Technical Report on the Paciência Mining Complex, Minas Gerais, Brazil Report for NI 43-101

Jaguar Mining Inc.

SLR Project No: 233.03695.R0000

Effective Date:
March 31, 2023

Signature Date:
May 30, 2023

Prepared by:
SLR Consulting (Canada) Ltd.

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FINAL

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1.0 SUMMARY

1.1 Executive Summary

SLR Consulting (Canada) Ltd (SLR) was retained by Jaguar Mining Inc. (Jaguar) to prepare an independent Technical Report on the Santa Isabel Mine and nearby Bahú deposit located on Jaguar's Paciência Mining Complex (the Complex) in Minas Gerais, Brazil. The purpose of this Technical Report is to support the disclosure of the Mineral Resources as of March 31, 2023. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR visited the Complex on December 7, 2022.

Mineral Resource estimates were prepared for the mineralization present at the Santa Isabel Mine and for the mineralization present at the Bahú deposit, located approximately 4.5 km to the northwest of the Santa Isabel Mine.

Gold production was carried out from the Santa Isabel Mine during the 2008 to 2012 period. The mine includes two historical mining areas, Santa Isabel and Marzagão, and has been on a care and maintenance basis since its closure in 2012. Gold mineralization at the Santa Isabel Mine consists of shallowly dipping tabular sheets in two zones: Santa Isabel/Córrego Grande and Marzagão. The Mineral Resource estimates for these two zones have been prepared to consider extraction of the mineralization using underground cut-and-fill mining method, with the material processed at the existing Paciência plant.

Although records indicate that an exploration adit was excavated to allow detailed examination of the mineralization at the Bahú deposit, no production has taken place from that deposit. Gold mineralization at the Bahú deposit is hosted by quartz veining and alteration of the host rocks and is modelled as shallow dipping tabular sheets that sub-parallel the regional foliation. The mineralization is considered to be amenable to extraction using open pit mining methods for the shallow portions of the deposit. Underground cut-and-fill mining method is envisioned to be utilized to extract the mineralization from the deeper portions of the deposit. Mineralization is envisioned to be processed at the Paciência plant.

The Mineral Resource estimates, with an effective date of March 31, 2023, are presented in Table 1-1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were followed for Mineral Resources.

Table 1-1: Summary of Mineral Resources – March 31, 2023
Jaguar Mining Inc. – Paciência Mining Complex

Deposit	Mining Method	Cut-off Grade (g/t Au)	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
		Inferred Mineral Resources			
Santa Isabel	Cut-and-fill	2.75	978	4.01	126
Marzagão	Cut-and-fill	2.75	445	4.44	63
Bahú	Open Pit	0.74	43	2.08	3
Bahú	Cut-and-fill	1.81	333	3.99	43
Total Inferred			**1,799**	**4.06**	**235**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated using a long-term gold price of US$1,800 per ounce, and an average long term foreign exchange rate of R$5.20 : US$1.00.
3. A minimum mining width of two metres and three metres was used for the Santa Isabel and Bahú deposit, respectively.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources for the Santa Isabel Mine, including the Santa Isabel and Marzagão deposits, are reported as all blocks within reporting volumes prepared using clipping polygons.
6. Mineral Resources for the Bahú deposit are reported using a constraining pit shell for the open pit portion, and using reporting panels for the underground portion.
7. Numbers may not add due to rounding.

1.1.1 Interpretation and Conclusions

- The Mineral Resources for the Santa Isabel Mine and Bahú deposit of the Paciência Mining Complex were prepared in accordance with CIM (2014) definitions.
- The Inferred Mineral Resources are estimated to comprise a total of approximately 1.80 million tonnes (Mt) at an average grade of 4.06 g/t Au, containing approximately 235,000 ounces of gold (oz Au).
- Gold production took place from the Santa Isabel Mine during the 2008 to 2012 period. The mine has been on a care and maintenance basis since 2012.
- Mineral Resource estimates were prepared for the mineralization present at the Santa Isabel Mine and for the mineralization present at the Bahú deposit, located approximately 4.5 km to the northwest of the Santa Isabel Mine. Together, these two deposits form part of the Paciência Mining Complex.
- Gold mineralization at the Santa Isabel Mine consist of shallowly dipping tabular sheets in two zones: Santa Isabel/Córrego Grande and Marzagão. The Mineral Resource estimates for these two zones have been prepared to consider extraction of the mineralization using underground cut-and-fill mining method, with the material processed at the Paciência plant.
- Gold mineralization at the Bahú deposit is hosted by quartz veining and alteration of the host rocks and is modelled as shallow dipping tabular sheets that sub-parallel the regional foliation. The mineralization is considered to be amenable to extraction using open pit mining methods for the shallow portions of the deposit. Underground cut-and-fill mining method is envisioned to be utilized to extract the mineralization from the deeper portions of the deposit.
- The Mineral Resources for the Santa Isabel Mine have been prepared using surface-based drill hole information, underground-based drill hole information, and underground channel sample information. The Mineral Resources for the Bahú deposit have been prepared using surface-based drill hole information.
- The surface and underground drill hole collar locations are reasonable and channel samples are appropriately located with respect to the existing underground infrastructures. The SLR Qualified Person (QP) is of the opinion that database verification procedures for the Santa Isabel and Bahú deposits comply with industry standards and are adequate for the purposes of Mineral Resource estimation.
- The sample preparation, analysis, and security procedures at the Complex are adequate for use in the estimation of Mineral Resources.

1.1.1.1 Risks

Factors that may affect the Mineral Resource estimates include:

- Changes in the metal price and exchange rate assumptions.
- Changes to the input parameter assumptions used to generate the cut-off grade used for reporting of the Mineral Resources.
- Changes to geological and mineralization shape and geological and grade continuity assumptions and interpretations.
- Due to the natural variability inherent with gold mineralization, the presence, location, size, shape, and grade of the actual mineralization located between the existing sample points may differ from the current interpretation. The level of uncertainty in these items is lowest for the Measured Mineral Resource category and is highest for the Inferred Mineral Resource category.
- Changes to the understanding of the current geological and mineralization shapes and geological and grade continuity resulting from acquisition of additional geological and assay information from future drilling or sampling programs.
- Changes in the treatment of high grade gold values.
- Changes due to the assignment of density values.
- Changes to the input and design parameter assumptions that pertain to the assumptions for creation of underground constraining volumes.
- Changes to the input and design parameter assumptions that pertain to the assumptions for creation of open pit constraining surfaces.

1.1.2 Recommendations

1. Update the Mineral Resource estimate for the Bahú deposit with drill hole and assay information collected from the drill holes completed in 2022.
2. Collect high resolution topography survey for the Santa Isabel to Bahú area.
3. Record collar locations in both SIRGAS and Córrego Alegre datum.
4. Assign/determine location of benchmarks in both SIRGAS and Córrego Alegre datums.
5. Carry out infill drilling programs with the goal of increasing the level of confidence of the Mineral Resources to the Indicated category.
6. Carry out exploration drilling programs to search for the presence of additional mineralized zones.
7. Carry out metallurgical testing programs on representative mineralized samples from the Bahú deposit.

1.2 Technical Summary

1.2.1 Property Description and Location

The Complex is located in the Acurui District, which is a part of the municipality of Itabirito in the state of Minas Gerais, Brazil.

The portal of the Santa Isabel Mine (the primary mining operation) has the coordinates of 20°12'27.84" S latitude and 43°41' 9.51" W longitude. Initial exploration activities were carried out by AngloGold Ashanti (AngloGold) during the period between 1981 and 2004. Jaguar, through its subsidiary company

Mineração Serras do Oueste Ltda (MSOL), acquired ownership of the property from AngloGold on April 28, 2004.

1.2.2 Land Tenure

Jaguar holds 12 mineral properties which include the Santa Isabel Mine and other mining concessions and exploration authorizations. The Jaguar mineral properties cover an area totalling 9,005.35 ha.

1.2.3 Existing Infrastructure

Existing infrastructure includes:

- A processing plant with a nameplate capacity of 600,000 tonnes per annum (approximately 1,750 tonnes per day)
- Administration buildings
- Mechanical repair shops
- Core shack facilities
- A tailings storage facility
- A detoxification plant for treating process tailings
- A paste fille plant
- Portal access to the Santa Isabel Mine (currently flooded)
- A potable water supply

Electricity is provided to the mine site from the Brazilian national grid by CEMIG, the state-owned utility company with operations in the state of Minas Gerais.

1.2.4 History

Exploration for gold in the region started in the middle 17th century at alluvial sites along drainages where simple extraction techniques were employed. Beginning in approximately 1979, modern exploration has been carried out in the Itabirito region by various mining and exploration companies. Jaguar acquired the rights to the Santa Isabel, Marzagão, and Bahú claims in 2004. It acquired the rights to the Palmital property in 2009, the Ouro Fino property in 2008, and the Quati property in 2007.

Although gold production from various deposits present on the Complex was achieved by previous workers, no historical Mineral Resource estimates are present for the Santa Isabel, Córrego Grande, Marzagão, or Bahú deposits.

The Paciência Mining Complex began operations in 2008 and was placed on care and maintenance on May 8, 2012. Total production for the period is estimated at approximately 1,755 tonnes at an average grade of 3.06 g/t Au containing approximately 154,000 oz Au.

1.2.5 Geology and Mineralization

The Complex area is underlain by rocks of Archaean and Proterozoic ages. Archaean-aged units include a granitic basement and/or granitic stocks, which are overlain by the Nova Lima Group, a sequence of ultramafic-mafic to intermediate volcanic flows and pyroclastics and associated sediments. Proterozoic-aged units include the sedimentary Minas Supergroup, which includes basal quartzites and some local Witwatersrand-type conglomeratic packages and the well-known Lake Superior-type banded iron formation (BIF) packages of the global iron-ore producer Itabira Group.

The Complex is situated along the São Vicente/Paciência Lineament (Paciência Trend), the most prominent structure in the area. The São Vicente/Paciência Lineament is a northwest trending, northeast dipping, transpressive, sinistral shear zone that has been mapped along a strike length of more than 60 km across the Iron Quadrangle, from Ouro Preto in the south to Nova Lima in the north.

The gold mineralization and the mineralized bodies pertaining to the inactive Santa Isabel and Marzagão mines and to the Bahú deposit are genetically related to the Paciência lineament/trend structure. The mineralized shoots are generally lenticular and stratiform, but can be somewhat discontinuous laterally, being composed of hydrothermal quartz veins swarms (silicification zones) that “flood” altered schists rich in chlorite, carbonates, and sericite. The protolith host rock packages of the mineralized bodies seem to be somewhat variable along the strike-length of the host shear zone structure, and include metapelite-to-metapsammite turbiditic and metavolcaniclastic sequences of the Nova Lima Group.

Gold mineralization at the Complex occurs as free, visible grains hosted by quartz veins and/or veinlets, or as tiny inclusions within sulphide crystals, mainly pyrite and arsenopyrite. The economic mineralized bodies of the Santa Isabel and Marzagão mines are observed to align along the mineral stretching lineations that have an average trend azimuth of 090° to 125° and plunges of the order of -20° to -60°.

1.2.6 Exploration Status

Limited exploration activities have been completed by Jaguar on the Paciência Mining Complex other than drilling prior to 2021. Exploration activities were recommenced in 2021.

1.2.7 Mineral Resources

Mineral Resource estimates for the Santa Isabel Mine and Bahú deposit are presented in Table 1-1.

1.2.7.1 Santa Isabel Deposit

The Santa Isabel drill hole database contains information for 156 surface-based drill holes totalling 30,065 m in length, 171 underground-based drill holes totalling approximately 16,538 m in length, and 2,059 channel samples. While no drilling or sampling has been carried out at the Santa Isabel Mine since cessation of operations in July 2012, the cut-off date for the information in the drill hole database is September 2022, the beginning of the Mineral Resource estimation process.

A series of three dimensional wireframe models were constructed using the Leapfrog software package for the various mineralized zones present at the Santa Isabel Mine. The mineralization wireframes were constructed using a nominal grade threshold of 0.5 g/t Au and were constructed to a minimum width of two metres. To permit accurate grade estimation, one wireframe model was constructed for each mineralized zone.

In order to reduce the influence of high grade sample values, Jaguar elected to apply a restricted search approach. In this method, the grades of the resource assays contained within the respective mineralized wireframes deemed to represent anomalously high grades are limited to a short distance about the informing drill hole. Statistical analyses using probability plots were carried out to select the threshold values that described the high grade population for each wireframe domain.

Separate block models were constructed by Jaguar for the Santa Isabel and Marzagão portions of the mineralized trend using the Leapfrog Edge software package. Both utilized an array of parent blocks measuring 4 m x 4 m x 4 m and used sub-blocking with a minimum block size of 1 m x 1 m x 1 m. Both block models are oriented parallel to the coordinate grid system. Gold grades were estimated into the blocks by means of Ordinary Kriging (OK). A total of four interpolation passes at different ranges were carried out for each of the mineralized wireframes individually using distances derived from the variogram results and the search ellipse parameters. Restricted search criteria were applied during each estimation pass to limit the influence of high grade samples. The orientation of the search ellipses were varied using the dynamic anisotropy function of the Leapfrog software package.

All material was classified into the Inferred Mineral Resource category.

1.2.7.2 Bahú Deposit

The Bahú drill hole database contains information for 158 surface-based drill holes totalling approximately 21,409 m in length and 14 trenches totalling approximately 338 m in length. The geology and assay data related to the trench sample information are entered into the drill hole database as pseudo-drill holes. The cut-off date for the information in the drill hole database is November 2022, the beginning of the Mineral Resource estimation process.

Wireframe modelling for the Bahú deposit began with construction of a lithological model of the host rocks, hydrothermal alteration envelopes, and weathering profile using the Leapfrog software package.

A series of three dimensional wireframe models were then constructed using the Leapfrog software package for the various mineralized zones present at the Bahú deposit using a two-tiered approach.

One set of low grade mineralization wireframes were constructed using a nominal grade threshold of 0.5 g/t Au and were constructed to a minimum width of three metres to enclose those mineralized intervals that are judged to be potentially extracted using open pit mining methods. To permit accurate grade estimation, one wireframe model was constructed for each low grade mineralized zone. The wireframe models were constructed using the modelled lithology and hydrothermal alteration zones as guides.

A second set of nested wireframe models were constructed to model the higher grades using a nominal grade threshold of 1.2 g/t Au. These were constructed to a minimum width of one metre to enclose those mineralized intervals that are judged to be potentially extracted using underground mining methods. To permit accurate grade estimation, one wireframe model was constructed for each low grade mineralized zone. A total of 34 individual wireframe models were constructed.

In order to reduce the influence of high grade sample values, Jaguar elected to apply a restricted search approach. In this method, the grades of the resource assays contained within the respective mineralized wireframes deemed to represent anomalously high grades are limited to a short distance about the informing drill hole. Statistical analyses using probability plots were carried out to select the threshold values that described the high grade population for each wireframe domain.

A single, non-rotated block model was constructed by Jaguar using the Leapfrog Edge software package. Both utilized an array of parent blocks measuring 10 m (X) x 10 m (Y) x 5 m (Z) and used sub-blocking with a minimum block size of 1 m (X) x 1 m (Y) x 1 m (Z). Gold grades were estimated into the blocks by means of OK. A total of four interpolation passes at different ranges were carried out for each of the mineralized wireframes individually using distances derived from the variogram results and the search ellipse parameters. Restricted search criteria were applied during each estimation pass to limit the influence of high grade samples. The orientations of the search ellipses were varied using the dynamic anisotropy function of the Leapfrog software package.

All material was classified into the Inferred Mineral Resource category.

2.0 INTRODUCTION

SLR Consulting (Canada) Ltd (SLR) was retained by Jaguar Mining Inc. (Jaguar) to prepare an independent Technical Report on the Santa Isabel Mine and nearby Bahú deposit located on Jaguar's Paciência Mining Complex (the Complex) in Minas Gerais, Brazil. The purpose of this Technical Report is to support the disclosure of the Mineral Resources as of March 31, 2023. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

Jaguar is a Canadian listed junior gold mining, development, and exploration company operating in Brazil with three gold mining complexes and a large land package covering approximately 31,000 ha. Jaguar's principal operating assets are located in the Iron Quadrangle, which is a greenstone belt in the state of Minas Gerais. Jaguar's common shares are listed on the Toronto Stock Exchange under the symbol JAG.

The Santa Isabel Mine and Bahú deposit form part of the Paciência Mining Complex which includes a number of additional mineral concessions located in the vicinity. The Santa Isabel Mine comprises two historical mining areas, Santa Isabel and Marzagão, and has been on a care and maintenance status since May 8, 2012. Access to the underground workings is not possible as the mine is currently flooded. The mills in the Paciência plant are rotated over on a monthly basis and other equipment is also cycled on a regular basis.

2.1 Site Visits

A visit to selected areas of the Paciência Mining Complex was carried out by Mr. Reno Pressacco, M.Sc.(A)., P.Geo., and Mr. Jeff Sepp, B.Eng., P.Eng., on December 7, 2022.

Mr. Pressacco examined the general location and layout of the Complex, visited selected drilling sites located at the Bahú deposit, examined a topographic control station, examined the host rocks, style of alteration, and style of mineralization in a selection of recent drill core from the Bahú deposit, and examined cross sections and maps of the regional and local geology.

Mr. Sepp examined the plant facilities, the tailings storage facility, and the main portal entrance to the underground mine.

2.2 Sources of Information

During the course of preparation of the Mineral Resource estimate, discussions were held with the following personnel from Jaguar:

- Jonathan Victor Hill, Vice President, Geology & Exploration, Jaguar
- Mr. Elias de Oliveira Andrade, Technical Services Manager, Jaguar
- Armando José Massucatto, Geology & Exploration Manager, Jaguar
- Afonso José Guedes Salles, Growth Projects Coordinator, Jaguar
- Hugo Leonardo de Avila Gomes, Resource Estimation Coordinator, Jaguar
- André Guimarães Pinto, Resource Geologist, Jaguar
- Julia de Souza Pimenta, Exploration Geologist, Jaguar
- Leandro Rocha de Oliveira, Exploration Geologist, Jaguar

Mr. Pressacco, M.Sc.(A)., P.Geo., is the Qualified Person (QP) responsible for all sections of this report.

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.

2.3 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US$) unless otherwise noted.

μ	micron	L	litre
μm	micrometre	lb	pound
a	annum	L/s	litres per second
°C	degree Celsius	m	metre
C$	Canadian dollars	M	mega (million); molar
cm	centimetre	m^2	square metre
cm^2	square centimetre	m^3	cubic metre
d	day	MASL	metres above sea level
dia	diameter	min	minute
g	gram	mm	millimetre
G	giga (billion)	oz	Troy ounce (31.1035g)
g/L	gram per litre	ppb	part per billion
g/t	gram per tonne	ppm	part per million
ha	hectare	R$	Brazilian Real
hr	hour	RL	relative elevation
in.	inch	s	second
in^2	square inch	t	metric tonne
k	kilo (thousand)	t/m^3	tonnes per cubic metre
kg	kilogram	tpa	metric tonne per year
km	kilometre	tpd	metric tonne per day
km^2	square kilometre	US$	United States dollar
km/h	kilometre per hour	V	volt
kPa	kilopascal	W	watt
kW	kilowatt	wt%	weight percent
kWh	kilowatt-hour	yr	year

3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by SLR for Jaguar. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, SLR has relied on ownership information provided by Jaguar. SLR has not researched property title or mineral rights for the Paciência Mining Complex and expresses no opinion as to the ownership status of the property.

SLR has relied on Jaguar for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Paciência Mining Complex.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

Belo Horizonte is the state capital and largest city of Minas Gerais, with a population in excess of six million. It is the major centre for the Brazilian mining industry. A large commercial airport with domestic and international flights services Belo Horizonte, which hosts several state and federal government agencies and private businesses that provide services to the mining industry. Jaguar maintains a corporate office in Belo Horizonte.

The Paciência Mining Complex is located 81 km southeast of Belo Horizonte, in the Acurui District, which is a part of the municipality of Itabirito in the state of Minas Gerais, Brazil (Figure 4-1 and Figure 4-2).

The portal of the Santa Isabel Mine (the primary mining operation) has the coordinates of 20°12'27.84" S latitude and 43°41' 9.51" W longitude. Initial exploration activities were carried out by Mineração Morro Velho's (MMV) subsidiary companies and AngloGold Ashanti (AngloGold) during the period between 1981 and 2004. Jaguar, through its subsidiary company Mineração Serras do Oueste Ltda (MSOL), acquired ownership of the property from AngloGold on April 28, 2004.

Figure 4-1

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Location Map

May 2023

Source: Map Resources, 2010 .

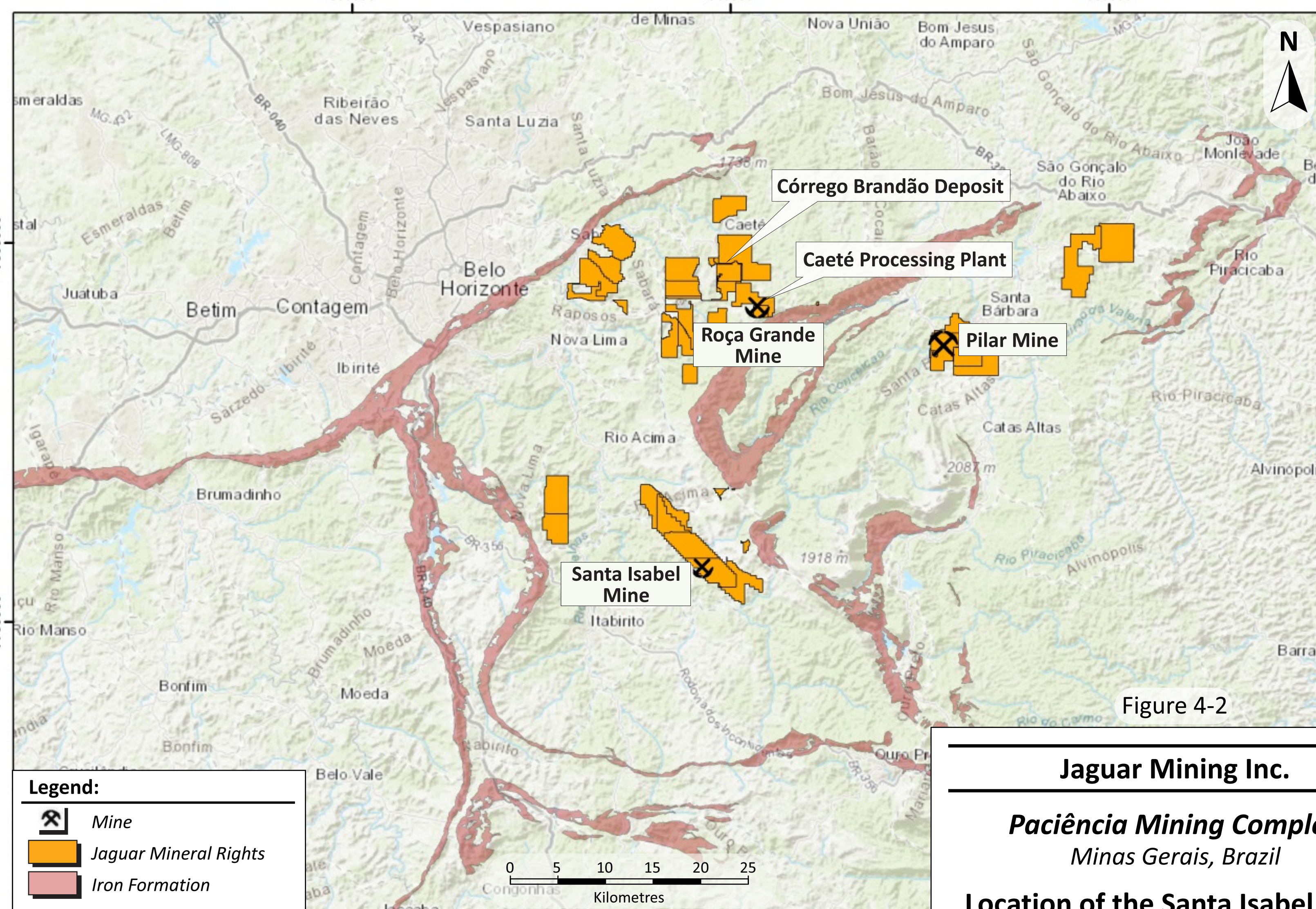


Figure 4-2

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Location of the Santa Isabel Mine

May 2023

Source: Jaguar Mining Inc., 2020.

4.2 Land Tenure

4.2.1 Introduction

Mining activities in Brazil are governed by the Brazilian Federal Constitution of 1988 (the Brazilian Federal Constitution), the Brazilian Mining Code (Federal Decree-Law No. 227/1967), and various other decrees, laws, ordinances, and regulations such as the Decree No. 9.406/2018 which renews the regulation of the Brazilian Mining Code. These regulations impose several obligations on mining companies pertaining to items such as the manner in which mineral deposits are exploited, the health and safety of the workers and local communities where mines are located, and environmental protection and remediation measures.

Under the Brazilian Federal Constitution, mineral rights are recognized as being distinct from surface rights and belonging exclusively to the Brazilian federal government. The Brazilian federal government is the sole entity responsible for governing mineral exploration and mining activities in Brazil.

Amongst other ministries and agencies, the Ministry of Mines and Energy (MME) and the National Mining Agency, or Agência Nacional de Mineração (ANM) in Portuguese, (formerly the Departamento Nacional de Produção Mineral (DNPM)) regulate mining activities in Brazil. The ANM is responsible for monitoring, analyzing, and promoting the performance of the Brazilian mineral industry by administering and granting rights related to the exploration and exploitation of mineral resources and other related activities in Brazil.

In Brazil, mineral resource tenure is achieved via exploration licences (Autorizações de Pesquisa), mining concessions (Concessões de Lavra), mining concession applications (Requerimento de Lavra), and exploration licence applications (Requerimentos de Pesquisa), which are together broadly referred to as mineral rights.

4.2.2 Mining Concessions and Exploration Licences

Mining concessions have no set expiry date. Each year Jaguar is required to provide information to ANM summarizing mine production statistics through the annual mining report (Relatório Anual de Lavra).

Exploration licences are granted for an initial period of three years. Once a company has applied for an exploration licence, the applicant holds a priority right to the concession area as long as there is no previous ownership. The fees for holding the licences during this initial three year phase is Brazilian Reais (R$) 4.09/ha, to be paid annually. The owner of the licence can apply to have the exploration licence renewed for a one time extension period up to three years. The fees for holding the licences during the second phase is R$6.13/ha, to be paid annually. Renewal is at the sole discretion of ANM. Granted mining concessions and exploration licences are published in the Official Gazette of the Republic (Diário Oficial da União - DOU), which lists individual concessions and their change in status. The exploration licences and mining concessions grant the owner subsurface mineral rights, while surface rights can be applied for if the land is not owned by a third party.

The owner of an exploration licence is guaranteed, by law, access to perform exploration field work, provided adequate compensation is paid to third party landowners and the owner accepts all environmental liabilities resulting from the exploration work. Exploration licences are subject to annual fees based on their size (Taxa Anual por Hectare). A final report that provides the results of any exploration activities carried out is required to be filed with the ANM upon expiry of an exploration licence.

The land holdings for the Paciência Mining Complex comprise the agglomeration of several individual mining concessions and exploration authorizations into one large and continuous group comprising the Cedro, Santa Isabel, Marzagão, Bahú (mining concession and exploration authorization), Quati, and the two un-named exploration authorizations located along the northwestern extremes. This main group of claim holdings will be referred to as the Santa Isabel group. This main Santa Isabel group of claims is flanked by the Rio de Peixe mining concessions to the west and the Palmital and the Ouro Fino mining concessions to the east.

Jaguar holds 12 mineral properties which include the Santa Isabel Mine and other mining concessions and exploration authorizations. The Jaguar mineral properties cover an area totalling 9,005.35 ha (Table 4-1, Figure 4-3).

Table 4-1: Summary of Jaguar's Mineral Rights
Jaguar Mining Inc. – Paciência Mining Complex

Name	ANM No.	Licence Date	Area (ha)	Status
Santa Isabel Mine	830.375/1979	August 19, 1981	1,000	Mining Concession
Bahú Property	830.373/1979	August 19, 1981	630.44	Mining Concession
Marzagão	830.374/1979	August 19, 1981	999.92	Mining Concession
Rio de Peixe 1	830.590/1983	January 16, 1986	979.63	Mining Concession
Rio de Peixe 2	830.592/1983	December 29, 2010	768.60	Mining Concession
Ouro Fino	831.161/1982	April 17, 1984	72.85	Mining Concession Application
Quati	831.191/1981	December 20, 1983	537.25	Mining Concession Application
Cedro	832.617/1986	September 17, 1995	786.40	Exploration Authorization (positive Final Exploration Report filed)
Bahú	832.098/2018		1,283.87	Expl. Authorization (initial period)
	832.405/2016	September 6, 2021	1,021.27	Expl. Authorization (initial period)
	830.688/2016	January 13, 2017	884.80	Expl. Authorization (initial period)
Palmital (leased)	832.682/2010	October 31, 2012	40.32	Mining Concession (leased from Namisa)
Total			**9,005.35**	

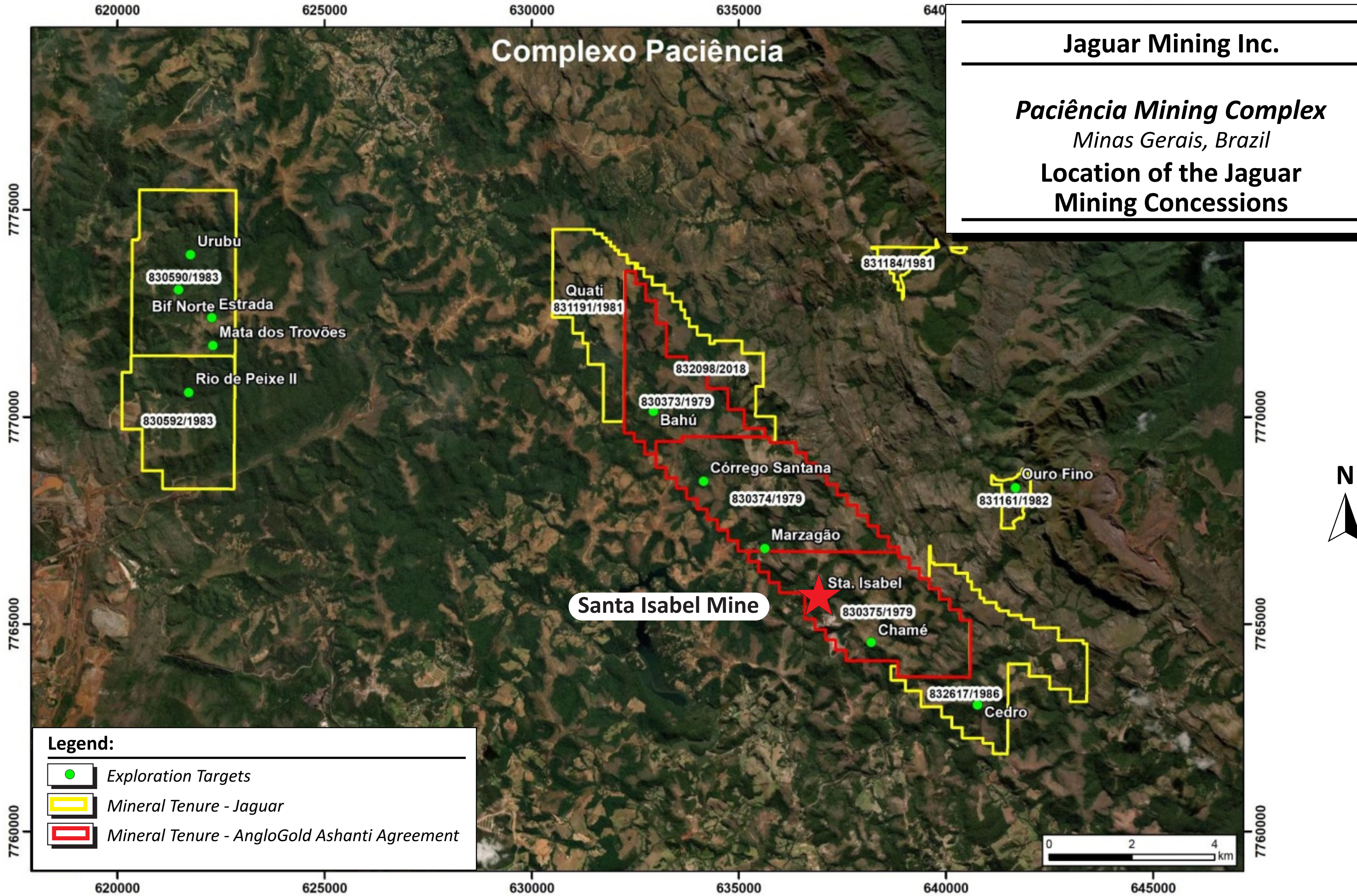
Figure 4-3

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Location of the Jaguar Mining Concessions



May 2023

Source: Jaguar, 2023.

4.2.3 Surface Rights

Jaguars land tenure for the Paciência mining complex includes four surface rights properties. The details of these surface rights properties are provided in Table 4-2. Their locations are shown in Figure 4-4.

Table 4-2: Summary of Surface Rights Holdings
Jaguar Mining Inc. – Paciência Mining Complex

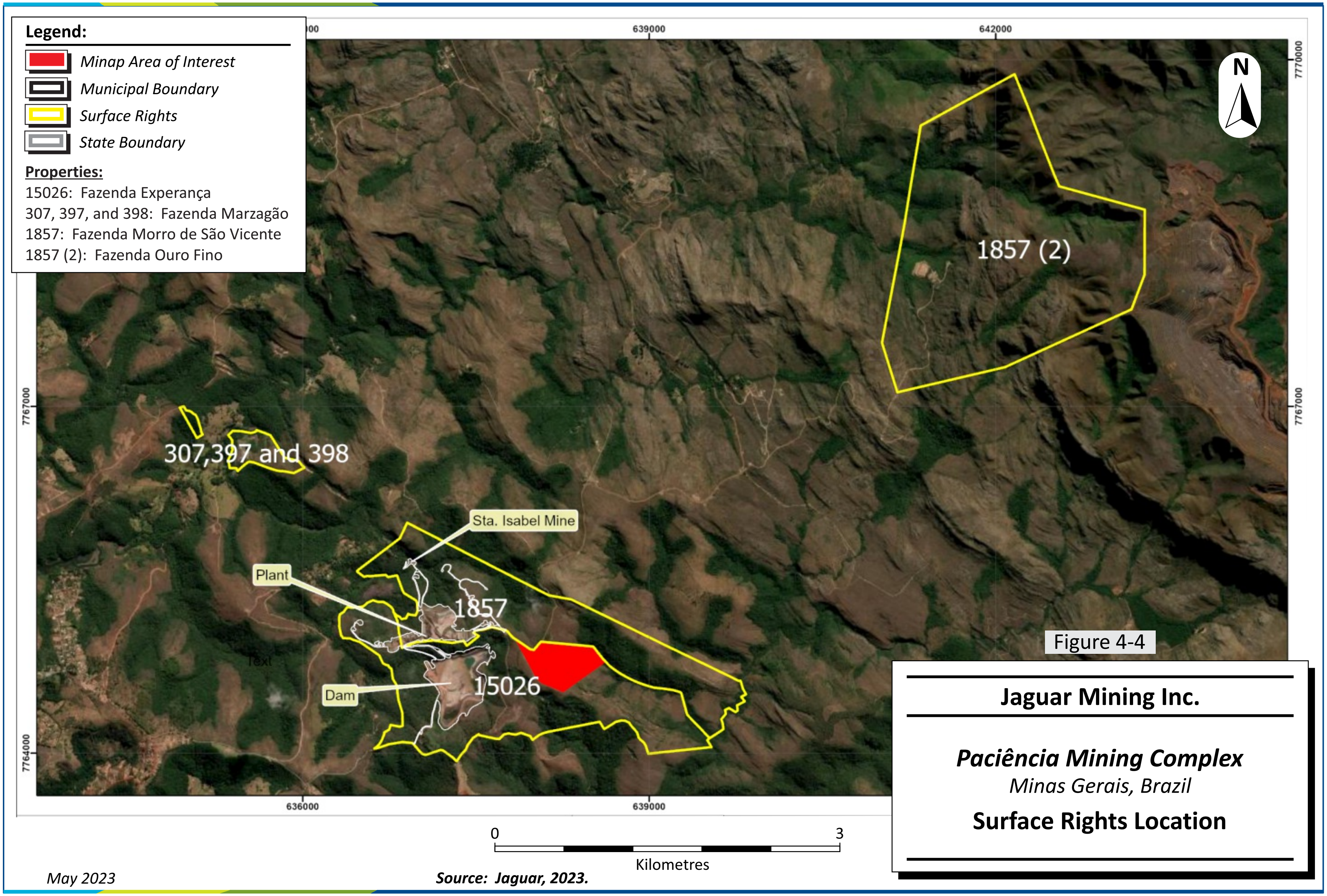
Name	Registry ID	Description	Total Area (ha)	Status	Legal Reservation (ha)
Fazenda Esperança	15026	Infrastructure, Mine entrance, and Tailings dam	209.0	Care and maintenance	42.0
Fazenda Marzagão	307, 397, and 7398-2	Mine entrance and waste piles	16.0	Care and maintenance	3.0
Fazenda Esperança (Morro São Vicente)	1857	Infrastructure	160.0	Care and maintenance	32.0
Fazenda Esperança (Ouro Fino)	1857	Ouro Fino mine	388.3	Care and maintenance	Reservation process is ongoing
Total			**773.3**		

Note: A portion of the Fazenda Esperança (19.22 ha) has already been sold to MINAP. See Figure 4-4 for the location.

