

#### 09 February 2023

ASX Market Announcements Level 6, Exchange Centre 20 Bridge Street Sydney NSW 2000



# AGUIA GREEN COPPER – UPDATED RESOURCE STATEMENT

**Sydney, Australia** - Aguia Resources Limited (ASX:AGR) ('**Aguia**' or the '**Company**') has two well-advanced mining projects in southernmost Brazil: metallic green copper and organic phosphate. Both projects are 100% owned.

Aguia is very pleased to announce that it's 2022 infill drilling campaign was successful. The geological modelling of the Green Copper Project<sup>1</sup> led to a sizable **Measured & Indicated Mineral Resources of 22.6 Mt at 0.43% Copper (Cu) and 2.11 g/t Silver (Ag)** and Inferred Mineral Resources totalizing 3.0Mt at 0.43% Cu and 1.85 g/t Ag. (*Detailed Technical information follows below*)

The Updated Resource Statement is a significant milestone in Aguia's copper story because it:

- Means that no further high-cost drilling is required;
- Provides additional certainty in relation to the copper resource;
- Permits us to proceed to the next stage the Pre-Feasibility Study (PFS), which will provide increasing economic confidence in the project; and
- Allows the start of the Environmental Impact Assessment (EIA) which leads to permitting.

In short, Aguia has an economically viable copper project, which was demonstrated in the Scoping Study announced to the market on 9 March 2021. The exploration phase for this current project we call Andrade is over, but it is just the beginning of Aguia's copper potential. Aguia has another 10 satellite targets close by, along with 1,500 sq km of copper tenements in the Rio Grande Copper Belt, where studies show unique geological similarities that suggest it once joined the famed African Kalahari Copper Belt that hosts many copper deposits and has been mined for decades.

Our largely Government funded, Research & Development, Green Copper Processing Project, is now progressing in tandem with the EIA work. <u>Click here</u> for learn more about the project.

### Management Commentary

**Managing Director Dr Fernando Tallarico said:** "We are extremely happy with the results of our 2022 infill drilling program. Moving forward, we will review the current resource model, using different cut-off grades, to determine the optimum reserve pit. The grade-tonnage sensitivity illustrates possible choices. Please see Table 2 below. This data will facilitate the improvement of the engineering of the project, which will lead us to a more robust economic model in the form of a Pre-Feasibility Study, which we expect to announce to our shareholders in the next quarter. The PFS will open the way for the environmental impact assessment and, finally, the permitting of our Copper Project."

<sup>&</sup>lt;sup>1</sup> Also know as "Andrade Copper Project" or just "Copper Project"



### **TECHNICAL INFORMATION**

The Resource Statement update was conducted by independent consulting firm GE21 Consultoria Mineral Ltda ('GE21') in Brazil. It was based on the results of an infill drilling campaign carried out by Aguia in 2022, comprising 25 core holes totalling 2646 metres drilled. The main objective of this drilling campaign was to convert the previously reported Indicated & Inferred Resources (9 of March 2021 announcement) to the Measured & Indicated Resource category. The drilling campaign was successful in converting the previous 22 Mt Indicated & Inferred Resources to Measured & Indicated Mineral Resources of 22.6 Mt at 043% Copper and 2.11 g/t Ag and Inferred Mineral Resources totalizing 3.0Mt at 0.43% Cu and 1.85 g/t Ag (see Table1).

This updated Measured and Indicated Resource offers a range of cutoffs that can potentially be applied to the upcoming resource modelling (please see Table 2, below). Please refer to the JORC-compliant resource report that is attached to this announcement.

#### **Background**

In February 2019, Aguia signed an option agreement to purchase the copper claims which form our current claims from a private Brazilian company, Referencial Geologia. In March 2019, Aguia issued a JORC-compliant Copper Resource Statement. The Statement was based on the results of 38 diamond drill holes previously drilled by Referencial Geologia between 2009 and 2010. The results were subsequently compiled into Aguia's database.

Aguia then undertook extensive exploration campaigns that included:

- A surface mapping program;
- The reprocessing of a historical airborne geophysical data package;
- Reprocessing of historical stream sediment sampling;
- Reprocessing of a historical ground geophysical survey (Induced Polarisation and Magnetometry);
- A new technological characterization of the ore samples;
- A new metallurgical program including flotation and acid-leaching test work; and
- The mapping and re-sampling of 18 historical trenches.

Our Copper Project's drilling database by the end of 2019 included:

- Detailed logging and geochemistry from 48 diamond drill holes totalling 8,986 metres;
- 23 historical trenches that were re-sampled totalling 1,646 metres; and
- 10,074 assay records.

#### Drilling 2020

In early 2020 two diamond drill holes confirmed the north and south high-grade copper zone within the existing mineral resource area. As a result of these 2 drill holes a Scoping Study was released in March 2021, which included a resource update with an Indicated Resource of 18.03 Mt at 0.41% Cu and 1.87g/t Ag and an Inferred Resource of 3.98 Mt at 0.53% Cu and 2.06g/t Ag.

#### Infill Drilling 2022

As a result a 3D Model was created to inform the next drilling phase. This entire infill drilling program comprised 25 drill holes totalling 2,646 metres and was undertaken in 2022. The goal was to take Aguia's Copper Resource to a Measured and Indicated with the certainty required to move the project to a Pre-Feasibility Study and to begin the Environmental Permitting Process. This was achieved.

The complete JORC-compliant Measured and Indicated Resource Statement is attached to this announcement. No further drilling is necessary as we now have achieved the resource category



that allows advancing with more refined engineering and economic modelling, after which we can proceed with the permitting of Aguia's metallic copper mine.

#### Mineral Resource Estimate

GE21, an independent Brazilian consulting firm, conducted the mineral resource estimate. GE21 using new drill hole data, a new geological interpretation, and a new geostatistical approach, reestimated the resource, updating the Mineral Resource classification based on variographic study and a new diamond drilling campaign. The block model supported the resource estimate. And the information carried in the block model includes:

- Rock type for mineralized and waste material.
- The mineralisation and waste density.
- Interpolated copper (%) and silver (ppm) via Ordinary Kriging.
- Interpolated copper (%) and silver (ppm) via Nearest Neighbor Method (NN Check).
- Mineral Resource Classification.
- Oxidation Model.

The resource estimate for the Andrade deposit was reported considering open pit and underground mineral resources at a cut-off grade of 0.17% Cu. No mineral reserves have been estimated for the Project at this time.

The updated mineral resource estimate consists of a Measured & Indicated Resource of 22.6 Mt grading 043% Cu and 2.11 g/t Ag containing 96,138 t of copper and 1,532 koz of silver and Inferred Mineral Resources totalizing 3.0Mt grading 0.43% Cu and 1.85 g/t Ag containing 12,812 t of copper and 179 koz of silver. The JORC (2012) Code standards were used for Mineral Resource classification.

Aguia Resources Limited – Andrade Deposit   Effective date 31/12/2023						
		Maga	Average Value		Metal Content	
Class	Domain	IVIASS	OK_Cu	OK_Ag	OK_Cu	OK_Ag
		kt	%	g/t	t	kt. oz
	HG OX	0.13	1.38	12.21	1.73	0.05
	HG SULF	624	1.42	5.10	8 830	102
MEASURED	LG OX	158	0.37	3.74	578	19
	LG SULF	1 031	0.35	3.02	3 633	100
	Total	1 813	0.72	3.80	13 043	221
	HG SULF	526	1.54	8.10	8 109	137
	LG OX	900	0.38	2.34	3 418	68
INDICATED	LG SULF	19 341	0.37	1.78	71 569	1 105
	Total	20 766	0.40	1.96	83 096	1 310
	HG OX	0.13	1.38	12.21	1.73	0.05
	HG SULF	1 150	1.47	6.47	16 939	239
MEA+IND	LG OX	1 058	0.38	2.55	3 996	87
	LG SULF	20 372	0.37	1.84	75 202	1 206
	Total	22 580	0.43	2.11	96 138	1 532
INFERRED	HG SULF	173	1.60	7.71	2 765	43
	LG OX	282	0.33	1.13	937	10
	LG SULF	2 548	0.36	1.53	9 110	126
	Total	3 003	0.43	1.85	12 812	179

#### Table 1 - Mineral Resource Table

Notes:

1. Definitions were followed for Mineral Resources. Mineral Resources also conform to JORC (2012) Code.

2. Mineral Resources are stated within a resource pit shell optimized above a cut-off grade of 0.17% Cu.

3. Average bulk densities of 2.68 t/m<sup>3</sup> for high-grade domains and 2.60 t/m<sup>3</sup> for low-grade and waste domains were applied.



4. Mining loss of 0% and mining dilution of 0% factors have been applied to the reported figures.

5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

6. Totals may not sum due to rounding.,

7. Bernardo H. C. Viana BSc. (Geo) MAIG, a geologist and full-time director and owner of GE21, is the CP responsible by the Andrade Copper Resources estimate.

A grade and tonnage analysis was carried out on the Mineral Resource report for Andrade Mineral resource. Table 2 presents Grade x Tonnage analysis results with some selected cut-off grades for copper.

Curve		Cu%			
Cut-off grade (Cu %)	Tonnes (millions)	Average grade (Cu %)	Metal Content kt Cu		
0	25.6	0.43	108.95		
0.1	25.5	0.43	108.90		
0.2	23.8	0.45	106.22		
0.3	16.9	0.52	88.64		
0.45	7.5	0.72	53.50		
0.5	5.0	0.83	41.99		
0.7	1.7	1.36	23.15		
1	1.2	1.62	18.86		
1.3	1.02	1.69	17.17		
1.5	0.70	1.81	12.63		
2	0.12	2.35	2.83		

#### Table 2 - Grade versus Tonnage Analysis - Copper

# AUTHORISED FOR ISSUE TO ASX BY FERNANDO TALLARICO, MANAGINGDIRECTOR OF AGUIA RESOURCES LIMITED

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#### About Aguia:

Aguia Resources Limited, ("Aguia") is an ASX listed multi commodity company (AGR:ASX) with preproduction phosphate and copper sulphate projects located in Rio Grande do Sul, the southernmost state of Brazil. Aguiahas an established and highly experienced in-country team based in Porto Alegre, the capital of Rio Grande do Sul. Aguia's first project, the Três Estradas Phosphate Project is expected to be in production by Q4 2021. Aguia is committed to advancing its existing projects into production whilst continuing to pursue other opportunities within the agricultural sector.

#### **JORC Code Competent Person Statements:**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Fernando Tallarico, who is a member of the Association of Professional Geoscientists of Ontario. Dr Tallarico is a full-time employee of the company. Dr Tallarico has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration andto the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Tallarico consents to the inclusion in the report of the matters based on his information in the form and context in whichit appears. The report compilation was done by Mr Bernardo H C Viana, a geologist and full-time director and owner of GE21 and is registered as Competent Person in the AIG (Australian Instituteof Geoscientists). Mr. Viana has sufficient relevant experience in the style of mineralization to qualify as a Competent Person as defined in the JORC Code (2012). Mr Viana also meets the requirements of aCompetent Person under the AIM Note for Mining, Oil and Gas Companies. Mr Viana consents to the inclusion in this report of the matters based on the GE21 study in the form and context in which it appears.

#### Caution regarding forward-looking information:

This press release contains "forward-looking information" within the meaning of applicable Australian securitieslegislation. Forward-looking information includes, without limitation, statements regarding the next steps for the project, timetable for development, production forecast, mineral resource estimate, exploration program, permit approvals, timetable and budget, property prospectivity, and the future financial or operating performance of the Company. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects", or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including, but not limited to: general business, economic, competitive, geopolitical and social uncertainties; the actual results of current exploration activities; other risks of the mining industry and the risks described in the Company's public disclosure. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be otherfactors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information except in accordance with applicable securities law.



February 9, 2023

I, Bernardo H. C. Viana, MAIG, do hereby consent to the public filing of the report titled "Andrade Copper Project Independent Technical Memorandum – Resource Estimate Update - Caçapava do Sul, RS, BRASIL" (the Technical Report), prepared for Aguia Resources Limited and dated February 9, 2023, and to the use of extracts from the Technical Report in the press release of Aguia Resources Limited dated February 9, 2023 (the Press Release).

I also certify that I have read the Press Release and that it fairly and accurately represents the information in the Technical Report that supports the Press Release.

