**3**
		Marines Rhyolite	**295**	**0.97**	**9**
		Matrincha Rhyolite	**468**	**0.57**	**9**
		Total	**12,665**	**1.26**	**515**

Differences may occur in totals due to rounding

Notes:

5) The effective date of the Mineral Resources Estimate is October 10, 2019.
6) The Qualified Persons for the estimate are Kevin Gunesch, PE, and Hamid Samari QP-MMSA of GRE.
7) Mineral resources are not ore reserves and are not demonstrably economically recoverable.
8) Mineral resources are reported at a 0.25 gpt cutoff, an assumed gold price of 1,500 $/tr. oz, an assumed mining cost of 1.5 to 2.0 $/tonne, processing cost of 12.0 $/tonne, an assumed metallurgical recovery of 92%, a saprolite pit slope of 45 degrees, and a fresh rock pit slope of 55 degrees.

14.12 Mineral Resource Sensitivity by Domain

Table 14-11 shows sensitivity of the mineral resource to cut-off grade in each domain.

Table 14-11 Resource Sensitivity to Cut-off Grade

Resource Class	Domain	Cut-off	kTonnes	Gold Grade (gpt)	Gold (koz)
Indicated	Baldo	0.20	2,964	0.78	74
		0.25	2,578	0.86	71
		0.30	2,286	0.93	69
	Crente	0.20	3,407	1.06	116
		0.25	3,083	1.15	114
		0.30	2,784	1.24	111
	Total	0.20	6,370	0.93	190
		0.25	5,661	1.02	185
		0.30	5,070	1.10	180
Inferred	Baldo	0.20	7,422	1.30	310
		0.25	6,930	1.38	307
		0.30	6,572	1.44	304
	Crente	0.20	4,209	1.08	145
		0.25	3,716	1.19	142
		0.30	3,422	1.27	139
	Marines	0.20	448	0.95	14
		0.25	409	1.02	13
		0.30	405	1.02	13
	Matrincha	0.20	1,802	0.93	54
		0.25	1,597	1.02	53
		0.30	1,504	1.07	52
	Tavares	0.20	13	0.70	0.3
		0.25	13	0.70	0.3
		0.30	13	0.70	0.3
	Total	0.20	13,894	1.17	524
		0.25	12,665	1.26	515
		0.30	11,916	1.33	508

15.0 Omitted Sections

The following sections are intentionally omitted from this technical report:

- Item 15: Mineral Reserve Estimates
- Item 16: Mining Methods
- Item 17: Recovery Methods
- Item 18: Project Infrastructure
- Item 19: Market Studies and Contracts
- Item 20: Environmental Studies, Permitting and Social or Community Impact
- Item 21: Capital and Operating Costs
- Item 22: Economic Analysis

23.0 Adjacent Properties

GRE is not aware of any adjacent properties with current mineral resource estimate or active operations

24.0 Other Relevant Data and Information

All pertinent information regarding the Cajueiro project and mineral resource estimate is containing within the other sections of this report. GRE is not aware of any other relevant information to make the report more understandable.

25.0 Interpretation and Conclusions

The authors have compiled the following list of interpretations and conclusions for the Cajueiro Project:

- The deposits at the project are associated with altered rhyolite. Alteration and mineralization appear to be related to fracture zones in the rhyolites. Gold mineralization is confined to these fractures zones which are comprised of vein like structures of hydrothermal breccias with altered zones containing more disseminated mineralization.
- Exploration of the property has mapped the vein like structure over several trenching programs since 2010. These structure have been confirmed at depth at several locations with diamond core drilling.
- A site visit was completed in April 2019 which verified select drill collars, showed good comparison of the physical core to the exploration database, and provided good comparison of the independent assays samples to the original assay values.
- The sampling, security, and QA/QC program are consistent the common industry practice. The minor deviations identified in the QA/QC program are within expected number of occurrence. The results of the program are adequate to estimate mineral resources for the property.
- The current mineral resource contains:
    - Indicated resources totaling 5,661,000t @ 1.02 g/t gold for a total of 185,000 oz of gold of which 854,000t @ 0.92 g/t gold (for 25,000 oz) is weathered rock and 4,806,000t @ 1.04 g/t (for 160,000 oz) is fresh rock.
    - Inferred resources totaling 12,665,000t @ 1.26 g/t gold for a total of 515,000oz of gold of which 1,673,000t @ 1.12 g/t gold (for 60,000 oz) is weathered rock and 10,992,000t @ 1.29 g/t (for 455,000oz) is fresh rock.
- The sulfide material from Cajueiro responds well to gravity separation, producing a concentrate with a grade as high as 121 g/t, and recovering as much as 80% of the gold.
- Gravity with tails leaching was good with recoveries as high as 85%. A maximum total recovery of 96% was observed.
- Sulfide material was sensitive to grind size, and both concentrate grades and leaching recoveries were improved when samples were ground to 75 microns compared to coarser material.
- Head grade sensitivity was seen where lower gold recoveries was noted from lower grade material and vice-versa. This sensitivity needs to be investigated further with additional leaching and variability testing.
- The oxide material was not amenable to flotation but leached well in direct cyanidation. Flotation recovered only 52% of the gold from the samples tested with a final concentrate grade of 51 g/t.
- Direct cyanidation of the oxide samples recovered 94% of the gold.
- It was determined through microscopy that the main gold-bearing mineral was Limonite. Gold deportment studies show that over 50% of the gold in the oxide material is sized under 5 microns, and around 48% of the gold is associated with Limonite.
- The current infrastructure is sufficient to support continued exploration activities. The planned process plant by FMS will require additional infrastructure for the plant footprint. Designated

areas for waste rock and tailings will also be required. The available space with the property limits is adequate for the planned small scale operation by FMS.

- There are no known factors related to metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, or political issues which could materially affect the mineral resource estimate.

25.1 Risks

- Brazilian political change, fluctuations in the national, state, and local economies and regulations and social unrest.
- Currency exchange fluctuations.
- Fluctuations in the prices for gold and silver, as well as other minerals.
- Risks relating to being adversely affected by the regulatory environment, including increased regulatory burdens and changes of laws.

25.2 Opportunities

- There is a potential for increasing the estimated mineral resources with infill drilling and additional trenching.

26.0 Recommendations

26.1 Recommended Work Programs

The authors make the following recommendations for the Cajueiro project.

- Before each new exploration campaign the company should:
  - Complete a review of the sampling program including method, preparation for dispatch, security, and chain of custody documentation
  - Determine the planned control sample type and insertion rate
  - Establish an action plan for deviations
  - Reeducate the workforce on the program
- Increase the QA/QC program control sample insertion rate to 20%. The company should review the results of the program at least monthly
- Complete another round of exploration drilling and trenching totaling 2,000 meters of core drilling and 4,000 linear meters of trenching.
- Provide location and interval data for all future samples, and wherever missing, the previously tested samples described in this section and provide a comprehensive database of all different ore types from the Cajueiro deposit
- Complete additional metallurgical testing:
  - Variability studies to reproduce results and verify head grades and grade sensitivity across the deposit
  - Record reagent consumptions for all tests
  - Comminution studies, including crusher work index, grinding energy, and abrasion index testing
  - Grind-gravity-leach optimization for all ore types
  - Gravity concentrate leaching via intensive leach studies
  - Flotation optimization if warranted for sulfide portion

26.2 Estimated Costs

The estimated costs for the next phase of exploration and testing are detailed below.

Table 26-1 Recommended Program Costs

Program	Budget
Exploration Drilling	$250,000
Trenching and Mapping	$50,000
Laboratory and Assaying	$100,000
Metallurgical Testing	$100,000
Total	$500,000

27.0 References

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I, Kevin J. Gunesch do hereby certify that:

1. I am currently employed as Principal Mining & Civil Engineer by Global Resource Engineering, Ltd at:

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2. I am a graduate of the Colorado School of Mines with a Bachelor of Science degree in Mining Engineering (2000).
3. I am a registered Professional Engineer in the State of Alabama (27448).
4. I have worked as a Mining Engineer for a total of 19 years since my graduation from university, as an employee as of several mining companies and as a consulting engineer. During that time, I have completed numerous resource estimates, mine plans, reclamation plans, economic evaluations, operating budgets, production reconciliations, tailings storage facility designs, heap leach pad designs, and waste rock facility designs for many operating mines and mining projects including coal, industrial minerals, and precious metals.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of the technical report titled "Mineral Resource Estimate, Cajueiro Project, Mato Grosso/Pará, Brazil" with an effective date of October 10th, 2019 (the "Technical Report") with specific responsibility for Sections 1-6, 9-12, 14, 23-27.
7. I conducted a personal 1-day visit of the subject property in April 2019.
8. I have personally completed an independent review and analysis of the data and written information contained in this Technical Report.
9. I have no previous involvement with the properties that are the subject of the Technical Report.
10. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43- 101.