A summary of the surface rights royalties paid in association with the care and maintenance process for the Paciência Mining Complex in 2022 is provided in Table 4-3.

Table 4-3: Summary of Surface Rights Royalties
Jaguar Mining Inc. – Paciência Mining Complex

Surface Owner/Property	Utility/Infrastructure	Annual Payment in 2022 (R$)
Edvarde Soares Rocha	Location of Power Poles and Road Access	58,536
Jose Luis Barcelos	Mine Ventilation and Raise, Surface Infrastructure	29,040
Saulo Filardi	Road Access – For the deactivated Ouro Fino Mine	14,520
Total		**102,096**


Legend:
Minap Area of Interest
Municipal Boundary
Surface Rights
State Boundary
Properties:
15026: Fazenda Experança
307, 397, and 398: Fazenda Marzagão
1857: Fazenda Morro de São Vicente
1857 (2): Fazenda Ouro Fino
639000
642000
7770000
7767000
7764000
636000
1857 (2)
307,397 and 398
Sta. Isabel Mine
Plant
1857
Dam
15026
N
0
3
Kilometres
Figure 4-4
Jaguar Mining Inc.
Paciência Mining Complex
Minas Gerais, Brazil
Surface Rights Location
May 2023
Source: Jaguar, 2023.

4.3 Encumbrances

SLR is not aware of any liens or claims against any of the properties that form the Paciência Mining Complex.

4.4 Royalties

Revenues from mining activities are subject to the Financial Compensation for the Exploration of Mineral Resources (*Compensação Financieria pela Exploração de Recursos Minerais,* or CFEM, in Portuguese), royalty that is paid to the ANM. The CFEM is a royalty paid on a monthly basis based on the sales value of minerals, net of taxes levied on the respective sale. When the produced minerals are used in its internal industrial processes, the CFEM payment is determined based on the costs incurred to produce them. The CFEM is determined by a reference price of the respective mineral to be defined by the ANM. The applicable rate varies according to the mineral product (currently 1% for gold).

An additional royalty of 0.5% is due to the holders of surface rights in the mine area not already owned by Jaguar. However, since the Paciência Mining Complex is currently being kept under a care and maintenance status, no payments of royalties related to gold production are currently being made.

In 2003, Jaguar, through its wholly owned entity MSOL, executed a sale-purchase agreement with AngloGold covering three tenements related to what is now termed the Paciência Mining Complex (ANM concession numbers 830.373/1979 – BAHÚ, 830.374/1979 – MARZAGÃO, 830.375/1979 – SANTA ISABEL). The agreement includes fixed payment and related commitments over a 10-year period (now expired) and a sliding scale Net Smelter Return (NSR) royalty (Table 4-4). Jaguar and AngloGold have ongoing discussions regarding restructuring the Paciência royalty agreement, which in its original form does not reflect current or projected market conditions.

Table 4-4: Summary of the Terms of the AngloGold Royalty Agreement
Jaguar Mining Inc. – Paciência Mining Complex

Gold Price (US$/oz)		Royalty Amount (%)
From	To	
0	290.0	1.5
290.01	320.00	2.0
320.01	350.00	2.5
350.01	390.00	2.7
390.01	430.00	3.0
430.01	470.00	3.5
470.01	510.00	4.0
Above 510.00		4.5

SLR is not aware of any environmental liabilities on the property. Jaguar has all required permits to conduct the proposed work on the property. SLR is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

Itabirito, located 23 km from the Project site, has good urban infrastructure, including banks, a hospital, schools, and commercial businesses. Access to the Project site is provided by a 16 km all-weather public road that joins BR-356, the main road that goes to the historic city of Ouro Preto. The distance from the Project site to the main neighbouring cities is: 23 km to Itabirito, 53 km to Ouro Preto, and 81 km to Belo Horizonte.

Belo Horizonte is serviced by a large commercial airport with domestic and international flights.

5.2 Climate

The Complex area experiences a tropical climate with six months of warm dry weather (April to November) with the mean temperature slightly above 20°C, followed by six months of tropical rainfall. Annual precipitation ranges from 1,300 mm to 2,500 mm and is most intense in December and January. Exploration and mining operations can be carried out throughout the year.

5.3 Local Resources

Itabirito is the largest town nearest to the Paciência site and has a population of approximately 50,000 people. The local economy is based on agriculture and iron mining. A full suite of services such as food, power, fuel, housing, schools, hospitals, and the like are available in Itabirito. Additional services are available in the surrounding villages and towns such as Ouro Fino, Ouro Preto, Nova Lima, Rio Acima, and Barão de Cocais.

5.4 Infrastructure

An aerial view of the current infrastructure present at the mine site is shown in Figure 5-1, which includes:

- A processing plant with a nameplate capacity of 600,000 tpa (approximately 1,750 tpd)
- Administration buildings
- Mechanical repair shops
- Core shack facilities
- A tailings storage facility
- A detoxification plant for treating process tailings
- A paste fille plant
- Portal access to the Santa Isabel Mine (currently flooded)
- A potable water supply

Electricity is provided to the mine site from the Brazilian national grid by CEMIG, the state-owned utility company with operations in the state of Minas Gerais.

Figure 5-1

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Site Infrastructure

May 2023

Source: Google Earth, 2023.

5.5 Physiography

The Paciência Mining Complex lies approximately 1,077 MASL, and is centred on the original Santa Isabel Mine. Relief is on the order of 300 m.

The physiography of the area surrounding the Paciência Mining Complex is rugged and consists of a series of hills and valleys that follow a general northwest to southeast orientation. The hills consist mostly of rounded hill tops with relatively steep sides that progress down to steeply incised valleys that often contain small streams and creeks and larger rivers at times. The vegetation is comprised of a mixture of open areas covered by various species of grasses that are interspersed with tree-filled areas containing trees ranging to several metres in height (Figure 5-2).

Based upon the observations made during the course of the site visit, the SLR QP believes that there are sufficient of surface rights, sources of power, water, mining personnel, tailings storage areas, and potential waste disposal area to conduct mining operations.

Figure 5-2

Jaguar Mining Inc.

Paciência Mining Complex
Minas Gerais, Brazil

General View of the Topography and Vegetation

May 2023

Source: SLR, 2023.

6.0 HISTORY

Gold discoveries in the Itabirito Region date from the middle of the 17th century and are directly attributed to the activity of the "Bandeirantes" (early Portuguese explorers) along the das Velhas River. Reports from that time state that gold was abundant, a fact that triggered a major gold rush which extended into the middle of the 19th century.

Exploration for gold in the region started at alluvial sites along drainages where simple extraction techniques were employed. Production eventually declined as alluvial sources were depleted and exploration then focused increasingly towards the discovery of "primary ore." Beginning in approximately 1979, modern exploration has been carried out in the Itabirito region by various mining and exploration companies.

6.1 Prior Ownership

A summary of the chain of previous owners of the Jaguar mining concessions and exploration authorizations is presented in Table 6-1 (Machado, 2011).

Table 6-1: Summary of Ownership Changes for the Jaguar Mining Paciência Mining Concessions and Exploration Authorizations
Jaguar Mining Inc. – Paciência Mining Complex

Period	Owner
Santa Isabel	
August 1981 to Jul, 1990	Mineração Itamonte Ltda.
July 1990 to December 1991	Mineração Paciência Ltda. (formerly Mineração Itamonte Ltda.)
December 1991 to December 1995	Mineração Itajobi Ltda.
December 1995 to April 1 2004	Mineração Morro Velho Ltda.
April 1 2004 to April 28, 2004	Mineração AngloGold Ashanti
April 28, 2004 to present	MSOL (a Jaguar subsidiary)
Palmital	
August 1945 to September 2009	Cayman Mineração do Brasil
September 2009	Cia de Fomento Mineral e Participações
October 2009 – present	Nacional Minérios SA-NAMISA
Ouro Fino	
December 1989 to November 2008	Minas Novas Pesquisa e Lavra SA
Quati	
December 1981 to June 2007	Mineração AngloGold Ltda.
June 2007 to November 2007	AngloGold Brasil Mineração Ltda.

6.2 Exploration and Development History

A summary of the exploration and development history of the Jaguar mining concessions and exploration authorizations is presented in Table 6-2 (Machado 2007b, 2011).

Table 6-2: Summary of the Exploration and Development History
Jaguar Mining Inc. – Paciência Mining Complex

Year	Company	Program	Results
		Santa Isabel/Córrego Grande/Marzagão/Bahú/Quati/Cedro	
1979 – 1990	AngloGold Ashanti	Regional geochemical surveying, aerial photography interpretation, and detailed channel sampling	Exploration targets identified
1990 - 2003	AngloGold Ashanti	Surface-based diamond drilling Metallurgical and mineral processing tests	8,924 m of drilling completed in 47 drill holes Cyanidation with gravity concentration resulted in a total gold recovery of 93.6%
Unknown	AngloGold Ashanti	Underground development and exploration drilling. Geological mapping and topographic surveying	1,586 m of ramp and drift access excavated. 2,695 m of drilling completed in 65 drill holes (underground), 3,553 channel samples collected
Unknown	AngloGold Ashanti	Surface-based diamond drilling	2,025 m of drilling completed in 10 drill holes
Unknown	AngloGold Ashanti	Underground development, diamond drilling, and channel sampling.	540 m of ramp and drift access excavated. 2,858 m of drilling completed in 28 drill holes (underground). 4,676 channel samples collected
Unknown	AngloGold Ashanti	Surface-based diamond drilling, channel sampling, geological mapping, and topographic surveying	11,249 m of drilling completed in 70 drill holes. Over 5,000 channel samples collected
1985-1989	AngloGold	Geological mapping and sampling	1,216 channel samples collected from underground workings
		Surface diamond drilling	Six drill holes totalling 630 m in length, 354 core samples taken
		Palmital	
1983-1989	Minas Novas Pesquisa e Lavra SA	Re-opening of old workings	670 m of old ramps and drifts rehabilitated, 505 m of new drifts excavated
		Channel sampling	605 channel and core samples collected

Year	Company	Program	Results
		Surface drilling	Nine drill holes, totalling 2,876 m in length
		Underground drilling	34 drill holes totalling 3,051 m in length
		Ouro Fino	
1983-1988	Minas Novas	Surface geological mapping and sampling	85 channel samples collected
		Re-opening of old workings	1,245 m of old ramps and drifts rehabilitated, 1,900 m of new drifts excavated
		Underground geological mapping and sampling	2,735 samples collected
		Underground drilling	14 drill holes totalling 1,790 m in length. 174 core samples taken
		Rio de Peixe (I & II)	
Unknown	RTZ Rio Tinto Mineração Morrumbala	Regional geophysical survey, surface geological mapping	Ground magnetic surveys, Induced Polarization (pole-dipole), Very Low Frequency Electromagnetic surveys, mise-a-la-mass surveys
		Regional stream sediment, soil and rock sampling, trenches and channel sampling	10 trenches in 570 m excavated ~1,500 channel samples collected
		Exploratory surface drilling	17 percussion drill holes, totalling 899 m
			16 diamond drilling totalling 1,103 m in length

6.3 Historical Resource Estimates

No historical Mineral Resource estimates are present for the Santa Isabel, Córrego Grande, Marzagão, or Bahú deposits.

6.4 Past Production

The Complex began operations in 2008 and was placed on care and maintenance on May 8, 2012. A summary of the material processed by the plant during its operating period is provided in Table 6-3. SLR notes that the figures presented below may include processing of gold-bearing material from nearby properties. Jaguar's records indicated that a total of 4,539 ounces of gold (approximately 43,000 t grading 3.28 g/t Au) were extracted by means of open pit mining methods.

Table 6-3: Summary of Production from the Paciência Mining Complex
Jaguar Mining Inc. – Paciência Mining Complex

Year	Tonnes (kt)	Mill Head Grade (g/t Au)	Plant Recovery (%)	Production (oz Au)
2008	289	3.19	91.9	23,431
2009	502	3.42	92.6	49,425
2010	438	3.02	93.8	39,480
2011	397	2.9	91.6	33,985
2012*	129	1.96	89.9	7,304
Total	**1,755**	**3.06**	**92.4**	**153,725**

* January to April

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

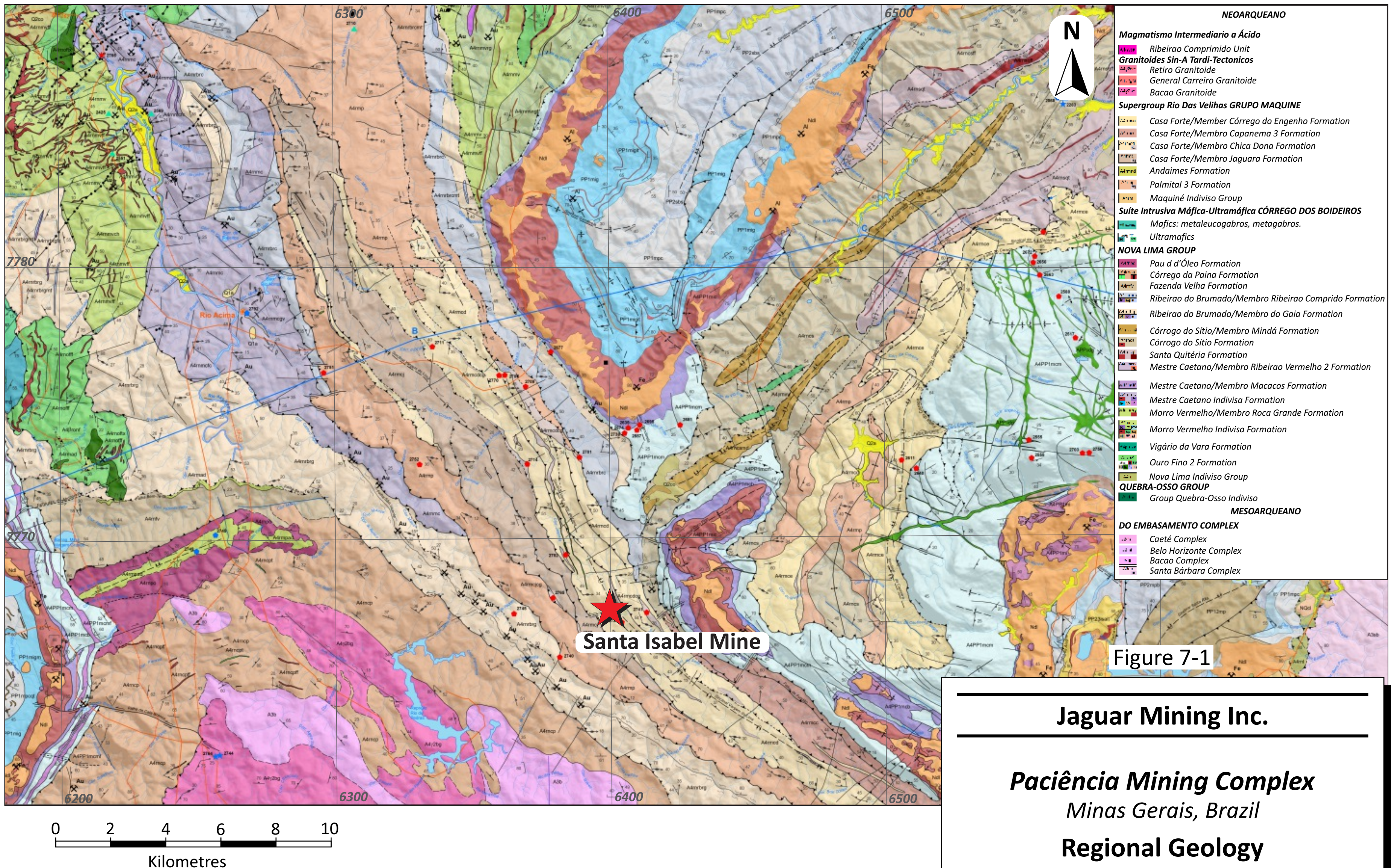
The Paciência Mining Complex is located in the central portion of the Iron Quadrangle province, which had been the largest and most important mineral province in Brazil for centuries until the early 1980s, when the Carajás mineral province, in the state of Pará, attained equal status.

The Complex area is underlain by rocks of Archean and Proterozoic ages (Figure 7-1). Archean-aged units include a granitic basement and/or granitic stocks, which are overlain by the Nova Lima Group, a sequence of ultramafic-mafic to intermediate volcanic flows and pyroclastics and associated sediments. Proterozoic-aged units include the sedimentary Minas Supergroup, which includes basal quartzites and some local Witwatersrand-type conglomeratic packages and the well-known Lake Superior-type BIF packages of the global iron-ore producer Itabira Group.

The Nova Lima Group, the host stratigraphic package of the Paciência Mining Complex main deposits, can be sub-divided into three units as shown in Figure 7-2:

- A basal unit composed of mafic to intermediate metavolcanic rocks interlayered with metapelites, Algoma type banded iron formations (BIF), and rare acidic metavolcaniclastic rocks;
- An intermediate unit represented by a unit of mixed metavolcanic rocks of mafic to felsic composition, and metavolcaniclastic rocks that are interlayered with graphitic phyllites and horizons of Algoma type BIFs;
- An upper unit composed of metapelites interlayered with felsic metavolcanic rocks and metavolcaniclastic rocks, quartzites, and metaconglomerates.

Structurally, the Iron Quadrangle has a complex and polyphasic tectonic-structural history. Extensive crustal sutures producing regional structural lineaments are the apparent hosts of a significant number of gold occurrences and deposits emplaced on the upper stratigraphic portion of the Nova Lima Group metasedimentary package, where the Paciência Mining Complex is geologically located.



Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Regional Geology

May 2023

Source: Silva et al., 2020.

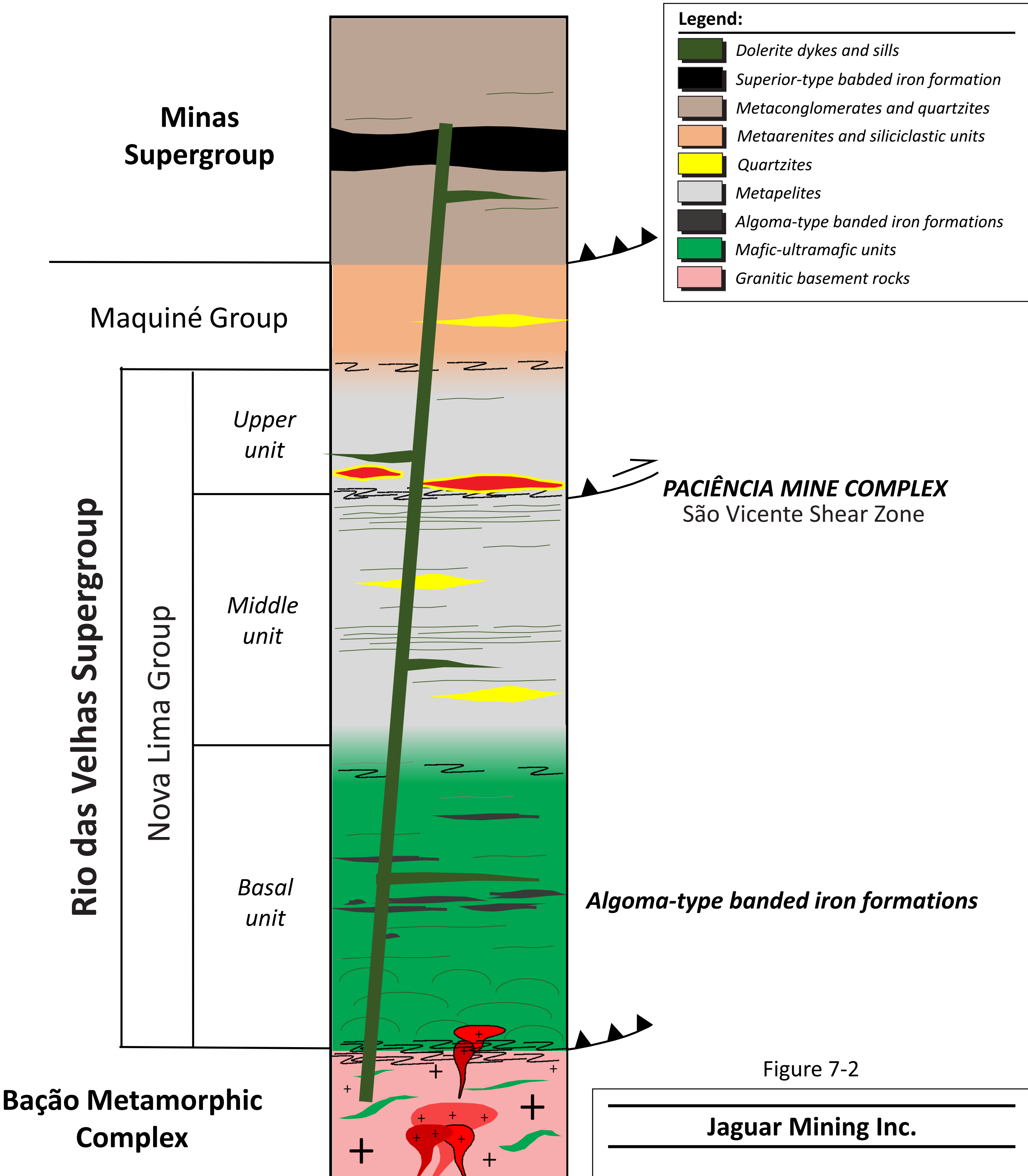


Figure 7-2

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Stratigraphic Column

May 2023

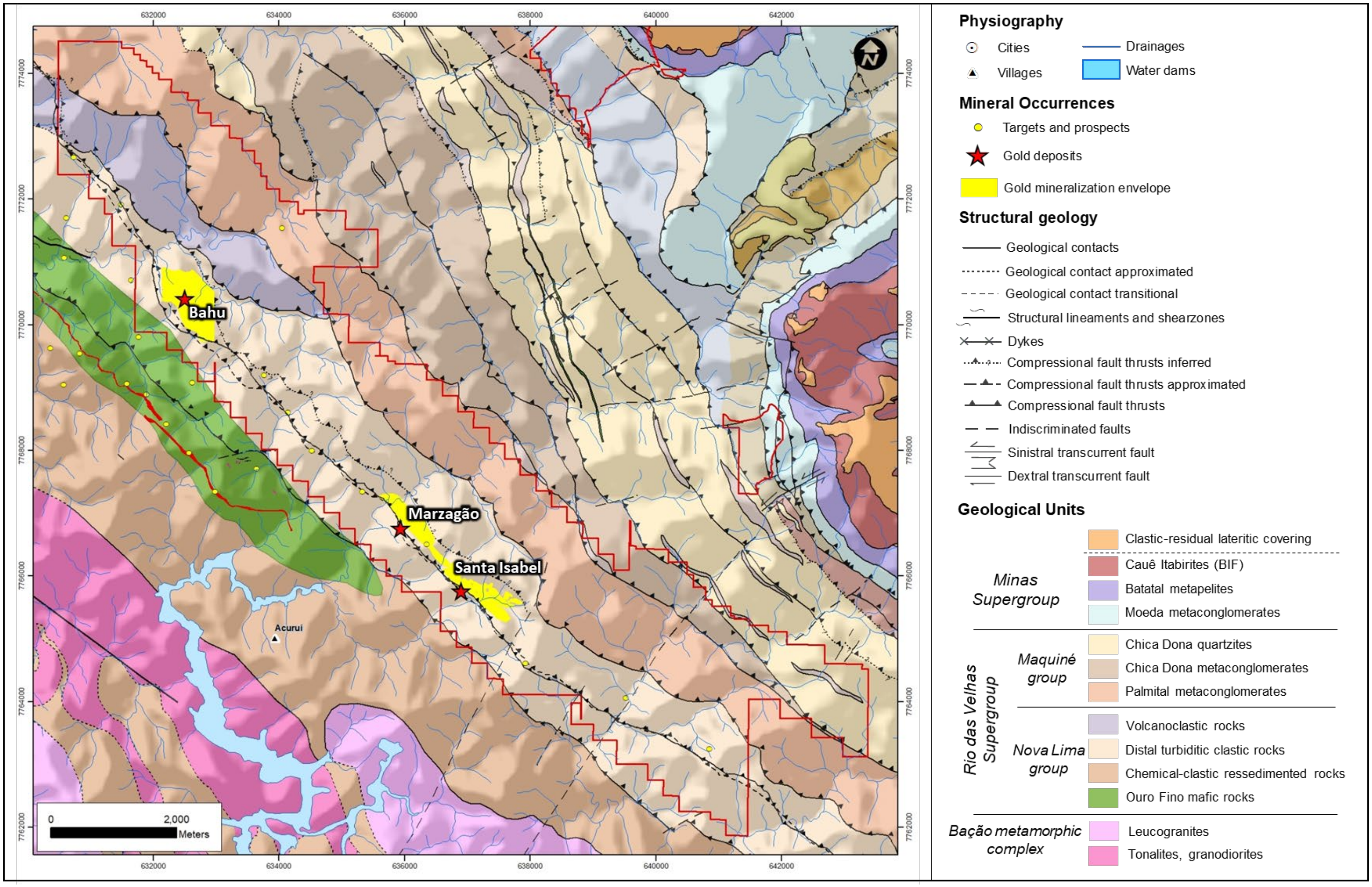
Source: Jaguar, 2023.

7.2 Local Geology

The Complex is situated along the São Vicente/Paciência Lineament (Paciência Trend), the most prominent structure in the area (Figure 7-3). The São Vicente/Paciência Lineament is a northwest trending, northeast dipping, transpressive, sinistral shear zone that has been mapped along a strike length of more than 60 km across the Iron Quadrangle, from Ouro Preto in the south to Nova Lima in the north. The Paciência region shows a significant number of historic lode gold diggings, prospects, and deposits along this prominent regional structure that was intensively explored during the 17th and 18th centuries.

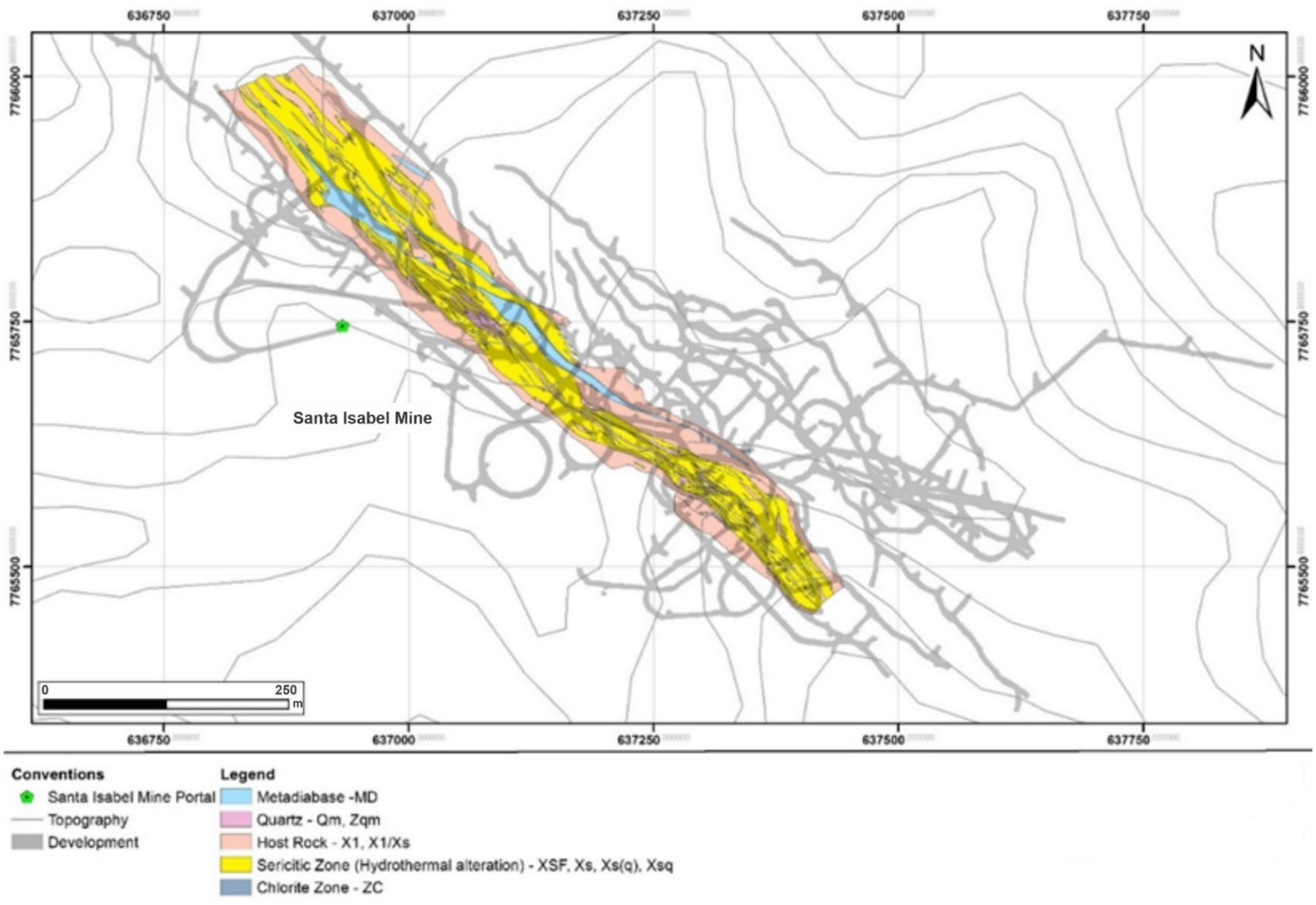
Gold deposits and prospects are known to occur along the entire length of the São Vicente/Paciência shear zone. The mineralized shoots are composed of concentrations of microcrystalline quartz veins swarms hosted in an altered matrix comprised of sericite/chlorite/carbonate schist. The gold particles commonly occur in free native form within the quartz veins and veinlets or included in sulphides and along their grain boundaries. These quartz-rich mineralized zones exhibit boudinaged shapes, with thicknesses that vary from a few centimetres up to 30 m. The length of these individual shoots varies between 10 m and 200 m along strike and can possess vertical extents greater than hundreds of metres following the down plunge direction of continuity (Figure 7-4 and Figure 7-5). The gold grades are variable in this geological-metallogenic context, and individual samples with grades between 30 g/t Au and 500 g/t Au are not uncommon due to the existence of coarse-grained gold particles.

Metapelites and metavolcaniclastic rock packages are the most common stratigraphic context in the project area. Subordinate basic dikes and schists rich in quartz and carbonaceous material are present locally. Along the Paciência Trend shear zone, the metapelite and metavolcaniclastic rock packages were subjected to marked hydrothermal alteration processes that resulted in the development of carbonate halos, chlorite and sericite-rich zones, and quartz veins swarms and/or more restricted silicification zones. Disseminated sulphides (pyrite, arsenopyrite, stibnite, sphalerite, chalcopyrite, and galena) in close association with the quartz veins swarms are common, but sulphides altogether do not exceed 3% of the rock volumes.



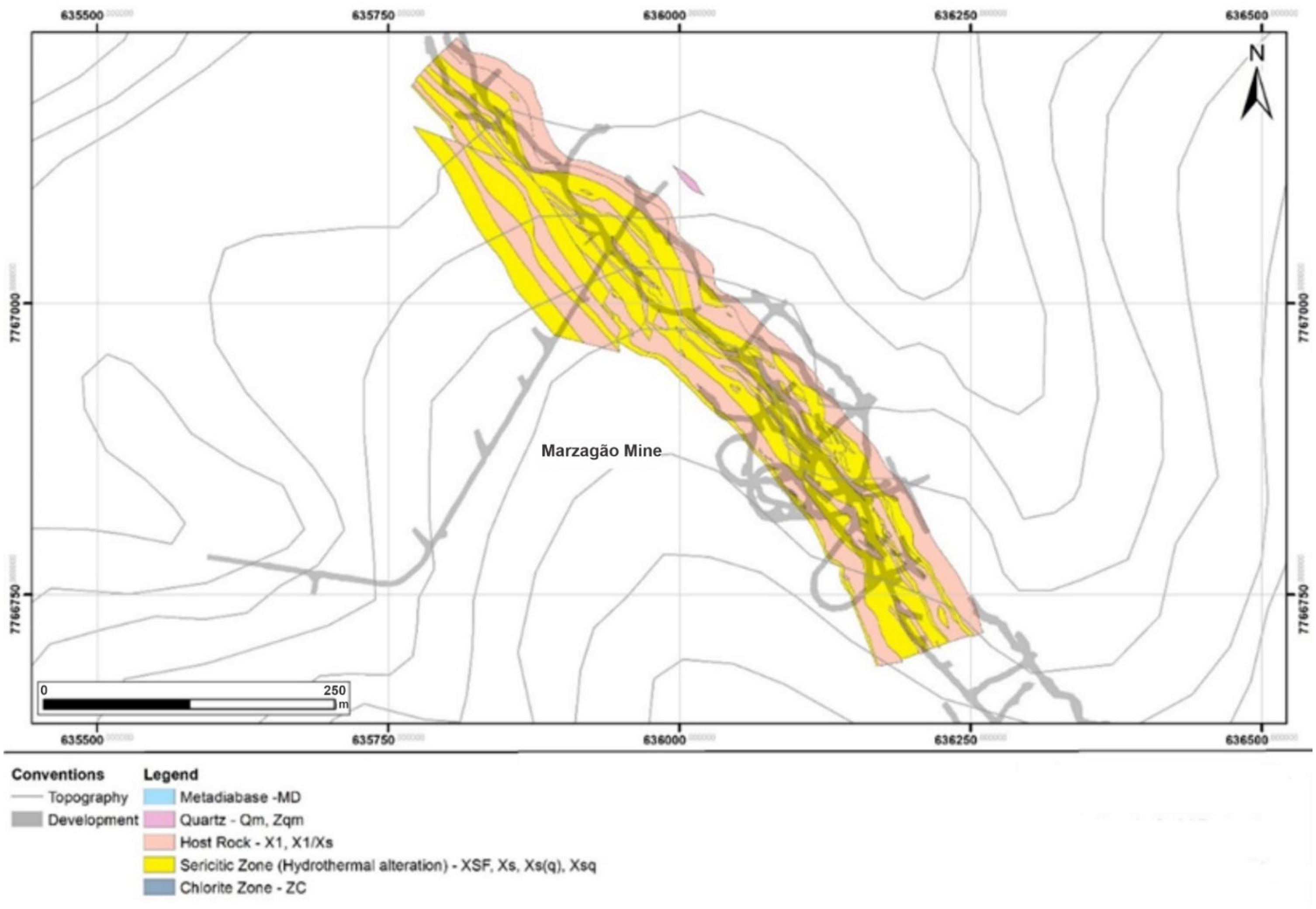
Source: Silva et al., 2020.