Bernardo H. C. Viana - dille FAIG 3709

(Signed) Bernardo H. C. Viana Bernardo H. C. Viana, MAIG



# ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL MEMORANDUM –



Resource Estimate Update Caçapava do Sul, RS, BRASIL

Prepared by GE21 Ltda on behalf of:

## **Aguia Resources Limited**

Effective Date:

31/12/2022 09/02/2023

<u>Authors:</u> Bernardo H Cerqueira Viana – (Geologist) MAIG





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	Bernardo H. C. Viana			
	Geologist			





# UNITS, SYMBOLS AND ABBREVIATIONS

Abbreviations				
Long Form	Short	Notes		
A million years	Ма			
Australian Institute of Geoscientists	AIG	Professional association		
Brazil	BR			
Canadian Institute of Mining	CIM			
Capital Expenditure	CAPEX			
Centimetre	cm			
Certified Reference Materials	CRM			
Compensação Financeira por Exploração Mineral	CFEM			
Competent Person	CP			
Dip	DIP	Direction or angle that the plane of a rock formation makes with horizontal		
Earnings before interest, taxes, depreciation and amortization	EBITDA			
East	E			
Hectare	ha			
Income Tax and Social Contribution on Net Profit	CSLL			
IRPJ	IR	Income Tax		
Internal Rate of Return	IRR			
Kilometre	km			
Life of mine	LOM			
Maximum	Max			
Member of the Australian Institute of Geoscientists	MAIG			
Member of the Australian Institute of Mining and Metallurgy	MAusIMM			
Metre	m			
Millimetre	mm			
Minimum	Min			
Nearest Neighbour	NN			
North	Ν			

Aguia Resources; Andrade Copper Project; Caçapava do Sul; RS, Brasil Update Resources Estimate and Scoping Study - Memorandum - February 9<sup>th</sup>, 2023





	Abbreviations	
Long Form	Short	Notes
Ordinary Kriging	ОК	
Operational Expenditure	OPEX	
Ounces	oz	
Quality Assurance and Quality Control	QAQC	
Run-of-Mine	ROM	
Social Contribution	CSLL	
South	S	
South American Datum	SAD	South American Datum
Strip Ratio	SR	Total waste(t)/Total mineral(t)
Three-dimensional	3D	
Tonne	t	
Variographic sill 1	c1	
Variographic sill 2	c2	
Weighted Average Cost of Capital	WACC	
West	W	





### INDEX

1	INTRO	DUCTION	9
2	LOCAL	L RESOURCES AND INFRASTRUCTURE	11
3	GEOLO	0GY	12
	3.1	Deposit type	13
4	EXPLC	DRATION	16
5	DRILLI	ING	16
6	SAMPI	LE PREPARATION, ANALYSES AND SECURITY	19
•	6.1	DENSITY SAMPLING METHOD AND APPROACH	20
	6.2	SECURITY	21
	6.3	QUALITY CONTROL AND QUALITY ASSURANCE MEASURES	21
	6.3.1	Previous campaigns (Referencial)	21
	6.3.	.1.1 Standards	21
	6.3.	.1.2 Duplicates	25
	6.3.	.1.3 Blanks	27
	6.3.	.1.4 Check-assay program	29
	6.3.2	Recent campaigns (Aguia Resources)	29
	6.3.	.2.1 Standards	29
	6.3. 6.3	2.2 Duplicates	31
7			35
'	7 1		35
	7.1		33
	7.2		37
	7.4	CAPPING LEVELS	38
	7.5	VARIOGRAPHY	40
	7.6	DENSITY DATA	41
	7.7	BLOCK MODELS	41
	7.8	SEARCH STRATEGY AND GRADE INTERPOLATION	
		PARAMETERS	42
	7.9	BLOCK MODEL VALIDATION	42
	7.10	MINERAL RESOURCE CLASSIFICATION	50
	7.11	MINERAL RESOURCE REPORTING	53
8	CONC	LUSIONS AND RECOMMENDATIONS	55
9	REFER	RENCES	56



# FIGURES

Figure 1-1 – Project Location Map.	9
Figure 1-2 – Tenement permit areas - Location map.	11
Figure 3-1 – Geological map of the Andrade deposit area.	14
Figure 3-2 – Mineralization Styles at Andrade.	15
Figure 5-1 – Map of Drillholes at the Andrade Deposit.	18
Figure 5-2 – Representative Drillhole and Geological Vertical Cross Section.	19
Figure 6-1 – Control chart: standard G394-4.	22
Figure 6-2 – Control chart: standard AMIS0071.	23
Figure 6-3 – Control chart: standard AMIS0072.	23
Figure 6-4 – Control chart: standard AMIS0088.	24
Figure 6-5 – Control chart: standard AMIS0119.	24
Figure 6-6 – Control chart: duplicates (copper).	25
Figure 6-7 – Control chart: duplicates (silver).	26
Figure 6-8 – Control chart: blind duplicates (copper).	26
Figure 6-9 – Control chart: blind duplicates (silver).	27
Figure 6-10 – Control chart: blank (copper).	28
Figure 6-11 – Control chart: blank (silver).	28
Figure 6-12: Result of the Analysis of Cu Content for CRM ITAK-809	30
Figure 6-13: Result of the Analysis of Cu Content for CRM ITAK-833	30
Figure 6-14: Result of the Analysis of Ag Content for CRM ITAK-833	31
Figure 6-15: Result of the analysis of Cu for field duplicates, for Diamond Drilling	32
Figure 6-16: Result of the Analysis for Cu of Fine Blank Samples	33
Figure 6-17: Result of the Analysis for Ag of Fine Blank Samples	33
Figure 6-18: Result of the Analysis for Cu of Coarse Blank Samples	34
Figure 6-19: Result of the Analysis for Ag of Coarse Blank Samples	34
Figure 7-1 – 3D Updated Mineralization Model – Andrade Deposit.	37
Figure 7-2 – Sample length histogram.	38
Figure 7-3 – Ag (ppm) Probability Plot – Capping definition.	39
Figure 7-4 – Directional Variograms of LG + HG samples.	40
Figure 7-5: Visual inspection and comparison of block grades with composited assay grades a	and block
model vertical section.	43
Figure 7-6: NN Check for Cu% within HG Domain – Measured, Indicated and Inferred resource	44
Figure 7-7: NN Check for Cu% within LG Domain – Measured, Indicated and Inferred resources	44

indicated resources.



54

Figure 7-8 – Swath Plot Analysis for Cu (%) within HG Domain – Measured, Indicated and Inferred resource. 46
Figure 7-9 – Swath Plot Analysis for Cu (%) within LG Domain – Measured, Indicated and Inferred resource. 47
Figure 7-10: Swath Plot Analysis for Ag (g/t) within HG Domain – Measured, Indicated and Inferred resource 48
Figure 7-11: Swath Plot Analysis for Ag (g/t) within LG Domain – Measured, Indicated and Inferred resource 49
Figure 7-12: Ordinary kriging estimate passes (A) and Euclidean distance to nearest sample (B) applied in Mineral Resource classification criteria 51
Figure 7-13 – Mineral resource Block Model and Resource Shell Performed in Whittle Software. The       Iongitudinal dimension of the pit is approximately 1.3km.       51
Figure 7-14: Grade tonnage graphs for copper (A) and silver (B), considering measured, inferred and



## TABLES

Table 1-1 – Tenement Permits Area Summary.	10
Table 5-1: Diamond drilling campaing performed by Aguia in 2022	17
Table 6-1 - Certified Reference Materials.	21
Table 6-2: Aguia CRM Evaluation Criteria	29
Table 6-3: Aguia Blank Evaluation Criteria	32
Table 7-1 – Drilling Summary Previously to 2010.	35
Table 7-2: New diamond drilling holes performed in 2019, 2020 and 2022 campaigns.	36
Table 7-3 - Andrade Resource Assay Statistics.	39
Table 7-4 - Modelled Variogram Parameters for Andrade Deposit.	40
Table 7-5 - Block Model Properties.	41
Table 7-6 - Search Ellipse Parameters for Grade Interpolation.	42
Table 7-7: Input Cost Assumptions Under Requirement of	52
Table 7-8: Mineral Resource Table	53
Table 7-9: Grade x Tonnage Analysis - Copper	55



## **1 INTRODUCTION**

GE21 Consultoria Mineral Ltda. (GE21) was engaged by Aguia Resources Limited to develop an update resources estimation compliant with JORC (2012) for the Mineral Resources and Mineable Resources for the Andrade Copper Project (Andrade Project). The Project is located in Caçapava do Sul, in the central southern region of the state of Rio Grande do Sul, approximately 260 km from the capital Porto Alegre by BR-290 (see Figure 1-1).



Figure 1-1 – Project Location Map.

Aguia is an exploration and development company, which is listed on the Australian Securities Exchange (ASX) under the symbol AGR. The company's corporate offices are located in Sydney, Australia and Porto Alegre, Brazil.

On February 27, 2019, Aguia announced that it had entered into an option agreement with Referencial Geologia Ltda. (Referencial) to acquire the Andrade deposit. Upon the exercise of the agreement, Aguia will become the sole titleholder of the Project.

All costs are expressed in Australian Dollars.

GE21 professionals completed a site visit to the Andrade Copper Project on 27 to 28 October, 2020.





Geologist Bernardo Viana, a professional with 20 years of geological and mining related experience ranging from execution, management and coordination of geology projects to resource estimation in a variety of commodities including Fe, Mn, Bauxite, Au, Cu, Ni, Zn and Phosphate in Brazil, Uruguay, Peru, Argentina, Venezuela, Colombia, Chile and Angola. He is a CP, member of the Australian Institute of Geoscientists ("MAIG") and is independent of Águia.

Maiden Mineral Resource estimation and classification of the Andrade Copper Project was prepared by Roscoe Postle Associates Inc. (RPA), with an effective date of March 13<sup>th</sup>, 2019, as verified by GE21 on NI43-101 Technical Report titled "Technical Report on the Andrade deposit, State of Rio Grande do Sul, Brazil", issued May 2<sup>nd</sup>, 2019.

GE21 using new drill hole data, a new geological interpretation, and a new geostatistical approach, re-estimated the resource to update the Mineral Resource classification based on variographic study and new diamond drilling campaign.

Andrade Copper Project area is situated at latitude 30°31'32.5"S, longitude 53°31'53.5"W. Mineral tenure is held through three mineral rights, all issued by the National Mining Agency (ANM), as listed in Table 1-1.

Six exploration permits comprise the immediate surroundings of the Andrade deposit, with a total area of 5,158.7 ha (see Figure 1-2). Aguia holds 100% interest in the six mineral rights permits covering the Andrade Copper Project area.

Claim Number	Area (ha)
811.092/2017	1,015.46
810.187/2018	730.26
810.636/2007	1,046.54
810.808/2008	279.03
810.345/2009	115.91
810.647/2008	1,971.49
Total	5,158.7

Table 1-1 – Tenement Permits Area Summary.







Figure 1-2 – Tenement permit areas - Location map.

# 2 LOCAL RESOURCES AND INFRASTRUCTURE

Caçapava do Sul is located in the central southern region of the state of Rio Grande do Sul, approximately 260 km from the state capital, Porto Alegre by BR-290. It has an area of 3,047,113 square kilometres and its estimated population was 33,624 inhabitants in 2019. Caçapava is a municipality bathed by the waters of the Camaquã, Santa Bárbara and Irapuá



rivers. The region has an excellent infrastructure and easy access, it is well served by hotels, hospitals, universities, banks and schools, in addition to being close to an important outflow point, the Port of Rio Grande, located 250 km from Caçapava do Sul by BR-392.

The climate of the region is subtropical or temperate. Summers are mild (days with temperatures over 30 °C are infrequent), in locations above 300 m in altitude. Summers have slightly higher temperatures in lower altitude locations. Winters are relatively cold, with frequent frosts. Snow events are uncommon, occurring at most between once and twice a decade, and very weakly and quickly. The last recorded snowfalls occurred on July 23<sup>rd</sup>, 2013 in Caçapava do Sul (previously 1983) with a precipitation that lasted for about three hours in the early morning.

The drainage network in the project area is part of the Rio Vacacaí sub-basin, a confluence of the Jacuí River. The main rivers in the region are the Bossoroca, São Rafael and Santa Bárbara rivers. The main drainage pattern is rectangular dendritic, with low density in areas of sedimentary cover and high density in areas of metapelite exposure.

