

# Technical Report on the Geology, Mineralization and Exploration of the Copeçal Gold Project, Mato Grosso State, Northwestern Brazil

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Report Prepared and Endorsed by QP

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## DATE & SIGNATURE PAGE

This NI 43-101 report entitled "Technical Report on the Geology, Mineralization and Exploration of the Copeçal Gold Project, Mato Grosso State, Brazil," issued December 31, 2024 with an Effective Date of, January 13, 2025, was prepared for GoldHavenResources Corp. and authored by the following:

*"Jean-Marc Lopez"*

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Jean-Marc Lopez B.Sc., FAusIMM

Date: December 31, 2024

## CERTIFICATE OF QUALIFIED PERSON

I, Jean-Marc Lopez, of JML Geologia & Consultoria EI, as the Author of this report entitled “Technical Report on the Geology, Mineralization and Exploration of the Copeçal Gold Project, Mato Grosso State, Brazil” (the "**Technical Report**"), issued December 31, 2024 with an Effective Date of January 13, 2025, prepared for GoldHaven Resources Corp., do hereby certify that:

1. I am a Geological Engineer, Owner and Principal Consultant Geologist of JML Geologia & Consultoria EI, 124/ 501 Amoroso Costa, Belo Horizonte MG, Brazil 30350570.
2. I graduated with a Bachelor of Science degree in Geological Engineering from the Ouro Preto School of Mines, Federal University of Ouro Preto, Brazil, in 1987, and a Masters of Business Administration degree from Fundação Getulio Vargas, Belo Horizonte, Brazil in 2007.
3. I am a practicing geologist registered as a Fellow in good standing with the AusIMM - the Australasian Institute of Mining and Metallurgy (Membership No. 224830) and a registered Professional Engineer in Brazil with the CREAMG – Conselho Regional de Engenharia e Arquitetura (Membership No. 50058/D).
4. I have practiced my profession continuously for 37 years since my graduation. I have held senior management positions during the last 26 years in several Canadian, Australian and South American Mining Companies. My relevant experience for the purpose of the Technical Report is:
  - review and report as an employee and consultant on several exploration and mining projects for due diligence and technical reports;
  - exploration and mine geology project management involving gold, copper, silver, nickel, and base metals located in Brazil, Canada, French Guyana, Suriname, Mexico, Chile, Peru and Ecuador.
5. I have read the definition of “qualified person” as set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“**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 am a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation of the Technical Report.
7. I visited the Copeçal Project from June 15 to June 17, 2023.
8. I am independent of GoldHaven Resources Corp. and all its subsidiaries, applying all of the tests in section 1.5 of NI 43- 101.
9. I have had no direct prior involvement with the Copeçal Project that is the subject of the Technical Report.
10. I have read NI 43-101, and the Technical Report has been prepared in compliance with that instrument and Form 43-101F1.
11. At 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.

Signed in Belo Horizonte, Minas Gerais, Brazil, this 31st day of December 2024.

*"Jean-Marc Lopez"*

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Jean-Marc Lopez, B.Sc, FAusIMM

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# 1. SUMMARY

## INTRODUCTION

The Copeçal Property (referred herein, as the "**Property**" or the "**Project**") is an early-stage exploration project located in the south-west portion of the Amazon Craton, embedded in the Juruena Mineral Province ("**Juruena Province**"), a 600 km long, west-north-west trending Paleo-Proterozoic continental magmatic arc structure.

The Property is constituted by two Exploration Permits (processes 866.779/2021 and 866.782/2021) totaling 3,681.76 ha, located in the municipality of Alta Floresta, state of Mato Grosso in mid-western Brazil. The Project area lies approximately at 600 km north of the city of Cuiabá, the state capital.

## TERM OF REFERENCE

TJML Geologia & Consultoria EI ("JML") was retained by GoldHaven Resources Corp. ("**GoldHaven**") to prepare an independent Technical Report on GoldHaven's consolidated mineral rights of the Copeçal Property.

The purpose of the Technical Report authored by Jean-Marc Lopez (the "**Author**") of JML, issued December 31, 2024 with an Effective Date of January 13, 2025 is to support the disclosure of the Geological Context and Exploration Thesis relative to the Property located in the Juruena – Teles Pires Mineral Province, Northern Mato Grosso, in mid-west Brazil.

The Property was first explored from 2010 to 2016 by former mineral title holder, AngloGold Ashanti plc ("**AngloGold**") who carried out a stream sediment geochemistry survey encompassing a total of 10 tenements centered on the current Copeçal Project, which results led to the identification of the soil gold anomalies situated in the mineral rights that constitute currently the Copeçal Property.

## PROJECT SETTINGS

The Copeçal Property is located in the Juruena Gold Province in the Mato Grosso State in Central Western Brazil and is comprised of two tenements, covering 3,681.76 hectares, encompassed in two rural properties. The Copeçal Property is located 60 km from Alta Floresta, a 50,000-population center with daily commercial flights from Mato Grosso state capital, Cuiaba. Half of the Copeçal Property is in cleared pasture, within mining-friendly farm owners. The mineral rights maintenance current fees are 4.33 Brazilian reais per hectare per year. There has been an estimated USD\$1 million in exploration expenditures spent by the previous title holder on the area surrounding and including the Copeçal Property. The previous work conducted on the general area by the previous operator includes:

- stream sediment sampling, rock chip and soil sampling;
- geological and structural field mapping;
- auger drilling (49 holes) and Air core drilling (6 holes);
- induced polarization of 4 cross sections and magnetic orientation surveys on 5 cross sections.

The Copeçal Property lies in the south-west segment of the Juruena Mineral Province in the western continuity of the Alta Floresta Gold Province (the "**AFGP**"). It constitutes with the Tapajós Mineral Province to the North, one of the major gold producing regions in Brazil since the late 70's.

Both the Juruena and the Tapajós Mineral Provinces lies in the south-west portion of the Amazonas craton, mostly constituted by plutono-volcanic sequences, generated during the meso to Paleoproterozoic emplacement of the Juruena continental magmatic arc.

In 2022, Boa executed 2 diamond drill holes (107 m) to follow-up the down-dip continuity of a chargeability anomaly drilled by AngloGold in 2013 and, in 2023, a total of 216 km drone magnetometry survey, aiming to validate the geometry and spatial relationship of the Copeçal Property geological settings, vis-à-vis the gold mineralization identified in stream sediment and soil geochemistry sampling programs by the previous operator.

## PROPERTY DESCRIPTION AND OWNERSHIP

### PROPERTY DESCRIPTION

The Copeçal Property is constituted by two Exploration Permits totaling 3,681.76 ha, located in the municipality of Alta Floresta, state of Mato Grosso in mid-western Brazil. The Project area lies approximately at 600 km north of the city of Cuiabá, the state capital.

The Copeçal Project is embedded in the mid-south portion of the Juruena Mineral Province ("**Juruena Province**"), that encompasses, at its Eastern end, the Alta Floresta Gold Province ("**AFGP**"). Together with the Tapajós Mineral Province to the North, the AFGP is one of the major gold producing regions in Brazil since the late 70's.

Ouro Resources Do Brasil Ltda Ltda ("**Ouro Subco**") was retained according to the protocols of a public offer presented by the ANM and authorized to claim the Copeçal gold property mineral rights by filing the Exploration Permit Applications identified under processes 866.779/2021 and 866.782/2021.

The Exploration Permits (*Alvará de Pesquisa*) were granted in January 2024 to Ouro Subco, valid for a 3 years term. The Exploration Permits can be extended for another two or three-years additional term at the ANM sole discretion, upon the submittal of a Partial Exploration Report (*Relatório Parcial de Pesquisa*) justifying the needs to extend the exploration activities.

The Exploration Permits, identified by 1162/2024 and 1163/2024, covers an area of 3,681.76 ha. Both tenements are in the Alta Floresta municipality authority, in the State of Mato Grosso.

The relevant events associated to the Copeçal Property Mineral Rights are listed in chronological order in Section 6 - HISTORY.

### PROPERTY OWNERSHIP

Boa is a company incorporated under the laws of British Columbia and currently has one wholly owned subsidiary, Ouro Resources Inc. ("**Boa Subco**"), a company incorporated under the laws of the Province of Ontario. Boa Subco currently has one wholly owned subsidiary, Ouro Resources Do Brasil Ltda ("**Ouro Subco**"), a company incorporated under the laws of Brazil, in Belo Horizonte, State of Minas Gerais, enrolled with the registration number (CNPJ) 31.874.305/0001-56, and represented by Boa Director, Mr. Rafael Viola Mottin.

Boa, through Boa Subco holds 100% of the Exploration Permits that constitute the Copeçal Property.

### Acquisition Agreement Between Boa and GoldHaven

GoldHaven Resources Corp. ("**GoldHaven**") is a company incorporated under the laws of British Columbia and listed on the Canadian Securities Exchange. On December 16, 2024, GoldHaven entered into an amalgamation agreement with BOA Gold Corp. ("**Boa**") and a wholly owned subsidiary of GoldHaven incorporated under the laws of British Columbia ("**GoldHaven Subco**"). If the proposed transaction (the "**Transaction**") is completed, GoldHaven will acquire all of the issued and outstanding common shares of Boa by way of a three-cornered amalgamation whereby GoldHaven Subco and Boa will amalgamate pursuant to the provisions of the *Business Corporations Act* (British Columbia) to form one company ("**Amalco**"). Upon completion of the Transaction, Amalco would become a wholly-owned subsidiary of GoldHaven and GoldHaven would indirectly (through its wholly owned subsidiaries Amalco, Boa Subco, and Ouro Subco) own a 100% interest in the Exploration Permits that constitute the Copeçal Property.

## EXPLORATION STATUS

Since the Exploration Permit Applications were filed in 2021, the field exploration activities have been limited to the execution of two diamond drill holes in February 2022 to test the down-dip continuity of the NE IP anomaly and a 216 km UAV (drone) magnetometry survey encompassing the most expressive soil gold anomalies identified by the former title holder. The Copeçal cow-calf operator, who owns part of the land was contacted and a private agreement formalized to secure free access to the Property.

## DATA COMPILATION AND DIGITALIZATION

An in-depth compilation and digitalization of two exploration reports filed by AngloGold at the ANM in 2013 and 2016 begun in June 2023 encompassing the stream sediment, rock chip and soil geochemistry, the mechanized auger and Air core shallow drill holes, geological maps and sections.

In addition to the geochemistry data, the compilation also included five IP lines surveyed on both the NE and SW soil anomalies and 56 ha of ground magnetometry covering the eastern part of the NE soil anomaly.

For the purpose, the geophysics contractor (Avant Geofísica) made available two geologists dedicated to digitize the information into GIS format.

## CORE DRILLING

In late 2021, Boa planned to test the outskirts of the NE Anomaly by drilling 200 m in 3 bore holes. Two out of three holes were executed in February/March 2022. Drill hole SR-001 aimed to reach the down dip continuity of AngloGold Air core hole CP-AC-004 (17 m deep), Drill hole SR-003 was positioned on grid line 561500E (L27100), to test two contiguous soil samples (110 ppb and 62 ppb Au).

One hundred and seven meters were bored out of the 200 m originally planned. Considering the procedure standards applied in the drilling operation and drill core handling have felt well under the accepted industry standards, the analytical results were discarded for target and resources estimation purposes and part of the information restricted to geological mapping only.

## DRONE MOUNTED MAGNETOMETRY SURVEY

In June 2023, Avant Geofísica undertook the execution of a 216 km drone magnetometry survey over the Property, encompassing a total of 840 ha over the WSW/ENE axis between the NE and SW Anomalies aiming to consolidate the thesis that the mineralization could be linked along an hypothetical axis joining two outstanding soil anomalies.

## DATA VERIFICATION

The bulk of the technical data, specific to the property was made available by Boa in successive periods of time beginning in June 2023 with AngloGold exploration reports, when the field visit to the property took place, and in October 2023 when the Drone magnetometry survey final report was released.

In March 2024, additional data was received from Boa, relative to diamond drill holes SR-001 and 003 executed in 2022.

The present revision made to the report includes an update of the Mineral Rights status dated February 2024, triggered by the issuance of the Exploration Permits in January 2024.

## ANGLOGOLD GEOCHEMISTRY DATA BASE

Most of the technical data and information utilized to support the geological thesis presented in the report was generated by AngloGold's subsidiary between 2010 and 2016. Stream sediment, rock chip, 49 Auger drill holes and 6 Air core drill holes constitute the bulk of the data base estimated in 3,861 samples and associated information.

A Random verification and comparison between the assay results contained in the lab certificates attached to the reports, the values plotted on maps (when available) and the information contained in spreadsheets did not return any inconsistencies. A set of soil data corresponding to four grid line located in different parts of the soil was flagged not because of inconsistently but for presenting suspicious systematic barren or very low gold values (<5 ppb) contrasting

with the adjacent grid lines suggesting that a few batches of soil samples may have been affected by the a deviation in the primary sample collection procedure in the field or a preparation and/or analytical issue at the laboratory affecting an entire batch of samples. Considering these are 400 m x 40 m pattern grid cross-lines, the impact represents a gap of 800 m of untested potential soil anomalies. Infill and re-sampling of part of these grid lines is recommended in Section 26.

### BOA DIAMOND DRILL HOLE SAMPLES

Based on the assessment made by the Author, one hundred and seven samples (100% of the samples) associated to diamond drill holes SR-001 and SR-003 executed in February 2022 were discarded for the disclosure of assays results and/or resource assessment purposes.

The decision was based on the following aspects:

- Inadequate operational procedures of fundamental activities related to the drilling operation and the drill core handling, not aligned with generally accepted industry standards;
- The lack of
  - Drill core to be verified;
  - collar coordinates, direction and inclination of drill hole SR003;
  - geological log of drill hole SR-003;
  - Sampling intervals (from/to depths) of both drill holes core samples reported in the ALS laboratory;
  - Description of the Operational Procedures applied to the drilling operation and the tasks relative to the handling of the primary samples from their capture from the core barrel up to the batch dispatching to the laboratory.
  - Representativity of the primary samples due to very low recovery rates apparently associated to large scale faults or discontinuities (see details of the distribution of the core recovery in Table 9.3 - Section 9 – EXPLORATION)

Some important procedure deviations noted during the analysis are:

- The drilling operation was executed without supervision from Boa;
- The absence of formalization and capture of the drill hole geographic coordinates, direction and dip or any of the relevant conditions observed during the execution (water, tools jam, etc.);
- The absence of Standard Operation Procedures (SOPs) of all the activities related to the drilling operation;
- The absence of DAILY driller logs.

Based on the assessment the assay results relative to those intervals with less than 40% recovery are not reliable therefore inconclusive. Upon the availability of the drill core and the validation of SR-003 collar coordinates, two intervals are susceptible to be validated for geological mapping and exploration planning purposes only The intervals are indicated in Table 9.3 of Section 9.

None of the information above was employed to any form of resource or reserve estimation.

### FIELD VISIT

The information susceptible to be validated in the field was revised, prior to the visit in June 2023.

At the time the visit took place, the Author had the opportunity to meet the technical team responsible to execute the magnetometry data acquisition.

During the field visit, the data verification consisted to locate and confirm the existence and the coordinates of the relevant physiographic references such as crossings between creeks and access roads, coordinates of existing facilities. Available rock showings or outcrops were described to compare the geological information contained in the reports. General aspects such as access, land occupancy to carry out the magnetometry survey in progress at the time of the visit were also observed.

The Author verified the existence of any potential risks related to land access or environment protected areas that could jeopardize the execution of the exploration activities the Company intend to carry on.

Due to the nature of the exploration activities carried out by the former mineral title holder, the Author could not confirm the existence and coordinates of any of the previously collected and reported samples.

No monuments attesting the position of the 6 Air core drill holes or auger holes were found, the Author did not find any reference in AngloGold reports informing the procedures applied to identify Air core drill holes in the field.

The existence of two drill holes executed in 2022 was not known by the Author when the field visit took place, therefore neither the collars in the field or the drill core could be verified.

Because the assay results generated by Air core or auger drilling usually do not meet the required sample representativity for resource estimation purposes, the drill collars probably were not marked in the field for future identification. Another possibility is the destruction of the monuments, if any, caused by the constant cattle occupation of the area identified as NE anomaly. The area associated to the SW soil anomaly, located in the primary rain forest was not visited during the field visit due to the lack of a field assistant.

It is the Author's opinion that the technical information made available by Boa to prepare this Technical Report is adequate for the purposes it is destined.

## CONCLUSION AND RECOMMENDATIONS

The integration of all the gathered relevant geological information and exploration data with the recently executed ground survey have led the Author to establish key components of the property geological settings that led to an in-depth analysis of the successive exploration campaigns executed from 2010 to 2023 on the property.

## KEY FINDINGS

The major key findings relative to the geological frame work are:

- The Property shares similar tectonic-structural settings with the major gold deposits known in the Juruena Province, characterized by the intersection of two multi-hundred kilometers shear corridors that have played an intrinsic role in the geo-tectonic evolution and emplacement of both, the Juruena - Teles Pires Paleo-Proterozoic continental magmatic arc, and the gold mineralization hydro-thermal plumbing. Two deep WNW-ESE and E-W sinistral, second-order shear zones crosses-cut the Property, while two NNW dextral shear faults border the east and western boundaries of the tenements;
- The Copeçal Property regional geochemistry signature described by CPRM, the Brazilian Geological Service (Souza, 2004), is highlighted by the presence on the mineral rights of the property and its vicinities of **gold and arsenic** anomalous values in stream sediment samples, **monazite** and abundant **tourmaline** counts in HMC (Heavy Mineral Concentrate), geographically associated to regional scale tectonic structures;
- The Copeçal gold mineralization is structurally controlled, associated to more than one shear faults of second and third-order. The property is embedded in ductile to ductile-brittle deformation domains characterized by highly deformed rocks attributed to the São Romão / São Pedro Suites intrusive units and the Bacaeri-Mogno metamorphic Complex (Juruena Super Suite); Similar to the gold occurrences described in the Copeçal Property vicinities, the gold mineralization tends to occur in "pinch and swell" style quartz lodes or potentially hosted in anastomosed mylonite "envelops", associated to the transpressive structures.

The major key findings relative to the exploration current status are:

- The geochemistry follow-ups, made prior to the consolidation of the tenements by Boa was only partially effective in a very limited part of the Property due to the excessive distance between the soil samples and the shallow auger and air core drill holes. The effect of such excessive distance between the grid lines is potentially enhanced when considering the possibility of "narrow vein" style mineralization.
- The ground, detailed magnetometry survey carried out by Boa in 2023 has confirmed the close association between the WNW-ESE second-order transcurrent structure and both the large SW Soil Anomaly and the 800 m long low-grade auger clusters delineated by the 200 x 40 m in fill soil sampling and mechanized auger drilling respective follow-ups; Detailed ground magnetometry proved to be very effective to reveal details of the bed-rock tectonic structures and some of the lithological contacts lying underneath the deep oxidized soil / oxidized cover.
- Based on the assessment, the analytical assays reported from 68 m out of 107 m of diamond drilling executed in February 2022 were qualified as inconclusive for exploration purposes due to the poor recovery of the drill core.

Although the gold mineralization has not yet been exposed on the Project, the geographic distribution and nature of the gold anomalies identified by soil geochemistry and auger drilling, conjugated to the geological settings and the mineralization exposures in the neighboring primary workings, indicates that the mineralization at Copeçal is structurally controlled, probably associated to mesothermal gold lodes of magmatic hydro-thermal affiliation.

Two soil anomalies were followed up employing auger drilling. The SW Anomaly, the most consistent and large anomaly on the grid was followed up with a total of 33 mechanized auger drill holes. A plot of the accumulated average grade of the best thirteen holes shows a good correlation with the iso-grade outlines of the soil anomaly. An analysis of the grade distribution in each of the thirteen best holes, returned a consistent, slightly higher average grade when compared to its respective soil sample above. The selected auger holes include intervals ranging from 7 m to 12 m apparent thickness and 23 to 334 ppb Au grade. Such behavior indicates that the soil anomaly is not restricted to A and B soil horizons and the source should not be very distant.

The wide, homogeneous distribution of the gold contents (up to 530 m wide) seems to reflect a spread of the gold contents in the soil mass, a common feature (identified as "mushroom effect") that occurs in thick, deeply developed soil and oxidized cover subject to tropical weathering.

It is the Author's opinion that the soil sampling and auger follow-up executed in 2013 only assessed a limited portion of in-situ anomalies due to the grid pattern. Furthermore, the Air core and diamond drilling follow-ups executed in 2013 and 2022 did not test the most potential zones situated at the SW Anomaly.

In light of the recent findings allowing to link the distribution of the soil and auger anomalies with the structural lineaments identified on the Property, consistent with the tectonic settings of several gold deposits of the Juruena Gold Province, it is the QP opinion that further exploration work is warranted on the Property, to identify and expose the primary mineralization by detailing the soil geochemistry grid and expand the ground magnetometry coverage in order to establish adequate drilling positions according to the recommendations made in this Technical Report.

## RECOMMENDATIONS

The Author recommends that further in-fill / step-out soil geochemistry and drone magnetometry follow-up are carried out in preparation to Air core / RC shallow drilling destined to identify, sample and establish the geometry (shape, direction and dip) and order of magnitude of the mineralization (grade, strike length and width).

The exploration program proposed here-in consists in two consecutive phases, with Phase 2 contingent to the results of Phase 1. Phase 1 encompasses the soil geochemistry and high definition magnetometry proposed follow-up intended to support Phase 2 air-core and RC drilling.

The recommended work aims to determine whether the Copeçal Project should be advanced to the Diamond drilling stage to establish inferred and indicated resources.

The area encompassed by the recommended program was distributed in six different sectors according to the ranking criteria discussed in Section 9 of the report. The resulting structural axis targets are shown in map B, Figure 9.9.



The estimated amount of soil samples, magnetometry and drilling is shown in Table 1.1

Table 1.1 Distribution of the recommended exploration work and respective quantitative

Recommended Exploration Program										
Activity	Soil Geochemistry Follow-up							Drone Magnetometry	Air Core Drilling	RC Drilling
Phase	Type of follow-up	Grid Pattern (meters between lines x meters between pickets)	Grid Sector	Shear Structure	Estimated Area (ha)	Estimated Line Cutting (m)	Estimated Samples (including 2% field duplicates)	Estimated Area (ha)	m	m
I	Infill	100x40	1	Y and R and X'	391	39,000	980	2424		
	Stepout & infill	200x40	2	R	500	10,000	250			
	Stepout & replicate	100x40	3	X'	200	20,000	500			
	Stepout & infill	200x40	4	Y and T	467	23,500	585			
	Stepout & infill	200x40	5	R and T	542	27,100	680			
	Infill	200x40	6	T	138	6,900	172			
	Phase I Sub-total				2,238	126,500	3,167	2,424		
II									10 holes @ 50 m	6 holes @ 80 m
								Phase II Sub-total	500	500

A total of CDN\$772,000 of exploration spendings is estimated to carry out Phases 1 and 2.

A Breakdown of the costs per activity, is shown in Table 26.2.

### PHASE 1 - SOIL GEOCHEMISTRY & UAV MAGNETOMETRY FOLLOW-UP

The Author recommends to scale-up the activities during Phase 1.

#### Sector 1

The Author recommends to begin the proposed soil geochemistry follow-up, by infilling Sector 1 encompassing the SW target and adjacent soil anomalies from 200 x 40 m to 100 x 40 grid pattern and then proceed to Sectors 2 and 3.

Once the area relative to the SW target is completed, the Author recommends to launch the drone magnetometry survey, giving priority to Sectors 1 and 2 so the preliminary magnetometry outputs can be used to eventually modify the outlines of the proposed soil sampling program or redirect it to other sectors.

Provided the on-going soil follow-up on Sector 1 returns satisfactory results, the required land access and environment licensing should begin to ensure the Phase 2 Air core / trenching programs are not jeopardized.

### PHASE 2 - AIR CORE & RC DRILLING

The end of Phase 1 represents a milestone. Contingent to the results obtained from the exploration work carried out during Phase 1 and, the identification of robust enough target(s) to justify Phase 2, the geological frame must be updated and the interpreted geological frame-work revised according to the geochemistry, the ground magnetometry outputs and the observations made by the project geologist.

Phase 2 work program should then be adjusted accordingly.

If justified, the Author recommends to plan and drill 500 m of shallow Air core drilling along the best soil results intervals. Considering the primary rain forest covering Sectors 1, 2 and 3, some well contained trenching and further re-habilitation may be an alternative to Air core drilling. In any case, opening an access through the jungle require the obtention of a license from the municipality of Alta Floresta. It is important to be reminded that such licensing must be filed by the land title holder.

In the same manner, contingent to Phase 1 results and the revised geological frame work, the Sectors 4, 5 and 6 should be infilled down to a maximum of 200 x 40 m grid pattern and, if required, to 100 x 40 m.

## **OTHER RECOMMENDATIONS**

### **Structural and geological field mapping**

Along with the soil geochemistry follow-up, it is important to proceed with systematic structural, and geological mapping along with rock chip sampling. The geological and structural mapping cannot be restricted to the grid coverage. It must encompass the areas between the grid lines and extend to the vicinities of the Property.

### **Standard Operating Procedures (SOP)**

The Author recommends to prepare the SOPs according to the envisaged exploration activities and adjusted to the technical and organization specifics of the Copeçal Property.

Once defined and hired, the field personnel should go through an introductory training period to get familiar with the Standard Operating Procedure protocols to ensure the exploration activities and associated sample and data are collected and captured in compliance to NI 43-101 standards.

### **Data Consolidation**

The first phase must be accompanied by a full compilation and analysis of the large amount of geochemistry and structural data available in the CPRM reports and other available papers.

There is still valuable information in AngloGold soil and auger drill logs and reports, in addition to the ICP multi elements to be plotted and overlaid to the frame-work.

Regional, high resolution airborne magnetometry and spectrometry (and radar images if possible) should be acquired, carefully analyzed and integrated to the other sources of information.

It is quite easy to spot unusual features such as fresh rock outcrops, suspect excavations, washed creek bed streams through careful observation of the Google Earth satellite images. Observations already made by the Author are available in digital format.

### **Important note:**

In parallel to the preparation of this report, Avant has integrated the data sourced from AngloGold Exploration Reports, the regional airborne magnetometry available from CPRM and the processed outputs of the drone magnetometry survey carried out in June 2023.

Unfortunately, at the time the resulting maps and presentations were made available to the Author most of the maps and other figures composing the report were too advanced to incorporate Avant's integration to the tectonic/structural data gathered during the preparation of the report.

The Author has not identified any fundamental or contradictory elements between Avant's geological frame work resulting from the integration with the framework presented here-in.

The integration of both compilations would certainly bring additional components to the understanding of the Copeçal Property mineralization settings and consequently be of great benefit to fine tune the proposed exploration program.

## 2. INTRODUCTION

### INTRODUCTION

The Copeçal Project is located in northern Mato Grosso State, mid-western Brazil. It is constituted by two Mineral Exploration Permits totaling an area of 3,681.76 hectares. The applications were filed in 2021 under Public Offer ref. 14/17, published in the official gazette on January 19, 2017. The Exploration Permits were granted in January 30, 2024 to Ouro Subco, a wholly owned subsidiary of GoldHaven, a Canadian private corporation, duly incorporated under the laws of British Columbia, Canada.

### TERM OF REFERENCE

The purpose of this Technical Report is to support the disclosure of the Geological Context and Exploration Thesis relative to the Property located in the Juruena – Teles Pires Mineral Province, Northern Mato Grosso, in mid-west Brazil

### CONTRIBUTORS

The Qualified Person responsible to prepare and sign off for this report is Jean-Marc Lopez, FAusIMM, owner and Principal Consulting Geologist of JML, who visited the Property in June 2023. The author has extensive experience with gold exploration and development in geological settings that characterize the Alta Floresta Gold Province, thus attending to the requirement of relevant experience and professional affiliation to act as Qualified Person for the preparation of this Technical Report.

The author is a Registered Professional Engineer in Brazil (CREA-MG #50058/D) and a Registered Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM).

The Author is an independent qualified person (“QP”) as defined by NI43-101.

### SOURCES OF INFORMATION

The preparation of this Technical Report and resulting conclusions or opinions contained herein are based on the geological knowledge of the Juruena Mineral Province the Author acquired during a one year long field campaign carried out as a consultant in 2001/2002, that consisted in a reconnaissance program of selected remote sensing targets. The field work conducted by the Author resulted in the discovery of the X1 gold deposit.

A vast content of geological, airborne geophysics, remote sensing and geochemistry data publicly available was gathered during the preparation of the Technical Report to complete the technical information made available by Boa to the author. Such information was transferred in successive periods of time as described below;

- **Early June 2013** - Digital Plot maps (pdf and kml) of the Mineral Rights, and the most relevant information selected from the data generated by AngloGold, reported in two Exploration Reports filed the ANM (*Relatório Parcial e Final de Pesquisa*) being: the grid soil Au contours identifying the SW and NE Anomalies, the 56 hectares ground magnetometry survey (Total Count), the location of the surveyed IP lines and a draft version of the local geological map (see maps in Figure 3.1);
- **Mid-June 2023** - The information gathered during the 3 days field visit to the Copeçal Property;
- **Early to mid-July 2023** - The digital version of most of the data contained in AngloGold exploration reports filed at the ANM in 2013 and 2016 relative to the samples that resulted from the rock chips, soil, Auger and Air core drilling campaigns were made available to the Author in (Excel/csv spreadsheet) to the exception of the stream sediment samples, extracted from AngloGold maps. The bulk of the information includes UTM coordinates (SAD 69), the description of the samples, and multi-element assay results. The Air core drill hole data is limited to the header information and gold assay results. Neither the logs or digitized description

- were identified in the reports. The information relative to the magnetometry and IP surveys was given to Avant Geofísica to generate, when possible, digitized plots to be used in the report.
- **Early September 2023** - Avant Geofísica report resulting from the data acquired in June 2023 including the magnetometry readings raw data and a full range of processed data destined to support the comprehension of the integration of AngloGold digitized information.
- **Early October 2023** - The complete final compilation of AngloGold data and a video of the comprehensive interpretation of the geological framework that resulted from the integration of the drone mag survey, the soil multi-element geochemistry, the distribution of the lithologies identified by AngloGold geologists and the airborne regional magnetometry. The data compilation made by Avant's team could not be integrated with the regional information gathered by the author due to the advanced stage of the report's preparation.
- **Mid-March 2024** - The technical information relative to the execution of two diamond drill holes (a total of 107 m) executed by Boa in February / March 2022 aimed to test AngloGold Air core results at the NE Anomaly.

The bibliography consulted during the preparation of this report is listed in Section 27 - REFERENCES.

To the best knowledge of the Author there are no previous technical reports on the Copeçal Property.

### SITE VISIT AND SCOPE OF PERSONAL INSPECTION

The Author of this Technical Report spent 3 days visiting the Copeçal Property from June 15 to June 17, 2023. During the three days visit, focus was given to:

- Access, as much as possible the areas contained inside the mineral rights boundaries aiming to identify and describe the geological units and settings susceptible to host gold mineralization associated to the geochemistry anomalies and the structural mapping elements reported by previous exploration programs;
- Confirm the execution of the engaged magnetometry survey, by *Avant Geofísica*, the geophysics services contractor retained by Boa to perform an UAV (drone) high resolution magnetometry and topography survey and;
- Confirm land access status and identify the existence of any potential risks to future exploration activities or fatal flows that could affect the installation of an industrial scale mining operation.

During the preparation of this report, the Author held discussions with management of GoldHaven.

The maps in Figure 2.1 shows the distribution of the visited areas plotted on the maps employed at the time of the visit,

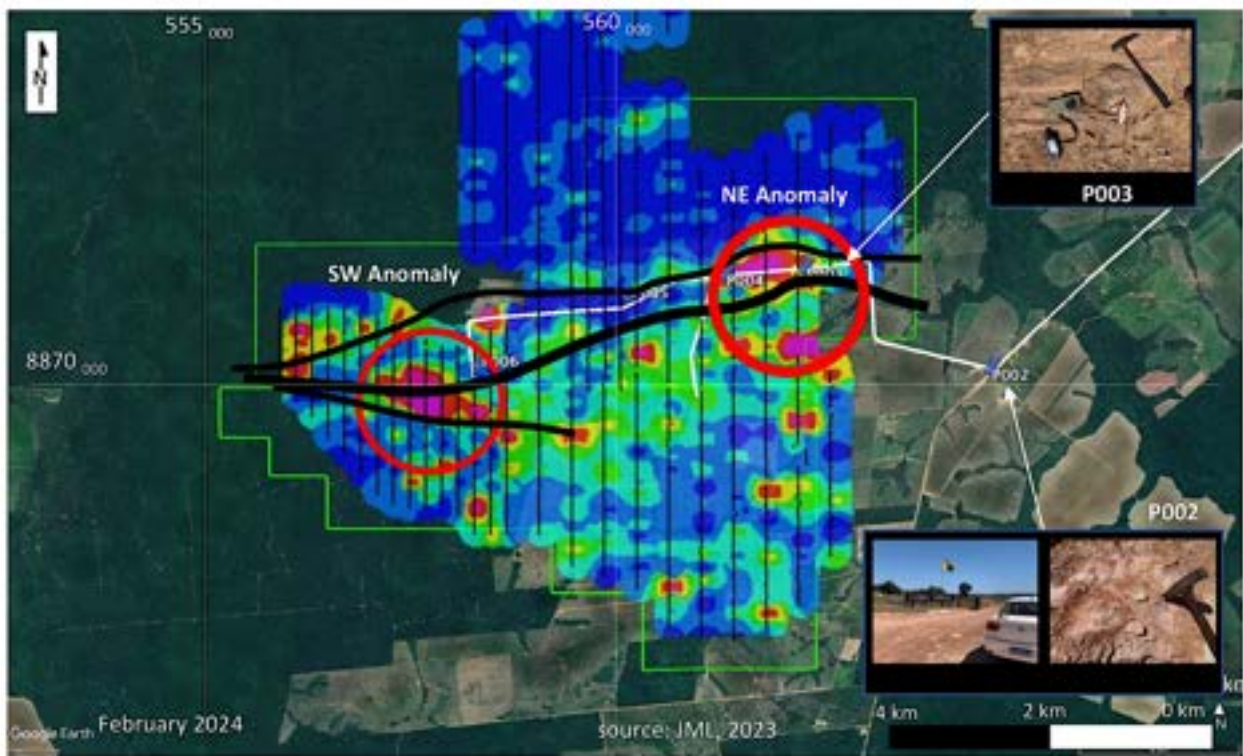
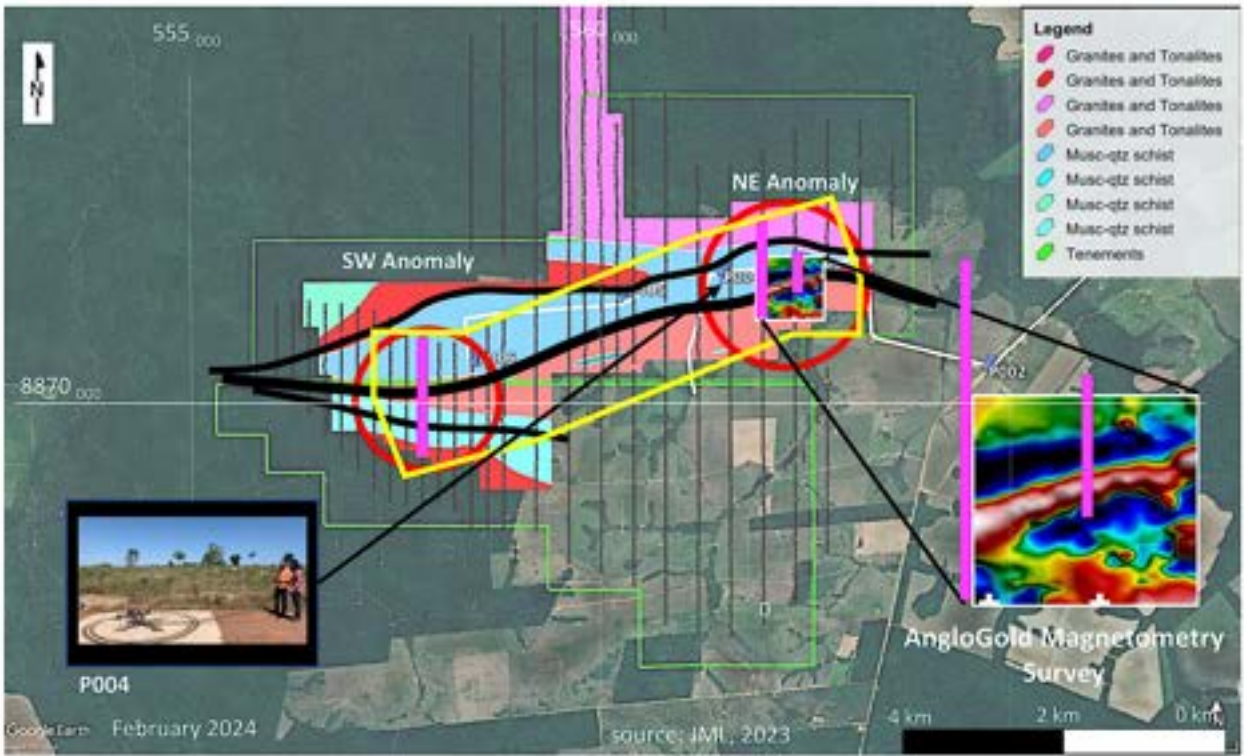


Figure 2.1 Location of the points visited in the maps employed by the Author to conduct the field visit in June 2023

### 3. RELIANCE ON OTHER EXPERTS

This Report has been prepared by Jean-Marc Lopez, B.sc., FAusIMM for GoldHaven Resources Corp. The information, conclusions, opinions, and estimates contained herein are based on assumptions, conditions, and qualifications set forth in this Report.

For the purpose of this Report, the Author has relied upon registered title information made publicly available by the ANM. This Report does not constitute, nor is it intended to represent a legal, or any other opinion as to title.

The information, conclusions, and recommendations contained in this Report are consistent with the data and information available at the time of preparation, and the assumptions, conditions, and qualifications set forth in this Report.

The Author has no reason to believe that the information used in the preparation of this report is false or purposefully misleading and has relied on the accuracy and integrity of the data referenced in Section 27 (References) of this Report.

As of the date of this Report, the Author is not aware of any material fact or material change with respect to the subject matter of this Report, in its entirety, that is not presented herein, or which the omission to disclose could make this Report misleading.

## 4. PROPERTY DESCRIPTION AND LOCATION

### PROPERTY DESCRIPTION

The Copeçal Project is embedded in the mid-south portion of the Juruena Province, that encompasses, at its Eastern end, the Alta Floresta Gold Province ("AFGP"). Together with the Tapajós Mineral Province to the North, the AFGP is one of the major gold producing regions in Brazil since the late 70's.

The Juruena Province lies in the south-west portion of the Amazon craton, mostly constituted by plutono-volcanic sequences, generated during the Paleoproterozoic emplacement of the Juruena continental magmatic arc.

Ouro Subco was retained under the protocols of a public offer presented by the ANM and authorized to claim the Copeçal gold property mineral rights by filing the Exploration Permit Applications identified under processes 866.779/2021 and 866.782/2021.

The Exploration Permits (*Alvará de Pesquisa*) were granted in January 2024 to Ouro Subco, valid for a 3 years term. The Exploration Permits can be extended for another two- or three-years additional term at the ANM sole discretion, upon the submittal of a Partial Exploration Report (*Relatório Parcial de Pesquisa*) justifying the needs to extend the exploration activities.

The Exploration Permits, identified by 1162/2024 and 1163/2024, covers an area of 3,681 ha. Both tenements are situated in the Alta Floresta municipality authority, in the State of Mato Grosso. The Project area lies approximately at 600 km north of the city of Cuiabá, the State Capital.

The Copeçal Property covers an area of 3,681 hectares and is situated near the towns of Alta Floresta and Colider, State of Mato Grosso, in mid-western Brazil. The Project is located at 10°13'03.9" latitude and 56°27'24.3" longitude within the administrative authority of Alta Floresta, approximately 60 km southwest of this same town. The Project area lies approximately at 600 km north of the city of Cuiabá, the state capital. Figure 4.1 shows the Copeçal Project location and main land access.

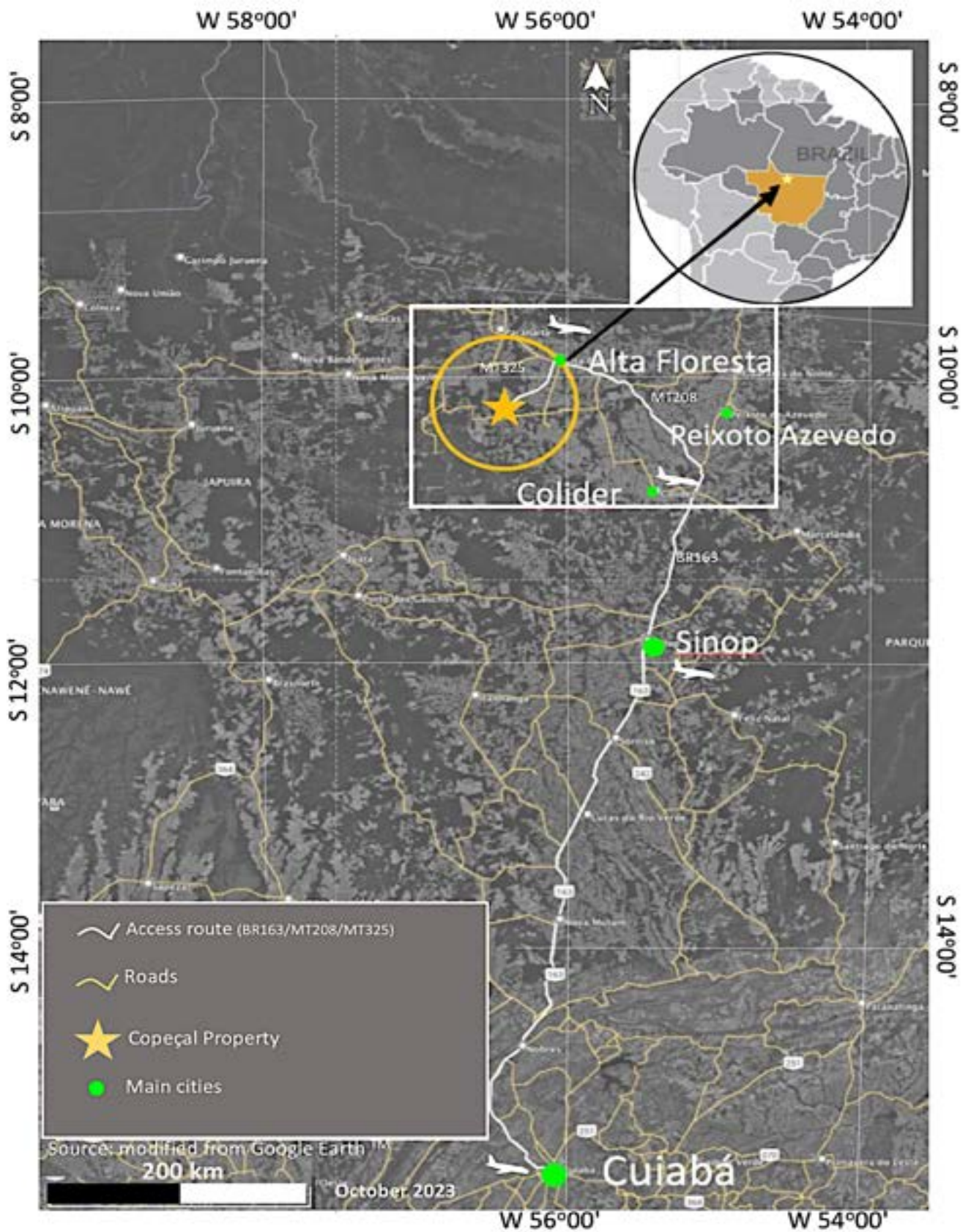


Figure 4.1 Regional scale location map of the Copeçal Property



## PROPERTY MINERAL RIGHTS

The Property mineral titles consist of two Exploration Permits identified by the titles number 1162/2024 and 1163/2024, and respective ANM process numbers 866.779/2021 and 866.782/2021, totaling 3,681.76 hectares (see details in Table 4.1). According to Boa and the consultation made to the ANM web service, (*Sistema de Informações Geográficas da Mineração - SIGMINE*), the Exploration Permits claimed in June 16, 2021 under the ANM proceedings provided by the Public Offer ref. 14/17 were granted to Ouro Subco in January 30, 2024. The Exploration Permits are active and valid up to February 01, 2027 (3 years regular term).

At the ANM sole discretion the Exploration Permits can be extended for another two- or three-years additional term, upon the submittal of a Partial Exploration Report (*Relatório Parcial de Pesquisa*) justifying the needs to extend the exploration works.

GoldHaven, through GoldHaven Subco and Ouro Subco subsidiaries holds and controls 100% of the Mineral Rights that constitute the Copeçal Property.

The tenements ANM identification, surface and validity milestones are shown in Table 4.1.

The map in Figure 4.1 shows the Copeçal Exploration Permits and neighboring tenements. The status of the tenements is identified by the colors indicated in the legend.

## DESCRIPTION OF MINERAL RIGHTS SUMMARIZED PROTOCOLS IN BRAZIL

Table 4.1 Copeçal Project - Status of the Mineral Rights as of February 07, 2024

Exploration Permit Application (ANM Process ID)	Surface (ha)	Date Application	Exploration Permit ID	Date Granted	Date Expiration
866.779/2021	2060.84	June 16, 2021	1162/2024	30/01/24	01/02/27
866.782/2021	1620.92	June 16, 2021	1163/2024	30/01/24	01/02/27
<b>Total Surface (ha)</b>	<b>3681.76</b>				

The Brazilian mining laws and concession ownership are regulated in Brazil by the ANM. In Brazil, all mineral ownership belongs to the Federal Republic of Brazil and ruled by the Secretary of Mines and Energy (*Ministério das Minas e Energia*) who define the standard protocols and applications for all aspects of exploration and mining activities under the current civil code.

Applications for an Exploration Permit are made to the ANM and are available to any company incorporated under Brazilian law or Brazilian national. Exploration Permits are applied by filling an Exploration Permit Application (*Requerimento de Pesquisa*). This application must include an exploration program with the planned exploration activities and associated budget to be undertaken.

Upon the analysis and approval of the Exploration Permit Application by the ANM, the Exploration Permit is granted to the applicant and made public by publishing in the official gazette ("**Diário Oficial da União - DOU**"). Committed values to carry out the exploration program must be submitted annually. Exploration field activities are only allowed after the Exploration Permit has been granted and formally communicated to the ANM.

Exploration Permits are valid for three years, with a maximum extension of two or three years, issued at the discretion of the ANM upon the submittal and approval of the Partial Exploration Report (*Relatório Parcial de Pesquisa*).

An annual fee per hectare (Taxa Anual por Hectare – TAH), currently stipulated at BRL\$4.56/hectare for the 3 years nominal Exploration Permit and BRL\$6.78/hectare for the period of time eventually extended. The annual payment deadline is determined by the date the Permit was published in the DOU. Annual fees of Permits or granted extensions published between the 1<sup>st</sup> of January up to the 30<sup>st</sup> of June must be paid until the last work day of July. Permits or granted extension's annual fees published between the 1<sup>st</sup> of July up to the 31<sup>st</sup> of December must be paid until the last work day of January.

Before the expiration of the Exploration Permit, the title holder must submit a Final Exploration Report (*Relatório Final de Pesquisa*) informing the outputs of the exploration program. As such, the title holder can either return the title to the ANM or file an application for a Mining Permit, supported by a *Plano de Aproveitamento Econômico – PAE*, the equivalent to a pre-feasibility Study.

Mining concessions are granted by the Brazilian Secretary of Mines and Energy. The concessions are automatically renewable annually, and have no set expiry date as long as the concessions remain in good standing.

The title holder is subject to the submission of annual production reports and the payments of royalties to the federal government.

## PROPERTY LAND TENURE

Third party land access to mineral rights titles in good standing is guaranteed by federal law. Damages caused by exploration field work must be compensated, preferentially through an agreement between land owner and the Company. Provided, no agreement with the land owner is reached, the ANM will designate an officer to establish the compensations to be applied.

The Copeçal Property total area (3,681 ha) partially steps into two rural properties. According to Boa, only one of the land properties, the Copeçal cattle ranch, is overlaid by the exploration activities undertaken in 2023. A formal agreement was put in place to allow free access to the land to conduct the exploration work.

## ENVIRONMENTAL LIABILITIES AND PERMITTING

Early-stage exploration activities such as geological mapping / reconnaissance, rock, soil sampling, topographic and geophysics surveying are not required to be licensed with the municipality and/or state environment agencies.

However drilling and shallow excavations such as trenching must be duly licensed to obtain the required environmental permitting with the Alta Floresta authorities, a process usually simple, except if deforestation is required.

The exploration activities developed so far by former title holder had very little impact to the environment and those made by Ouro Subco had no impact to the environment, therefore, no past environmental liabilities are expected to affect the Copeçal Property.

Consultation for the presence and /or proximities of restricted areas associated to federal, state and municipality environment zonation, and/or autochthone reservations were carried out by the author using the available public domains. The Author did not identify any environmental or autochthone restricted zonation that could restrict the access or any envisaged mining operation on the Property and its vicinities. The map in Figure 4.2 shows the distribution of the nearest exclusion zones.

Based on the site visit, the conversations held with Boa's technical staff, and consultations with available public domains, the QP has not identified and is not aware of any sort of any significant risks that may affect access, title, or the right and ability to perform the proposed exploration work program on the Copeçal Property.