Figure 7-3: Local Geology of the Santa Isabel to Bahú Deposit Area



Source: Jaguar, 2022

Figure 7-4: Plan View of the Geology and Mineralization at the Santa Isabel Mine



Source: Jaguar, 2022

Figure 7-5: Plan View of the Geology and Mineralization of the Marzagão Mine

7.3 Mineralization

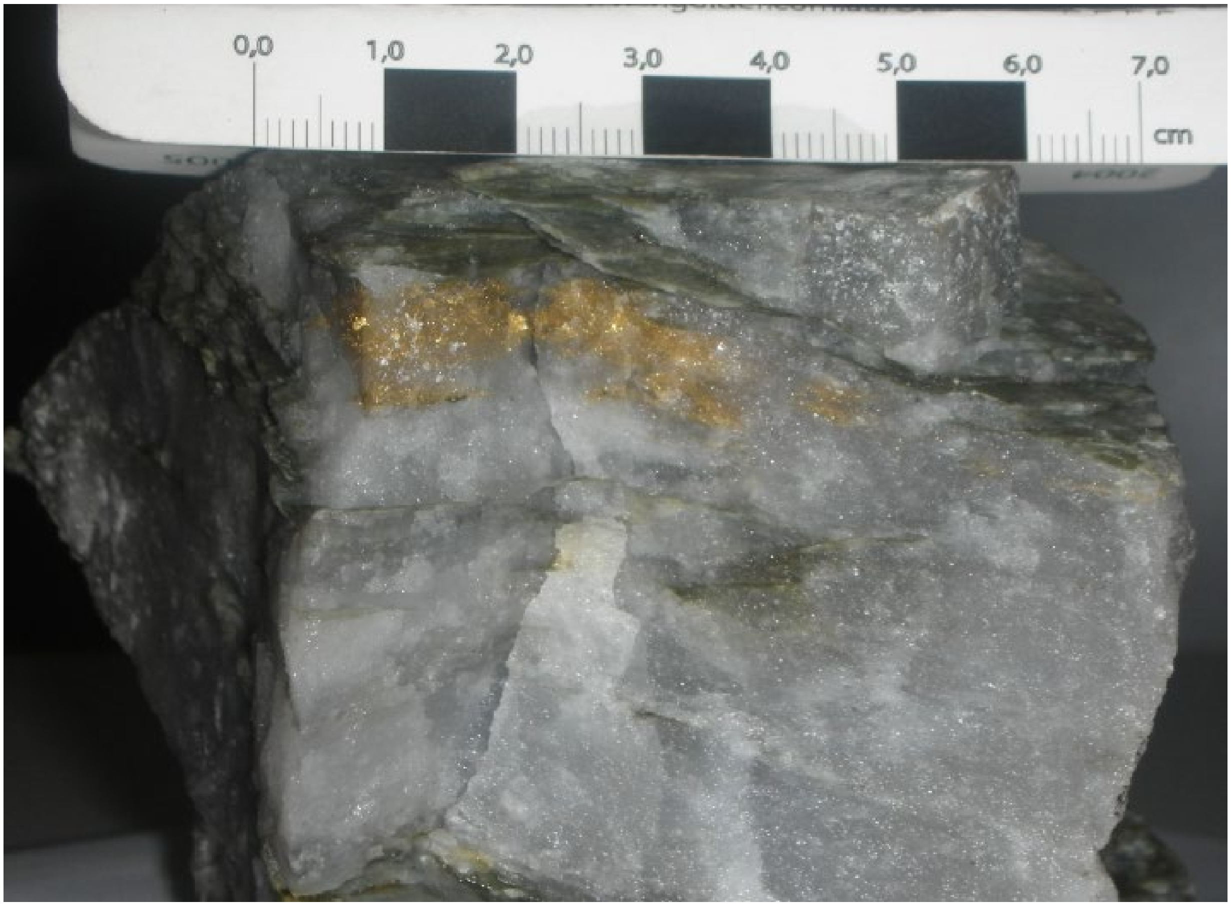
The gold mineralization and mineralized bodies of the inactive Santa Isabel and Marzagão mines and the Bahú deposit are genetically related to the Paciência Trend structure. The mineralized shoots are generally lenticular and stratiform, but can be somewhat discontinuous laterally, being composed of hydrothermal quartz veins swarms (silicification zones) that “flood” altered schists rich in chlorite, carbonates, and sericite. The protolith host rock packages of the mineralized bodies seem to be somewhat variable along the strike-length of the host shear zone structure, and include metapelite-to-metapsammite turbiditic and metavolcaniclastic sequences of the Nova Lima Group.

Hydrothermal alteration fronts, currently represented by carbonatization, sericitization, silicification, and sulphidation facies/domains that generally overprint the protolithic lithologies, also generated concentrations of quartz-carbonate-sericite-dark green chlorites lenses and swarms within the foliation planes (Figure 7-6, Figure 7-7, and Figure 7-8). These lenses are considered to be possibly coeval with elongated boudins and “filled” fold axes that have been shown by mapping in the underground mines to trend mainly to an azimuth of between 115° and 120° and plunge downwards at dips of approximately 15° to 25°. The lenticular quartz swarms are microcrystalline, white-greyish in colour, and can host small concentrations of disseminated pyrite, pyrrhotite, arsenopyrite, and stibnite. The disseminated sulphide minerals are observed to be mainly concentrated at the contacts of the quartz veins with the host hydrothermally altered schists.

Gold mineralization at the Paciência Mining Complex occurs as free, visible grains hosted by quartz veins and/or veinlets, or as tiny inclusions within sulphide crystals, mainly pyrite and arsenopyrite. The economic mineralized bodies of the Santa Isabel and Marzagão mines are observed to align along the mineral stretching and intersection lineations that have an average trend azimuth of 090° to 125° and plunges of the order of -20° to -60°.

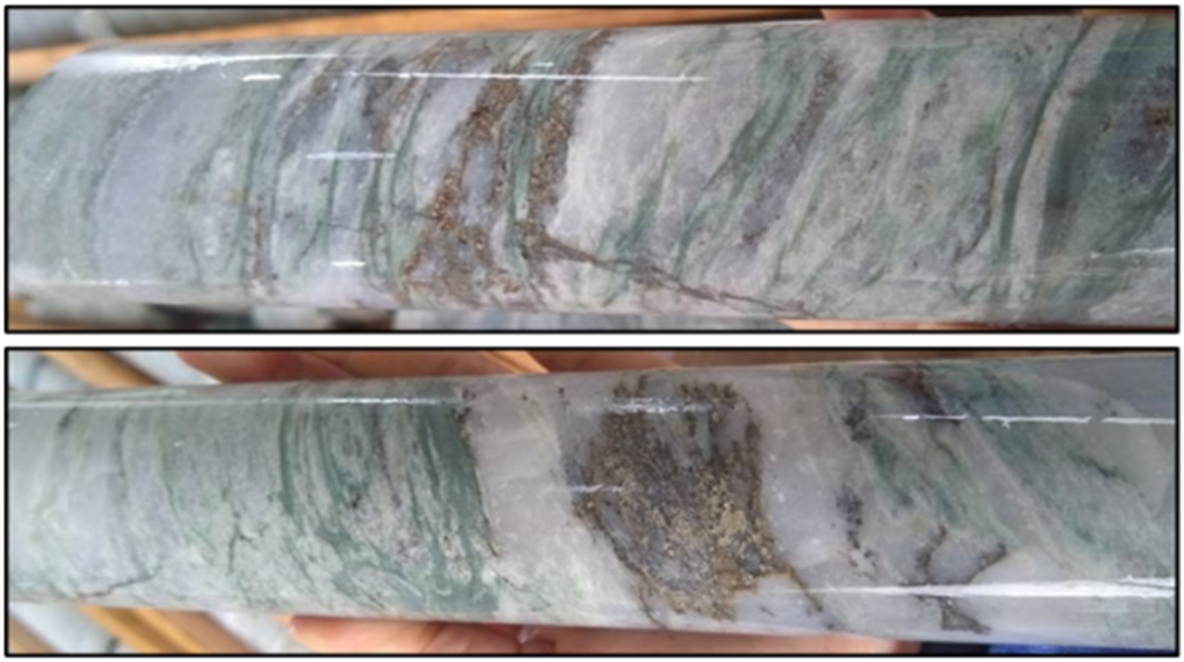
Source: Jaguar, 2023

Figure 7-6: Example of the Style of Gold Mineralization at the Santa Isabel Mine



Source: Jaguar, 2023

Figure 7-7: Coarse Grained Visible Gold Hosted in a Quartz Vein from the Paciência Mining Complex



Source: Jaguar, 2023

Figure 7-8: Examples of the Alteration, Quartz Veining, and Sulphide Mineralization in Drill Core, Paciência Mining Complex

8.0 DEPOSIT TYPES

The gold metallogeny in the Iron Quadrangle is complex, with gold mineralization predominately observed within three general types of deposits:

- Archean-age, invariably stratabound-like, Algoma BIF hosted deposits.
- "Quartz vein swarms-style", clearly mesothermal deposits.
- Early-Proterozoic, Witwatersrand type paleo-placer deposits.

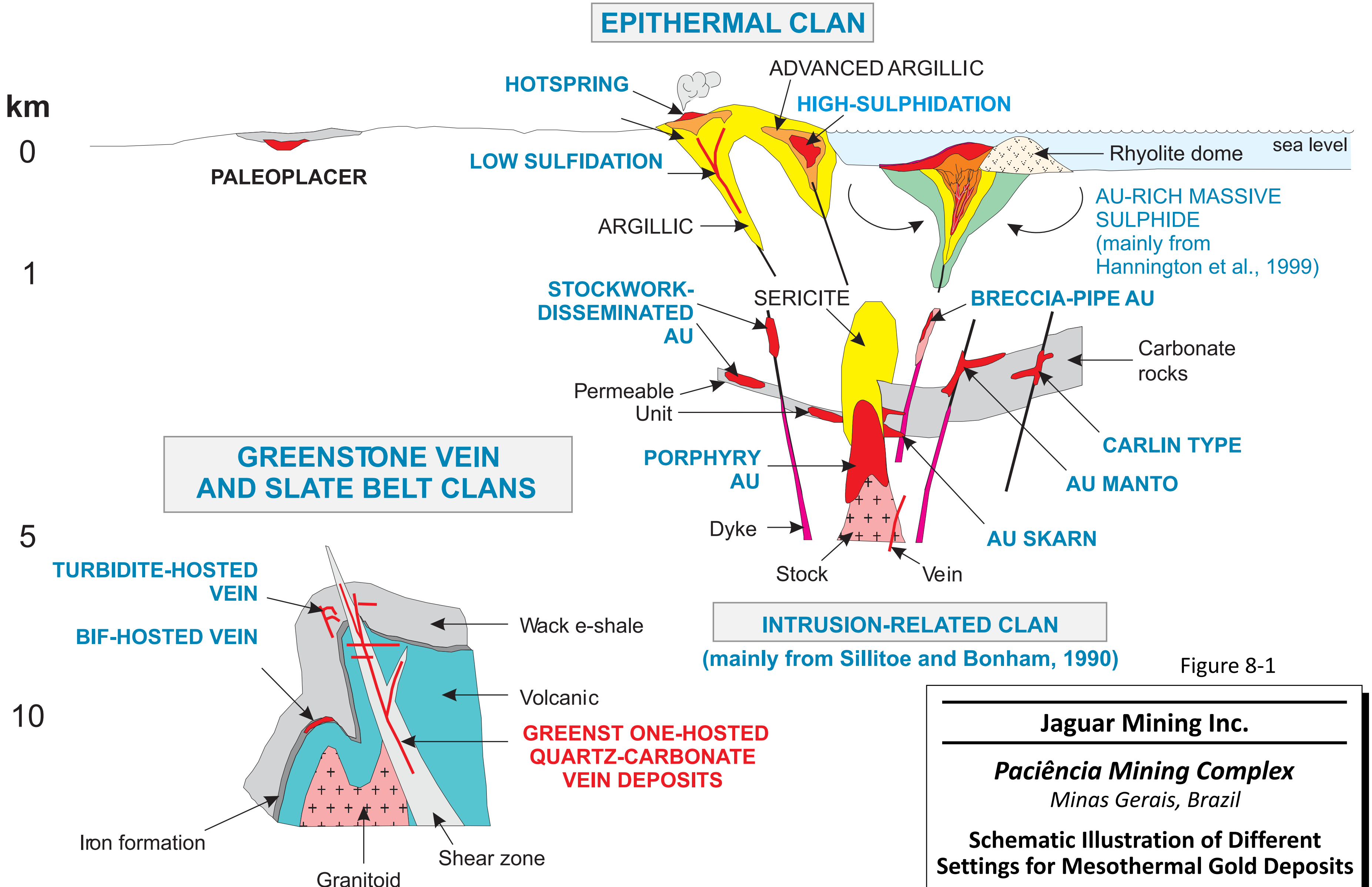
While the Jaguar Pilar and Roça Grande deposits are examples of the Algoma BIF hosted type, the gold mineralization at the Paciência Mining Complex is an example of an Archean-aged shear-hosted deposit.

The following general description of Archean-aged mesothermal gold deposits has been presented in Dubé and Gosselin (2007).

Greenstone hosted quartz-carbonate vein deposits typically occur in deformed greenstone belts of all ages, especially those with variolitic tholeiitic basalts and ultramafic komatiitic flows intruded by intermediate to felsic porphyry intrusions, and sometimes with swarms of albitite or lamprophyre dikes (Figure 8-1). They are distributed along major compressional to trans-tensional crustal-scale fault zones in deformed greenstone terranes commonly marking the convergent margins between major lithological boundaries, such as volcano-plutonic and sedimentary domains. The large greenstone hosted quartz-carbonate vein deposits are commonly spatially associated with fluvio-alluvial conglomerate (e.g., Timiskaming conglomerate) distributed along major crustal fault zones (e.g., Destor Porcupine Fault). This association suggests an empirical time and space relationship between large-scale deposits and regional unconformities.

These types of deposits are most abundant and significant, in terms of total gold content, in Archean terranes, however, a significant number of world-class deposits are also found in Proterozoic and Paleozoic terranes. In Canada, they represent the main source of gold and are mainly located in the Archean greenstone belts of the Superior and Slave provinces. They also occur in the Paleozoic greenstone terranes of the Appalachian orogen and in the oceanic terranes of the Cordillera.

The greenstone hosted quartz-carbonate vein deposits correspond to structurally controlled complex epigenetic deposits characterized by simple to complex networks of gold bearing, laminated quartz-carbonate fault-fill veins. These veins are hosted by moderately to steeply dipping, compressional brittle-ductile shear zones and faults with locally associated shallow dipping extensional veins and hydrothermal breccias. The deposits are hosted by greenschist to locally amphibolite facies metamorphic rocks of dominantly mafic composition and formed at intermediate depth (5 km to 10 km). The mineralization is syn- to late-deformation and typically post-peak greenschist facies or syn-peak amphibolite facies metamorphism. The deposits are typically associated with iron-carbonate alteration. Gold is largely confined to the quartz-carbonate vein network but may also be present in significant amounts within iron rich sulphidized wall-rock selvages or within silicified and arsenopyrite rich replacement zones.



May 2023

Source: modified after Dubé & Gosselin, 2007.

Figure 8-1

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Schematic Illustration of Different Settings for Mesothermal Gold Deposits

There is a general consensus that the greenstone hosted quartz-carbonate vein deposits are related to metamorphic fluids from accretionary processes and generated by prograde metamorphism and thermal re-equilibration of subducted volcano-sedimentary terranes. The deep seated, gold transporting metamorphic fluid has been channelled to higher crustal levels through major crustal faults or deformation zones. Along its pathway, the fluid has dissolved various components - notably gold - from the volcano-sedimentary packages, including a potential gold rich precursor. The fluid then precipitated as vein material or wall-rock replacement in second and third order structures at higher crustal levels through fluid-pressure cycling processes and temperature, pH, and other physio-chemical variations.

9.0 EXPLORATION

Limited exploration activities have been completed by Jaguar on the Paciência Mining Complex other than drilling prior to 2021. Exploration activities were recommenced in 2021 and are summarized in Table 9-1.

Table 9-1: Summary of Jaguar Exploration Activities
Jaguar Mining Inc. – Paciência Mining Complex

Year	Description of Work	Summary of Results
	Santa Isabel/Córrego Grande/Marzagão/Bahú/Quati/Cedro	
2021	UAV magnetometry geophysics, Light Detection and Ranging (LIDAR), and aerial photography survey	Exploration targets identified
	Regional Time-Domain Electromagnetic and Frequency-Domain Electromagnetic geophysics interpretation	Exploration targets identified
	Topographical surveying of drill holes completed by prior owners at the Bahú deposit	
2022	Quati-Bahú soil and rock chip sampling program	1,178 soil samples collected 279 rock chip samples collected
	Three dimensional modeling of São Vicente Lineament	
2023	Bahú-Marzagão soil and rock chip sampling programs	541 soil samples collected 48 rock chip samples collected
	Palmital	
	No exploration activities have been completed by Jaguar	
	Ouro Fino	
	No exploration activities have been completed by Jaguar	
	Rio de Peixe (I & II)	
2008-2010	Soil sampling, trenches, and rock channel geochemistry surveys	780 soil samples collected; 22 trenches 1,570.75m excavated and 1,546 channel samples collected

10.0 DRILLING

Following completion of the acquisition of the Paciência Mining Complex from AngloGold, Jaguar proceeded to carry out additional diamond drilling programs that tested selected targets at the Santa Isabel Mine. Drilling programs were also completed at the Rio de Peixe concessions. These drilling programs were summarized in Table 10-1.

Table 10-1: Summary of Jaguar Drilling Activities
Jaguar Mining Inc. – Paciência Mining Complex

Year	Drilling Type	Target	No. Holes	Total Length (m)
		Bahú		
1983 to 1984	FS	Bahú	6	1,350
2009 to 2010	FS	Bahú	135	16,826
		Córrego Grande		
1987 to 1988	FS	Córrego Grande	8	1,339
2009	FS	Córrego Grande	13	2,812
2010	FSS	Córrego Grande	7	532
2011	FSS	Córrego Grande	5	851
		Marzagão		
1983	FS	Marzagão	3	594
1987	FS	Marzagão	1	121
1988	FS	Marzagão	19	2,765
2008	FS	Marzagão	17	2755
2008	FSS	Marzagão	10	694
2009	FS	Marzagão	9	1,511
2009	FSS	Marzagão	25	1,362
2010	FSS	Marzagão	47	2,637
2011	FSS	Marzagão	17	1,187
2012	FSS	Marzagão	19	2,946
		Santa Isabel		
1985	FS	Santa Isabel	5	718
1986	FS	Santa Isabel	8	1,337
1987	FS	Santa Isabel	22	4,636
1988	FS	Santa Isabel	11	2,033
1988	FSS	Santa Isabel	6	355

Year	Drilling Type	Target	No. Holes	Total Length (m)
1989	FSS	Santa Isabel	58	2,283
1990	FS	Santa Isabel	1	200
2004	FS	Santa Isabel	7	961
2004	FSS	Santa Isabel	41	6,330
2005	FS	Santa Isabel	18	5,819
2006	FSS	Santa Isabel	15	3,333
2007	FSS	Santa Isabel	59	8,979
2008	FSS	Santa Isabel	47	2,598
2009	FSS	Santa Isabel	71	4,042
2009	FS	Santa Isabel	19	2,763
2010	FSS	Santa Isabel	97	6,497
2011	FSS	Santa Isabel	85	8,526
2012	FSS	Santa Isabel	49	6,806
		Rio de Peixe (I & II)		
	Surface		69	6,480
Totals			**1,029**	**114,978**

The following description of the Jaguar underground drilling programs completed during the 2004 to 2006 period is based on Moreno (2007).

Underground drilling was carried out by Geosol Geologia e Sondagens Ltda and surface drilling by Mata Nativa Sondagens Ltda; both companies have qualified technical personnel. Surface drill holes were drilled with HQ (63.5 mm) and NQ (47.6 mm) bits and underground drill holes were drilled with BQ (36.5 mm) bits. Drill holes were accepted only if they had more than an 85% recovery from the mineralization zone.

The holes drilled to evaluate the deposit had their deviations measured by Tropari, Sperry Sun, and DDI/Maxbore instruments.

The cores were stored in wooden boxes one metre in length with three metres of core per box (HQ diameter) or four metres of core per box (BQ or NQ-equivalent diameter). The hole's number, depth, and place were identified in the boxes by an aluminum plate on the front of the box and by a water-resistant ink mark on its side. The progress interval and core recovery were identified inside the boxes by small wooden blocks or aluminum plates.

During logging, the old geological information was collected, progress and recovery measures were verified, and chemical analyses samples were defined. Samples were identified in the boxes by highlighting markings on their sides or by labels.

The locations of the drill holes and channel samples for the Santa Isabel deposit are presented in Figure 10-1. The locations of the drill holes for the Bahú deposit are presented in Figure 10-2.

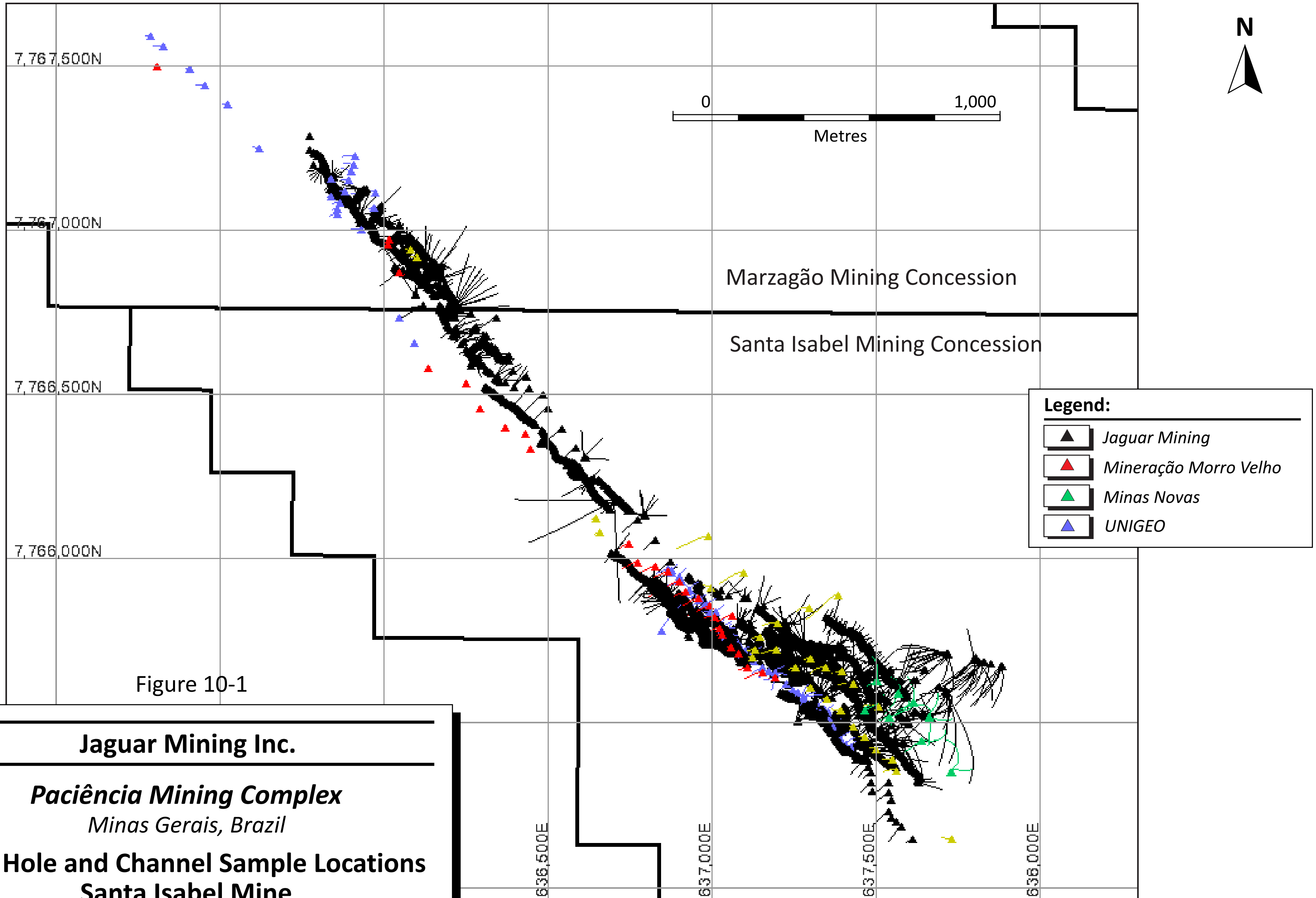


Figure 10-1

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Drill Hole and Channel Sample Locations
Santa Isabel Mine

May 2023

Source: SLR, 2023.

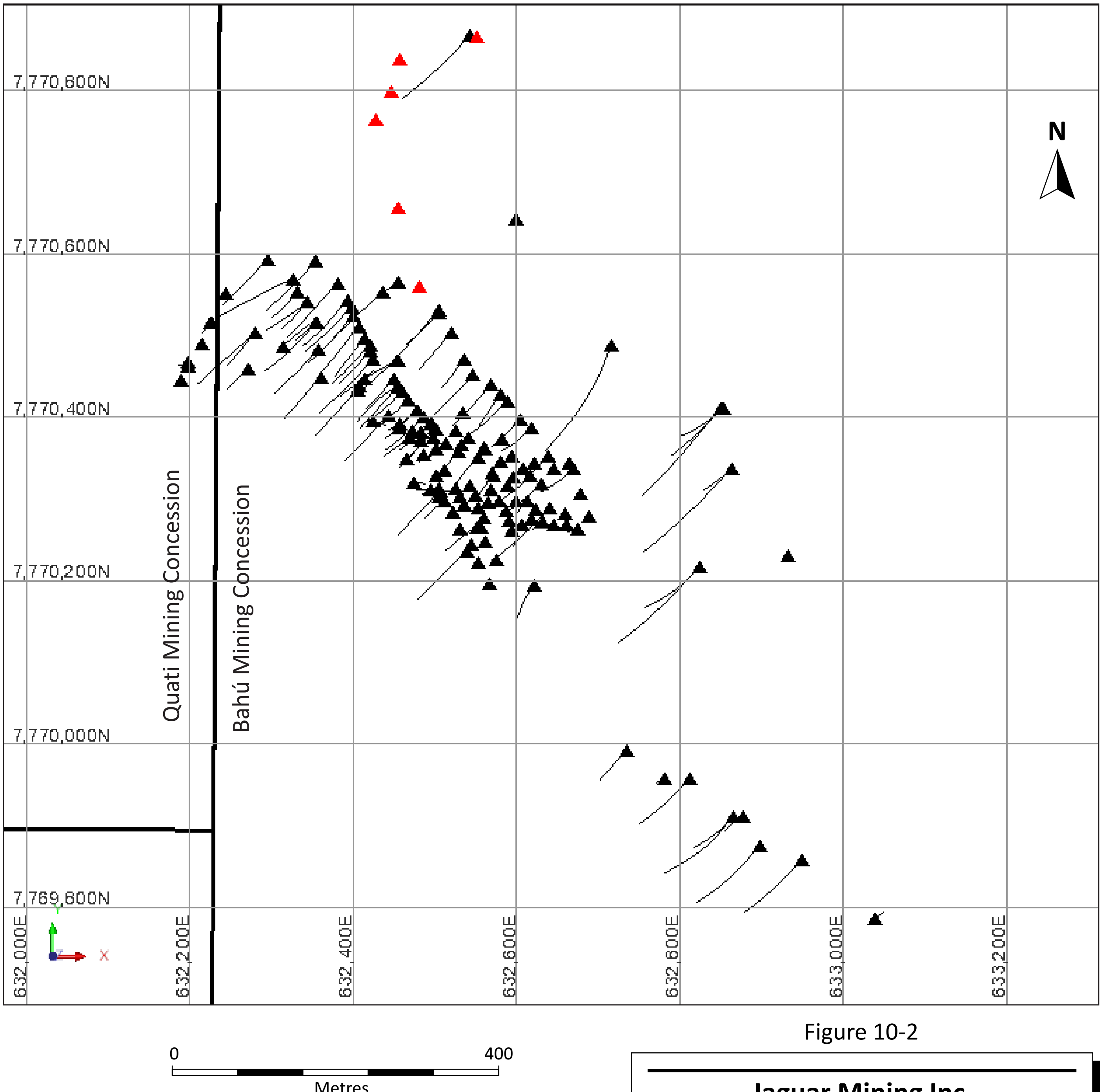


Figure 10-2

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Drill Hole Locations, Bahú Deposit

Legend:

- *Jaguar Mining*
- *Mineração Morro Velho*

May 2023

Source: SLR, 2023.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling Procedures

Jaguar follows a standard set of sampling procedures as follows.

11.1.1 Surface/Exploration Channel Sampling

- Channel samples are collected from outcrops and trenches as needed.
- The sites to be sampled are cleaned with a hoe, exposing the material by scraping it.
- Structures are mapped and the lithologic contacts defined, and samples marked so that no sample has more than one lithology.
- Samples have a maximum length of one metre and are from one kilogram to two kilograms in weight.
- Each sample is collected manually in channels with average widths between five and ten centimetres, and approximately three centimetres deep, using a hammer and chisel.
- Either an aluminum tray or a thick plastic canvas drop sheet is used to collect the material.
- Samples are stored in a thick plastic bag and identified by a numbered label, which is protected by a thin plastic cover and placed with the sample.
- At the sampling site, samples are identified by small aluminum plates, labels, or small wooden poles.
- Sketches are prepared with lithological and structural information, and sample locations are surveyed.

11.1.2 Diamond Drilling Core Sampling

- Surface drilling is performed by contractors using either HQ or NQ equipment.
- Underground drilling is performed either by Jaguar or contractors using BQ, NQ, or LTK equipment.
- Drill holes are accepted only if they have greater than 85% core recovery from the mineralized zone.
- All the drill holes have their deviations measured by Maxibor, Reflex™, or equivalent survey tools.
- The cores are stored in wooden or plastic boxes of one metre length with three metres of core per box (NQ and HQ diameters) or four metres of core per box (BQ or LTK diameters).
- The number, depth, and location of each hole are identified in the boxes by an aluminum plate or by a water resistant ink mark on the front of the box.
- The progress interval and core recovery are identified inside the boxes by small wooden plates.
- During logging, all of the geological information, progress, and recovery measures are verified and the significant intervals are defined for sampling.
- Samples are identified in the boxes by highlighting their side or by labels.
- Samples are cut lengthwise with a diamond saw and hammer into approximately equal halves.

- One half of the sample is placed in a highly resistant plastic bag, identified by a label, and the other half is kept in the box at a warehouse.
- The remaining drill core from the surface based drill holes is stored at a dedicated core storage facility that is located at Roça Grande.
- For many of the underground based drill holes, samples are cut lengthwise with a diamond saw and hammer into approximately equal halves.
- For the shorter length, bazooka type drill holes completed from underground set-ups, the whole core is sampled as the core diameter does not permit splitting into halves.

11.1.3 Underground Production Channel Sampling

- The sector of the wall to be sampled is cleaned with pressurized water. Structures are mapped and lithologic contacts defined, and samples marked so that no sample has more than one lithology. Samples have a maximum length of one metre and are from two to three kilograms in weight.
- Channel samples are collected by manually opening the channels, using a hammer and small steel pointer crowned by carbide or small jackhammer.
- The channel samples have lengths ranging from 50 cm to 1.5 m, average widths between five and ten centimetres, and are approximately three centimetres deep.
- Two sets of channel samples are regularly collected on the face. One set of channel samples is collected approximately along the back once the work area has been secured. The second set of channel samples is collected at the grade height once the heading has been mucked and secured.
- Channel samples from the walls and back are collected at approximately five metre intervals. When the mineralization has very flat dips, the channel samples are collected starting at the floor level on one side and continuing over the drift back to the floor on the opposite side. In case of a steep dip, the channel samples are collected only at the roof.
- Either an aluminum tray or a thick plastic canvas placed on the floor of the drift is used to collect the material. Samples are then stored in a thick plastic bag and identified by a numbered label, which is protected by a thin plastic cover and placed with the sample.
- At the sampling site, samples are identified with paint.
- Sketches are prepared with lithological and structural information, and sample locations are surveyed.

11.2 Sample Preparation and Analysis

11.2.1 2004 to 2006

The following description of the Jaguar sample preparation and analysis procedures followed for the underground drilling programs is based on Moreno (2007).

The core sampling intervals were selected by the Senior Geologist based on lithology, mineralization type, and visually anticipated grade. The sample size was variable between 0.4 m and 1.0 m, tending towards 1.0 m. Several samples in barren or poorly mineralized section were slightly larger (maximum 1.3 m). In addition, one or two samples of core anticipated to be barren on the margins of the mineralized zones were selected. Due to the presence of visible gold, the grade variance within the zone can be very high. The width of the mineralized zone is variable from several centimetres to approximately 40 m.

Samples were prepared for analysis at the SGS and Lakefield/Geosol laboratories in Belo Horizonte and at the Jaguar laboratory located at the Roça Grade mine site by drying, crushing to 90% minus 2 mm, quartering with a Jones splitter to produce a 250 g sample, and pulverizing to 95% minus 150 mesh. Analysis for gold was by standard fire assay procedures, using a 50 g or 30 g aliquot with an atomic absorption (AA) finish.

Analytical results were forwarded to MSOL's Exploration Department by email, followed by a hard copy. Lakefield/Geosol and Jaguar laboratories used identical sample preparation and analytical procedures as the SGS facility [SGS subsequently purchased the Lakefield/Geosol laboratory (LKG) in Belo Horizonte].

The Lakefield/Geosol laboratory has been assessed by ABS Quality Evaluations, Houston, Texas, and found to be in compliance with ISO 9001. Lakefield/Geosol is independent of Jaguar. The Jaguar onsite laboratory is not ISO 17025 certified and is not independent of Jaguar.

The Jaguar onsite laboratory is not ISO 17025 certified and is not independent of Jaguar.

11.2.2 2022

For surface based exploration drill holes completed in 2022, samples were sent for analysis either to the independent SGS laboratories in Belo Horizonte or were sent to Jaguar's onsite laboratory. Samples at the SGS laboratory were prepared by drying, crushing to 90% minus 2 mm, quartering with a Jones splitter to produce a 250 g sample, and pulverizing to 95% minus 150 mesh. Analysis for gold is by standard fire assay procedures, using a 50 g or 30 g sample and an atomic absorption spectroscopy (AAS) finish.

The SGS laboratory based in Belo Horizonte meets international analytical standards and ISO 17025 compliance protocols. SGS is independent of Jaguar. Analytical results from the SGS laboratory were forwarded to Jaguar's Exploration or Mine Departments by e-mail, followed by a hard copy.

At Jaguar's onsite laboratory, samples from Paciência are dried and then crushed. A one kilogram sub-sample of the crushed material is selected for pulverization to approximately 70% - 200 mesh. The ring and puck pulverizers are cleaned after each sample using compressed air and a polyester bristle brush. The analytical protocol for all samples employs a standard fire assay fusion using a standard 30 g aliquot, with the final gold content being determined by means of AAS. The detection limit for fire assay analyses is 0.05 g/t Au. A second cut from the pulps is taken and re-assayed for those drill core samples where the grade is determined to be greater than 30 g/t Au. If the two assays are in agreement, only the first assay is reported. The AAS unit is calibrated to directly read gold grades up to 3.3 g/t Au, samples with grades greater than this are re-assayed by diluting the solute until it falls within the direct-read range.

The SGS laboratory based in Belo Horizonte meets international analytical standards and ISO 17025 compliance protocols. SGS is independent of Jaguar.

The Jaguar onsite laboratory is not ISO 17025 certified and is not independent of Jaguar.

11.3 Sample Security

Core from the diamond drills is delivered daily to the exploration geologists who proceed to prepare descriptions of the lithology, alteration and mineralized intervals present. The intervals for sampling are marked off and the core is then passed along to a Jaguar technician for splitting. The split samples are placed in plastic bags that are transported to the analytical laboratory either directly by a Jaguar employee or using commercial carriers.

11.4 Quality Assurance and Quality Control

11.4.1 2004 to 2006 Drilling Programs

The following description of the Jaguar quality assurance and quality control (QA/QC) procedures followed for the underground drilling programs is based on Moreno (2007).

Jaguar's QA/QC program consisted of:

- Submission of the blanks, standard reference samples, and duplicate samples to the laboratories;
- Re-submission of selected rejects and pulps to the laboratories for re-assays;
- Checking the original results at an outside accredited assay laboratory.

The following procedure was used for each sample lot assayed:

- Blanks: One was inserted at the beginning and another at the end of the lot, and one between every 20-sample set;
- Standards: Rocklabs standards were included: one at every 20-sample set;
- Duplicates: one included at every 20-sample set.

Inter-laboratory Check Control: approximately 14% of the samples (pulp and crushed) assayed in one laboratory were re-assayed in another laboratory.

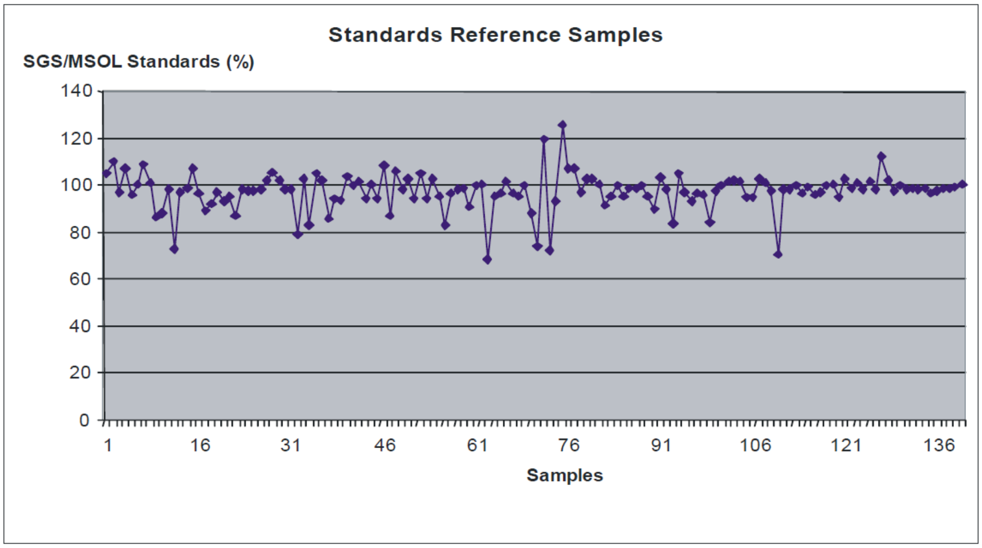
11.4.1.1 Control Blanks

Two-hundred and seventy six (276) blank samples, equivalent to 6.7% of the Jaguar diamond drill cores were submitted to the laboratories. Control blanks were employed to check for contamination, drift, or tampering.