## 3 GEOLOGY

All the information presented in this section is found in 2021 Andrade Project Scooping Study, carried out by GE21. The Project area is in the central southern region of the State of Rio Grande do Sul, within the limits of the Paraná Basin and Coastal Plain, in the portion also named Rio Grande do Sul Shield. The Project area is inserted in the São Gabriel Domain, composed the Vacacaí Metamorphic Complex, Brasilian Granitoids, and volcanic and sedimentary rocks of the Neoproterozoic-Ordovician, as well as sedimentary coverage of the Paraná Basin.

The Vacacaí Metamorphic Complex (705±2 Ma) contains the units hosting the mineralization. They are supracrustal rocks consisting of acid to basic metavolcanic, metavolcanoclastic, chert and ferriferous formations, in addition to meta-arenites, metapelites, silicon calcium, amphibolites, magnesian schists, and serpentinites. These rocks have metamorphosed under greenschist facies and amphibolite conditions.

The Caçapava Granite (562±8 Ma) is a calcalkaline peraluminous granite of the Brasilian Granitoids unit. It has been metamorphosed to greenschist facies and presents parallel foliation to the schistosity of the rocks of the Vacacaí Metamorphic Complex.

The rocks of the Neoproterozoic-Ordovician are subdivided into four allogroups: Maricá, Santa Bárbara, Bom Jardim, and Guaritas. The Maricá Allogroup consists of the base of the "Camaquã Basin," and comprises continental, transitional and shallow-water platform marine deposits in a transgressive trend. The Bom Jardim Allogroup is an alluvial fan facies in elongated river basins intercalated with basic and intermediate volcanic rocks with shoshonitic affinity to the Hilário Formation. The Santa Bárbara Allogroup, at its base, comprises the Acampamento Velho Formation, formed by volcanic and pyroclastic rocks with acid composition, aged 545.1  $\pm$  12.7 Ma. Its upper portion consists of the Santa Bárbara Formation, in which continental deposits with lacustrine, fluvial, and alluvial origin occur. The Guaritas Allogroup (equivalent to the Guaritas



Formation) indicates aeolian activity, with associations of alluvial, fluvial, and lacustrine facies. Close to the base of this unit, the basic and intermediate alkaline volcanic rocks of the Rodeio Velho Member occur, with an age of circa 470 Ma.

The sedimentary strata of the Paraná Basin is lodated in the Rio Bonito and Palermo formations. The Rio Bonito Formation, of Eopermian age, is formed mainly of sandstones, siltstones, shales, and, subsidiarily, layers of coal and limestone. The Palermo Formation is described as a sequence of yellow-grey siltstones, with intense bioturbation and rare lenses of fine to conglomeratic sandstones and carbonate layers.

The local geology of the Andrade deposit area is dominated by four main packages, named; the Vacacaí Complex, hosting the mineralization, the Caçapava Do Sul Granite Complex, and the Bom Jardim and Santa Barbara formations. Most units have been subjected to metamorphism and late stage brittle deformation.

## 3.1 Deposit type

The Andrade deposit is located on the western flank of the Caçapava Granite. The local geological mapping reveals the presence of three large geologic domains from east to west: 1) granitoids of the Caçapava do Sul Granitic Suite, which is in tectonic contact with the 2) Basic Metavolcano-Sedimentary Unit (Amphibolites) of the Vacacaí Metamorphic Complex, which grades into the intermediate to acid metavolcano-sedimentary package (feldspar chlorite schists and quartz chlorite schists), which in turn, is in both tectonic and erosive contact with the 3) conglomeratic sediments of the Santa Bárbara Formation (Figure 3-1).







Figure 3-1 – Geological map of the Andrade deposit area.

At the west flank of the Andrade deposit, the meta-andesites and meta-dacites are enriched in copper as indicated by surface occurrences of malachite, chrysocolla, and chalcocite which are disseminated concordantly with the foliation and infilling fractures. The occurrences are associated with a shear zone observed in the field and named Andrade Fault. At depth, the mineralization has a mineral sulphide paragenesis composed of chalcocite > bornite >



chalcopyrite > pyrite, with smaller concentrations of native copper. The sulphides occur disseminated, intergrown in the matrix, usually granular, and sometimes with coated texture (e.g., pyrite enveloped by chalcocite, bornite enveloped by chalcocite, chalcopyrite enveloped by bornite) and in stockwork veins and in zones brecciated by hydrothermalism (carbonate-chlorite-quartz zones, albite-hematite zones and metavolcanic zones brecciated with druses). The Andrade copper mineralization is hydrothermal and structurally controlled.

Based on geochronologic and isotopic data, the copper mineralization hosted in the schists of the Vacacaí Metamorphic Complex (which belong to the Passo Feio Formation) classifies as epigenetic hydrothermal, generated 562 Ma ago during the intrusion of the Caçapava do Sul Granite. The source of the copper mineralization has a magmatic-sedimentary origin. Figure 3-2 shows mineralization styles at Andrade.



Figure 3-2 – Mineralization Styles at Andrade.

The metamorphic structures in these volcanic rocks present a preferential mylonitic foliation direction Sn=N15°-20°E and a second foliation Sn+1= N40°E, diving 40°-70°NW, with a sinistral preferential movement observed on field in the quartz boudins, which are found mainly in the meta-andesites. This volcanic package presents northwest trending structures which dislocate the host rock package and mineralization, as well as north-northeast structures with a brittle regime sinistral dislocation, which may have resulted in the tectonic breccias found in the meta-andesite.

The most appropriate mineralization model for the Andrade Deposit is that of an intrusion related copper mineralized system. Magmatic-sedimentary derived fluids have exploited a pre-existing shear system and precipitated sulphide minerals as hydrothermal breccias, and disseminations in the host rock and on the selvedges of carbonate veinlets.



## 4 EXPLORATION

Previous exploration activities in the region carried out by Referencial include surface mapping program and the reprocessing of a historical airborne geophysics data package. Additionally, a stream sampling program was conducted in the drainages around the north and western edges of the Caçapava Granite. Following the surface mapping, Referencial conducted a of ground based geophysical survey campaign (Induced Polarization (IP) and Magnetometric). All exploration data obtained by Referencial has been provided to Aguia.

As part of the surface mapping program, Referencial cleaned, mapped, and resampled 18 historical trenches at the Andrade deposit. These samples were collected as one metre long chip channel samples along the walls of the trench. Trench sample locations are clearly marked by metal sample tags pinned to the rock of the trench. Aguia technical staff have resampled the same intervals and have found that their results show close agreement with the re-sampling program conducted by Referencial in 2009 and 2010. The 894 samples collected from the trenching work at Andrade showed mean grades of 0.288% Cu and 3.18 g/t Ag with maximum grades of 0.4% Cu and 60.8 g/t Ag.

These trench samples are included in the resource database as drill holes. The influence of the trench samples for the purpose of estimating Mineral Resources was restricted to the oxidized zone of the deposit.

## 5 DRILLING

Referencial conducted drilling programs over the Andrade deposit in 2009 and 2010. In 2009, drilling contractor Geoserv Pesquisas Geológicas S.A. drilled 13 holes with a total length of 2,004.5 m and in 2010, Boart Longyear drilled 25 holes totalling 6,401.85 m at the Andrade deposit.

All holes were collared and drilled in HQ core size to advance through the regolith. Upon contact with fresh rock, drill holes were continued using NQ size equipment. Drill hole collars were initially marked out using a handheld global positioning system (GPS) unit and final drill hole collar locations were surveyed with a differential GPS unit, utilizing both fixed and mobile base stations. Downhole measurements of azimuth and dip deviation were taken at three metre intervals using a Reflex Maxibor survey tool.

The drill core was placed into wooden core boxes and drilling induced fractures were marked on the core, core boxes were then sealed and transported to the core logging facility for logging and sampling by Referencial staff. Drill holes were logged by the technical staff of Referencial using a minimum logging interval of 0.5 m. Cores were logged for lithology, structure, alteration, weathering state, and geotechnical parameters (rock quality designation (RQD), joint surface, joint angles, etc.).



Descriptions were logged directly into a Microsoft Excel database. The logging database was backed up daily onto a separate server.

As part of the due-diligence process, Aguia drilled two twin holes (AND-19-001 and AND-19-003) and three further holes to confirm the results of the Referencial drilling programs. The result of these holes closely agreed with the results from the previous drilling program. All drill hole collars were located, and the collar positions were confirmed using a handheld GPS unit. All drill core from the 2009 and 2010 drilling campaigns have been preserved and maintained in a secure storage facility. Representative holes from these campaigns have been re-logged by Aguia technical staff to confirm the existing logs and to ensure consistency of logging across the two owners.

In 2020, Aguia conducted a short diamond drilling program objecting to test the continuity of the high-grade zones along the plunge. The program consisted in two drillholes named as AND-20-004 and AND-20-005, with 197.15 meters of drilling.

A new drilling campaign was carried out by Aguia in 2022, totalling 25 diamond drilling holes and 2646.21 meters of drilling. The drillholes carried out in the 2022 drilling campaign are detailed in Table 5-1 below:

Hole ID	UTM_E	UTM_N	Elevation (m)	Depth (m)	Azimuth	Dip
AND-22-006	257085.31	6620427.50	286.54	100.30	88.05	64.12
AND-22-007	257112.77	6620427.80	300.36	80.45	88.58	60.04
AND-22-008	257069.24	6620455.20	281.54	80.93	92.74	64.75
AND-22-009	257066.05	6620489.50	286.54	112.63	86.66	65.07
AND-22-010	257034.98	6620476.80	275.65	121.55	88.32	59.85
AND-22-011	257084.84	6620525.20	295.00	110.25	90.77	59.90
AND-22-012	257106.53	6620552.40	291.54	100.45	89.36	59.95
AND-22-013	257152.33	6620524.80	306.19	81.95	88.50	58.45
AND-22-014	257155.25	6620581.40	298.60	61.60	87.87	59.07
AND-22-015	257157.69	6620639.30	294.87	40.25	90.42	59.61
AND-22-016	257175.63	6620481.40	315.66	79.05	87.33	62.32
AND-22-017	257097.00	6620381.00	283.00	91.65	91.82	59.40
AND-22-018	257004.00	6620426.00	258.00	120.5	89.91	55.10
AND-22-019	257032.00	6620381.00	256.00	121.10	84.59	63.25
AND-22-020	257000.00	6620324.00	222.00	144.55	86.95	60.62
AND-22-021	257129.00	6620498.00	301.00	90.60	88.11	49.82
AND-22-022	257072.00	6620360.00	231.00	100.25	87.03	62.43
AND-22-023	257092.00	6620324.00	267.00	97.90	85.54	65.90
AND-22-024	257050.00	6620072.00	238.00	151.60	86.83	61.54
AND-22-025	257044.00	6620028.00	227.00	121.00	87.28	60.60
AND-22-026	256977.00	6619986.00	228.00	178.25	88.56	61.48
AND-22-027	257015.00	6620080.00	227.00	98.45	89.90	59.56
AND-22-028	257016.00	6620162.00	236.00	111.05	90.39	59.50
AND-22-029	257058.00	6619985.00	226.00	149.10	85.58	59.72
AND-22-030	257040.00	6620242.00	242.00	100.80	84.34	70.31

Table 5-1: Diamond drilling campaing performed by Aguia in 2022

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Update Resources Estimate and Scoping Study - Memorandum - February 9th, 2023





Aguia followed the same procedures as Referencial, except data were logged on paper prior to being entered into a digital database. Figure 5-1 shows the locations of drill hole collars at the Andrade deposit. A representative cross-section of drilling through the Andrade deposit is shown in Figure 5-2.



Figure 5-1 – Map of Drillholes at the Andrade Deposit.







Figure 5-2 – Representative Drillhole and Geological Vertical Cross Section.

## **6 SAMPLE PREPARATION, ANALYSES AND SECURITY**

Once each drill hole was logged, the core was marked for density measurements and sampling after which wet and dry photographs were taken of all cores. The sampling intervals were marked by the geologist who logged the hole. Sample lengths were targeted to be one metre but were altered to observe lithological contacts. Samples lengths were a minimum of 0.5 m and a maximum of 1.5 m.

Following the photographs and density measurements, the core was half split along sample interval lines by trained technicians. The core was split using a diamond core saw. The position of the cutting line was drawn to make a high angle to the dominant planar structure within the core and then split in half along the marked up cutting line. The left side of the core was retained in storage for reference while the right side was used for sampling.

Sample preparation was undertaken by ALS Chemex preparation laboratory in Vespasiano-MG, Brazil, using internal standard procedures (rock and drill samples). The sample was dried if required and crushed to 70% less than 2 mm, 250 g, and 1 kg, respectively.

The samples were then split using a riffle splitter and pulverized to at least 85% passing less than 75  $\mu$ m.