Figure 4.2 The nearest exclusion zone (a rural settlement) lies 30 km away from the Copeçal Mineral Rights

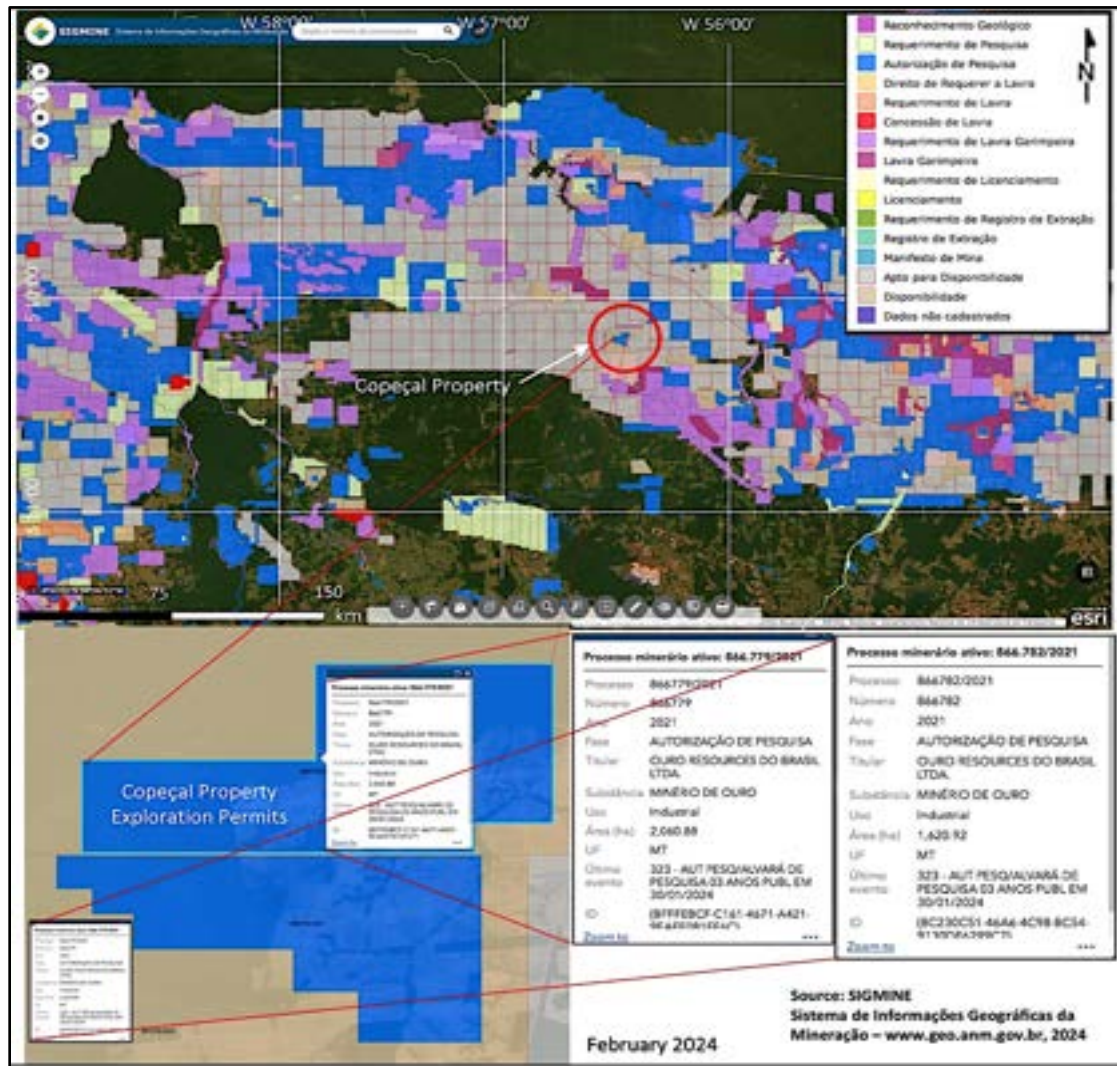


Figure 4.3 Copeçal Property regional tenure map as of February 2024

## AGREEMENTS, ROYALTIES, AND ENCUMBRANCES

Boa, incorporated under the laws of British Columbia, Canada currently has one wholly owned subsidiary, Boa Subco, incorporated under the laws of the Province of Ontario, Canada.

Ouro Subco is a company wholly owned by Boa Subco, incorporated under the laws of Brazil.

Boa holds 100% of the Explorations Permits through its wholly owned subsidiary Ouro Subco based in Belo Horizonte, state of Minas Gerais-Brazil, enrolled with the registration number (CNPJ) 31.874.305/0001-56 and administered in Brazil by Boa Director, Mr. Rafael Viola Mottin.

### **Acquisition Agreement between Boa and GoldHaven**

On December 16, 2024, GoldHaven entered into an amalgamation agreement with Boa and GoldHaven Subco, a wholly owned subsidiary of GoldHaven incorporated under the laws of British Columbia. If the proposed Transaction is completed, GoldHaven will acquire all of the issued and outstanding common shares of Boa by way of a three-cornered amalgamation whereby GoldHaven Subco and Boa will amalgamate pursuant to the provisions of the *Business Corporations Act* (British Columbia) to form Amalco. Upon completion of the Transaction, Amalco would become a wholly-owned subsidiary of GoldHaven and GoldHaven would indirectly (through its wholly owned subsidiaries Amalco, Boa Subco, and Ouro Subco) own a 100% interest in the Exploration Permits that constitute the Copeçal Property.

## 5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### ACCESSIBILITY

The nearest town to the Copeçal Property is Alta Floresta. It is served by daily commercial airway services with direct connections to the major cities in the south-east of Brazil. Regular commercial flights are also available in the city of Sinop which is approximately 315 kilometers from Alta Floresta.

The national network paved highway BR-163 crosses the region from the South to the North linking Cuiabá city, the Mato Grosso state capital, to the port of Santarém, a major pole in the Pará State for the exportation of grains and livestock. Direct land access distance from Cuiabá to the Copeçal Project is 825 km (see Figure 5.2).

From Alta Floresta to the Copeçal Project access is made by a secondary road (MT-325). Approximately half of the 60 km distance to reach the Property is paved, the second half is constituted by a wide, all weather dirt road (see photo in Figure 5.1).

Both the national and state highway grids are kept in relatively good conditions to support the large outflow of grain and cattle production, the major economic engines in the region. Access to the Copeçal Property can be made year-round, including the rainy season.



Figure 5.1 The MT-325 unpaved year-round road and Copeçal cattle ranch access gate

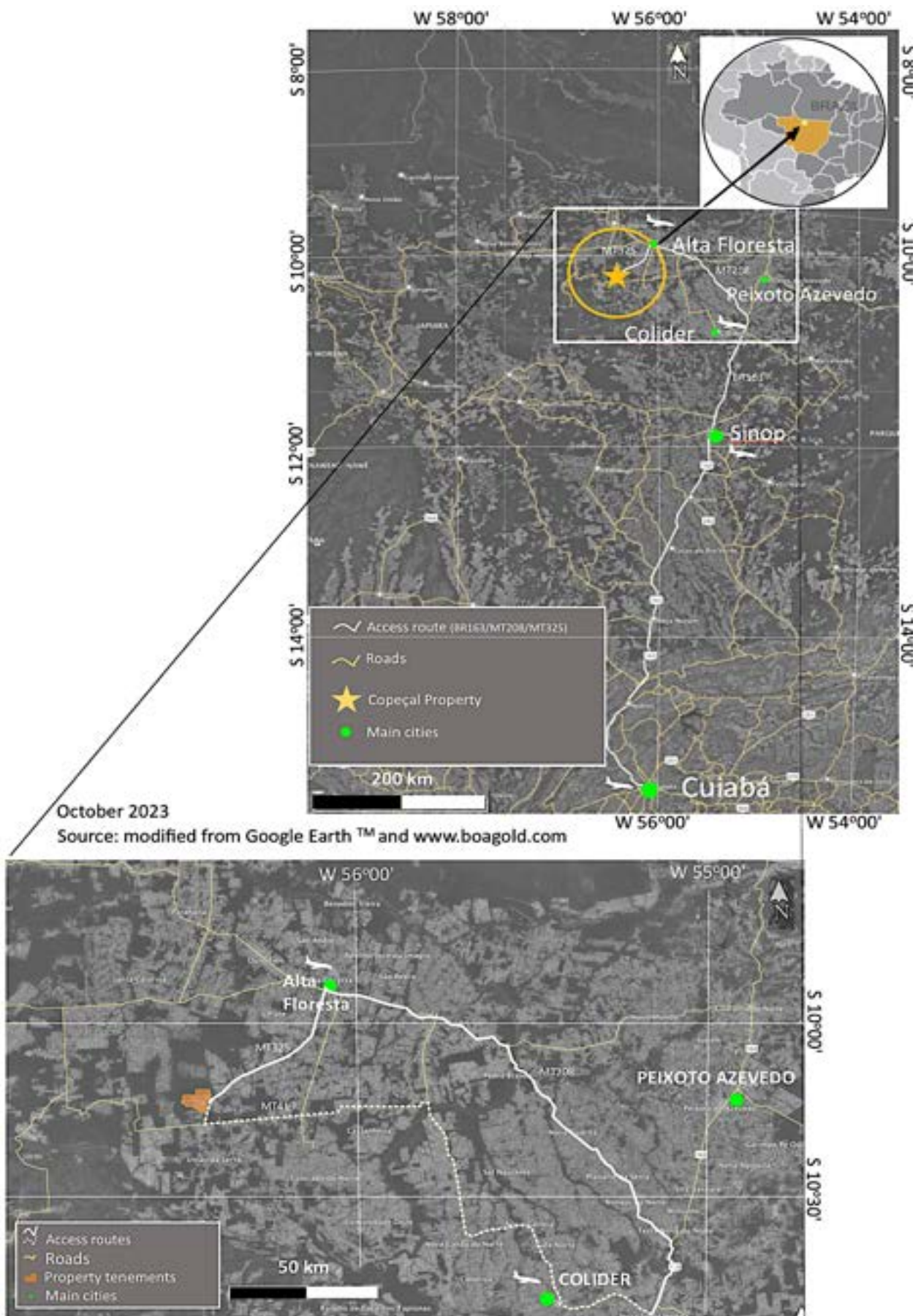


Figure 5.2 Location and land access to the Copeçal Property

## CLIMATE AND PHYSIOGRAPHY

Due to the last few decades of massive deforestation of the Amazonian rain forest in the region, the typical Continental Equatorial Climate has been transitioning to a Continental Tropical Climate regime.

According to Climate-Data.org, average annual rainfall is approximately 2,225 mm, with two well defined seasonal periods: a wet season from September to April, and a dry one from May to August. Occasional rainfall occurs within these periods. July is the driest month in the year, when rainfall can reach as little as 8 mm monthly average. Most of the rainfall is recorded in February, with an average of 370 mm.

Based on the Municipality of Alta Floresta data (2022), the average annual temperature is 24°C, ranging from 40°C maximum and a minimum of 4°C.

The Copeçal Project area relief is characterized by a flat to gentle rolling hills, with elevation ranging from 270 m to 340 m above sea level. The relief is dissected by narrow creeks flowing down to the Teles Pires river to the north, the main water distributary in the vicinities of the Copeçal Project and one of the major contributors of the São Manoel hydroelectric power dam.

Original vegetation is typical of the Amazonian rain forest, which is still well preserved in some isolated locations. In the Alta Floresta region, a vast area of the primary forest has been replaced by cattle grazing and crop plantation areas, with soybean crops standing out and occupying new areas (see photo in Figure 5.3). Secondary vegetation has been formed in the area landscape, represented by bushes and undergrowth.



Figure 5.3 3D aerial tilted view of the Copeçal mineral rights boundaries.

## LOCAL RESOURCES AND INFRASTRUCTURE

Based on the latest census (IBGE, 2020), Sinop is the most populated town in the region with approximately 150,000 habitants, Alta Floresta is the second largest town with 52,000 habitants and Colider comes in third place with approximately 34,000 habitants (see photos in Figure 5.4).

The economy in the region rely on soybean, corn farming and livestock activity. Forestry and dairy agriculture have declined overtime during the last 10 years. This is one of the fastest growing economic regions in the country mainly because of the export-oriented agribusiness, livestock and the income resulting from deforested areas.

The towns of Alta Floresta, Sinop and Colider are served with good standards college institutions. Both the high schools and the universities focus is to provide the demand generated by agriculture and livestock business.



Figure 5.4 View of Alta Floresta (bottom) and Sinop cities (top)



The artisanal mining activity is still active in the region. It currently represents a small foot print in the local economy and can't be compared to the gold rush that took place in the 1980s when Alta Floresta's population reached 140,000 inhabitants.

Nonetheless, the presence of many mining hardware stores in the main cities, attests the amplitude of the artisanal gold extraction in the Alta Floresta Gold Province.

Exploration and mining related professionals are usually sourced from Cuiabá or from other states of the federation.

Public and private hospitals are available in all three more populated cities in the region, Alta Floresta, Sinop and Colider.

The Alta Floresta region is well supplied in electric power. High tension powerlines integrate the São Manoel hydroelectric powerplant to the national electric grid through the south-eastern powerlines system as shown in Figure 5.5.

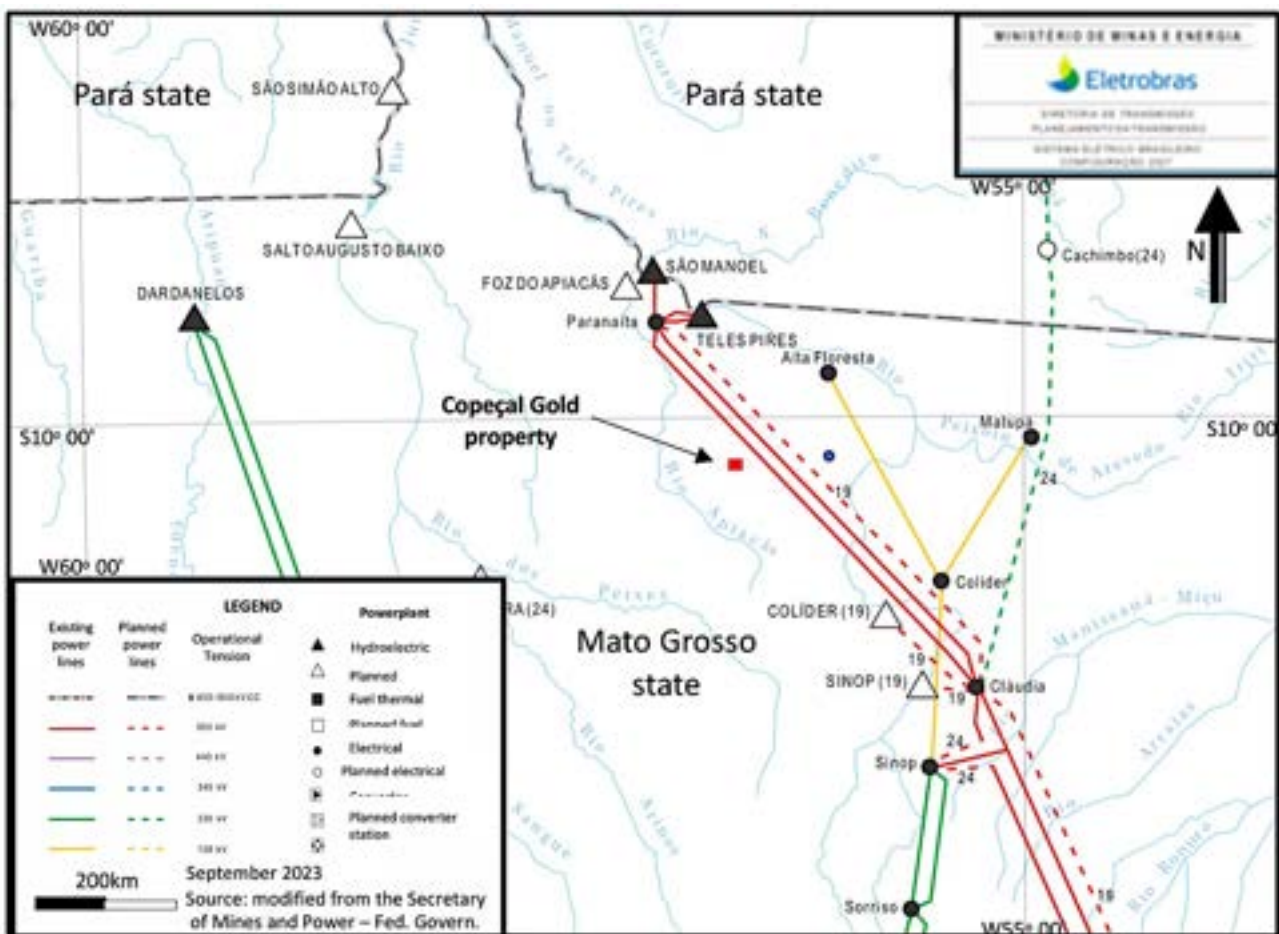


Figure 5.5 Distribution of the powerplants and transmission lines in the region of Alta Floresta - MT

## 6. HISTORY

### HISTORY PRIOR TO 2010

#### ARTISANAL MINING (*GARIMPO*) ACTIVITIES

Early mining activities in the vicinity of the Copeçal Property are characterized by considerable amounts of secondary gold production extracted from the major rivers, drainage and terraces.

The satellite image in Figure 6.1 was taken in 1989 during the apex of the *garimpeiro* activities. The light-colored yellow stream stretches circulated by dot lines, indicate where the extraction of the alluvial and colluvial material took place.

#### CPRM REGIONAL GEOCHEMISTRY

Data gathered to produce this Technical Report included the CPRM province-wide stream sediment and heavy mineral concentrate (HMC) surveys conducted between 1998 and 2002 (SOUZA, J. 2004), covering 72,000 square kilometers of the Juruena Province. A total of 1,224 stream sediment samples were analyzed and 1153 heavy mineral concentrates panned and described for gold, sulfides, epidote, rutile, and tourmaline counts among other minerals. The boundaries of the CPRM geochemistry program are shown in the Juruena simplified geological map in Figure 6.2.

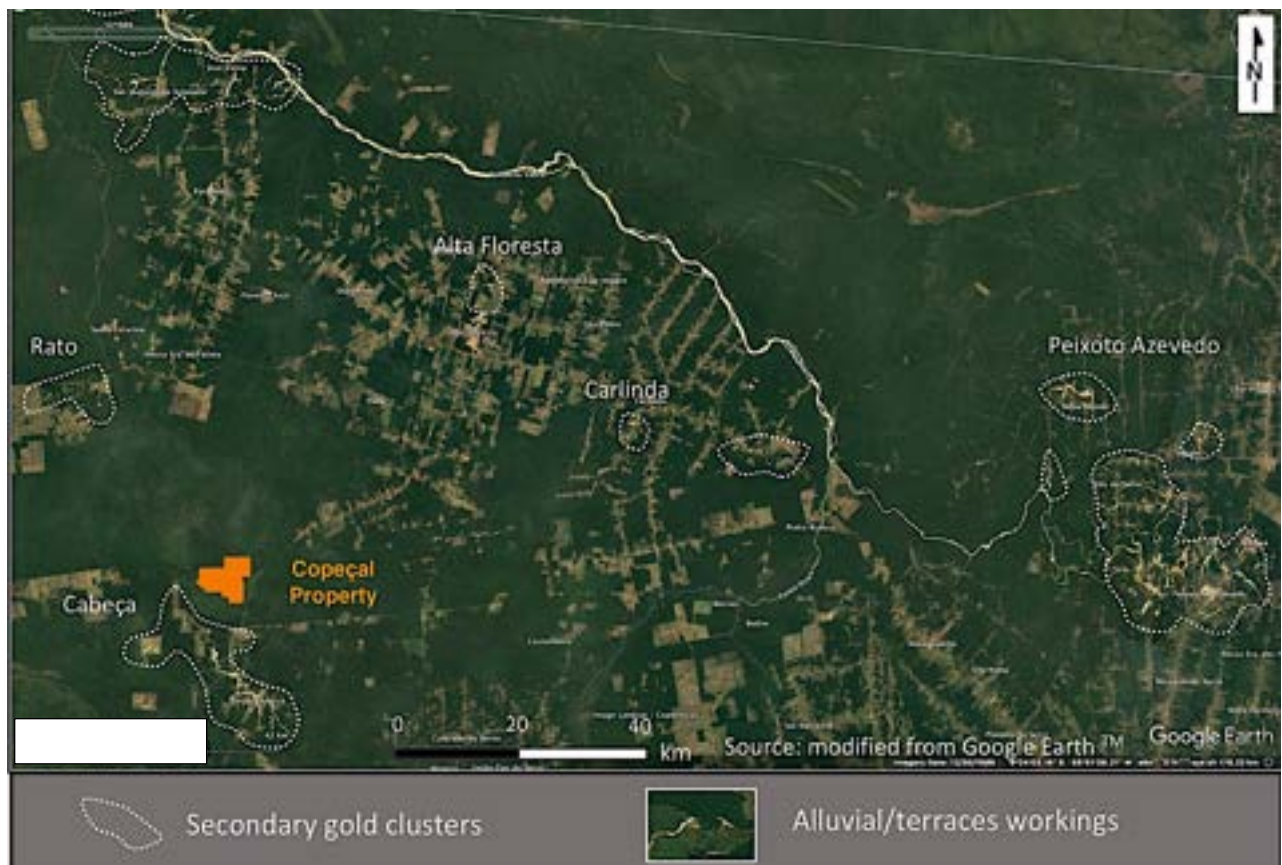


Figure 6.1 Extents of the Juruena Gold Province secondary (alluvial) workings in 1989

The geochemistry program carried out by CPRM identified gold and arsenic anomalous values in stream sediment samples encompassed in tenements 866.074/2010 and 867.311/2010.

It also reported the presence of monazite and abundant tourmaline counts in five HMC samples, one sample sourced from streams situated inside the Property, and four samples in streams bordering the immediate vicinities of the Copeçal Property.

The presence of tourmaline associated to the local Copeçal soil anomaly may indicates the presence of sulfide rich Banded Iron Formation associated to the sedimentary facies of the Bacari-Mogno Complex, one of the lithologies identified in the Property.

It may also characterize the presence of gold mineralization originated from magmatic source.

Either way it should be investigated in future exploration activities.

The gold and arsenic stream sediment results and gold counts are shown in Figure 6.3. The contouring shown in Figure 6.4 refers to the dispersion of lithium assays resulting from stream sediment samples, while the yellow and red dots correspond to the distribution of tourmaline fragments counts ( $6 < x < 10$  and  $x > 10$  respectively).

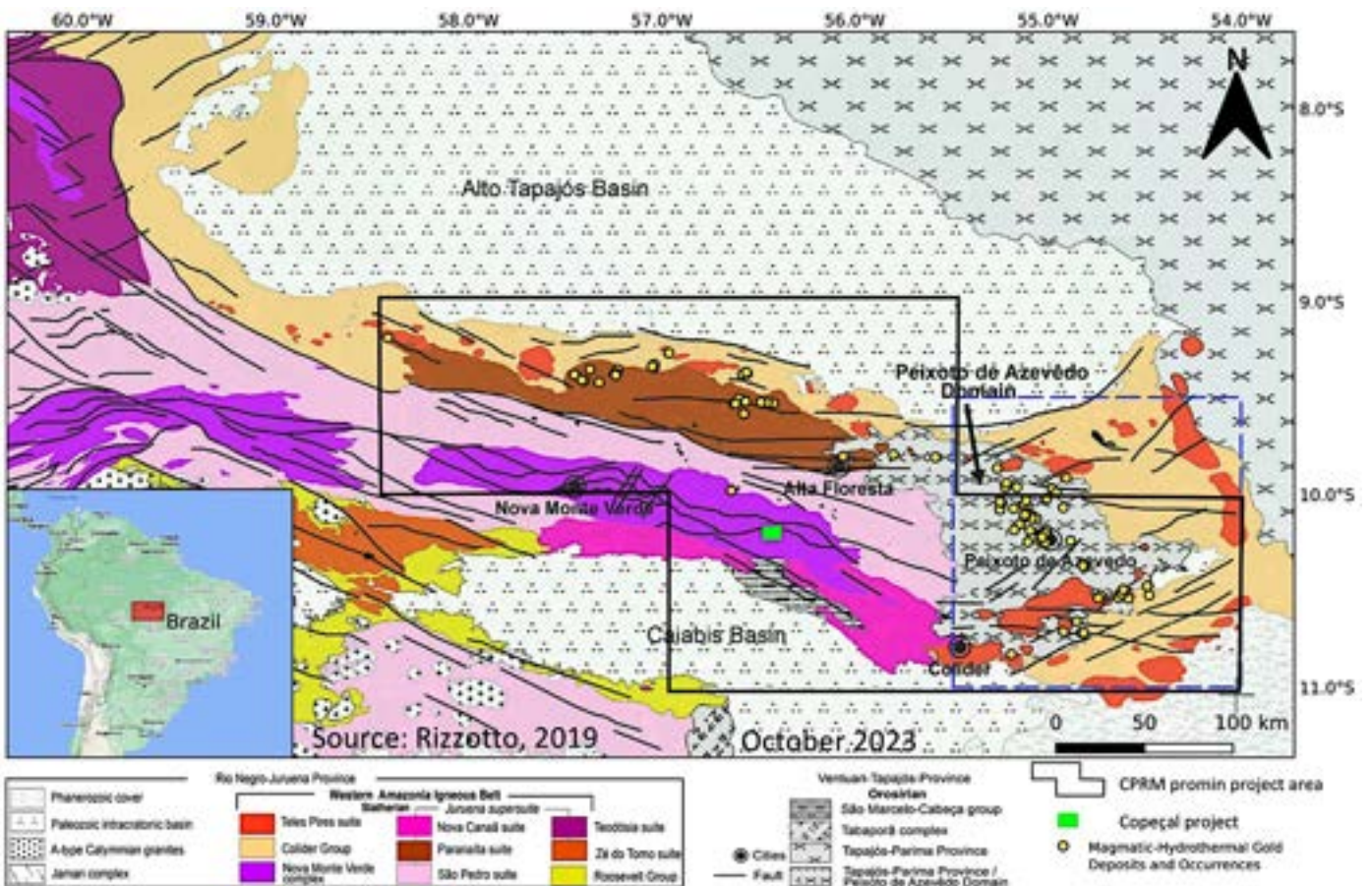


Figure 6.2 The Juruena Gold Province simplified geological map and boundaries of the CPRM Promin survey polygon

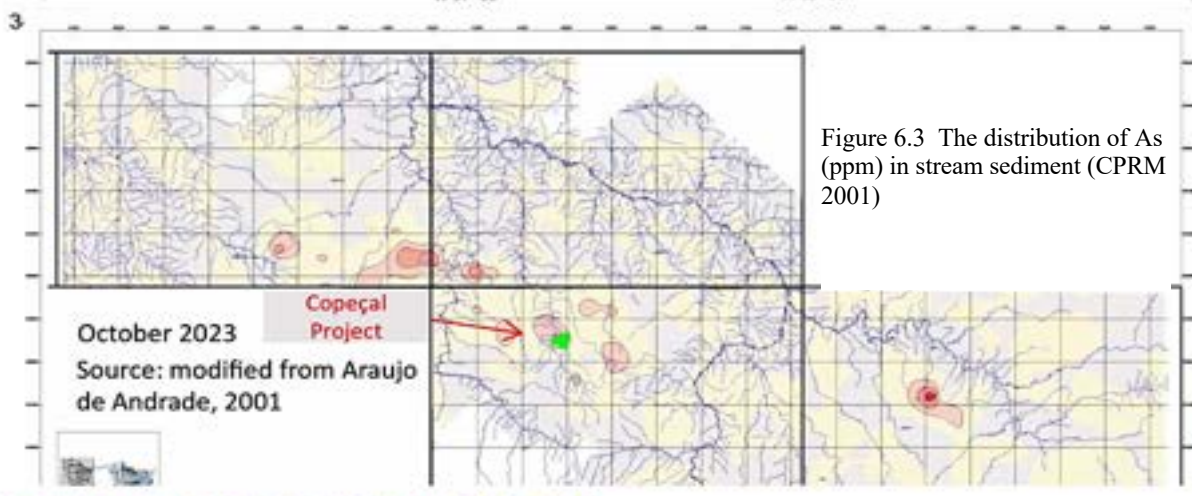
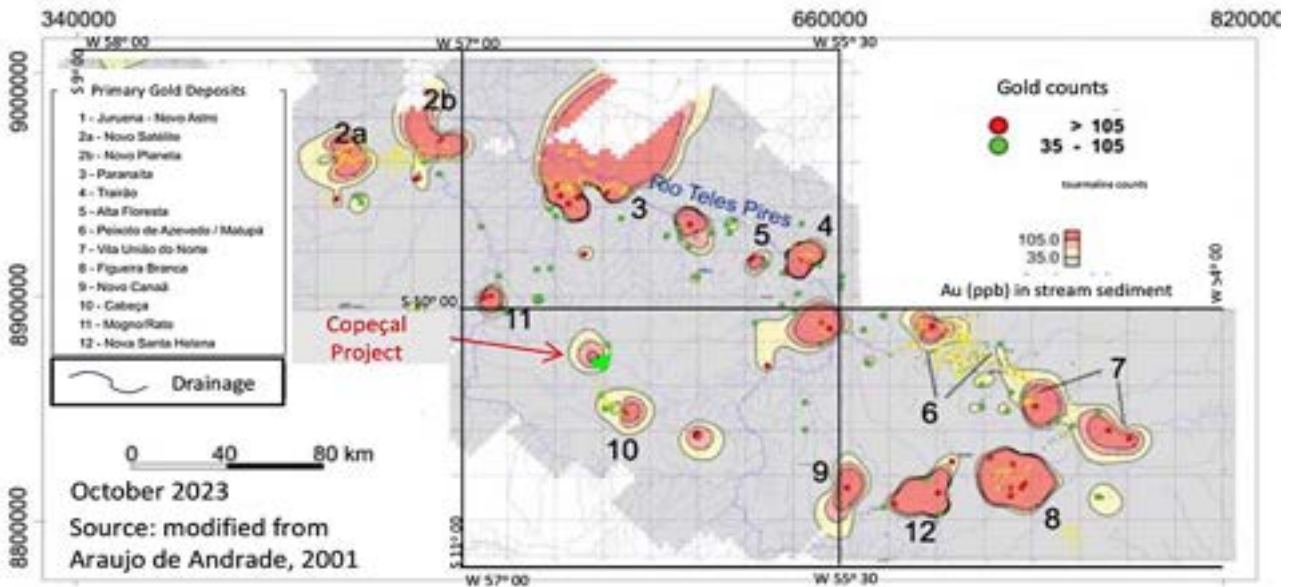


Figure 6.3 The distribution of As (ppm) in stream sediment (CPRM 2001)

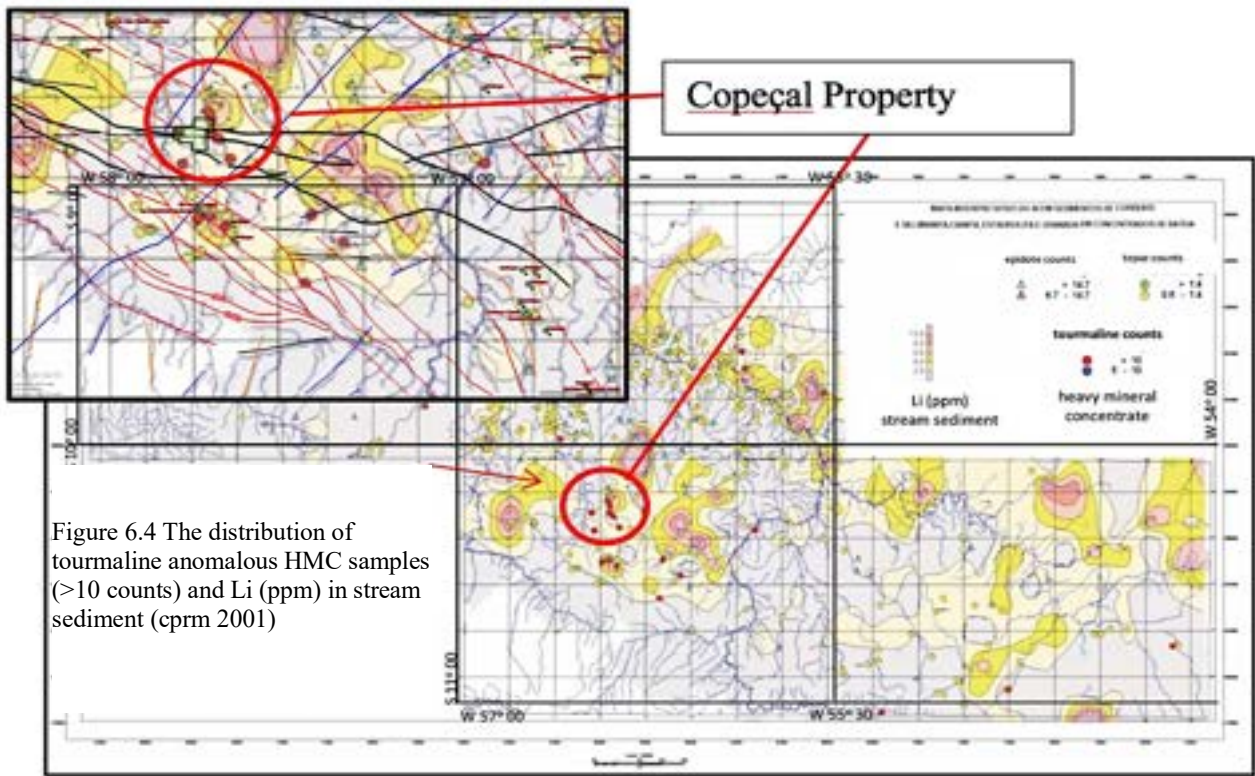


Figure 6.4 The distribution of tourmaline anomalous HMC samples (>10 counts) and Li (ppm) in stream sediment (cprm 2001)

## HISTORY FROM 2010 TO 2016

In the late 2000's, AngloGold Ashanti exploration arm saw an opportunity to expand its foot-print in Brazil after identifying the potential to discover mid to large precious metal deposits in the Juruena Province.

AngloGold Ashanti ("**AngloGold**"), through its subsidiary MDL consolidated the Property in 2010 filing a total of 10 contiguous Exploration Permit Applications at the DNPM (the former ANM agency). Table 6.1 list the tenements consolidated by AngloGold in 2010 and the reminiscent tenements claimed by Boa (two out of ten titles).

The chronological sequence of events associated to the mineral rights, ANM process 866.074/2010 and 867.311/2010, consolidated by Boa through the ANM public offer and replaced by 866.782/2021 and 866.779/2021 respectively in March 2016 is shown below:

Table 6.1 List of all 10 former tenements consolidated by AngloGold and those currently controlled by Boa

Mineração Dórica Ltda		Agencia Nacional de Mineração (ANM)		Ouro Resources do Brasil Ltda	
Process number	permit number			Process number	permit number
866.071/2010	NA	Final report filed - EP title returned to ANM	NA		
866.072/2010	NA	Final report filed - EP title returned to ANM	NA		
866.073/2010	NA	Final report filed - EP title returned to ANM	NA		
866.074/2010	6763/2010	Final report filed - EP title returned to ANM in April 2016	Public Offering published in February 2017	866.782/2021	1163/2024
867.309/2010	NA	Final report filed - EP title returned to ANM	NA		
867.310/2010	NA	Final report filed - EP title returned to ANM	NA		
867.311/2010	1159/2011	Final report filed - EP title returned to ANM in April 2016	Public Offering published in February 2017	866.779/2021	1162/2024
867.312/2010	NA	Final report filed - EP title returned to ANM	NA		
867.313/2010	NA	Final report filed - EP title returned to ANM	NA		
867.314/2010	NA	Final report filed - EP title returned to ANM	NA		

September 2023 Source: DNPM - Processes 866.074/2010 and 867.311/2010 archive hard copies

1 - February 2010 - MDL filed an Exploration Permit Application covering 8,455 ha corresponding to the southern part of the ground today known as the Copeçal Property, registered under process 866.074/2010;

2 - June 2010 - ANM granted MDL 3 years Exploration Permit to process 866.074/2010 under title number 6763/2010;

3 - July 2010 - MDL formalized it has launched exploration activities on Title 6763/2010;

4 - November 2010 - MDL filed the Exploration Permit Application covering 8,805 ha corresponding to the northern part of the Copeçal Property, registered under process 867.311/2010;

5 - February 2011 - ANM granted MDL 3 years Exploration Permit to Process number 867.311/2010 under title number 1159/2011. The Copeçal Property total area sums 17,260 ha;

6 - March 2011 - MDL formalized the Company has launched exploration activities on the Exploration Permit 867.311/2010;

7 - April 2013 - MDL filed a petition pleading another 3 years extension of Title 6763/2010;

8 - November 2013 - MDL filed a petition pleading 3 years extension of Title 1159/2011;

9 - March 2014 - Title 6763/2010 Exploration Permit **Extension** was granted to MDL;

10 - February 2014 - Title 1159/2011 Exploration Permit **Extension** was granted to MDL;

11 - March 2014 - MDL formalized it resumed exploration activities on Title 6763/2010;

- 12 – April 2014 – MDL formalized it resumed exploration activities on Title 1159/201;
- 13 – January 2016 – MDL formalized the results of the exploration program, by filing the Final Exploration Report returning Title 6763/2010 to the ANM;
- 14 – January 2016 – MDL formalized the results of the exploration program by filing the Final Exploration Report returning Title 1159/2011 to the ANM;
- 15 – March 2016 – ANM revoked Exploration Permit **Extension** number 1159/2011 (process 867.311/2010);
- 16 – March 2016 – ANM revoked Exploration Permit **Extension** 6763/2010 (process 866.074/2010);
- 17 – March 2016 – ANM published in the Official Gazette the Public Offering availability status of mineral right process 866.074/2010;
- 18 – March 2016 – ANM published in the Official Gazette the Public Offering availability status of mineral right process 867.311/2010;
- 19 – June 16, 2021 – Boa Subco filed an 8,805 ha Exploration Permit Application overlaying Process 867.311/2010, under **Public Offer ref. 14/17**, published in the official gazette on **January 19, 2017**. The application is registered at the ANM under **process 866.779/2021**;
- 20 - June 16, 2021 – Boa Subco filed an 8,455 ha Exploration Permit Application overlaying Process 866.074/2010, under **Public Offer ref. 14/17** published in the official gazette on **January 19, 2017**. The application is registered at the ANM under **process 866.782/2021**;
- 21 – July 1, 2021 – Boa Subco filed a reduction in size from 8,466.66 ha to 2,060.94 ha of the Exploration Permit Application **process 866.779/2021**;
- 22 – July 1, 2021 – Boa Subco filed a reduction in size from 8,805.06 ha to 1,620.92 ha of the Exploration Permit Application **process 866.782/2021**;
- 23 – January 30, 2024 – ANM granted Boa Subco 3 years Exploration Permit to process 866.779/2021 **under number 1162/2024**;
- 24 – January 30, 2024 – ANM granted Boa Subco 3 years Exploration Permit to process 866.782/2021 **under number 1163/2024**;
- 25 – February 16, 2024 – Boa Subco. formalized to the ANM it has launched exploration activities on the Exploration Permit 1162/2024;
- 26 – February 16, 2024 – Boa Subco. formalized to the ANM it has launched exploration activities on the Exploration Permit 1163/2024;

## ANGLOGOLD EXPLORATION WORK

The information and data relative to the exploration activities carried out on the Property by former title holder between 2010 and 2016, were extracted from hard copies of the mining titles archives held by the ANM agency.

The title files included two exploration reports relative to Exploration Permits 6763/2010 and 1159/2011, written and filed by AngloGold technical staff, one for each exploration permit term (*Relatórios Parcial de pesquisa* and *Relatório Final de Pesquisa*).

During the preparation of the Technical Report, Boa had digitized and made available, in digital format most of the data contained in the reports.

*Note: Maps and other Figures, extracted from the ANM have limited quality and resolution. Please consult the report hard copies if required.*

In 2010 AngloGold Ashanti launched the first phase of the exploration program consisting in:

- Geological reconnaissance and mapping of all 10 tenements;
- Stream sediment geochemistry covering the creeks encompassing all 10 tenements;
- Soil geochemistry (tenements 866.074/2010 and 867.311/2010);
- Rock grab geochemistry (tenements 866.074/2010 and 867.311/2010);
- Mechanized auger drilling (tenements 866.074/2010 and 867.311/2010);
- Induced Polarization geophysics survey (tenements 866.074/2010 and 867.311/2010);
- Air core drilling (tenements 866.074/2010 and 867.311/2010).

The Author is not aware of any exploration activities on the Property prior to those undertaken by AngloGold from 2010 to 2016.

Assays relative to the rock, soil, auger and Air core drilling geochemistry were performed at ALS Minerals Brasil laboratory (Vespasiano-MG/Brazil unit). The stream sediment samples were prepared at ALS Brazil and the pulps assayed at ALS Lima (Peru) facility. A copy of the lab certificates is attached to the exploration report relative to tenement 866.311/2010 filed at the ANM.

The nature and amount of exploration data generated by AngloGold during the six years validity of the exploration permits are summarized in Table 6.2.

To the exception of the Air core drilling campaign, all the exploration activities were performed during the first 3 years, therefore during the regular exploration permit term.

## STREAM SEDIMENT GEOCHEMISTRY

AngloGold stream sediment survey was carried out simultaneously with the geological reconnaissance covering a total of ten Exploration Permits originally claimed.

According to the exploration report, the field geological reconnaissance program encompassed the area shown in the geological base map of Figure 6.5.

The stream sediment assay results, shown in Figure 6.6 refers exclusively to the samples collected in the vicinities of tenements 866.074/2010 and 866.311/2010. Although it is not written in the ANM reports, one may conclude that the stream sediment assays shown in Figure 6.6 must constitute the best values resulting from the SS campaign made over all ten tenements.

According to AngloGold reports, the raw samples were screened under #200 on site (see photo in Figure 6.7) then dispatched to ALS Chemex preparation facility in Vespasiano, Minas Gerais. Two pulps per sample, weighting 50 g were then shipped to ALS Chemex in Lima, Peru. One primary 50 g aliquot was analyzed for Au using Fire-assay digestion / ICP finish with 1 ppb detection level. The secondary pulp was analyzed for 49 elements using Aqua Regia digestion and ICP-AES finish.

Table 6.2 AngloGold reported exploration activities from 2010 to 2016

Activity	Exploration Permit Phase	866.074/2010		867.311/2010		Other MRs	
		units	units	units	units	units	units
Geological mapping	3 years regular EP	232 geologic points	28 km	14 geologic points	4.1 km	18 geologic points	8 km
Stream Sediment Geochemistry	3 years regular EP	21 samples		12 samples		174 samples	
Rock Geochemistry (grab samples)	3 years regular EP	64 samples		3 samples		8 samples	
Soil Geochemistry	3 years regular EP	2040 samples	NA	1327 samples	9.52 km		
Mechanized Auger (holes/meters)	3 years regular EP	166 samples	26 holes	195 samples	23 holes		
IP Geophysics (lines/km)	3 years regular EP		9.24 km		3.24 km		
Air Core DH (holes/meters)	3 years regular EP						
	<b>3 years extension EP</b>	33 m	6 holes				

September 2023

Source: DNPM - Processos 866.074/2010 and 867.311/2010 archive hard copies



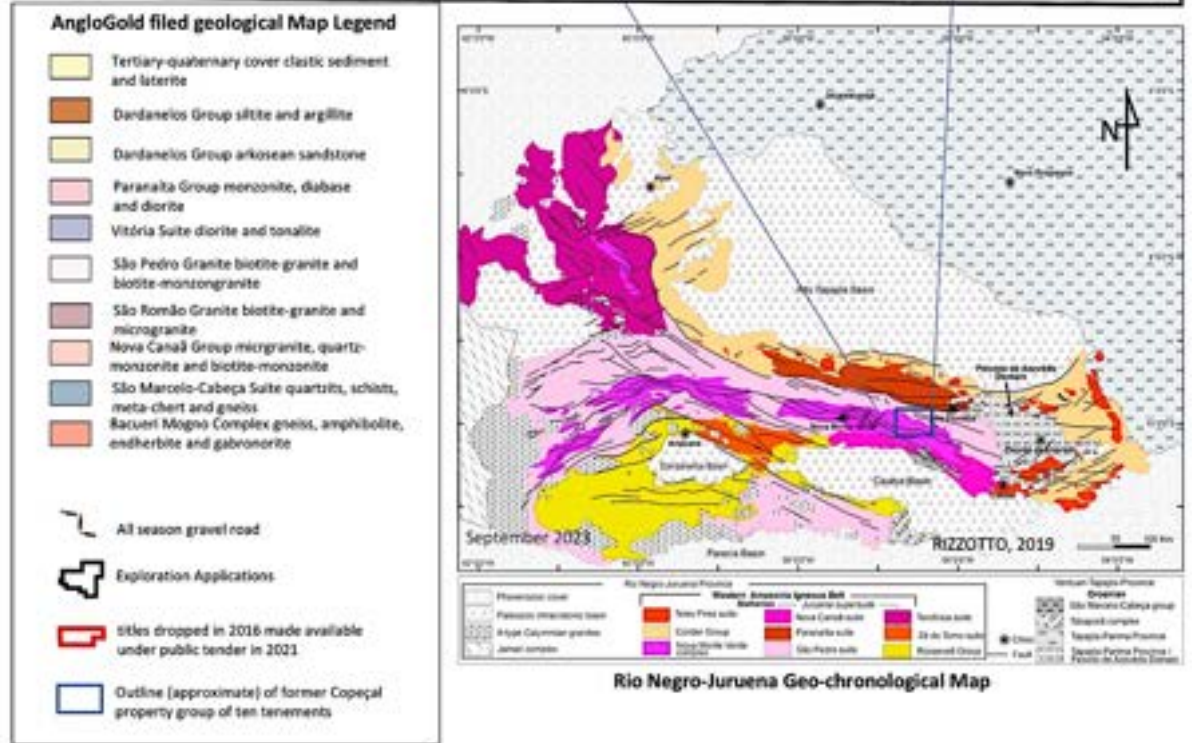
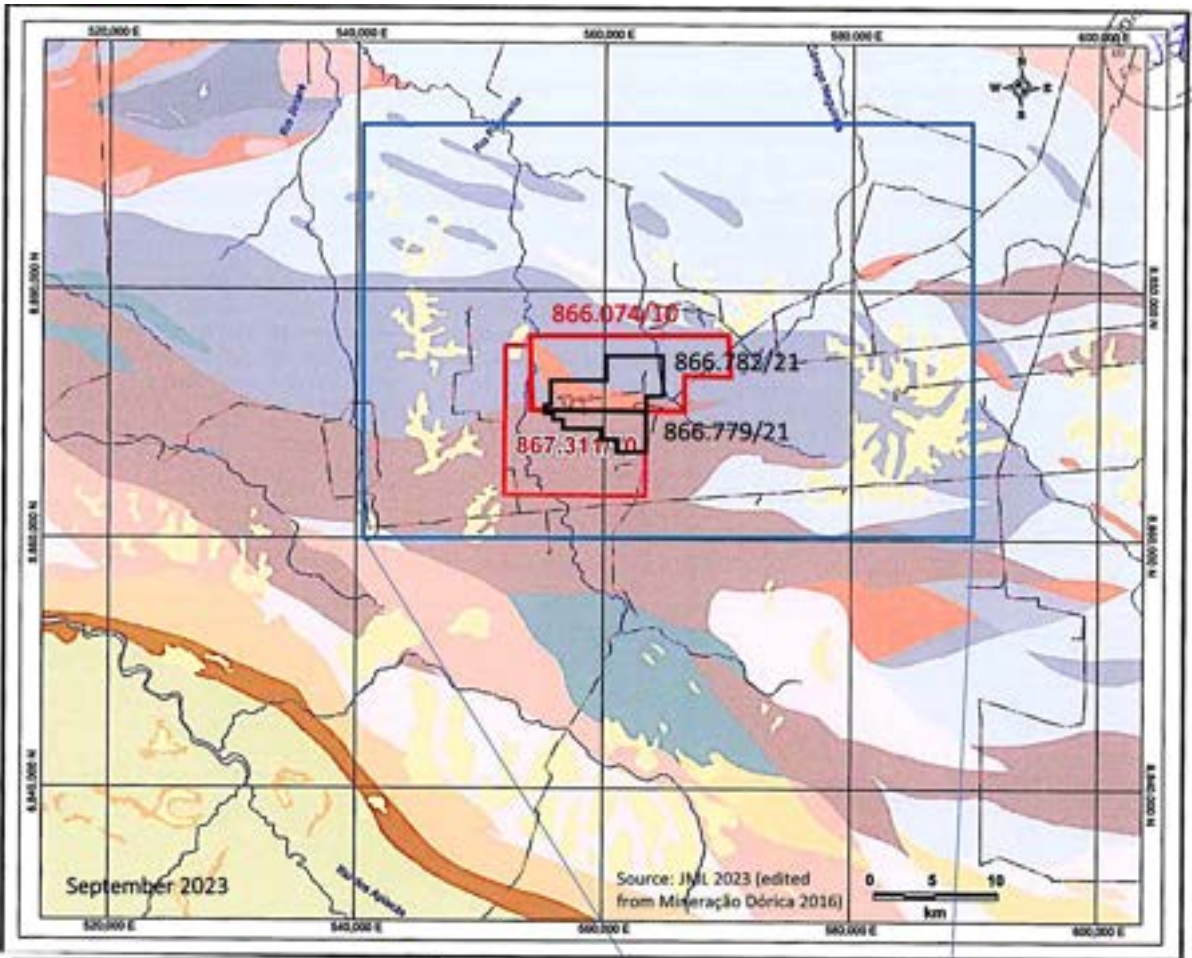


Figure 6.5 At the top of the Figure, the Project geological map as filed at the DNPM (former ANM) in 2013, in reference to the Rio Negro-Juruena province shown at the bottom

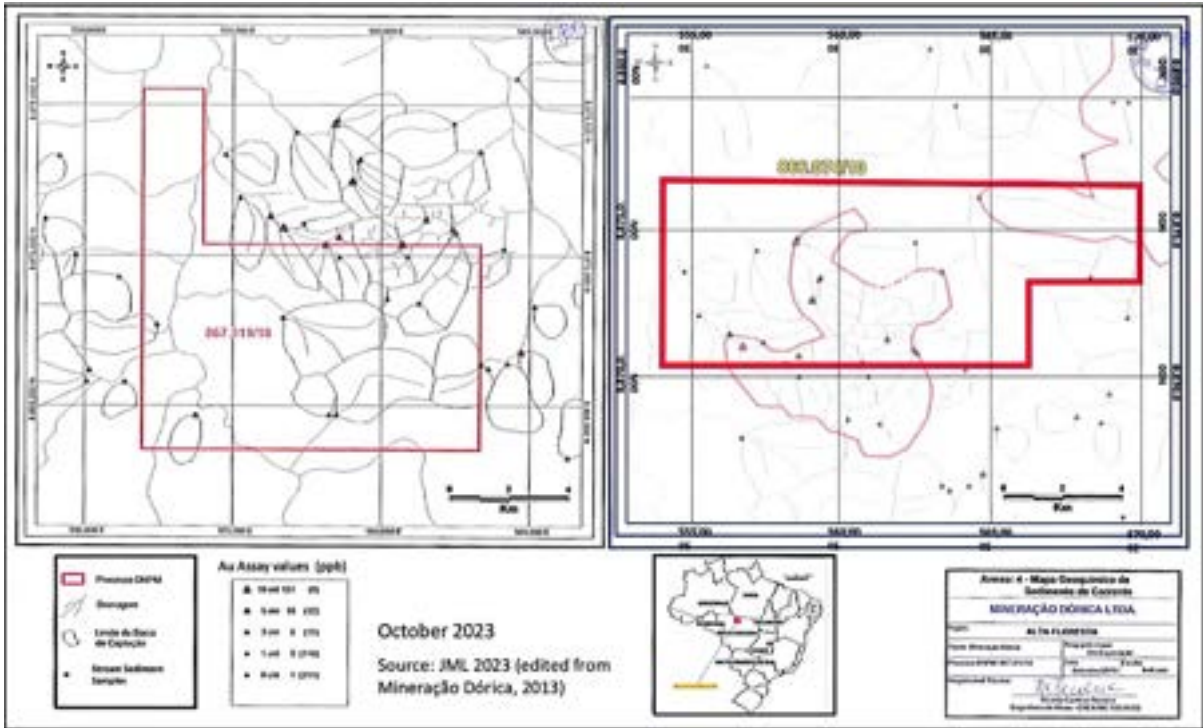


Figure 6.6 Location of the AngloGold stream sediment samples



Figure 6.7 Stream sediment sampling procedures at the Copeçal Project

## GRID CUTTING AND PICKETING

After the completion of the stream sediment program, the exploration activities focused on following up the gold contents identified in the stream sediment samples. A base grid was settled encompassing the topographic highs attributed to the source of the stream sediment anomalies (see the extension of the grid lines in the map at the bottom of Figure 6.11).