Blanks were composed of crushed, barren quartzite, or gneiss. They were used to check for contamination. The detection limits for fire assay analyses were <0.02 g/t Au (SGS and Lakefield/Geosol) and <0.05 g/t Au (Jaguar/MSOL). In 2006, SGS do Brasil started using 0.01 g/t as the detection limit. Usually, industry practice recommends that the maximum limit for the control blanks should not exceed three times the detection limit, i.e., 0.06 g/t Au.

11.4.1.2 Standards Reference Samples

Jaguar submitted 143 standard reference samples to the laboratories, corresponding to approximately 3.5% of the diamond drill core sample population. Standards were used to test the accuracy of the laboratory results. Jaguar used standard references graded 1.314 g/t Au (SH13), 2.643 g/t Au (SJ10), 4.048 g/t Au (SK21), 4.823 g/t Au (SK11), 5.852 g/t Au (OXL25), 5.911 g/t Au (SL20), and 8.367 g/t Au (SN16). They were purchased from Rocklabs Ltd. (Rocklabs), Auckland, New Zealand. The results of the standard reference samples were monitored by means of control charts. An example is presented in Figure 11-1.

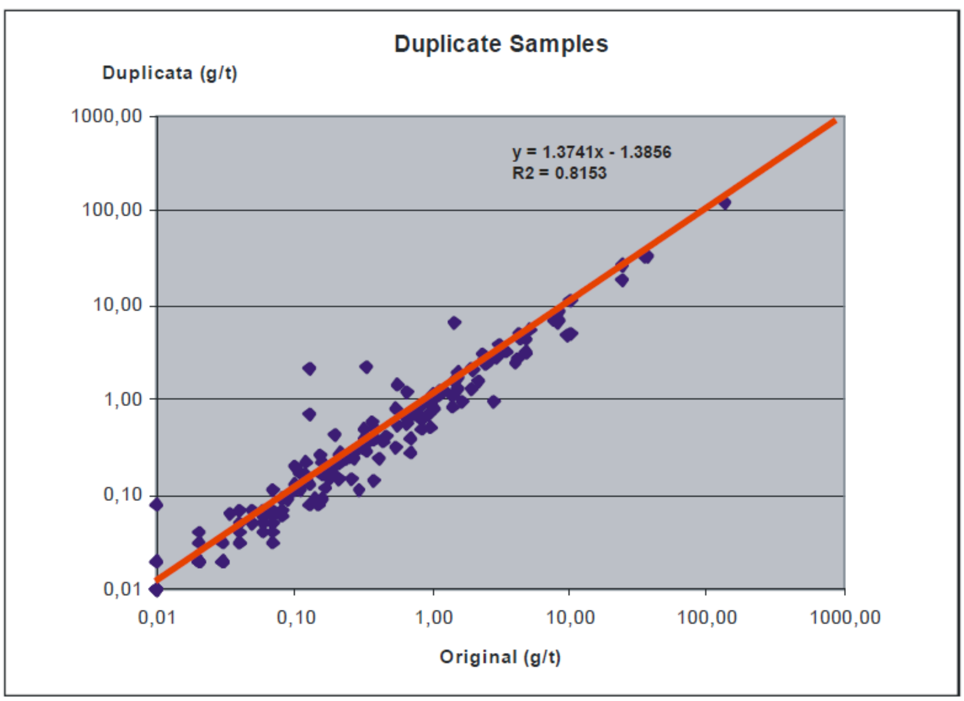


Source: Moreno, 2007.

Figure 11-1: Sample Control Chart for Standard Reference Materials

11.4.1.3 Duplicates Samples

Jaguar submitted 172 samples of quartered core to the laboratories as duplicates to test for grade variability. The results are shown in Figure 11-2. The average gold grades for the two sets of data are similar (in the range of 2.59 g/t and 2.38 g/t).



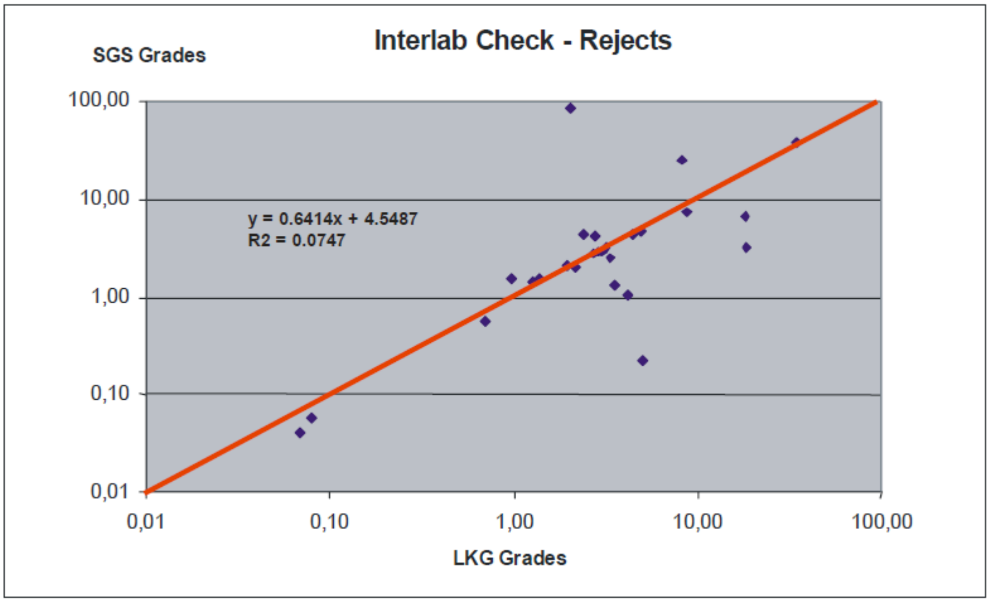
Source: Moreno, 2007.

Figure 11-2: Duplicate Sample Results

11.4.1.4 Inter-laboratory Check Assays

In order to ensure the reliability of chemical analyses that laboratories used to test the drilling samples, Jaguar sent pulp and crushed samples for analysis in a different laboratory. The samples were re-tagged with a new sequence of numbers and sent to the laboratory. Pulp samples were sent only for drying and analysis, while the crushed material had to go through the entire preparation process (drying, pulverization) before the analysis. Blank samples and Rocklabs standards were included in the batches sent for inter-laboratory check.

During 2004 and 2005, the samples were analyzed at SGS do Brasil and at LKG. Thus, the samples sent to one laboratory also had a duplicate sent to the other and vice versa (Figure 11-3).



Source: Moreno, 2007.

Figure 11-3: Inter-laboratory Check Assay Results

11.4.2 2022 Drilling Campaign

Jaguar carried out a program of QA/QC for drill hole samples collected during the 2022 drilling campaign at the Bahú deposit. Jaguar's standard QA/QC protocols include the use of blank samples, standard reference materials, pulp duplicate analyses, and re-assaying of the crushed reject material at a rate of every 20 samples, representing an insertion frequency of 5%.

Commercially sourced standard reference materials obtained from Rocklabs are inserted by the Jaguar geological team into the sample stream at a frequency of every 20 samples. A list of the standard reference materials that were used for the diamond drilling programs is provided in Table 11-1. An example of the results from the standard reference material analyses is presented in Figure 11-4.

Table 11-1: List of Certified Standard Reference Materials, 2022 Drilling Campaign
Jaguar Mining Inc. – Paciência Mining Complex

Standard No.	Number Analyzed
SG99	41
SK120	71
SN106	33
SN117	5
Total	**150**

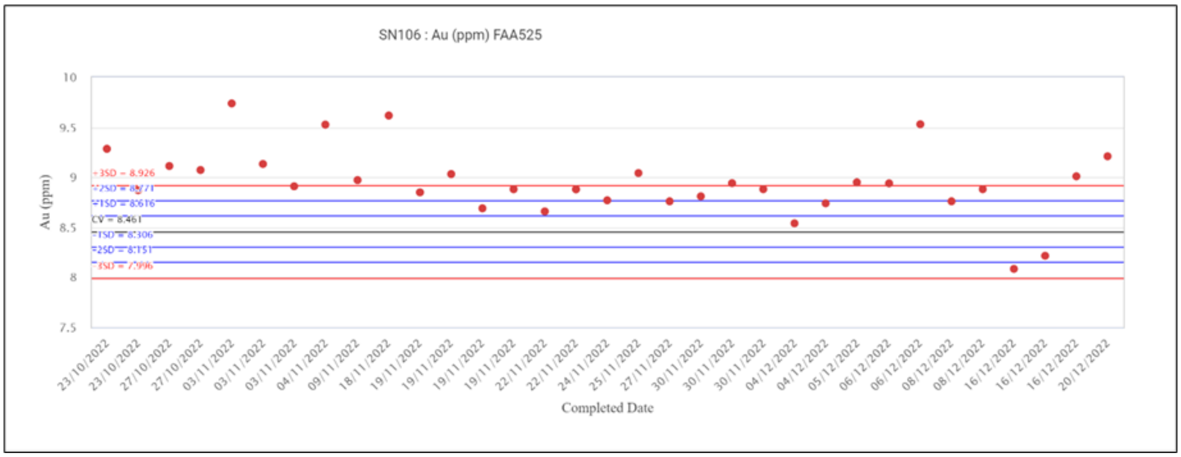


Figure 11-4: Control Chart for Standard Reference SK106

Blank samples are inserted at a rate of one in every 20 samples, representing an insertion frequency of 5%. Blank samples are composed of crushed, barren quartzite or gneiss and are used to check for contamination and carry-over during the crushing and pulverization stage. A total of 123 blank samples were analyzed.

A total of 69 pulp samples from the drilling program were forwarded to the SGS laboratory in Belo Horizonte, for third-party check analyses and the analytical results compared favourably with the Jaguar analyses.

A total of 69 samples of the crushed reject material from the drilling program were forwarded to the SGS laboratory in Belo Horizonte, for third-party check analyses, and the analytical results compared favourably with the Jaguar analyses.

In the SLR QP's opinion, the sample preparation, analysis, and security procedures at the Paciência Mining Complex are adequate for use in the estimation of Mineral Resources.

12.0 DATA VERIFICATION

The SLR QP's validation checks of the information relating to the Santa Isabel and Bahú deposits included:

- A site visit carried out on December 7, 2022 during which the local topography and access was reviewed, field inspections of selected drilling sites and examination of the local topographic control points were carried out, selected drill core intervals from the drilling completed in 2022 were examined to review the host geology, alteration, and mineralization styles, and discussions regarding the geology and style of mineralization that was exploited during the operational phase of the mine were held with the local geological staff.
- Carried out a site visit to the Jaguar onsite laboratory where the sample preparation and analytical procedures and equipment were reviewed.
- Carried out independent validation of the Santa Isabel and Bahú databases by means of spot checking of 40 drill holes comprising both historical drill holes and those completed by Jaguar.
- Checked collar locations relative to either the digital topographic surface or the location of the underground excavation digital model as appropriate.
- Completed validity checks for out of range values, overlapping intervals, and mismatched sample intervals.
- Reviewed the reasonableness of the geological interpretations relative to the nature of the previously extracted mineralization.
- Reviewed the mineralization wireframes to ensure that a minimum mining width was honoured.
- Carried out a small program of check assaying on 15 samples selected from available drill hole material from the 2022 drilling program. For this check assaying program, the pulps from the selected samples were forwarded to the ALS Brazil laboratory located in Belo Horizonte. The gold contents of the samples were determined at the ALS Laboratory located in Lima, Peru using the ALS Chemex method code Au-GRA21 which comprises a standard fire assay procedure on a 30 g aliquot, with the gold concentrations being determined by gravimetric methods. The ALS Chemex laboratory located in Lima is accredited according to the ISO 17025 protocol. The results of the check assaying are presented in Table 12-1.

Table 12-1: Summary of Check Assay Results, Drill Hole FBH005, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Sample No.	From (m)	To (m)	Length (m)	First Assay (Fire Assay- Atomic Absorption Finish) (g/t Au)	Check Assay (Fire Assay- Gravimetric Finish) (g/t Au)
FBH005-0190	159.17	160.38	1.21	0.27	0.35
FBH005-0192	160.38	161.00	0.62	0.25	0.46
FBH005-0193	161.00	162.00	1.00	0.73	0.88
FBH005-0195	162.00	163.00	1.00	0.94	1.22
FBH005-0196	163.00	164.06	1.06	1.26	1.59
FBH005-0197	164.06	165.06	1.00	0.72	0.86

Sample No.	From (m)	To (m)	Length (m)	First Assay (Fire Assay- Atomic Absorption Finish) (g/t Au)	Check Assay (Fire Assay- Gravimetric Finish) (g/t Au)
FBH005-0198	165.06	166.03	0.97	0.08	0.27
FBH005-0199	166.03	167.00	0.97	6.01	6.35
FBH005-0200	167.00	168.00	1.00	3.75	4.08
FBH005-0201	168.00	169.00	1.00	1.60	1.56
FBH005-0202	169.70	170.00	1.00	1.52	0.25
FBH005-0203	170.00	171.00	1.00	3.17	2.98
FBH005-0204	171.00	172.00	1.00	2.06	1.93
FBH005-0206	172.00	172.78	0.78	0.64	0.79
FBH005-0207	172.78	173.57	0.79	0.12	Not received

While discrepancies in the locations of a small number of drill hole collars were observed during the spot checking portion of SLR's data validation efforts, these were explained by the differences in the survey control points used by previous operators. Several instances were observed where data readings for such items as down hole deviation measurements present in the databases were not supported by the physical records provided for review. SLR believes that these items are most likely to be related to poor housekeeping practices. No material errors were noted in the Lithology or Assay records reviewed.

The SLR QP observes that the surface and underground drill hole collar locations are reasonable and channel samples are appropriately located with respect to the existing underground infrastructures. The SLR QP is of the opinion that database verification procedures for the Santa Isabel and Bahú deposits comply with industry standards and are adequate for the purposes of Mineral Resource estimation.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 AngloGold

Metallurgical test work on samples from the mineralization found at the Santa Isabel Mine were first carried out by AngloGold in 1988 to initially investigate the recoveries that could be expected by use of cyanide leaching alone, or in combination with a gravity recovery circuit. The test work also investigated whether the presence of graphite in the feed material could have a negative impact upon the recoveries. The following is the summary of the test work carried out and the results discussed in Machado (2007a, and 2007b). The location and nature of the sample material provided for these testing programs was not disclosed.

13.1.1 November 1988

Fifty two (52) kg of samples (from drill cores) were supplied to be used for gold and silver recovery tests, related to both gravity concentration and cyanidation processes. The following tests were executed using these samples:

1. Cyanidation without gravity concentration:

   Tests were executed after the sample was ground to 100% minus 200 mesh. Seven rolling bottle tests (cyanide leaching) were carried out with 24 hours of contact time.

   The pulp density was 50% solids by weight. Tests yielded an average Leaching Recovery of 90.61%.

2. Cyanidation with gravity concentration:

   Tests were executed after three sub-samples were generated by grinding part of the original sample to 70%, 80%, and 90% minus 200 mesh. A "Superpanner" was used in the gravity tests. The best result was obtained with 90% minus 200 mesh, which yielded a 93.6% total gold recovery.

3. Density tests for the solid fraction were executed using a pycnometer. Density was found to be 2.7 t/m^3.
4. "Closing" chemical analyses were also carried out yielding an average 5.43 g/t of gold and only traces of silver.

13.1.2 September 1989

Cyanidation tests using graphite schist-bearing samples (with possible dilution up to 20%) were carried out to verify the effect of the graphite schist in the gold metallurgical recovery. The conclusion of the report states, "The dilution in the Paciência ore due to graphite schist will not cause any problem in the gold extraction process, nor in the cyanidation process, in the Nova Lima metallurgical plant."

Samples collected by AngloGold had gold grades of 16 g/t, 4.95 g/t, and 6.77 g/t, while the gold grade in the graphite schist was 0.25 g/t.

13.2 Jaguar Mining

A number of metallurgical tests were carried out by Jaguar on samples from the Santa Isabel Mine as part of the preparation of the pre-feasibility study and feasibility study that were completed in support of the production decision for the Santa Isabel Mine and processing facility. The results of these test work programs are presented in Machado (2007a, 2007b, and 2007c). A brief listing of the metallurgical tests completed by Jaguar is provided in Table 13-1.

Table 13-1: Summary of Metallurgical Test Work Programs
Jaguar Mining Inc. – Paciência Mining Complex

Description	Date	Prepared by
Sedimentation and viscosity testing	November, 2005	Unknown
Bond work index and abrasion testing	February, 2005	Metso Minerals
Bond work index, gravity concentration-Cyanide leach and carbon absorption testing	March, 2006	Dawson Metallurgical Laboratories, INC.
Gravity recovery testing	May, 2005	Knelson Research & Technology Centre
Cycloning and permeability tests with Paciência project tailings	April, 2004	TESTWORK Process Development Ltda.
Sample preparation for cyanide destruction tests, Paciência project tailings	May, 2007	TESTWORK Process Development Ltda.
Sedimentation and viscosity testing	May, 2005	Universidade Federal de Minas Gerais, Departamento Engenharia de Minas
Classification testing, residual solids	August, 2005	Lakefield Geosol Laboratórios Ltda.
Ensaios de Cianetação Amostra Bahú	May 2010	Jaguar Mining, Caeté Process Laboratory
Ensaios de Cianetação Amostra Bahú Sulfetado	June 2010	Jaguar Mining, Caeté Process Laboratory
Ensaios de Cianetação Alvo Marzagão - CPA	June 2011	Jaguar Mining, Caeté Process Laboratory
Ensaios de Cianetação Alvo Bahú Oxidado	August 2011	Jaguar Mining, Caeté Process Laboratory
Ensaios de Cianetação Rio de Peixe-Alvo BIF Norte	October 2011	Jaguar Mining, Caeté Process Laboratory
Cyanidation Testing, Bahú, Ouro Fino, and Marzagão Targets	February 2012	Jaguar Mining, Caeté Process Laboratory

Brief descriptions of the scope of work and the results of selected testing programs are provided below. Full descriptions of the test work programs are provided in Machado (2007c).

13.2.1 Bond Work Index, Gravity Concentration-Cyanide Leach, and Carbon Absorption Tests

The following tests were performed on two samples from the Santa Isabel deposit:

- Bond work index (BWi) determinations using a standard BWi grinding mill. Closing sizes of 100 mesh and 270 mesh were performed.
- Gravity concentration of ore ball mill ground to 80% minus 270 mesh (53 µm) using a Knelson gravity concentrator.
- Cyanide leach of gravity concentration tailings to determine gold extraction after free gold had been removed in the gravity concentration step. Data to produce leach rate curves was also collected.

- Carbon adsorption tests were performed using the cyanide leach solution to determine the gold adsorption rate and to determine gold adsorption equilibrium onto 8x16 mesh Pica G210AS carbon.

13.2.1.1 Bond Work Index Summary

Bond work index determinations were made on the minus 6 mesh ore. BWi tests were performed at closing sizes of 100 mesh (150 µm) and 270 mesh (53 µm). Tests were performed in a standard BWi mill. Nine (9) cycles were used to determine the work index at a closing size of 100 mesh, while seven (7) cycles were needed to complete the tests at closing size of 270 mesh. A summary of the results is presented in Table 13-2.

Table 13-2: Summary of Bond Work Index Results
Jaguar Mining Inc. – Paciência Mining Complex

Test #	Closing Size	kWh/t	
		Short	Metric
1	100 mesh – 150 µm	10.5	11.6
2	270 mesh – 53 µm	18.8	20.7

13.2.1.2 Gravity Concentration

Results of the gravity concentration of ore ground to 80% minus 270 mesh indicated that approximately 31% of the gold was recovered using a centrifugal gravity concentrator. The ground ore was passed through the concentrator two times to recover as much free gold as possible. The concentrate of each pass was combined and hand panned further to obtain a small volume of gold concentrate. The hand pan concentrate was submitted for total mg gold content by fire assay procedure. A summary of the results is presented in Table 13-3.

Table 13-3: Summary of Gravity Concentration Testing
Jaguar Mining Inc. – Paciência Mining Complex

Product	Assay (g/t Au)	Gold Distribution (%)
Gravity Concentrate	-	30.7
Gravity Tails	3.24	69.3
Calculated Head	**4.67**	**100.0**

Note. Ground to 80% minus 270 mesh.

13.2.1.3 Cyanide Leach

The gravity tailings were allowed to settle, and decanted to 50% solids. The slurry was split in halves, each representing 2 kg of ore, and each half placed in an agitated beaker. The cyanide leach test consisted of aerating each slurry at about 11 pH (with Ca(OH)2) for three hours, then adding NaCN to give 2 gm/l NaCN solution. Slurry samples were taken at timed intervals and filtered. Solutions were titrated for free NaCN content and also submitted for Au assay by AA. After 45 hours of leaching the slurry was filtered and washed, and the residue assayed by standard fire assay procedures. The tests were run at 50% solids. Filtrate from the tests was set aside for use in carbon loading tests.

Results of the cyanide leach test indicated that approximately 84% of the gold contained in the gravity tails was extracted at the grind size of 270 mesh. The total gold recovered in the combined gravity plus leach products was 89%. The leach tails assayed 0.51 gm/t Au.

Kinetic data for the gold extraction indicate that nearly all of the gold in the leach feed which did dissolve, dissolved within the first two hours of leaching. In other words, very little gold was dissolved after the first two hours of leaching. A summary of the results is presented in Table 13-4.

Table 13-4: Summary of Cyanide Leach Results
Jaguar Mining Inc. – Paciência Mining Complex

Test Product	Leach of Gravity Tails		Overall Gravity & Leach	
	Assay (g/t Au)	Distribution (%)	Assay (g/t Au)	Distribution (%)
Gravity Concentrate	na	na	1.44	30.7
Leach Solution	2.73	84.1	2.72	58.3
Leach Residue	0.51	15.9	0.51	11.0
Calculated Head	**3.24**	**100.0**	**4.67**	**100.0**
Gravity Concentrate + Leach Solution	na	na	4.16	89.0

Note. 80% minus 270 mesh, Gravity Concentrate, 2 g/L NaCN Leach 45 hrs, 50% Solids

13.2.2 Gravity Recovery Testing

The primary objective was to determine the gravity recoverable gold (GRG) content and the distribution of the GRG by particle size distribution (E-GRG). A by-product of testing is the ability to determine the feed grade of the sample.

The overall GRG value of this ore sample was 60.8% at a final grind size of 84 microns (P_{80}). The calculated feed grade of the sample tested was 8.30g-Au/t. The gold recovery in the first stage was moderate at 30.2% from the as-crushed material. Further grinding and processing produced recoveries of 12.9% and 17.7% for stages 2 and 3 respectively.

13.2.3 Cyclone and Permeability Tests

The objective of the cyclone tests was to determine the best operational conditions for the industrial cyclone system to produce hydraulic backfill for the future Paciência Mine. Three conditions were to be studied: ultra-fines (U/F) production with the maximum of 5%, 10%, and 15% under 400 mesh (34 µm). However, achieving these values was not feasible since half of the material was already under 400 mesh. The tests were then re-focused on achieving an operational condition which would allow obtaining the maximum quantity of mass for the cyclone U/F with the maximum possible permeability.

Permeability tests were also carried out to determine the best operational condition of the cyclone and consequently of the mine.

The conclusions are:

1. The attempt of obtaining U/F with just 5% under 400 mesh showed itself very difficult. All the tests showed between 30% and 40% under mesh, however, the permeability is still considered good.
2. The tests showed that decreasing the solids % in the feed to a range of approximately 15% solids can produce a substantial mass for the U/F with a good permeability. This is probably due to a more efficient separation of the size range under 10 µm (slimes range). One of the operational parameters for backfill is that the material should have no more than 10% above 10 µm (AngloGold standard).
3. Increasing the pressure from 100 kPa to 150 kPa improved the U/F permeability, although the % under 400 mesh stayed practically the same. Again, it is possible that there was a better classification of the ultra-fines .
4. Considering around 30% solids in the cyclone feed, it is possible to send around 40% mass as hydraulic backfill to the future Paciência Mine.
5. The best compaction was reached with 21% moisture in the fill with 1.529 g/cm^3.

13.2.4 Cyanidation Tests, Bahú, Ouro Fino and Marzagão Sulphide Targets

Three drill hole samples, from Bahú, Ouro Fino, and Marzagão, were composed for cyanidation tests, under the following conditions:

- 50% solids
- 90% < 200 mesh
- 3 hours of pre-lime
- 24 hours of cyanidation with 2 kg/t of NaCN
- pH 11.0 to 11.5

The cyanidation results are presented in Table 13-5 (de Souza, 2012).

Table 13-5: Cyanidation Test Results, Bahú, Ouro Fino, and Marzagão
Jaguar Mining Inc. – Paciência Mining Complex

Sample ID	Gold (g/t)			Gold Recovery (%)	NaCN		
	Calculated Feed Grade	Solution	Tailings		Addition (kg/t)	Final Concentration (%)	Effective Consumption (kg/t)
Bahú	2,23	2,14	0,09	96,12	2,00	0,0929	1,09
Ouro Fino	4,06	3,86	0,21	94,91	2,00	0,0808	1,19
Marzagão	2,36	2,29	0,08	96,73	2,00	0,0723	1,27

14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

Mineral Resource estimates were prepared for the mineralization present at the Santa Isabel Mine and for the mineralization present at the Bahú deposit, located approximately 4.5 km to the northwest of the Santa Isabel Mine. Together, these two deposits form part of the Paciência Mining Complex.

Gold production was carried out from the Santa Isabel Mine during the 2008 to 2012 period. The mine has been on a care and maintenance basis since its closure in 2012. Gold mineralization at the Santa Isabel Mine consist of shallowly dipping tabular sheets in two zones: Santa Isabel/Córrego Grande and Marzagão. The Mineral Resource estimates for these two zones have been prepared to consider extraction of the mineralization using underground cut-and-fill mining method, with the material processed at the Paciência plant.

Although records indicate that an exploration adit was excavated to allow detailed examination of the mineralization at the Bahú deposit, no production has taken place from that deposit. Gold mineralization at the Bahú deposit is hosted by quartz veining and alteration of the host rocks and is modelled as shallow dipping tabular sheets that sub-parallel the regional foliation. The mineralization is considered to be amenable to extraction using open pit mining methods for the shallow portions of the deposit. Underground cut-and-fill mining method is envisioned to be utilized to extract the mineralization from the deeper portions of the deposit. Mineralization is envisioned to be processed at the Paciência plant.

The Mineral Resource estimates are presented in Table 14-1.

Table 14-1: Summary of Mineral Resources – March 31, 2023
Jaguar Mining Inc. – Paciência Mining Complex

Deposit	Mining Method	Cut-off Grade (g/t Au)	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Inferred Mineral Resources					
Santa Isabel	Cut-and-fill	2.75	978	4.01	126
Marzagão	Cut-and-fill	2.75	445	4.44	63
Bahú	Open Pit	0.74	43	2.08	3
Bahú	Cut-and-fill	1.81	333	3.99	43
Total, Inferred			**1,799**	**4.06**	**235**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated using a long-term gold price of US$1,800 per ounce, and an average long term foreign exchange rate of R$5.20 : US$1.00.
3. A minimum mining width of two metres and three metres was used for the Santa Isabel and Bahú deposit, respectively.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources for the Santa Isabel Mine, including the Santa Isabel and Marzagão deposits, are reported as all blocks within reporting volumes prepared using clipping polygons.
6. Mineral Resources for the Bahú deposit are reported using a constraining pit shell for the open pit portion, and using reporting panels for the underground portion.

7. Numbers may not add due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

14.2 Santa Isabel Mine

14.2.1 Topography and Excavation Models

A topographic surface of the Santa Isabel Mine area contained within Jaguar's computer files dating from 2011 was used to assist in the preparation of the Mineral Resource estimate. The topographic map was prepared according to the Córrego Alegre zone 23S datum. Wireframe models of the completed underground excavations (development and stopes) current as of July 2012 were applied as constraints for the preparation of the clipped volumes used for reporting of the Mineral Resources. The wireframe models of the underground development and stope excavations were prepared from survey information collected by Jaguar during the operational period of the mine.

The Santa Isabel Mine is accessed by means of an adit which allows access to the Santa Isabel and Córrego Grande mineralized zones. A total of eight levels have been excavated, with the bottom most level being excavated at approximately the 720 m elevation, approximately 375 m beneath the surface. A decline has been excavated down to approximately the 675 m elevation, however, no stoping activities have been completed below the bottom most level. The principal mining method employed at the Santa Isabel Mine is cut-and-fill.

Access to the Marzagão mineralization was achieved by extending the level development at approximately the 875 m elevation towards the northwest. The mineralization at the Marzagão deposit has been excavated from two levels using the cut-and-fill mining method.

In total, underground excavations have been established along a strike length of approximately 2,900 m (Figure 14-1).

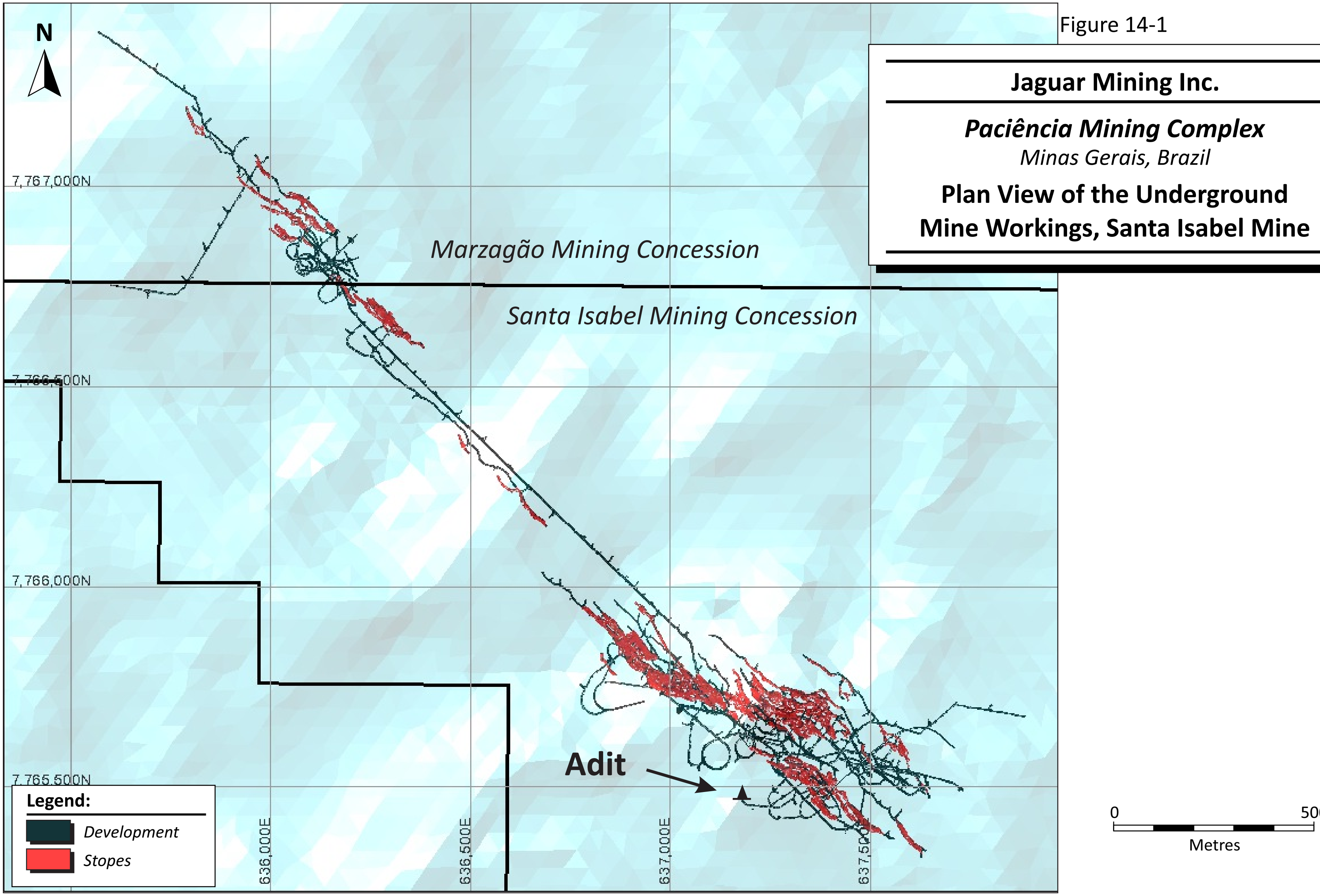


Figure 14-1

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Plan View of the Underground Mine Workings, Santa Isabel Mine

May 2023

Source: SLR, 2023.

14.2.2 Resource Database

Jaguar maintains an internal database using the MX_Deposit database software package provided by the Geosoft group to store and manage all the digital information for all of its operations. The internal databases were previously maintained using the BDI software package. The Santa Isabel drill hole database contains information for 156 surface-based drill holes totalling 30,065 m in length, 171 underground-based drill holes totalling approximately 16,538 m in length, and 2,059 channel samples. The geology and assay data related to the underground channel sample information are entered into the drill hole database as pseudo-drill holes.

Santa Isabel drill hole and channel sample information was extracted from the internal database into separate files for use in the preparation of the Mineral Resource estimate. This drill hole information was modified slightly so as to be compatible with the format requirements of the Leapfrog software package and was imported into that software package by Jaguar. A number of new tables and variables were created during the estimation process to capture such information as the intersection information between the drill holes and the wireframe models, capped assay values, various domain codes, and composite values.

While no drilling or sampling has been carried out at the Santa Isabel Mine since cessation of operations in July 2012, the cut-off date for the information in the drill hole database is September 2022, the beginning of the Mineral Resource estimation process. Drilling and sampling were carried out using the UTM Datum Córrego Alegre, Zone 23S grid coordinate system.

The drill hole database contains drill hole information collected by previous owners of the property who determined the collar locations according to a different grid datum. The collar locations for all previous drill holes were transformed to the Córrego Alegre, Zone 23S grid coordinate datum.

A summary of the drilling and channel sampling information is provided in Table 14-2. The locations of the drill holes and channel samples are shown in Figure 10-1.

Table 14-2: Description of the Santa Isabel Database
Jaguar Mining Inc. – Paciência Mining Complex

Data Type	Number of Records
Collars (327 drill holes and 2,059 chip/channel samples)	2,386
Survey	34,929
Lithology	29,242
Assays	49,935
Composites (within wireframe boundaries)	16,294
Weathering Code	669
Density	240

The database included a number of assay records representing intervals of no sampling, lost core, lost sample, or no core recovery, some of which are contained within the mineralized wireframes. Depending upon the specific local conditions, these unsampled intervals can introduce an undesired positive bias upon the grade estimations. Jaguar therefore elected to pursue a conservative approach by inserting a very low gold value of 0.01 g/t Au for these intervals of null values.