Samples were dispatched from the ALS Chemex preparation laboratory to the primary assay laboratory, ALS Chemex in Lima, Peru, for analysis employing selected techniques.

ME-ICP61, which uses inductively coupled plasma atomic emission spectroscopy (ICP-AES) for 33 elements was used for the 2009 drilling samples, ME-ICP61a was used for the 2010 campaign samples. For gold analysis, Au-AA26 was used.

Routine assays were conducted using a four acid 'near total' digestion with ICP-AES finish (ME-ICP61 process) to provide analysis for 33 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn).

All copper and cobalt determinations were re-assayed by four acid (HF-HNO3-HClO4) digestion, HCl leach and ICP finish to provide an improved level of accuracy on these values (method) ME-OG62.

As a standard procedure, Referencial carried out routine quality assurance (QA) and quality control (QC) analysis on all assay results, including the systematic insertion of certified reference materials (CRMs), blanks, and field duplicates. In total, 7,613 samples were submitted to ALS Chemex, including 235 duplicates, 130 blind duplicates, 138 blanks, and 428 CRM samples. Aguia maintained these procedures along the 2019-2022 campaign.

The SGS Geosol Laboratórios Ltda., Belo Horizonte, Brazil, (SGS) was used as the umpire laboratory. In total, 810 samples were sent to the SGS laboratory, including 22 blanks and 65 CRM samples. For ICP40B method was used for the analysis of copper. All the laboratories used in sample preparation and analysis are independent of Aguia.

## 6.1 DENSITY SAMPLING METHOD AND APPROACH

After the completion of the geological and geotechnical logging, the intervals from which the density samples were to be collected were selected. The intervals were recorded in the Density Plan spreadsheet by the responsible geologist and subsequently used by the technician in charge of the density measurements.

Density measurements were taken from core of each drill hole surrounding and within the resource area. The samples for density measurements were selected at 20 m intervals from surface and shifted where required to avoid lithological boundaries. A section of core 15 cm to 20 cm long was selected at 20 m spacing for density measurements. It was ensured that these core selections were representative of their lithological interval. In total, 648 density measurements were made using the Archimedes method.

While the procedures for measuring the densities appear to be appropriate; when reviewing the results, Aguia technical staff noted that the measured densities appeared to be lower than expected for the rock type. Aguia technical staff carried out their own density measurements and found that measured rock densities were approximately 5% higher than that obtained by Referencial. These samples have been sent to an independent laboratory for verification, and once confirmed will be incorporated into future model iterations.





### 6.2 SECURITY

Referencial maintained the integrity and security of the core from the drill rig until arrival at the preparation laboratory according to the following internal control procedures.

All drill sites are cordoned off and only authorized personnel are allowed access. Once each core box at the rig is full, a lid is placed on the core box and nailed down. The core is transported to the secure core shed each evening.

The core sheds are kept locked when not active, and during active periods access was restricted to authorised Referencial staff. All logging and sampling activities are carried out within the restricted core sheds. The second storage core shed is kept locked and alarmed when not active.

Sample security procedures for Andrade are in line with industry standards based on discussions with Aguia staff and observations made during the site visit.

### 6.3 QUALITY CONTROL AND QUALITY ASSURANCE MEASURES

The QA/QC program was carried out to control the quality and reliability of the sample preparation and assay. Referencial and Aguia followed a strict protocol for the insertion of QC samples. In any assayed batch, 15% of the samples were reference samples such as CRMs (standards), duplicates, and blanks. In a batch of 40 samples, 34 samples would be core samples and six samples would be reference samples (two duplicates, three standards and one blank).

### 6.3.1 Previous campaigns (Referencial)

GE21 in 2020 scoping study validated the data generated by the drilling campaign carried out by Referencial between the years of 2009 and 2010. The QAQC analysis is presented in items 6.3.1.1, 6.3.1.2, 6.3.1.3 and 6.3.1.4.

### 6.3.1.1 Standards

For the 2009 drilling campaign, the reference standards used were not certified for copper. In order to validate the assay results, a set of 102 duplicates samples were submitted along with 30 certified standards and compared to the original sample results. The duplicates showed excellent correlation with original analyses. For the 2010 drilling campaign, copper and blank CRMs from African Mineral Standards, as well as a gold CRM from Geostats Pty Ltd., Australia were used. The standards used are shown in Table 6-1.

Standard	Certified Value	Standard Deviation
AMIS088 (Cu %)	0.32	0.0222
AMIS119 (Cu %)	0.63	0.054
AMIS071 (Cu %)	0.88	0.063
AMIS072 (Cu %)	1.64	0.095
G398-4 (Au ppm)	0.66	0.05

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All CRMs were pre-packaged in 50 g sachets and were selected to reflect the range of expected copper grades of the Andrade deposit.

The small number of anomalous results from standards were investigated and can be attributed to minor human errors such as mislabelling standards or inserting a blank sample in place of a standard. All remaining CRM analyses fell within two standard deviations of the certified value (Figure 6-1 to Figure 6-5).



Figure 6-1 – Control chart: standard G394-4.







Figure 6-2 – Control chart: standard AMIS0071.



Figure 6-3 – Control chart: standard AMIS0072.

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Figure 6-4 – Control chart: standard AMIS0088.



Figure 6-5 – Control chart: standard AMIS0119.





### 6.3.1.2 Duplicates

A total of 390 duplicate (196 duplicates and 194 blind duplicates) samples were selected for analysis. These duplicate samples showed very high correlation between results, especially at the critical grade range near the resource cut-off grade. Some of the highest-grade duplicates showed poorer correlation between samples, which is most likely due to the presence of small, high grade veinlets that are not evenly dispersed through the core (Figure 6-6 to Figure 6-9).



Figure 6-6 – Control chart: duplicates (copper).







Figure 6-7 – Control chart: duplicates (silver).



Figure 6-8 – Control chart: blind duplicates (copper).







Figure 6-9 – Control chart: blind duplicates (silver).

### 6.3.1.3 Blanks

The results for 97 blank samples were provided to GE21. A total of 25% of these results showed elevated values (greater than 20 ppm Cu), however, the maximum value returned was only 66 ppm Cu (Figure 6-10 and Figure 6-11). These results indicate that there might be some low-level contamination occurring at the laboratory.











Figure 6-11 – Control chart: blank (silver).





### 6.3.1.4 Check-assay program

SGS was selected as the umpire laboratory. A total of 10% of the samples (723 samples) from the 35 drill holes used for the resource estimate were reanalysed, including seven pairs of duplicates.

Initial results of the check assay program at SGS appear to show a high bias for copper at ALS Chemex. However, the results of the CRMs included in the program indicate that a low bias exists at the SGS laboratory. A comparison of the CRM results from either laboratory shows that ALS Chemex achieves better results in terms of both precision and accuracy.

### 6.3.2 Recent campaigns (Aguia Resources)

GE21 conducted the validation of the QA/QC data generated in the period from 2019 to 2022, referring to all campaigns carried out by Aguia Resources in Andrade Copper Project. The QA/QC program includes standards, field duplicate (for Diamond Drilling), fine and coarse blank samples. All the analysis were undertaken by ALS Chemex preparation laboratory in Vespasiano, Minas Gerais, Brazil.

### 6.3.2.1 Standards

Aguia Resources purchased commercial standards prepared by Instituto de Tecnologia August Kelulé Ltda (ITAK-809 and ITAK-833) following the best industry practices, which include identification and treatment of outliers, stragglers and technically invalid data, certified value calculation, standard deviation calculation, and extended standard uncertainty calculation.

The total of number of Certified Reference Material ("CRM") control samples has a rate of 3% within the 2019-2022 drilling campaign database used for estimation. The CRM samples ranged from low to high copper grades. Based on internal controls, GE21 has established that 90% of the tested samples should be within the minimum and maximum limits, defined as within two standard deviations of the CRM certified value (or 95% confidence limits). The values of these limits are presented in Table 6-2 and the graphs are shown in Figure 6-12 and Figure 6-14.

CRN	1 ID	Certified	Lower Limit (%)	Upper Limit (%)	Certified value	Lower Limit (%)	Upper Limit (%)
			95% Confidence		(79 pp)	95% Confidence	
ITAK-	-809	0.36	0.34	0.38	-	-	-
ITAK-	-833	1.57	1.5	1.65	5.2	2.8	7.6

Table 6-2:	Aguia	CRM	Evaluation	Criteria
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### Figure 6-12: Result of the Analysis of Cu Content for CRM ITAK-809



### Figure 6-13: Result of the Analysis of Cu Content for CRM ITAK-833

Aguia Resources; Andrade Copper Project; Caçapava do Sul; RS, Brasil Update Resources Estimate and Scoping Study - Memorandum - February 9<sup>th</sup>, 2023






#### Figure 6-14: Result of the Analysis of Ag Content for CRM ITAK-833

Overall, based on the analysis of the QA/QC results, the ALS laboratory provided a level of accuracy at all of copper grade ranges inside acceptance limits. The analysis displays a slight tendency to underestimate the silver values, probably due to equipment calibrating. Despite these remarks, the results are considered, mostly, to be within the quality control limit. The CRM ITK-809 provides an informative value for silver and could not be evaluated in this analysis.

#### 6.3.2.2 Duplicates

The duplicate analysis objective is to control the effect of variance in the processes of sample preparation and chemical analysis, to evaluate analytical and sampling precision and identify possible sample changes.

The typical QA/QC program implemented at Aguia involves sending field duplicate samples to be assayed by ALS Chemex Laboratory. GE21 observed that the total of number of duplicate samples has a rate of 4.3% of the total samples present in the database, from 2019-2022 Campaign. Analysing the results of duplicate samples, the author considered 15% of the relative difference as a limit of acceptability.

Considering both drilling types performed in the campaign, the field duplicate results appear to be reasonably well correlated, for the duplicate analysis results for copper. Some minor outliers are present, but that is not unusual, particulary at grades near the detection limit.







#### Figure 6-15: Result of the analysis of Cu for field duplicates, for Diamond Drilling

#### 6.3.2.3 Blanks

Blank material was inserted into the QAQC sample stream in order to detect crosscontamination between samples during sample preparation (coarse blank) and evaluate possible contamination during the chemical analysis (fine blank). GE21 observed that both types of blank materials have a rate of 4.93% comparing to the number of samples present in Aguia's 2019-2022 campaign database.

Figure 6-16 to Figure 6-19 present the statistics and results associated with the blank control samples used on this current campaign and Table 6-3 present the blank control values. Overall, results from samples that underwent these quality control procedures are within the quality control limit, for Cu and Ag content.

		0				
CRM ID	Certified value (Cu ppm)	Detection Limit (ppm)		Certified value (Ag ppm)	Detection Limit	Upper Limit (ppm)
BLK-QF-11	20.1	1.00	23.10	<0.02	0.50	1.52
BLK-QF-08	5.30	1.00	10.30	1.26	0.50	4.76

Table 6-3: Age	uia Blank	Evaluation	Criteria
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Figure 6-16: Result of the Analysis for Cu of Fine Blank Samples



Figure 6-17: Result of the Analysis for Ag of Fine Blank Samples







#### Figure 6-18: Result of the Analysis for Cu of Coarse Blank Samples



#### Figure 6-19: Result of the Analysis for Ag of Coarse Blank Samples



### 7 MINERAL RESOURCES

### 7.1 MINERAL RESOURCE DATABASE

The Andrade drill hole database previously to 2010 has 38 surface (Table 7-1) diamond drill holes with a total length of 8,406.34 m.

The Andrade drillhole database comprises 68 surface diamond drill holes with a total length of 11,480.5 m and 19 historical trenches re-sampled by Referencial in 2009 and 2010 which total 1,065.06 drilled meters. There are 10,115 assay records in the current database. This includes historical drilling performed in 2009 and 2010 and historical re-sampled trenches, and 30 diamond core holes drilled by Aguia in 2019, 2020 and 2022 campaigns (3,074.16m) (Table 7-2).