The grid was settled in two steps. The first step was carried out from November to December 2010, based on an East-West (090o) base line and a total of twenty north-south (360o) cross-lines with stations picketed every 40 m horizontal distance (see Figure 6.1). The Copeçal grid saw the most exploration conducted by AngloGold between 2011 and 2016 occur on the current Property. The exploration work included soil geochemical and magnetic surveys, geologic mapping, trenching, and litho-geochemical sampling.

A follow-up second step was performed one year after, in November 2011 by infilling part of the grid with 200 m spaced grid lines pattern.

AngloGold reports a total of 3,368 soil samples were collected along the grid, 2,040 in tenement 866.074/2010 and another 1,328 samples in tenement 867.311/2010 (see Table 6.2).

## GEOLOGICAL MAPPING OF THE GRID

AngloGold's first phase exploration program included regional geological reconnaissance and mapping of a total of ten tenements that constituted the Copeçal Project in 2010.

AngloGold reports in 2013 three geologic units classified in two rock domains, the "schist domain" and the "granitoid" domain:

The São Romão granites (in the south portion of the Property), the Vitoria Suite, (to the north) and the Bacari-Mogno Complex ferruginous quartzites, intercalated between the São Romão and Vitoria units (see map at the top of Figure 6.11).

The "granitoid" Domain:

According to the reports the "granitoid" domain is composed by a suite of differentiated granitic rocks including K Feldspar -reddish granite, granodiorite, monzonite, sienogranites and tonalites in less quantity. Fine grained, disseminated magnetite is reported, associated to the granodiorite units. According to the reports, an increase of the magnetite contents was observed when approaching the contact zone with the "schist domain". AngloGold reports that the granites from "granitoid" domain, are usually isotropic, shows a strong variation in texture, moving from isotropic to foliated, segregated, banded and stretched texture (see photo in Figure 6.8).

The "schist" Domain":

The second most expressive lithotype reported to occur in Copeçal Property tenements were identified under the "schist" domain nomenclature. Rocks from the "schist" domain are described as medium grained, whitish, muscovite-sericite quartz schist (see photo in Figure 6.9). Like the "granitoid" domain, the texture of the sericite-quartz schists may vary from one exposure to the other in short distance

The grid geological base map shown in Figure 6.11 indicates three "strips" of sericite quartz schist ("schist" domain), positioned in an anastomosed shape, surrounded by the "granitoid" domain. Two of the quartz schist bodies are connected to the East, still inside the grid and the tenement boundaries. All three layers converge to the west, but according to the map are not connected inside the area covered by the grid.

Readings of foliation and lineation on the interpreted map suggests the mid and southern strip refer to an inclined sinform which hinge lies off the Western limits of the grid (hinge inclination to ENE). In a similar manner the mid and northern strip would constitute the adjacent antiform.

The Author hasn't identified any discussion about this thesis in the reports.



August 2023

Source: MDL, 2016

Figure 6.8 São Romão granite hand specimen, isotropic on the left, foliated to the right



August 2023

Source: MDL, 2016

Figure 6.9 Sericite-quartz schist collected from the “schist “domain”

## SOIL GEOCHEMISTRY

Based on the sample logs, the samples were collected in two distinct steps, both during the first term of the exploration permit.

During the first step, a 400 m pattern grid was cut, picketed and soil samples collected on a 40 m horizontal distance. A total of 2,040 soil samples, out of 3,368 were collected and assayed for 50 elements by ICP (Induced Coupled Plasma) from November to December 2010. The second step, consisted in reducing the distance in part of the grid, from 400 m to 200 m by opening intermediary lines between step 1 grid lines.

The densification took place from July to November 2011 with the collection of another 1,328 samples. Samples above 7 ppb Au are contoured in red line on the map in Figure 6.6. Two anomalies, identified as NE and SW soil anomalies, outstands in size and continuity from the others.

The SW anomaly is constituted by two, almost connected, contoured values trending N60W. The core of the larger one is represented by a 750 m radius “bull eye” shape ranging from 20 to 539 ppb gold values, distributed along four contiguous grid lines positioned 200 m apart from each other (see map in Figure 6.11).

## ROCK GEOCHEMISTRY

A total of 67 rock grab samples were collected and analyzed for 50 elements in tenements 866.074/2010 and 867.311/2010.

Only three samples out of the total 67 rock grab samples returned gold grades above 10 ppb.

A map of the rock sample distribution shown in Figure 6.11 conjugated with the main 6 ppb soil anomaly’s contouring as a reference.

Based on MDL maps, none of the rock samples were collected inside the boundaries delineated by any of the soil anomalies. Sample 12500500 returned 20 ppb Au, the highest grade among the rock grab samples. It is positioned on the eastern boarder continuity of SW anomaly (see Figure 6.11).

## MECHANIZED AUGER DRILLING

The SW and NE soil anomalies were followed-up by Auger drilling. The drilling campaign, consisting in 49 Auger drill holes was carried out covering the SW and NE soil anomalies (see photos of the mechanized auger drill in Figure 6.10).

The Auger holes, destined to test the “roots” of soil anomalies SW and NE, were positioned every 80 m along three grid lines, 400 m apart from each other at the NE Anomaly, and along five grid lines, 200 m apart at the SW Anomaly. The Auger drill hole collars are represented by labeled dots in the bottom map of Figure 6.11 and, in larger scale in Figure 6.12. The Auger drilling campaign returned an average and maximum depth of 7.2 m and 12 m respectively.



Figure 6.10 AngloGold auger drilling activity and the sample reduction by quartering

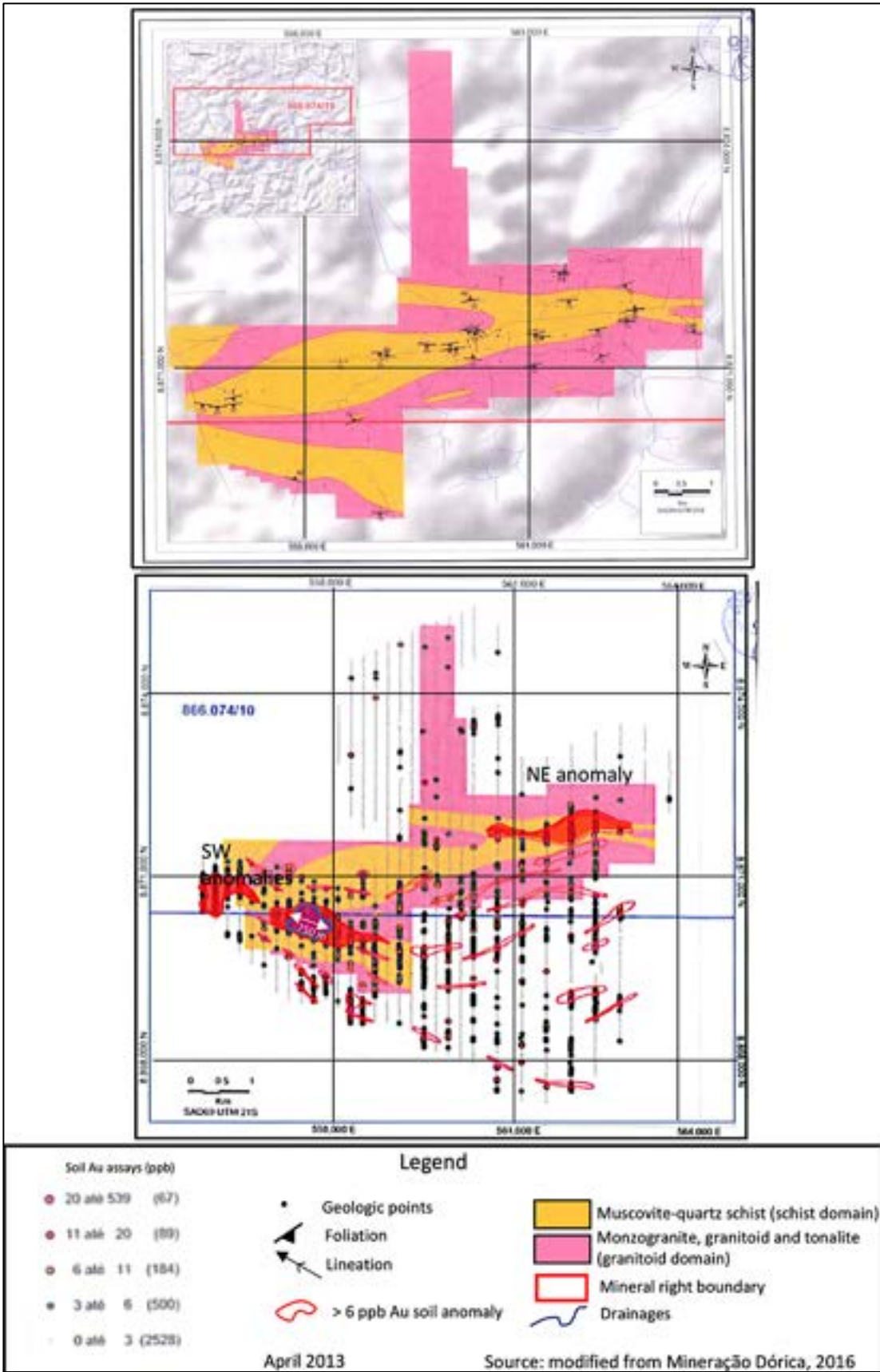


Figure 6.11 Geological grid base Map (top) and soil Au geochemistry results (ppb)

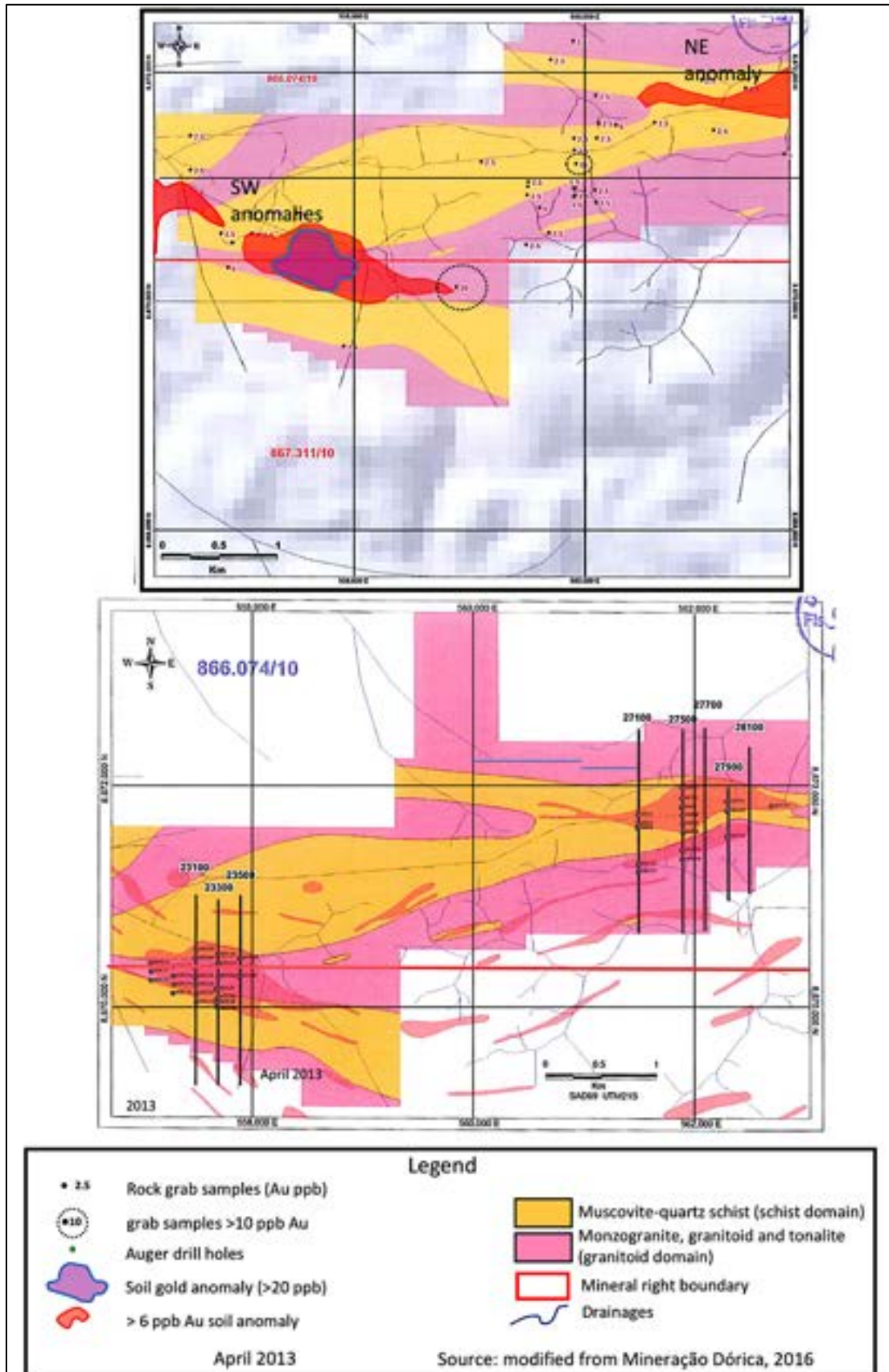


Figure 6.12 Rock grab geochemistry results in ppb (top) and auger drill hole location (bottom)



## AUGER DRILL HOLE RESULTS

The 49 auger drill holes executed to follow-up the NE and SW soil anomalies did not return economic gold grades however a significant amount of auger holes have identified the continuity of the soil grades in depth. The identified "roots" of the gold soil anomalies are further discussed in Section 9.

Table 6.3 reports the only 9 samples out of 372 collected samples that returned grades above 0.1 ppm Au (five holes out of 49 executed holes).

Table 6.3 Gold assays above 100 ppb in auger drill intervals

Anomaly	Hole ID	Coord_N (UTM69-21S)	Coord_E (UTM69-21S)	Sample Number	From (m)	To (m)	Au (ppb)
NE	ADC013	8871567	562296	10600083	4.00	5.00	178
SW	ADC018	8870002	557686	10600114	1.00	2.00	136
		8870002	557686	10600116	3.00	4.00	127
		8870002	557686	10600119	4.00	5.00	153
	ADC023	8870396	557698	10600175	4.00	5.00	185
	ADC030	8870122	557497	10600232	5.00	6.00	122
	ADC043	8870128	557896	10600346	1.00	2.00	125
		8870128	557896	10600352	6.00	7.00	113
		8870128	557896	10600353	7.00	8.00	334

April 2013

Source: Extracted from

MDL, 2016

The auger drill holes with gold assay results above 0.1 g/t are shown in the detail plans in Figure 6.13.

## INDUCED POLARIZATION GEOPHYSICS

AngloGold undertook an induced polarization survey (IP) aiming to detect the presence of disseminated sulfide associated to the SW and NE anomalies. All reports filed by AngloGold states that a total of eight sections were surveyed, however all four documents only include the results from four sections, two sections on NE Anomaly and two sections on SW Anomaly.

Reported results only includes chargeability, there are no mentions of other results such as resistivity.

All four sections reported the presence of moderate conducting anomalies. The NE Anomaly returned higher chargeability response if compared to the SW Anomaly. AngloGold geologists attribute the chargeability response to higher sulfide contents associated to the deformation along the southern contact between the "schist" domain (quartz shists) and the "granitoid" domain (see section 562300 E in Figure 6.15).

The trace at surface of the IP conductors is shown in the plan map in Figure 6.14 and in the 3D orientated sections in Figures 6.15 and 6.16.

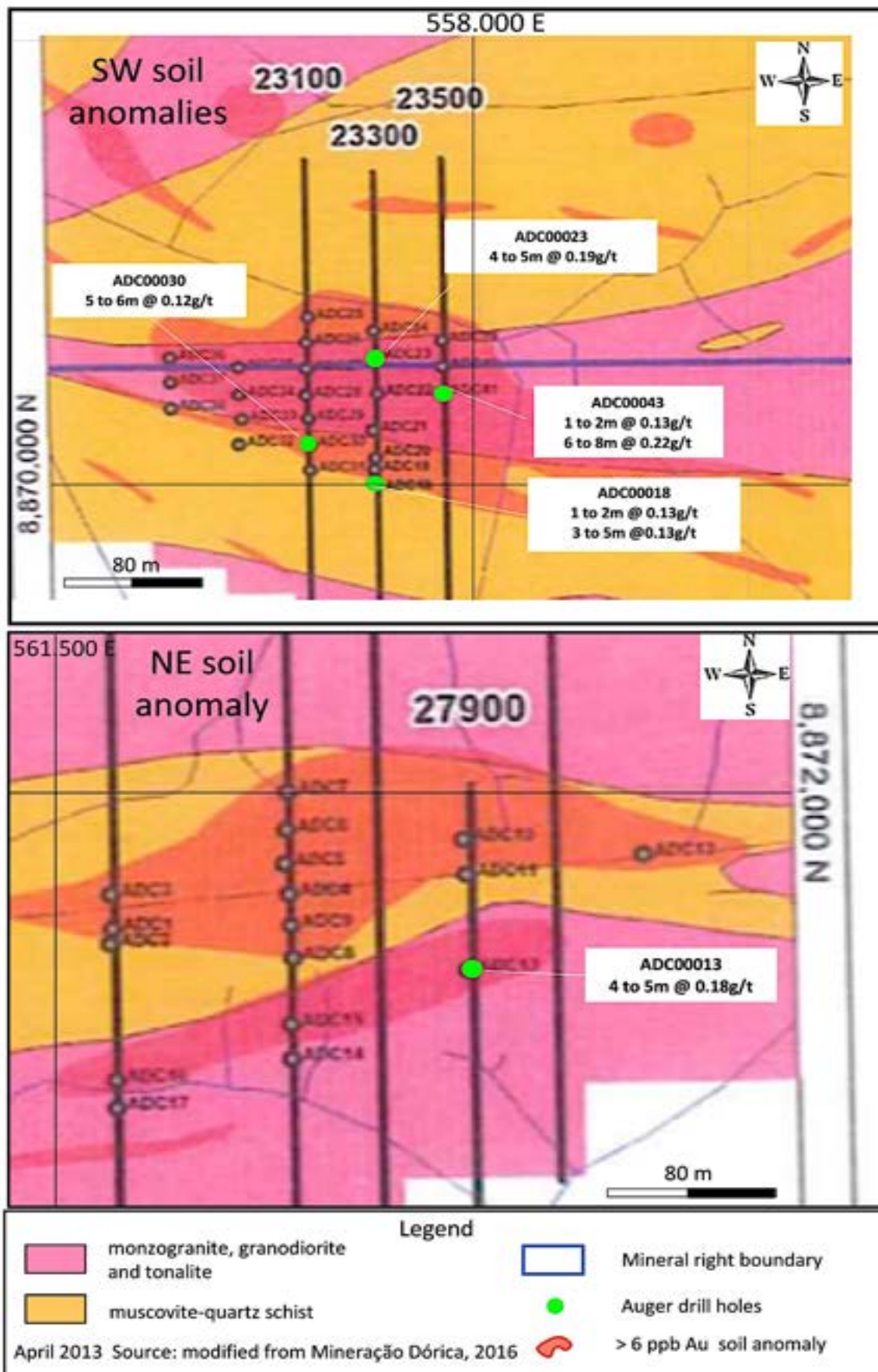


Figure 6.13 Detail plan of the auger drill holes executed on the NE (bottom map) and SW anomalies (top map)

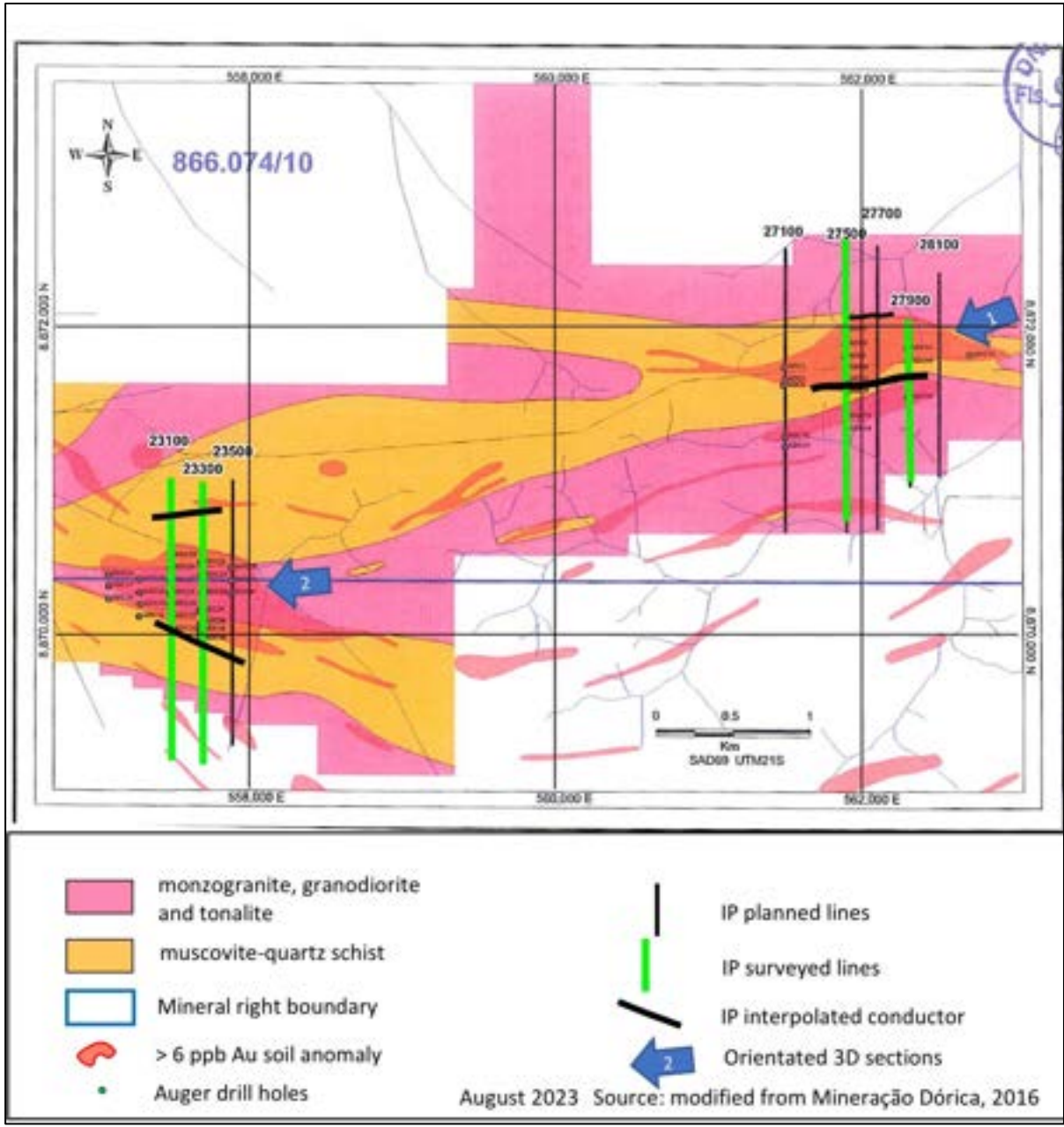


Figure 6.14 Location of the geophysics induced polarization survey and resulting interpolated conductors

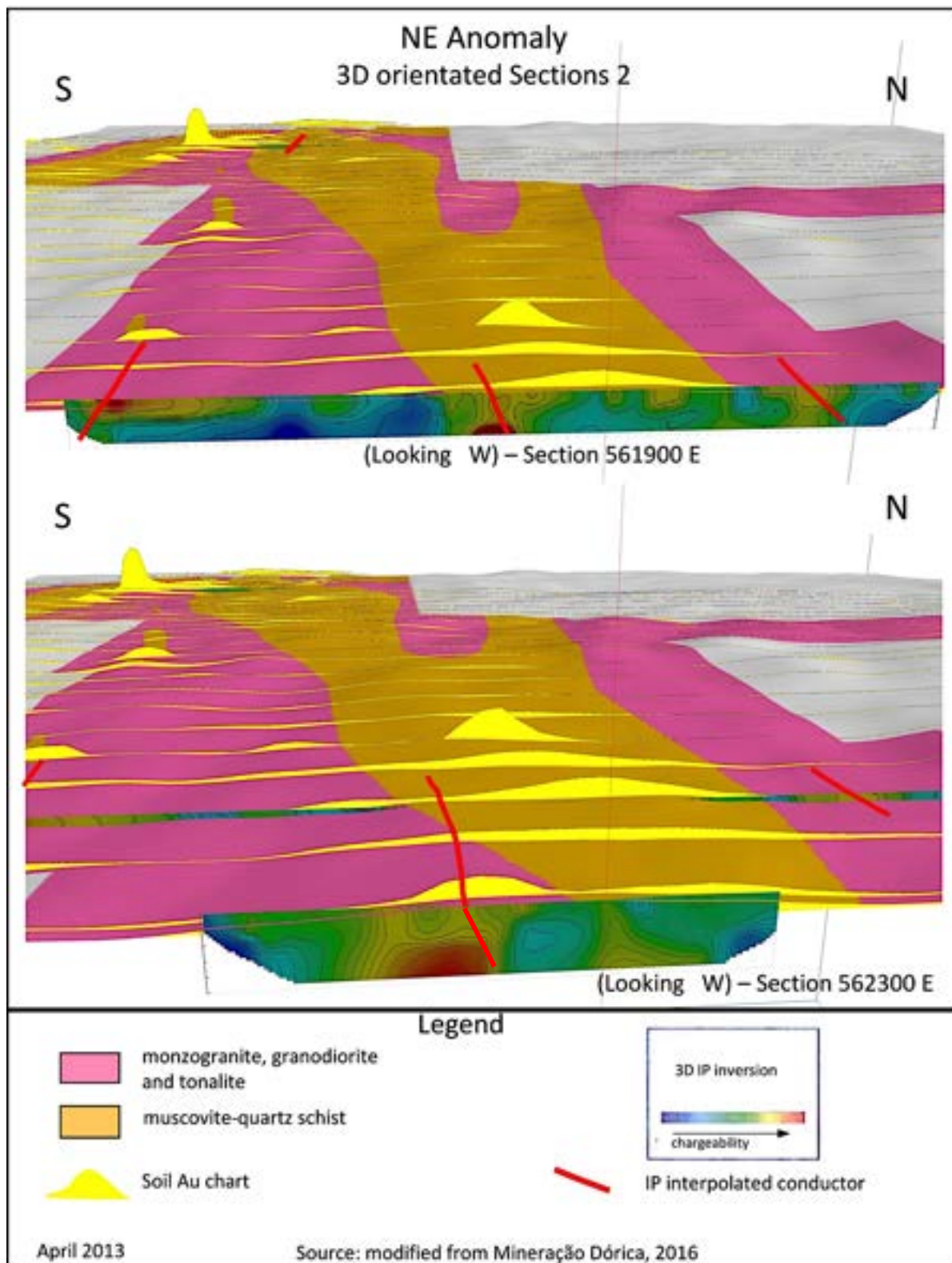


Figure 6.15 3D orientated section of the NE anomaly (looking W) showing the chargeability response resulting from the IP survey

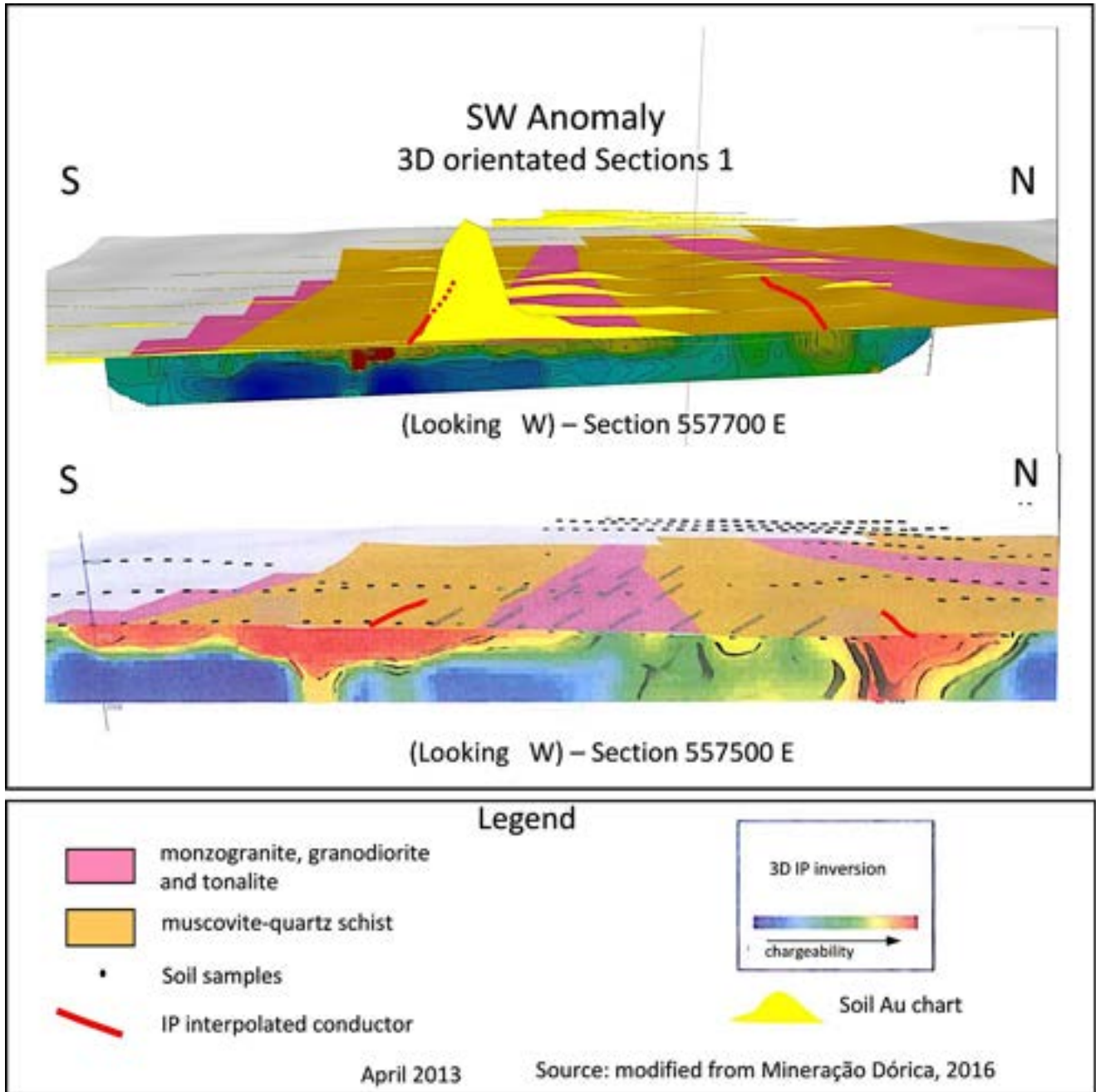


Figure 6.16 3D orientated section of the SW anomaly (looking W) showing the chargeability response resulting from the IP survey

## AIR CORE DRILLING

During the extension term of the Exploration Permit, AngloGold undertook the execution of six Air core drill holes positioned over auger drill hole ADC0013 coordinates in order to test the IP conductor located at the southern contact between the border of NE soil anomaly, and auger drill hole ADC0013 (6 to 8 m interval @ 224 ppb Au).

The total depth of the 3.5-inch diameter Air core drill holes ranges from 7 m to 20 m. The drill holes are vertical and most of the sample intervals are 3 m width (apparent thickness).

Only one sample, out of 32 samples, from the bottom of drill hole CP-AC-004 returned gold values above 100 ppb. The Air core drill hole location and associated results are shown in the detail map plan in Figure 6.17. AngloGold's Air core drilling campaign is further assessed in Section 9.

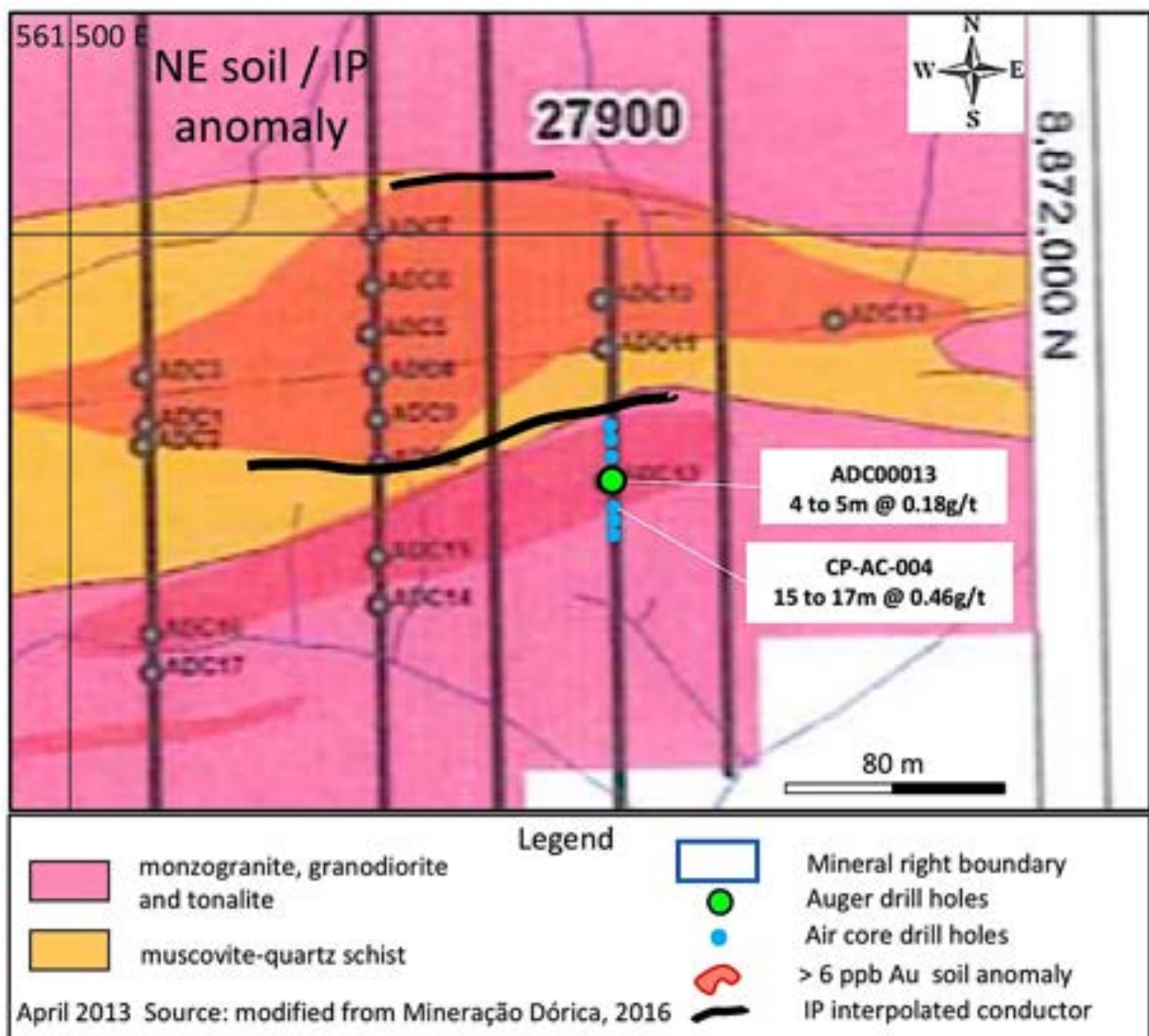


Figure 6.17 Detail plan of the Air core drill holes executed on the NE anomaly. Drill hole with intervals over 100 ppb are labeled.

## 7. GEOLOGICAL SETTINGS AND MINERALIZATION

### INFORMAL MINING ACTIVITIES IN THE JURUENA GOLD PROVINCE

The Tapajós and Juruena Mineral Provinces have been responsible for decades of a significant portion of the informal gold production in the country.

Gold was first discovered in 1958 in the Tapajós basin (Pará state) in alluvial of the Tropas river. Only in 1966, a group of *garimpeiros* from the Tapajós, moving upstream on the Juruena river discovered gold rich alluvials on the right margin of the Juruena river, a place today known as the Juruena *garimpo* situated on the Northwestern end of the Juruena Province.

At the end of that decade, the region encompassed by Peixoto Azevedo, Matupá and Guarantá was flooded with thousands of *garimpeiros* and dozens of open cut excavations, both along the major river bedrocks (dredges) and lateral terraces to extract easy alluvial and colluvial gold resources.

Between 1970 and 1990, the Tapajós and Juruena regions has become the largest artisanal gold producer in Brazil, with up to around 100,000 informal miners *garimpeiros* working in hundreds of small mines in placers, paleo placers and colluvial deposits.

With the exhaustion of many of these secondary deposits and the increasing governmental controls on environmental degradation caused by artisanal mining, the production declined, opening opportunities to the mineral exploration of primary deposits by mining companies.

In the Juruena Province, the gold production took a turn in 1978 toward stronger production figures resulting from the discoveries of the Novo Planeta and Alta Floresta mining camps, this latest by accident, when the construction of the BR-163 road accidentally exposed the mineralization.

Dozens of small-sizes (usually <5 t Au) and high-grade gold placers and granite-hosted veins and disseminations have been exploited by artisanal prospectors or mining companies, most of them without geological studies and previous resource measures.

With the depletion of shallow alluvial and colluvial resources, the decline in gold price and increase in operating costs from 1999 onwards, the artisanal production practically ceased, leaving room to the mining companies to begin systematic exploration.

Gold production picked up again in 2006, however it did not reach the numbers recorded in the late 1980s and early 1990s. In 2019 the accumulated production from the Juruena Province was estimated in 180 metric tons (5.8 million oz), of which 160 tons were produced in the 1980s.

Over time, the exposure of primary gold sources (mostly high-grade narrow quartz lodes and some lower grade disseminated bodies associated to granitic rocks) became more frequent.

Gold production reached its peak in 1990 and started to fall in 1999.

Annual declared gold production resumed in 2009 to gradually reach approximately 4.5 metric tons in 2015 and 2.5 metric tons in 2016 (approx. 143 koz and 80 koz respectively) as shown in Figure 7.1.

Additional figures of the historic estimated gold production of the Juruena Province are summarized in Tables 7.1 and 7.2. Highlighted cells in Table 7.1 refers to the Cabeça sector that encompasses the Copeçal Property. Table 7.2 reports the estimated annual gold production from the Juruena Province (1996 to 2000) and per district, from 1980 to 2000 (DNPM).

The chart in Figure 7.1 and Table 7.3 indicates some estimated resource figures of the known deposits (see cautionary note).

Cautionary note:

Except X1 and Paraíba properties, the resource figures displayed in Figure 7.1, Table 7.1, 7.2, and 7.3 are NOT NI 43-101 compliant. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves; the issuer is not treating the historical estimate as current mineral resources or mineral reserves, and we do not expect to have access to information outside of the information contained herein and as a result of proposed exploration by which these historical estimates may be verified.

Note:

- production and resources figures were sourced from several CPRM (Geological Service) publications and originally from the DNPM (now ANM) published reports. The Author has not verified the information directly from the DNPM records;
- most of the production numbers are reported to the DNPM by informal miners. It is common practice to sub-evaluate the real production values when filing the annual production forms at the ANM. It must be taken into consideration if applied to any projections.

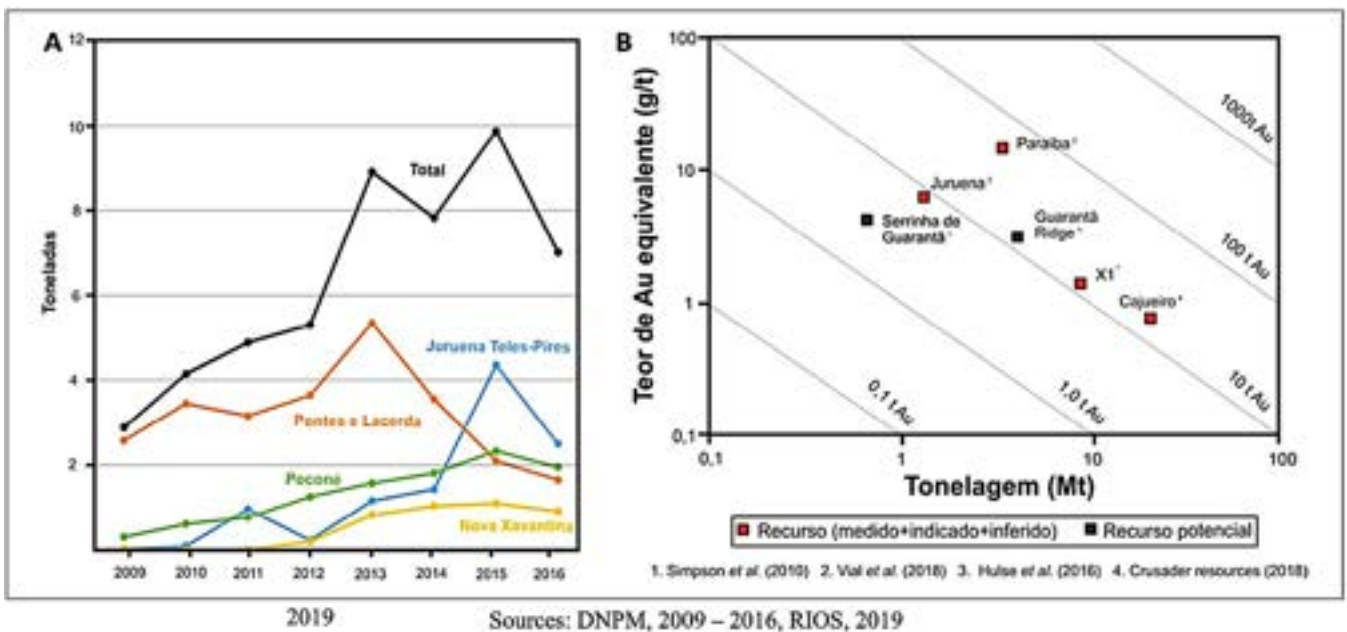


Figure 7.1 Mato Grosso estimated gold production from 2009 to 2016 (see cautionary note)



Table 7.1 Alta Floresta estimated gold production between 1982 and 1995 (see cautionary note)

PRODUÇÃO GARIMPEIRA DE OURO 1982/1995 - NORTE DE MATO GROSSO - (REGIÃO DE P. DE AZEVEDO) (kg)												
Anos	Municípios											
	P. de Azevedo		Colíder		Matupá		T. Nova do Norte		Guarantã do Norte		Total	
	Oficial	Estimada	Oficial	Estimada	Oficial	Estimada	Oficial	Estimada	Oficial	Estimada	Oficial	Estimada
1982	621	1.186	-	-	-	-	-	-	-	-	621	1.186
1983	1.618	2.168	-	-	-	-	-	-	-	-	1.618	2.168
1984	2.687	4.730	-	-	-	-	-	-	-	-	2.687	4.730
1985	2.587	7.653	-	-	-	-	-	-	-	-	2.587	7.653
1986	950	4.617	-	-	-	-	-	-	-	-	950	4.617
1987	1.688	5.804	-	-	-	-	-	-	-	-	1.688	5.804
1988	2.073	5.451	-	-	-	-	-	-	-	-	2.073	5.451
1989	1.828	4.926	-	-	-	-	-	-	-	-	1.828	4.926
1990	7.266	5.565	527	403	240	184	608	465	1.628	1.247	10.269	7.864
1991	5.708	4.281	388	291	1.329	997	1.249	937	1.209	907	9.883	7.413
1992	5.858	4.629	355	281	449	355	648	512	734	580	8.044	6.357
1993	4.295	3.753	261	228	330	288	475	415	538	470	5.899	5.154
1994	2.106	2.106	67	67	780	780	176	176	338	338	3.467	3.467
1995	904	904	50	50	120	120	33	33	318	318	1.425	1.425
<b>TOTAL</b>	<b>40.189</b>	<b>57.773</b>	<b>1.648</b>	<b>1.320</b>	<b>3.248</b>	<b>2.724</b>	<b>3.189</b>	<b>2.538</b>	<b>4.765</b>	<b>3.860</b>	<b>53.039</b>	<b>68.215</b>

2023

Source: BRASIL, 1996

Table 7.2 Juruena Gold Province deposits declared resources Figures (see cautionary note)

DEPOSIT	TONNAGE (Mt)	Au grade (g/t)	Contained Au(kg)	Ag grade (g/t)	Cu grade (%)
Paraíba	3,30	12,94	42,74	9,15	0,85
Cajueiro	19,54	0,78	15,24	-	-
X1	8,47	1,37	11,61	4,50	-
Juruena	1,30	6,30	8,19	-	-
Guarantã Ridge	4,00	2,20	8,80	77,00	-
Serrinha de Guarantã	0,65	3,00	1,95	14,00	0,70
FIDES	1,6	2,5	4,00	-	-

2019

Source: modified from Alves (CPRM), 2019

Table 7.3 Estimated gold production from the Juruena Province between 1996 and 2000) and accumulated production per region from 1980 to 2000 (DNPM) \*see cautionary note

SOURCE	ANNUAL PRODUCTION (Kg)					ACCUMULATED PRODUCTION (KG)
	1996	1997	1998	1999	2000	
ALTA FLORESTA	1,523	1,321	923	1,071	31	54527.76 (1980-2000)
APIACÁS	85	74	52	4		4200.2(1990-2000)
COLÍDER	45					1870(1990-2000)
MATUPÁ	44					2740(1990-2000)
PARANAÍTA	219	153	107			6780(1999-2000)
PEIXOTO DE AZEVEDO	1,314	1,900	1,327	1,010	960	49569(1982-2000)
TERRA NOVA DO NORTE	87					3493(1996-2000)
GUARANTÃ				264		264(1990-2000)
<b>TOTAL</b>	<b>3,317</b>	<b>3,448</b>	<b>2,409</b>	<b>2,349</b>	<b>991</b>	<b>123443.96</b>

2005

Source: Ribeiro (CPRM), 2005

## METALLOGENY OF THE JURUENA MINERAL PROVINCE

The challenging access due to the rain forest and few roads, the geological knowledge only at a regional scale, the few metallogenetic studies, and the lack of a clear definition concerning the Paleoproterozoic tectonic environment and petrogenesis precluded the proposition of comprehensive metallogenetic models for gold and copper–molybdenum mineralization of the Juruena Province.

For many years, the ca. 1.88 Ga felsic magmatism of the Tapajós Mineral Province was considered exclusively as related to post-orogenic to intra-cratonic A-type magmatism with only a major potential to tin deposits.

Besides this, many gold occurrences, and small mines, spatially related to ca. 2.1 to 1.88 Ga volcano–plutonic rocks at the Tapajós Mineral Province, and until ca. 1.77 Ga in the Juruena Province, led the proposition of distinct metallogenetic models for the gold mineralization in both provinces. The pioneering studies proposed ore-forming processes linked to mesothermal, epizonal orogenic intrusion-related deposits post- or later than the ca. 1.88 Ga A-type magmatic event.

The orogenic gold genetic model prevailed for several years, especially in the Tapajós province, until the discovery of a well-preserved high-sulfidation epithermal gold mineralization associated with 1.88 Ga calc-alkaline volcanic rocks by Rio Tinto company opened the possibility for the occurrence of large Paleo-Proterozoic gold and Cu–Mo deposits in both provinces.

In the following years, academic researchers have reported epithermal (low-, intermediate- and high-sulfidation) occurrences related to calc-alkalic and alkalic porphyry-like mineralization, sometimes with Au, Cu or Mo expanding the perspectives for the existence of magmatic hydrothermal high-grade epithermal and large porphyry-like deposits.

More recently, the discovery by Anglo American of the Jaca Cu–(Mo)–(Au) porphyry deposit in the Juruena Province stimulated a new exploration rush and intense land claims in both provinces.

The review, systematization and new geologic, petrological, and metallogenetic data of the Tapajós and Juruena Mineral Provinces suggests that Paleo Proterozoic episodes of magmatic– hydrothermal mineralization in continental magmatic arcs are the main source for gold, in addition to orogenic gold deposits (Juliani, 2021).

The primary gold occurrences in the Juruena Province exhibit a close spatial relationship with calc-alkaline and oxidized (magnetite-bearing) I-type granites, volcanic rocks, and volcano- sedimentary sequences originated in continental magmatic arcs. The hydrothermal alteration, styles, and the ore paragenesis, together with fluid inclusions and isotopic data, suggest their formation in Paleoproterozoic magmatic–hydrothermal systems developed in different crustal levels and positions regarding the magmatic source (Juliani, C et al, 2021) .

The lithological map of the Tapajós and Juruena Provinces in Figure 7.2 shows the location of the main gold deposits and occurrences. The legend includes a chronological relation of the magmatic episodes associated to the gold mineralization. The gold occurrences are shown by yellow-filled dots.

## TECTONIC HISTORY OF THE TELES PIRES-JURUENA MINERAL PROVINCE

The tectonic environment in which the rocks of the Rio Negro Juruena Mineral Province were formed remains a major problem in Precambrian geology of the Amazon craton. There are many contrasting suggestions of its possible origin, such as:

a) magmatism derived from the evolution of continental magmatic arc (e.g., Santos et al., 2000; Souza et al., 2005; Scandola et al., 2014, 2017; Duarte et al., 2012; Assis, 2015), and b) bimodal magmatism generated in an intraplate extensional environment (Pinho et al., 2001; Neder et al., 2002; Rizzotto and Quadros, 2005; Leite et al., 2005; Barros et al., 2009; Rizzotto et al., 2016).

One of the largest known crustal cratons, the Amazonas shield is surrounded by the mobile Neoproterozoic mobile belts of Tucavaca (in Bolivia), Araguaia-Cuiabá (Central Brazil) and Tocantins (northern Brazil) (Almeida et al., 1976; Cordani et al., 1988; Tassinari & Macambira, 1999).

The Teles Pires - Juruena geotectonic province forms the south-central portion of the Amazon craton also named Amazonas shield (Almeida, 1978; Almeida et al, 1981).

This major tectonic structure was recently characterized as the Western Amazonia Igneous Belt ("WAIB") (Rizzotto, 2019). The WAIB occupies the northern part of the South American continent, and a total area close to 125,000 km<sup>2</sup> (see map in Figure 7.2).