14.2.3 Mineralization Wireframes

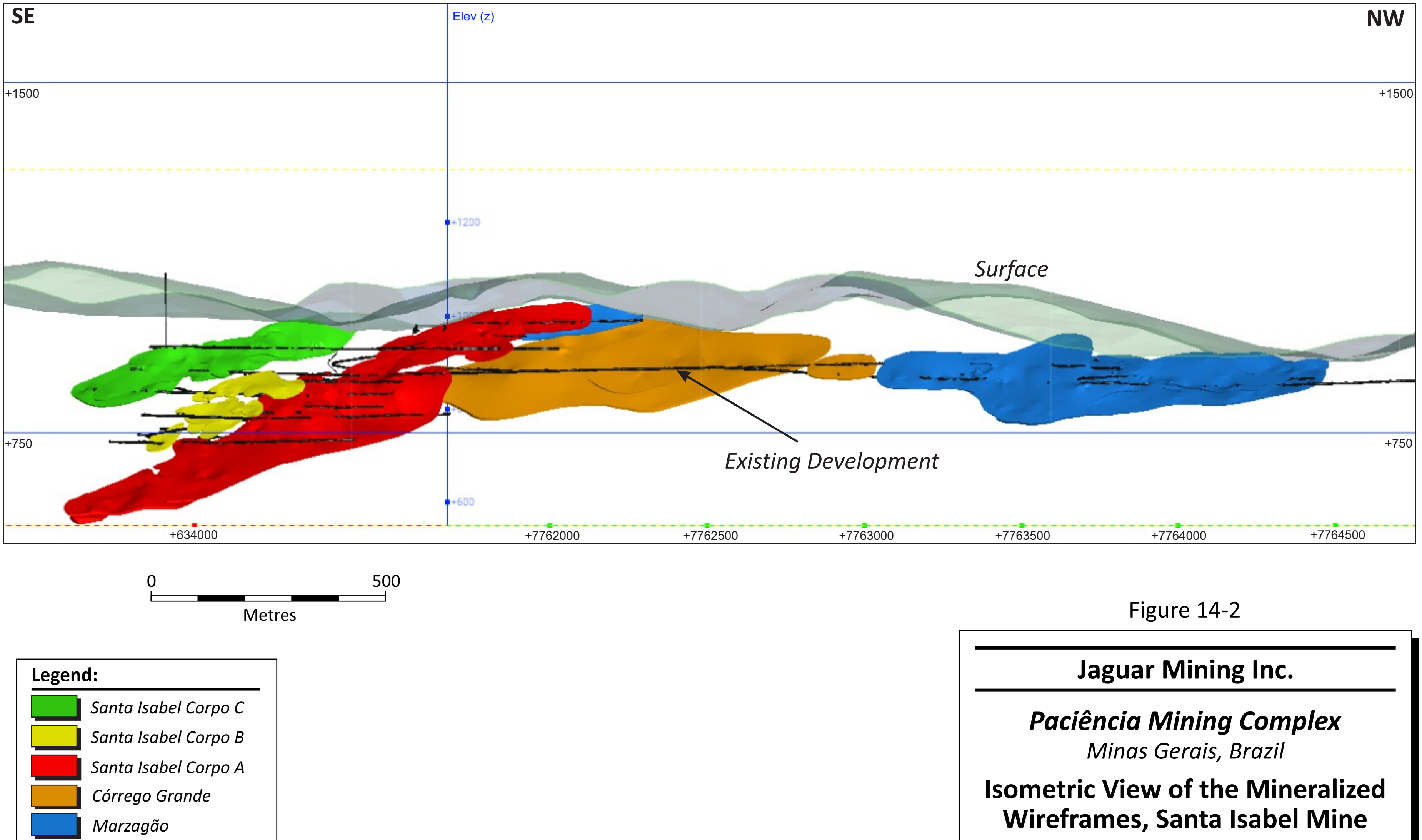
A series of three dimensional wireframe models were constructed using the Leapfrog software package for the various mineralized zones present at the Santa Isabel Mine. The mineralization wireframes were constructed using a nominal grade threshold of 0.5 g/t Au and were constructed to a minimum width of two metres. To permit accurate grade estimation, one wireframe model was constructed for each mineralized zone using the domain codes presented in Table 14-3. A minimum of three drill hole or channel samples were used to prepare any given wireframe model. In general, the wireframe interpretations were constructed with the understanding gained during operations that the mineralization generally occurs as tabular sheets that parallel the regional foliation and plunges at approximately -20° towards azimuth 110°. A total of 35 individual wireframe models were constructed (Figure 14-2).

Table 14-3: Summary of Mineralized Wireframes, Santa Isabel Mine
Jaguar Mining Inc. – Paciência Mining Complex

Target	Wireframe Domain ID
South Santa Isabel	101
	102
Central Santa Isabel	201
	202
	203
	204
	205
	206
	207
	208
	209
North Santa Isabel	301
	302
	303
	304
	305
	306
	307
	308
	309
	310
	311
	312
	313
	314
	315

Target	Wireframe Domain ID
Córrego Grande	401
	402
	403
Marzagão	501
	502
	503
	504
	505
	506

Looking Southwest



May 2023

Source: SLR, 2023.

Figure 14-2

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Isometric View of the Mineralized Wireframes, Santa Isabel Mine

14.2.4 Resource Assays

Mineralization wireframe models were used to code the drill hole database and identify the raw assay samples, or resource assays, that are contained within the mineralized wireframes. These samples were extracted from the database into their respective domains, and then subjected to statistical analyses by means of histograms, probability plots, and decile analyses. The resource assay sample statistics and the selected capping values are summarized in Table 14-4.

Table 14-4: Summary Statistics of the Uncapped Raw Assay Values, by Domain
Jaguar Mining Inc. – Paciência Mining Complex

Target	Domain	Count	Mean (g/t Au)	CV	Variance	Minimum (g/t Au)	Median (g/t Au)	Maximum (g/t Au)
South Santa Isabel	101	2,083	4.07	4.7	365.74	0.01	0.77	541.94
	102	565	3.33	4.04	181.56	0.01	0.79	250
Central Santa Isabel	201	110	8.33	2.23	344.06	0.01	1.04	113.83
	202	41	6.52	2.03	174.7	0.03	0.98	59.92
	203	32	3.2	3.02	93.33	0.01	0.35	44.6
	204	52	3.74	5.81	472.66	0.01	0.31	158.61
	205	38	1.77	1.61	8.11	0.01	0.86	15.42
	206	39	5.66	3.87	480.41	0.01	0.68	134.76
	207	48	1.36	2.08	7.95	0.01	0.32	16.75
	208	14	0.84	0.75	0.4	0.03	0.61	2.42
	209	43	1.69	1.64	7.67	0.01	0.71	13.02
North Santa Isabel	301	60	2.29	2.61	35.78	0.01	0.61	43.86
	302	220	2.51	2.59	42.31	0.01	0.66	65.71
	303	234	5.02	2.28	131.25	0.01	1.27	93.67
	304	3,198	3.96	2.69	113.45	0.01	1.04	149
	305	77	2.31	1.28	8.76	0.01	0.92	12.14
	306	1,201	2.63	4.68	151.6	0.01	0.77	312.9
	307	1,277	3.06	4.29	171.92	0.01	1.41	550
	308	647	3.07	2.11	41.9	0.01	1.48	83.73
	309	44	1.12	1.16	1.71	0.01	0.72	7.37
	310	374	1.94	2.08	16.27	0.01	0.88	45.25
	311	139	1.38	1.39	3.65	0.01	0.91	15.9
	312	708	2.23	1.63	13.33	0.01	1.1	45.5
	313	586	2.25	1.94	19.16	0.01	1.09	63.58
	314	935	3.54	1.52	29.05	0.01	1.66	63.58
	315	216	1.36	1.64	4.99	0.01	0.67	24.04

Target	Domain	Count	Mean (g/t Au)	CV	Variance	Minimum (g/t Au)	Median (g/t Au)	Maximum (g/t Au)
Córrego Grande	401	1,114	1.63	3.25	27.96	0.01	0.77	272.31
	402	166	1.13	2.76	9.71	0.01	0.39	32.63
	403	61	3	1.46	19.15	0.01	0.64	19.92
Marzagão	501	214	2.32	1.23	8.14	0.01	1.44	20.79
	502	2,139	3.52	11.19	1,548.58	0.01	0.45	1,322.38
	503	325	1.87	3.07	32.9	0.01	0.51	65.83
	504	176	0.8	2.48	3.91	0.01	0.31	17.13
	505	1,115	2.37	3.21	57.72	0.01	0.56	111
	506	925	7.62	14.74	12,625.32	0.01	0.84	4,040

14.2.5 Treatment of High Grade Assays

In order to reduce the influence of high grade sample values, Jaguar elected to apply a restricted search approach. In this method, the grades of the resource assays contained within the respective mineralized wireframes deemed to represent anomalously high grades are limited to a short distance about the informing drill hole. Statistical analyses using probability plots were carried out to select the threshold values that described the high grade population for each wireframe domain. A summary of the restricted search threshold values, as well as a summary of the restricted search parameters are presented in Table 14-5.

Table 14-5: Summary of Restricted Search Parameters, Santa Isabel Mine
Jaguar Mining Inc. – Paciência Mining Complex

Target	Domain	Strategy	Distance Restriction (m)	Threshold Value (g/t Au)
South Santa Isabel	101	Discard	15	50
	102	Discard	15	70
Central Santa Isabel	201	Discard	15	33
	202	Clamp	15	6
	203	Discard	15	8
	204	Discard	15	10
	205	Discard	15	6
	206	Discard	15	10
	207	Clamp	15	2.5
	208	- -	- -	- -
	209	Discard	15	7

Target	Domain	Strategy	Distance Restriction (m)	Threshold Value (g/t Au)
North Santa Isabel	301	Clamp	15	8
	302	Discard	15	23
	303	Discard	15	33
	304	Clamp	15	25
	305	- -	- -	- -
	306	Clamp	15	18
	307	Discard	15	30
	308	Discard	15	18
	309	- -	- -	- -
	310	Discard	15	14
	311	- -	- -	- -
	312	Discard	15	16
	313	Discard	15	14
	314	Discard	15	20
	315	Discard	15	8
Córrego Grande	401	Discard	15	15
	402	Discard	15	-6
	403	- -	- -	- -
Marzagão	501	- -	- -	- -
	502	Discard	15	60
	503	Clamp	15	5
	504	Clamp	15	5
	505	Discard	15	50
	506	Discard	15	37

14.2.6 Compositing

All drill hole and channel samples were composited to equal lengths of one metre. For those mineralized intervals for which a full composite length of one metre was not possible, the remaining length was added onto the previous sample interval.

14.2.7 Bulk Density

A total of 238 bulk density measurements were collected from the various host rock units present at the Santa Isabel deposit. The average bulk density of these measurements was 2.77 tonnes/m^3 and the median value was 2.76 t/m^3 (Table 14-6). Jaguar elected to apply an average bulk density of 2.74 t/m^3 for estimation of the Mineral Resources.

Table 14-6: Descriptive Statistics of the Santa Isabel Density Measurements
Jaguar Mining Inc. – Paciência Mining Complex

Item	Value (t/m^3)
Mean	2.77
Standard Error	0.02
Median	2.76
Mode	2.50
Standard Deviation	0.67
Sample Variance	0.07
Range	2.72
Minimum	2.11
Maximum	4.83
Count	238

14.2.8 Trend Analysis

14.2.8.1 Grade Contouring

As an aid in understanding the distribution and continuity of the gold grades in the mineralized domain models, a short study to examine the overall trends was conducted. For this exercise, a selection of wireframe domains containing the largest volumes was made. The resulting gold grades were digitally contoured using Surpac contouring functions and the results are presented in Figure 14-3 to Figure 14-7.

Review of these longitudinal projections suggests that the samples with gold grades above the 10.0 g/t Au range appear to occur as somewhat isolated pods measuring approximately 15 m to 20 m in size that have a limited preferred elongation along the down-plunge. Lower grade samples generally exhibit a more pronounced preferred elongation along the down-plunge orientation of the mineralized wireframes.

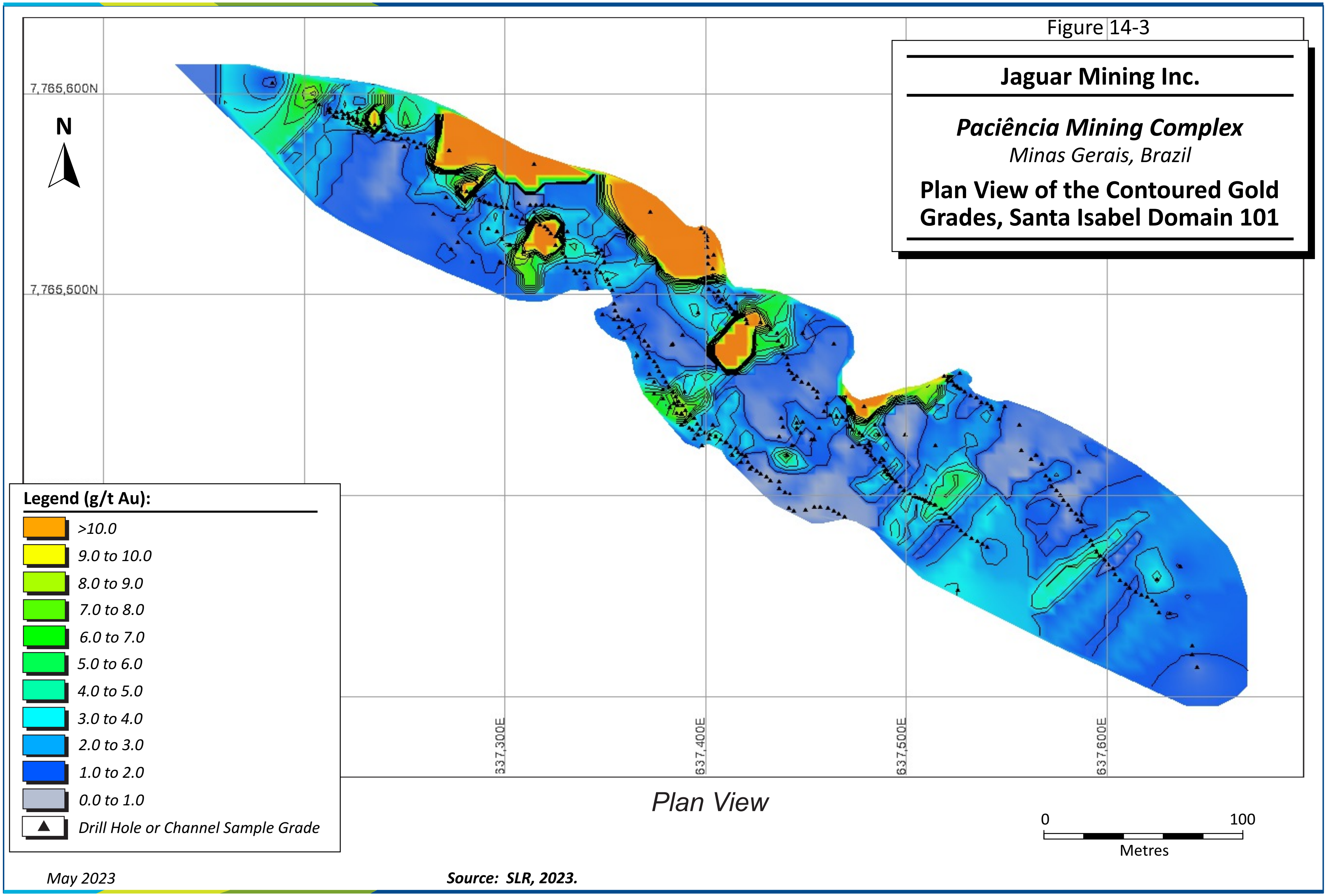


Figure 14-3
Jaguar Mining Inc.
Paciência Mining Complex
Minas Gerais, Brazil
Plan View of the Contoured Gold Grades, Santa Isabel Domain 101
7,765,600N
7,765,500N
N
637,300E
637,400E
637,500E
637,600E
Legend (g/t Au):
>10.0
9.0 to 10.0
8.0 to 9.0
7.0 to 8.0
6.0 to 7.0
5.0 to 6.0
4.0 to 5.0
3.0 to 4.0
2.0 to 3.0
1.0 to 2.0
0.0 to 1.0
Drill Hole or Channel Sample Grade
Plan View
0
100
Metres
May 2023
Source: SLR, 2023.

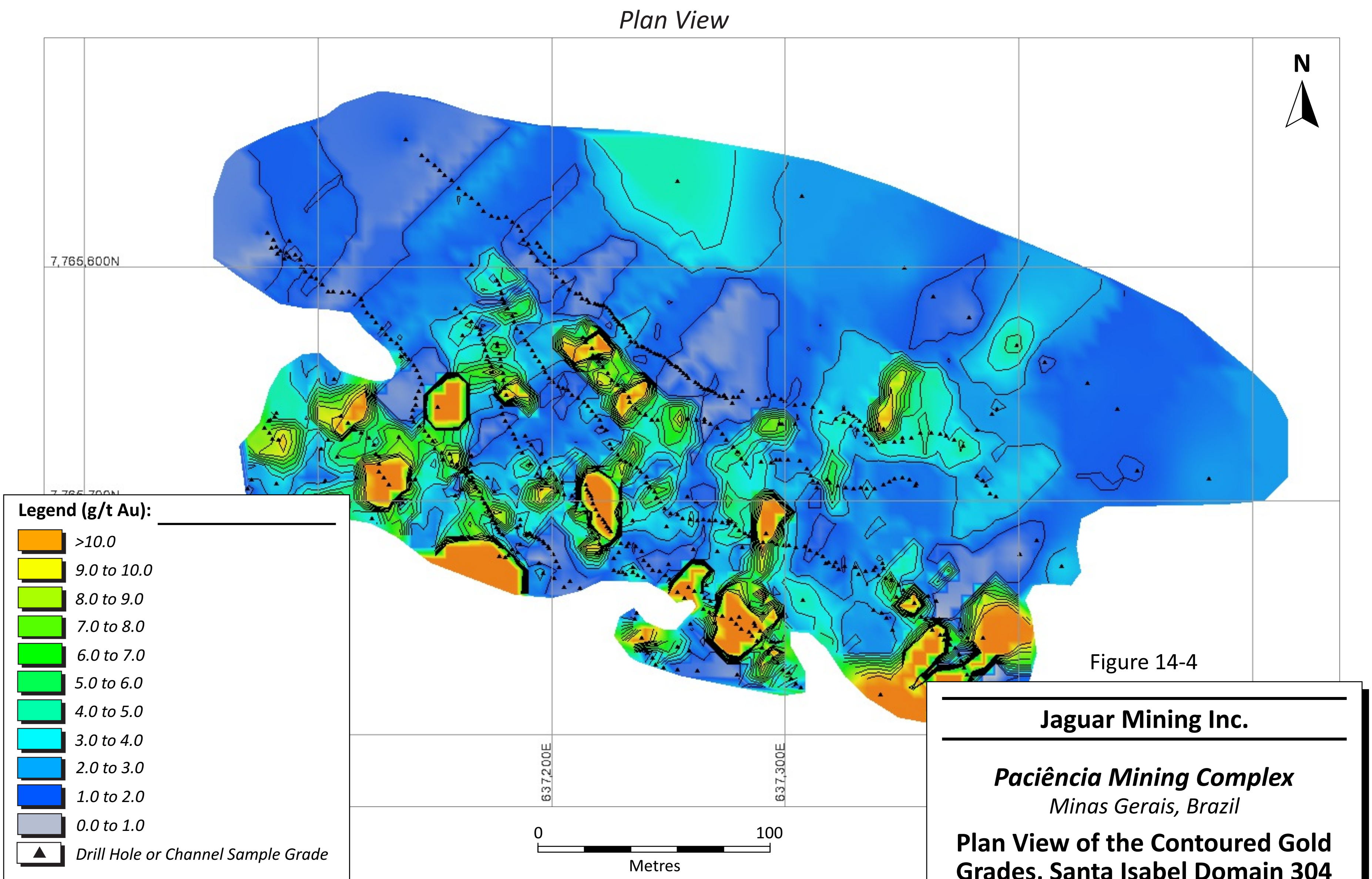


Figure 14-4

Jaguar Mining Inc.

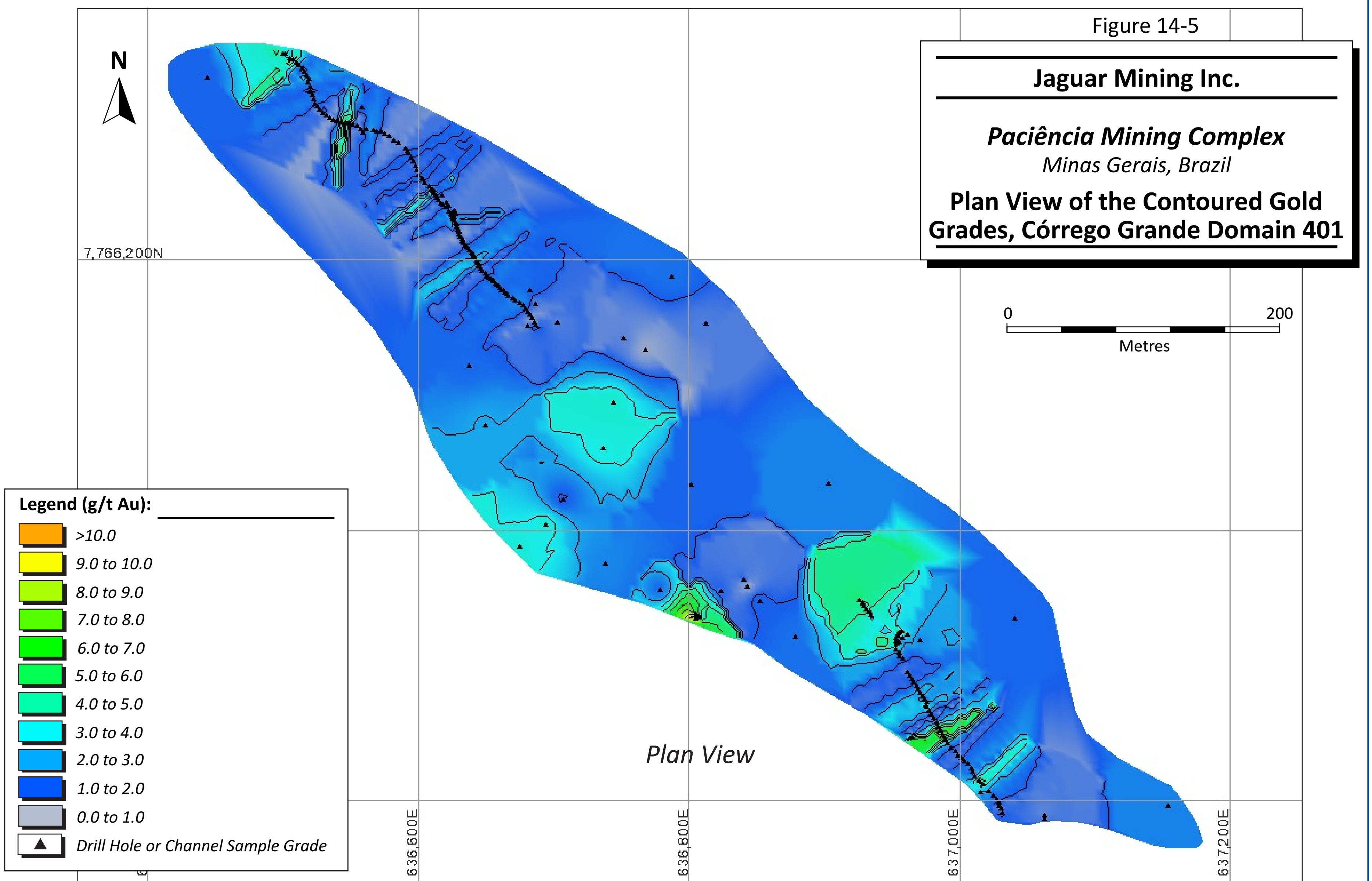
Paciência Mining Complex

Minas Gerais, Brazil

Plan View of the Contoured Gold Grades, Santa Isabel Domain 304

May 2023

Source: SLR, 2023.



May 2023

Source: SLR, 2023.

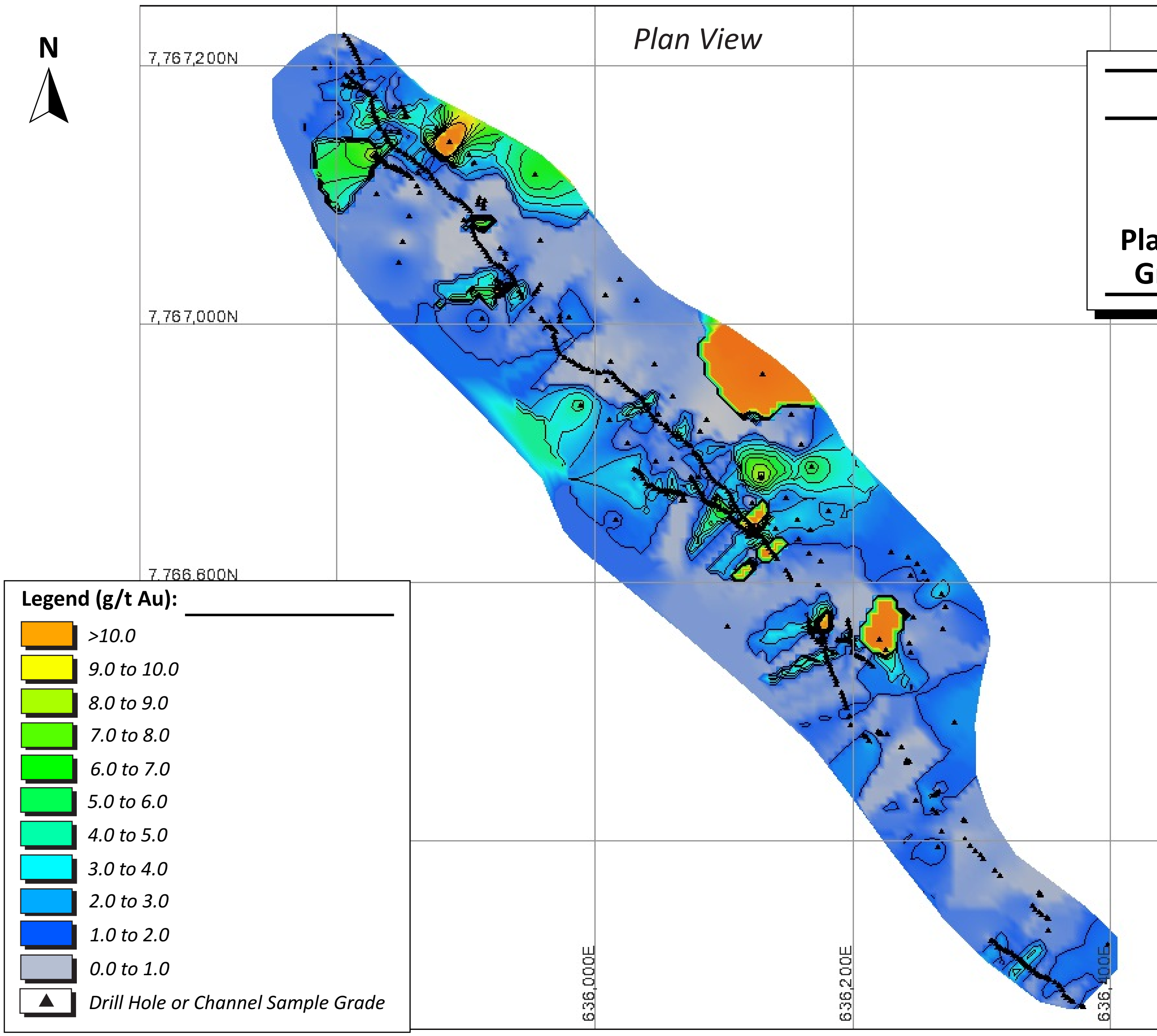


Figure 14-6

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Plan View of the Contoured Gold Grades, Marzagão Domain 502

May 2023

Source: SLR, 2023.

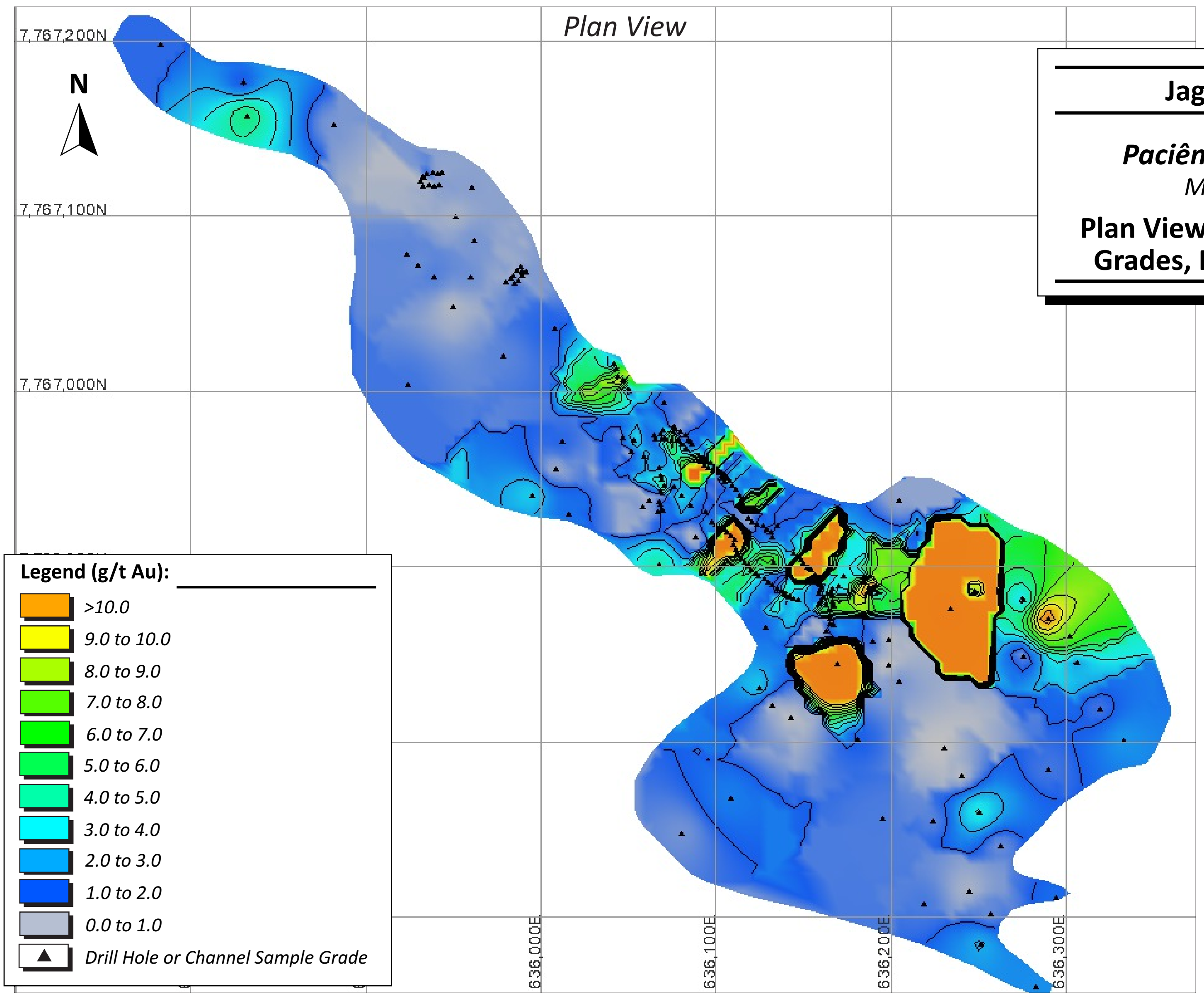


Figure 14-7

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Plan View of the Contoured Gold Grades, Marzagão Domain 506

May 2023

Source: SLR, 2023.

14.2.8.2 Variography

Jaguar carried out an analysis of the spatial continuity of the gold grades by constructing variograms for the combined mineralized domains contained within the Santa Isabel/Córrego Grande and the Marzagão portions of the mineralized trend at the Santa Isabel Mine. The variograms were constructed using the Leapfrog software package (Figure 14-8 and Figure 14-9). A summary of the variogram parameters is presented in Table 14-7.

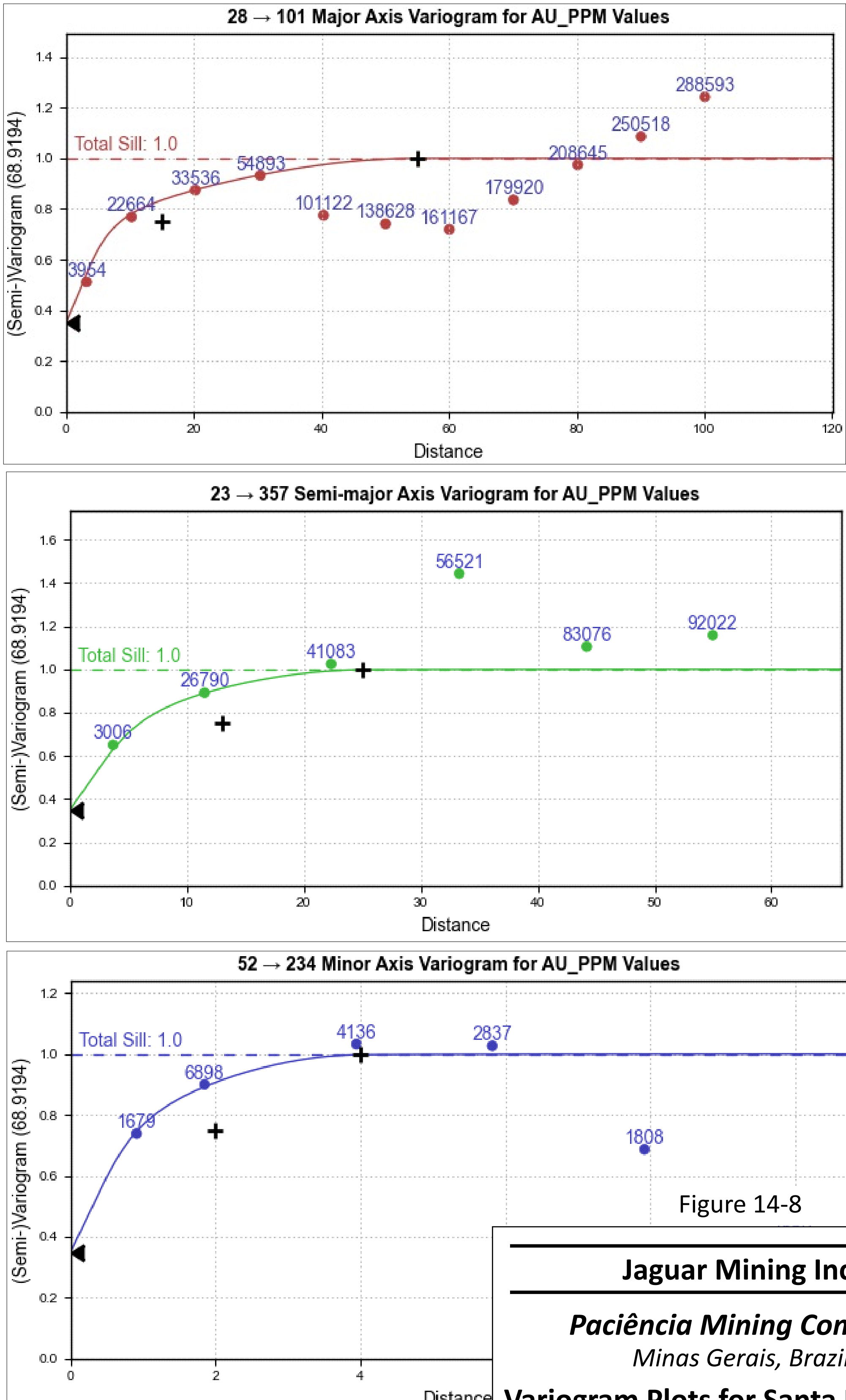


Figure 14-8

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Variogram Plots for Santa Isabel and Córrego Grande Mineralized Domains

Source: SLR, 2023.

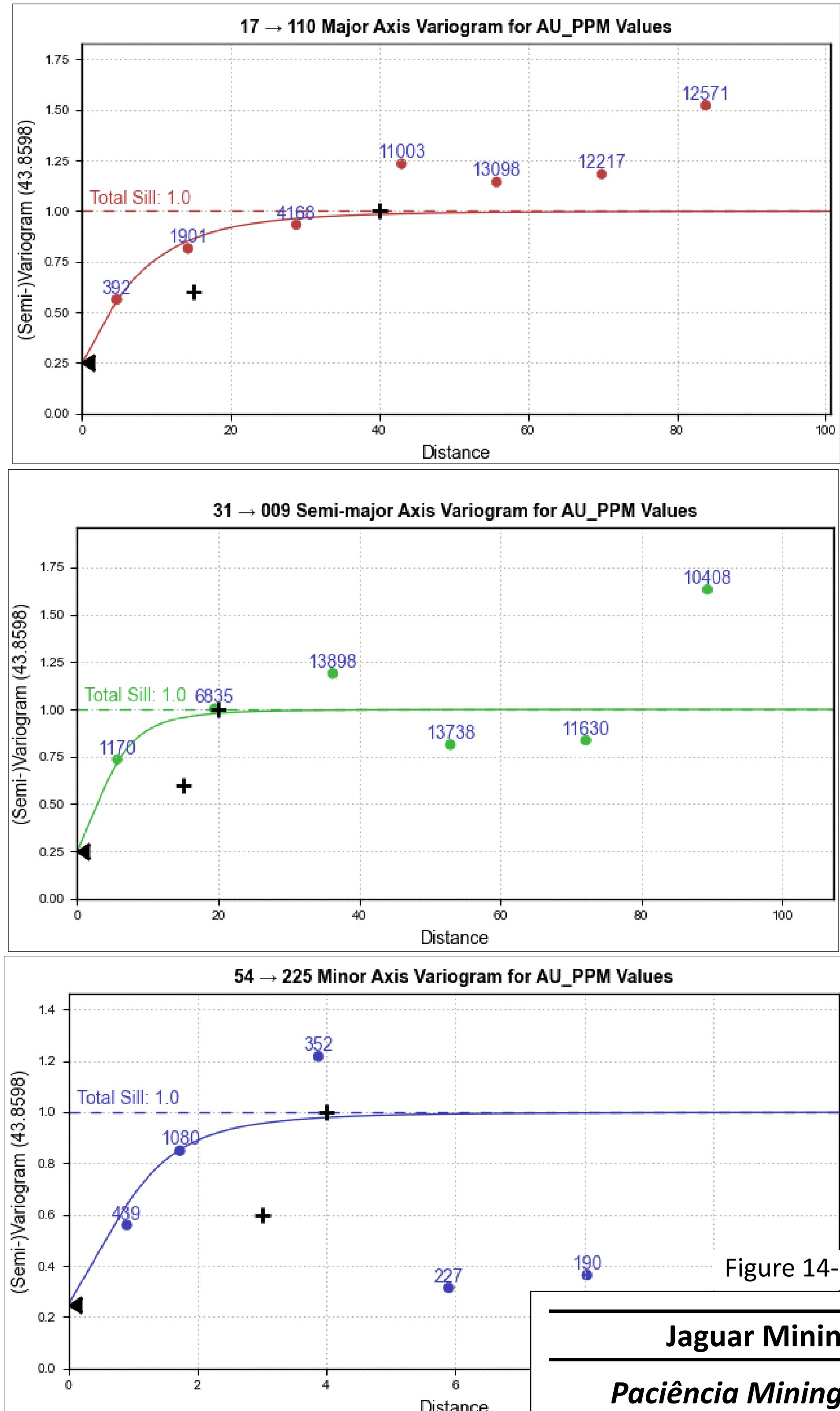


Figure 14-9

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Variogram Plots for the Marzagão Mineralized Domains

May 2023

Source: SLR, 2023.