11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the websites accessible by the public, of the Technical Report.
13. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of November 2019

Kevin J. Gunesch (Signature)

Signature of Qualified Person

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CERTIFICATE of AUTHOR

I, Jeffrey Todd Harvey, PhD do hereby certify that:

1. I am currently employed as Principal Metallurgist by Global Resource Engineering, Ltd at:

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1. I am a Society of Mining Engineers (SME) Registered Member Qualified Professional in Mining/Metallurgy/Mineral Processing, #04144120.
2. I hold a degree of Doctor of Philosophy (PhD) (1994) in Mining and Mineral Process Engineering from Queen's University at Kingston. As well as an MSc (1990) and BSc (1988) in Mining and Mineral Process Engineering from Queen's University at Kingston.
3. I have practiced my profession since 1988 in capacities from metallurgical engineer to senior management positions for production, engineering, mill design and construction, research and development, and mining companies. My relevant experience for the purpose of this Mineral Resource Estimate is as the test work reviewer, process designer, process cost estimator, and economic modeler with 25 or more years of experience in each area.
4. I have taken classes in mineral processing, mill design, cost estimation and mineral economics in university, and have taken several short courses in process development subsequently.
5. I have worked in mineral processing, managed production and worked in process optimization, and I have been involved in or conducted the test work analysis and flowsheet design for many projects at locations in North America, South America, Africa, Australia, India, Russia and Europe for a wide variety of minerals and processes.
6. I have supervised and analyzed test work, developed flowsheets and estimated costs for many projects including International Gold Resources Bibiani Mine, Aur Resources Quebrada Blanca Mine, Mineracao Caraiba S/A, Avocet Mining Taror Mine, Mina Punta del Cobre Pucobre Mine, and others, and have overseen the design and cost estimation of many other similar projects.
7. I have worked or overseen the development or optimization of mineral processing flowsheets for close to one hundred projects and operating mines, including copper flotation and acid heap leach SX/EW processes.
8. I have been involved in or managed many studies including scoping studies, prefeasibility studies, and feasibility studies.
9. I have been involved with the mine development, construction, startup, and operation of several

mines.

10. I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional organization (as defined in National Instrument 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101.
11. I have not visited the project.
12. I am responsible for Section 13 of the technical report titled "Mineral Resource Estimate, Cajueiro Project, Mato Grosso/Pará, Brazil" with an effective date of October 10th, 2019 (the "Technical Report") and have contributed to Sections 1, 25, 26, and 27.
13. I am independent of the issuer as described in section 1.5 by National Instrument 43-101.
14. I have no previous involvement with the properties that are the subject of the Technical Report.
15. I have read National Instrument 43-101 and Form 43-101F1. The Resource Estimate has been prepared in compliance with the National Instrument 43-101 and Form 43-101F1.
16. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of November 2019

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3. I hold a degree of PhD of Science (2000) in geology (Tectonics - structural geology) from Tehran Azad University (Sciences & Research Branch).
4. I have practiced my profession since 1994 in capacities from expert of geology to senior geologist and project manager positions for geology, seismic hazard assessment and mining exploration.
5. I have been involved with many studies including scoping studies, prefeasibility studies, and feasibility studies.
6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional organization (as defined in National Instrument 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101.
7. I am responsible for Sections 7, 8, and 14 of the technical report titled "Mineral Resource Estimate, Cajueiro Project, Mato Grosso/Pará, Brazil" with an effective date of October 10th, 2019 (the "Technical Report") and have contributed to Sections 1, 25, 26, and 27.
8. I have not visited the project.
9. I am independent of the issuer as described in section 1.5 by National Instrument 43-101.
10. I have no previous involvement with the properties that are the subject of the Technical Report.
11. I have read National Instrument 43-101 and Form 43-101F1. The Resource Estimate has been prepared in compliance with the National Instrument 43-101 and Form 43-101F1.
12. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of November 2019

Hamid Samari (Signature)

Signature of Qualified Person

"Hamid Samari"

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