The WAIB consists of a set of massifs of granitic and volcanic rocks and associated mafic intrusions (1.82–1.76 Ga). This belt of magmatic rocks is 820 Km long and 150 Km wide, and borders a core of high- grade metamorphic rocks (Nova Monte Verde Complex, 1.80–1.76 Ga).

The belt is composed dominantly by volcano-plutonic felsic rocks (Juruena super- suite, Teles Pires suite and Colíder group) and has dominant alkali-calcic, metaluminous to peraluminous, ferrous, geochemical characteristics, similar to A-type granites. The Silicic members are represented by granites and rhyolitic-rhyodacitic volcanic rocks, mafic members by gabbroic rocks and diabase dykes. Intermediate rocks are rare (Rizzotto, 2019)

To the east the WAIB is truncated by a remnant core of older rocks named Peixoto de Azevedo Domain and represents a remaining cratonic block of the Ventuari-Tapajós Province ("VTP"), a continuation to the south of the Alto Tapajós Basin (see simplified structural map in Figure 7.5).

The rocks that form the basement of this domain are inserted into the Cuiú- Cuiú Complex (2.05–1.99 Ga), which consists of an expanded calc-alkaline magmatic series derived from the continental magmatic arc. Another group of younger granitoids are predominant in the southern part of the VTP, has chemical characteristics compatible with the formation in an intraplate extensional environment correlated to the Parauari and Maloquinha intrusive suite of the Tapajós tectonic province.

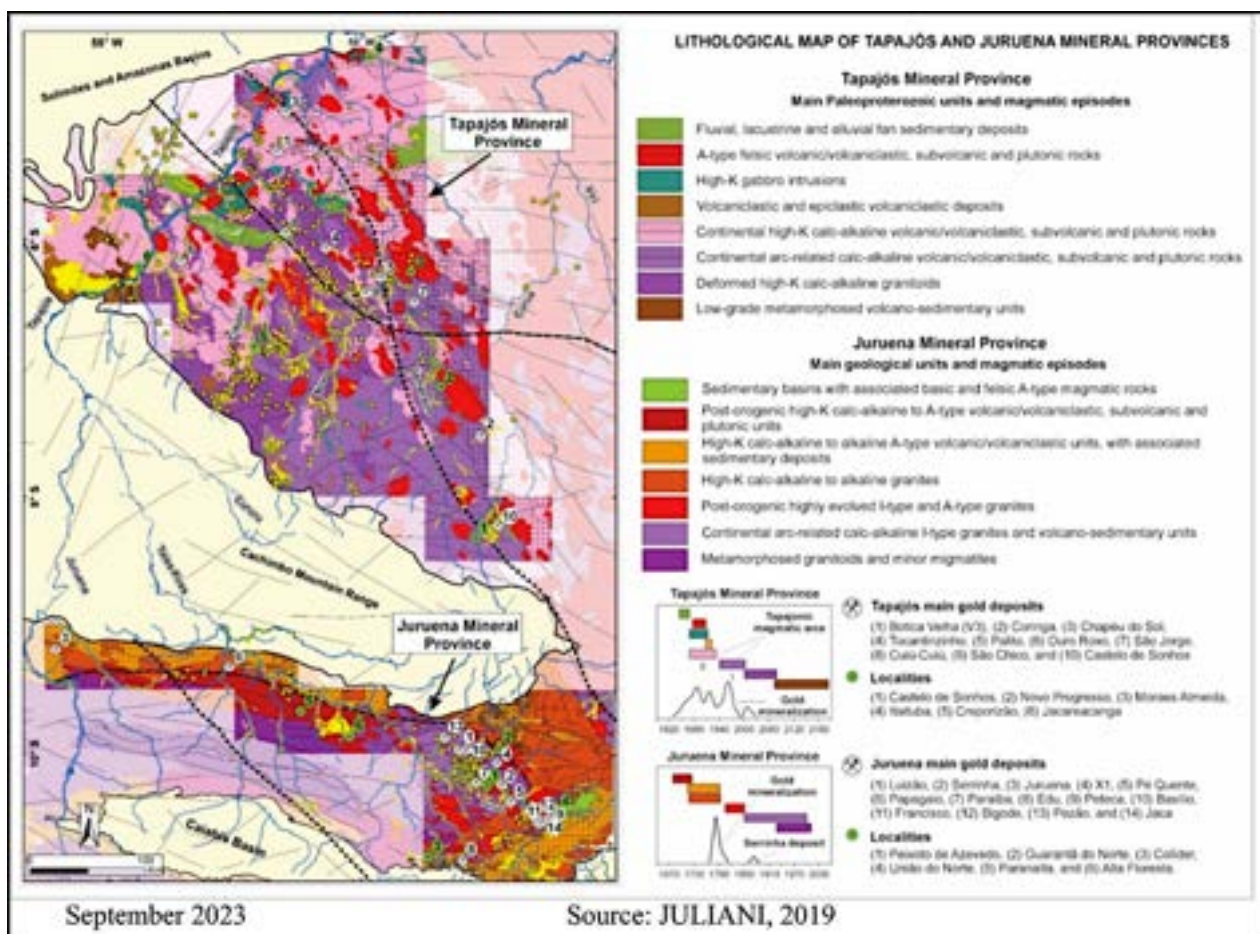


Figure 7.2 The Tapajós and Juruena Mineral Provinces lithological maps and magmatic episodes

This entire set of basement rocks and granitoids, distributed in the Peixoto de Azevêdo Domain were developed as a stable platform; in which high-grade metamorphism is rarely observed and deformational events typically developed in brittle-ductile domain, a characteristic of the numerous gold deposits known the Peixoto Azevedo gold cluster.

On the other hand, the-WAIB is composed by granitoid rocks that show different degrees of deformation and metamorphism, ranging from multi-deformed rocks to rocks with incipient foliation or isotropic.

In this context, the Nova Monte Verde Complex, one of the units identified in the Copeçal tenements ground, is represented by a strip of granulitic-migmatitic gneissic rocks, together with granitic batholiths and stocks of the Juruena supersuite, elongated through the EW structures and bordering the Nova Monte Verde complex belt of migmatitic and granulitic rocks.

The Juruena Supersuite occurs on both the north and south sides of the Nova Monte Verde Complex strip constituting a 800 km long arched structure (see maps in Figures 7.3 and 7.5).

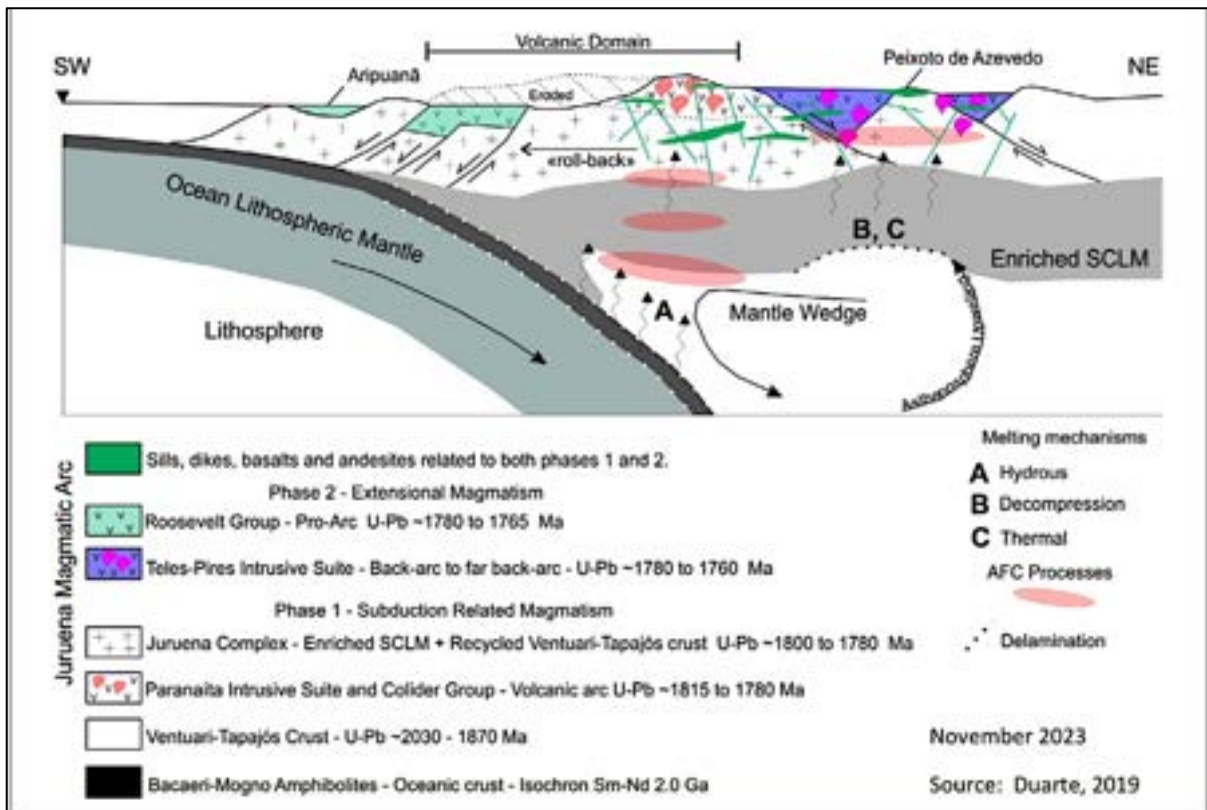


Figure 7.3 Schematic cross section of the Juruena Magmatic Arc tectonic evolution in two phases related to subduction and extensional character

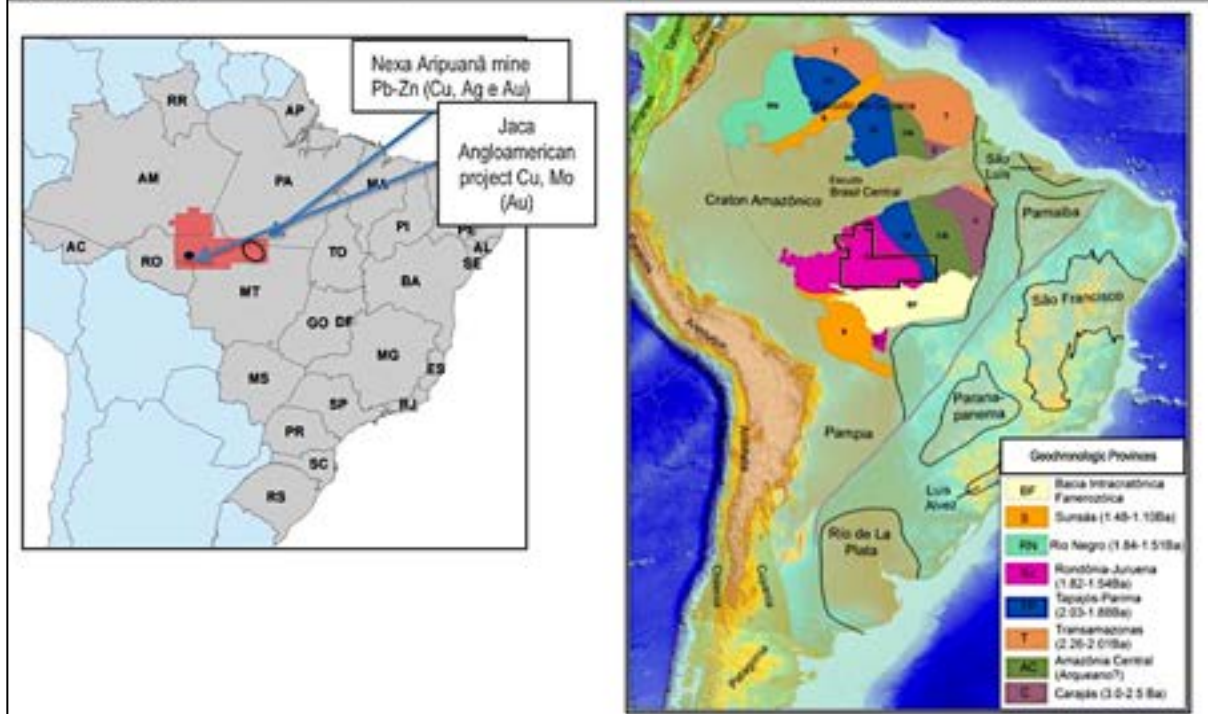
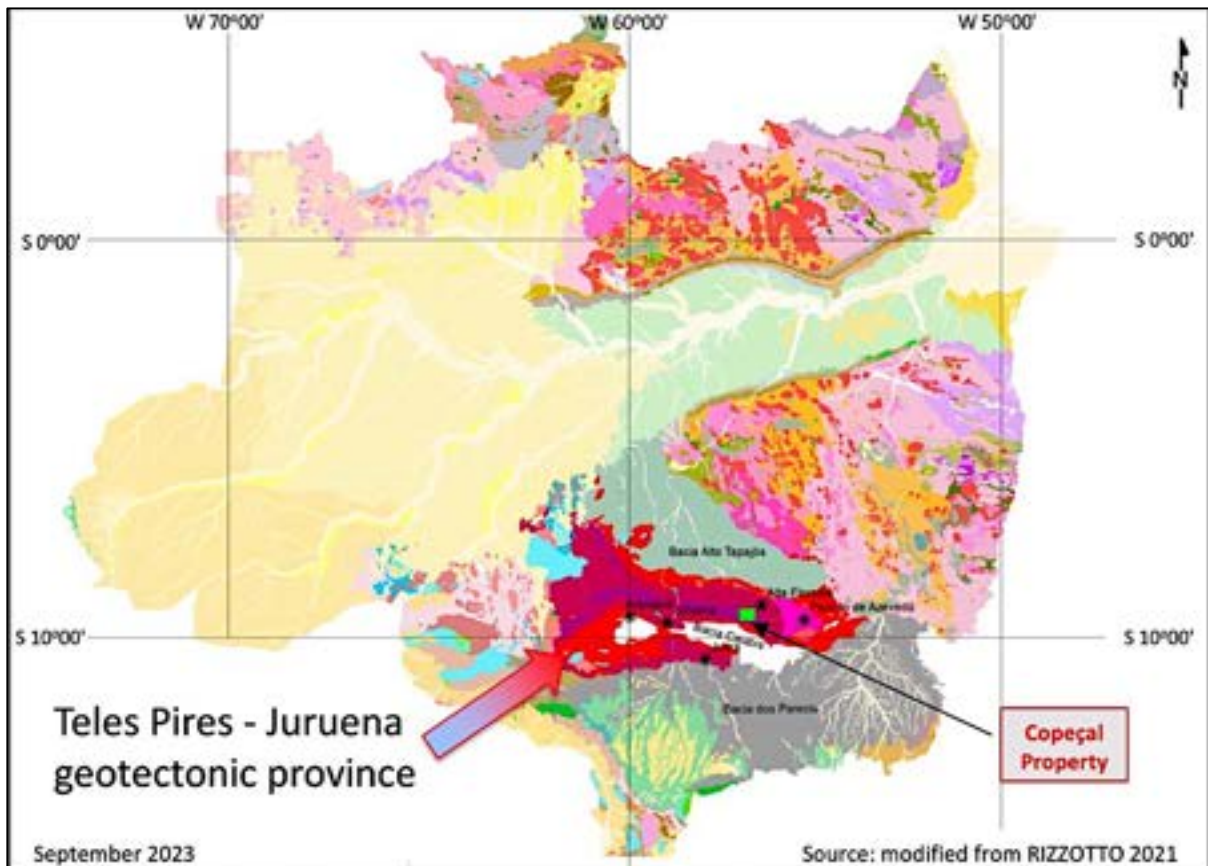


Figure 7.4 Map showing the extents of the Teles Pires - Juruena geotectonic province and the Amazon craton divided in six geo-chronological provinces

## EVOLUTION OF THE MAGMATIC ARC

At the moment three distinctive geodynamic models are considered for this plutono-volcanism (Duarte 2019). The first model admits that the Volcanic Domain magmatism, called Teles-Pires is the result of a taphrogenesis process developed around 1.8 Ga. (Tassinari, 1999; Cordani, 2007 and 2009; Barros, 2009).

The second model recognizes the Volcanic Domain as an accretionary margin volcanic belt developed on the Ventuari-Tapajós Province at 1.8 Ga, which worked as an active continental margin, resulting in the formation of the Juruena Magmatic Arc (Santos. 2000, 2005 and 2008; Souza, 2005; Duarte, 2012).

Alternatively to the interpretations above, Barros, 2009; Alves, 2013; Silva, 2014 and Rizzotto, 2019 considers that the Volcanic Domain is a late- to post-orogenic extensional magmatism, developed within the Juruena Magmatic Arc.

Based on the degrees and nature of the deformation presented by the Copeçal Project country rocks, both in the literature and the field observations, it was considered in the present report a geodynamic model that admit shifts in the tectonic regime through time switching from an accretionary margin volcanic belt to a late- to post-orogenic extensional magmatism (Duarte, 2019).

The orogeny that gave rise to the Juruena Magmatic Arc started at 1820 Ma. Compressive stresses from SW to NE transported an oceanic crust (Bacaeri-Mogno Complex) toward the already stable Tapajós-Parima Province (cratonic margin) leading to plate subduction and consumption (Santos et al. 2000; Souza et al. 2005; Duarte et al. 2012).

The interaction of the mantle with crustal sources in this accretionary environment generated hybrid magmas. Rocks related to the earliest stages of subduction are distributed in a volcanic belt which is composed of hypabyssal granites from the Paranaíta Intrusive Suite (1820 to 1769 Ma) and volcanic/volcaniclastic rocks from the Colíder Group (1803 to 1766 Ma) (JICA/MMAJ 2000, 2001; Ribeiro and Duarte 2010; Duarte et al. 2012).

Despite the strong ductile deformation, this volcanic domain is well preserved and called Teles-Pires Group undeformed domain.

Within the Copeçal Property, the Volcanic Domain occurs in tectonic contact along a transpressional WNW-ESE trending, sinistral shear zone with medium to high-grade metamorphic rocks of the Juruena Complex, or with the Teles-Pires Group Deformed Domain. It contains predominantly plutonic rocks with ages ranging from 1787 to 1764 Ma, as well as the Bacaeri-Mogno Complex, which is interpreted as oceanic crust remnant. This domain comprises the Vitória Plutonic Suite (1787 to 1765 Ma), the São Pedro (1796 to 1730 Ma) and São Romão (1780 to 1770 Ma) granites.

The geological episode that left its high-grade deformation imprint on the Juruena Magmatic Arc was the collisional Quatro Cachoeiras orogeny (Rizzotto et al. 2004; Santos et al. 2008). In the southwest of the area, closer to the suture zone, this orogeny is revealed through metamorphic ages around 1640 Ma

The orogeny was followed by post- collisional granitogenesis during the Mesoproterozoic, which nowadays is represented by the Serra da Providência Suite (1605 to 1505 Ma) (Tassinari et al. 1984).

Other events recorded by the regional stratigraphy are represented by graben-like basins, which are related to the Sunsás-Aguapeí orogeny, filled with sediments of the Beneficente Group, and the Piranhas dike swarms emplaced in the early Paleozoic (Santos et al. 2002; Duarte et al. 2012).

The schematic cross section in Figure 7.3 illustrates the proposed hybrid evolution published by Duarte, 2019.

## STRUCTURAL GEOLOGY AND TECTONIC SETTINGS

Considering the structural singularity of the Copeçal Property geographic location, an analysis of the CPRM consecutive geological surveys executed up to 2019 in the Juruena Province was carried out with emphasis on the major tectonic structures and their role in the mineralization emplacement.

The evaluation of the Copeçal Property's structural context was carried out upon a selection of the available bibliography. The information sourced from the AngloGold maps and reports and the 1:250.000 scale CPRM geological base map was compared with the data extracted and digitized when required.

Table 7.4 lists the available airborne geophysics surveys executed in the region. The CPRM base map index sheet number 1053 (*Ilha 24 de Maio - SC.21-Z-A*) covers the Copeçal Property area.

Table 7.4 CPRM airborne geophysics surveys publicly available

Cprm Sheet Index	Title	Year	Flight Height m	Survey Area Km	Flight Lines Direction	Control Lines Direction	Spacing m	Exec Company
1052	Juruena - Teles Pires (Fase I)	1992	150	36,300	N-S	E-W	2000	PROSPEC
1053	Juruena - Teles Pires (Fase II)	1996	150	22,827	N-S	E-W	2000	LASA Engenharia e Prospecções S.A.
1119	Serra dos Apiacás	2014	100	24,693	N-S	E-W	500	LASA Engenharia e Prospecções S.A.
1120	Rio Juruena	2014	100	30,603	N-S	E-W	500	LASA Engenharia e Prospecções S.A.
1121	Norte do Mato Grosso	2014	100	45,907	N-S	E-W	500	Prospeção Aerolevantamentos e Sistemas Ltda.
1122	Serra dos Caiabís	2013	100	54,918	N-S	E-W	500	Microsurvey Aero geofísica e consultoria Científica

September 2023

Source: [www.sgb.gov.br](http://www.sgb.gov.br)

The latest CPRM comprehensive update of the geological and geo-tectonic settings, source of the tectono-structural information utilized to support the present report, was coordinated by Maria da Gloria da Silva in CPRM report, published in 2008 (*Projeto Metalogenia da Província Aurífera Juruena – Teles Pires, Mato Grosso*).

The CPRM project procedures and outputs are summarized below:

- (i) All data was standardized to be compatible with former field structural reported mappings issued by Silva et al., 1980; Barros, 1994; Madrucci et al., 2002 and Souza et al., 2005;
- (ii) The densification of second and third order structures, and enhancement of eventual circular features (possible calderas) was obtained by applying an IHS fusion of the radar images from the Shuttle Radar Topography Mission ("SRTM") and the LANDSAT TM5 images (band 543). Directional filters were applied to the Terrain Digital Model (90 m resolution), along NE-SW, NS, and EW directions. Processing also included band 321 with the fusion of the Terrain Digital Model – (shadow relief and 90 m resolution), without any directional filter.
- (iii) The identification of deep magnetic structures is based on a new interpretation of the airborne magnetometry and gamma spectrometry data in conjunction with the Bouguer gravimetry data interpreted by Oliveira & Escobar (2002) to obtain a better definition of the boundaries between tectonic blocks.

The final products resulting from the analysis of the CPRM metalogeny program are shown in Figures 7.8. The CPRM structural maps encompass the area delimited in the polygon shown in Figure 7.5, the same delineated during the PROMIN geochemistry program.

- The trace at subsurface of the deep, mega structures were extracted from the interpretation made by Silva, 2008 generated from airborne gravimetry and airborne magnetometry and spectrometry (Figure 7.8).
- The shallow, subsidiary (second and third order) structures were extracted from the maps interpreted by IHS fusion of the SRTM images with LANDSAT TM5 (see Figure 7.8)
- Two airborne magnetometry localized maps were also included, one extracted from Silva. M, 2008, the other covering the Property was made available from *Avant Geofísica*.
- The 1:5,500,000 scale integrated airborne magnetometry total count was used to track the major transcurrent shear zones outside the area covered by the radar image.

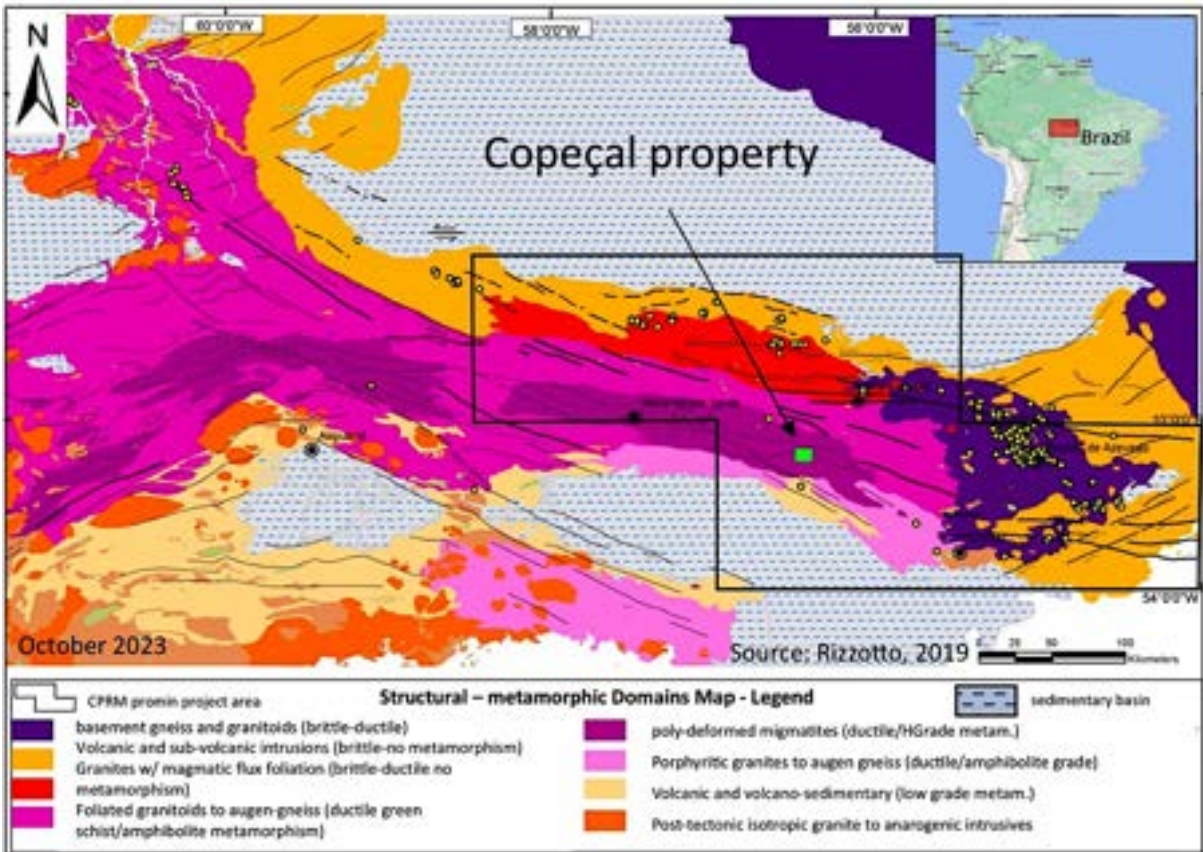


Figure 7.5 The Jurueua Mineral Province simplified structural and metamorphic domains map

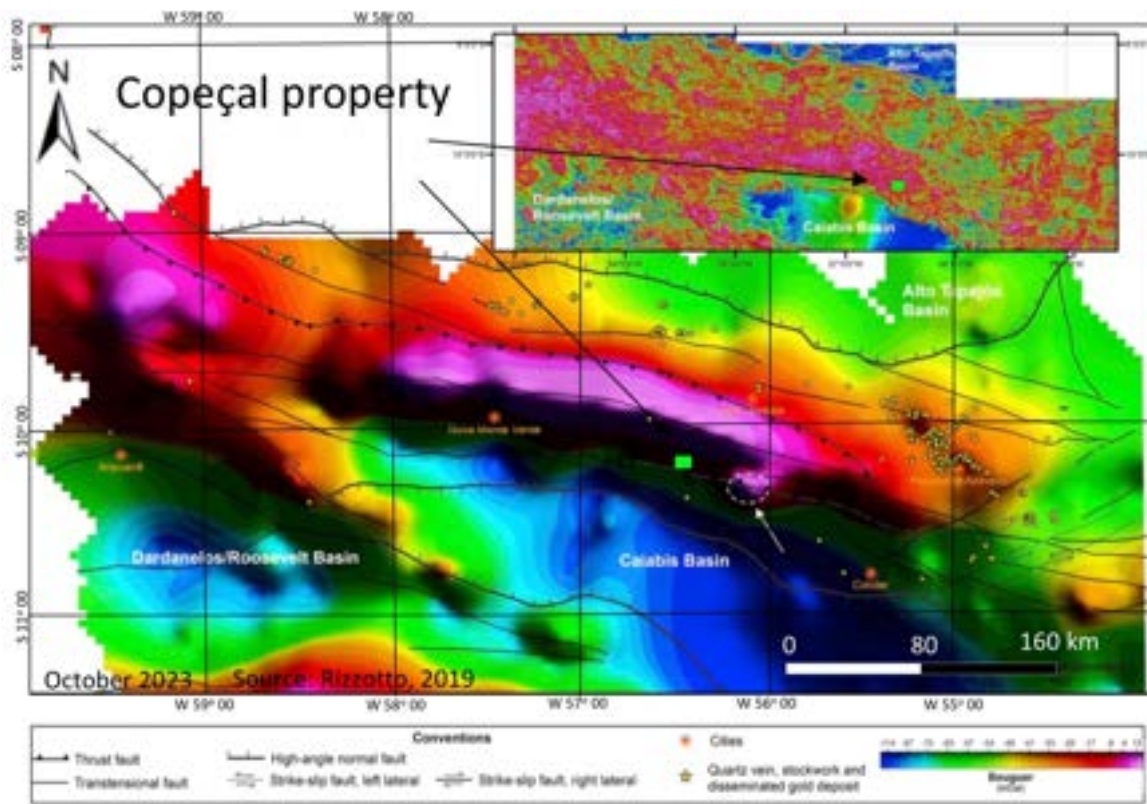


Figure 7.6 The Bouguer gravimetric anomaly attributed to the Monte Verde Complex



## GEOTECTONIC DOMAINS

Three distinct geotectonic domains are recognized in the Juruena Province (Souza 2004).

A first brittle domain (I) characterized by the abundance of granitic rocks associated to acidic to intermediate volcanism rocks constituted by gneisses of Cuiú-Cuiú Complex and granitoids less deformed of the Matupá Intrusive Suite and basic rocks of the Flor da Serra Intrusive Suite. Domain I, situated in the northeastern part of the area, refers to the Alta Floresta gold district.

A second domain (II) dominant in most part of the area, is represented by two NW-SE distinct crustal segments that constitute the core of the Juruena Magmatic Arc, in which lies the Copeçal Property.

The first segment, correspond to the pluto-volcanic terrain characteristically submitted to a brittle to brittle-ductile regime. It comprises the Juruena, Paranaíta and Colíder suites, Rio Cristalino Alkaline as well as Nhandu and Teles Pires granites.

The second segment, host of the Copeçal Project, is a medium to high metamorphic grade, dominantly ductile that includes the Bacaeri-Mogno and Nova Monte Verde Complexes, the Vitória Suite and, the São Pedro, São Romão and Apiacás granites.

The third domain (III), situated in the S-SW region, juxtaposed to the Juruena Arc, constitutes the accretionary magmatic arc (back arc type basin), characterized by meta-volcano-sedimentary terrains submitted to ductile regime (São Marcelo Group correlated to the Roosevelt Group and Nova Canaã Suite peraluminous granitic).

Binary tectonics resulting from the reactivation of the EW to WNW-ESE transcurrent brittle-ductile to brittle mega-shear zones, acted in conjunction and in a synchronous way that resulted in trans-traction zones and strike slip faults, that expanded gradually to pull-apart rhomboid basins, filled by paleo-Proterozoic sedimentation of pelitic carbonate, psamo-pelitic rocks of the Beneficente and Caiabis groups.

The main structural features of the Juruena Province are the result of the specific kinematics developed during the evolution of the magmatic arc. They have been attributed to two deformation phases, each one bearing distinct characteristics according to the rock competence and crustal position that has determined the deformation regime they were subject to. The extents of the main deformational domains in the area are shown in Figure 7.7.

### D1 DEFORMATION EVENT

The first deformation event (D1) submitted the older litho-stratigraphic units, Bacaeri-Mogno and Cuiu-Cuiu Complexes to a N65W compressive phase caused by crustal shortening responsible to generate the NE-SW structures in ductile regime. It is characterized by compressive and transcurrent tectonic dynamics in ductile and ductile-brittle regime, at meso to cata-zonal crustal depths. It is attributed to the Cuiú-Cuiú magmatic arc emplacement, approximately between 2.05 and 1.96 Ga.

The convergence and closure of the oceanic basin (Bacaeri-Mogno) occurred under severe pressure and temperature, by subduction and oblique collision conditions against the Cuiú-Cuiú Complex.

D1 deformation developed built up first, under coaxial shear caused by E-W crustal shortening. Established first under compressive dynamics, it moved to simple, biaxial shear kinematics resulting in an off-set and a rotation of the compressional vector.

The final stage of the event is attributed to the end of the Cuiú-Cuiú magmatic arc evolution.

It is marked by the generation of large dextral, transcurrent WNW-ENE trending shear zones. The final compressional vector is estimated to be N30-40W.

### D2 DEFORMATION EVENT

The second event (D2) occurred after a long period of tectonic stability, consecutive to the Bacaeri-Mogno basin closure.

It was generated in a shallower crustal depth affecting both the older Tapajós-Parima and the younger Rondonia-Juruena Geo-tectonic Provinces rocks.

Characterized by a ductile, brittle-ductile, and a brittle regime, the second compressive phase is characteristically biaxial, with a N55E stress vector that resulted in sinistral, synthetic NW-SE transcurrent mega shear zones, and dextral, antithetic NS transcurrent shear faults. It is also responsible to reactivate, under sinistral kinematics, the deep WNW-ENE transcurrent shear zones (D1) in shallower, epizonal depth (in brittle regime).

Some of these mega shear discontinuities are expressed by hundreds of meters width and dozens of kilometers long mylonitic and proto-mylonitic zones.

Based on the identified tectonic structures encompassing the Copeçal Property, a project scale structural base map was put together using all relevant deep magnetic and shallower structures resulting from the CPRM structural output. The lineaments were overlaid to the regional geological map and their position fined tuned using the available geo-referenced radar image.

### MAJOR REGIONAL FAULTS AND SHEAR ZONES

The top map in Figure 7.8 correspond to the distribution of the tectonic structures obtained in a previous study made by Parro in 1998. It does not differentiate the primary deep magnetic discontinuities from the shallower secondary lineaments. Because the deep structures were formed before the deposition of the Jurueña Complex, they are poorly expressed at surface so conventional remote sensing analysis and field mapping has miss-identified part of the structures.

The mid and bottom maps of Figure 7.8 refer to the CPRM assessment made in 2008 integrating three significantly higher resolution airborne surveys and the integration with new, processed remote sensing data.

The map in mid Figure 7.8 indicates the deep, first order magnetic structures delineated through airborne magnetometry constituted by E-W to WNW and NE lineaments. The E-W to WNW structures, first emplaced between 2.05 - 1.95 Ga are the deepest in the region, down to the MOHO interface (Silva, 2008). They represent mega, multi hundred kilometers long, continental scale structures (see Figure 7.9 and 7.10).

The bottom map comprises the secondary order, shallower structures identified by IHS fusion of the SRTM (radar) and Landsat TM images. It comprises the extensional NE/SW lineaments and the N-S trans current, dextral lineaments.

The map in the middle also includes the boundaries of the positive Bouguer gravimetry anomaly attributed to the highly magnetic Nova Monte Verde complex arched core of the Jurueña tectonic structure. Both the gravimetry and the deep magnetic lineaments are well superposed and attributed to the suture between successive accretionary event of the Jurueña magmatic arc (Silva, 2008).

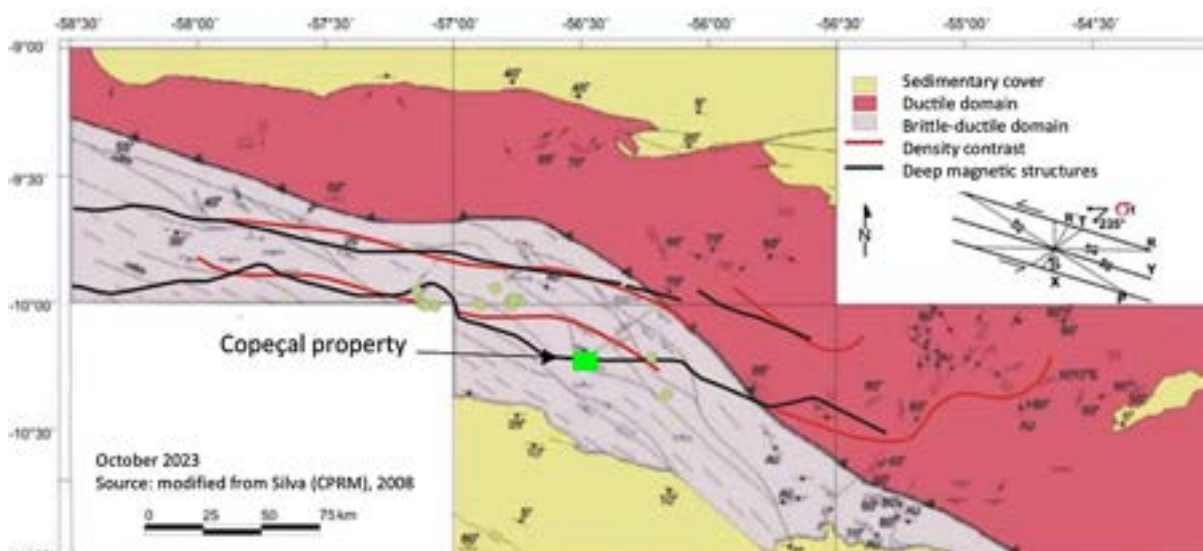


Figure 7.7 Distribution of the deformation domains

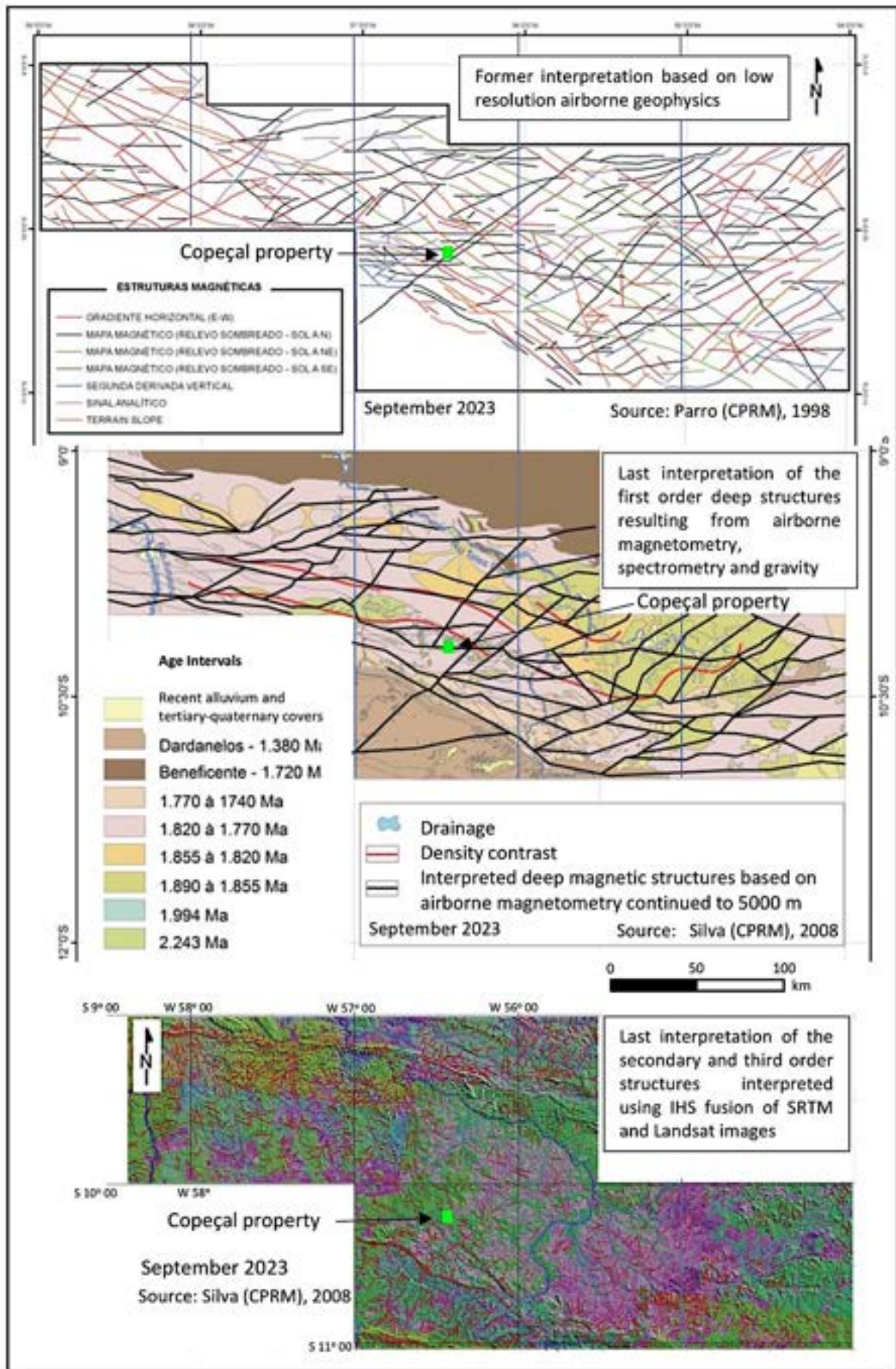


Figure 7.8 Copeçal Property identified regional tectonic settings  
 NI 43-101 CopeçalProject Technical Report – December 2024

## MINERALIZATION AT REGIONAL SCALE

The relevant tectonic structures are shown, at local and regional scales in the geological maps in Figures 7.9, and the entire Juruena province scale in the 1/5 million scale magnetometry total count map in Figure 7.10.

The maps mentioned above also include the major gold clusters, individual occurrences and known deposit. It

All three maps illustrate the clear association of the gold mineralization geographic distribution with the deep first order magnetic structures and shallower second order structures.

When overlaid with the distribution of the pathfinder elements obtained from the CPRM regional geochemistry survey, it results in a compartmentation of tectonic / geochemical domains of the Juruena Province. Some of the outputs are:

- The gold occurrences are distributed preferentially along the northern and southern borders of the WNW igneous belt constituting the Juruena geo-chronological province, preferentially associated to the WNW and NW deep magnetic structures;
- At the Eastern extremity of the province, constituted by the Alta Floresta domain, the gold clusters tend to be concentrated at the border of the Cuiú-Cuiú Complex forming a circular feature;
- The distribution of the NS later structures tends to be less prominent in the eastern portion of the Juruena province (Alta Floresta domain);
- The distribution of the tourmaline anomalous counts occurs preferentially in the mid / southern portion of the province.

The gold deposits of the region are mainly of the lode type, associated to hydrothermal breccias and stockworks. The textural and hydrothermal alteration features suggest characteristics typical of low sulfidation epithermal systems.

Most occurrences and deposits described in the academic papers and CPRM reports are structurally controlled at a regional scale by the WNW/ESE deep, magnetic lineaments responsible to conduct the mineralized magmatic fluids during their re-activation.

At project scale, the mineralization generally occurs emplaced in sinistral, subsidiary shear zones, along NE extensional faults, NW transpressive shear zones, or in the NNW sinistral shear zones.

Gold mineralization occurs in the Tapajós and Juruena Mineral Provinces as:

- (i) alluvial/colluvial occurrences;
- (ii) orogenic carbonate–sulfide-rich quartz veins in shear zones,
- (iii) stockworks, veins, and dissemination in granites,
- (iv) contact of NE/SW basic dikes,
- (v) well- preserved high-, intermediate- and low-sulfidation epithermal mineralization, and (vi) porphyry-like and intrusion-related gold systems associated with late- to post-orogenic epizonal emplacement.

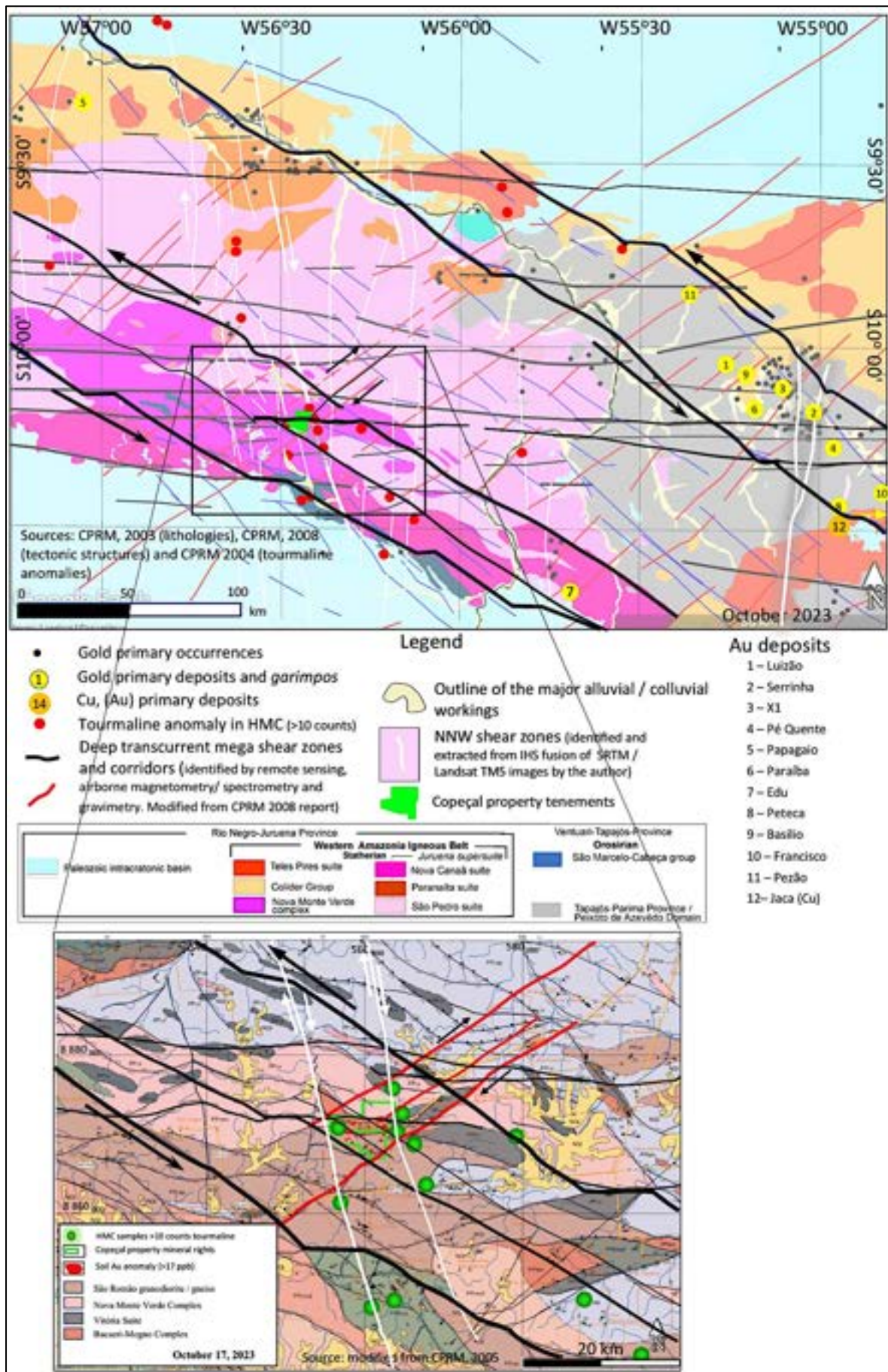


Figure 7.9 Integrated regional geology, major tectonic structures and primary gold occurrences and deposits

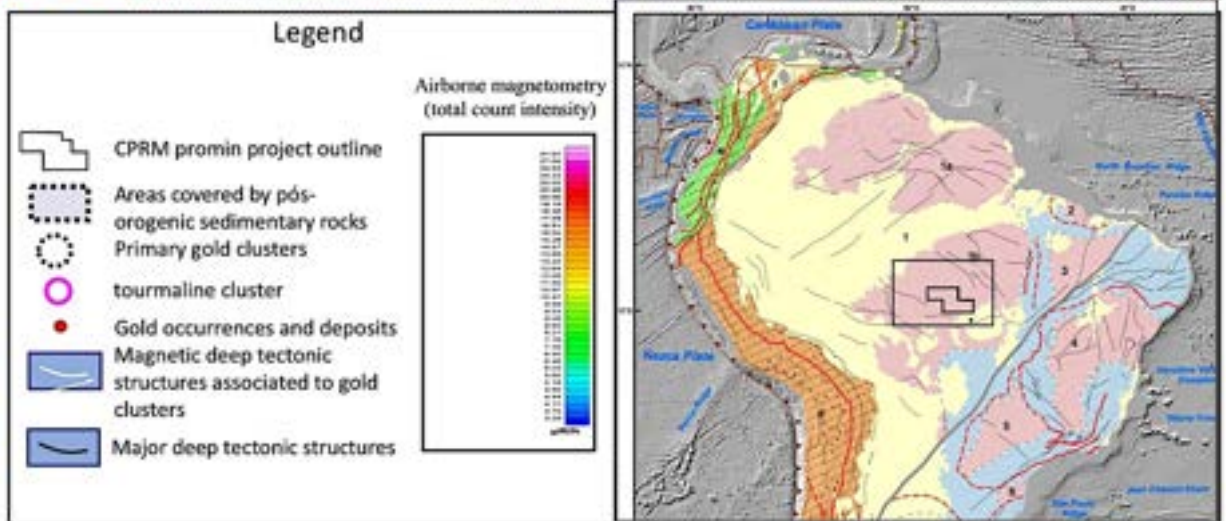
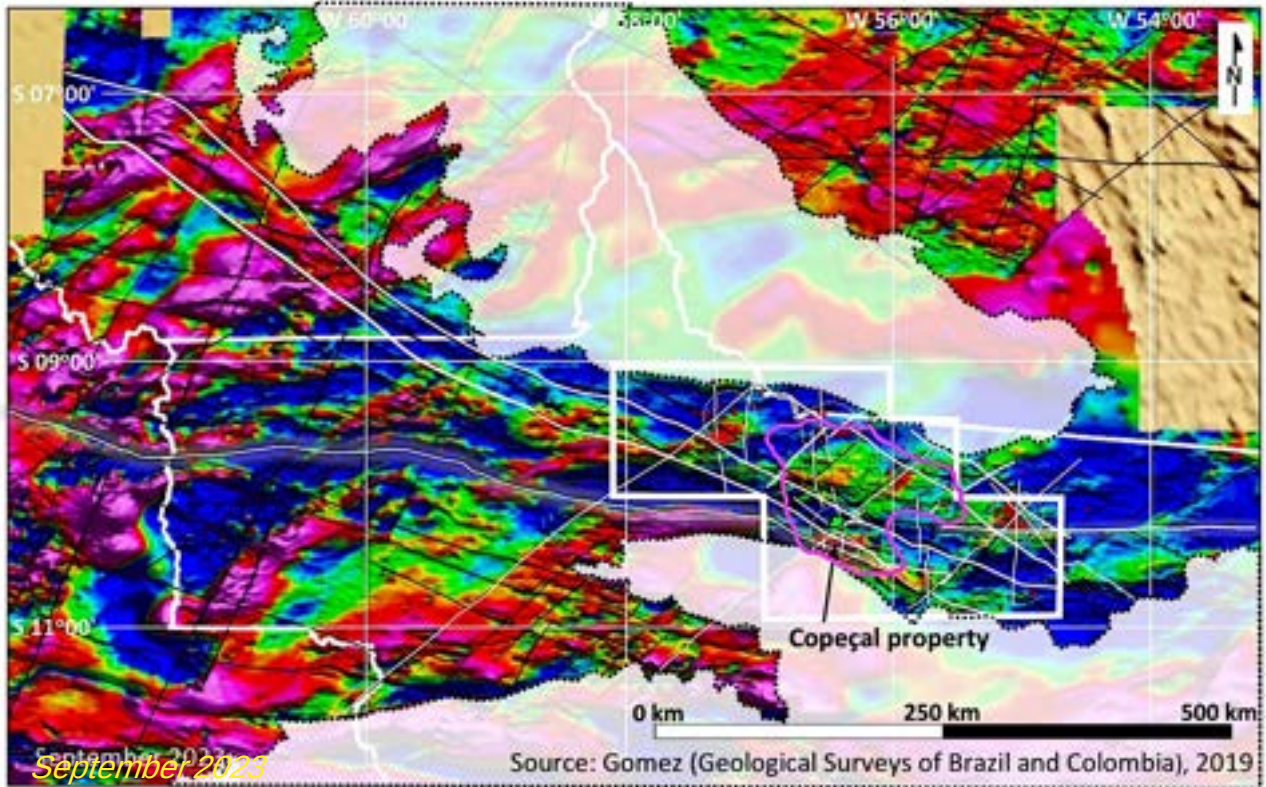


Figure 7.10 Continental scale extents of the WNW deep tectonic structures responsible to shape the SW Amazon Craton and conduct mineralized magmatic fluids

The mineralization age is estimated between 1.81 and 1.76 Ga, which corresponds in the region to the Colíder-Teles Pires volcano-plutonic event.