Table 14-7: Summary of Variogram Parameters, Santa Isabel/Córrego Grande and Marzagão
Jaguar Mining Inc. – Paciência Mining Complex

Domain	Orientation			Total Sill	Normalized Nugget (C_0)
	Dip	Azimuth	Pitch		
Santa Isabel/Córrego Grande	38	54	130	69	0.35
Marzagão	36	45	150	44	0.25

Structure #1

Domain	Normalized Sill (C1)	Type	Major Axis Length (m)	Semi-major Axis Length (m)	Minor Axis Length (m)
Santa Isabel/Córrego Grande	0.40	Spheroidal	15	13	2
Marzagão	0.35	Spheroidal	15	15	3

Structure #2

Domain	Normalized Sill (C1)	Type	Major Axis Length (m)	Semi-major Axis Length (m)	Minor Axis Length (m)
Santa Isabel/Córrego Grande	0.25	Spheroidal	55	25	4
Marzagão	0.40	Spheroidal	40	20	4

14.2.9 Block Model Construction

Separate block models were constructed by Jaguar for the Santa Isabel and Marzagão portions of the mineralized trend using the Leapfrog Edge software package. Both utilized an array of parent blocks measuring 4 m x 4 m x 4 m and used sub-blocking with a minimum block size of 1 m x 1 m x 1 m. Both block models are oriented parallel to the coordinate grid system (i.e., no rotation or tilt). The block model origins and dimensions are provided in Table 14-8. A number of attributes were created to store information such as the domain code, estimated gold grades and estimation pass. The same set of attributes was used for both block models (Table 14-9).

Table 14-8: Block Model Definitions, Santa Isabel/Córrego Grande and Marzagão
Jaguar Mining Inc. – Paciência Mining Complex

Type	Units	Northing (Y)	Easting (X)	Elevation (Z)
Santa Isabel / Córrego Grande				
Minimum Coordinates	m	7,765,200	634,400	1,200
Number of Blocks	m	292	392	169

Type	Units	Northing (Y)	Easting (X)	Elevation (Z)
Parent Block Size	m	4	4	4
Sub-block Size	m	1	1	1
Rotation	°	0.000	0.000	0.000
		Marzagão		
Minimum Coordinates	m	7,768,368	635,588	1,200
Number of Blocks	m	264	250	125
Parent Block Size	m	4	4	4
Sub-block Size	m	1	1	1
Rotation	°	0.000	0.000	0.000

Table 14-9: Block Model Attribute List, Santa Isabel/Córrego Grande and Marzagão Block Models
Jaguar Mining Inc. – Paciência Mining Complex

Attribute Name	Type	Decimals	Description
Domain	Character	- -	Wireframe ID
Nn_au	Real	2	Estimated gold grade by nearest neighbour
Ok_au	Real	2	Estimated gold grade by ordinary kriging
Step	Character	- -	Estimation pass

14.2.10 Search Strategy and Grade Interpolation Parameters

Gold grades were estimated into the blocks by means of Ordinary Kriging (OK). A total of four interpolation passes at different ranges were carried out for each of the mineralized wireframes individually using distances derived from the variogram results and the search ellipse parameters (Table 14-10). Restricted search criteria were applied during each estimation pass to limit the influence of high grade samples. The orientation of the search ellipses were varied using the dynamic anisotropy function of the Leapfrog software package.

Hard domain boundaries were used for each of the mineralized domain wireframes. Only data contained within the respective wireframe model was used to estimate the block grades within the wireframe in question, and only those blocks within the wireframe limits were allowed to receive grade estimates.

Table 14-10: Summary of the Search Strategies, Santa Isabel/Córrego Grande and Marzagão
Jaguar Mining Inc. – Paciência Mining Complex

Search Parameters	Pass #1	Pass #2	Pass #3	Pass #4
Santa Isabel / Córrego Grande				
Major axis range (m)	27.5	55	110	1,100
Semi-major axis range (m)	12.5	25	50	500
Minor axis range (m)	2	4	8	80
Spatial Restriction (% of search distance)	55	27	14	1.4
Minimum Number of Composites	4	3	1	1
Maximum Number of Composites	8	8	8	8
Maximum Number of Composites per Drill Hole	2	2	4	8
Maximum composites per sector	4	4	4	8
Maximum number of empty sectors	2	2	3	3
Marzagão				
Major axis range (m)	20	40	80	800
Semi-major axis range (m)	10	20	40	400
Minor axis range (m)	2	4	8	80
Spatial Restriction (% of search distance)	75	38	19	2
Minimum Number of Composites	4	3	1	1
Maximum Number of Composites	8	8	8	8
Maximum Number of Composites per Drill Hole	2	2	4	8
Maximum composites per sector	4	4	4	8
Maximum number of empty sectors	2	2	3	3

14.2.11 Block Model Validation

Block model validation exercises began with comparing the volume of the coded blocks in the block models against the volume report of the respective wireframe models as a high level check that the block model has been correctly coded for each of the wireframes (Table 14-11). A comparison of the estimated gold grades using the OK interpolation method with the estimated grades using the Nearest Neighbour (NN) interpolation method is presented in Table 14-12. Swath plots are presented in Figure 14-10 and Figure 14-11. Visual comparisons of block model estimated gold grades with the contoured gold grades from the informing samples are presented in Figure 14-12 to Figure 14-16.

Table 14-11: Comparison of Wireframe and Block Model Volumes, Santa Isabel Mine Jaguar Mining Inc. – Paciência Mining Complex

Wireframe ID	Wireframe Volume (m^3)	Block Model Volume (m^3)	Difference (BM-Wf)	% Difference (vs Wf)
101	197,870	197,769	-101	0%
102	102,250	102,275	25	0%
201	12,072	12,095	23	0%
202	8,660	8,665	5	0%
203	8,608	8,599	-9	0%
204	17,276	17,278	2	0%
205	4,457	4,438	-19	0%
206	8,319	8,308	-11	0%
207	15,396	15,398	2	0%
208	4,786	4,800	14	0%
209	28,762	28,767	5	0%
301	69,959	69,980	21	0%
302	212,350	212,343	-7	0%
303	23,669	23,701	32	0%
304	389,840	389,789	-51	0%
305	9,838	9,856	18	0%
306	262,050	262,154	104	0%
307	145,310	145,404	94	0%
308	36,290	36,290	0	0%
309	16,482	16,470	-12	0%
310	29,764	29,806	42	0%
311	15,042	15,056	14	0%
312	57,370	57,388	18	0%
313	63,905	63,887	-18	0%
314	79,021	79,047	26	0%
315	9,040	9,016	-24	0%
401	717,700	717,667	-33	0%
402	115,840	115,848	8	0%
403	9,913	9,949	36	0%
501	29,637	29,638	1	0%

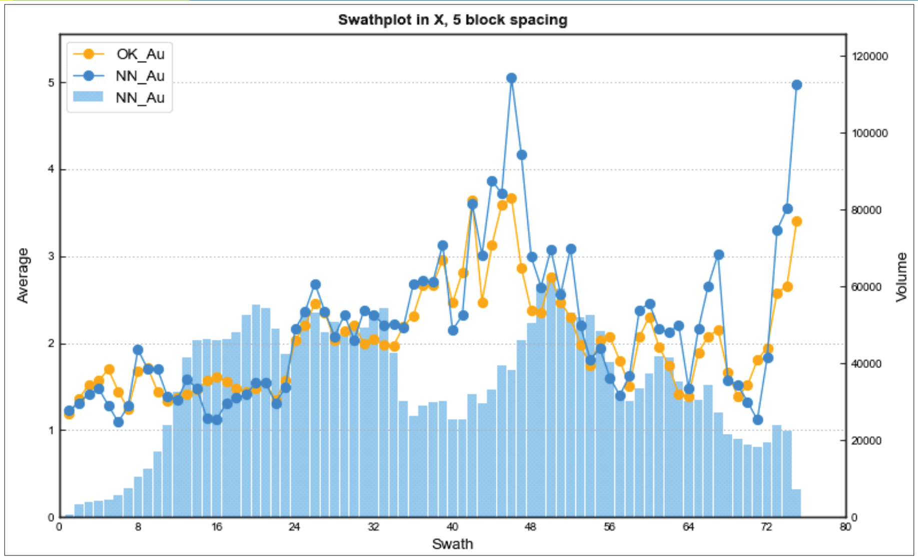
Wireframe ID	Wireframe Volume (m^3)	Block Model Volume (m^3)	Difference (BM-Wf)	% Difference (vs Wf)
502	440,270	440,166	-104	0%
503	115,710	115,755	45	0%
504	35,256	35,280	24	0%
505	360,340	360,346	6	0%
506	365,460	365,512	52	0%

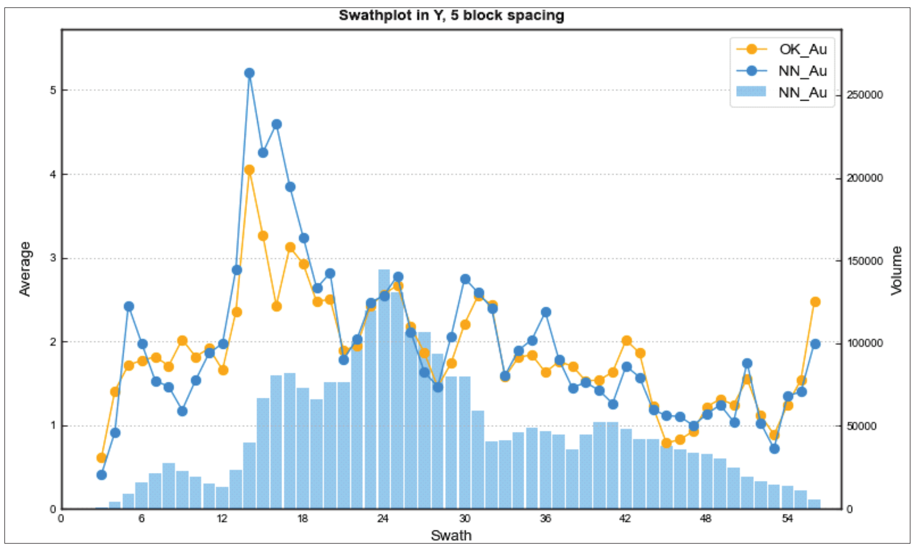
Table 14-12: Comparison of Ordinary Kriging vs. Nearest Neighbour Estimated Grades, Santa Isabel Mine
Jaguar Mining Inc. – Paciência Mining Complex

Wireframe ID	Estimated Grade		Difference (g/t Au)	% Difference
	Nearest Neighbour (g/t Au)	Ordinary Kriging (g/t Au)		
101	3.93	3.07	-0.86	-28%
102	2.74	2.33	-0.41	-18%
201	4.71	4.69	-0.02	0%
202	2.93	2.26	-0.67	-30%
203	2.31	1.80	-0.51	-28%
204	1.64	1.36	-0.28	-21%
205	1.50	1.39	-0.11	-8%
206	5.61	3.12	-2.49	-80%
207	0.92	0.96	0.04	4%
208	0.92	0.80	-0.12	-15%
209	2.06	1.52	-0.54	-36%
301	2.14	1.67	-0.47	-28%
302	2.35	2.01	-0.34	-17%
303	4.43	3.89	-0.54	-14%
304	2.63	2.58	-0.05	-2%
305	1.87	2.12	0.25	12%
306	1.96	1.89	-0.07	-4%
307	2.67	2.68	0.01	0%
308	2.41	2.60	0.19	7%
309	1.41	1.21	-0.20	-17%

Wireframe ID	Estimated Grade		Difference (g/t Au)	% Difference
	Nearest Neighbour (g/t Au)	Ordinary Kriging (g/t Au)		
310	1.80	1.68	-0.12	-7%
311	1.36	1.31	-0.05	-4%
312	2.49	2.06	-0.43	-21%
313	1.98	2.04	0.06	3%
314	2.98	3.15	0.17	5%
315	1.44	1.43	-0.01	-1%
401	1.55	1.53	-0.02	-1%
402	0.89	0.77	-0.12	-16%
403	2.14	2.52	0.38	15%
501	1.63	1.74	0.11	6%
502	2.02	1.75	-0.27	-15%
503	1.07	1.03	-0.04	-4%
504	0.83	0.74	-0.09	-12%
505	1.75	1.55	-0.20	-13%
506	2.34	1.82	-0.52	-29%

Note: Average grades reported from estimation passes 1, 2, and 3 only.





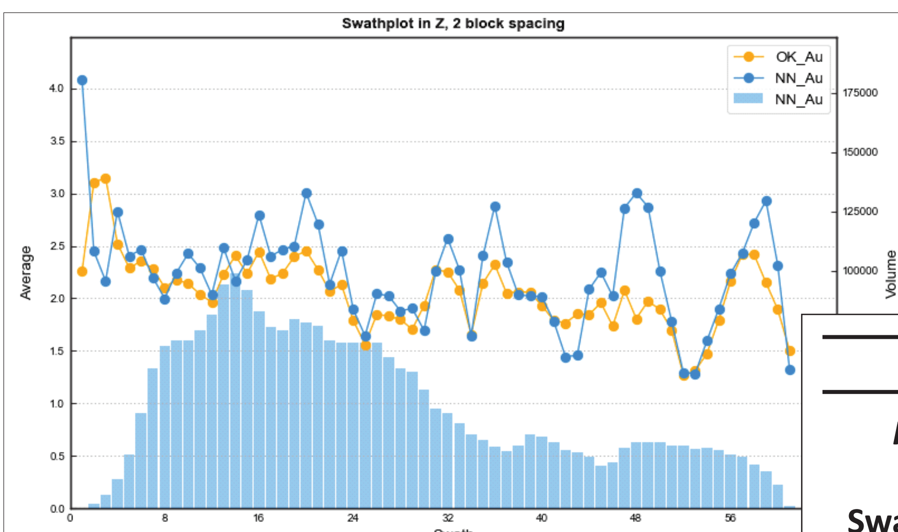


Figure 14-10

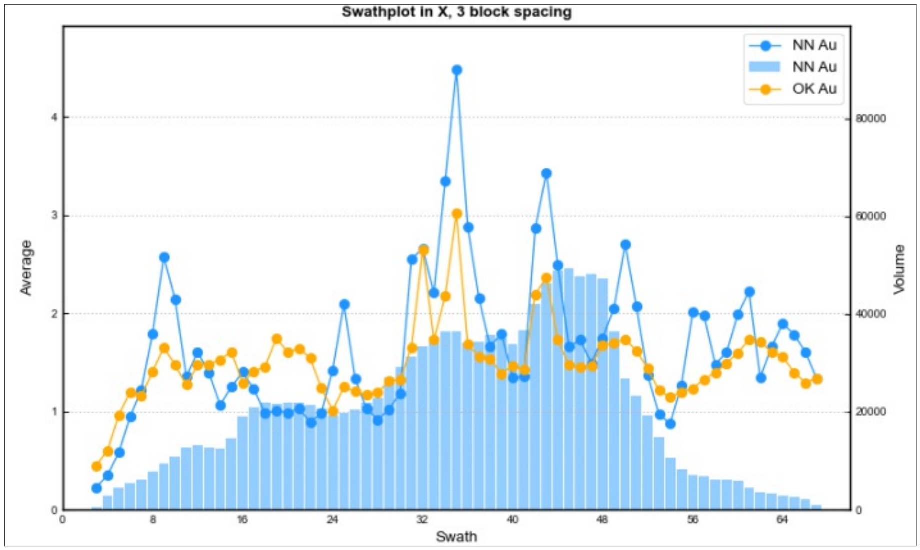
Jaguar Mining Inc.

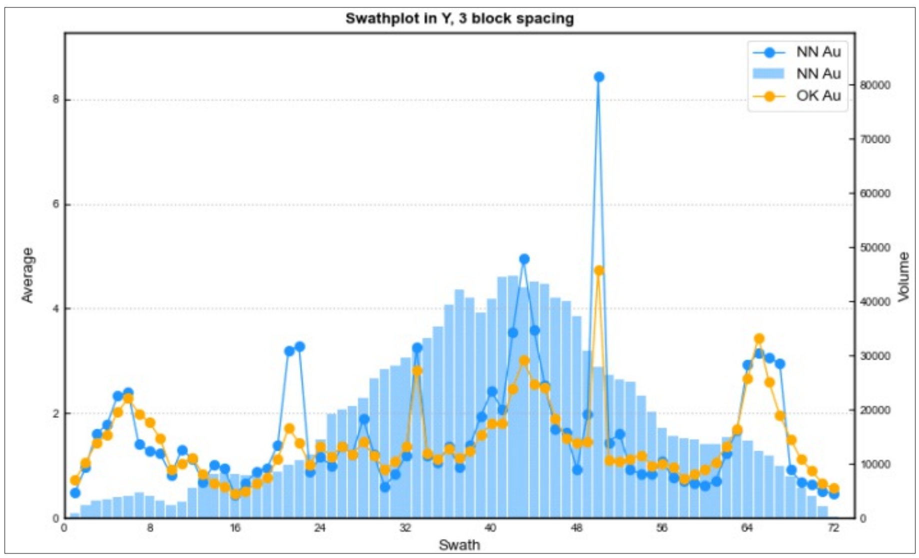
Paciência Mining Complex

Minas Gerais, Brazil

Swath Plots for Santa Isabel and Córrego Grande Wireframe Domains

May 2023 ***Source: Jaguar, 2023.***





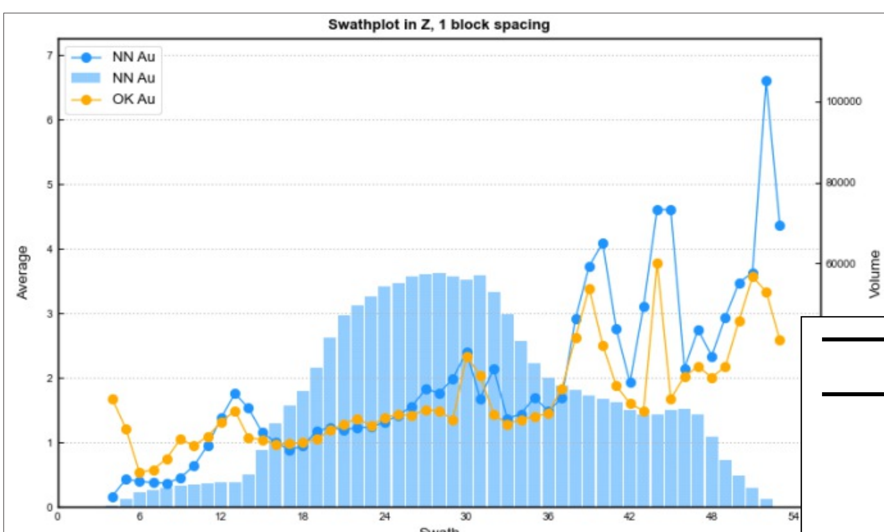


Figure 14-11

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Swath Plots for Marzagão

May 2023

Source: Jaguar, 2023.

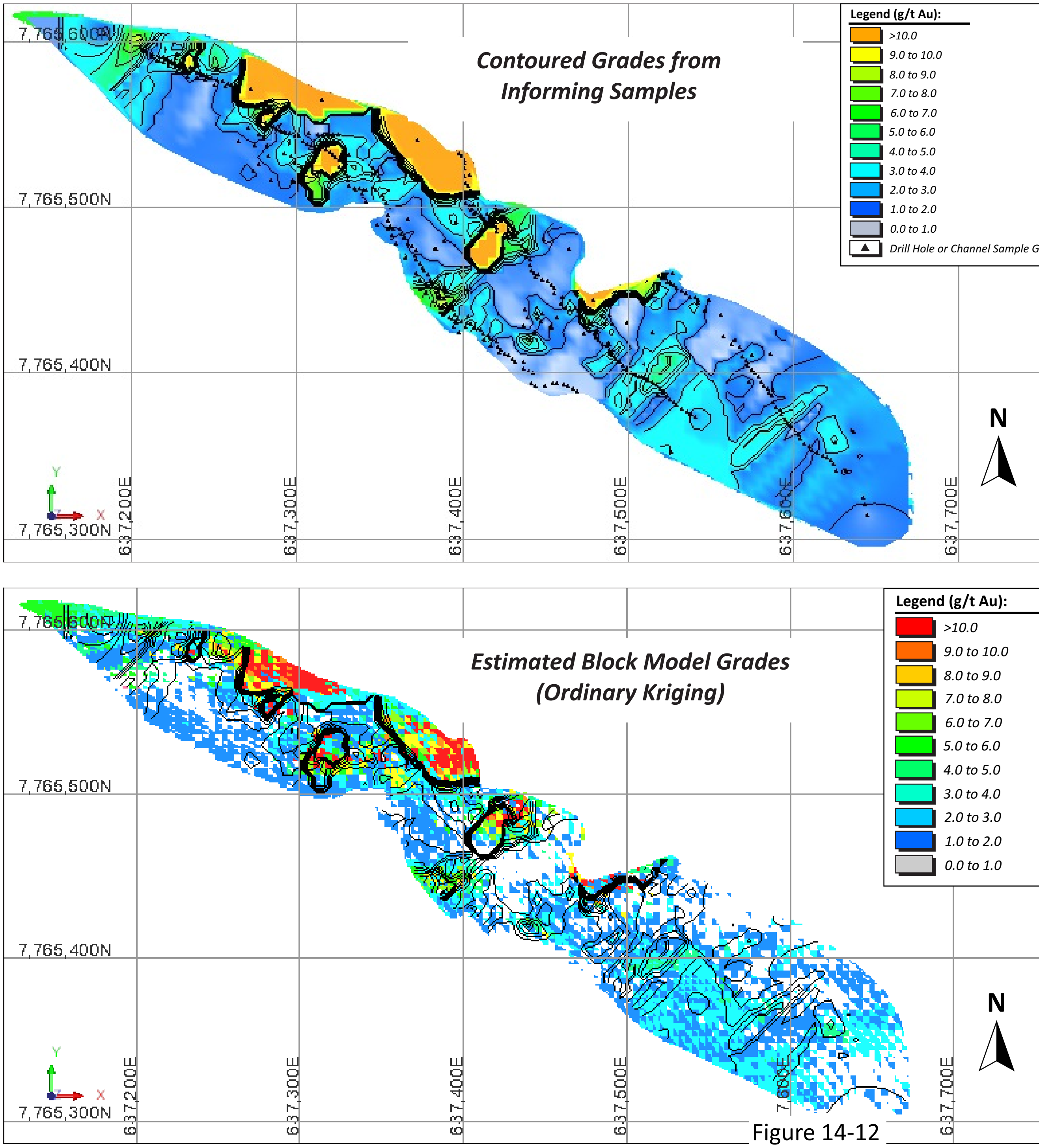


Figure 14-12

0 100
Metres

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Santa Isabel Domain 101

May 2023 **Source: SLR, 2023.**

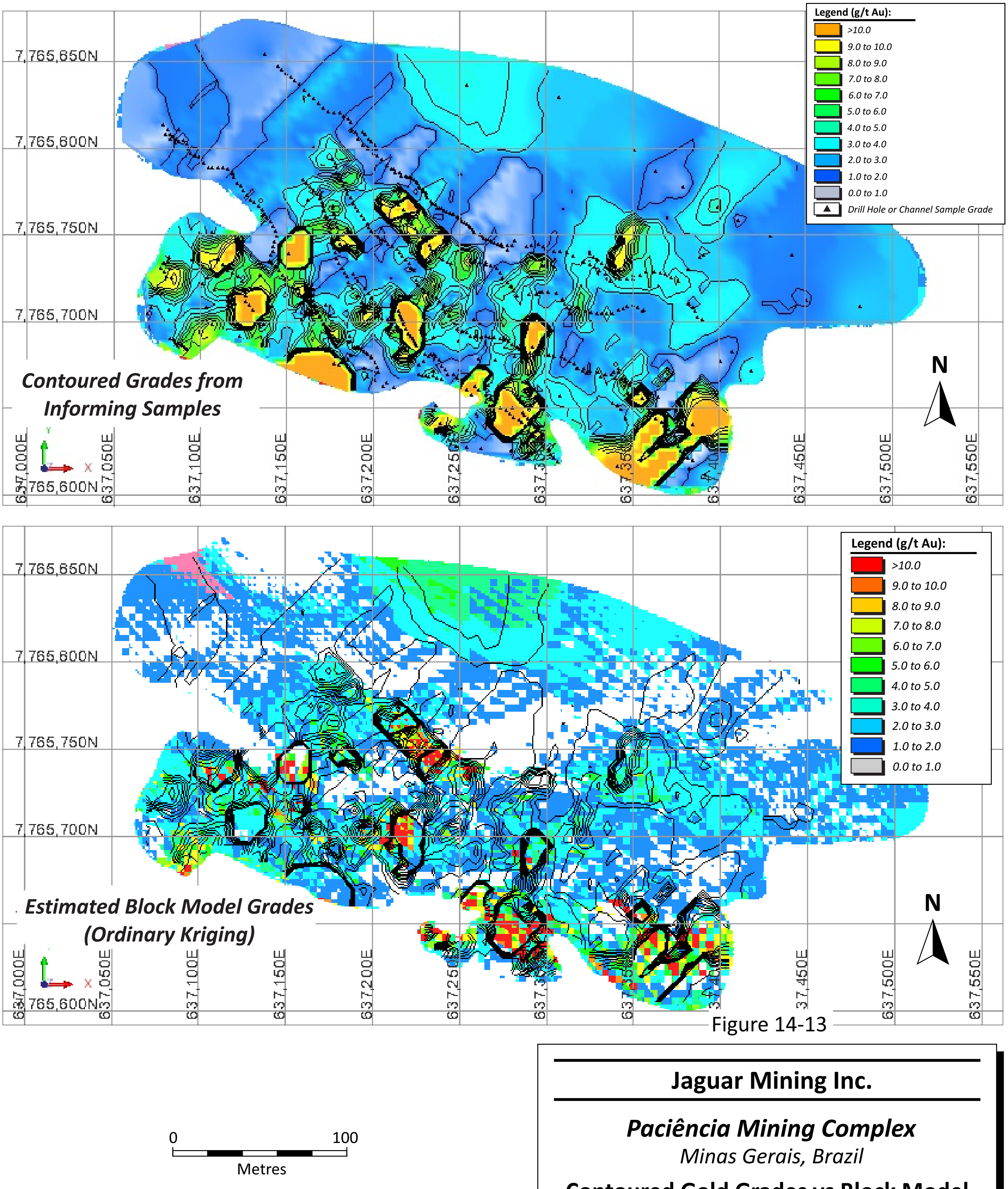


Figure 14-13

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Santa Isabel Domain 304

May 2023

Source: SLR, 2023.

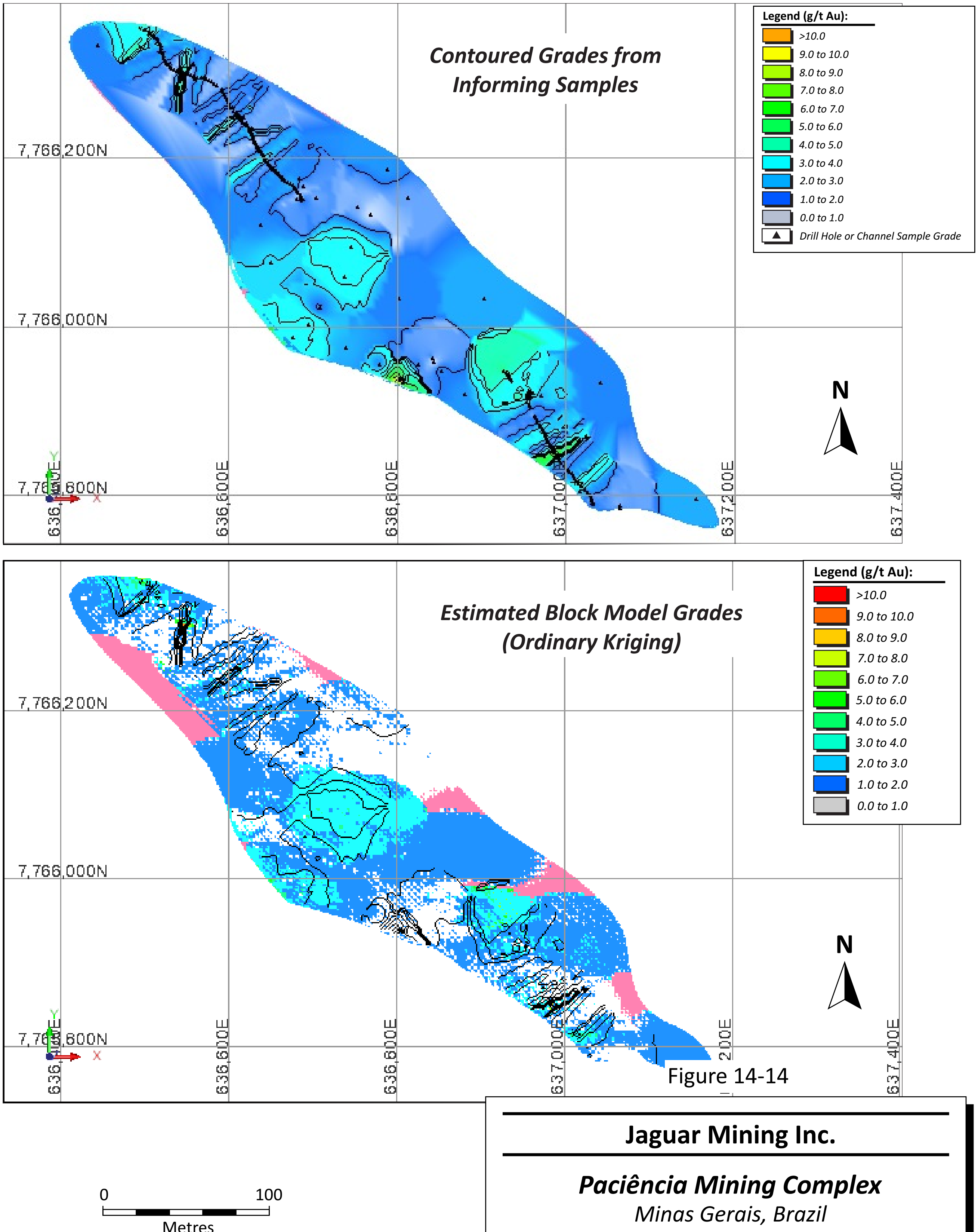


Figure 14-14

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Córrego Grande Domain 401

May 2023 ***Source: SLR, 2023.***

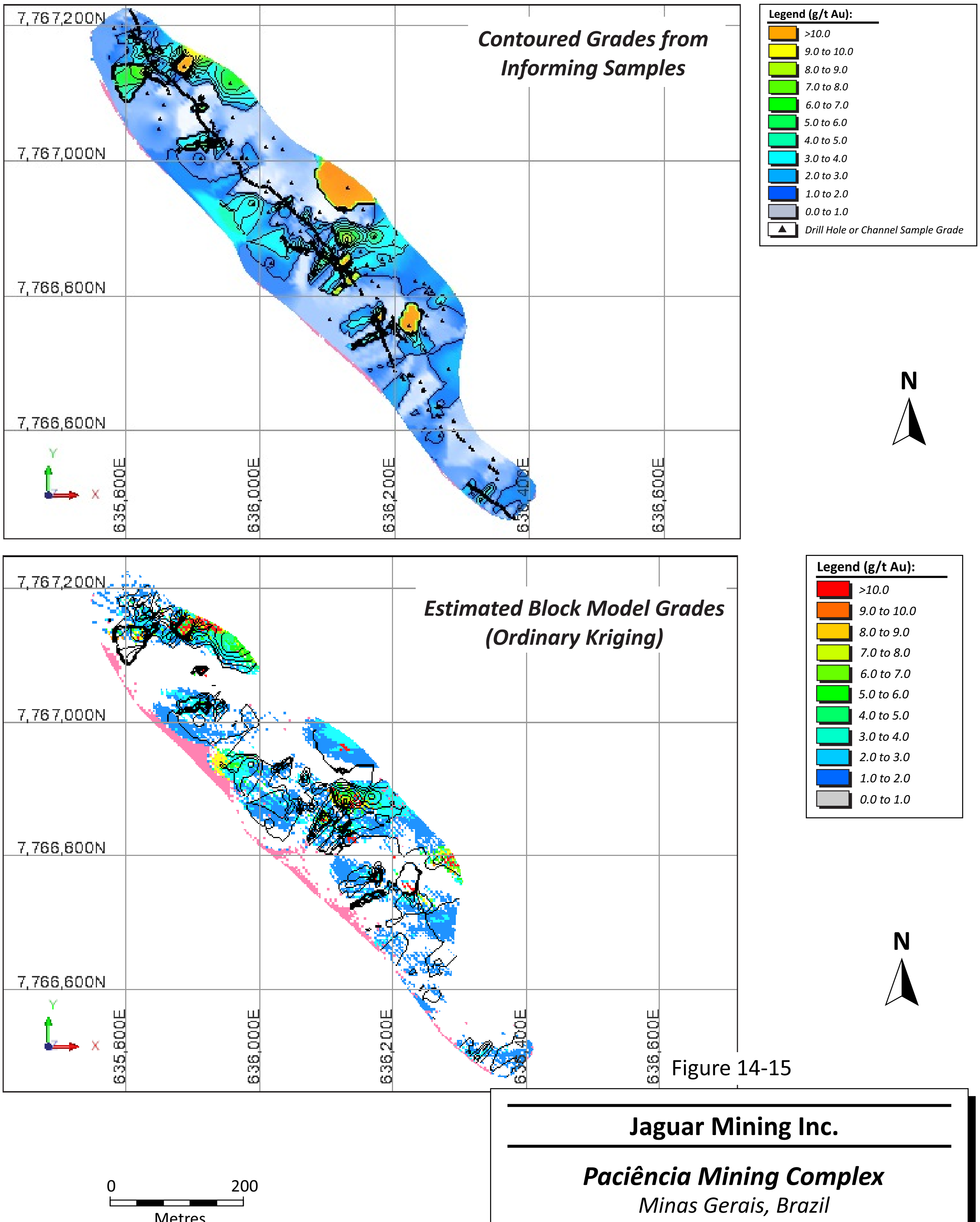


Figure 14-15

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Marzagão Domain 502

May 2023

Source: SLR, 2023.