Hole-Id	Х	Y	Z	Max_Depth	Executing company	Туре
CPV_AN_DDH001	257114.3	6620642	271.53	83.81	Geoserv	Diamond Drilling
CPV_AN_DDH002	257099	6620640	266.05	90.6	Geoserv	Diamond Drilling
CPV_AN_DDH003	257123.2	6620032	248.84	150	Geoserv	Diamond Drilling
CPV_AN_DDH004	257100.7	6620482	297.64	119.9	Geoserv	Diamond Drilling
CPV_AN_DDH005	257081.1	6619926	217.68	171	Geoserv	Diamond Drilling
CPV_AN_DDH006	257168.1	6620281	287.62	110.9	Geoserv	Diamond Drilling
CPV_AN_DDH007	257089.2	6619826	213.23	238.4	Geoserv	Diamond Drilling
CPV_AN_DDH008	257109.9	6620134	248.7	137.9	Geoserv	Diamond Drilling
CPV_AN_DDH009	257036.4	6619833	226.78	237	Geoserv	Diamond Drilling
CPV_AN_DDH010	257166.3	6620392	306.78	100.9	Geoserv	Diamond Drilling
CPV_AN_DDH011	257150.8	6620214	263.47	101.9	Geoserv	Diamond Drilling
CPV_AN_DDH012	257053.5	6619732	234.9	180	Geoserv	Diamond Drilling
CPV_AN_DDH013	257061.6	6620211	231.65	150	Geoserv	Diamond Drilling
CPV_AN_DDH014	257009.7	6619927	230.8	216	Geoserv	Diamond Drilling
CPV_AN_DDH015	257093.9	6620031	243.95	170	Geoserv	Diamond Drilling
PRI_AN_DDH017	256614	6619804	313.05	277.15	Geoserv	Diamond Drilling
PRI_AN_DDH018	257520.3	6619341	312.08	278.35	Geoserv	Diamond Drilling
PRI_AN_DDH025	257107.1	6619427	227.23	201.05	Geoserv	Diamond Drilling
PRI_AN_DDH027	256939.2	6619626	291.2	434.35	Geoserv	Diamond Drilling
PRI_AN_DDH029	257044.3	6619627	245.58	249.05	Geoserv	Diamond Drilling
PRI_AN_DDH030	257056.3	6620429	271.84	218.75	Geoserv	Diamond Drilling
PRI_AN_DDH031	257150.4	6619733	235.35	203.85	Geoserv	Diamond Drilling
PRI_AN_DDH032	257252.9	6620930	359.62	184.7	Geoserv	Diamond Drilling
PRI_AN_DDH033	256905.6	6619526	267.71	504.35	Geoserv	Diamond Drilling
PRI_AN_DDH034	257201.2	6620527	323.88	164.9	Geoserv	Diamond Drilling
PRI_AN_DDH035	257000.1	6619520	263.07	247.58	Geoserv	Diamond Drilling
PRI_AN_DDH036	257001.6	6620529	274.76	223.5	Geoserv	Diamond Drilling
PRI_AN_DDH037	257147.9	6620724	289.7	161.8	Geoserv	Diamond Drilling
PRI_AN_DDH038	257050.4	6620725	278.84	143.85	Geoserv	Diamond Drilling
PRI_AN_DDH039	256949.2	6620433	238.82	242.75	Geoserv	Diamond Drilling
PRI_AN_DDH040	256953	6619737	262.72	427.05	Geoserv	Diamond Drilling

Table 7-1 – Drilling Summary Previously to 2010.





Hole-Id	х	Y	Z	Max_Depth	Executing company	Туре
PRI_AN_DDH041	256933.9	6620315	215.06	271.6	Geoserv	Diamond Drilling
PRI_AN_DDH042	257115.6	6619938	237.03	182.85	Geoserv	Diamond Drilling
PRI_AN_DDH043	257051.4	6620323	249.61	247.6	Geoserv	Diamond Drilling
PRI_AN_DDH044	257009.9	6620120	241.83	277	Geoserv	Diamond Drilling
PRI_AN_DDH045	256993.4	6619429	249.7	262.05	Geoserv	Diamond Drilling
PRI_AN_DDH047	256941.6	6619825	260.83	382.7	Geoserv	Diamond Drilling
PRI_AN_DDH049	257001.9	6620028	220.22	361.2	Geoserv	Diamond Drilling

#### Table 7-2: New diamond drilling holes performed in 2019, 2020 and 2022 campaigns.

Hole ID	UTM_E	UTM_N	Elevation (m)	Depth (m)	Azimuth	Dip
AND-19-001	256994	6620025	220	120.3	90.39	60.84
AND-19-002	256994	6620025	220	151.5	89.61	73.22
AND-19-003	257041	6620426	272	110.6	90.47	60.54
AND-20-004	257064	6620380	266.77	107.15	90.59	64.52
AND-20-005	257111	6620596	280	90	110.59	51.01
AND-22-006	257085.31	6620427.5	286.54	100.3	88.05	64.12
AND-22-007	257112.77	6620427.8	300.36	80.45	88.58	60.04
AND-22-008	257069.24	6620455.2	281.54	80.93	92.74	64.75
AND-22-009	257066.05	6620489.5	286.54	112.63	86.66	65.07
AND-22-010	257034.98	6620476.8	275.65	121.55	88.32	59.85
AND-22-011	257084.84	6620525.2	295	110.25	90.77	59.90
AND-22-012	257106.53	6620552.4	291.54	100.45	89.36	59.95
AND-22-013	257152.33	6620524.8	306.19	81.95	88.50	58.45
AND-22-014	257155.25	6620581.4	298.6	61.6	87.87	59.07
AND-22-015	257157.69	6620639.3	294.87	40.25	90.42	59.61
AND-22-016	257175.63	6620481.4	315.66	79.05	87.33	62.32
AND-22-017	257097	6620381	283	91.65	91.82	59.40
AND-22-018	257004	6620426	258	120.5	89.91	55.10
AND-22-019	257032	6620381	256	121.1	84.59	63.25
AND-22-020	257000	6620324	222	144.55	86.95	60.62
AND-22-021	257129	6620498	301	90.6	88.11	49.82
AND-22-022	257072	6620360	231	100.25	87.03	62.43
AND-22-023	257092	6620324	267	97.9	85.54	65.90
AND-22-024	257050	6620072	238	151.6	86.83	61.54
AND-22-025	257044	6620028	227	121	87.28	60.60
AND-22-026	256977	6619986	228	178.25	88.56	61.48
AND-22-027	257015	6620080	227	98.45	89.90	59.56
AND-22-028	257016	6620162	236	111.05	90.39	59.50
AND-22-029	257058	6619985	226	149.1	85.58	59.72
AND-22-030	257040	6620242	242	100.8	84.34	70.31



### 7.2 GEOLOGICAL MODELLING

GE21 geological modelling was caried out based on previously mineralization model review using Leapfrog Geo 2022, using the information provided by the drilling holes adjusted with polylines to respect the previous interpretation. The resources for the Andrade fresh rock are based on two sets of wireframes. The low-grade fresh rock was wireframed at a nominal cut-off grade of 0.17% Cu, while in the area defined as high grade was modelled at 1.00% Cu cut-off grade. The maximum length of internal dilution within a mineralized interval was four metres. An oxide zone that exists in first eight metres below the topography surface has been individualized by an oxidized surface defined by the drill hole descriptions that was superimposed in the low-grade fresh rock solid.

The 2019 wireframes were built using 3D polylines, snapped to the drill hole intervals on cross sections spaced 100 m apart. The polylines were then joined using tie lines in order to create 3D solids. The mineralized wireframes outcrop at the topographic surface and extend southwest approximately 1,400 m along strike, dipping approximately 60° to the west, and to depths of up to 400 m below surface. Figure 7-1 illustrates the extents of the updated mineralized wireframes and identifies the low and high-grade zones.

The high-grade mineralization zone presents a south plunging feature (approximately 20° to South). This feature was modelled at a 1.00% Cu wireframe cut-off grade defining five plunging bodies, apparently dislocated by later northwest faults. These high grade bodies require further drilling for definition as the zones remain open along plunge.







The Andrade drill hole database includes all the oxide trench sampling and fresh rock drill holes. A surface that separates oxide (OXI) and fresh rock interface were also modelled.

### 7.3 COMPOSITING

The assays within the mineralized domains were composited to one metre lengths inside mineralization wireframe, based on the analysis of sample lengths (Figure 7-2). Composites shorter than 0.50 m were distributed equally along the hole. The Andrade composites average 1.0 m in length.



Histogram of Lenght m

Figure 7-2 – Sample length histogram.

### 7.4 CAPPING LEVELS

GE21 composited all assay intervals to a length of one metre. Both raw and composited data was examined for high grade outlier samples using descriptive statistics, log-probability plots, and by assessing the change in the mean grade and coefficient of variation with alternative capping values. A cut-off grade of 20 g/t Ag was selected as the high-grade limit for oxide and low-grade domains (Figure 7-3), a total of 14 samples were capped. Capping was not considered necessary for the copper estimate.









Table 7-3 presents the statistical summary for sample grades after compositing and capping.

	Copper (%)										
Domain	Count	Mean	Median	Standard deviation	Minimum	Maximum	Coefficient of variation				
OX	804	0.26	0.14	0.38	0.00	4.01	1.43				
HG	260	1.45	1.13	1.36	0.00	7.53	0.94				
LG	1740	0.34	0.25	0.33	0.00	3.45	0.96				
	Silver (g/t)										
Domain	Count	Mean	Median	Standard deviation	Minimum	Maximum	Coefficient of variation				
OX	790	2.91	1.4	3.70	0.25	19.5	1.27				
HG	252	4.18	3	4.14	0.25	19.6	0.99				
LG	1734	1.92	1	2.74	0.25	18.1	1.43				



### 7.5 VARIOGRAPHY

GE21 updated the variographic analysis using Isatis Neo software, reaching robust variograms, that indicates notable continuity in the main direction of the orebody associated to a minor anisotropy along the normal direction.

The modelled nugget effect was defined from the downhole variograms and the two spherical models that came from the directional variograms. These two modelled structures likely represent the low and high-grade samples that were combined in the experiments. There were insufficient data to model a separate high grade zone. The variograms fitted by GE21 are provided in Figure 7-4. Table 7-4 presents the variographic model parameters in Isatis software format. Copper and silver variables were estimated using the same variogram model.



Figure 7-4 – Directional Variograms of LG + HG samples.

Table 7-4 -	Modelled	Variogram	Parameters <sup>•</sup>	for An	ndrade I	Deposit.

				C0		Struc	ture C1			Struc	ture C2	
Variable	Dip Az	Dip	Pitch	Nugget	Sill	x	Y	z	Sill	х	Y	z
Cu%/ Ag (g/t)	256°	45°	32°	0.2	0.6	40m	14m	1m	0.2	90m	65m	10m



### 7.6 DENSITY DATA

Density tests were caried out on drill core samples by Archimedes method on a dry basis. The total density database contains 696 measurements that includes mineralization and waste samples. Density was applied to the block model as average values for high grade (2.68 t/m<sup>3</sup>), low grade, and waste domains (2.60 t/m<sup>3</sup>).

The current values for density do not account for the oxidation state or weathering profile. GE21 maintains 2019 recommendation that further density measurements should be taken from the weathered/oxidized zones to provide a better estimate of the near surface tonnes.

### 7.7 BLOCK MODELS

The resource estimate is supported by a block model performed in Leapfrog 2022.1. The extent of the block model covers all modelled domains and waste rocks. Table 7-5 presents the block model setup. The information carried in the block model includes:

- Rock type for mineralized and waste material.
- The mineralization and waste density.
- Interpolated copper (%) and silver (ppm) grades via Ordinary Kriging.
- Interpolated copper (%) and silver (ppm) via Nearest Neighbour Method (NN Check).
- Mineral Resource Classification.
- Oxidation model.

	Y (m)	X (m)	Z (m)
Min. Coordinates	6618900	256400	-440
Max. Coordinates	6621420	257920	440
Blocks dimensions	40	40	5
Sub-blocks dimensions	2.5	2.5	2.5
Rotation	0	0	0

#### Table 7-5 - Block Model Properties.

Sub-blocks with 2.5 m by 2.5 m by 2.5 m size were flagged with the rock codes of the modelled solids on a centroid basis. The volume of flagged blocks was then compared to the mineralized wireframe for validation and the volumes were found to be within 2% between the wireframe model and the flagged blocks.



### 7.8 SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS

Copper and silver were estimated into the block model using ordinary kriging of one metre composites (minimum 0.5 m) within the mineralized domains. For all elements, five estimation passes were used, with progressively relaxed search ellipsoids and data requirements. Block estimation required a minimum of 4 and a maximum of 12 samples until the fourth pass and a minimum of 2 and maximum of 12 samples in the last search pass. The estimation ellipse ranges and orientations are based on the variogram model for copper variable (Table 7-6).