Both lode and disseminated mineralization are regionally conditioned to the regional deep WNW-ESE structures framework.

Locally, the mineralization tends to accommodate along the secondary or third order structures such as the Riedel "T" type extensional zones, parallel to the stress direction or along the shear components (R and R', P shear and Riedel Y). The intersections between two or more structures constitute preferential emplacements of the gold mineralization.

The lode gold mineralization is characterized by pinch and swell, subvertical veins with concentrations of iron and copper sulfides and native gold associated to quartz veins. The presence of vuggy-silica features and druse cavities and low temperature hydrothermal alteration, indicate the mineralization was formed in epizonal crustal depth, originated from magmatic fluids.

The ore zones consist of massive to banded quartz  $\pm$  carbonate (calcite, ankerite, siderite) veins with variable amounts of pyrite and chalcopyrite and minor molybdenite, galena, sphalerite, pyrrhotite, bornite, magnetite, hematite, scheelite, bismuthinite and native bismuth (Juliani, 2019).

Disseminated mineralization in hydrothermalized granitoids (Pé Quente, Garantã do Norte and Matupá suites) occurs in a subordinate manner and have characteristics of a "unconventional" porphyry-type hydrothermal system associated with a high-K calc-alkaline magmatism to shoshonitic or A-type, A2-subtype, in a post-orogenic to anorogenic setting.

Late- to post- orogenic evolved oxidized I-type granitoids host alkalic-type epithermal and porphyry-like gold mineralization with inner sodic and potassic (potassic feldspar  $\pm$  biotite or biotite) alterations grading to propylitic, muscovite-sericite, chlorite-sericite, and chlorite alterations. Potassic alteration zones are the locus of Cu-Mo mineralization, and gold-rich zones occur in muscovite/sericite-quartz-pyrite alteration.

Although the gold deposits and occurrences do not share the same spatial and paragenetic evolution concerning their hydrothermal alteration, the albitic, potassic (K-feldspar  $\pm$  biotite), biotite-rich, carbonatic, sericitic-muscovitic, sericitic-chloritic, silicification, chloritic and propylitic alteration generally occurs associated to all occurrences. It is reported that temporal evolution started with the albitic alteration, followed by pervasive K-feldspar  $\pm$  biotite, biotitic, sericitic-muscovitic, and carbonatic alteration.

## GEOLOGICAL SETTINGS AT PROJECT SCALE

### LITHOLOGICAL UNITS

The Copeçal Property lies in CPRM geological base map sheet *Ilha 24 de Maio (SC.21-Z-A)* 1:250.000 scale. The report and attached maps were published in 2005. It is today the latest integrated geological map available from CPRM (see local stratigraphy and cross section in Figure 7.12 and map in Figure 7.11). A revised, 1/100.00 scale geological map of the Copeçal area was identified in the appendix of the CPRM Anomaly Map relative to SGB/CPRM sheet SC 21-Z-A-II published in 2020. Unfortunately, the Technical Report was completed when the report was identified. Beside some stratigraphy re-positioning, the modifications between each version refers to the elimination of the flexure towards north of the Bacaeri-Mogno enclave (partially modified in the proposed framework) and presence of scattered NE/SW dikes in the SE of the Project area associated to "T" extensional structures.

Based on the 2005 version map the study area, the metamorphic Nova Monte Verde Complex occurs in tectonic contact along a transpressional WNW-ESE trending, sinistral shear zone with medium to high-grade metamorphic plutonic rocks of the Juruena Complex comprising the Vitória Plutonic Suite (1787 to 1765 Ma) and São Romão (1780 to 1770 Ma) granites and rocks of the Bacaeri-Mogno Complex, which is interpreted as oceanic crust remnant (Souza et al. 2005).

The Bacaeri-Mogno Complex quartz schists proto-mylonite (meta-sediments) lenticular body occurs emplaced as an enclave along the WNW/ESE deep structure that constitute the tectonic contact, between the São Romão meta-granites to the south, and the Nova Monte Verde Complex granodiorites, monzonites and sienogranites to the North.

In addition to the units listed above, in a small area of the north-eastern corner of the tenements, tonalites of the Vitória Suite are mapped bordering the Copeçal Property (see Figure 7.11).

#### **The Bacaeri-Mogno Complex**

Tectonic history of the southern portion of the Rio Negro-Juruena Province may start with the deposition of psamo/pelitic sediments, precursor of the Bacaeri-Mogno migmatites and granulites, and the intrusion of mafic sills and dykes in the Tapajós crust, provided by mantle up-welling in a intraplate setting.

The sedimentation of the Bacaeri-Mogno protolith occurred between 1.87 Ga, which is the age of the youngest zircon grain in paragneisses, and 1.80 Ga, which is the age of high-grade metamorphism impressed in Nova Monte Verde complex.

The Bacaeri-Mogno metasedimentary sequence is composed by migmatites (aluminous para-gnaisses-kinzigites) with intercalated lenses of quartzite, BIF (carbonatic cherts) a mafic intrusive complex.

The sequence was deformed under high angle compressive regime, associated with a regional ,high-grade metamorphism (high-grade amphibolite to granulite) resulting in a strong, penetrative, striking EW foliation.

According to the CPRM 1:250000 scale geological map (2019), an 8 km strike long per 2.5 km wide, insulated “slice” of Bacaeri-Mogno Complex meta-sedimentary unit is enclaved along the tectonic contact.

The base map shows an ellipsoid, lenticular shape of the muscovite-sericite quartz schist partially along the tectonic contact and about half of it, forming a flexure toward north, and bordering a NW shear. The shape of the quartz-schist enclave suggests it has been dragged by the NW sinistral fault (see Figure 7.11).

Metatexites and diatexites are equally distributed among the Bacaeri-Mogno paragneisses.

The most common textures in the paragneiss are stromatic, schlieren, nebulitic and schollen. Flow banding is characterized by mafic schlieren. Globular clusters and eye shaped K-feldspar and quartz are bordered by biotite + sillimanite + garnet, which represents the melanosome. Leucocratic bands are formed by quartz + K-feldspar + plagioclase (leucosome) and mesocratic domains consist of plagioclase + quartz + K-feldspar + cordierite + bio- tite.



Contacts, from the Bacaeri-Mogno rocks with other Nova Monte Verde units or São Romão granites are represented by expressive shear zones or through transitional contacts when occurring in migmatitic domains. Lenticular mega-enclaves or tectonic slices of various dimensions are the usual shape of Nova Monte Verde rock bodies.

It is accepted that the Nova Monte Verde Complex delineates a crust suture zone, enhanced by the Bouguer gravimetric discontinuity (Frasca, A. et al 2005). Such suture correspond to a collisional event characterized by high temperatures, ductile shear zones, under progressive compressional, oblique regime resulting in intense magmatism.

These rocks present a mylonitic foliation and/or gneissic banding, striking EW to NW/SE representing an underthrust structure with tectonic kinematics from SW to NE.

Therefore, rocks from the Nova Monte Verde Complex were subducted from SW to NE under the continental plate constituted by the Tapajós Province ranging from 2.2 Ga to 1.87 Ga (Vasquez, Ricci & Klein, 2002).

The Nova Monte Verde Complex stands out in the airborne magnetic due to their high, disseminated magnetite contents, in both the supracrustal and plutonic lithotypes. Gamma-spectrometry maps returned low K and U but high Th values (see map in Figure 7.6).

### **The Vitória Plutonic Suite**

The Vitória Plutonic Suite comprises intermediate to acid calc-alkaline (Ribeiro and Duarte 2010) plutonic rocks including metadiorites, metaquartz-diorites, metatonalites, and metagranodiorites.

The rocks are spatially arranged as sigmoidal-shaped bodies deformed under a ductile structural regime driven by a complex set of steeply-dipping ( $\sim 70^\circ$  to  $90^\circ$ ) oblique shear zones, striking E-W with inflections to NE- SW and NW-SE (Pinho et al. 2003; Souza et al. 2005; Ribeiro and Duarte 2010; Duarte et al. 2012).

Macroscopic features mostly observed in these rocks are of proto-mylonite texture and gneissic layering. In addition, incomplete magma mixing and mingling features are common, such as elongate dioritic enclaves.

### **The São Romão Granite**

The São Romão Granite is constituted by a series of stretched and elongated batholites and stocks, predominantly composed by calco-alkalin, high K fine-grained granites and subordinated micro-granites and granodiorites. It may occur as sheared, discordant micro-granite dykes (aplites). WNW-ESE striking proto-mylonitic, mylonitic and gnaissic structures are predominant in all lithotypes.

Emplaced in mesozonal settings, it was submitted to ductile deformation, under trans-pressure and oblique trans-tensional kinematics. The foliation strikes WNW/ESE dipping

NNE. Assymmetric, isoclinal tight folds were generated through the compressional phase. Pinch and swelling features are common.

Contacts with the Vitoria Suite, and the Nova Monte Verde Complex occurs by fault, intrusion or locally transitional. With the Bacacari-Mogno Complex the contacts are usually by fault or or oblique, contractional shear zone.

### **TECTONIC STRUCTURES**

The mid-southern part of the province is characterized by ductile to brittle- ductile, metamorphic rocks of the Juruena southern belt, as opposed to the brittle domain of the Alta Floresta mining camp situated at the eastern end of the Juruena Province.

The Property lies at the intersection of two mega deep magnetic discontinuities, one of them represented by a 50 km wide, WNW/ESE sinistral, transcurrent shear corridor, the other a NE/SW trans tensional dextral fault/shear zone.

In addition to the WNW and NE deep mega structures, the Property is also intersected by two shallower lineaments, a 10 km wide, NNW/SSE transcurrent, dextral shear zone and a NW/SE sinistral shear corridor.

Immediately to the south of the Property, the intersection of the shear corridors is marked by a flexure of the Juruena southern belt characterized by a mega sinistral duplex where are hosted the Cabeça gold occurrences including the Gil and Fabiano *Garimpos*.

The tectonic deformation, particularly intense in the area encompassing the Copeçal Property, is attested by the strong segmentation of the Juruena and Nova Monte Verde Complexes units shown in geological map in Figure 7.11.

The presence of large, isoclinal, dextral folds situated in both the São Romão Granites to the south and the Nova Monte Verde monzonites to the north attest the ductile to ductile-brittle deformation characteristics of the Copeçal Property host rocks.

The geologic-structural plan map and cross section of the Copeçal Property shown in Figures 7.11 and 7.12 were modified from the CPRM 2005 SC.21-Z-A.

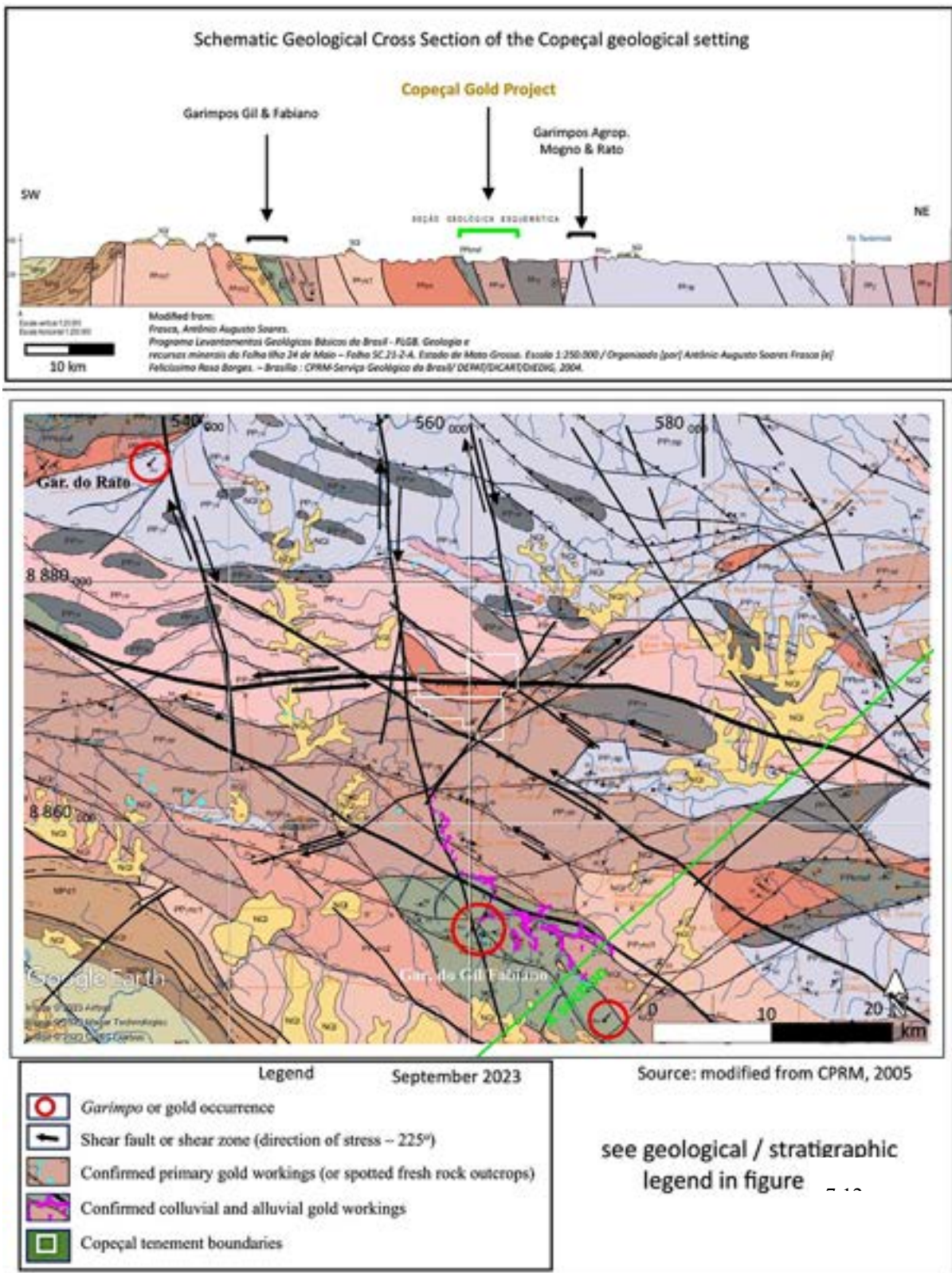


Figure 7.11 Geostructural map and cross section of the Copeçal Project area

### Litho-stratigraphy

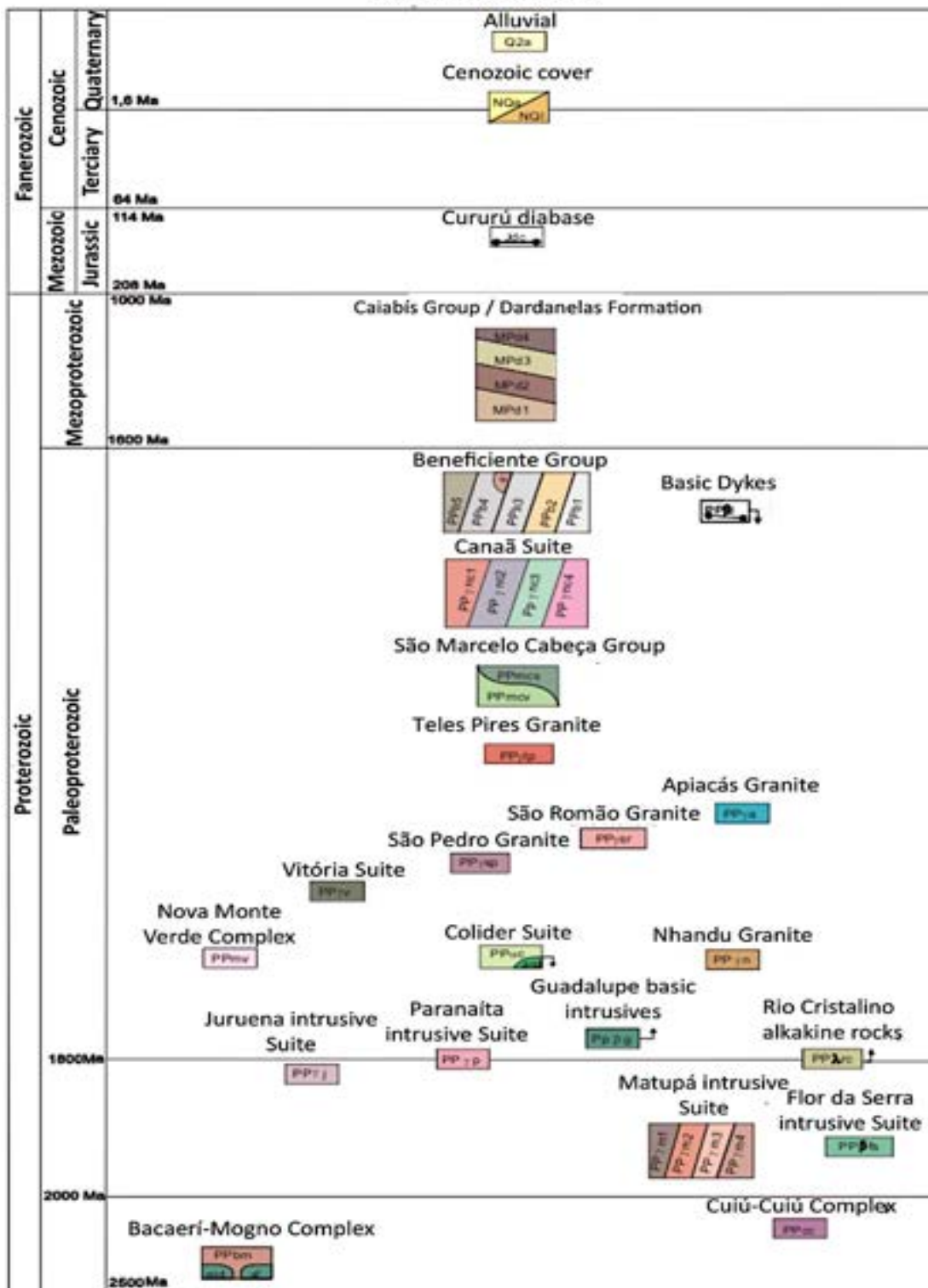


Figure 7.12 Litho-stratigraphy legend of the Ilha 24 de Maio (SC.21-Z-A) 1:250k scale geological map

A preliminary version of the Project geological draft map was prepared by the Author based on the geological data presented in Section 7.

The 2004 CPRM 1:250k scale base map was used as a base map, the modifications were introduced in two steps (see map F in Figure 7.13. :

Step 1 consisted in overlying and integrating the regional tectonic lineaments and the AngloGold digitized geological grid map (Figure 7.13 map B) to the CPRM 2005 base map (Figure 7.13 map C). The granitoids ("**granitoid Domain**") mapped south of the E-W structure are interpreted here-in as São Romão Granites while the intrusive at the northern limit of AngloGold map correspond to the Nova Monte Verde Complex units. The "quartz schists domain" delineate the Bacaeri-Mogno complex.

As a second step, the As, Pb, and K-Th-U ternary grid assays. sourced from the digitized AngloGold soil geochemistry (Figure 7.13 map E) were employed to adjust the lithological contacts between the para derived Bacaeri-Mogno meta sedimentary rocks and the Juruena Super-suite intrusive, Finally, the regional magnetic lineaments were introduced and fine-tuned based on the CPRM 1:100,000 scale airborne magnetometry (Figure 7.13 map D).

The revised geological frame-work resulting from the technical assessment is presented in Section 9.

*Note: the local geological settings exposed in this report are not supported by field observations. As recommended in Section 26 further studies based on field observations are imperative to validate the proposed framework in order to effectively support future exploration.*

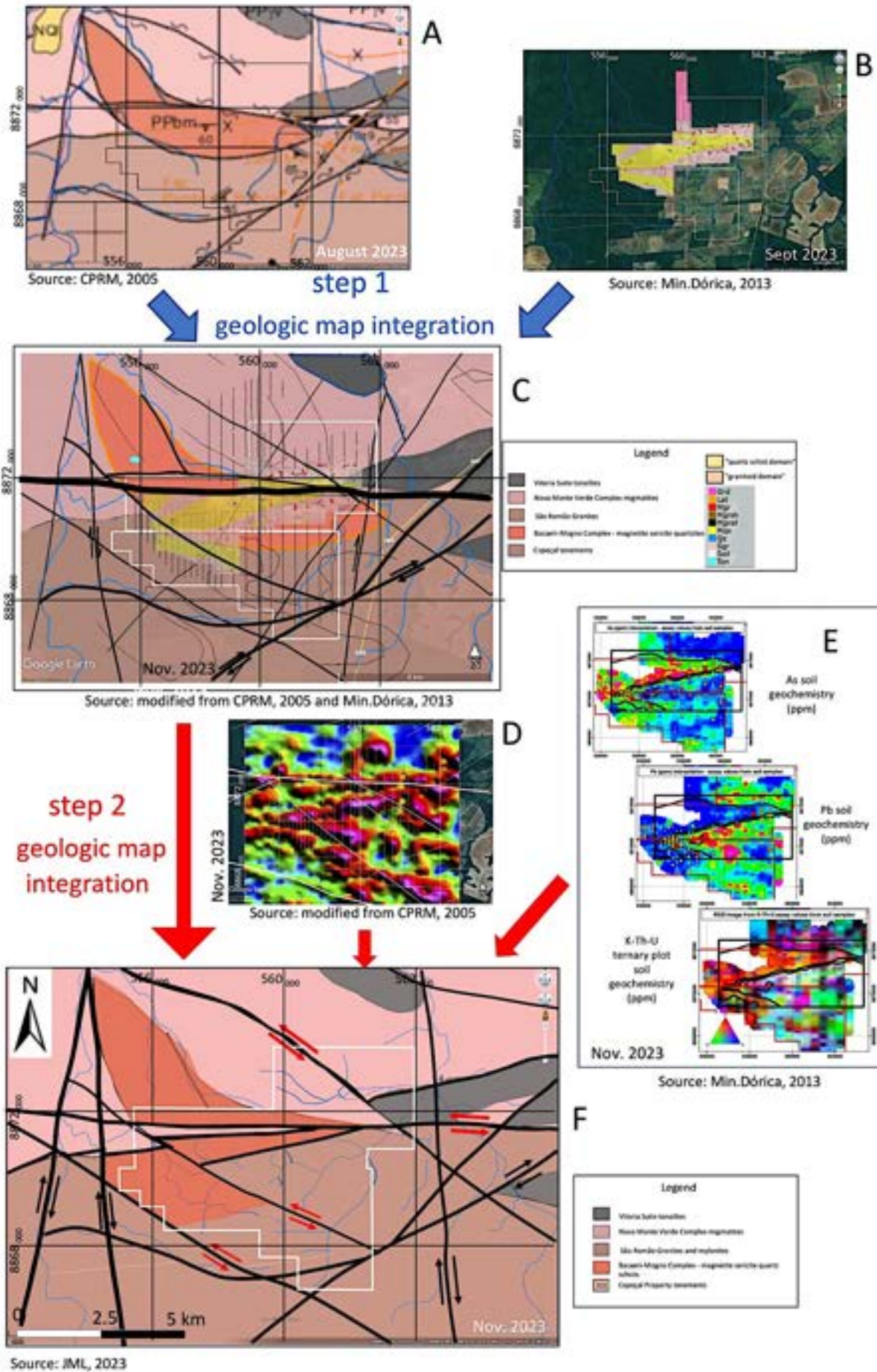


Figure 7.13 The Copeçal local geological map two steps integration

## 8. DEPOSIT TYPES

To the Author's knowledge, the source of the gold soil anomalies identified at the Copeçal Property has not been exposed to date.

Regionally, the gold occurrences and deposits has been extensively described in the literature (see Section 7). The map in Figure 8.1 shows the distribution and classification of the mineral deposits in the southern part of the Amazon Craton. The data shown in Figure 8.1 suggests a strong predominance of magmatic-hydrothermal deposit types in the Juruena and Tapajós Mineral Provinces.

Based on the assessment made of the available information, the Property has potential to host structurally-controlled gold mineralization related to meso-epithermal gold lodes of magmatic-hydrothermal affiliation.

It is the Author's opinion that the structural framework described in Section 7 will unlikely hosts disseminated, stockwork mineralization style deposit.

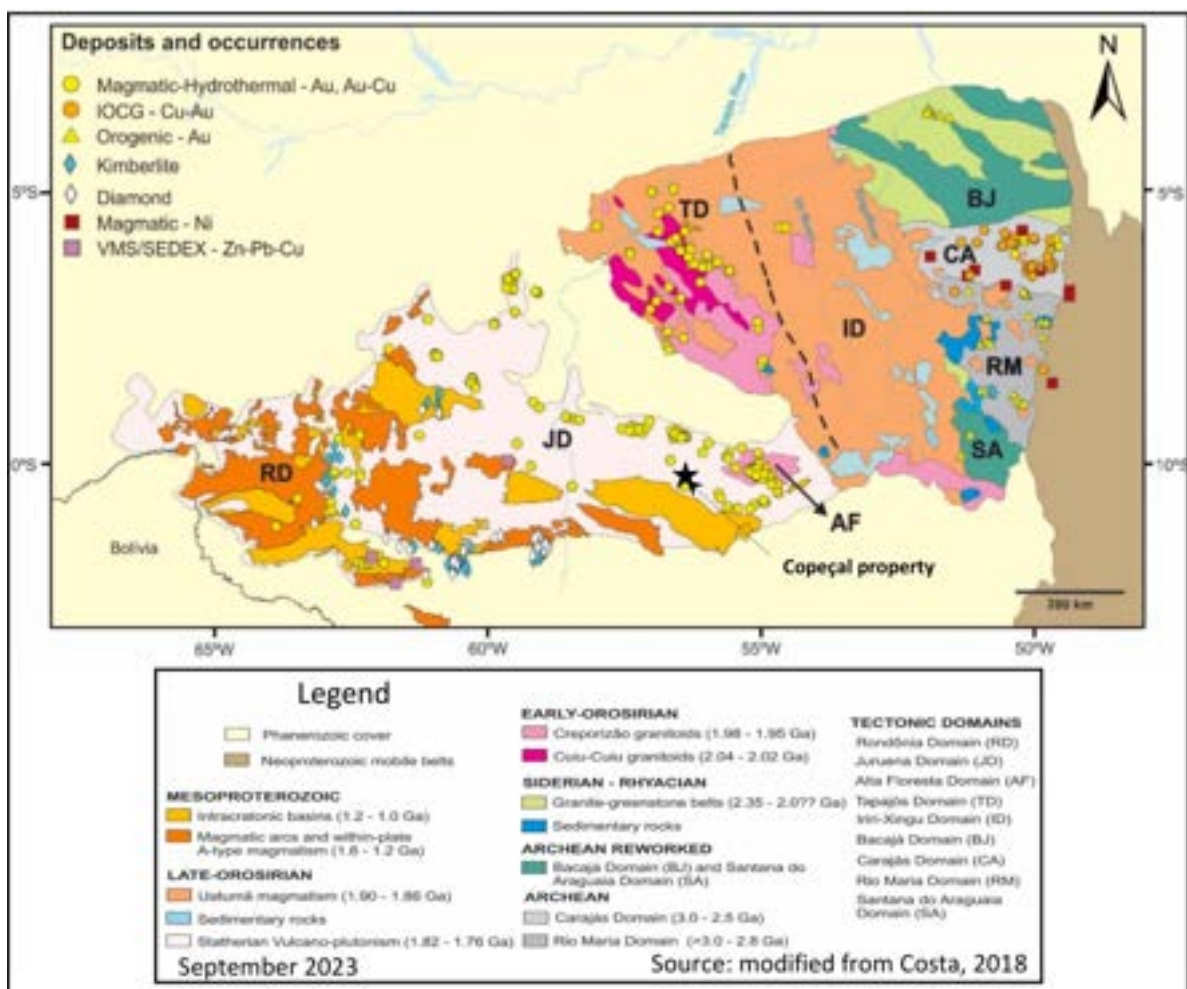


Figure 8.1 Mineral Deposit and occurrences of the southern Amazon Craton

## 9. EXPLORATION

### INTRODUCTION

The assessment and reconstruction of the successive steps taken by AngloGold and Boa from 2010 to the present time destined to identify economic gold mineralization at the Copeçal Property was based on the analysis made of the exploration reports filed by AngloGold, the data made available by Boa and all the gathered information used to delineate the regional and project scale geological settings exposed in Section 7.

The exploration activities undertaken on the property by both companies haven't reached the required maturity to expose the primary source of the gold mineralization identified through the soil and auger drilling geochemistry.

As such the Copeçal Gold Property is still characterized as an early-stage exploration property.

The opinions and conclusions exposed herein, relative to the outcomes of each exploration activities are solely based on the data analysis as the author did not have the opportunity to discuss or liaise with AngloGold geology staff any of the technical aspects that were certainly taken into consideration to conduct the exploration activities.

In regard to Boa exploration work, the technical discussions were limited to the drone magnetometry survey. During the field visit, the author had the opportunity to discuss the technical aspects of the raw data collection with the Avant field crew responsible to conduct the drone survey, and in a second instance, the processed outputs reported in October 2024.

### EXPLORATION EXECUTED BY ANGLOGOLD

#### STREAM SEDIMENT REGIONAL GEOCHEMISTRY

AngloGold exploration activities at the Copeçal property were launched in 2010 with a regional scale stream sediment and heavy mineral concentrate geochemistry programs encompassing a total of 10 contiguous mineral right titles.

AngloGold stream sediment campaign was probably motivated by the reported results from CPRM of the HMC and stream sediment regional survey displayed in the regional Map 6.4.

The regional exploration campaign resulted in the identification of several anomalous stream sediments samples. Figure 9.1 shows the distribution of the stream sediment samples collected by AngloGold in the vicinities of the Copeçal Property including two outstanding results (151 ppb and 142 ppb) and three medium/low grades (12 ppb, 9 ppb and 6 ppb). The results obtained by the AngloGold stream sediment campaign confirmed the information published by CPRM, GoldHaven's tenements being situated in the Southwestern hemisphere of CPRM gold anomaly.

#### EXPLORATION GRID SETTLEMENT AND SOIL FIRST PASS GEOCHEMISTRY (400 M X 40 M)

The stream sediment anomalies were followed-up by settling a north-south oriented, wide-pattern exploration grid covering the ground attributed to be the source of the stream sediment anomalous values.

The first phase that took place in 2010 covering a total of 3,272 ha, was characterized by a 400 m x 40 m grid pattern (400 m distance between lines and pickets every 40 m along the line).

It was settled to cover the area encompassing the best stream sediment sample results. The extensions of the exploration grid settled by AngloGold is shown in Figure 9.1. The first pass (400 m) and second pass (200 m follow-up) and the areas covered by the grid are distinguished according to the legend.

*Note: the soil grid displayed in Figure 9.1 refers to the original grid as originally settled by AngloGold. The soil assays results made available to the author do not refers to the complete grid extension shown in Figure 9.1. Grid lines shown in red refers to the missing information.*



## SOIL INFILL 200 M X 40 M EXPLORATION GRID

The second phase constituted by an infill and step-out program (200 m x 40 m) comprised 48% of the total grid surface (1580 ha out of 3,324 ha).

The assay results made available by Boa, accompanied by an iso-grade contour map, originally split in more than 20 range brackets. For the assessment purpose, the soil sample results were plotted distributed in 8 grade range brackets (see Map A in Figure 9.2) and in further maps reduced to 4 ranges starting from 10 ppb to enhance the distribution morphology (see Map B in Figure 9.2).

Standing out from the first pass soil sampling program, two anomalies named here-in SW and NE anomalies, were followed up with 200 m infill grid lines. The other 16 anomalies were not assessed. Most of them are more punctual, insulated spots due to the excessive distance to the neighboring grid line.

The SW Anomaly 10 ppb Au outline crosses diagonally (N55°W) a total of seven 200 x 40 m grid lines. The 10 ppb outline measures between 1,500 m in strike and 550 m width along two thirds of its total length. A 200 m diameter anomaly core grading above 40 ppb occurs in the mid-southern part of the 10 ppb iso-grade contour, constituted by five consecutive samples that include the sample population highest grade (sample 16502245 with 539 ppb Au).

Despite the overall dimensions of the 10-ppb outline that covers a total of 49 ha of the target, the intensity of the anomaly quickly drops to 22 ha area above 20 ppb, then to no more than 4 ha above 40 ppb (6 samples) and 1.4 ha relative to 3 samples above 80 ppb (see Map C in Figure 9.2).

The NE Anomaly, the second more expressive anomaly in size, is defined by only two grid lines 400 m apart from each other. Its strike length ranges from 400 to 800 m with 320 m width delineated by grid line 561900 E. The higher-grade core is positioned at the western extremity, on line 561500 E. It is marked by two consecutive soil samples presenting grades of 52 and 110 ppb Au values. Like the SW Anomaly the 30-ha area of the 10-ppb outline drops to 13 ha (20 ppb outline), down to 1.8 ha (2 samples) for the 40-ppb outline and has only 1 sample above 80 ppb (see Map B in Figure 9.2).

## ROCK GRAB GEOCHEMISTRY

A total of 67 rock grab samples were collected during the geological mapping of the grid.

Only five samples returned grades above 5 ppb grade detection limit (see maps A, B and C in Figure 9.2). Three of them were collected in the vicinities of the SW Anomaly, positioned in the 2 - 5 ppb range grade bordering the outer contour of the SW Anomaly. This includes the 20 ppb highest grade of the rock sample campaign. The other two samples, grading 11 and 6 ppb located at mid-distance of the anomalies, in between two 400 m grid lines were not detected by the soil sampling program.

Only one rock grab sample, out of the 67 samples felt inside the projected 10 ppb soil iso-grade contour. It suggests that the rock sample collection took place before or during the ongoing soil program first phase, when no soil assay results were yet available.

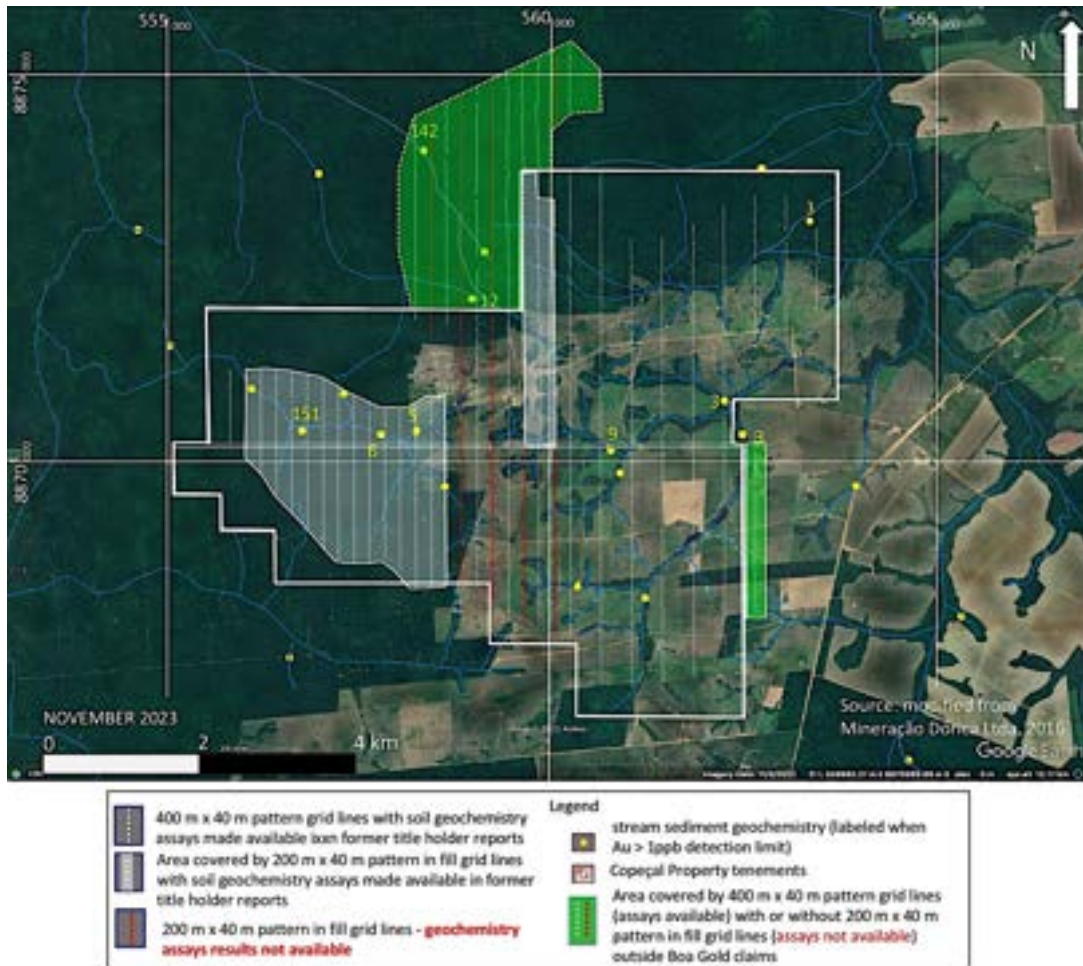
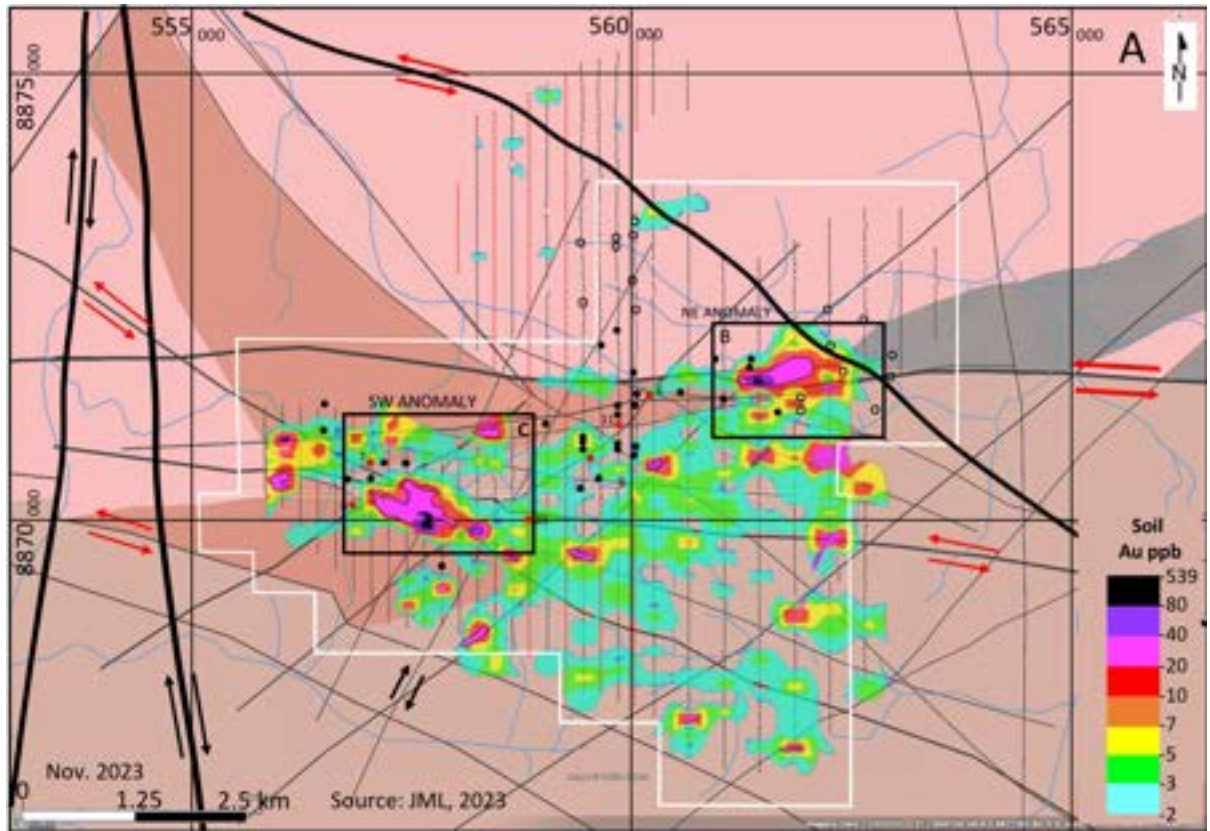


Figure 9.1 Distribution of the MDL stream sediment samples and exploration grid settled in 2010 / 2011



- Legend**
- Vitoria Suite tonalites
  - Nova Monte Verde Complex migmatites
  - São Romão Granites and mylonites
  - Baccaeri-Mogno Complex - magnetite sericite quartz schists
  - Rock grab sample (Au grade unknown)
  - Rock grab sample (Au < 5ppb detection limit)
  - Rock grab sample (Au grade in ppb)
  - Stream sediment sample (Au grade in ppb)
  - AD Auger drill hole location and label
  - AC Air Core drill hole location and label

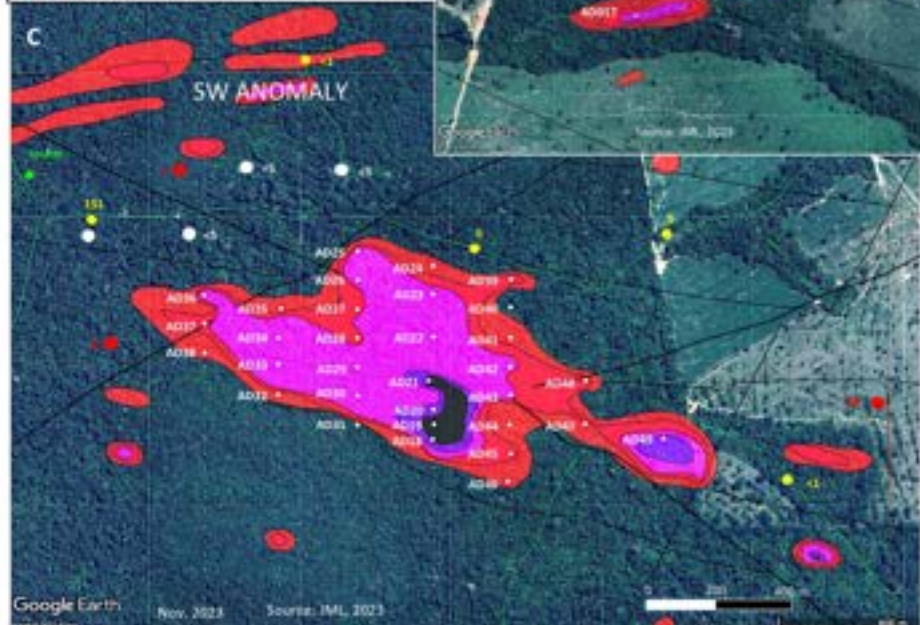
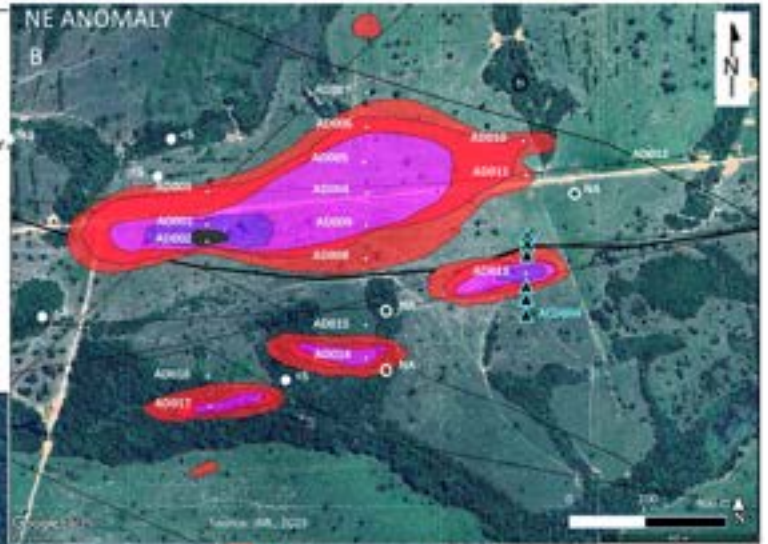


Figure 9.2 Map A: Rock grab samples and contoured soil assay result iso-grades. Maps B and C: Location of auger and Aircore drill holes

## MECHANIZED AUGER DRILLING EXECUTED BY ANGLOGOLD

A total of 353.8 m distributed among 49 mechanized auger drill holes were executed from April to August 2012. 32 holes (258 m) were destined to follow-up the SW Anomaly identified during the soil sampling campaign while the other 17 holes (95 m) were drilled at the NE soil anomaly.

Drill holes average depth at NE Anomaly returned 5.6 m against 8.1 m from the SW Anomaly suggesting the latest may be characterized by thicker soil.

Aiming to test the “roots” of the soil anomalies, the auger drill holes were positioned every 80 m along five contiguous grid lines, 200 m apart of the SW Anomaly and three grid lines, 400 m apart from each other at the NE Anomaly.

An assessment of the gold contents spatial distribution was made by plotting, for each of the auger holes, the accumulated *grade x thickness* of those intervals composed by contiguous, anomalous (>20ppb) samples.

The resulting punctual distribution of the auger drill hole "grade-thickness" values and the contouring of contiguous auger composites above 140 ppb-m are shown in maps A and B of Figure 9.3, overlapped to the gold soil iso-grade contours above 10 ppb. Low, medium and high contents of the magnetic susceptibility readings reported in the consulted logs were also included in Figure 9.3 maps.

As a result, two 800 m long low-grade clusters were identified, both at the SW Anomaly, delineated by 12 out of 18 auger hole composites above 140 ppb-m.

Both clusters strike N70W, and are aligned with the SW soil anomaly longitudinal axis suggesting it does not link to the NE Anomaly, a fundamental premise that governed the planning of all the successive exploration steps since the grid opening and consequent soil, auger, air core, IP and the drone magnetometry survey.

The most continuous cluster is delineated by 8 contiguous auger holes distributed in five contiguous grid lines, 200 m apart from each other. It is positioned along the southern border of the SW anomaly (see Map A in Figure 9.3). All the eight auger holes present continuous sample intervals varying from 7 to 10 m vertical width, ranging from 25 to 80 ppb Au (40 ppb average grade). Despite the low-grade values, these auger holes indicate a consistent trend which is not only 7 to 10 m thick but systematically higher grade than the surrounding soil samples..

Saprolite fragments described in 11 of the holes in or neighboring the cluster boundary suggest that the SW Anomaly is hosted in, and around the tectonic contact between the São Romão Granite units to the northeast and the muscovite-quartz schists of the Bacueri-Mogno Complex to the southwest.

Auger composites above 140 ppb-m resulting from the NE Anomaly are limited to auger holes ADC001 (grid line 561500E) and ADC013 (grid line 562300E). Each of the holes is positioned on the opposite side of the most expressive soil grid of NE Anomaly (561900E).

Because none of the auger drill hole composites from the mid line 561900E succeeded to return composites above 140 ppb-m, holes ADC001 and 013 resulted delineating two insulated clusters 800 m apart from each other (see Map B of Figure 9.3).

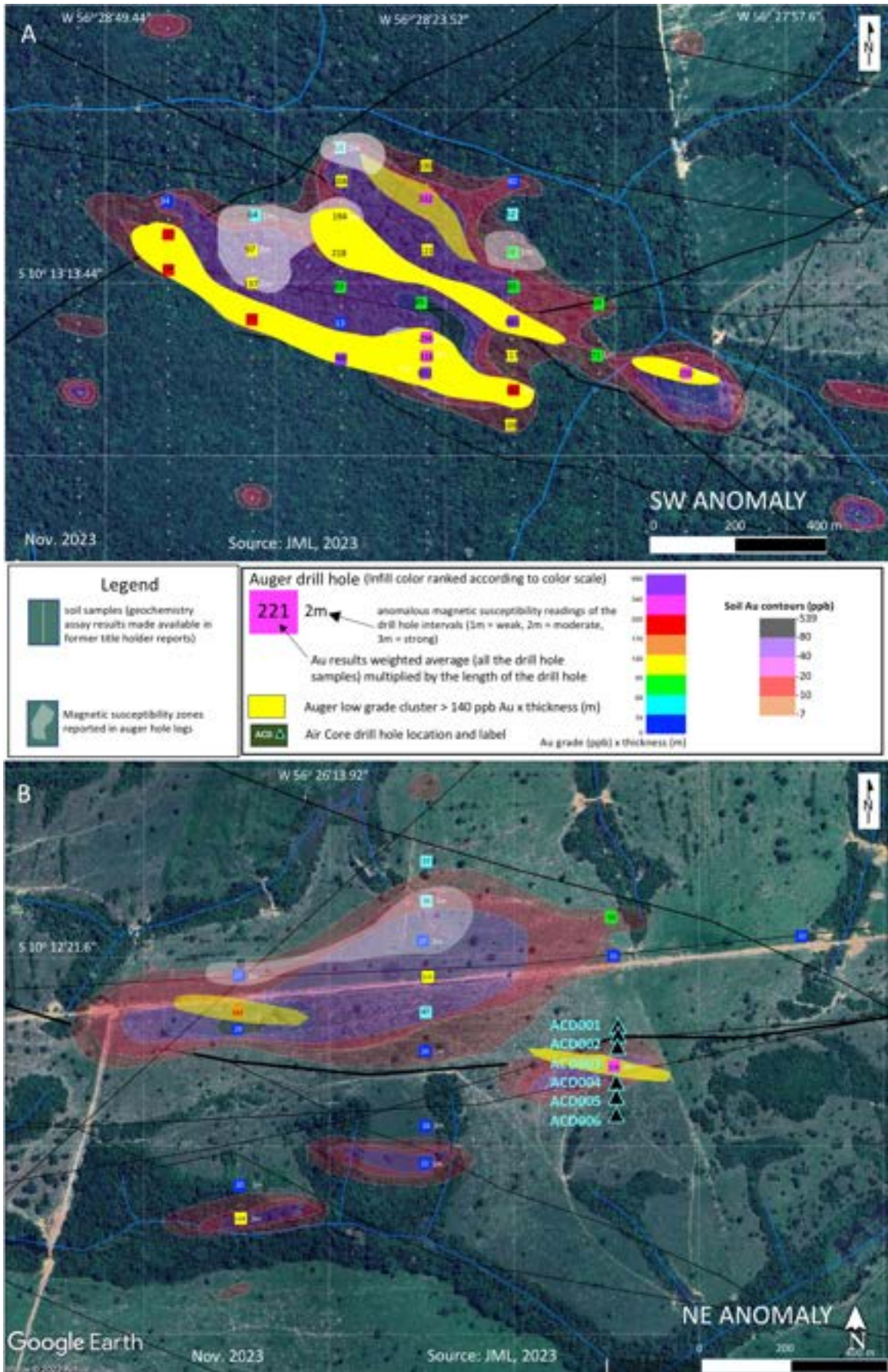


Figure 9.3 Distribution of the Air core drill holes and the auger drill holes labeled with their respective grade x thickness (ppb x m) composites contoured above 140 ppb-m.