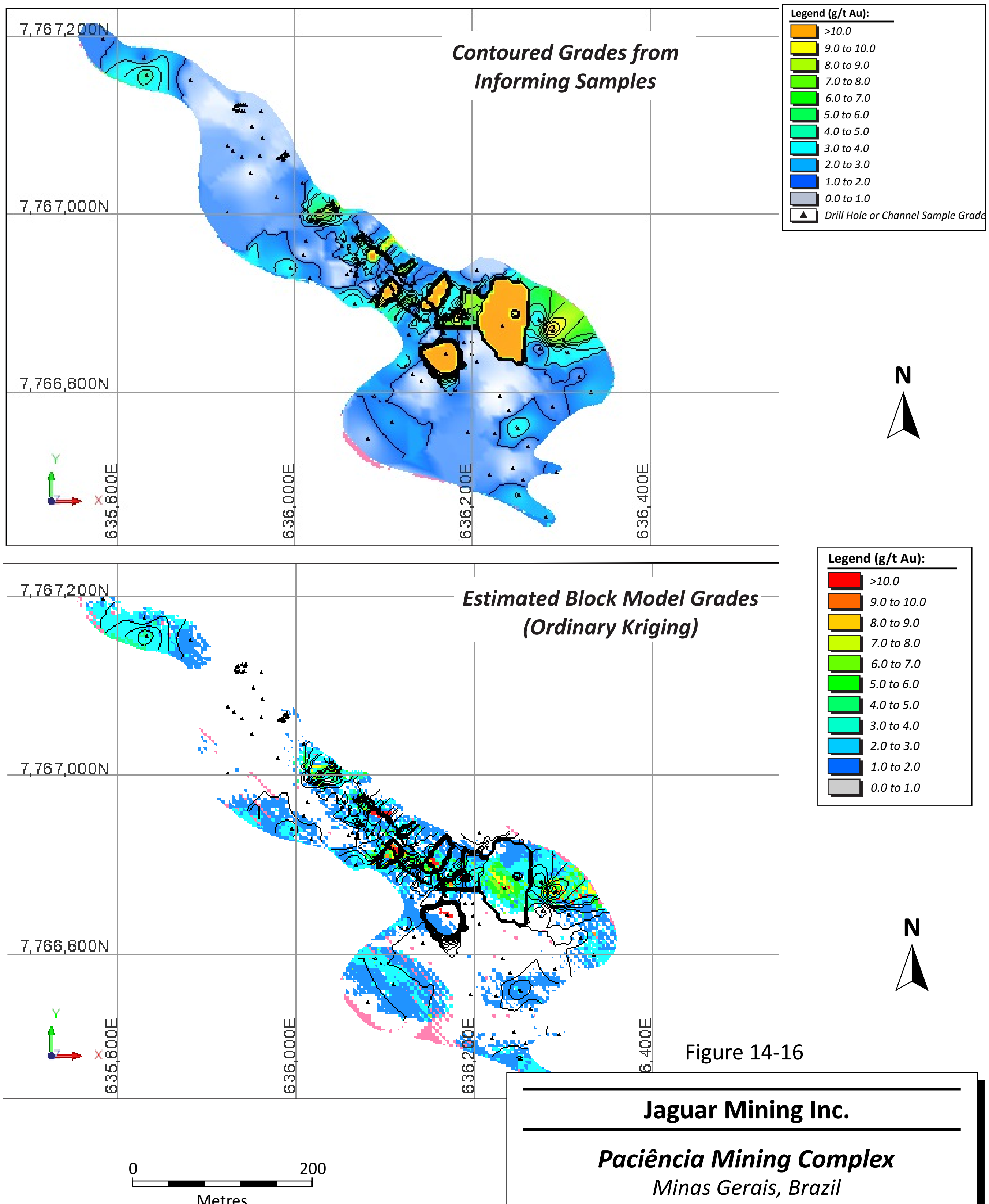


Figure 14-16

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Marzagão Domain 506

May 2023 ***Source: SLR, 2023.***

14.2.12 Mineral Resource Classification Criteria

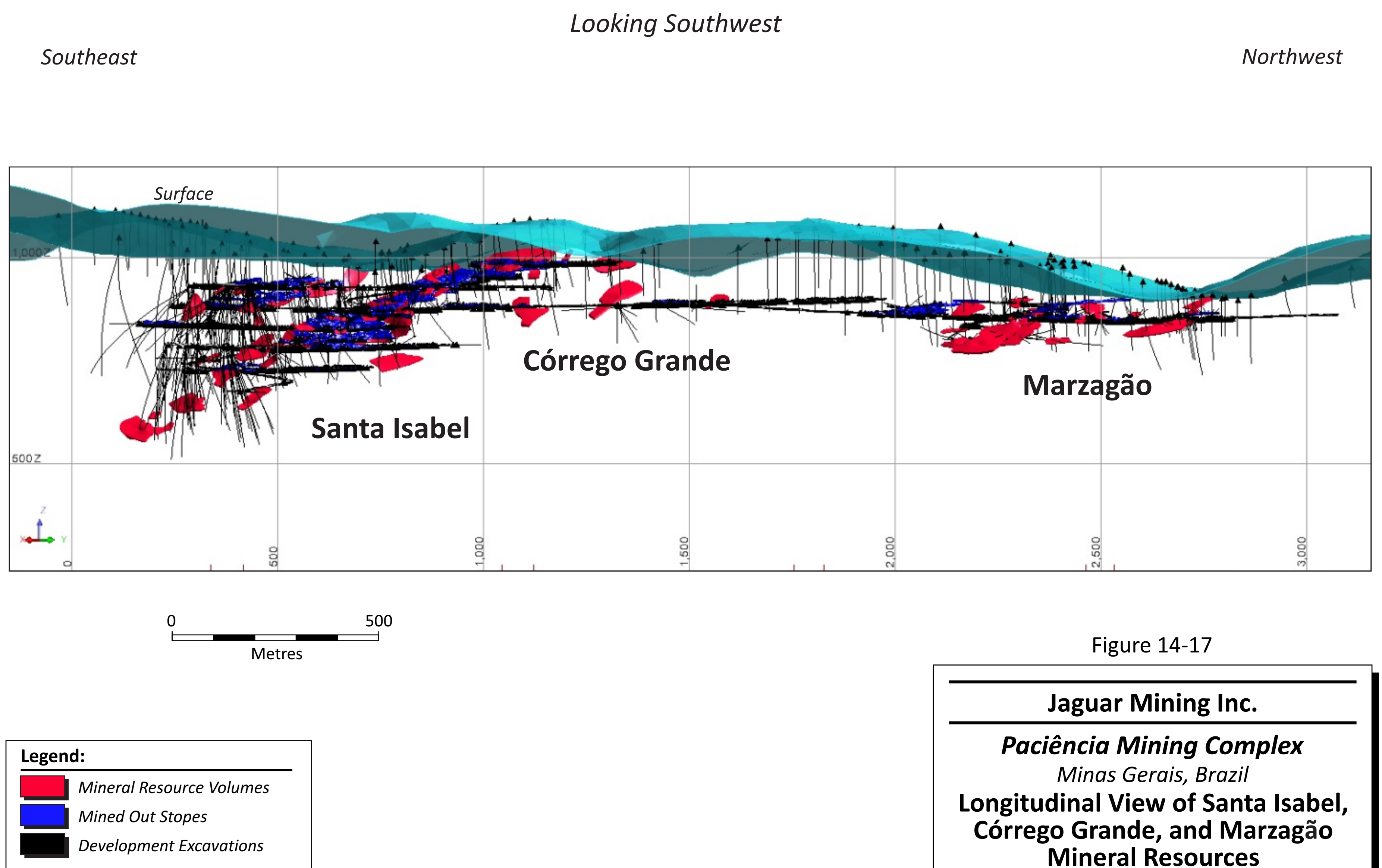
Definitions for resource categories used in this Technical Report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction". Mineral Resources are classified into Measured, Indicated, and Inferred categories.

All material at Santa Isabel was classified into the Inferred Mineral Resource category.

14.2.13 Cut-off Grade and Reporting Criteria

An initial cut-off grade of 1.81 g/t Au was used for modeling the Santa Isabel/Córrego Grande/Marzagão Mineral Resources. This cut-off grade was calculated using a gold price of US$1,800/oz Au, an average gold recovery of 92%, an average exchange rate of R$5.20 : US$1.00, and a total operating cost of R$503/t (US$96.73/tonne). The operating costs were estimated by averaging the actual costs incurred by Jaguar's mining operations during 2022. The cut-off grade estimates were prepared using a conceptual operational scenario in which the cut-and-fill mining method would be used to extract the mineralized material. The extracted material would be processed using the existing plant facilities to extract the contained gold.

Upon review and consideration, Jaguar subsequently elected to adopt a conservative approach and apply a higher cut-off grade of 2.75 g/t Au for reporting the Mineral Resources. This revised cut-off grade was used to prepare clipping polygons to create appropriate volumes for reporting of the Mineral Resources. The Mineral Resource statements thus represent all blocks contained within the constraining volumes that meet the minimum width criteria and have not been mined out (Figure 14-17).



May 2023

Source: SLR, 2023.

Figure 14-17

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Longitudinal View of Santa Isabel, Córrego Grande, and Marzagão Mineral Resources

14.2.14 Mineral Resource Estimate

The Mineral Resource estimate is presented in Table 14-13.

Table 14-13: Summary of Mineral Resources as of March 31, 2023, Santa Isabel, Córrego Grande, and Marzagão Deposits
Jaguar Mining Inc. – Paciência Mining Complex

Deposit	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Inferred Mineral Resources			
Santa Isabel/Córrego Grande	978	4.01	126
Marzagão	445	4.44	63
Total Inferred	**1,423**	**4.13**	**189**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are reported within resource reporting shapes which were generated using a cut-off grade of 2.75 g/t Au.
3. Mineral Resources are estimated using a long term gold price of US$1,800/oz Au and an average long term foreign exchange rate of R$5.20 : US$1.00.
4. Bulk density is 2.74 t/m^3.
5. A minimum mining width of two metres was used.
6. Gold grades are estimated using Ordinary Kriging.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.

14.2.15 Comparison with Previous Estimates

A Mineral Resource estimate was prepared for the Santa Isabel, Córrego Grande, and Marzagão deposits as part of the 2007 Feasibility Study (Machado, 2007b) that was completed in support of the production decision (Table 14-14). It is important to note that the tonnages and grades of that estimate reflect the level of knowledge, drill hole and sample information available at the time. The tonnages and grades were also estimated prior to commencement of mining operations.

Table 14-14: Comparison with Previous Mineral Resource Estimates, Santa Isabel Mine
Jaguar Mining Inc. – Paciência Mining Complex

Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
	Mineral Resources as at March 31, 2023		
Inferred	1,423	4.13	189
	2007 Mineral Resources		
Measured	871	5.59	157
Indicated	1,702	5.00	274
Sub-total, M&I	**2,573**	**5.20**	**430**
Inferred	421	5.44	74

14.3 Bahú Deposit

14.3.1 Topography and Excavation Models

A topographic surface of the Santa Isabel Mine area contained within Jaguar's computer files dating from 2011 was used to assist in the preparation of the Mineral Resource estimate for the Bahú deposit. The topographic map was prepared according to the Córrego Alegre zone 23S datum.

While historical records indicate that an adit was excavated to allow access for examination of the style of mineralization and to allow completion of underground-based drilling programs, the quality of the information describing this excavation was not sufficient to prepare wireframe models of the location and extent of this excavation with confidence.

14.3.2 Resource Database

Jaguar maintains an internal database using the MX_Deposit database software package provided by the Geosoft group to store and manage all the digital information for all of its operations. The internal databases were previously maintained using the BDI software package. The Bahú drill hole database contains information for 158 surface-based drill holes totalling approximately 21,409 m in length, and 14 trenches totalling approximately 338 m in length. The geology and assay data related to the trench sample information are entered into the drill hole database as pseudo-drill holes.

The Bahú drill hole database includes preliminary information collected from nine drill holes completed by Jaguar in 2022 (drill holes FBH001 to FBH009, inclusive). None of these drill holes were used in the preparation of the Mineral Resource estimate because the assay information had not been received for a number of drill holes in sufficient time to incorporate it into the estimation process.

SLR recommends that the Mineral Resource estimate be updated for the Bahú deposit with assay information collected from the drill holes completed in 2022.

The drill hole and trench sample information for the Bahú deposit was extracted from the internal database into separate files for use in the preparation of the Mineral Resource estimate. This drill hole information was modified slightly so as to be compatible with the format requirements of the Leapfrog software package and was imported into that software package by Jaguar. A number of new tables and variables were created during the estimation process to capture such information as the intersection information between the drill holes and the wireframe models, capped assay values, various domain codes, and composite values.

The cut-off date for the information in the drill hole database is November 2022, the beginning of the Mineral Resource estimation process. Drilling and sampling by Jaguar prior to 2022 were carried out using the UTM Datum Córrego Alegre, Zone 23S grid coordinate system. Drill hole information collected by Jaguar during the 2022 drilling campaign was carried out using the UTM SIRGAS datum and subsequently converted to the Córrego Alegre datum.

The drill hole database contains drill hole information collected by previous owners of the property who determined the collar locations according to a different grid datum. The collar locations for all previous drill holes were transformed to the Córrego Alegre, Zone 23S grid coordinate datum.

A number of drill holes were removed from the database due to poor data quality as judged by the Jaguar team. These included:

- FSV001 and FSV004 (due to collar elevation issues)
- All BSS-series drill holes (because of lack of down hole deviation measurements)
- FBA092 (due to collar location issues)
- FBA005 to FBA009 (because of lack of down hole deviation measurements and also absence of lithology descriptions/drill-hole log)

A summary of the drilling and channel sampling information is provided in Table 14-15. The location of the drill holes and channel samples are shown in Figure 10-2.

Table 14-15: Summary of the Bahú Drill Hole Database
Jaguar Mining Inc. – Paciência Mining Complex

Data Type	Number of Records
Collars	172
Survey	6,076
Lithology	4,174
Assays	10,106
Composites (within wireframe boundaries)	1,522
Weathering Code	389

The database included a number of assay records representing intervals of no sampling, lost core, lost sample, or no core recovery, some of which are contained within the mineralized wireframes. Depending upon the specific local conditions, these unsampled intervals can introduce an undesired positive bias upon the grade estimations. Jaguar therefore elected to pursue a conservative approach by inserting a very low gold value of 0.01 g/t Au to 0.025 g/t Au for these intervals of null values.

14.3.3 Lithology and Mineralization Wireframes

Wireframe modelling for the Bahú deposit began with construction of a lithological model of the host rocks, hydrothermal alteration envelopes, and weathering profile using the Leapfrog software package.

A series of three dimensional wireframe models were then constructed using the Leapfrog software package for the various mineralized zones present at the Bahú deposit using a two-tiered approach.

One set of low grade mineralization wireframes were constructed using a nominal grade threshold of 0.5 g/t Au. These were constructed to a minimum width of three metres to enclose those mineralized intervals that are judged to be potentially extracted using open pit mining methods. To permit accurate grade estimation, one wireframe model was constructed for each low grade mineralized zone. The wireframe models were constructed using the modelled lithology and hydrothermal alteration zones as guides.

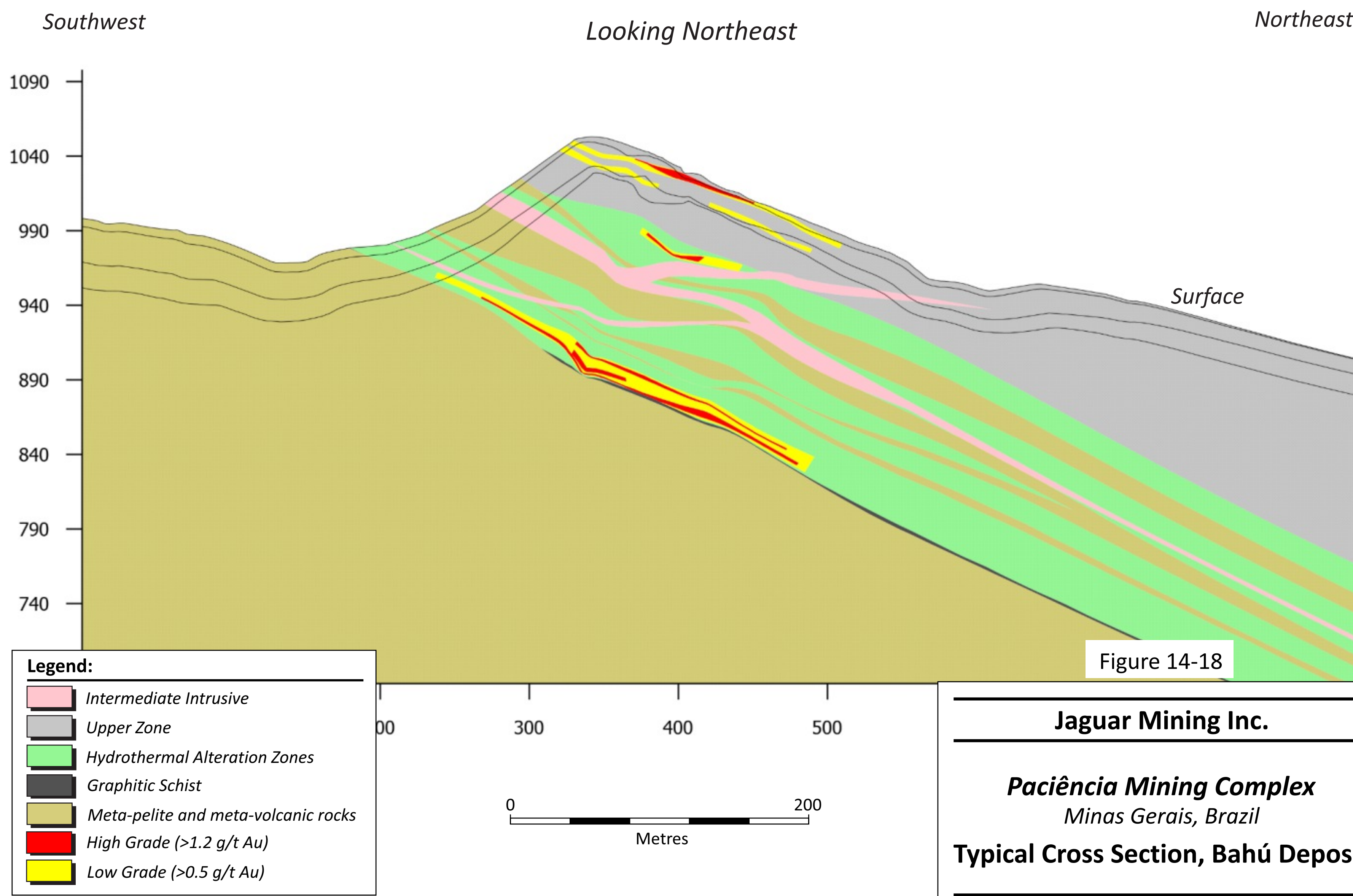
A second set of nested wireframe models were constructed to model the higher grades using a nominal grade threshold of 1.2 g/t Au. These were constructed to a minimum width of one metre to enclose those mineralized intervals that are judged to be potentially extracted using underground mining methods. To permit accurate grade estimation, one wireframe model was constructed for each low grade mineralized zone. A total of 34 individual wireframe models were constructed (Table 14-16).

In general, the mineralization wireframe interpretations were constructed with the understanding gained from drill hole information as well as information collected during operation of the Santa Isabel Mine. This information suggests that the mineralization generally occurs as tabular sheets that parallel the regional foliation and plunges at approximately -20° towards azimuth 110° (Figure 14-18).

Table 14-16: Summary of Mineralization Wireframe Domain Codes, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Alteration Zone	Grade Model	Sub-domain	Code
X2 01	Waste	Waste	100
	LG	LG	110
	HG	HG 01	121
		HG 02	122
		HG 03	123
		HG 04	124
X2 02	Waste	Waste	200
	LG	LG	210
	HG	HG 01	221
		HG 02	222
		HG 03	223
X2 03	Waste	Waste	300
	LG	LG	310
	HG	HG 01	321
		HG 02	322
		HG 03	323
		HG 03	324

Alteration Zone	Grade Model	Sub-domain	Code
X2 04	Waste	Waste	400
	LG	LG	410
	HG	HG	421
X2 05	Waste	Waste	500
	LG	LG	510
	HG	HG 01	521
		HG 02	522
		HG 03	523
Upper Zone	Waste	Waste	600
	LG	LG	610
	HG	HG 01	621
		HG 02	622
		HG 03	623
		HG 04	624
		HG 05	625
		HG 06	626
		HG 07	627



May 2023

Source: Jaguar, 2023.

Figure 14-18

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Typical Cross Section, Bahú Deposit

14.3.4 Resource Assays

Mineralization wireframe models were used to code the drill hole database and identify the raw assay samples, or resource assays, that are contained within the various mineralized wireframes. These samples were extracted from the database into their respective domains, and then subjected to statistical analyses by means of histograms, probability plots, and decile analyses. The resource assay sample statistics and the selected capping values are summarized in Table 14-17.

Table 14-17: Summary Statistics of the Uncapped Raw Assays Values by Domain, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Domain	Count	Mean (g/t Au)	CV	Variance	Minimum (g/t Au)	Median (g/t Au)	Maximum (g/t Au)
				High Grade Domains			
121	105	3.63	2.85	107.27	0.07	1.33	91.50
122	142	3.08	1.79	30.36	0.01	1.35	43.75
123	22	1.90	0.89	2.87	0.18	1.12	5.60
124	4	2.11	0.48	1.01	1.23	1.41	3.42
221	10	0.93	0.52	0.24	0.23	1.17	1.54
222	8	0.72	0.67	0.23	0.01	0.66	1.38
223	4	2.36	0.40	0.91	1.39	2.65	3.25
321	12	1.06	0.42	0.20	0.14	1.06	1.80
322	6	2.05	0.58	1.42	0.57	2.30	3.88
323	23	5.23	1.34	48.98	0.37	2.51	27.60
421	28	2.37	0.63	2.26	0.25	3.13	5.97
521	45	2.03	1.96	15.76	0.03	1.40	27.42
522	24	1.38	0.99	1.90	0.01	1.04	5.05
621	34	1.64	0.89	2.12	0.50	1.17	7.27
622	7	1.04	0.59	0.38	0.06	090	1.89
623	24	1.36	0.93	1.59	0.03	0.82	4.99
624	30	1.87	0.76	2.01	0.01	1.47	4.87
625	8	15.76	1.59	631.40	0.71	6.42	65.53
626	17	4.04	1.16	8.83	0.93	1.29	8.45
627	6	2.51	1.18	8.83	0.93	1.29	8.45
				Low Grade Domains			
110	492	0.27	1.73	0.21	0.01	0.16	8.44
210	56	0.15	1.67	0.06	0.01	0.07	1.80
310	51	0.39	0.88	0.11	0.01	0.31	1.72

Domain	Count	Mean (g/t Au)	CV	Variance	Minimum (g/t Au)	Median (g/t Au)	Maximum (g/t Au)
410	56	0.45	1.56	0.50	0.01	0.27	3.90
510	69	0.30	1.75	0.29	0.01	0.16	4.78
610	306	0.26	1.25	0.11	0.01	0.16	3.50

14.3.5 Treatment of High Grade Assays

In order to reduce the influence of high grade sample values, Jaguar elected to apply a restricted search approach. In this method, the grades of the resource assays contained within the respective mineralized wireframes deemed to represent anomalously high grades are limited to a short distance about the informing drill hole. Statistical analyses using probability plots were carried out to select the threshold values that described the high grade population for each wireframe domain. A summary of the restricted search threshold values, as well as a summary of the restricted search parameters are presented in Table 14-18.

Table 14-18: Summary of Restricted Search Parameters, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Domain	Strategy	Distance Restriction (m)	Threshold Value (g/t Au)
	High Grade Domains		
121	Clamp	20	6.0
122	Clamp	20	10.0
123	- -	- -	- -
124	- -	- -	- -
221	- -	- -	- -
222	- -	- -	- -
223	- -	- -	- -
321	- -	- -	- -
322	- -	- -	- -
323	Discard	20	9.2
421	- -	- -	- -
521	Cap	- -	4.5
522	- -	- -	- -
621	- -	- -	- -
622	- -	- -	- -
623	- -	- -	- -
624	- -	- -	- -

Domain	Strategy	Distance Restriction (m)	Threshold Value (g/t Au)
625	Clamp	20	8.0
626	Clamp	20	8.0
627	Clamp	20	2.0
Low Grade Domains			
110	Discard	20	1.0
210	Discard	20	1.0
310	Discard	20	1.0
410	Discard	20	1.0
510	Discard	20	1.0
610	Discard	20	1.0

14.3.6 Compositing

All drill hole and channel samples were composited to equal lengths of one metre. For those mineralized intervals for which a full composite length of one metre was not possible, the remaining length was added onto the previous sample interval.

14.3.7 Bulk Density

A total of eight bulk density measurements were collected from oxidized portions of the Bahú deposit, with an additional 55 density measurements being collected from samples of the fresh, un-weathered host rocks. The average bulk density of the oxidized samples was 1.36 t/m^3 and the median value was 1.32 t/m^3. The average bulk density of the fresh samples was 2.78 t/m^3 and the median value was 2.76 t/m^3 (Table 14-19). Jaguar elected to apply an average bulk density of 2.74 t/m^3 for estimation of the Mineral Resources hosted by the fresh rocks. An average bulk density of 1.31 t/m^3 was applied for the oxidized material.

Table 14-19: Descriptive Statistics of the Density Measurements, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Item	Oxidized (t/m^3)	Fresh (t/m^3)
Mean	1.36	2.78
Standard Error	0.05	0.01
Median	1.32	2.76
Mode	N/A	2.80
Standard Deviation	0.15	0.10
Sample Variance	0.02	0.01
Range	0.45	0.48

Item	Oxidized (t/m^3)	Fresh (t/m^3)
Minimum	1.20	2.58
Maximum	1.65	3.06
Count	8	55

14.3.8 Trend Analysis

14.3.8.1 Grade Contouring

As an aid in understanding the distribution and continuity of the gold grades in the mineralized domain models, a short study to examine the overall trends was conducted. For this exercise, a selection of wireframe domains containing the largest volumes were selected. The resulting gold grades were digitally contoured using Surpac contouring functions and the results are presented in Figure 14-19 and Figure 14-20.

14.3.8.2 Variography

Jaguar carried out an analysis of the spatial continuity of the gold grades by constructing correlogram models for the combined high grade mineralized domains present at the Bahú deposit. Variogram models were constructed for the low grade domains. The correlogram and variogram models were constructed using the Leapfrog software package (Figure 14-21). A summary of the correlogram and variogram parameters is presented in Table 14-20.

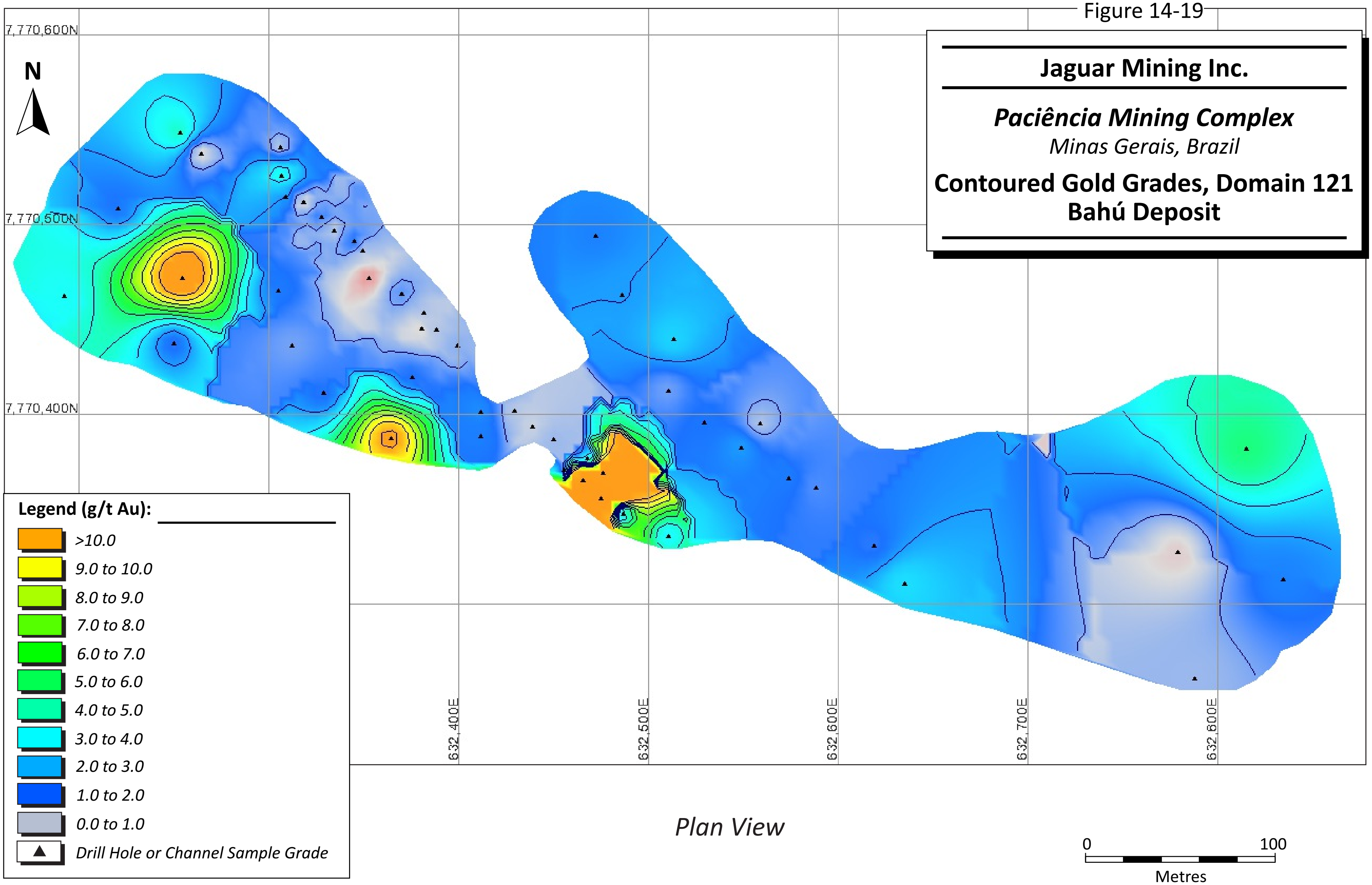
Figure 14-19

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades, Domain 121
Bahú Deposit



May 2023

Source: SLR, 2023.

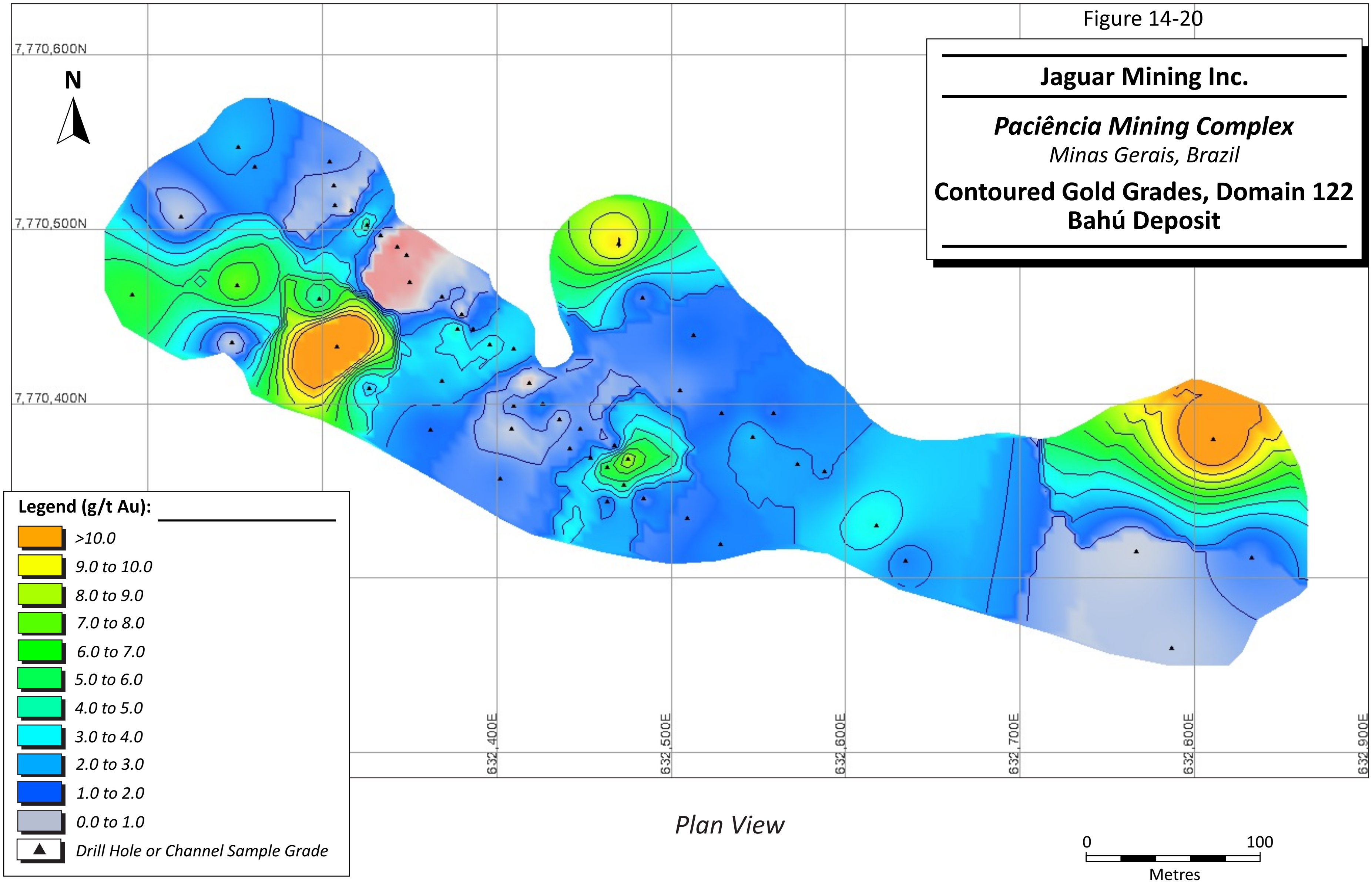
Figure 14-20

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades, Domain 122
Bahú Deposit



May 2023

Source: SLR, 2023.

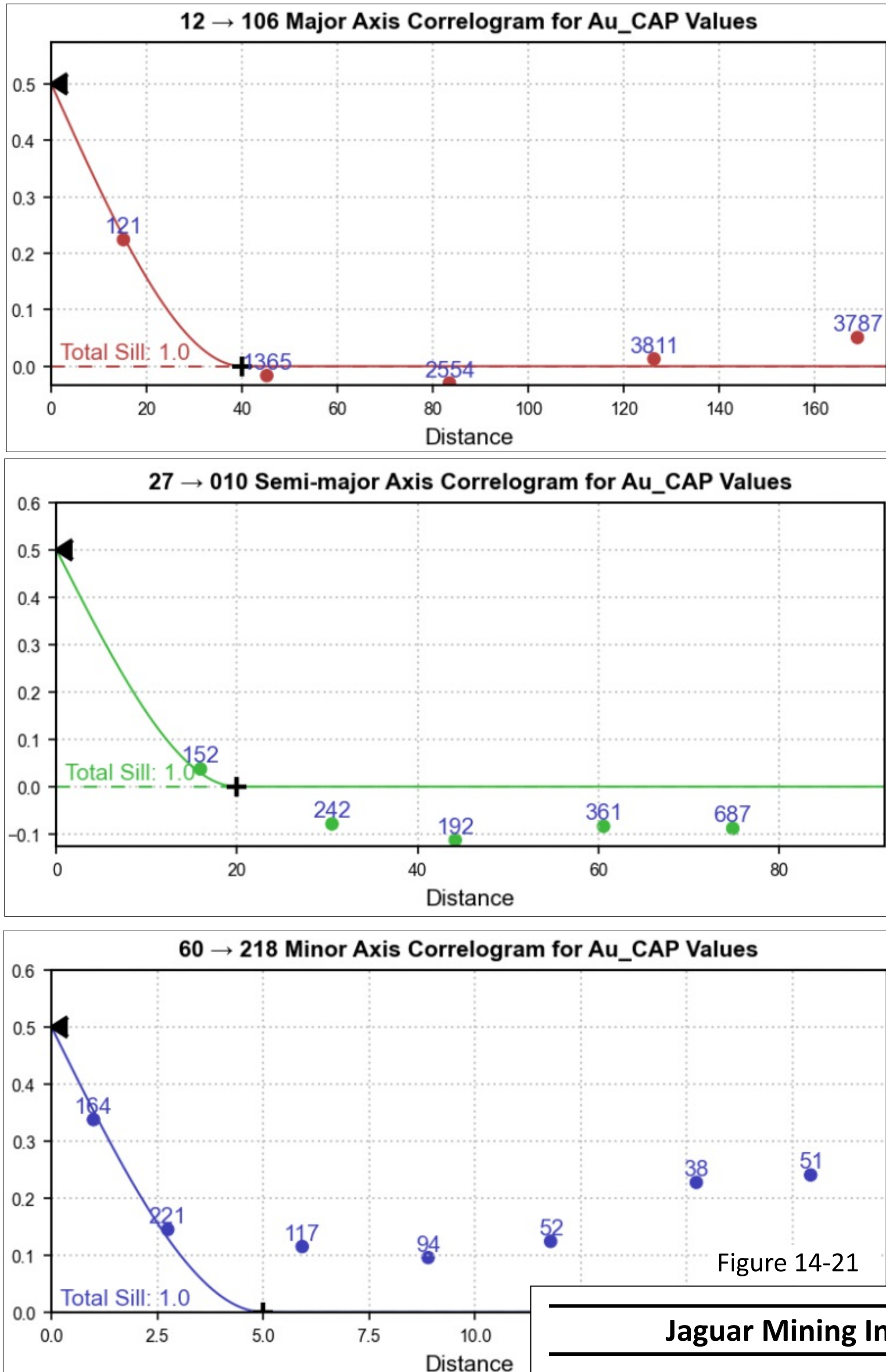


Figure 14-21

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Correlogram Models, Bahú Deposit

May 2023

Source: SLR, 2023.