Domain	Variable	Step	Radius	Search	Samples Max sample		Az.	Plunge	Dip	RSM *	RMM *	E Res	Block	on	
					Min	Max	drill						у	x	z
		1	30	SPHE	4	12	2	256	32	45	1.38	9	40	40	5
	2	60	SPHE	4	12	2	256	32	45	1.38	9	40	40	5	
Lg and Ha	CU_pct, AG_ppm	3	135	SPHE	4	12	2	256	32	45	1.38	9	40	40	5
	, co_pp	4	225	SPHE	4	12	2	256	32	45	1.38	9	40	40	5
		5	>225	SPHE	2	12	2	256	32	45	1.38	9	40	40	5
*- RSM = Ma	ajor/Sem-Majo	r axis; RI	MM = Major	/Minor axis;	SPHE	= spheri	cal variogra	phic sti	ructures						

Table 7-6 - Search Ellipse Parameters for Grade Interpolation.

#### 7.9 BLOCK MODEL VALIDATION

GE21 used three methods to audit and validate the block model, including:

- 1. Visual inspection and comparison of block grades with modelled grade shells.
- 2. Statistical comparison of resource assay and block grade distributions.

3. Inspection of swath plots with composites along three coordinate axis separately (X, Y, Z) and globally (NN Check);

Visual validation comparing the block grades and composite grades on sections and plans shows were performed in Leapfrog 2022.1 (Figure 7-5). Occasional minor grade banding occurs locally when changes in wireframe dip or strike restrict the access to composites. This effect is considered by visual validation as inside the acceptance limits.







Figure 7-5: Visual inspection and comparison of block grades with composited assay grades and block model vertical section.

The validation of the resource estimation process was carried out by comparative methods. The estimation of the sample grade Cu by the nearest neighbour (NN) method applied to the block model was considered the reference for ordinary kriging (OK).

The NN check is a comparative exploratory analysis to validate the global bias and smoothing effect. Figure 7-6 and Figure 7-7 show that there is a small bias in the median for copper, but it can be considered within the acceptance limits for Mineral Resource estimation.







Figure 7-6: NN Check for Cu% within HG Domain – Measured, Indicated and Inferred resource



Figure 7-7: NN Check for Cu% within LG Domain – Measured, Indicated and Inferred resources





Swath Plot is a graphical comparison over the range along the X, Y and Z coordinate axis used to validate local biases and the smoothing effect on the grade estimation. The local validation aims to analyse the occurrence of specific biases, comparing the average of the grades estimated for the model obtained by the OK method with the grades that were estimated by NN method for the same X, Y or Z. Figure 7-8 to Figure 7-11 show the graphical validation results for copper and silver for measured, indicated, and inferred resources. Bias and Smoothing Effect can be considered within the acceptance limits for Mineral Resource estimation based on the Swath Plot analysis results.





Figure 7-8 – Swath Plot Analysis for Cu (%) within HG Domain – Measured, Indicated and Inferred resource.





Figure 7-9 – Swath Plot Analysis for Cu (%) within LG Domain – Measured, Indicated and Inferred resource.





Figure 7-10: Swath Plot Analysis for Ag (g/t) within HG Domain – Measured, Indicated and Inferred resource





Figure 7-11: Swath Plot Analysis for Ag (g/t) within LG Domain – Measured, Indicated and Inferred resource



### 7.10 MINERAL RESOURCE CLASSIFICATION

Definitions for resource categories used in this report are consistent with those defined by JORC (2012) Code.

The Mineral Resources at Mina de Andrade are classified into Inferred, Indicated, and Measured Mineral Resources, based on the reliability levels of the following observed and/or measured factors:

- Quality and quantity of the data.
- Reliability of the geological interpretation.
- Number, spacing, and orientation of mineralization intersections.
- Progressive estimation steps or estimation based on variographic ranges.

The distribution on the first and second pass of the estimation and the Euclidean distance were used to adjust the wireframe associated to Measured and Indicated resources to the remain blocks into the mineralised domains inside the resource pit. The drilling grid size, that is directly related to distance to samples, was considered as an auxiliary parameter for confidence level classification and further mineral resource classification.

Figure 7-12 presents the block model classified by progressive estimative passes of ordinary kriging and in the Euclidean distance to nearest sample.

RPEEE considerations for the limitation of resource classification were applied using a pit optimization process, that will be discussed on the next section of this report.









Figure 7-12: Ordinary kriging estimate passes (A) and Euclidean distance to nearest sample (B) applied in Mineral Resource classification criteria

GE21 used the Measured, Indicated and Inferred Resource blocks and the input assumptions in Table 7-7 to generate an open pit shell (Figure 7-13) in Whittle to provide a constraint for the open pit resource that complies with the JORC (2012) Code for "reasonable prospects for eventual economic extraction".

A post-processing on the mineral resource class was applied on the block model by polygon interpretation to provide the continuity of classification zones.



Figure 7-13 – Mineral resource Block Model and Resource Shell Performed in Whittle Software. The longitudinal dimension of the pit is approximately 1.3km.



A basic operating scenario was designed based on a one million tonne per annum processing capacity and a ten-year mine life. This scenario was used to establish basic input cost assumptions that could be used to calculate cut-off grades. These cost assumptions are based on the experience of GE21 and Aguia considering operations of similar size within the larger region. The operation is envisaged to utilize both open pit and underground mining methods.

Item	Item	Unity	
Economic	Sell Price	AUD\$/t Cu	12614
DOM	Density	g/cm³	model
ROM	Grade (Cu)	%	model
Waste	Density	g/cm³	2.60
Mining a	Mining recovery		100
Mining	Dilution	%	0
	х		5
Block Model	Y	m	5
	Z		5
	Oxided		45
Slope Angle	Fresh rock	0	55
Metallurgical recovery	Cu	%	70
Cut-off	Cu	%	0.17
	Mining	AUD\$/t mined	4.50
Costs	Process	AUD\$/t product	1162
	G&A	AUD\$/t product	22.69

#### Table 7-7: Input Cost Assumptions Under Requirement of Reasonable Prospects for Economic Extraction



#### 7.11 MINERAL RESOURCE REPORTING

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The open pit and underground Mineral Resource estimate for the Andrade deposit is summarized in Table 7-8. The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC (2012) Code) standards were used for Mineral Resource classification.

Aguia Resources Limited – Andrade Deposit Effective date 31/12/2022						
			Average	e Value	Material Content	
Class	Domain	Wass	OK_Cu	OK_Ag	OK_Cu	OK_Ag
		kt	%	g/t	t	kt. oz
	HG OX	0.13	1.38	12.21	1.73	0.05
	HG SULF	624	1.42	5.10	8 830	102
MEASURED	LG OX	158	0.37	3.74	578	19
	LG SULF	1 031	0.35	3.02	3 633	100
	Total	1 813	0.72	3.80	13 043	221
	HG SULF	526	1.54	8.10	8 109	137
	LG OX	900	0.38	2.34	3 418	68
INDICATED	LG SULF	19 341	0.37	1.78	71 569	1 105
	Total	20 766	0.40	1.96	83 096	1 310
	HG OX	0.13	1.38	12.21	1.73	0.05
	HG SULF	1 150	1.47	6.47	16 939	239
MEA+IND	LG OX	1 058	0.38	2.55	3 996	87
	LG SULF	20 372	0.37	1.84	75 202	1 206
	Total	22 580	0.43	2.11	96 138	1 532
	HG SULF	173	1.60	7.71	2 765	43
	LG OX	282	0.33	1.13	937	10
INFERRED	LG SULF	2 548	0.36	1.53	9 110	126
	Total	3 003	0.43	1.85	12 812	179

Table 7	-8:	Mineral	Resource	Table
	•••			

Notes:

1. Definitions were followed for Mineral Resources. Mineral Resources also conform to JORC (2012) Code.

2. Mineral Resources are stated within a resource pit shell optimized above a cut-off grade of 0.17% Cu.

3. Average bulk densities of 2.68 t/m<sup>3</sup> for high-grade domains and 2.60 t/m<sup>3</sup> for low-grade and waste domains were applied.

4. Mining loss of 0% and mining dilution of 0% factors have been applied to the reported figures.

5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

6. Totals may not sum due to rounding.,

7. Bernardo H. C. Viana BSc. (Geo) MAIG, a geologist and full-time director and owner of GE21, is the CP responsible by the Andrade Copper Resources estimate.

A grade vs. tonnage analysis was carried out on the Mineral Resource report for Andrade Mineral resource. The graphs of grade vs tonnage for copper and silver are presented in Figure 7-14. Table 7-9 presents Table x Tonnage analysis results with some selected cut-off grades for copper.





Figure 7-14: Grade tonnage graphs for copper (A) and silver (B), considering measured, inferred and indicated resources.



Grade x Tonnage Analysis - Copper			
Curve		Cu%	
Cut-off grade (Cu %)	Tonnes (millions)	Average grade (Cu %)	Material Content kt Cu
0	25.6	0.43	108.95
0.1	25.5	0.43	108.90
0.2	23.8	0.45	106.22
0.3	16.9	0.52	88.64
0.45	7.5	0.72	53.50
0.5	5.0	0.83	41.99
0.7	1.7	1.36	23.15
1	1.2	1.62	18.86
1.3	1.02	1.69	17.17
1.5	0.70	1.81	12.63
2	0.12	2.35	2.83

#### Table 7-9: Grade x Tonnage Analysis - Copper

### 8 CONCLUSIONS AND RECOMMENDATIONS

The Mineral Resource Estimate for the Andrade Copper Project was updated by GE21 from a maiden Resources Estimate prepared by RPA, with effective date new of February 1<sup>st</sup>, 2021. GE21 estimated Measured plus Indicated Mineral Resources total 22.6 Mt at 043% Cu grade and 2.11 g/t Ag containing 96,138 t of copper and 1,532 koz of silver and Inferred Mineral Resources totalizing 3.0Mt at 0.43% Cu and 1.85 g/t Ag containing 12,812 t of copper and 179 koz of silver..

#### Recommendation from GE21

- Regarding the Mineralization Model and the Resources Estimation, an additional drilling program is recommended, objecting:
  - The high grade bodies require further drilling for definition as the zones remain open along plunge.
  - GE21 maintains 2019 recommendation that further density measurements should be taken from the weathered/oxidized zones to provide a better estimate of the near surface tonnes.
  - Trade off study to evaluate the option for underground mining.



### 9 REFERENCES

ANM – Agência Nacional de Mineração [acess on January 10th, 2023]. Available in: http://anm.gov.br.

- GE21 CONSULTORIA MINERAL LTDA. 2021. ANDRADE COPPER PROJECT: INDEPENDENT TECHNICAL REPORT Updated Resources Estimate and Scoping Study.
- INCRA Instituto Nacional de Colonização e Reforma Agrária (Consultation of Rural Properties/Land<br/>Collection) [acess in August 14th, 2020] Available in:<br/>http://acervofundiario.incra.gov.br/acervo/acv.php
- SILVA, R. R. Relatório Final Positivo De Pesquisa Mineral. Referencial Geologia Mineração E Meio Ambiente Ltda.
- Technavio Copper Sulphate Market in Brazil 2020–2024. Available in: <u>https://pt.wikipedia.org/wiki/Wikip%C3%A9dia:P%C3%A1gina\_principal</u>