## INDUCED POLARIZATION AND GROUND MAGNETOMETRY EXECUTED BY ANGLOGOLD

AngloGold undertook an induced polarization survey (IP) aiming to detect the presence of disseminated sulfide associated to the SW and NE anomalies.

The exploration reports filed by AngloGold to the ANM state that a total of eight sections were surveyed, however the information made available to the author only include the data relative to four sections, two sections on each the NE and SW Anomalies.

All four sections reported the presence of moderate conducting anomalies. According to AngloGold interpretation, NE Anomaly returned higher chargeability response than the SW Anomaly.

AngloGold geologists attributed the chargeability response to higher sulfide contents associated to the deformation / alteration positioned along the southern contact between the “schist” domain (quartz shists) and the “granitoid” domain (see 3D section 562300 E in Figures 6.15 and Figure 9.4).

Although the explanation stated above regarding the role of the ductile / brittle deformation is in essence aligned with the geological / exploration thesis presented in this report, the interpreted geometry of the IP conductor’s continuity drawn in here differs from the AngloGold reports as it took into consideration the structural framework and the re-interpreted geological map.

The 3D sections in Figures 9.4 and 9.5, show the chargeability and interpreted conductors overlapping AngloGold’s geologic map. The same IP conductors overlaps, in the plan view the soil geochemistry iso-grades and the auger low-grade clusters.

## AIR CORE DRILLING EXECUTED BY ANGLOGOLD

A total of 85 m of shallow, vertical Air core drilling were collared at the NE Soil Anomaly in a one-day job (02 of April 2013). The Air core drilling campaign occurred just before AngloGold applied to a 3 years extension of the exploration permit.

All six drill holes were distributed along a 120 m segment of grid line 562300 E (also named 27900E in local grid coordinate) and positioned approximately in 25 m intervals (see Figures 9.3 and 9.4).

AngloGold exploration reports and other consulted documents do not inform the technical reasons it has opted to follow-up a moderate IP anomaly associated to an insulated 1 m @ 178 ppb Au auger hole interval (ADC013) provided it could rather test another IP conductor associated to the 800 m long low-grade clusters associated to the SW Anomaly.

A plausible explanation may be the short time left before the expiration of the Exploration Permit to obtain an environmental permit necessary to mobilize a drill rig to the SW Anomaly in the rain forest.

The Air core drilling campaign failed to identify any economic gold mineralization, the only interval above 0.1 ppm Au out of 32 samples collected refers to the interval from 15 to 17 m of drill hole CP-AC-004 that resulted in 2 m (apparent thickness) @ 0.45 ppm Au.

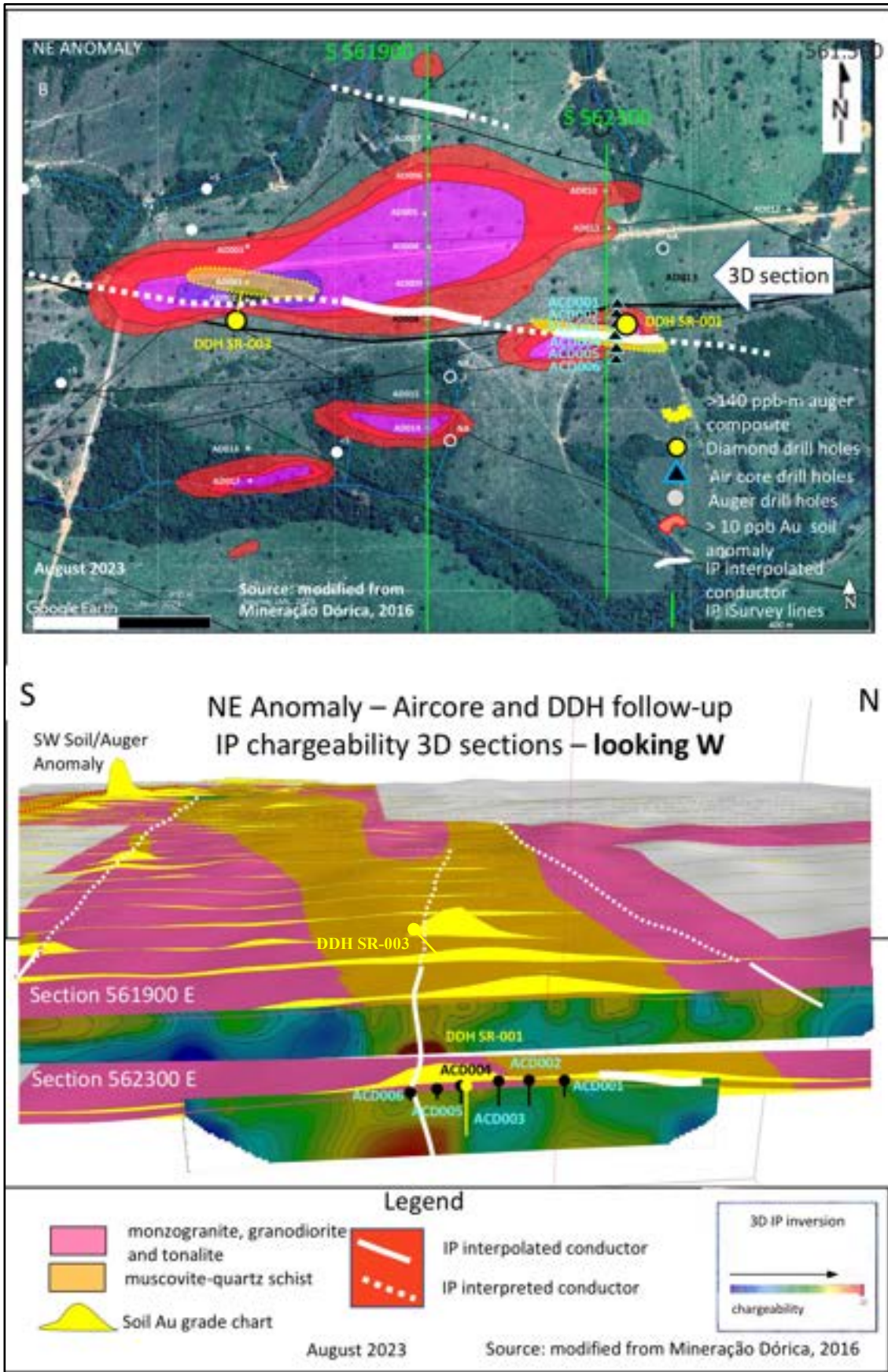


Figure 9.4 NE Anomaly: 3D NS sections composite and plan map of the chargeability anomalies and associated interpreted conductors including AngloGold's Air core drill holes and Boa diamond drill holes carried out in 2022.

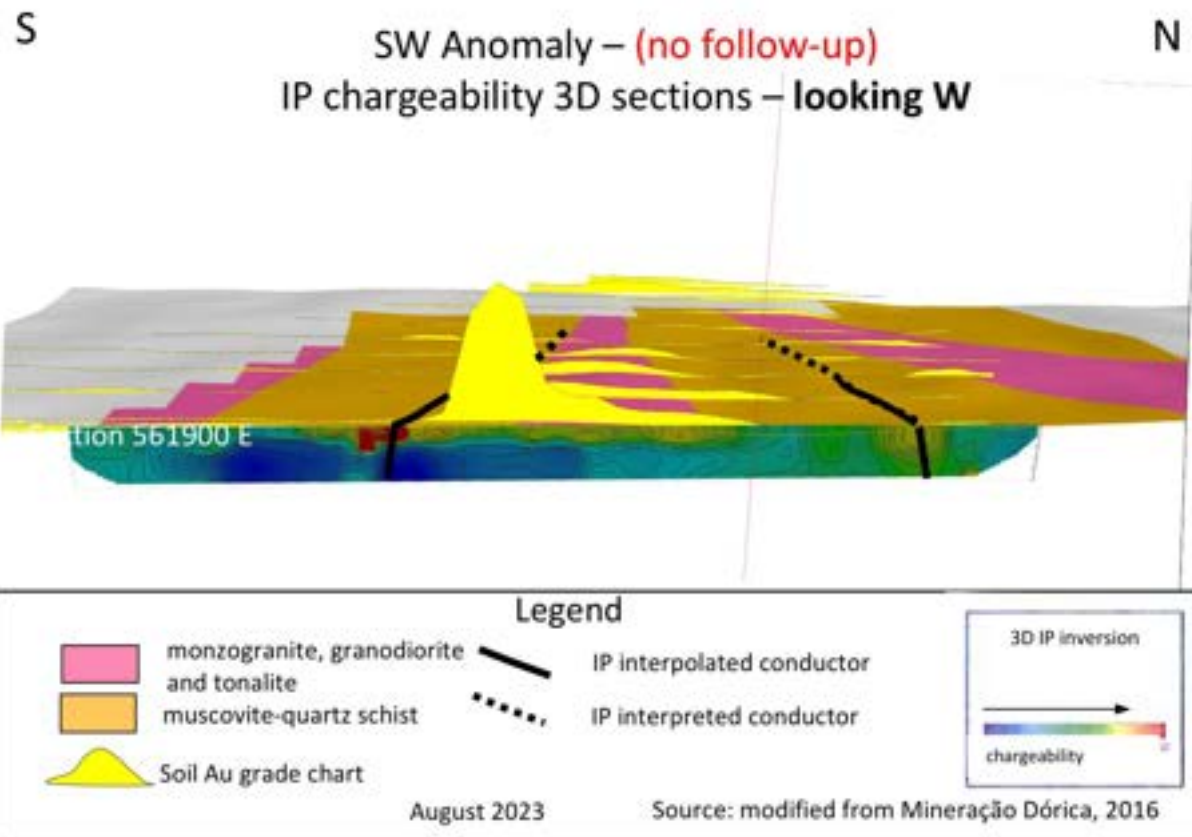
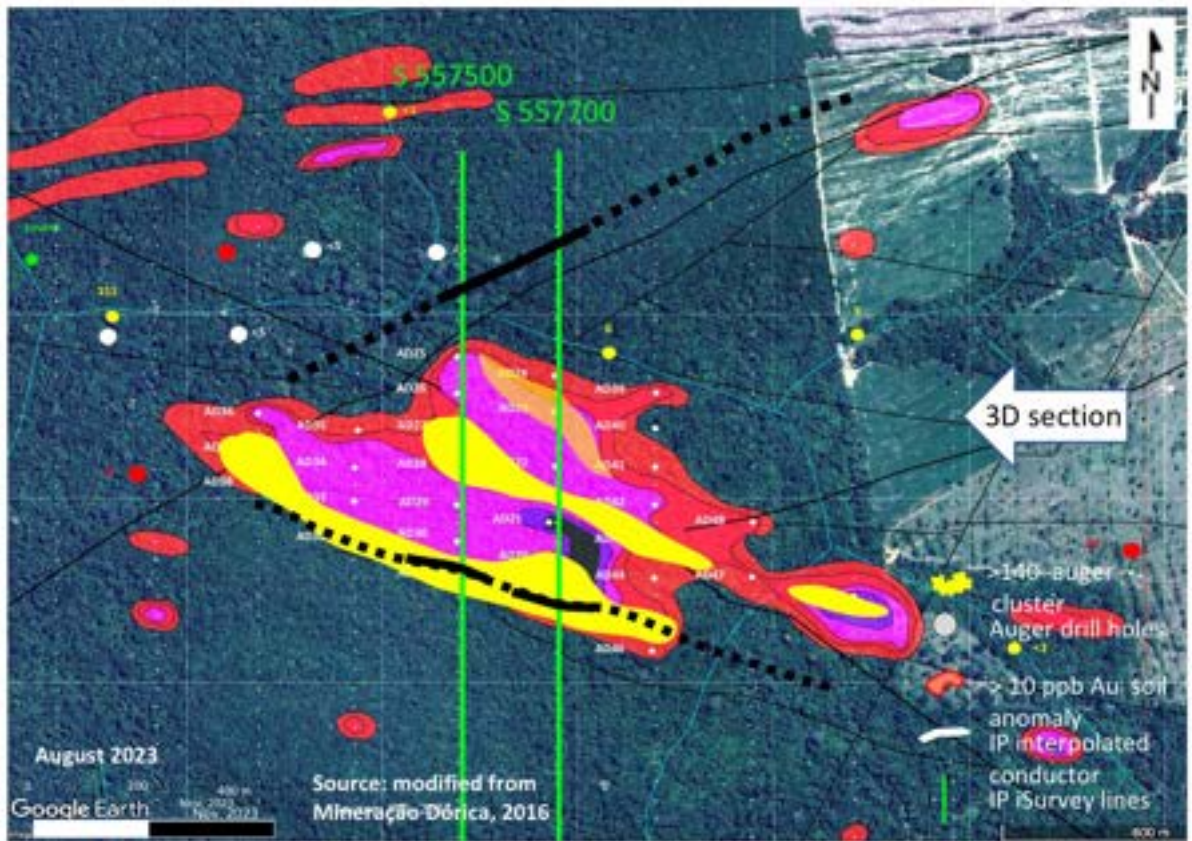


Figure 9.5 SW Anomaly: 3D NS section and plan map of the chargeability anomalies and interpreted conductors.



## EXPLORATION EXECUTED BY BOA GOLD

Since the conclusion of AngloGold’s Air core drilling in 2016 and the consolidation by Boa of the property mineral rights in 2021, the exploration activities at the Copeçal property were limited to the execution, in 2022 of 107 m of conventional NW diameter diamond drilling distributed in two bore holes executed at the NE Anomaly and the survey of 840 ha drone mounted magnetometry covering both the NE and SW Anomalies.

### DIAMOND DRILLING EXECUTED BY BOA GOLD

In late 2021, Boa took the decision to execute a short drilling campaign -at the NE Anomaly of the Copeçal Property to test the down-dip continuity of a low-grade intersection from Air core drill hole CP-AC-004

GEORRÁS Serviços geológicos,(Georrás), a small size drilling contractor from Cuiabá, Mato Grosso state was hired and mobilized in February 2022 to execute the proposed 200 m diamond drilling campaign using a Maquesonda 850 drill rig.

Due to the restrictions imposed by the covid /post-covid transition in 2021 limiting the hiring and mobilization of technical personnel, Boa engaged a geologist, Mr. Renato Antunes Da Silveira Neto, a geologist full time employee and signatory of Georrás to provide the technical support required to not only steer the field activities but convey the capture of the geological information including the description / logging, the photography of the drill core, the recovery readings and the preparation of reports.

The originally planned campaign envisaged the execution of 200 m diamond drilling distributed in one vertical hole (50 m) and two inclined holes (80 m and 70 m). The objectives were:

SR-001 (50 m / -90°) : located on grid line 562.300E, it was destined to test the down-dip continuity of Air core drill hole CP-AC-004 (from 15 m to 17 m).

SR-002 (80 m / -50° / estimated azimuth 360°): it was originally planned to be an inclined hole towards N, collared from the same SR-001 drill pad to expand an eventual positive intersection identified in SR-001. Considering the absence of mineralization in drill hole SR-001, the execution of drill hole SR-002 was aborted and the drill rig mobilized to the western boundary of the NE Anomaly.

SR-003 (70 m / -50° / estimated azimuth 360°) : it aimed to identify the source of the soil gold anomaly constituted by two contiguous soil samples grading 110 and 62 ppb Au.

The preparation and analytical procedures applied to the 107 rock soil samples extracted from drill holes SR-001 and SR-003 are reported in Table 9.1.

The location of drill holes SR-001 and 003 is shown in Figure 9.6 and in the plan map / 3D section of Figure 9.4. Photos of the Maquesonda 850 drill rig and the SR-001 drill site are shown in Figure 9.7

Table 9.1 Preparation and analytical procedures of the diamond drill hole samples

SAMPLE PREPARATION		
ALS CODE	DESCRIPTION	
WEI-21	Received Sample Weight	
PUL-QC	Pulverizing QC Test	
LOG-22	Sample login - Rcd w/o BarCode	
CRU-31	Fine crushing - 70% <2mm	
SPL-21	Soft sample - riffle splitter	
PUL-32	Pulverize 1000g to 85% < 75 um	
BAG-01	Bulk Master for Storage	
CRU-QC	Crushing QC Test	

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS

T

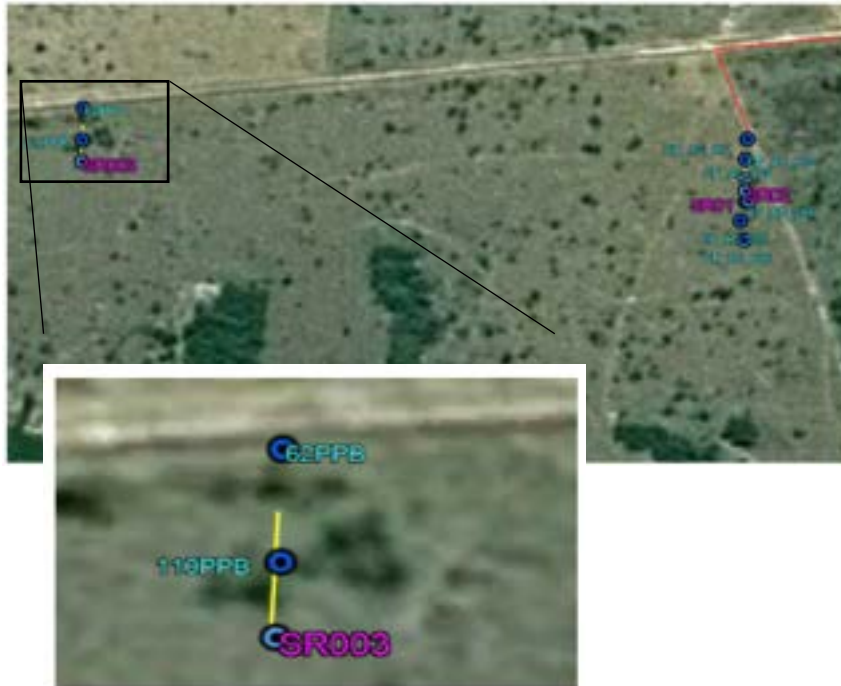


Figure 9.6 The satellite image print above is the only reference available relative to the collar coordinates and the direction of diamond drill hole SR-003

Table 9.2 Simplified check list of the diamond drill holes missing information

Georrás Diamond Drilling - Data Simplified Check List				
Information		Drill Holes		
		SR-001	SR-003	
Drill hole start and conclusion Date		Doc 1	Doc 3	
Header data	Drill Hole Collar Location	Coordinates	Doc 1	NA
		Method / equipment	NA	NA
	Direction	Doc 1	NA	
	Dip	Doc 1	Doc 3	
	Deviation	-	-	
EOH		Doc 1	Doc 3*	
Recovery		Doc 2	Doc 3*	
Geological log	Lithology	Doc 1	NA	
	Structures	NA	NA	
	Alteration	NA	NA	
	Mineralization	NA	NA	
	Primary samples	Intervals	NA	NA
Method		NA	NA	
Daily Driller Log		Doc 2	Doc3	
Photography	raw drill core (prior to the sampling procedure)	Doc 1 and Doc 2	Doc 2 (0 to 25m)	
	retained drill core	Doc 4	Doc 5	
Core box Storage		NA	NA	
Secondary sample preparation	Weight capture	NA	NA	
	Insertion of Quality control standards	NA	NA	
	Rejects storage	NA	NA	

\* EOH don't match the depth informed in Doc 3 and the tag in Doc 6. The recovery informed in Doc 4 (Drillers log) is not numeric. it state the sample were washed wish is not compatible with the photos in Doc 6



Figure 9.7 Photo of the SR-001 drill pad and the 27 hp Maquesonda 850 drill rig employed by Georras to execute drill holes SR-001 and SR-003.

The assessment of the diamond drilling campaign was based on the conversations held during the assessment with Mr. Rafael Mottin and the documents listed below:

- **Doc 1:** A 15 pages report identified as "**Partial drilling Report**") - Prepared and signed by Renato Antunes da Silveira Neto, a geologist employed by Georrás Serviços Geológicos, and hired by Boa to log the core and handle the day-to-day drilling operation; It contains the SR-001 geological log and collar information in a separated table and the photos of SR-001 core boxes prior to the sampling.
- **Doc 2:** A 4 pages document identified as "**Drill Hole Location Criteria**" (author not identified) Destinated to justify technically the proposed drill holes it contains some Google Earth satellite image prints showing the location of the proposed drill holes and a schematic cross section of grid line 562,300E, showing the auger and Air core drill hole;
- **Doc 3:** Operational production sheets, it refers to the February 2022 invoice, it includes a summary of drill hole SR-001 driller daily logs and photos of SR-001 unsampled core boxes.
- **Doc 4:** Operational production sheets, it refers to March invoice and includes the SR-003 summarized driller daily logs but no photos of the unsampled drill core.
- **Doc 5:** A set of 5 photos of the SR-001 drill core boxes after the sampling took place.
- **Doc 6:** A set of 5 photos of the SR-003 drill core boxes after the sampling took place
- **Doc 7:** Two ALS assay result certificates, one relative to the 107 samples of drill holes SR-001 and SR-003; the other certificate reports assays results of QC samples
- **Doc 8:** One Excel spreadsheet containing the results reported in the Lab certificates.

*Note*

*The drill core was not verified as the location of the drill core storage was not made available to the author*

A simplified check list reporting the status of the information gathered from the documents and files listed above is shown in Table 9.2

### Diamond drill hole SR-001

SR-001 diamond drill hole geological log prepared by Georrás geologist is shown in Figure 9.8. It reports the hole collar basics, a simplified description of the lithologies, a graphic chart of the measured drill core recovery and photos of the drill core boxes.

Figure 9.9 shows an assemblage made of the SR-001 drill core photos. Among aother features, it is used here-in to capture the sampling interval markers. A comparison is shown between the recovery informed in the geologic log and the recovery calculated using primary sample weights informed in the lab certificates.

The sample intervals are not reported in the log neither were found in the documents made available. and had to be extracted from the photographs shown in Figure 9.9.

Data from the geological log indicates that once drill hole SR-001 had recovered the first 8 m of soil and saprolite, it intercepted a void / cavity resulting in the loss of the rig water circulation (based on the driller log). It is characterized by the sudden drop of recovery from 90% down to 25% between 8 and 10 m depth. The 12 m interval with less than 50% recovery, composed of unconsolidated mix of fresh and strongly oxidized rock probably refers to a large-scale tectonic structure. It is followed by a fresh but strongly deformed migmatite / biotite quartz schist from 20 m depth up to the end of the hole reported at 40.25 m.

Hypothetically, based on the adjusted geological framework and the ground geophysics,t drill hole SE-001 may have crossed the, or one of the tectonic contacts between the São Romão granite / granodiorite domain and entered into the Bacaueri-Mogno para-gneiss migmatites.

This last geological unit is attributed here-in to the "schist domain" described in the AngloGold reports and maps (see Figure 6.4, Figure 9.2 and the section in Figure 9.4).

The strongly deformed Bacaueri-Mogno migmatites described in the literature, are magnetic anomalous and typically associated to the transitional tectonic contacts that occur in this part of the Juruena Province.

A visual comparison between photos of Bacaueri-Mogno migmatite outcrops and hand specimens from a CPRM presentation and SR-001 drill core is made in Figure 9.10.

Table 9.3 Diamond drill holes summarized information extracted from Boa reports and photos

# Hole	N	E	EOH (m)	Direction	Dip	Grid Line	Interval m (from-to)	Unit / struct	Valid.	Recovery	Sampling	Valid.
SR-001	10° 12' 27.59	56° 25' 52.39	40.25	0°	90°	562300 E	0 to 8	S. Romão?		93% (83%-101%)	8	
							8 to 19	FAULT?		45% (22%-71%)	12	
							19 to 40.25	B. Mogno	✓	97% (88%-100%)	20	✓*
SR-003	NA	NA	67	NA	NA	561500 E	0 to 9	S. Romão?		96% (89%-100%)	9	
							9 to 25	S. Romão?		77% (59%-97%)	16	
							25 to 67?	FAULT?		33% (21%-57%)	42	

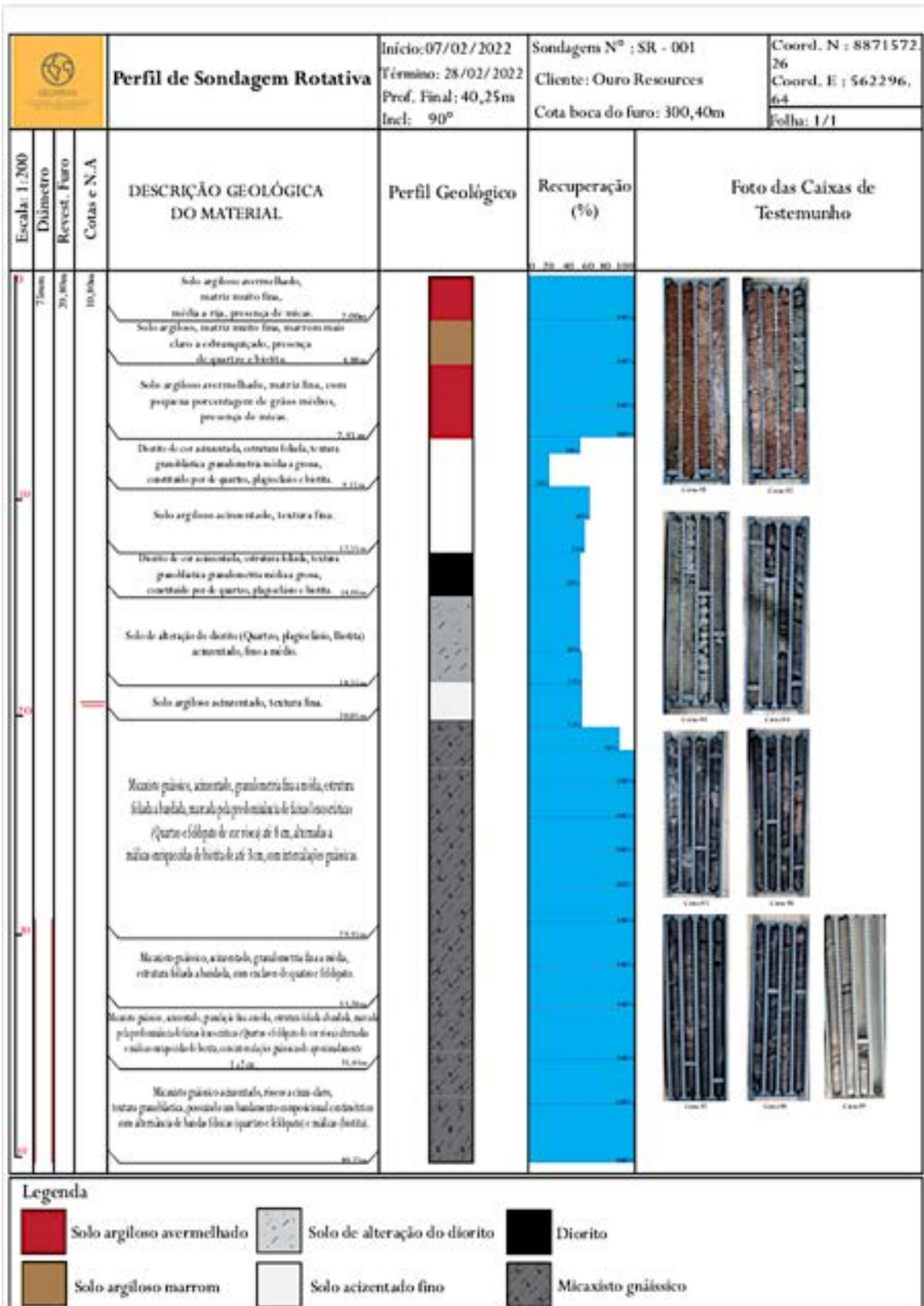


Figure 9.8 SR-001 log reported by Georrás, in charge to execute and log the drill holes. The sampling intervals and samples details were not reported.

Based on the drill core photos, the sampling of fresh rock drill core intervals was executed using a rock saw. T drill core was sewed in the middle along the longitudinal axis in 1 m-long regular intervals. One half of the core was returned to the core box. The author assumes that 100% of the other half was sent to ALS laboratory

None of the procedures involving the collection, the insertion of QA/QC standards, the preparation of the sample batches and their shipment were made available to the author.

As part of the analysis, the ALS assay certificates and the estimated individual recoveries estimates were introduced in the geological log. The from-to intervals attributed to the results were based on the written markers extracted from the drill core photos, the estimated recovery was based on the lithotypes density and the calculated volume based on 1 m-long by 50% NW drill bit diameter circle, minus the volume generated from the rock saw blade (see Figure 9.11).

The red chart in Figure 9.11 illustrates the correlation between the recovery reported by Georrás in blue, (apparently the geologist extracted the numbers from the driller's log), measured in 83% and the 85% estimated average based on the primary sample weights, extracted from the lab certificates.

The accuracy of the recovery reported by Georrás from drill hole SR-001 was considered satisfactory by the author.

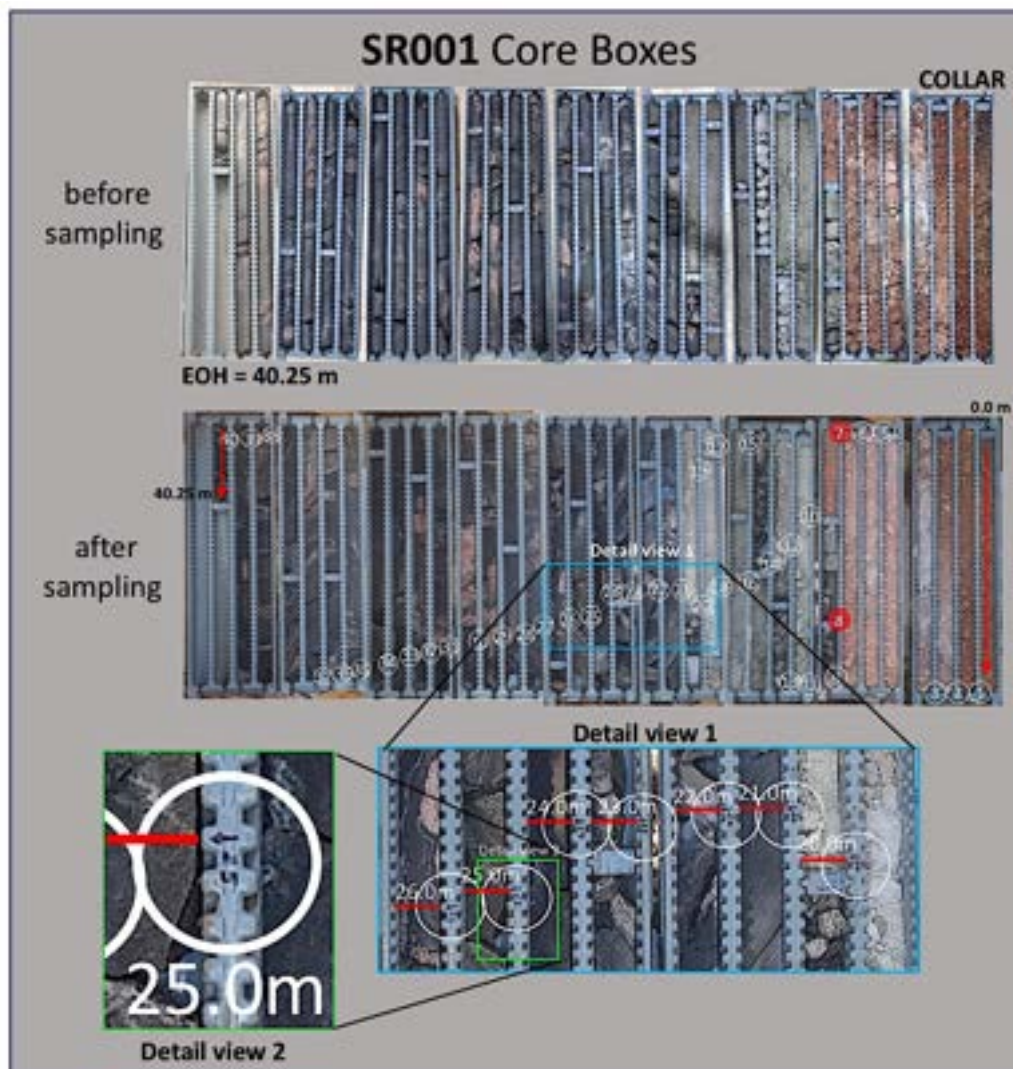


Figure 9.9 SR-001 drill runs sourced from the core box photos before and after sampling. Please note the drill core embedded in the boxes from the right to the left, an unusual practice.

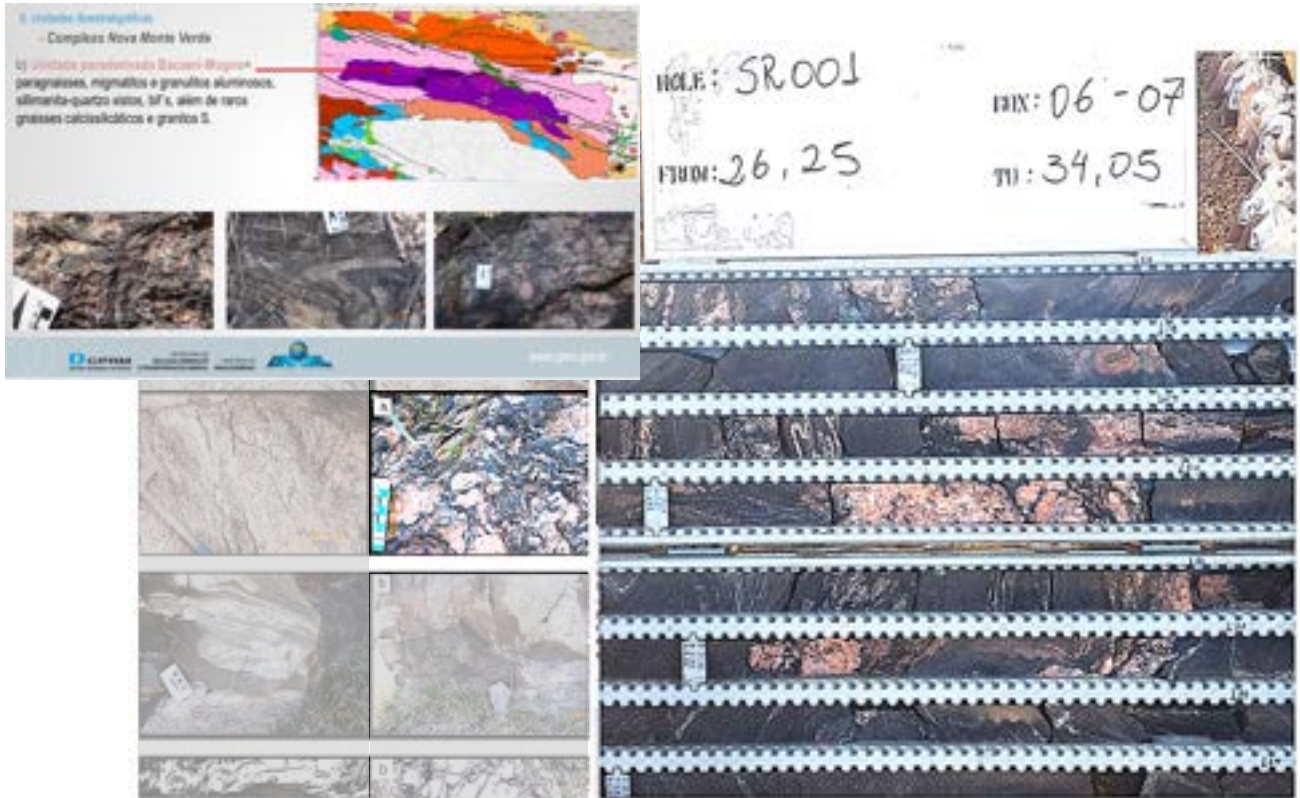


Figure 9.10 Examples of Bacaueri-Mogno migmatite hand specimen and outcrops reported by CPRM that visually matches the petrography of SR-001 diamond drill hole interval from 26 to 34 m.



WEATHERING	DENSITY	Mx CORE DIAMETER	INTERVAL LENGTH_m	INSITU THEORETICAL CORE WEIGHT_kg	WEIGHT LOST BY SAWING_kg	ESTIMATED SAMPLE WEIGHT_kg
SOIL	1.8	55	100	4.230	0.788	1.721
SAPROLITE	2.1	55	100	4.935	0.919	2.008
FRESH ROCK	2.95	55	100	6.932	1.291	2.821



ALS Brasil Ltda.  
 Rua São Paulo, 685, Celvi  
 CEP 33.200-000 Vespasi  
 Belo Horizonte MG  
 www.alsglobal.com/g

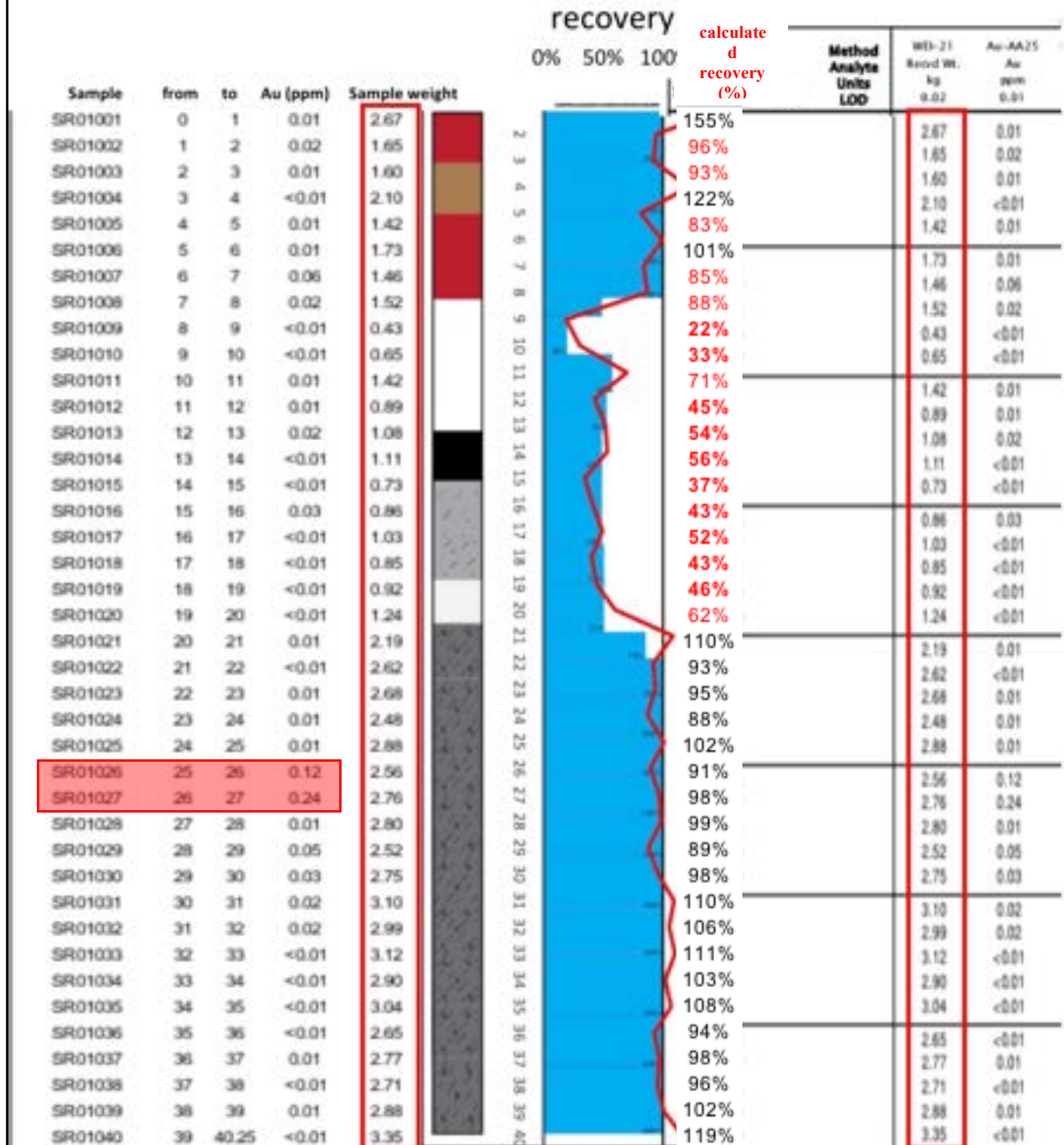


Figure 9.11 SR-001 DDH reported core recovery (blue) versus calculated recovery from the sample weights (in red numbers and chart)

## Assay results from Drill Hole SR-001

Samples SR01026 and SR01027 collected from the fresh, strongly deformed migmatite interval from 25 to 27 depth returned 0.8 m true thickness @ 0.18 g/t Au

*Note:*

*The alpha angles displayed in the photos of the drill core interval range from 45° to 0° (see interval in Figure 9.9). It is reasonable to assume a factor of 0.4 (sin 23°) to the apparent thickness measured from the drill core.*

The intervals characterized by 27% recovery from 8 to 10 m and 47% from 11 to 19 m constitute potential mineralization zones associated to tectonic structures. It seems the drill target, AngloGold in 2013 and Boa in 2022, choose to test, falls into this category which explains the presence of disseminated sulphide responsible to generate the targeted IP anomaly. If this hypothesis reveals to be correct, recovery levels in the ranges of those incurred to drill SR-001 usually invalidate any type of sampling.

Diamond drilling in thick soil / saprolite covers cross-cut by large scale discontinuities require the utilization of modern drill rigs, equipped with wire-line and big enough to handle HQ rods in order to recover larger volumes of unconsolidated material in one shot (without the need to retrieve the rods to avoid caving) until reaching the bed rock and settle the HQ as a casing for the introduction of NQ tools.

The productivity numbers of 1.55 m per 8 hours operation identified are a strong evidence of the need the driller probably had to wash the hole every time the rods were pulled out to empty the core barrel.

The understanding of such low productivity would rely on Daily Driller Logs. It is the author's opinion that the drill runs shown in the core boxes from 0 to 20 m do not reflect the multitude of maneuvers made to reach the fresh rock at 20 depth.

According to the assessment of SR-001 data and upon the validation of the collar coordinates the following intervals of drill hole SR-001 can be employed for the following purposes:

- From 0 m to 8 m
  - Lithology: São Romao Units
  - Geochemistry: **No use of any kind**
- From 8 m to 20 m
  - Lithology: Fault (transpressive sinistral R)
  - Geochemistry: **INCONCLUSIVE, No use of any kind**
- From 20 m to 40.25 m
  - Lithology: Bacauri-Mogno Units
  - Geochemistry: For exploration purpose only

### Diamond drill hole SR-003

The diamond drill hole SR-003 was planned to test the roots of two contiguous soil samples located 40 m from each other at the western end of the NE Anomaly delimited by grid line 561500E (identified as L27100 in AngloGold's reports).

The available documents do not provide important information such as:

- The drill hole coordinates and the direction.
- The geological log containing the described lithologies and the recovery among others

For assessment purposes, the collar coordinates and direction were extracted from the satellite image prints shown in Figure 9.6 and the recovery from the driller logs and the photos of the drill core.

The information captured is shown in the spreadsheet in Figure 9.12.

The analysis of drill hole SR-003 data has indicated several fatal flaws due to severe information inconsistencies between the consulted sources:

- Length of the drill hole: 3 distinct End-of-Hole (EOH) values were identified in the available documents. It ranges from 65 m to 69.30 m. Figure 9.13 illustrates the inconsistencies.
- Recovery: the calculated recovery based on the raw sample weights extracted from the ALS laboratories certificates returned 84% from 0 to 24 m (against 100% from the driller's log) and 33% average recovery from 24 m to 67 while the driller's log states the term "**washed out**" for the entire interval from 24 m depth down to 67 m (see Table 9.3)

The photos available of drill hole SR-003 core indicates there was an "on purpose" MANIPULATION of the distribution of drill core material affecting the depths of both the drill runs and the drill core intervals depth.

The 23 m of oxidized rock / saprolite regularly distributed in the core boxes from 24 m to 67 m (the bottom) doesn't look "washed". Typically, washed core intercepts are constituted by relicts of less weathered or even fresh small fragments of quartz, kaolin, biotite aggregates and sand, generally free of clay or silt that is washed by the drill rig water injection. When clay is captured, it generally "escapes" and is brought to surface by the rig circulated water or amalgamates like a "mosh" in the core barrel. Once sitting in the core box, this mix of fresh angular quartz / feldspars / sand fragments dries out and stick to the wood of the core box. It does not look like the gentle, homogeneous box bed constituted of clayey fragments observed in the photos.

The drill runs executed below the 24 m, into the bound ground (see the drop of recovery in Figure 9.12), the length of the drill runs would rather be much shorter, and not 4.00 m.

In difficult, loose ground, the opposite situation is expected. Typical diamond drilling operation in unconsolidated, muddy rock / soil forces the driller to execute much shorter runs instead of filling the whole barrel length. Short runs not only improve the recovery but also reduce the risks to jam the drill bit and coupled core barrel. The perfect, 4.00 m runs accommodated in exact 4.00 m capacity core boxes looks very suspect (see recovery numbers and distribution in Table 9.3).

SR-003 DIAMOND DRILL HOLE – DATA AND RECOVERY ASSESSMENT													
Core Box (photos taken after sampling)	SAMPLE ID (lab)	Estimated sample interval (m)		Au grade (ppm)	Lab Sample weight (Kg)	Estimated in situ weight (Kg)	Estimated Recovery (%) (based on weight)		Recovery extracted from the drill core photos (%)	Calculated Recovery			
		From	To				per sample	per core box		0%	50%	80%	100%
Box 01	SR03001	0	1	0.01	1.75	1.72	102%	98%	100%				
	SR03002	1	2	0.01	1.54	1.72	90%						
	SR03003	2	3	<0.01	1.53	1.72	89%						
	SR03004	3	4	0.01	1.92	1.72	112%						
Box 02	SR03005	4	5	0.01	1.53	1.72	89%	107%	100%				
	SR03006	5	6	0.04	2.02	1.72	117%						
	SR03007	6	7	0.02	1.91	1.72	111%						
	SR03008	7	8	0.01	1.92	1.72	112%						
Box 03	SR03009	8	9	0.03	1.72	1.72	100%	89%	100%				
	SR03010	9	10	0.02	1.51	1.72	88%						
	SR03011	10	11	0.01	1.38	1.72	80%						
Box 04	SR03012	11	12	0.01	1.54	1.72	90%	72%	100%				
	SR03013	12	13	0.01	1.36	1.72	79%						
	SR03014	13	14	0.01	1.38	1.72	80%						
Box 05	SR03015	14	15	0.01	1.18	1.72	69%	69%	100%				
	SR03016	15	16	0.02	1.02	1.72	59%						
	SR03017	16	17	0.01	1.01	1.72	59%						
Box 06	SR03018	17	18	0.01	1.23	1.72	72%	82%	100%				
	SR03019	18	19	<0.01	1.16	1.72	67%						
	SR03020	19	20	<0.01	1.33	1.72	77%						
Box 07	SR03021	20	21	0.01	1.2	1.72	70%	29%	33%				
	SR03022	21	22	0.01	1.43	1.72	83%						
	SR03023	22	23	0.01	1.35	1.72	78%						
Box 08	SR03024	23	24	0.01	1.66	1.72	97%	29%	33%				
	SR03025	24	25	0.01	1.32	1.72	77%						
	SR03026	25	26	0.01	0.23	2.00	12%						
	SR03027	26	27	<0.01	0.36	2.00	18%						
	SR03028	27	28	0.08	0.27	2.00	14%						
	SR03029	28	29	0.01	0.4	2.00	20%						
	SR03030	29	30	0.01	0.41	2.00	21%						
	SR03031	30	31	0.05	0.36	2.00	18%						
	SR03032	31	32	0.01	0.61	2.00	31%						
	SR03033	32	33	0.01	0.63	2.00	32%						
	SR03034	33	34	0.01	0.64	2.00	32%						
	SR03035	34	35	<0.01	0.92	2.00	46%						
	SR03036	35	36	0.02	0.59	2.00	29%						
	SR03037	36	37	0.02	0.71	2.00	36%						
SR03038	37	38	0.01	0.59	2.00	30%							
SR03039	38	39	0.01	0.76	2.00	38%							
SR03040	39	40	0.03	0.57	2.00	29%							
SR03041	40	41	0.02	0.57	2.00	29%							
SR03042	41	42	0.01	0.7	2.00	35%							
SR03043	42	43	0.01	0.46	2.00	23%							
SR03044	43	44	0.01	0.69	2.00	35%							
SR03045	44	45	0.02	0.66	2.00	33%							
SR03046	45	46	0.01	0.35	2.00	18%							
SR03047	46	47	<0.01	0.64	2.00	32%							
SR03048	47	48	0.01	0.61	2.00	31%							
SR03049	48	49	0.02	0.42	2.00	21%							
SR03050	49	50	<0.01	0.76	2.00	38%							
SR03051	50	51	0.01	0.8	2.00	40%							
SR03052	51	52	0.01	0.78	2.00	39%							
SR03053	52	53	<0.01	0.78	2.00	39%							
SR03054	53	54	0.01	0.92	2.00	46%							
SR03055	54	55	0.02	0.74	2.00	37%							
SR03056	55	56	<0.01	0.81	2.00	41%							
SR03057	56	57	<0.01	0.81	2.00	41%							
SR03058	57	58	<0.01	0.52	2.00	26%							
SR03059	58	59	0.01	0.78	2.00	39%							
SR03060	59	60	0.02	1.01	2.00	51%							
SR03061	60	61	<0.01	0.84	2.00	42%							
SR03062	61	62	<0.01	0.82	2.00	41%							
SR03063	62	63	<0.01	0.85	2.00	43%							
SR03064	63	64	<0.01	0.81	2.00	41%							
SR03065	64	65	0.01	0.9	2.00	45%							
SR03066	65	66	<0.01	0.87	2.00	44%							
SR03067	66	67	<0.01	0.52	2.00	26%							

Figure 9.12 The very low SR-003 drill core recovery calculated from the sample weights, inconsistent with the reported driller log and photos.