Table 14-20: Summary of Correlogram and Variogram Parameters, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Domain	Orientation			Total Sill	Normalized Nugget (C_0)
	Dip	Azimuth	Pitch		
Combined High Grade	30	38	155	4.69	0.5
Combined Low Grade	30	38	150	0.07	0.4

Structure #1

Domain	Normalized Sill (C1)	Type	Major Axis Length (m)	Semi-major Axis Length (m)	Minor Axis Length (m)
Combined High Grade	0.5	Spherical	40	20	5
Combined Low Grade	0.26	Spherical	25	15	5

Structure #2

Domain	Normalized Sill (C1)	Type	Major Axis Length (m)	Semi-major Axis Length (m)	Minor Axis Length (m)
Combined High Grade	- -	- -	- -	- -	- -
Combined Low Grade	0.34	Spherical	150	110	10

14.3.9 Block Model Construction

A single, non-rotated block model was constructed by Jaguar using the Leapfrog Edge software package. Both utilized an array of parent blocks measuring 10 m (X) x 10 m (Y) x 5 m (Z) and used sub-blocking with a minimum block size of 1 m (X) x 1 m (Y) x 1 m (Z). The block model origins and dimensions are provided in Table 14-21. A number of attributes were created to store information such as the domain code, estimated gold grades, and estimation pass (Table 14-22).

Table 14-21: Block Model Definition, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Type	Units	Northing (Y)	Easting (X)	Elevation (Z)
Minimum Coordinates	m	7,770,115	632,140	1,075
Number of Blocks	m	83	80	74
Parent Block Size	m	10	10	5

Type	Units	Northing (Y)	Easting (X)	Elevation (Z)
Sub-block Size	m	1.25	1.25	0.625
Rotation	°	0.000	0.000	0.000

Table 14-22: Block Model Attribute List, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Attribute Name	Type	Decimals	Description
Au_ok	Real	2	Estimated gold grade by ordinary kriging
Au_nn	Real	2	Estimated gold grade by nearest neighbour
Domain	Character	- -	Wireframe ID
Reclass	Character	- -	Final Classification
Step	Character	- -	Estimation pass
Weat	Character	- -	Weathering code
Zone	Character	- -	

14.3.10 Search Strategy and Grade Interpolation Parameters

Gold grades were estimated into the blocks by means of OK. A total of four interpolation passes at different ranges were carried out for each of the mineralized wireframes individually using distances derived from the variogram results and the search ellipse parameters (Table 14-23). Restricted search criteria were applied during each estimation pass to limit the influence of high grade samples. The orientation of the search ellipses were varied using the dynamic anisotropy function of the Leapfrog software package.

Hard domain boundaries were used for each of the mineralized domain wireframes. Only data contained within the respective wireframe model was used to estimate the block grades within the wireframe in question, and only those blocks within the wireframe limits were allowed to receive grade estimates.

Table 14-23: Summary of the Search Strategies, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Search Parameters	Pass #1	Pass #2	Pass #3	Pass #4
High Grade Domains				
Major axis range (m)	20	40	80	160
Semi-major axis range (m)	10	20	40	80
Minor axis range (m)	2.5	5	10	20
Spatial Restriction (% of search distance)	100	50	25	12.5
Minimum Number of Composites	3	2	1	1

Search Parameters	Pass #1	Pass #2	Pass #3	Pass #4
Maximum Number of Composites	16	16	16	16
Maximum Number of Composites per Drill Hole	2	1	4	8
Low Grade Domains				
Major axis range (m)	75	150	300	600
Semi-major axis range (m)	55	110	220	440
Minor axis range (m)	5	10	20	40
Spatial Restriction (% of search distance)	27	13	7	3
Minimum Number of Composites	3	2	1	1
Maximum Number of Composites	16	16	16	16
Maximum Number of Composites per Drill Hole	2	1	4	8

14.3.11 Block Model Validation

Block model validation exercises began with comparing the volume of the coded blocks in the block models against the volume report of the respective wireframe models as a high level check that the block model has been correctly coded for each of the wireframes (Table 14-24). A comparison of the estimated gold grades using the OK interpolation method with the estimated grades using the NN interpolation method is presented in Table 14-25. Swath plots are presented in Figure 14-22 and Figure 14-23. Visual comparisons of block model estimated gold grades with the contoured gold grades from the informing samples are presented in Figure 14-24 and Figure 14-25.

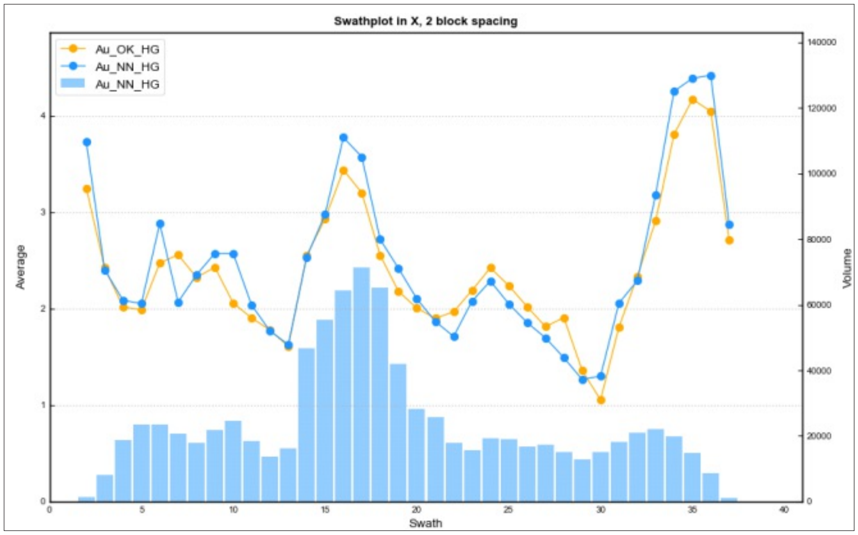
Table 14-24: Comparison of Wireframe and Volumes Block Model, Bahú Deposit Jaguar Mining Inc. – Paciência Mining Complex

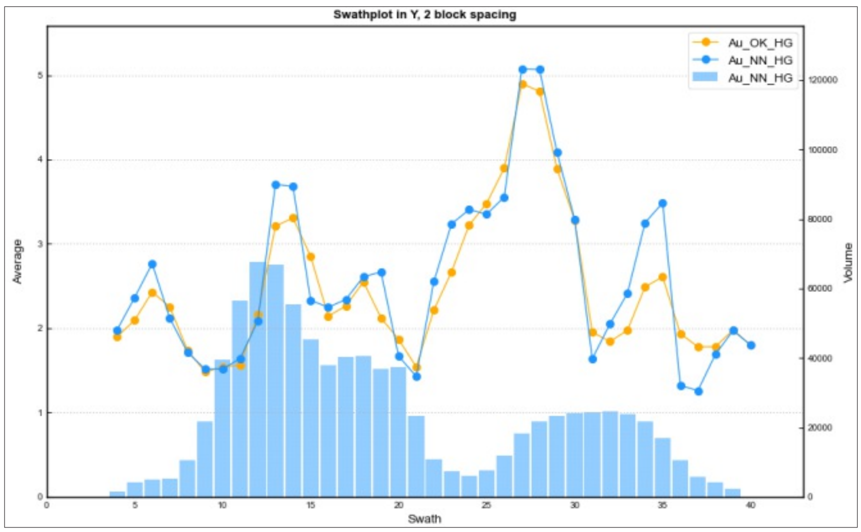
Wireframe ID	Wireframe Volume (m^3)	Block Model Volume (m^3)	Difference (BM-Wf)	% Difference (vs Wf)
High Grade Domains				
121	208,980	209,034	54	0%
122	236,610	236,489	-121	0%
123	13,782	13,717	-65	0%
124	19,804	19,804	0	0%
221	16,303	16,298	-5	0%
222	6,695	6,701	6	0%
223	530	532	2	0%
321	12,407	12,414	7	0%
322	9,774	9,783	9	0%

Wireframe ID	Wireframe Volume (m^3)	Block Model Volume (m^3)	Difference (BM-Wf)	% Difference (vs Wf)
323	55,165	55,155	-10	0%
421	173,570	173,559	-11	0%
521	16,263	16,251	-12	0%
522	15,478	15,445	-33	0%
621	11,404	11,383	-21	0%
622	2,661	2,664	3	0%
623	11,368	11,352	-16	0%
624	13,994	14,032	38	0%
625	30,531	30,523	-8	0%
626	4,508	4,503	-5	0%
627	2,617	2,609	-8	0%
		Low Grade Domains		
110	1,392,800	1,392,947	147	0%
210	55,349	55,370	21	0%
310	137,120	137,202	82	0%
410	305,450	305,458	8	0%
510	51,677	51,662	-15	0%
610	256,830	256,727	-103	0%

Table 14-25: Comparison of Ordinary Kriging vs. Nearest Neighbour Estimated Grades, Bahú Deposit Jaguar Mining Inc. – Paciência Mining Complex

Domain	Estimated Grade		Difference (g/t Au)	% Difference
	Nearest Neighbour (g/t Au)	Ordinary Kriging (g/t Au)		
High Grade	2.61	2.50	-0.11	-4%
Low Grade	0.32	0.33	0.01	3%





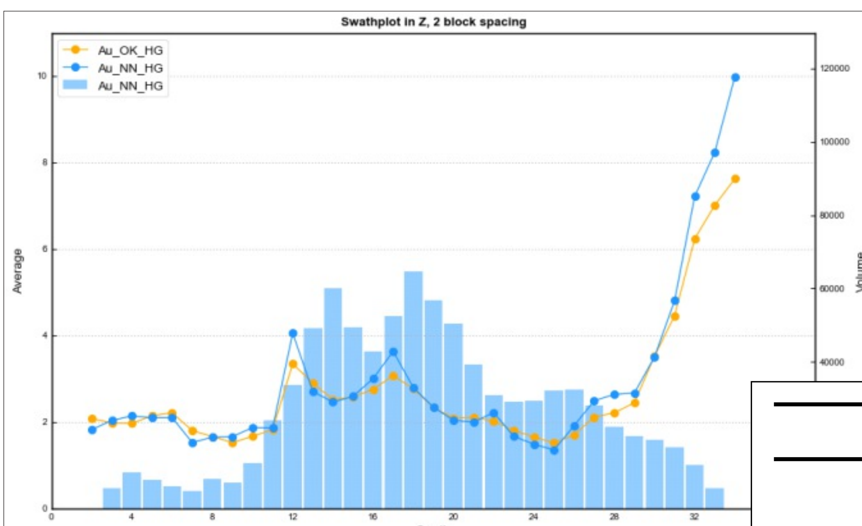


Figure 14-22

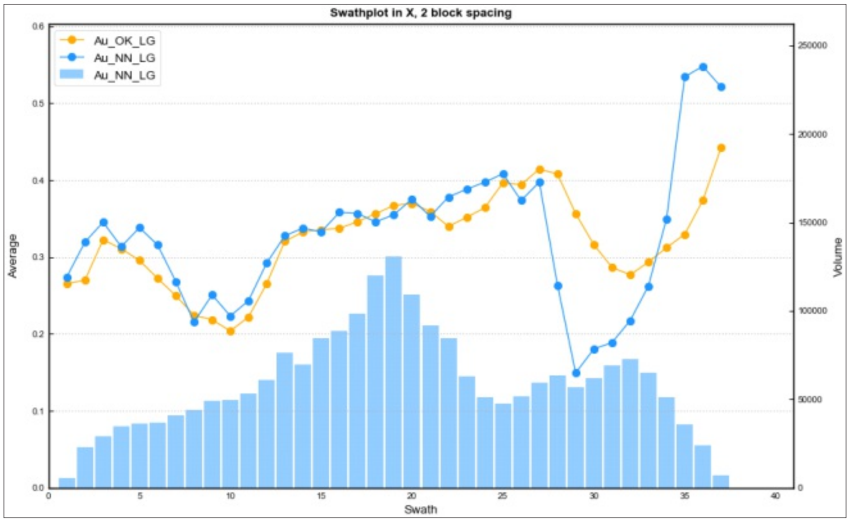
Jaguar Mining Inc.

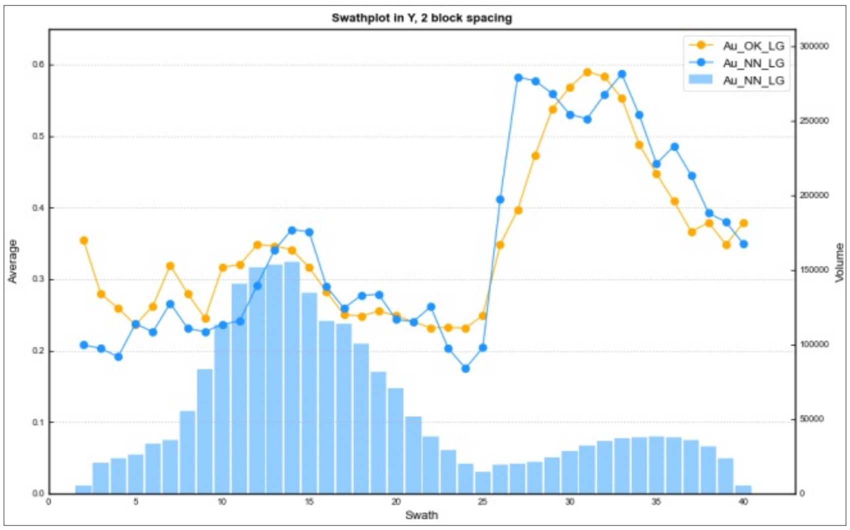
Paciência Mining Complex

Minas Gerais, Brazil

Swath Plots, High Grade Domains Combined, Bahú Deposit

May 2023 ***Source: Jaguar, 2023.***





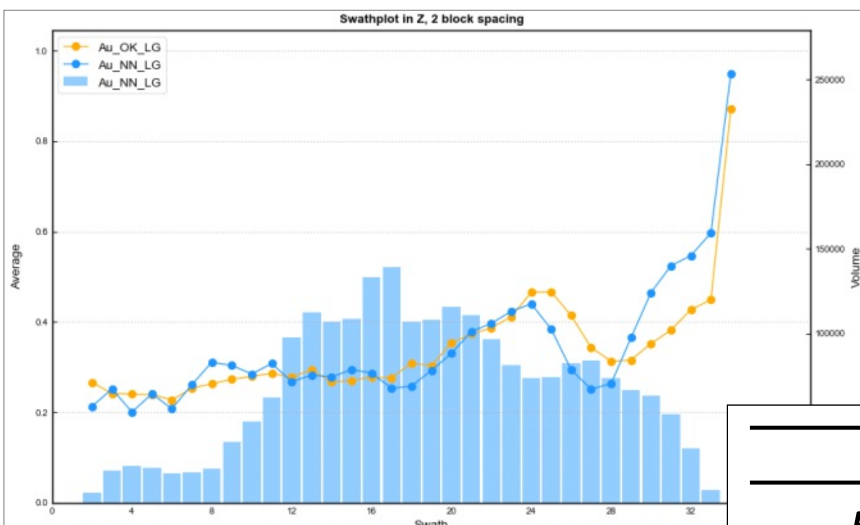


Figure 14-23

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Swath Plots, Low Grade Domains Combined, Bahú Deposit

May 2023 ***Source: Jaguar, 2023.***

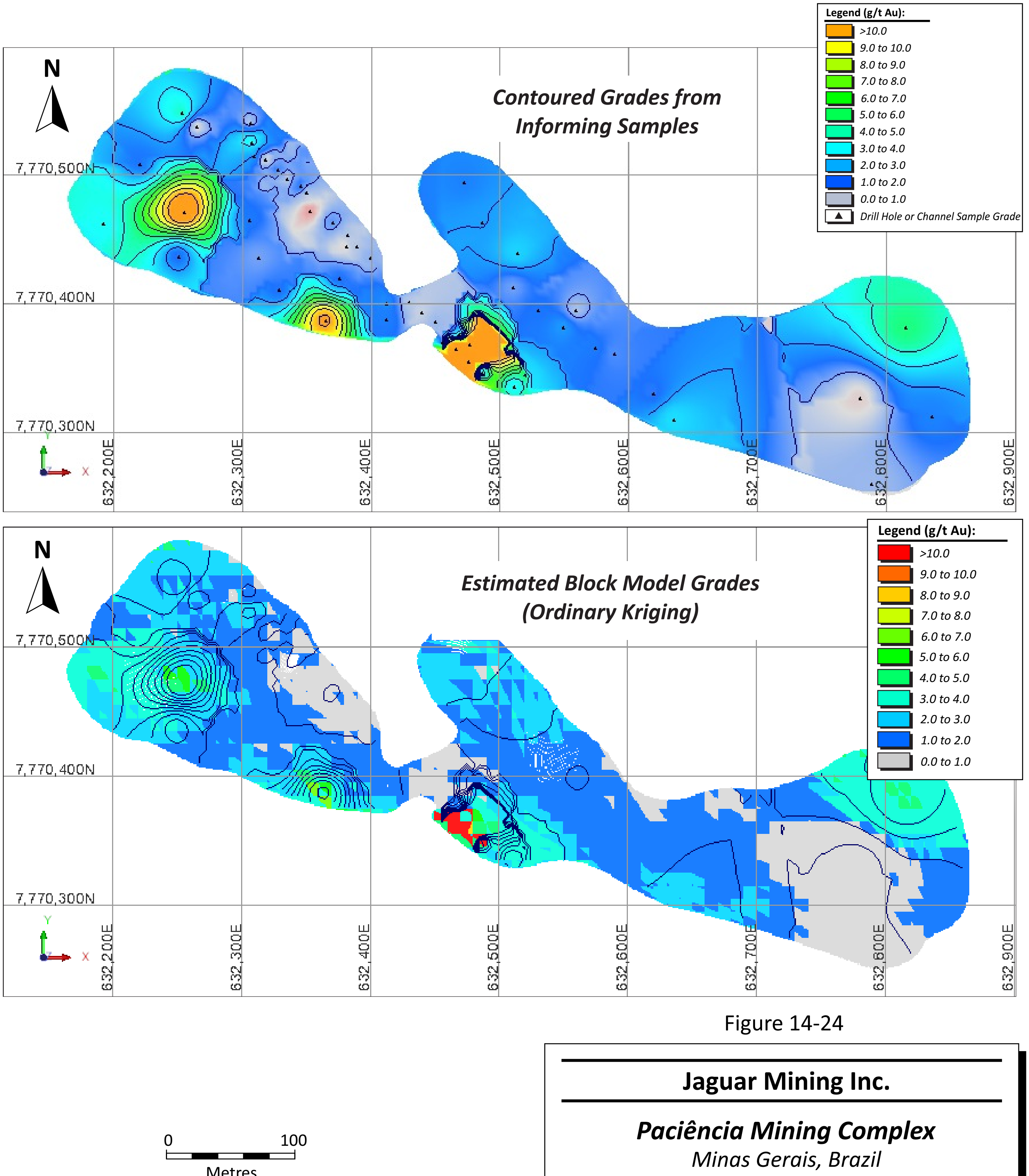


Figure 14-24

Jaguar Mining Inc.

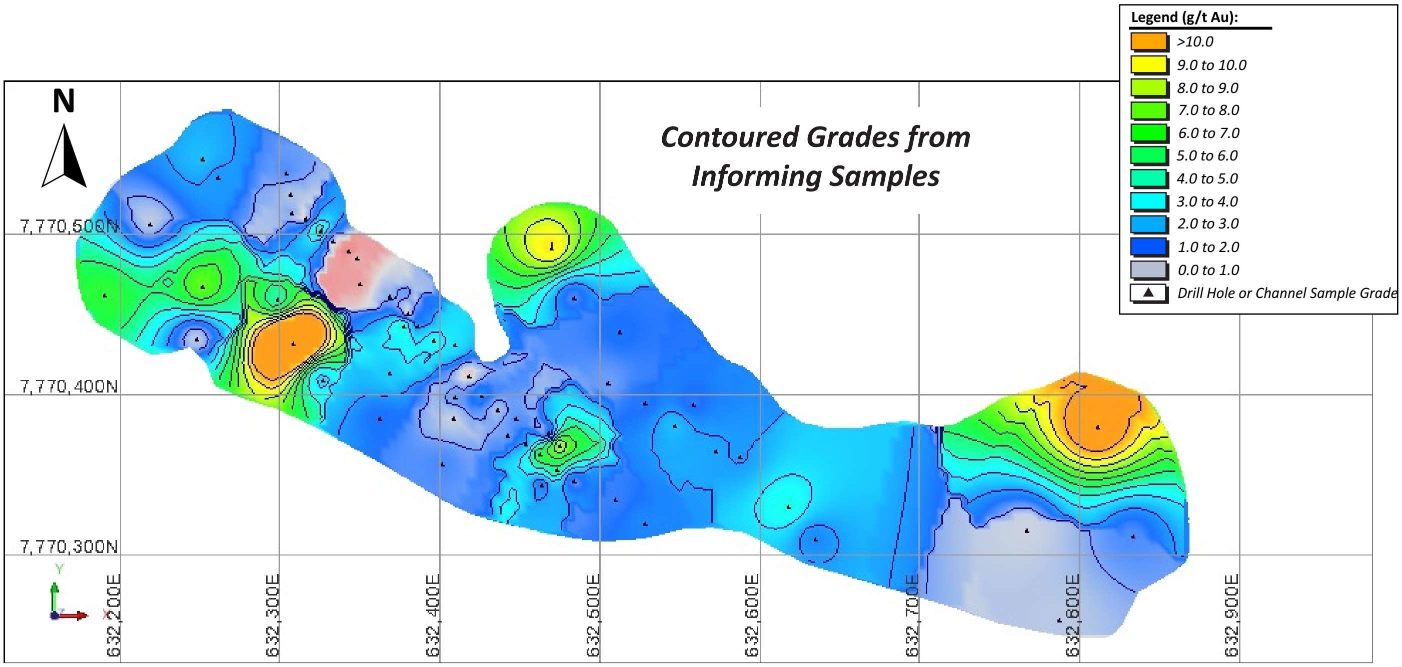
Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Bahú Deposit Domain 121

May 2023

Source: SLR, 2023.



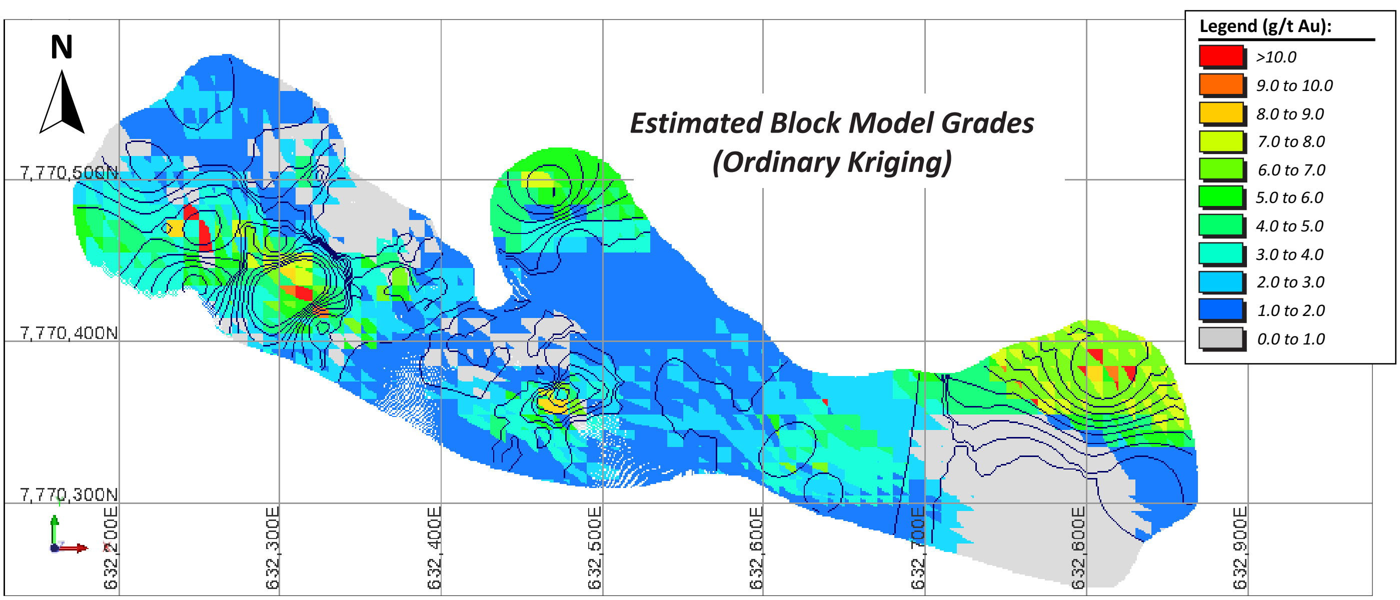


Figure 14-25

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Contoured Gold Grades vs Block Model Estimated Grades, Bahú Deposit Domain 122

May 2023 ***Source: SLR, 2023.***

14.3.12 Mineral Resource Classification Criteria

Definitions for resource categories used in this Technical Report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction". Mineral Resources are classified into Measured, Indicated, and Inferred categories.

All material at Bahú was classified into the Inferred Mineral Resource category.

14.3.13 Cut-off Grade and Reporting Criteria

Metal prices used for reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources. For resources, metal prices used are slightly higher than those for reserves.

Cut-off grades were estimated for both open pit and underground mining conceptual operational scenarios using the parameters presented in Table 14-26. Estimated operating parameters were drawn from Jaguar's 2022 actual operating costs. The estimated metallurgical recovery was derived from historical data.

A cut-off grade of 0.74 g/t Au was used for estimating the open pit Mineral Resources. A cut-off grade of 1.85 g/t Au was used for estimating the underground Mineral Resources.

Table 14-26: Mineral Resource Cut-off Grade Input Parameters, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Item	Value
Gold Price	US$1,800/oz
Exchange rate	R$5.20 : US$1.00
Estimated metallurgical recovery	92%
Mining costs – open pit	US$2.50/tonne
Mining costs - underground	R$332.21/tonne (US$63.91/tonne)
Processing costs	US$30.86/tonne
General and administration costs	US$4.10/tonne
Freight costs	US$2.16/tonne

The open pit cut-off grade parameters were used as input parameters to develop a pit shell that focused only on that mineralization that was located within the oxidized portion of the weathering profile. This pit shell was then used as a criterion for reporting the open pit Mineral Resources.

The underground cut-off grade parameters were used as input parameters to develop reporting panels that were then used as constraints for reporting the underground Mineral Resources. A cut-and-fill mining method was envisioned for preparing the reporting panels (Figure 14-26).

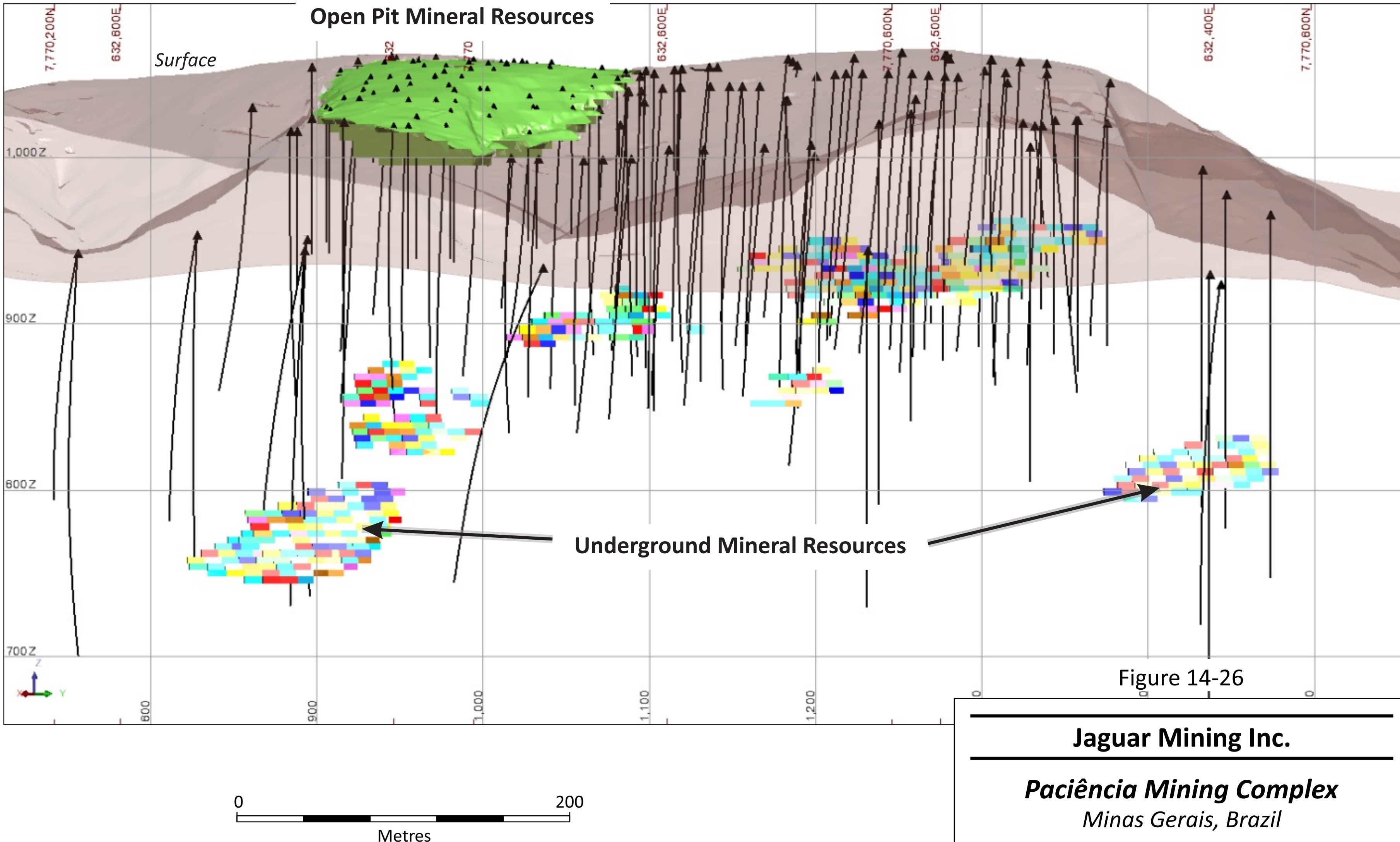


Figure 14-26

Jaguar Mining Inc.

Paciência Mining Complex

Minas Gerais, Brazil

Longitudinal Projection of the Bahú Mineral Resources

May 2023

Source: SLR, 2023.

14.3.14 Mineral Resource Estimate

The Mineral Resource estimate for the Bahú deposit is presented in Table 14-27.

Table 14-27: Mineral Resources as at March 31, 2023, Bahú Deposit
Jaguar Mining Inc. – Paciência Mining Complex

Mining Method	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Inferred Mineral Resources			
Open Pit	43	2.08	3
Underground	333	3.99	43
Total Inferred	**376**	**3.80**	**46**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Underground Mineral Resources are reported within resource reporting shapes which were generated using a cut-off grade of 1.81 g/t Au. Open Pit Mineral resources are reported within a pit shell using a cut-off grade of 0.74 g/t Au.
3. Mineral Resources are estimated using a long term gold price of US$1,800/oz Au and an average long term foreign exchange rate of R$5.20 : US$1.00.
4. Bulk density is 1.31 t/m^3 and 2.74 t/m^3 for oxidized and fresh material, respectively.
5. A minimum mining width of three metres was used.
6. Gold grades are estimated using Ordinary Kriging.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.

14.3.15 Comparison with Previous Estimates

No previous Mineral Resource estimates have been prepared for the Bahú deposit.

15.0 MINERAL RESERVE ESTIMATE

This section is not applicable.

16.0 MINING METHODS

This section is not applicable.

17.0 RECOVERY METHODS

This section is not applicable.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable.

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable.

22.0 ECONOMIC ANALYSIS

This section is not applicable.

23.0 ADJACENT PROPERTIES

This section is not applicable.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not applicable.

25.0 INTERPRETATION AND CONCLUSIONS

- The Mineral Resources for the Paciência mining complex were prepared in accordance with CIM (2014) definitions.
- The Inferred Mineral Resources are estimated to comprise a total of approximately 1.80 Mt at an average grade of 4.06 g/t Au, containing approximately 235,000 oz Au.
- Gold production took place from the Santa Isabel mine during the 2008 to 2012 period. The mine has been on a care and maintenance basis since 2012.
- Mineral Resource estimates were prepared for the mineralization present at the Santa Isabel mine and for the mineralization present at the Bahú deposit, located approximately 4.5 km to the northwest of the Santa Isabel mine. Together, these two deposits form part of the Paciência Mining Complex.
- Gold mineralization at the Santa Isabel mine consist of shallowly dipping tabular sheets in two zones: Santa Isabel/Córrego Grande and Marzagão. The Mineral Resource estimates for these two zones have been prepared to consider extraction of the mineralization using underground cut-and-fill mining method, with the material processed at the Paciência plant.
- Gold mineralization at the Bahú deposit is hosted by quartz veining and alteration of the host rocks and is modelled as shallow dipping tabular sheets that sub-parallel the regional foliation. The mineralization is considered to be amenable to extraction using open pit mining methods for the shallow portions of the deposit. Underground cut-and-fill mining method is envisioned to be utilized to extract the mineralization from the deeper portions of the deposit.
- The Mineral Resources for the Santa Isabel mine have been prepared using surface-based drill hole information, underground-based drill hole information, and underground channel sample information. The Mineral Resources for the Bahú deposit have been prepared using surface-based drill hole information.
- The surface and underground drill hole collar locations are reasonable and channel samples are appropriately located with respect to the existing underground infrastructures. The SLR Qualified Person (QP) is of the opinion that database verification procedures for the Santa Isabel and Bahú deposits comply with industry standards and are adequate for the purposes of Mineral Resource estimation.
- The sample preparation, analysis, and security procedures at the Complex are adequate for use in the estimation of Mineral Resources.

25.1 Risks

Factors that may affect the Mineral Resource estimates include:

- Changes in the metal price and exchange rate assumptions.
- Changes to the input parameter assumptions used to generate the cut-off grade used for reporting of the Mineral Resources.
- Changes to geological and mineralization shape and geological and grade continuity assumptions and interpretations.
- Due to the natural variability inherent with gold mineralization, the presence, location, size, shape, and grade of the actual mineralization located between the existing sample points may

differ from the current interpretation. The level of uncertainty in these items is lowest for the Measured Mineral Resource category and is highest for the Inferred Mineral Resource category.

- Changes to the understanding of the current geological and mineralization shapes and geological and grade continuity resulting from acquisition of additional geological and assay information from future drilling or sampling programs.
- Changes in the treatment of high grade gold values.
- Changes due to the assignment of density values.
- Changes to the input and design parameter assumptions that pertain to the assumptions for creation of underground constraining volumes.
- Changes to the input and design parameter assumptions that pertain to the assumptions for creation of open pit constraining surfaces.

26.0 RECOMMENDATIONS

1. Update the Mineral Resource estimate for the Bahú deposit with drill hole and assay information collected from the drill holes completed in 2022.
2. Collect high resolution topography survey for the Santa Isabel to Bahú area.
3. Record collar locations in both SIRGAS and Córrego Alegre datum.
4. Assign/determine location of benchmarks in both SIRGAS and Córrego Alegre datums.
5. Carry out infill drilling programs with the goal of increasing the level of confidence of the Mineral Resources to the Indicated category.
6. Carry out exploration drilling programs to search for the presence of additional mineralized zones.
7. Carry out metallurgical testing programs on representative mineralized samples from the Bahú deposit.

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28.0 DATE AND SIGNATURE PAGE

This report titled “Technical Report on the Paciência Mining Complex, Minas Gerais, Brazil” with an effective date of March 31, 2023 was prepared and signed by the following author:

(Signed & Sealed) ***Reno Pressacco***

Dated at Toronto, ON
May 30, 2023

Reno Pressacco, M.Sc., (A)., P.Geo
Associate Principal Geologist

29.0 CERTIFICATE OF QUALIFIED PERSON

29.1 Reno Pressacco

I, Reno Pressacco, M.Sc.(A)., P.Geo., as the author of this report entitled "Technical Report on the Paciência Mining Complex, Minas Gerais, Brazil", with an effective date of March 31, 2023, prepared for Jaguar Mining Inc., do hereby certify that:

1. I am an Associate Principal Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.
2. I am a graduate of Cambrian College of Applied Arts and Technology, Sudbury, Ontario, in 1982 with a CET Diploma in Geological Technology, Lake Superior State College, Sault Ste. Marie, Michigan, in 1984, with a B.Sc. degree in Geology and McGill University, Montreal, Québec, in 1986 with a M.Sc.(A) degree in Mineral Exploration.
3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #939). I have worked as a geologist for a total of 37 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a consultant on numerous exploration and mining projects around the world for due diligence and regulatory requirements, including preparation of Mineral Resource estimates and NI 43-101 Technical Reports.
   - Numerous assignments in North, Central and South America, Europe, Russia, Armenia and China for a variety of deposit types and in a variety of geological environments; commodities including Au, Ag, Cu, Zn, Pb, Ni, Mo, U, PGM, REE, and industrial minerals.
   - Vice president positions with Canadian mining companies.
   - A senior position with an international consulting firm, and
   - Performing as an exploration, development, and production stage geologist for a number of Canadian mining companies.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Paciência Mining Complex on December 7, 2022.
6. I am responsible for all Sections of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. 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.

Dated 30th day of May, 2023

(Signed & Sealed) ***Reno Pressacco***

Reno Pressacco, M.Sc.(A)., P.Geo

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