### JORC Code, 2012 Edition – Table 1

### Section 1 Sampling techniques and data (criteria in this group apply to all succeeding groups)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul> <li>In the Andrade Project area procedures for diamond drilling samples were compliant with mineral industry standards.</li> <li>Samples were sent to laboratories that are commercial fee-for-service testing facilities and theyare independent of Aguia.</li> <li>The Andrade deposit was defined using diamond core drilling, and surface trench sampling.</li> <li>Drilling comprised 38 diamond core drill holes performed by Referencial from 2009 / 2010 campaign (8,406.34 m) and five core drill holes completed by Aguia from 2019 / 2020 (579.55 m). A new drilling campaign was carried out by Aguia in 2022, totalling 25 diamond drilling holes and 2646.21 meters of drilling.</li> </ul>
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that</li> </ul>	<ul> <li>Aguia has followed standard practices in their geochemical surveys and diamond drilling programs. They have followed a set of standard procedures in collecting cuttings and core samples, logging and data acquisition for the project. Their procedures are well documented and meet generally recognized industry standards and practices.</li> <li>All core logging is completed by Aguia geologists and directly entered into a comprehensive database program. Aguia's geologists are responsible for identifying and marking core intervals for sampling. Sample intervals range in length from 0.31m to 1.50m with 90% of all core samples falling within the range of 0.8m to 1.1m and honour the geological contacts. Digital and hard copies of all sampling and shipment documentation are stored in the project office at Caçapava do Sul. Documentation includes geological logs, core photographs, core recovery records, portable XRF readings and down-hole surveys.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	<ul> <li>Drill type (eg. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka etc.) and details (eg. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul> <li>All diamond drillholes were drilled using wireline coring methods. HQ size (63.5mm diameter core) core tools were used for drilling through weathered material and NQ size (47.6mm diameter core) tools were used for drilling through fresh rock.</li> </ul>
Drill sample recovery	<ul> <li>Whether core and chip sample recoveries have been properly recorded and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Core recovery has exceeded 90% of all core holes.</li> <li>Aguia has followed standard practices in their core drilling programs. They have followed a set of standard procedures in collecting cuttings and core samples, logging, and data acquisition for the project. Their procedures are well documented and meet generally recognized industry standards and practices.</li> <li>There was no investigation about relationship between sample recovery and grade.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> </ul>	<ul> <li>Digital and hard copies of all sampling and shipment documentation are stored in the project office at Caçapava do Sul. Documentation includes geological logs, core photographs, core recovery records, portable XRF readings and down-hole surveys. Detailed geological logs are completed for every core hole using an appropriate logging form. Sampling intervals in the mineralized zone are typically targeted for a 1.0m length but may fall within a range of 0.31m to 1.50m.</li> </ul>
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography.</li> </ul>	• The logging is qualitative in nature. A photographic record is maintained for all core boxes with each photograph recording three boxes;

Criteria	JORC Code Explanation	Commentary
	<ul> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	100% diamond drillholes was logged.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	• Fresh core is split lengthwise using a core saw. Samples are systematically taken using the right half of the core, returning the left half of the core to the core box for archival storage.
	<ul> <li>If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry.</li> </ul>	• Trench samples are included in the resource drillhole database. The influence of the trench samples for the purpose of estimating Mineral Resources was restricted to the mineralization zone modeling of the deposit.
	<ul> <li>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>Sample preparation was completed at ALS's Belo Horizonte laboratory in Brazil using standard crushing and pulverization techniques. The sample preparation techniques meet industry standards and are considered appropriate for the mineralization being investigated.</li> <li>Sample preparation was completed using standard crushing and pulverization techniques PREP-31 (rock and drill samples). All samples were dried, crushed, and milled to 70% passing 2 mm, riffle split off 250 g, then the split pulverized to better than 85% passing 75 microns. Pulp splits are collected and retained in storage</li> </ul>
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<ul> <li>Lab management system is consistent with ISO 9001:2008 requirements for sampling preparation.</li> <li>Industry standard procedures were employed, including ensuring non-core samples are adequately homogenized before. Pulp splits are collected and retained in storage.</li> <li>ALS does introduce on routine basis certified reference material within every batch of samples, namely appropriate standards, duplicates and blanks. A QAQC report is sent together with the assay certificates.</li> </ul>
	• Measures taken to ensure that the sampling is representative of the in-situ material collected.	90% of all core samples falling within the range of 0.8m to 1.1m.
Sub-sampling techniques and sample preparation	<ul> <li>Whether sample sizes are appropriate to the grainsize of the material being sampled.</li> </ul>	<ul> <li>Sampling intervals in the mineralized zone are typically targeted for a 1.0m length but may fall within a range of 0.50m to 1.50m.</li> </ul>

Criteria	JORC Code Explanation	Commentary
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>The ICP method used is industry standard and considered appropriate for the analysis of base metal hosted mineralization.</li> <li>Sample preparation and analysis was completed at ALS's Belo Horizonte laboratory in Brazil using standard crushing and pulverization techniques.</li> <li>Routine assays were conducted using a four acid 'near total' digestion with ICP-AES finish (ME-ICP61 process) to provide analysis for 33 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn). All Cu and Co determinations were re-assayed by four acid (HF-HNO3-HCIO4) digestion, HCI leach and ICP finish to provide an improved level of accuracy on these values (method ME-OG62). The preparation and analytical procedures are appropriate for the type of mineralization sampled and are reliable to deliver the total content of the analysed compounds.</li> </ul>
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	<ul> <li>A hand held XRF, Delta Analyser CS-4000 by Innov-X Systems, was employed to pre scan samples.</li> </ul>
	<ul> <li>Nature of quality control procedures adopted (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established.</li> </ul>	<ul> <li>For the core sampling, Aguia used certified reference materials (standard), supplied by the Instituto de Tecnologia Augusto Kekule (ITAK) for 2019-2022 campaign. ITAK-809 and ITAK-833 are low grade and high grade copper standard, respectively. In addition, fine and coarse blank samples were prepared from barren quartz veins. Also field duplicates were inserted in the batches. The control is considered appropriate to the sampling type and grades.</li> </ul>

Criteria	JORC Code Explanation	Commentary
		LOGICAL SEQUENCE MATRIX OF SAMPLES IN BATCHES – RIO GRANDE PROJECT ALS Batch size 35 SAMPLES (WITHIN MINERALIZED ZONE) FIRST H1 H2 H3 SULPHIDATION ZONE CONTROL SAMPLES FINE BLANK COARSE BLANK TTAK-628 or ITAK-630 PULP DUPLICATE
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Two twin boreholes were completed by Aguia. The assay results and mineralized intervals present good correlation with the original drill holes.</li> <li>All core drilled before 2019 was logged by Referencial geologists and verified by Aguia geologists; The core drilled after 2019 was logged by Aguia; data was entered digitally into a comprehensive database program, before 2019. Since 2019, Aguia followed the same procedures as Referencial, except data were logged on paper prior to being entered into a digital database. Electronic data was verified against original assay certificates by GE21.</li> <li>Assay data did not need to be adjusted.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul> <li>All drill collars are surveyed using a hand-held GPS both before and after drill hole completion. Andrade down hole surveys were completed on core holes using a Maxibore II down-hole survey tool. Readings are collected on three-meter intervals.</li> </ul>
	<ul> <li>Specification of the grid system used.</li> </ul>	<ul> <li>Coordinates are recorded in Universal Transverse Mercator (UTM) using the SAD69 Datum, Zone 22S.</li> </ul>
	Quality and adequacy of topographic control.	• Previous company (Referencial) surveyed drillhole collars with total station. Topographic survey was conducted at the Andrade target by Aguia with handheld GPS.

Criteria	JORC Code Expla	ination	Commentary
Data spacing and distribution	<ul> <li>Data spacing fo Exploration Res</li> </ul>	r reporting of sults.	<ul> <li>30 diamond drill holes were completed by Aguia Resources in a target area between 2019 and 2022, aiming to check low- and high-grade copper mineralization. Drilling grid size is ranging from 100m x 100 m to 30 m x 30m.</li> </ul>
Data spacing and distribution	<ul> <li>Whether the data distribution is su the degree of ge continuity appro Mineral Resource estimation proce classifications a</li> </ul>	ta spacing and ufficient to establish eological and grade opriate for the ce and Ore Reserve edure(s) and pplied.	<ul> <li>Initially, the diamond drilling was completed on sections spaced 100 m apart with two to three drill holes per section. Drill hole spacing within each section was also approximately 100 m.</li> <li>Since 2019, Aguia started to detail the grid spacing (approximately 30mx30m) to upgrade the mineral resource class based on previous variographic study.</li> </ul>
	Whether sample been applied.	e compositing has	<ul> <li>Assay data was composited to one-meter length prior to resource estimation.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the origination of the second second</li></ul>	entation of sampling sed sampling of res and the extent known, considering	The sampling patterns used did not introduce an apparent sampling bias.
	<ul> <li>If the relationshidrilling orientation orientation of kestructures is conditioned a same should be assessible assessible and the same should be assessible assessible and the same should be assessible assessible and the same should be assessible assessible as the same should be assessible as the same should be assessible as the same same should be assessible as the same same same same same same same sam</li></ul>	ip between the on and the ey mineralised nsidered to have mpling bias, this ssed and reported if	<ul> <li>The sampling patterns used did not introduce an apparent sampling bias.</li> </ul>
Sample Security	The measures t sample security	aken to ensure	<ul> <li>Chain of custody of all sample material was maintained by Aguia. Samples were stored in a secured facility in Caçapava do Sul until dispatch to the preparation laboratory by commercial carrier.</li> </ul>
Audits or reviews	The results of a of sampling tech	ny audits or reviews nniques and data.	<ul> <li>In 2019, RPA other technical consultant was hired to execute a mineral resource estimate following JORC/NI 43-101 international codes.</li> <li>GE21 and RPA reviewed the sample collection techniques, quality control procedures, sample storage facility, and data integrity as part of a site visit carried out from the January 21 to 24, 2019 (visit by RPA) and February 14 to 15, 2023. GE21 and also RPA are of the opinion that all relevant data has been collected and stored in accordance with industry best practice standards and is suitable to support the estimation of a Mineral Resource.</li> </ul>

### **Section 2 Reporting of Exploration Results** (criteria listed in the preceding group apply also to this group)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Andrade deposit as currently modelled is situated over three separate exploration tenements.</li> <li>The majority of the deposit is situated in proceedings 810.636/2007 and 810.808/2008. These are currently held by Referencial. Aguia has signed an option agreement with Referencial to acquire these tenements (as disclosed in a press release dated 27/02/2019). Upon the conclusion of this acquisition, these tenements will be subject to a 1% net smelter return royalty to be paid to Referencial.</li> <li>The remainder of the deposit and the potential along strike extensions of the deposit are located in proceeding 810.187/2018. This claim is held by Aguia Fertilizantes S.A., a subsidiary company of Aguia.</li> <li>Independent legal advice prepared for Aguia by William Freire Advogados Associados indicates that:</li> <li>Aguia satisfies the requirements for operating a mine within 150 km of the territorial borders of Brazil (the 'Border zone').</li> <li>The tenements in question do not fall within conservation units or indigenous lands.</li> <li>Those tenements that are currently under application or awaiting a response from the relevant department are unlikely to be denied.</li> <li>There are no known impediments to obtaining a licence to operate in this area.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	• Copper occurrences at Andrade were first reported in the late 19th century in government surveys. The first drilling program was undertaken by Vale in the early 1970s where the scout program revealed the first mineral intercepts. Between 2009 and 2010, Mining Ventures, a private Swiss exploration company, conducted an extensive exploration program which included mapping, soil geochemistry, trenching, IP and 10,300 metres of diamond drilling (38 holes) at Andrade:
		<ul> <li>1900-08 Artisanal Mining: Trenches, pits, shafts and drifts at Andrade and Primavera</li> <li>1942 DNPM: (8 holes) Resource 462 kt at 0.8% Cu at Andrade</li> <li>1942 DNPM: Resource 91 kt at 1.00% Cu and 29 kt at 1.74% Cu at Primavera</li> <li>1959 DNPM: (25 holes) Resource 560 kt at 0.7% Cu 100 kt at 1% Cu at Andrade and Primvera</li> <li>1975 CRM: (13 holes) 3.3 Mt at 0.43% Cu at Andrade</li> <li>1985 CBC: (8 holes) 502 kt at 0.55% Cu at Andrade</li> <li>2009-10 Referencial: drilling completed (38 holes) at Andrade</li> <li>2009 Referencial: drilling completed (11 holes) at Primavera</li> <li>2012-13 Referencial: Deeper IP (TITAN) 4 sections completed at Andrade and Primavera</li> </ul>

Criteria	JORC Code Explanation	Commentary
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The Andrade deposit is located at the western flank of the Caçapava Granite.</li> <li>The local geological mapping reveals the presence of three large geologic domains from the east to the west: 1) granitoids of the Caçapava do Sul Granitic Suite, which is in tectonic contact with the 2) basic meta-volcano-sedimentary unit (amphibolites) of the Vacacaí Metamorphic Complex, which grades to the intermediate to acid meta-volcano-sedimentary package (feldspar chlorite schists and quartz chlorite schists), which is both in tectonic and erosive contact with the 3) conglomeratic sediments of the Santa Bárbara Formation.</li> <li>The same units described with respect to the Andrade deposit are also found in the Primavera target, since the latter is an extension to the south of the former. However, meta-sediments, meta-tuffs, and meta-rhyodacites belonging to the Vacacaí Metamorphic Complex, as well as intrusions of basic volcanic rocks, are also seen.</li> <li>Mineralization at Andrade sits along the contact between volcanic rocks at the footwall and sediments at the hanging wall. Strong chlorite alteration associated with carbonate alteration and potassic alteration are the hosts to the copper mineralization that includes mostly chalcocite and minor bornite and chalcopyrite.</li> </ul>
Drill Hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> </ul>	<ul> <li>Andrade project has 68 drillholes, including 38 diamond drillholes drilled by Referencial Geologia and another 30 diamond drillholes drilled by Aguia.</li> <li>Drilling utilized for the resource estimate consists of 38 diamond drill holes drilled by Referencial from the 2009/2010 campaigns (8,406.34 m), 30 diamond drill holes carried out by Aguia (3,074.16m) and 19 historical trenches re-sampled by Referencial in 2009/2010 (1,088.46 m).</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<ul> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	