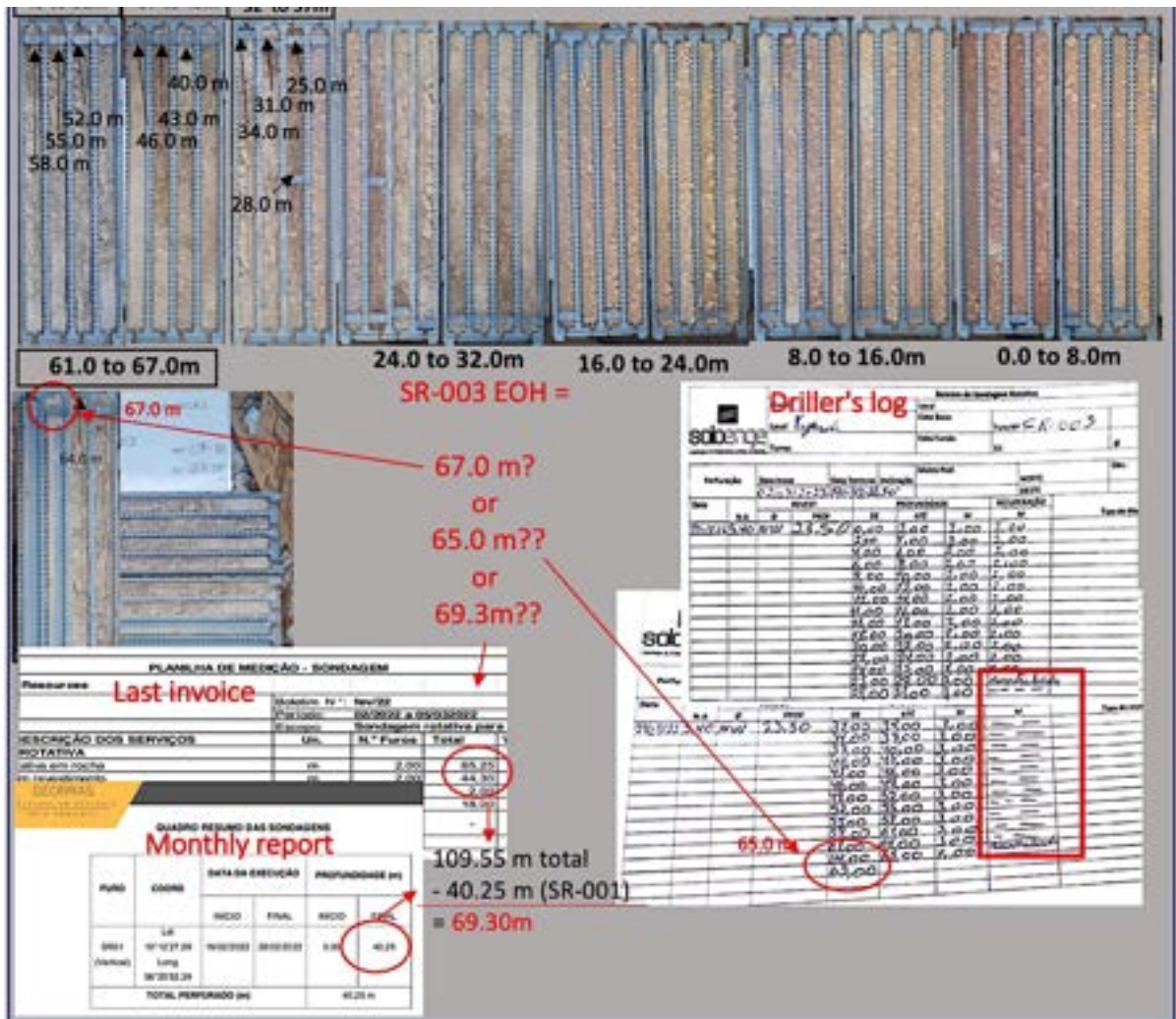


Figure 9.13 SR-003 reported End of Hole (EOH) inconsistent from three reported sources. The regular 4.00 m drill runs below 24 m depth, inconsistent with reported "washed out" recovery and 21% to 57% calculated recovery

In the opinion of the author, it is a strong indication that the length of the delivered runs, the recovery and the depth associated to the core have been manipulated at such a degree that the entire drill hole is not reliable and should not be used in any matter.

In addition to the procedure deviations already described for directly affecting the analytical and geological data, the following observations were made during the course of the assessment:

- The drill rig equipment was not appropriate to execute the drilling operation. The 27 hp motor is not strong enough to handle HQ diameter rods in unconsolidated material. The rig is not equipped to handle wire-line tools (see Figure 9.6);
- The drill rig and crew productivity capacity returned an average productivity of 2.3 m / worked-day (mod/demob to the property not included), well below industry practices standard rates;
- There was no Boa employee designated to supervision the operation at any time;
- There was no formal register of the drill hole geographic coordinates, direction and dip or any of the relevant conditions observed during the execution (water, tools jam, etc.);
- Standard Operation Procedures (SOPs) were not available neither applied to perform the drilling activities;
- There was no daily driller logs available, only a summarized log without any operational information (time effectively drilled, maintenance, mob/demob, down time, etc)
- The lack of formal register of the sample intervals in logs;
- The sampling intervals were not established according to the geological contacts / boundaries;
- Only one geological log was available relative to hole SR-001, none was found describing drill hole SR-003;
- The lack of QA/QC procedure;
- The core storage location was not disclosed;
- The sampling procedures were not disclosed;
- The chain of custody procedure of the sample's handling, if existent was not made available;

According to the assessment made of drill hole SR-003 data and upon the validation of the collar coordinates the following intervals of drill hole SR-003 can be employed for the following purposes:

- From 0 m to 25 m
  - Lithology: São Romao Units
  - Geochemistry: **No use of any kind**
- From 25 m to 65 m
  - Lithology: Fault (transpressive sinistral R)
  - Geochemistry: **INCONCLUSIVE, No use of any kind**

## BOA GOLD DETAILED UAV / DRONE MAGNETOMETRY SURVEY

Avant Geofísica (Avant) was retained and mobilized to Alta Floresta in June 2023 to execute the detailed UAV magnetometry survey covering the axis defined by the SW and NE soil anomalies (see Figures 9.15).

The geophysics survey aimed to reveal the bed rock lithological and structural frame work associated to the tectonic contacts between the Bacaeri Mogno Complex sericite-quartz schist and both the São Romão Granite and Nova Monte Verde intrusive Complexes in which the SW and NE soil anomalies seemed to be emplaced (see geological and soil geochemistry map plans in Figure 6.11).

A total of approximately 840 ha (5.5 km x 1.5 km) was covered with 50 m spaced lines bearing 335° azimuth.

The magnetometer was kept at 30 m in average above ground except at the SW extremity of the survey area, still covered by native rain forest, where the elevation was modified to maintain the equipment at 15 m in average above the canopies. Above SW and NE anomalies, the distance between the lines was reduced to 25 m pattern.

Processed data and associated outputs, including a 945-ha detail topographic map, are shown respectively in maps A, C and B of Figure 9.6. The total Magnetic Intensity reduced to pole (IGRF Reduced) and Total Horizontal Derivative - THD were chosen for the local lithological-structural assessment.



Figure 9.14 Avant DJI Matrice 300 RTK UAV/drone and attached GEM GSMP-25U magnetometer at the Copeçal Project

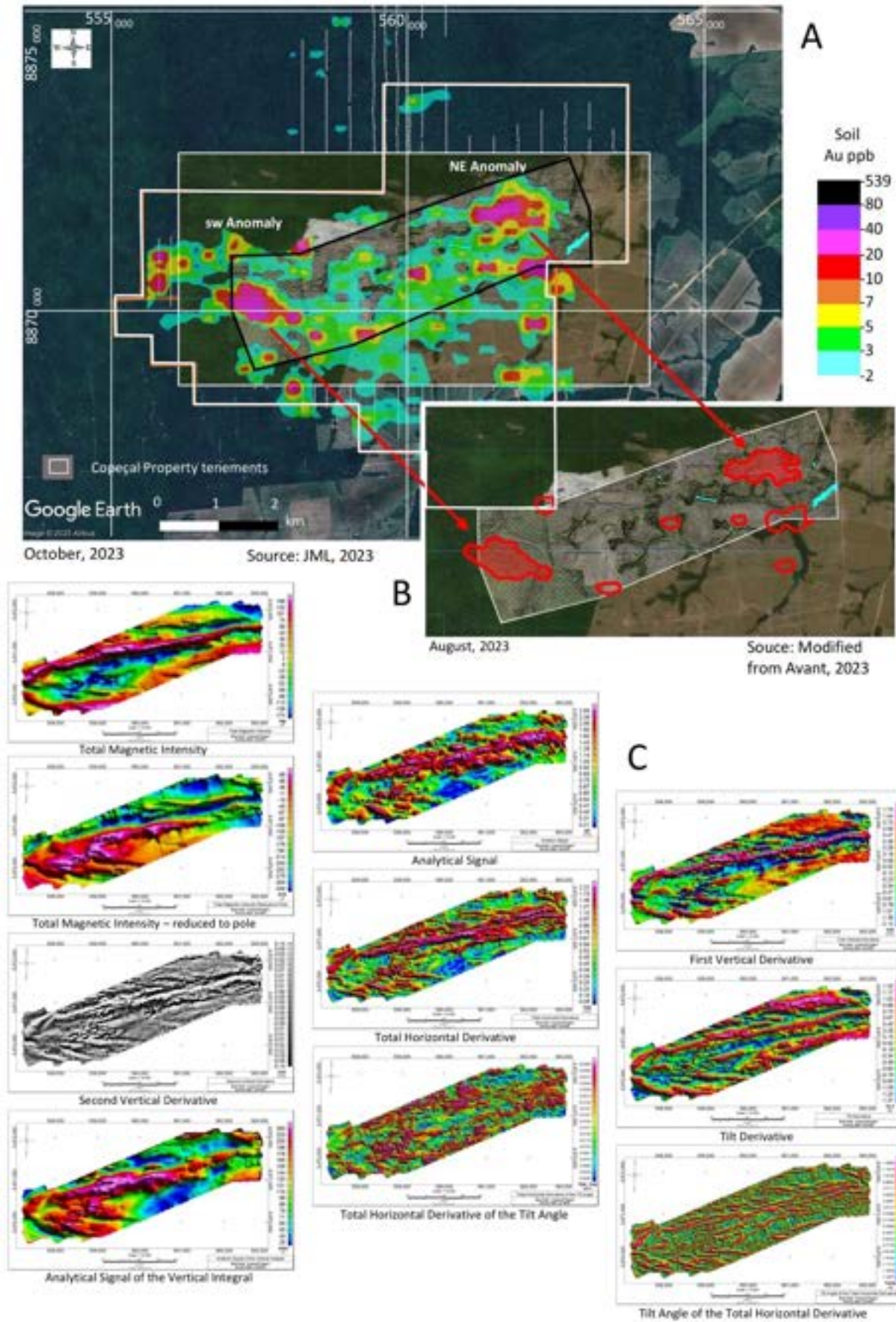


Figure 9.15 Location of drone magnetometry survey and processed outputs



Figure 9.16 shows the Total Horizontal Derivative - THD response overlying the Copeçal geological map and the local tectonic structures gathered from the regional compilation.

The kinematic elements associated to each structure family are based on the classic Riedel shear diagram included in the Figure. A second diagram shows the preferential structural gold traps based on the surveys available in CPRM Promin reports. Though most of the structural information refers to the Peixoto Azevedo Gold District and the northern Juruena Belt, the kinematics remains the same for the Copeçal country rocks, the major difference being the deformation domain moving from brittle-ductile (eastern / northern Juruena) to a predominantly ductile-brittle regime in the southern belt.

The low-elevation drone magnetometry has demonstrated to constitute an excellent tool to delineate, with good resolution, the shape and morphology of both the underling geologic bedrock and the structural elements covered by an estimated 30 to 60 m of oxidized and transitional (saprolite) weathered rock.

Observations of the drone magnetometry maps shows the presence of convoluted and isoclinal tight folds (an indication of ductile deformation regime), associated to rectilinear structures formed under brittle conditions are characteristic of biaxial stress deformation under ductile to ductile-brittle regime. The described structural elements, associated to very high bi-axial stress typically result in heterogeneous rock fabric patterns of the same rock, in line with the features reported by the AngloGold geologists such as isotropic granitoids moving in a few meters distance to strongly foliated, deformed mylonite.

The kinematics associated to the revealed discontinuities are consistent with the regional tectonics gathered by the Author and shown in Section 7. The discontinuities were grouped in families according to their geometry and kinematics, then compared to a classic Riedel shear diagram, specific to the local ductile to ductile-brittle deformation regime.

The currently extensive available bibliography of the Juruena Province reports the utilization of similar classification to the known gold deposits, especially those located in the Peixoto Azevedo district. The PDZ (Principal Displacement Zone) vector was adjusted to fit the local trend of the WNW shear corridor.

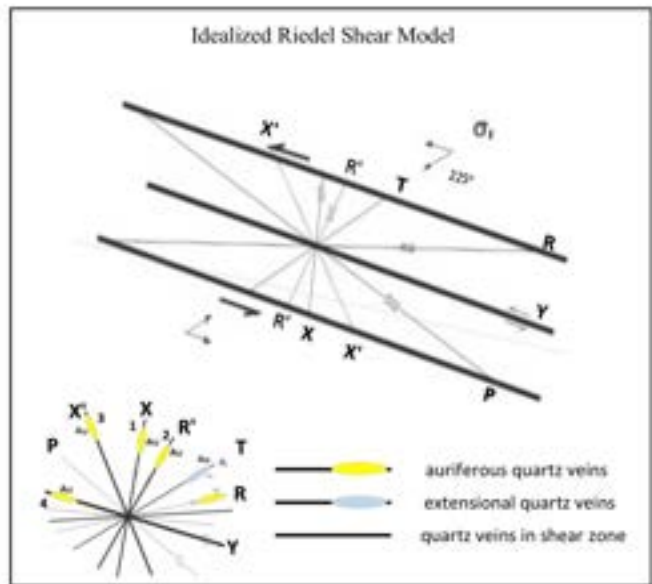
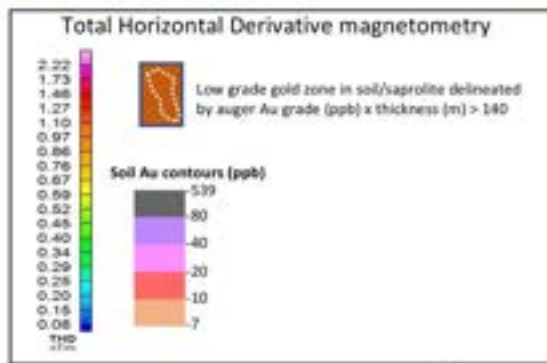
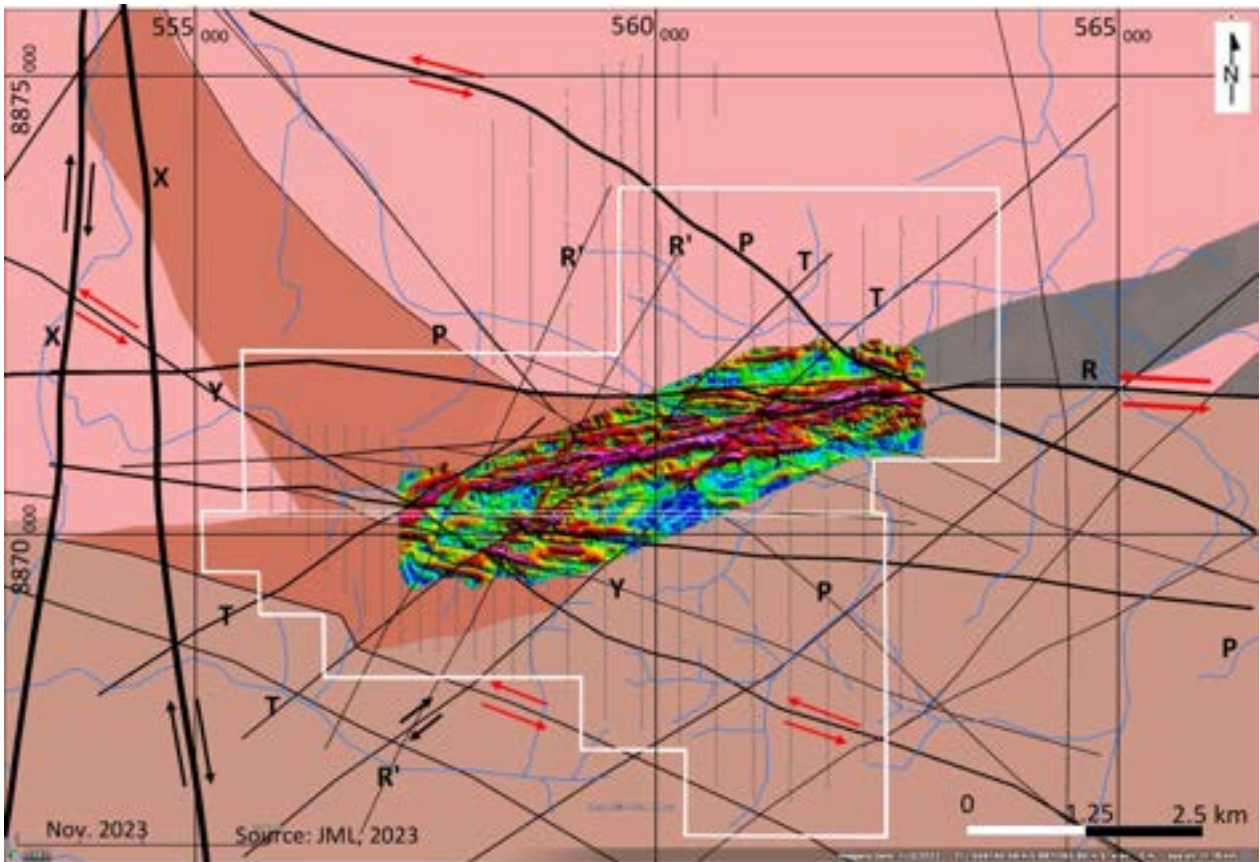


Figure 9.16 Total Horizontal Derivative - THD overlying geological map and interpreted structural kinematics

## PROPOSED GEOLOGICAL FRAME-WORK

A revised geological frame-work is proposed here-in based on the outputs resulting from the integration of the following information:

- The geological and tectonic settings outsourced from CPRM, several academic papers, and exploration companies reports publicly available;
- The stream sediment, rock, soil, and shallow drilling exploration data available from AngloGold Ashanti exploration program carried out from 2010 to 2016 and,
- The 840-ha drone magnetometry survey encompassing the NE and SW soil anomalies. (see Figure 9.8)

The maps in Figure 9.9 show the THD ground magnetometry overlaid by the structural lineaments, in addition to the soil gold iso-grade contours over 10 ppb and the outline of the auger drill holes grade-thickness contents above 140 ppb-m. In both maps the compiled structural lineaments were adjusted to the magnetometry morphology.

The contours of the soil anomaly shown with a white line (>10 ppb) were left unfilled so the bed rock magnetometry response is exposed. The geological map in the background is here limited to the Bacaeri-Mogno muscovite-quartz schist (transparent brown).

The lithological contact shown here was, in first instance interpreted using AngloGold grid map and associated soil multi-element results. It was then adjusted according to the CPRM airborne magnetometry, then fine-tuned using the ground magnetometry and, where available, the description found in the auger drill hole logs.

Both the SW and NE anomalies are emplaced at the intersection of two distinct Y shear structures (see map in Figure 9.10), and two distinct R shear structures apparently connected by a "horse tail splay" style fault (see maps in Figures 9.9 and 9.10).

In Figure 9.10, the SW soil anomaly contours defined by the 200 m in-fill grid pattern is clearly bordered to the south by the "Y" sinistral lineament (N70°W) and cut, along its longitudinal axis by two E-W trending, "R" type, sinistral shear structures in which a "wedge" of Bacaeri-Mogno quartz schist is enclaved.

The SW Anomaly is confined to the west by a "horse tail splay" style fault, derived from a major E-W sinistral shear zone (R) to the north that crosses-cut the Property (see maps in Figures 9.9 and 9.10).

The splitting of the SW Anomaly defines two distinct structural domains. Cluster 1, situated in the southern domain is characterized by a long, almost rectilinear WNW trending anomaly suggesting the mineralization may be partially hosted in a wide-shear zone envelope associated to the N70W sinistral transpressive shear zone while Cluster 2's shape, on the northern side on the E-W structures suggests to be hosted in one of the many drag folds occurring in the northern domain.

The shear structures and their respective directions, kinematics and potential to host gold mineralization identified during the assessment are listed in Table 9.4.

Table 9.4 List of the tectonic shear structures at the Copeçal Property

Shear Type	Average Azimuth	kinematics	Au potential ranking
Y	N70°W	sinistral	moderate to high
R	E-W	sinistral	moderate to high
X'	N10°W	dextral	high
R'	N30°E	dextral	high
X	N05°E	dextral	high
T	N60°E	extensional	moderate
P	N50°W	-	low

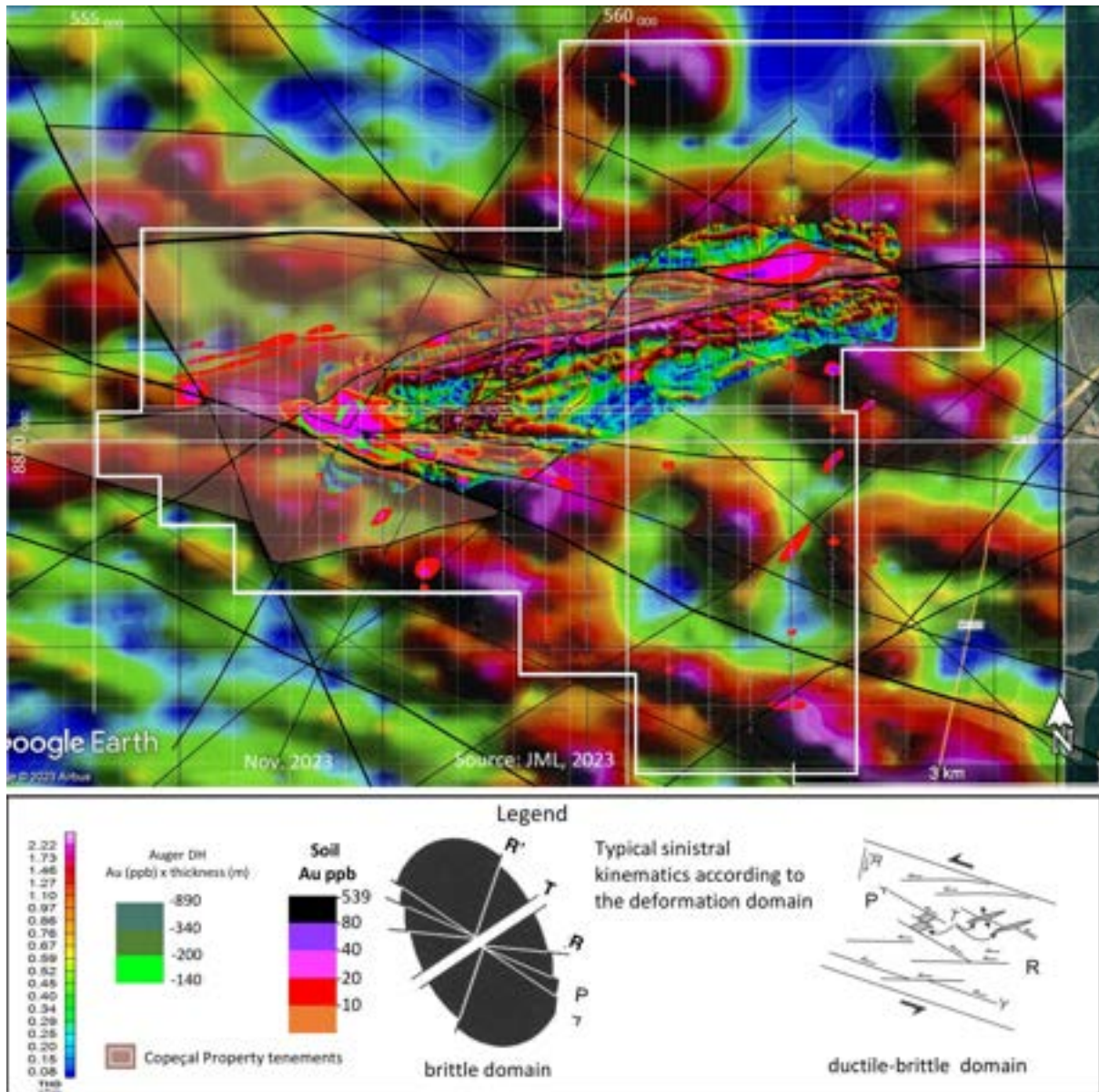


Figure 9.17 Soil and auger anomalies superposed to the structures, the airborne/ ground mag and BM qtz-schists

The bed rock response to the magnetometry illustrates the ductile-brittle kinematics developed under sinistral stress (see Riedel schematics in Figure 9.16). Similar geometry is also shown at regional scale in the geological map in Figure 7.11 and at project scale (see airborne magnetometry signature in Figure 9.17).

According to Figure 9.18, the gold mineralization identified as SW Anomaly, is not restricted to the muscovite quartz-schist but rather structurally controlled along major shear structures that may locally constitute a tectonic contact between two distinct stratigraphic. Specifically, in here, the clusters defined by the auger holes, are positioned in both sides of the contact between the São Romão Granite intrusive and the Bacaeri-Mogno Complex quartz schists.

The morphology of the bed rock revealed underneath the thick soil cover by the ground magnetometry re-enforce the potential presence of more than one mineralization style and geometry. The identified tectonic structure directions suggest that 400 m and even 200 m grid north-south lines pattern can easily miss anomalies emplaced along Y, T, R', X and X' shear structures.

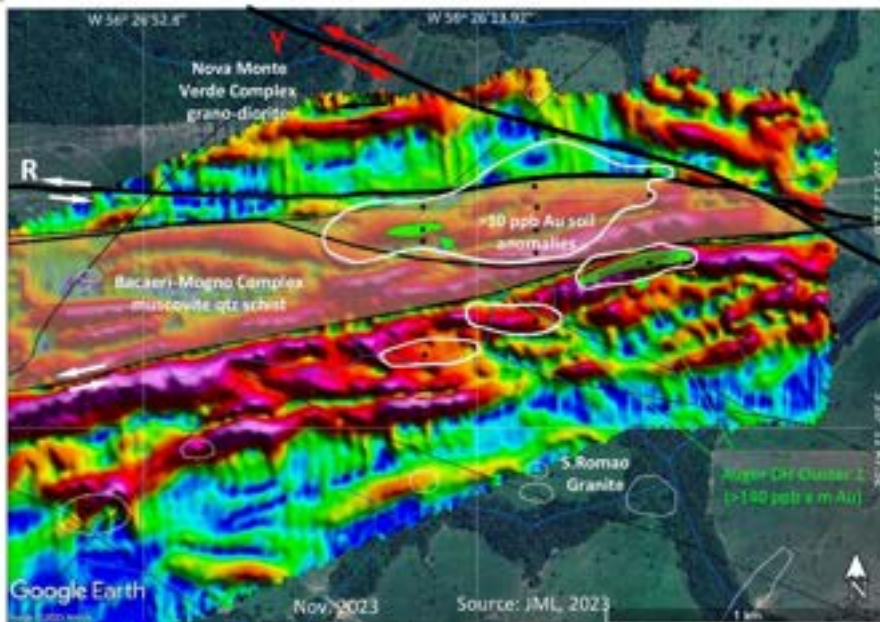
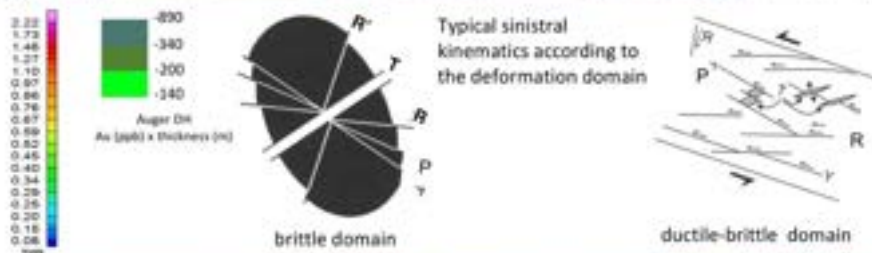
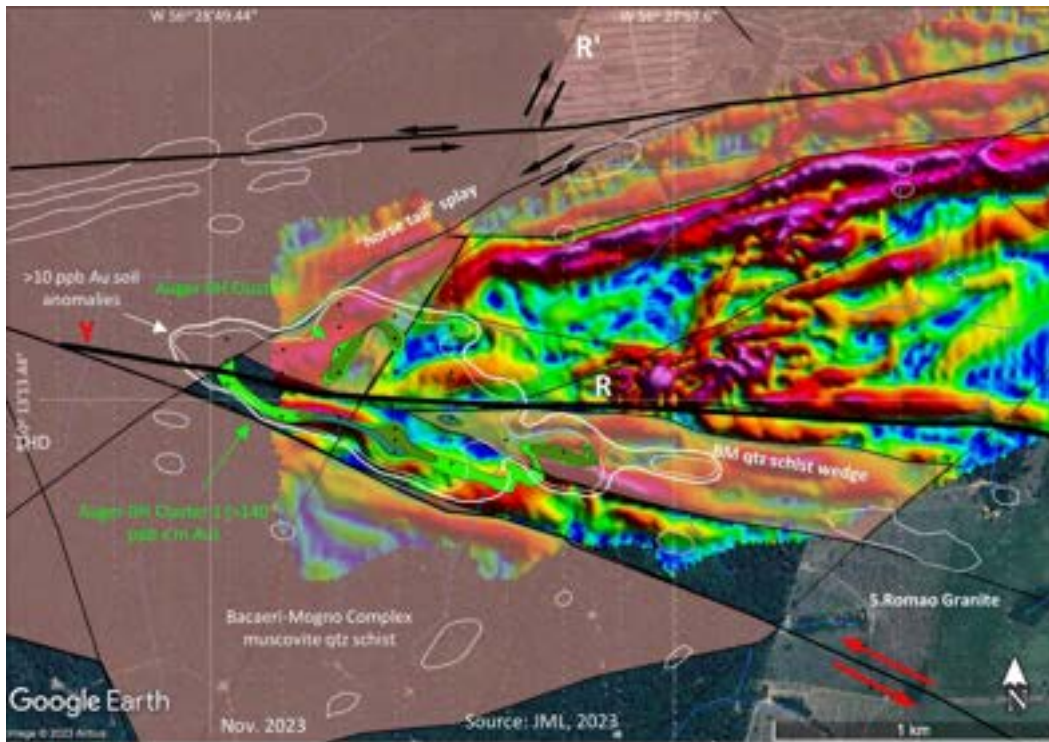


Figure 9.18 Detail maps of the SW and NE Anomalies of the integration shown in Figure 9.17

The geological map presented in map A of Figure 9.19 is coupled with the major structural axes in schematic map B. It points out seven axes divided in two sets of arrows and four different directions corresponding to the most favorable tectonic structures to host gold mineralization according to the present assessment and based on the information made available by Boa. Every axis is labeled with the corresponding Riedel shear reference.

The red axis in map B correspond to higher degree of interpretation reliability and robustness. The criteria employed to rank the different sectors were:

- Geochemistry distributed along grid lines closer to each one (100 versus 400 m for instance);
- Lithological data backed-up by geological stations, auger drill hole logs, soil sampling logs;
- The bed rock detailed morphology covered by the ground magnetometry.

The ranking has taken in account the fact that the western and northern portions of the tenements are still covered by primary rain forest, therefore, naturally less explored, either by the geologists but also the farm's personnel. Though considering that low grade pervasive mineralization is not attractive to the *garimpeiros*, any signs of quartz veining or any kind of expressive alteration, outcropping in the deforested area of the farm would probably be already spotted by the farm employees.

The intersection between auriferous structures represents important exploration targets in a structural controlled environment. The SW Anomaly seems to fall in this situation.

The areas marked by small circles correspond to the intersections of two lineaments while the crossing of three or more lineaments are marked with larger circles.

At a regional scale, two structures stand out in the proposed framework:

- The "Y" shear. It seems to be a recurring direction reported from many occurrences and producing gold lodes all over the Peixoto Azevedo district and other regions of the Juruena province. It constitutes, in the Copeçal Property the only target with maturity enough to be drilled in a relative short-term time, provided it returns positive results from an additional surface infill geochemistry infill program.
- The "X" structure. Though it is not well expressed in the remote sensing images except the STRM radar, this lineament is responsible to dictate the course of many drainages in the area and is associated to the largest number of tourmaline anomalies (magmatic hydrothermal signature?) identified by the CPRM regional geochemistry survey in 2002 (see maps in Figures 7.9).

It is the Author opinion that the regional NNW shear zone (X') associated to the Paranaíta river that borders the western side of the Property (see Figures 9.2 and 23.3), was an important element of the plumbing responsible to conduct the gold rich fluids associated to the Cabeça camp, the Copeçal Property and the secondary workings identified in the satellite image dated from 1982 in Figure 23.3. The excavations made in alluvions and colluviums are located less than 5 km from the southern limits of the Copeçal Property.

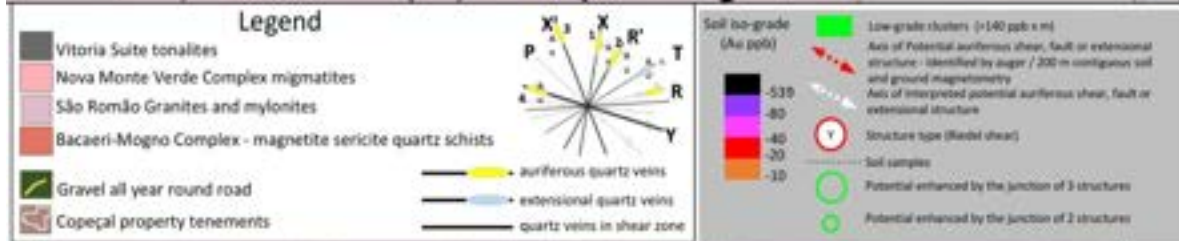
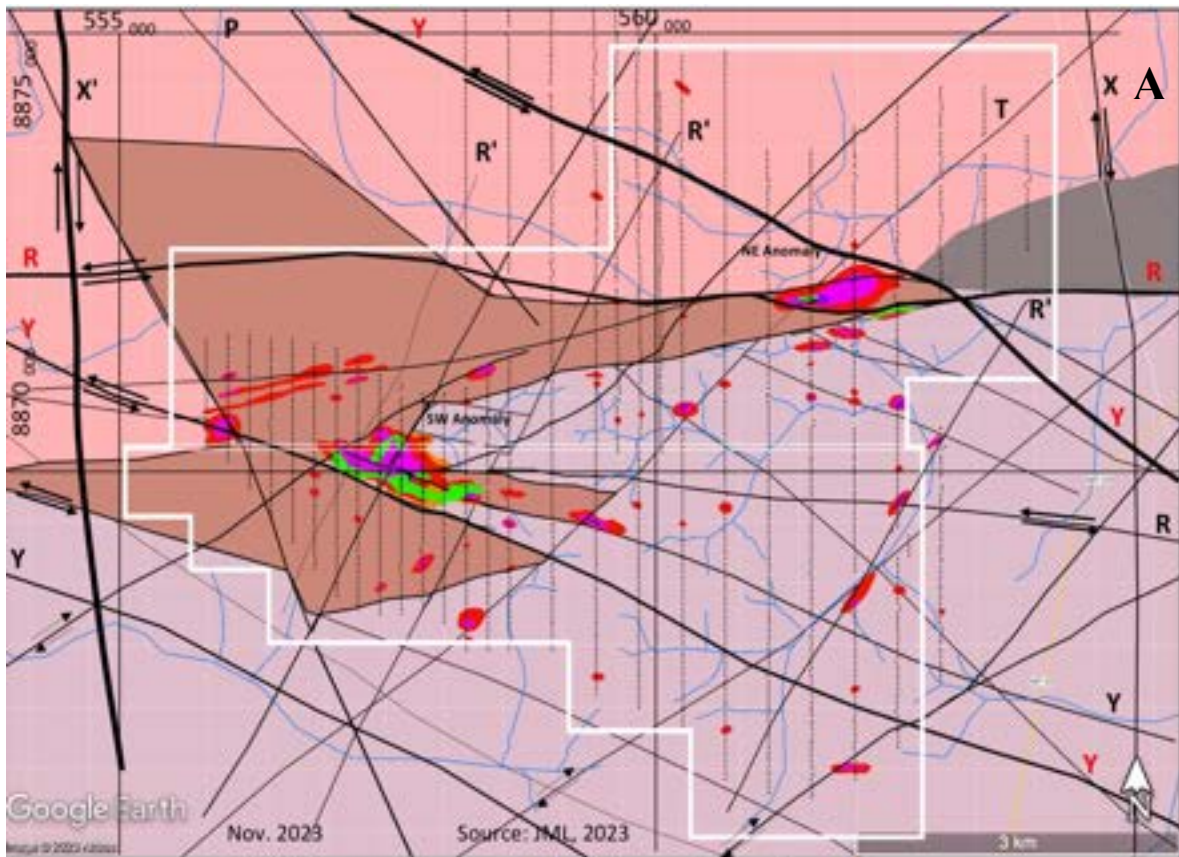


Figure 9.19 Map A: Updated litho-structural map resulting from the assessment. Map B: Potential structural axes susceptible to host gold mineralization at the Copeçal Property

## CONSIDERATIONS REGARDING THE INTERPRETATION

The assessment and *integration* of the soil geochemistry, the 54 shallow drilling auger - air core drill holes and detailed ground magnetometry with the geological, and especially the structural frame-work of the Copeçal host rock have led the Author to conclude that the failure to identify the primary mineralization in the auger and air core drill holes, is explained to the excessively wide distance between both the grid lines and the stations along the lines.

The wide, quite homogeneous, and large distribution (up to 530 m wide) of the soil gold contents above 20 ppb seems to reflect a secondary spread of the gold contents in the soil mass in "mushroom like" style, typical in deep soil covers developed in tropical weathering environment.

A Plot of the accumulated average grade of the forty-nine auger holes shows a good correlation with the iso-grade outlines of the soil anomaly and consistent, slightly higher average grade when compared to the nearest soil samples. Thirteen auger composites out of fifteen selected higher-grade auger holes are located in the core of the SW Anomaly. The higher-grade composites range from 7 m to 12 m apparent thickness and 23 to 334 ppb Au.

Although the auger drill holes results did not return any economic grade, the distribution of the best grade composites demonstrate that the geochemistry anomalies are composed of in-situ, residual soil and have allowed to delineate "low-grade gold auger clusters", two of them at the SW Anomaly, at least 800 m strike length and up to 180 m wide. None of the low-grade clusters were followed-up

The excessively wide pattern of the grid has highlighted that, the mineralization trend presumed to be E-W in 2010, is in fact oriented in at least 3 other directions associated to shear or extensional structures.

Gold potential associated to the identified structures ranges from moderate to high. Two of the highest ranked structures strike N10W and N30E, almost sub-parallel to the associated 800 m long low-grade clusters

The mineralization described in the Copeçal country rocks tend to occur in "pinch and swell" style quartz lodes or hosted in anastomosed mylonite "envelops", associated to transpressive structures.

As such, the ability of the current grid pattern to catch the mineralization trends, is significantly impacted.

Anglogold's Air core follow-up in 2013, over printed by the 107 m diamond drilling of Boa in 2022 aimed to test a chargeability anomaly associated to an insulated soil result of the 400 x 80 grid NE Anomaly out skirts. Both drilling campaigns failed to identify any relevant gold mineralization

The analysis of the diamond drilling executed in 2023 demonstrated that:

- The drill holes were not adequately collared to catch the interpreted IP conductors,
- Most of the sampling was done in very low recovery intervals (from 20 to 50%), therefore not representatives or in fresh, not altered wall rock intervals;
- The data was presented well below the minimum accepted industry standards.

It is the Author's opinion that the combination of the factors described above were determinant to the disappointing results from the auger and air core drilling campaign.

In light of the recent findings allowing to link the distribution of the soil and auger anomalies to the structural lineaments present on the Property and consistent with the tectonic settings associated to several gold deposits of the Juruena Gold Province, it is the QP opinion that further work is warranted on the property, to identify and expose the primary mineralization by detailing the soil geochemistry grid and expand the ground magnetometry coverage in order to reach a decision point envisaging to diamond drill the identified targets.



## 10. DRILLING

The Copeçal Gold Property is characterized as an early-stage exploration property and, as such only 546 m were executed on the property of which 424 m were validated for exploration planning purposes.

Three different types of drilling techniques were employed, starting with 354 m of shallow auger holes in 2012 executed by AngloGold. The auger drilling campaign was followed-up by AngloGold again with 85 m of shallow Air core drilling.

Additional information is shown in Table 10.1.

More recently, in 2022, Boa Gold executed 107 m of diamond drilling, of which a few intervals were selected during the preparation of this Technical Report for the strict purpose of mapping and exploration planning work.

See Section 9 (Exploration) for further detail regarding the drilling activities.

Table 10.1 Volume of produced information from the drilling campaigns at the Copeçal Property since 2012

Executed by	Year	Type	Diameter	Validated	# holes	m	# sample
AngloGold	2012	auger drilling	4"and 6"	v	49	354	371
AngloGold	2013	Air core drilling	3'5"	v	6	85	33
Boa Corp.	2021	Diamond drilling	NW	<del>v*</del>	2	<del>107</del> 63	<del>107</del> 20
					57	546	511
					57	502	424

\* only 63 m are validated for exploration purposes (mapping, modeling) UPON COLLAR COORDINATES VALIDATION

\*\* none of the samples are validated for resource assessment, only 20 samples (20 m) are partially validated for exploration purposes UPON COLLAR COORDINATES VALIDATION

## AUGER DRILLING EXECUTED BY ANGLOGOLD

The soil geochemical gold anomalies identified in 2011 were followed-up in 2012 employing a portable mechanized auger drilling device capable to drill vertical holes down to 20 m depth depending of the soil / saprolite consolidation. The auger holes were executed using a 6" spoon during the first 2 m then reduced to 4" until reaching the end-of-hole, usually determined by the presence of water. The primary samples collected at 1 m intervals were dumped on a plastic tarp on site, homogenized using " mix-by-rolling" procedure, then split 4 or 5 times by repeated quartering until the secondary sample reached 2 kg (see Figure 10.1).

Forty-nine vertical drill holes, totalizing 353.8 m were distributed every 80 m in average (every two pickets), along the N-S grid line segments associated to the NE and SW anomalies. 32 holes (258 m) were destined to follow-up the SW Anomaly, the other 17 holes (95 m) were drilled at the NE soil Anomaly. Drill holes average depth at NE Anomaly returned 5.6 m against 8.1 m from the SW Anomaly. The location of the auger drill holes is shown in Figure 9.2, overlapping the soil geochemistry contouring.

An assessment of the gold contents spatial distribution in auger holes was made by plotting, for each of the auger holes, the accumulated *grade x thickness* of those intervals composed by contiguous, anomalous (>20ppb) samples.

12 holes above 140 ppb x m Au of the SW Anomaly, out of 18 holes were contoured and resulted in two 800 m long low-grade clusters located at the SW Anomaly (see Figure 9.3).

The composites of only 2 insulated holes of the NE Anomaly insulated holes resulted above 140 ppb-m resulting from the NE Anomaly (see Figure 9.3).

See Section 9 (Exploration) for further detail regarding the mechanized auger drilling activity.



Figure 10.1 Typical drilling operation of the portable mechanized auger drill

### AIR CORE DRILLING EXECUTED BY ANGLOGOLD

A total of 85 m of shallow, vertical Air core drilling were collared at the NE Soil Anomaly in a one-day job in April 2013.

The total depth of the 3.5-inch diameter Air core drill holes varies from 7 m to 20 m. The drill holes were vertical and the samples collected at 3 m intervals.

All six drill holes were distributed along a 120 m segment of grid line 562300 E (also named 27900E in local grid coordinate) and positioned approximately in 25 m intervals (see Figures 9.3 and 9.4).

Resulting assay results above 0.1 g/t Au were limited to 2 contiguous samples from airoe drill hole CP-AC-004 from 15 m to 17 m depth. The intersection returned 0.8 m @ 0.45 g/t Au.

See Section 9 (Exploration) for further detail regarding the Air core drilling activity.

### DIAMOND DRILLING EXECUTED BY BOA GOLD

In late 2021, Boa took the decision to execute a short drilling campaign-to test the down-dip continuity of the chargeability anomaly previously drilled without success by AngloGold in 2013. The geophysics anomaly is located in the south-eastern boundary of the NE soil Anomaly.

GEORRÁS Serviços geológicos,(Georrás), a small size drilling contractor from Cuiabá, Mato Grosso state was hired and mobilized in February 2022 to execute the proposed 200 m diamond drilling campaign using a Maquesonda 850 drill rig.



Figure 10.2 Photo of the SR-001 drill pad and the 27 hp Maquesonda 850 drill rig employed by Georrás to execute drill holes SR-001 and SR-003.

The assessment of the diamond drilling campaign was based on the conversations held during the assessment with Mr. Rafael Mottin and the documents listed below:

- Doc 1: A 15 pages report identified as "**Partial drilling Report**") - Prepared and signed by Renato Antunes da Silveira Neto, a geologist employed by Georrás Serviços Geológicos, and hired by Boa to log the core and handle the day-to-day drilling operation; It contains the SR-001 geological log and collar information in a separated table and the photos of SR-001 core boxes prior to the sampling.
- Doc 2: A 4 pages document identified as "**Drill Hole Location Criteria**" (author not identified) Destinated to justify technically the proposed drill holes it contains some Google Earth satellite image prints showing the location of the proposed drill holes and a schematic cross section of grid line 562,300E, showing the auger and Air core drill hole;
- Doc 3: Operational production sheets, it refers to the February 2022 invoice, it includes a summary of drill hole SR-001 driller daily logs and photos of SR-001 unsampled core boxes.
- Doc 4: Operational production sheets, it refers to March invoice and includes the SR-003 summarized driller daily logs but no photos of the unsampled drill core.
- Doc 5: A set of 5 photos of the SR-001 drill core boxes after the sampling took place.
- Doc 6: A set of 5 photos of the SR-003 drill core boxes after the sampling took place
- Doc 7: Two ALS assay result certificates, one relative to the 107 samples of drill holes SR-001 and SR-003; the other certificate reports assays results of QC samples
- Doc 8: One Excel spreadsheet containing the results reported in the Lab certificates.

*Note*

*The drill core was not verified as the location of the drill core storage was not made available to the author*

A total of 107 m diamond drill core was reported to Boa after 42 days campaign when Boa took the decision to end the drilling activity due to very poor recovery rates achieved in drill holes SR-001 and 003 (drill hole SR-002

- The analysis made of the data indicated that the drilling Equipment did not meet the required drilling capacity to perform thick soil / saprolite terrain, intersected by large scale faults and associated voids.
- The inadequacy of the drill rig led the contractor to deliver only 57% of 107 m of drill core (approx. 60 m, the equivalent to 30% of the 200 contractor meters),
- Diamond drilling in thick soil / saprolite covers, intersected by large scale discontinuities / faults require the utilization of modern drill rigs, equipped with wire-line and capacity/power enough to handle HQ, even PQ rods in order to recover larger volumes of unconsolidated material in one shot, reducing the need to retrieve the rods and therefore avoiding caving until the drill bit reaches the bed rock and settle the HQ rods to play the role of casing for the introduction of NQ tools.

The productivity numbers are a strong evidence of the need the driller probably had to wash the hole every time the rods were pulled out to empty the core barrel, which is not required when the rig is equipped with wire-line accessories.

Further information relative to the diamond drilling campaign is reported in Section 9.

## 11. SAMPLE PREPARATION, ANALYSIS AND SECURITY

Five exploration activities have generated a total of 3291 samples since 2010 up to 2022, the vast majority related to the soil sampling (2780) executed in 2010/2011, then to auger / Air core drilling (404) in 2013.

Both the soil and the shallow drilling campaigns, which represent 96% of the samples, were executed by AngloGold, the former mineral right holder.

The Data relative to the soil geochemistry and the shallow drilling are reported in Section 6 - history and as well in Sections 9 - Exploration and 10 - Drilling for the following reason:

The data presented in Section 6 is supported by the original maps, sections and other information presented in two AngloGold reports, filed at the ANM in 2013 and 2016.

For the preparation of the Technical Report, most of the historical information was digitized, and integrated with the data generated by Boa in recent years and the data gathered from CPRM and other public /scientific sources. The combined information was used to support the *Geological Context and Exploration Thesis* set in the Term of Reference of the present report. and the associated geological and structural frameworks required to prepare the Technical Report.

As such, the information was introduced in Sections 9 and 10, accompanied with modified, and additional maps, sections and tables.

As stated in Section 12, the data was randomly cross-checked and verified. The procedures, analysis and handling of the information was verified through AngloGold exploration report.

The assay data generated by Boa in 2022, relative to 2 diamond drill holes and 107 core samples were rejected after the verification as it did not meet the minimum required industry standards (see Section 12).

## 12. DATA VERIFICATION

The bulk of the technical data, specific to the property was made available by Boa in successive periods of time beginning in June 2023 when the field visit to the property took place, up to August 2023 when the final data from the Drone magnetometry survey was released. Recently in March 2024 a small content of additional data received from Boa relative to two diamond drill holes executed in 2022. The present revision made to the report includes an update of the Mineral Rights status triggered by the issuance of the Exploration Permits in January 2024.

### ANGLOGOLD GEOCHEMISTRY DATA BASE

The vast majority of the technical data and information utilized to support the geological thesis presented in the report was generated by AngloGold's subsidiary between 2010 and 2016. Stream sediment, rock chip, 49 Auger drill holes and 6 Air core drill holes constitute the bulk of the data base estimated in 3,861 samples and associated information.

The Random verification between the assay results contained in the lab certificates attached to the reports, the values plotted on maps (when plotted) and the information contained in spreadsheets did not return any inconsistencies. A set of soil data corresponding to four grid line located in different parts of the soil was flagged not because of inconsistently but for presenting suspicious systematic barren or very low gold values (<5 ppb) contrasting with the adjacent grid lines suggesting that a few batches of soil samples may have been affected by a deviation in the primary sample collection procedure in the field or a preparation and/or analytical issue at the laboratory affecting an entire batch of samples. Considering these are 400 m x 40 m pattern grid lines, the impact represents a gap of 800 m of untested potential soil anomalies. Infill and re-sampling of part of these grid lines is recommended in Section 26.

### BOA DIAMOND DRILL HOLE SAMPLES

Based on the assessment made by the Author, one hundred and seven samples (100% of the samples) associated to diamond drill holes SR-001 and SR-003 executed in February 2022 were discarded for the disclosure of assays results and/or resource assessment.

The decision was based on three aspects:

- The unavailability of important Information: The author was not provided with:
  - The collar coordinate, direction and inclination of one of drill hole SR003;
  - The intervals (from/to depths) of the core samples reported in the ALS laboratory;
  - A description of the Operational Procedures applied to the drilling operation and the tasks relative to the handling of the primary samples from their capture from the core barrel up to the batch dispatching to the laboratory.
- Inadequate operational procedures of the activities related to the drill core handling, not aligned with generally accepted industry standards;
- The lack of representativity of the primary samples due to very low recovery rates. Details of the distribution of the drill holes core recovery is shown in Table 9.3 - Section 9 - EXPLORATION

The verification made of the information made available relative to drill holes SR-001 and SR-003 resulted in pointing out the information missing from the data made available in March 2022.

The simplified check list reporting the status of the information gathered from the documents and files listed in Section 9 is shown in Table 12.1

- The drilling operation was executed without supervision;
- The lack of formalization and capture of the drill hole geographic coordinates, direction and dip or any of the relevant conditions observed during the execution (water, tools jam, etc.);
- Lack of Standard Operation Procedures (SOPs) of all the activities related to the drilling operation;
- Lack of DAILY driller log, It's the contractor's obligation, but the responsibility of the contractor to demand it
- The sampling intervals were not established according to the geological contacts / boundaries;

Table 12.1 Simplified check list of the diamond drill holes missing information

Georrás Diamond Drilling - Data Simplified Check List				
Information			Drill Holes	
			SR-001	SR-003
Drill hole start and conclusion Date			Doc 1	Doc 3
Header data	Drill Hole Collar Location	Coordinates	Doc 1	NA
		Method / equipment	NA	NA
	Direction		Doc 1	NA
	Dip		Doc 1	Doc 3
	Deviation		-	-
	EOH		Doc 1	Doc 3*
Recovery			Doc 2	Doc 3*
Geological log	Lithology		Doc 1	NA
	Structures		NA	NA
	Alteration		NA	NA
	Mineralization		NA	NA
	Primary samples	Intervals	NA	NA
		Method	NA	NA
Daily Driller Log			Doc 2	Doc3
Photography	raw drill core (prior to the sampling procedure)		Doc 1 and Doc 2	Doc 2 (0 to 25m)
	retained drill core		Doc 4	Doc 5
Core box Storage			NA	NA
Secondary sample preparation	Weight capture		NA	NA
	Insertion of Quality control standards		NA	NA
	Rejects storage		NA	NA

According to the assessment made of drill hole SR-001 and SR-003 data and **upon the validation of the collar coordinates in the field**, the following intervals of drill hole SR-001 can be employed for the following specific purposes:

*Note*

*The intervals not listed below should not be utilized to any purpose*

**SR-001**

Geological and structural purpose

- From 0 m to 40.25 m (EOHJ)

Geochemistry **for exploration purpose only**

- From 20 m to 40.25 m

**SR-003**

Geological and structural purpose

- From 0 m to 65 m

**VERIFICATION MADE DURING THE FIELD VISIT**

The information susceptible to be validated in the field was revised, prior to the visit in June 2023.

At the time the visit took place, the Author had the opportunity to meet the technical team responsible to execute the magnetometry data acquisition.

The existence of two drill holes executed in 2022 was not known by the Author when the field visit took place, therefore neither the collars in the field or the drill core could be verified.

During the field visit, the data verification consisted to locate and confirm the existence and the coordinates of the relevant physiographic references such as crossings between creeks and access roads, coordinates of existing facilities. Available rock showings or outcrops were described to compare the geological information contained in the reports. General aspects such as access, land occupancy to carry out the magnetometry survey in progress at the time of the visit were also observed.

The Author verified the existence of any potential risks related to land access or environment protected areas that could jeopardize the execution of the exploration activities the Company intend to carry on.

Due to the nature of the exploration activities carried out by the former mineral title holder, the Author could not confirm the existence and coordinates of any of the previously collected and reported samples.

No monuments attesting the position of the 6 Air core drill holes or auger holes were found, the Author did not find any reference in AngloGold reports informing the procedures applied to identify Air core drill holes in the field.

Because the assay results generated by Air core or auger drilling usually do not meet the required sample representativity for resource estimation purposes, the drill collars probably were not marked in the field for future identification. Another possibility is the destruction of the monuments, if any, caused by the constant cattle occupation of the area identified as NE anomaly. The area associated to the SW soil anomaly, located in the primary rain forest was not visited during the field visit due to the lack of a field assistant.

**None of the information above was employed and should not be employed to any form of resource or reserve assessment.**

It is the Author's opinion that the technical information made available by Boa to prepare this Technical Report is adequate for the purposes it is destined.



### 13. MINERAL PROCESSING AND METALLURGICAL TESTING

Not Applicable

### 14. MINERAL RESOURCE ESTIMATES

Not Applicable

### 15. MINERAL RESERVE ESTIMATES

Not Applicable

### 16. MINING METHODS

Not Applicable

### 17. RECOVERY METHODS

Not Applicable

### 18. PROJECT INFRASTRUCTURE

Not Applicable

### 19. MARKET STUDIES AND CONTRACTS

Not Applicable

### 20. ENVIRONMENTAL STUDIES, PERMITTING & SOCIAL OR COMMUNITY IMPACT

Not Applicable

### 21. CAPITAL AND OPERATING COSTS

Not Applicable

### 22. ECONOMIC ANALYSIS

Not Applicable

## 23. ADJACENT PROPERTIES

### Caution

*“The Author has not visited the adjacent properties nor was able to verify the production Figures and information sourced from outsourced reports. The information is not necessarily indicative of the mineralization on the Copeçal Property that is the subject of this Technical Report.”*

To the exception of the younger sedimentary rock of the Caiabis and the Cachimbo basins, the core of Juruena Province is entirely covered by mining titles as shown in the ANM map in Figure 23.1. Three major players hold the vast majority of the ground surrounding the Copeçal Property. Anglo American holds approximately 720,000 hectares encompassing the north-western areas adjacent to the Copeçal Property (see the area filled in grey in Figure 23.1).

Codelco is the second major title holder with approximately 450,000 hectares situated to the west (filled in green in Figure 23.1). Codelco holds most of Copeçal adjacent tenements. Nexus's claims, shown in yellow, fill the gap occupying the eastern continuity of Copeçal.

A total of six gold occurrences and small-scale primary operations, hosted in the southern belt of the Juruena province were identified in a radius of 85 km around the Copeçal tenements.

- The Nova Canãan *garimpo*, also named Edu *garimpo* is situated at approximately 82 km, bearing 120° azimuth. It is labeled with the number 7 (Edu) in Section 7, Figure 7.9
- The Agropecuaria Mogno Camp encompasses 4 gold occurrences situated 31 km to the north-west (320° azimuth). The occurrences are known as Rato, Faz. Mogno and Morro do Tunel *Garimpos*.
- The Cabeça Mining camp lies 19 km to the south. Based on recent Airbus images, it constitutes the only active operation in the vicinities of the Copeçal Property. The mining titles are active at the ANM under a group of 50 ha of individual claims consolidated under a "*lavra garimpeira*" (small scale mining activity) type permit. The *Lavra Garimpeira* permits are granted by the ANM under specific regulations destined to small scale mining activities. Among other tenements, the most significant titles are the Fabiano, the Pista do Oto and the Rato *Garimpos*.

Both the Agropecuaria Mogno and Cabeça Mining camps are shown in the geological map in Figure 23.3.

### THE CABEÇA MINING CAMP (RESERVA GARIMPEIRA)

The Fabiano and Gil *garimpos* are the main operations in the Cabeça camp and the nearest operations from Copeçal, lying approximately 19 km to the south (see Figure 23.3). The Fabiano artisanal operation is reported to be active in 2020, the latest satellite image available confirm the Fabiano property was operational at the time this Technical Report was being prepared. The Author could not confirm the status of the other *garimpos*.

The analysis of the *Google Earth*<sup>TM</sup> remote sensing historic images resulted in identifying the nature and extent of the current and historical workings. The full extents of the alluvial and colluvial are seen in Figure 23.3 dated 1995 when it reached its peak (the excavations begun before or during 1982, based on *Google Earth* historic views).

The Fabiano and Gil gold artisanal operation are described in CPRM report by Silva, M – CPRM, *Projeto Metalogenia da Província Aurífera Juruena, Mato Grosso, 2008*.

She refers to the occurrence as *Garimpo do Gil e do Fabinho*. The paper reports that the production of primary gold took place in 1990 (actually, the satellite image shows the alluvial had been discovered before 1982) by producing ore from mylonite rocks, hosted in folded, narrow quartz veins. The schists protoliths are meta-subvolcanic intercalated with graphite schist and meta-greywacke of the São Marcelo Cabeça unit. The mineralization is accessed through a shaft and a drift.

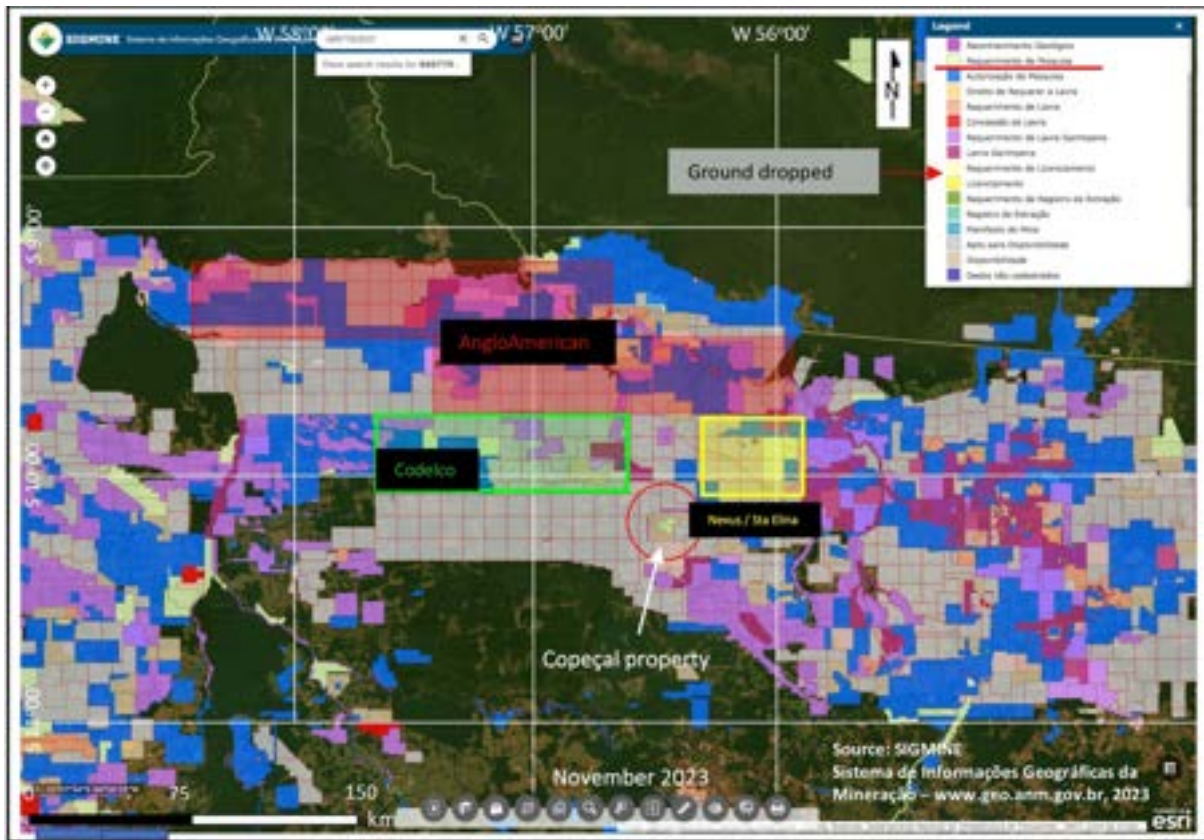


Figure 23.1 Distribution of the mining titles around the Copeçal gold Property



Figure 23.2 Mylonitic foliation dipping NE at the Gil artisanal drift

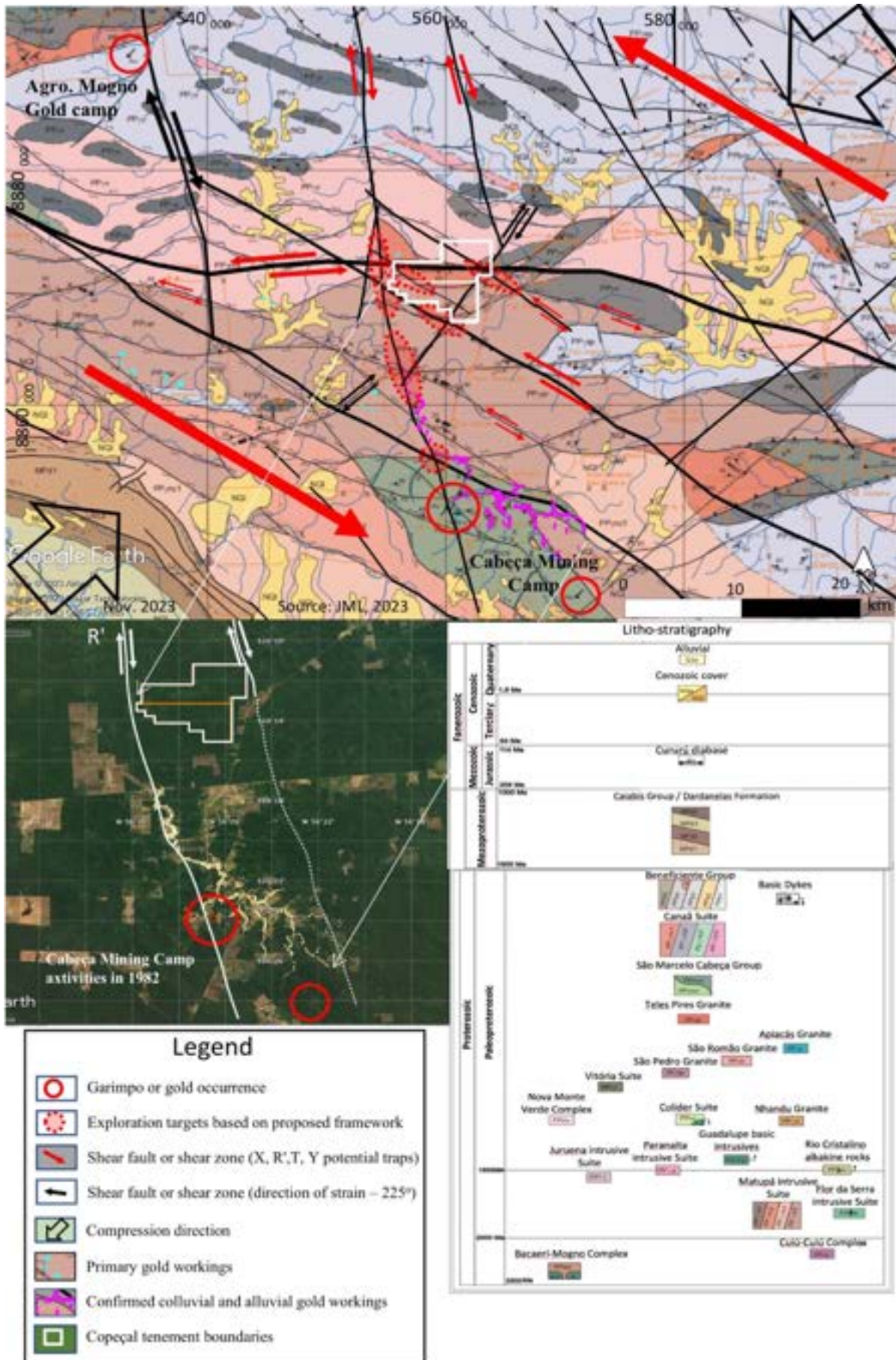


Figure 23.3 Mineralized NNW shear zone linking Copeçal and the Cabeça Garimpos

Emplaced in ductile deformation settings, the mineralization is trapped in the hinge or along the axial plan of isoclinal, asymmetric, reclined folds. The high grade, core mineralization, at the Fabiano mine is reported to behave in boudinage geometry along the axial plan.

According to Silva, the declared total resources in 2008 were approx. 400 K oz. (NI 43-101 non-compliant)

The head grade was ranging from 4.5 g/t up to 850 g/t. The main quartz lode width is reported to be 0.8 to 1.0 m. The gamma-spectrometry ternary plots signature is yellow/white, compatible with the usual hydrothermal response. Gil developed 2 inclined shafts measuring 20 m and 18 0 m with an inclination of 45°/N90° along the 45-75°/N70-90° fold axis.

The Fabiano's mine was developed through a vertical shaft. The first level is situated 40 m below surface, the development then strikes N60°W along the mineralization hosted in the fold axial plan.

The presence of abundant fine-grained tourmaline (15% to 40%) was reported from the adjacent creeks during CPRM visit. Py and Po constitute 1 to 8% of the ore, Aspy and Cpy are subordinated.

Reported alteration includes silicification, sericitization, biotite, tourmaline, and epidote. Silicification may vary however sericite/muscovite are always abundant and wide spread.

Martini, 1998 describes quartz-biotite schist and quartz-muscovite schists with local variations to quartzite. He reports the presence of carbonaceous and garnet rich layers. The rocks exhibit a penetrative, sub-vertical foliation and micro folds. Horizontal friction type lineation is frequent. He reports that the gold seems to be restricted to the quartz veins.

Descriptions of the Fabinho / Gil mineralization indicates that those occurrences share with the Copeçal Property, the ductile deformation domain that characterize the Southern belt of the Juruena Province.

#### THE AGRO-MOGNO – RATO GARIMPO OCCURRENCES

The main excavation associated to the Agro-Mogno occurrence, situated 32 km to the northwest of the Copeçal Property, is constituted by a 200 m by 100 m open cut that is clearly identifiable in the current satellite images (see Figure 23.5). The geological settings of the Agro-Mogno occurrence are shown in Figure 23.3

Scabora (1997), visited the occurrence at the time Santa Elina Mineração was diamond drilling the property. He reports the company had identified centimetric to metric thick layers of gold mineralization hosted in quartz vein rich altered mylonite with disseminated sulfide, associated to magnetic porphyry granites of the Paranaíta suite intruded in Bacaeri-Mogno Complex rocks. He also reports the mineralization strike N70°E dipping 70-80° NW.

Hydrothermal alteration included milimetric bands of carbonate and up to 2% disseminated sulfide including py, cpy, sphalerite and bornite. An alteration halo composed by epidote and sericite was also observed in the granitoids.

Scabora indicated that the mineralization was directly associated to the sulfide alteration, the highest reported grade in drill core being 75,23 g/t over 2 m apparent width, associated to a quartz vein hosted in altered mylonites.



Figure 23.4 Fabinho open cut operation and extents of the Cabeça secondary workings

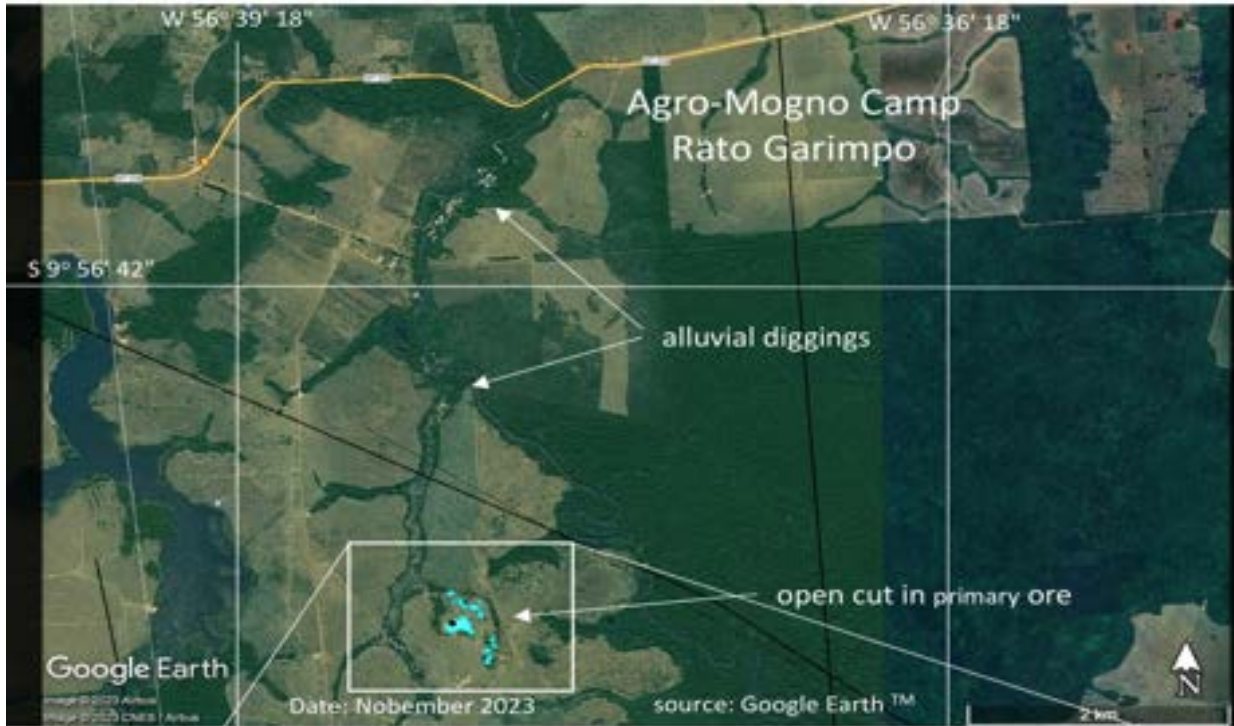


Figure 23.5 Former Rato open cut and extents of the alluvial secondary workings

## 24. OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information not already reported in the other sections of this Technical Report.



## 25. INTERPRETATION AND CONCLUSIONS

### INTRODUCTION

The Author notes the following interpretations and conclusions, based on the assessment made of the data available for this Report.

### MINERAL TENURE AND SURFACE RIGHTS

Information provided by Boa supports the interpretation that, at the time this Technical Report took effect, the Exploration Permits are active and registered under the name of Ouro Resources Do Brasil Ltda at the ANM.

### INFRASTRUCTURE

The Property lies in an open area, with apparently no restrictions to the development of a large, industrial mining operation. There are several options to establish a waste pile and tailings facilities. Water and power supply are abundant in the vicinities of the property, the current road access is available year-round with no restrictions in size or weather.

The Alta Floresta region, in northern Mato Grosso, constitute one of the most mining friendly environments, thanks to five decades of on-going mining activities history. Due to its geographic position, the Alta Floresta municipality is granted with the “*Legal Amazonia*” tax break regime.

### GEOLOGY AND MINERALIZATION

The integration of the data gathered from the exploration campaigns and the outsourced information have led to establish key components of the property geological settings. The most relevant are:

The Property shares similar tectonic-structural settings with most of the known gold deposits known in the Juruena Province, characterized by the intersection of two multi-hundred kilometers shear corridors that have played an intrinsic role in the geo-tectonic evolution and emplacement of the Paleo-Proterozoic continental magmatic arc and associated hydro-thermal plumbing that have carried the gold mineralization ..

Two deep WNW-ESE and E-W sinistral, second-order shear zones crosses-cut the Property, while two NNW dextral shear faults border the east and western boundaries of the tenements;

The Property is embedded in ductile to ductile-brittle deformation domains characterized by highly deformed rocks attributed to the São Romão / São Pedro Suites intrusive units and the Bacaeri-Mogno metamorphic Complex (Juruena Super Suite); The mineralization is probably structurally controlled, associated to more than one shear faults of second and third-order, occurring in "pinch and swell" style quartz lodes or hosted in anastomosed mylonite "envelops".

CPRM has identified and described the presence on the mineral rights of the property and its vicinities of gold and arsenic anomalous values in stream sediment samples, monazite and abundant tourmaline counts in HMC (Heavy Mineral Concentrate), geographically associated to regional scale tectonic structures;

### EXPLORATION

#### THE EXPLORATION GRID - CONSIDERATIONS

The geochemistry follow-up carried out to date at the Copeçal Property was spatially distributed along 3,324 hectares of a north-south regional exploration grid line pattern.

The grid was settled with grid line 400 m distant from each other and sample stations distributed every 40 along the lines, an excessively wide pattern, rather employed in regional exploration.

The 200 x 40 m pattern infill program undertaken one year later resulted in the densification of only 17% of the grid (see Figure 9.1)

The soil 200 x 40 m infill program resulted in the consolidation of the SW Anomaly, the most consistent and large anomaly of the whole grid, thanks to the closer grid pattern.

The wide, quite homogeneous, and large distribution (up to 530 m wide) of the soil gold contents above 20 ppb indicates the presence of a secondary process resulting in a spread of the gold contents in the A and B soil mass in a "mushroom like" style, typical of deep soil covers developed in tropical weathering environment.

As such, the SW Anomaly was followed up with a total of 33 mechanized auger drill holes. A plot of the accumulated average grade of the best thirteen holes shows a good correlation with the iso-grade outlines of the soil anomaly. An analysis of the grade distribution in each of the thirteen best holes, returned a consistent, slightly higher average grade when compared to its respective soil sample above. The selected auger holes include intervals ranging from 7 m to 12 m apparent thickness and 23 to 334 ppb Au grade. Such behavior indicates that the SW soil anomaly is not restricted to the top soil horizons but is of residual nature and not restricted to the A horizon but to the B horizon as well and possibly deeply rooted in the "in situ" saprolite.

The distribution of the accumulated *grade x thickness* values extracted from the best 13 auger drill holes and the contouring of the contiguous composites above 140 ppb-m returned two 800 m long, low-grade auger clusters at the SW Anomaly.

The mineralization trend, presumed to be E-W back in 2016, seems to be in fact oriented in at least 3 other directions associated to shear or extensional structures. To the exception of the "R" structure, all the other potential structural traps are at least 30° off the grid best catch angle. Two of them are almost parallel to the grid lines, including the "X" structures often reported by CPRM to host expressive gold ore bodies in the regional vicinities of the Copeçal Property; Table 9.3 reports the regional structures recognized at the Copeçal Property project scale.

#### THE DIAMOND DRILLING CAMPAIGN - CONSIDERATIONS

The assay results relative to the diamond drilling campaign executed in 2022 (drill holes SR-001 and SR-003) to test a chargeability anomaly associated to an insulated soil result of the 400 x 80 grid NE Anomaly out skirts were discarded for the purpose of resource assessment. A small number of samples from SR-001 (20 samples out of 107) was validated for geological purpose only (see Table 9.3 for further detail)

The analysis of the diamond drilling executed in 2023 demonstrated that:

- The operational procedures of most of the drilling and drill core handling were not carried out according to generally accepted industry standards;
- A great part of the sampling was sourced from intervals characterized by very low recovery rates (from 20 to 50%), therefore not representatives and inconclusive for exploration purposes;
- A great amount of important information was not recorded or was not available such as collar data, logs, operational procedure SOP's, etc.
- the drilling operation was executed without supervision from Boa;
- The drill core was not made available at the time the field visit took place.

None of the information above was employed to any form of resource or reserve estimation.

#### THE DRONE MOUNTED MAGNETOMETRY SURVEY - CONSIDERATIONS

The ground, detailed magnetometry survey carried out by Boa in 2023 has confirmed the close association between the WNW-ESE second-order transcurrent structure and both the large SW Soil Anomaly and the 800 m long low-grade auger clusters.

Detailed ground magnetometry proved to be very effective to reveal details of the bed-rock tectonic structures and some of the lithological contacts lying underneath the deep oxidized soil / oxidized cover.

It is the Author's opinion that the soil sampling and auger follow-up executed in 2013 only assessed a limited portion of in-situ anomalies due to the excessive wide grid pattern. Furthermore, the Air core and diamond drilling follow-ups executed in 2013 and 2022 did not test the most potential zones situated at the SW Anomaly.

## 26. RECOMMENDATIONS

The Author recommends that further in fill and step-out soil geochemistry, drone magnetometry and further air core shallow drilling and/or trenching be carried out to identify and establish the geometry (shape, direction and dip) and order of magnitude (grade, strike length and width) of the mineralization, aiming to determine whether the Copeçal Gold project should be advanced to the diamond drilling stage.

The recommended infill soil program and magnetometry follow-up, proposed in Phase 1 have the objective to consolidate the frame work and thesis established during the assessment. One of the outputs resulting from the assessment is the indication that the gold mineralization can potentially occur in quite a large array of directions and shapes depending which shear structure(s) and the nature of the deformation(s) domain it is emplaced.

The area encompassed by the recommended program was divided in six different Sectors according to the ranking criteria discussed in Section 9 of the report, and applied to the structural axes shown in map B, Figure 9.9.

The recommended exploration program proposed here-in is divided in two consecutive phases, with Phase 2 contingent to the results of Phase 1.

### PHASE 1 - PROPOSED EXPLORATION PROGRAM

The Author recommends to scale-up the activities during Phase 1

#### IN FILL AND STEP-OUT SOIL SAMPLING, STRUCTURAL MAPPING AND DRONE MAGNETOMETRY

##### **Sector 1**

Phase 1 recommended program aims to consolidate the frame-work and geological thesis established during the assessment suggesting that the gold mineralization potentially occurs in different directions and shapes depending of the shear structure(s) and the nature of the deformation(s) domain it is emplaced.

The Author recommends initially, to validate the AngloGold soil sample population by collecting twin samples of the soil in randomly selected sectors of the grid. Upon satisfactory validation, to resume exploration beginning by soil infill and step-out sampling the recommended sectors according to the priorities and grid patterns indicated in the map at the top of Figure 26.1 and listed in tables 26.1 and 26.2.

Concomitant with the soil geochemistry follow-up program, to expand the ground magnetometry coverage to the surface indicated in the map at the bottom of Figure 26.1.

The soil follow-up sectors are shown in Figure 26.1, the estimated amount of soil samples, magnetometry coverage and recommended drilling is reported in Table 26.1.

The estimated costs associated to the proposed exploration activities are presented in Tables 26.2.

Phase 1 includes a campaign covering a total of 2,200 ha of 200 m x 40 m step-out soil sampling and 100 m x 40 m infill follow-up.

A total of 126 km of grid line, 3160 soil samples are estimated to cover all six sectors shown in Figure 27-1 and listed in table 27.1. Approximately 50% of the grid lines will be cut in reminiscent primary rain forest (sectors 1,2 and 3). The other 50% (60 km) are situated in open pasture.

To carry out the soil geochemistry, the grid geological / structural mapping and rock chip sampling, it is estimated a total of three months, two crews of 1 technician and 2 field assistants each, under the coordination of one project geologist responsible to supervision the grid opening and sample collection, and carry-on the structural / geological mapping and rock chip sampling.

A total of five months should suffice to collect, ship the samples to the lab and receive the assay results. Two months will be required to process the information and establish / plan the drilling targets and required access / drill pads preparation.

Considering the data and information today available, the SW soil / auger anomaly constitute the most advanced and robust gold occurrence susceptible to result in drilling target(s), the Author recommends to begin the proposed soil geochemistry follow-up, by infilling Sector I, encompassing the SW target with a 100 x 40 m grid pattern and the adjacent soil anomalies with 200 x 40 m pattern.

The 65-ha area delimited by the 10-ppb soil outline containing the trends delineated by the auger holes that overlaps and the *Y* secondary shear zone should not be just infilled, but the former 200 x 80 m sample stations sampled again to ensure that the soil anomalies identified by the previous operator are reliable enough to be used as preliminary guide.

The assays corresponding to the 65-ha area must be validated against the former samples collected in 2011. The new grid lines should match, as much as possible the coordinates of the N-S former grid lines.

It is of paramount importance that the field sampling procedures, sample volumes and depth, on-site screening, etc. follow identical protocols. The same applies to the preparation and analysis protocols.

If possible, the field campaign should take place during the same season the former campaign was carried out.

If the replicate assay results of the first batches return significative variance or low precision, the proposed follow-up areas should be not only constituted by opening new intermediary grid lines but the former grid lines be resampled.

Once the area relative to the SW target area is completed, the Author recommends to launch the drone magnetometry survey, giving priority to Sectors 1 and 2 so the preliminary magnetometry outputs can be used to eventually modify the outlines of the proposed soil sampling program or redirect it to other sectors.

Provided the on-going soil follow-up on Sector 1 returns satisfactory results, the required land access and environment licensing should be launched to ensure that Phase 2 Air core / RC drilling are not jeopardized.

### **Sector 2**

A major part of Sector 2 remains unsampled while the eastern extremity is partially covered with 400 m x 80 m lines and a small area infilled to 200 m x 80 m.

The Author recommends to grid and sample the entire Sector 2 with 200 m x 40 m pattern to ensure the former operator soil results from the eastern extremity are reliable as one of the former grid lines cutting this sector of the former grid raised some concerns about the reliability of the assays.

### **Sector 3**

A major part of Sector 3 remains unsampled, only the northeastern portion is covered with 200 m x 80 m lines.

It is recommended to grid the unsampled area with 100 m x 40 m pattern and infill the northeastern area with 100 m x 40 m pattern.

### **Sectors 4, 4 and 6**

Those sectors must be in filled to 200 m x 40 m

## PHASE 2 - AIR CORE & RC DRILLING

Contingent to the results obtained from the exploration work carried out during Phase 1, and the identification of target(s) robust enough to justify Phase 2 proposed work, the geological frame must be updated and the interpreted geological frame work revised according to the geochemistry, the ground magnetometry outputs and the observations made by the project geologist. Phase 2 work program should then be adjusted accordingly.

The decision being favorable, the Author recommends to plan and drill 500 m of shallow Air core along the best soil results intervals. Considering the primary rain forest covering Sectors 1, 2 and 3, a compact drill rig capable to drill down to 60 m is recommended to ease the mob / demobilization of the equipment.

To open the access through the jungle, an environment license from the municipality of Alta Floresta is required. It is important to be reminded that such licensing must be filed by the land title holder.

The sooner the licensing is launched the better.

## OTHER RECOMMENDATIONS

### DATA CONSOLIDATION

The first phase must be accompanied by a full compilation and analysis of the large amount of geochemistry and structural data available in the CPRM reports and other available papers.

There is still valuable information in AngloGold soil and auger drill logs and reports. In addition to the ICP multi elements to be plotted and overlaid to the frame-work.

Regional, high resolution airborne magnetometry and spectrometry (and radar images if possible) should be acquired, carefully analyzed, and integrated to the other sources of information.

It is quite easy to spot unusual features such as fresh rock outcrops, suspect excavations, washed creek bed streams, etc, with a careful observation of the Google Earth satellite images. Observations already made by the Author are available in digital format.

### STRUCTURAL AND GEOLOGICAL FIELD MAPPING

Along with the soil geochemistry follow-up, it is important to proceed with systematic, structural, and geological mapping along with rock chip sampling. The geological and structural mapping cannot be restricted to the grid coverage. It must encompass the areas between the grid lines and extend to the vicinities of the Property.

When transferring the information to the geologic map, the bedrock geometry revealed by the magnetometry survey should be taken in consideration.

## DRONE MAGNETOMETRY

The distribution of the structural axis, intersections between the relevant structures pointed out in Figure 9.9 and the geological frame work map must be shared with the geophysics technical personnel prior to the mobilization and planning of the survey in order to delineate the areas where special attention or line distance reduction may be required;

The direction of the survey lines in regard to the X and X' structures striking N-S, must be assessed by the geophysics team, especially in Sector 2.

## REGIONAL TARGETS

With respect to regional exploration, the map in Figure 26.2 indicates potential targets in the vicinities of the Copeçal Property selected during the preparation of this report. Based on the analysis, the Author recommends GoldHaven to consolidate the surface circulated by a red dot line.

## PETROGRAPHY

The presence of abundant tourmaline on the Property is an opportunity to define the origins, depth, pressure, and the temperature of the magmatic fluids that gave origin to the gold mineralization. Understanding the genesis of the mineralization is extremely valuable as a guidance to the exploration program and an opportunity to link the Copeçal Property to other deposits of the Jurueña and Tapajós Mineral Provinces.

Analysis of tourmaline specimens can be performed by EMPA (electron microprobe analysis) at the UFMG or UFOP geology departments or at the Microprobe Laboratory of the Instituto de Geociências (USP - São Paulo University).

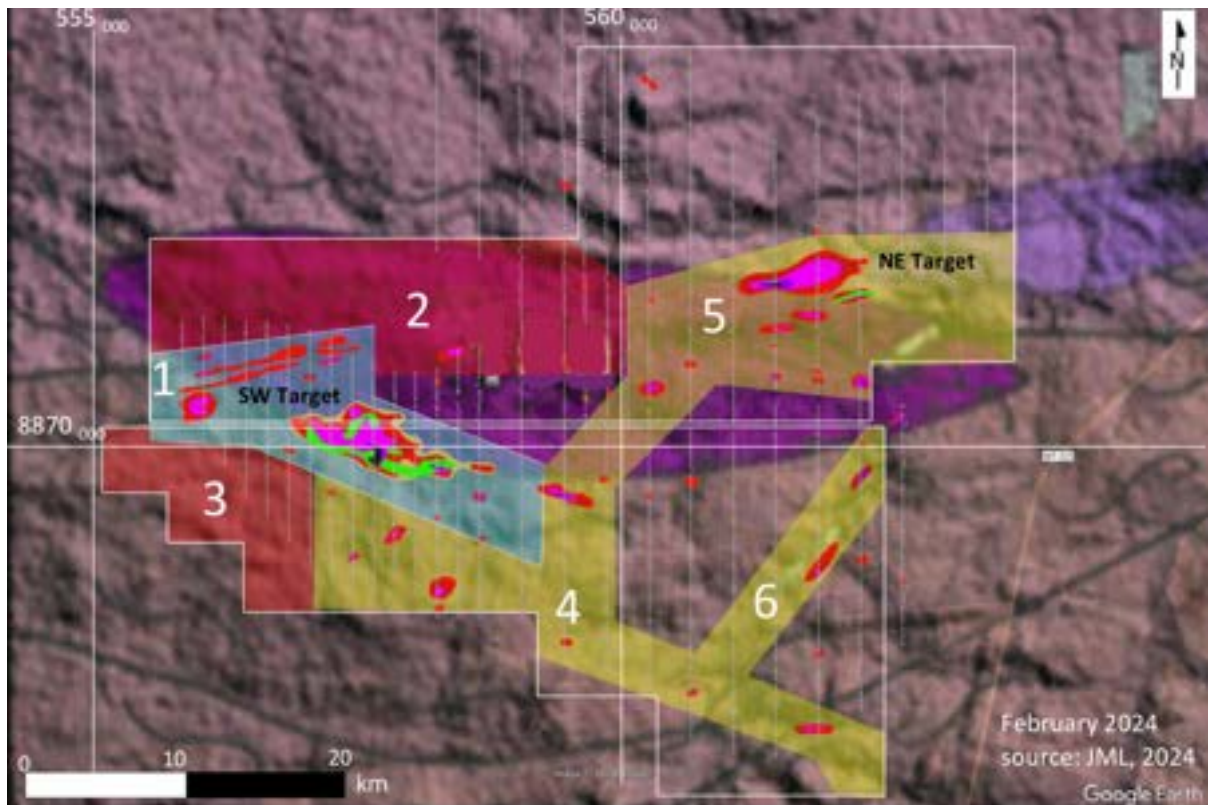
## STANDARD OPERATING PROCEDURES (SOP) AND QA/QC

The Author recommends to prepare the SOPs according to the envisaged exploration activities adjusted to the technical and organization specifics of the Copeçal Property.

Once defined and hired, the field personnel should go through an introductory training period to get familiar with the Standard Operating Procedure protocols to ensure the exploration activities and associated sample and data are collected and captured in compliance to NI 43-101 standards.

Data collection and key procedures should not be given to contractors but handled by in-house trained personnel. Field exploration activities, particularly those involving the collection of primary samples must be executed under strict industry standard QA/QC procedures and adjusted according to the particularities of the project.

Every sampling process, such as drilling must be conducted according to the industry best practices to ensure that the samples delivered from the drilling equipment are extracted, handled and delivered to the laboratory free of bias so the resulting data is representative and robust enough to be employed in all downstream applications such as resource /reserve estimations, mine plans, processing routes, etc.



**Phase 1 – Infill & Step-out Soil Geochemistry – Drill Target Identification**

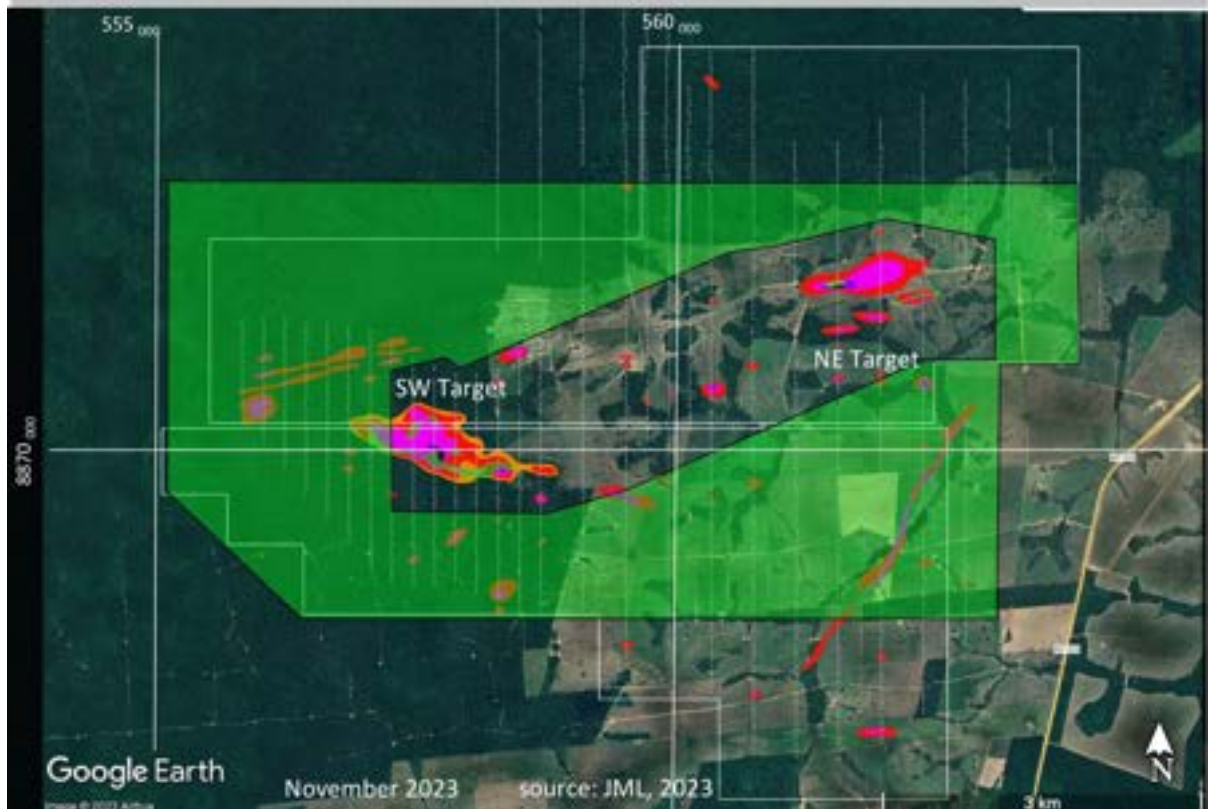


Figure 26.1 Soil follow-up sectors and ground magnetometry proposed outline

PROPOSED EXPLORATION QUANTITATIVE AND ESTIMATED COSTS

Table 26.1 Distribution of the recommended exploration work and respective quantitative

Recommended Exploration Program										
Soil Geochemistry Follow-up								Drone Magnetometry	Air Core Drilling	RC Drilling
Phase	Type of follow-up	Grid Pattern	Grid Sector	Shear Structure	Estimated Area (ha)	Estimated Line Cutting (m)	Estimated samples (including 3% field duplicate)	Area (ha)	m	m
I	Infill	100x40	1	Y and R and X'	391	39,000	980	2,424		
	Stepout & infill	200x40	2	R	500	10,000	250			
	Stepout & replicate	100x40	3	X'	200	20,000	500			
	Stepout & infill	200x40	4	Y and T	467	23,500	585			
	Stepout & Infill	200x40	5	R and T	542	27,100	680			
	Infill	200x40	6	T	138	6,900	172			
			Phase I Sub-total		2,238	126,500	3,167	2,424		
II									500	500
							Phase II Sub-total	2,424	500	500

Table 26.2 Recommended work cost Estimate

Phase 1 – Drill Target Identification & Consolidation	
Year 1 / quarters 1, 2 and 3	
Activity	Total (CDN\$)
Grid line cutting, sampling and Topographical Survey	\$40,000
Geology and coordination	\$90,000
Assays (3200 samples @ US\$20/sample)	\$86,400
Petrography (electron microprobe analysis)	\$10,000
UAV magnetometry	\$174,200
Remote Sensing image and maps acquisition	\$10,720
Environmental Licensing	\$40,000
Legal & Admin	\$25,000
Logistics	\$35,000
Contingency	\$40,000
<b>Total Phase 1</b>	<b>\$551,320</b>

Phase 2 – Air Core & RC Drilling	
Year 1 - quarter 4	
Activity	Total (CDN\$)
Air core drilling (500m @ US\$80/m)	\$54,000
Assays	\$13,500
RC drilling (500m @ US\$100/m)	\$67,500
Assays	\$13,500
Geology and coordination	\$30,000
Assays	\$5,000
Legal & Admin	\$8,000
Logistics	\$10,000
Contingency	\$20,000
<b>Total Phase 2</b>	<b>\$221,500</b>

Total Phase 1 & 2 (CDN\$)	
	<b>\$772,820</b>

\* Overhead, management and land tenure fees are not included



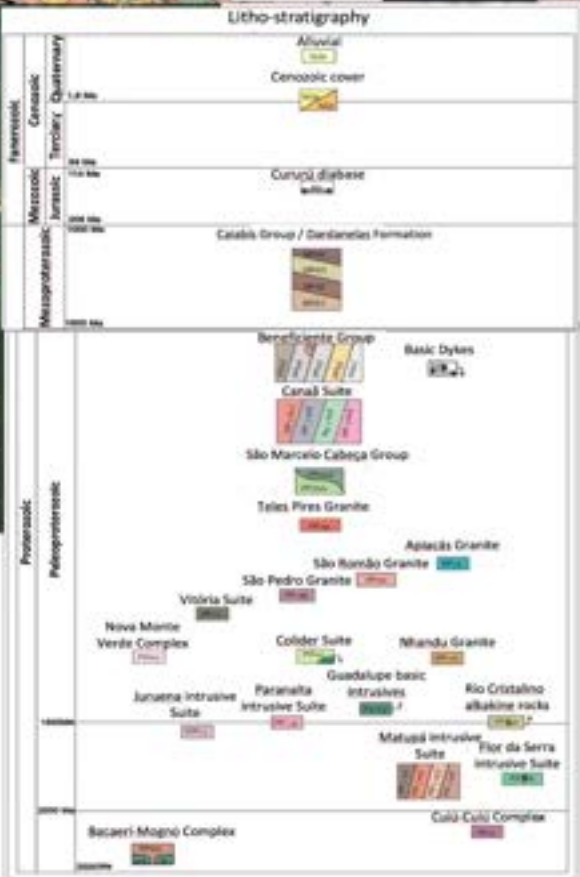
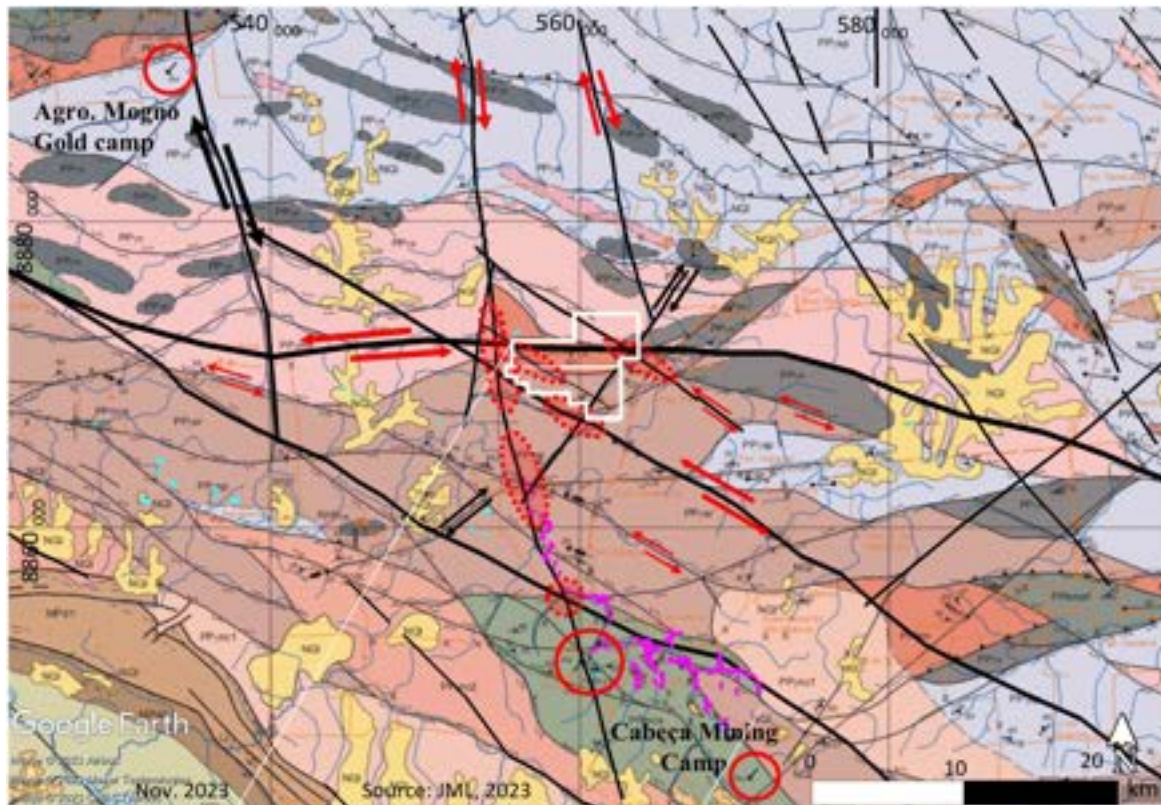


Figure 26.2 Recommended potential areas to target in an eventual project expansion

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