Criteria	JORC Code Explanation	Commentary				
		Hole ID	Depth From (m)	Depth To (m)	Cu (%)	
		AND-19-001	97.33	104.99	0.68	
		AND-19-001	105.00	106.85	0.71	
		AND-19-003	65.20	83.02	2.64	
		AND-20-004	60.05	67.20	1.52	
		AND-22-006	50.00	64.00	0.70	
		AND-22-008	59.00	72.00	2.20	
		AND-22-009	65.00	70.00	1.03	
		AND-22-011	49.00	60.00	1.26	
		AND-22-016	15.89	19.18	0.08	
		AND-22-017	34.00	51.00	1.08	
		AND-22-018	84.00	86.00	1.27	
		AND-22-019	77.81	100.00	1.57	
		AND-22-022	52.35	56.40	1.44	
		AND-22-025	54.00	61.00	1.28	
		AND-22-027	75.00	81.00	1.34	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually material and should be stated.</li> </ul>	No exploration	n data were altered			
Criteria	JORC Code Explanation	Commentary				
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Data aggregation methods	<ul> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	<ul> <li>Intercepts above 0.17% Cu are considered significant.</li> </ul>				
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Metal equivalents were not reported.				
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<ul> <li>Core drilling was designed to intersect the full width of the copper mineralization at a high angle.</li> </ul>				
	<ul> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	<ul> <li>Drill holes do not typically intercept the mineralisation perpendicularly, hence down hole widths are greater than true widths. For boreholes drilled with a dip of 60°, true mineralization widths were generally in the order of 80% to 90% of down hole intersection lengths.</li> </ul>				
	<ul> <li>If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (eg. 'downhole length, true width not known').</li> </ul>	<ul> <li>Down hole lengths were reported. Relationships between true lengths and true thickness are shown in cross sections below.</li> </ul>				

#### INDEPENDENT TECHNICAL MEMORANDUM | RESOURCE ESTIMATE UPDATE

ANDRADE COPPER PROJECT – AGUIA RESOURCES LTD.



Criteria	JORC Code Explanation	Commentary
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	The drilling databases are highly organized with drilling Intercepts and its grade x length reports are properly stored and readily available within on the drillhole database.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances</li> </ul>	<ul> <li>Aguia made use of an airborne magnetic geophysical survey completed by CPRM to aid in exploration targeting and an extensive geological mapping program developed by Referencial.</li> <li>Ground Geophysics Double-Dipole Induced Polarization/Resistivity method by AFC Geofisica.</li> </ul>

Criteria	JORC Code Explanation	Commentary
Further work	• The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).	• Further work at the Andrade deposit is initially focused on replicating high grade intercepts found in historical drilling. These historical intercepts were not included in the Mineral Resource but have the potential to increase the grade and/or extend the high grade volumes of the deposit.
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	

#### Section 3 Estimation and reporting of Mineral Resources

#### (criteria listed in the first group, and where relevant in the second group, apply also to this group)

Criteria	JORC Code Explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> </ul>	<ul> <li>Assay data is provided to Aguia in spreadsheet form and directly copied to the company's data system. The database was provided in a digital format, as a Microsoft Excel file. Electronic validation on database integrity to check for inconsistencies or errors as sample overlaps or missing information was carried out and any issue was found.</li> </ul>
	Data validation procedures used.	<ul> <li>Original assay certificates were provided to RPA and GE21. Grades above 1% Cu were checked against the provided data set. A series of random spot checks were also carried out. The database was checked for overlapping samples, missing samples, and un-sampled intervals. GE21 and RPA found no material issues with provided database and is of the opinion that it is suitable to support the estimation of a Mineral Resource.</li> </ul>
Site Visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>A site visit was undertaken by Mr. John Makin from January 21 to 24, 2019. Mr. Makin is a Senior Geologist with RPA and is an independent Competent Person for the purpose of JORC Code (2012).</li> <li>Geologist Bernardo Viana that is a GE21 professional with 20 years of geological and mining related experience completed a site visit to the Andrade Copper Project on 27 to 28 October, 2020.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> </ul>	<ul> <li>Mineral Resource was updated by GE21 based on the new information provided by the 25 recent drillholes, along with the previous database, is reliable enough to support a declaration of Measured, Indicated and Inferred Mineral Resource.</li> <li>The deposit shows continuity along strike and down dip in terms of both grade and lithology and geological and mineralization model was based on drillhole intercepts</li> </ul>
	Nature of the data used and of any assumptions made.	• The geological model was built from the diamond drill hole and trench sample data as described in the previous sections. It used an approached lithological assay based to define the boundaries of the copper mineralization and the following criteria: Minimum average grade of composite interval (hangingwall to footwall contact) is 0.17% Cu for low grade and 1.00% Cu for high grade.

Criteria	JORC Code Explanation	Commentary
	<ul> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul> <li>In 2019, Cross sectional interpretations of high grade (&gt;1% Cu) and low grade (&gt;0.17% Cu) mineralization lenses were undertaken. These were guided primarily by the host lithology and the assayed grade. The maximum length of internal dilution within a mineralized interval was four meters. These two-dimensional interpretations were then linked in Geovia's GEMS software using tie-lines to form three-dimensional mineralisation solids for block estimation.</li> <li>GE21 updated the grade-shells using Leapfrog Geo 2022.1 implicit geological modelling software based on the previous 2019 model. GE21 used polylines in cross sections to limit the updated solid.</li> </ul>
	<ul> <li>The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>A surface of approximately 8 meters below the topography and the information of drillhole geological logging was used to define the oxidation horizon.</li> <li>Some sub-vertical east-west faulting occurs within the deposit but the influence of these structures on the geometry of the deposit is not yet well understood.</li> </ul>
Dimensions	<ul> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul> <li>The Andrade deposit has been drilled along a strike length of 1,400 m. It plunges shallowly (approximately 20°) to the south and has been intercepted at depths of up to 550 m below surface. The general plane of the deposit dips at 60° to the west and has a width (in plan section) of up to 360 m from east to west.</li> </ul>
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points.	<ul> <li>Two estimation domains were modelled, separating the low grade and high-grade data populations. The low grade was divided in weathered and fresh rock by an eight-metre surface generated from the topography surface. Geovia's GEMS software was used to estimate grades into a 3D block model, constrained by mineralization wireframes. In 2023, the updated model grades were estimated using Leapfrog Edge 2022.1.</li> <li>Cu and Ag were estimated into the block model using ordinary kriging within the mineralized domains. For all elements, five estimation passes were used with progressively relaxed search ellipsoids and data requirements. Block estimation required a minimum of four and a maximum of 12 samples in the first pass and a minimum of two and maximum of 12 samples in the last search pass. The estimation ellipse ranges and orientations are based on the variogram model for Cu.</li> </ul>
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No checks with previous estimates or mine production records have been made.

Criteria	JORC Code Explanation	Commentary
	<ul> <li>The assumptions made regarding recovery of by-products.</li> </ul>	No estimation of recovery factors has been made.
	<ul> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> </ul>	None made.
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> </ul>	• The block size of 2.5 m (along strike) by 2.5 m (perpendicular to strike) by 2.5 m (vertical) was used. Drilling grid size is approximately 100 m x 100 m, with a detailed central-north area where the grid size spacing 30m x 30m.
	<ul> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	None made.
	<ul> <li>Any assumptions about correlation between variables.</li> </ul>	No assumptions were made.
	<ul> <li>Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul> <li>One-metre composites for Cu and Ag for all domains combined. GE21 considers that Aguia's calculation parameters, orientation, and fitted variogram models are appropriate and reasonable given the available data and geological interpretation.</li> </ul>
	<ul> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	• Aguia composited all assay intervals to a length of one meter. Following top-cut analysis, 20 g/t Ag was selected as the high-grade limit. No cap was necessary for the copper estimate.
	• The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	<ul> <li>GE21 performed a visual validation of the block model by visually comparing block and borehole grades on a section by section basis and also produced a series of swath plots and NN checks to compare ordinary kriging and nearest neighbor estimations(NN) with reasonable conformance. The resultant block estimates appear to be reasonable in comparison to the composite grades.</li> <li>GE21 believes that the estimation methodology and parameters are appropriate for the estimation of Measured, Indicated and Inferred Mineral Resource.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	Sample weighting and assay analysis were performed on dry basis.

Criteria	JORC Code Explanation	Commentary				
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>Open pit Mineral Resources are reported within a conceptual pit shell generated in Geovia's Whittle software at a cut-off grade of 0.17% Cu. This was calculated based on input costs as detailed below and a uniform pit slope angle of 55°.</li> </ul>				
Mining factors or assumptions.	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining</li> </ul>	<ul> <li>GE21 used th Table below t open pit reso eventual ecor</li> </ul>	ne Measured, Ind to generate an op urce that complie nomic extraction'	dicated and Inferrec pen pit shell (figure es with the JORC (2 '.	I Resource blo below) in Wh 2012) Code fo	ocks and the input assumptions in ittle to provide a constraint for the r "reasonable prospects for
	nossible to make assumptions	Item	ltem	Unity		
	regarding mining methods and	Economic Parameters	Sell Price	AUD\$/t Cu	12614	
	parameters when estimating Mineral Resources. may not always be rigorous. Where this is	DOM	Density	g/cm³	model	
		KOW	Grade (Cu)	%	model	
	the case, this should be reported	Waste	Density	g/cm³	2.60	
	with an explanation of the basis of the mining assumptions made.	Mining	Mining recovery	0/	100	
		winning	Dilution	70	0	
			Х		5	
		Block Model	Y	m	5	
			Z		5	
		Clana Angla	Oxided	٥	45	
		Slope Angle	Fresh rock		55	
		Metallurgical recovery	Cu	%	70	
		Cut-off	Cu	%	0.17	
			Mining	AUD\$/t mined	4.50	
		Costs	Process	AUD\$/t product	1162	
			G&A	AUD\$/t product	22.69	

Criteria	JORC Code Explanation	Commentary
		Resource Pit Resource Pit MEASURED INDICATED INFERRED
Metallurgical factors or assumptions.	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Recovery assumptions above were based on a preliminary metallurgical study undertaken at the mineral processing laboratory at the Federal University of Rio Grande do Sul (UFRGS) in 2010. A Bond Ball Mill Work Index test was also carried out in 2010 at the Federal University of Rio de Janeiro (UFRJ).</li> <li>Two samples, representative of different aspects of sulphide ore, were obtained from diamond drill core. The first, EM-001, was selected as representative of mainly disseminated mineralization predominant in the deposit. The second, EM-002, was selected as representative of mainly vein/replacement style mineralization seen to exist within the main body. A third sample, EM-003, was collected from trenches to represent oxidized material containing mainly malachite and chrysocolla. The selected samples were used for a preliminary and non-conclusive work index, flotation, and leaching tests.</li> <li>Aguia is currently testing samples in a Bioleaching process. According to Aguia, Preliminary results show 70% of metallurgical recovery. The cost estimate for Bioleaching process was 1162 AUD\$/t product. This parameters were applied on pit optimization for Mineral Resource pit.</li> </ul>

Criteria	JORC Code Explanation	Commentary
<ul> <li>Environmental factors or assumptions</li> </ul>	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>No environmental assessment study has been carried out to assess the likely environmental or social impacts of this project going into production.</li> <li>No location or design studies have been undertaken to identify potential locations for tailings management facilities or waste rock storage.</li> </ul>

Criteria	JORC Code Explanation	Commentary
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Density tests were caried out on drill core samples by Archimedes method on a dry basis. The total density database contains 696 measurements that includes mineralization and waste samples. Density was applied to the block model as average values for high grade (2.68 t/m3), low grade, and waste domains (2.60 t/m3).</li> <li>The current values for density do not account for the oxidation state or weathering profile. GE21 maintains 2019 recommendation that further density measurements should be taken from the weathered/oxidized zones to provide a better estimate of the near surface tonnes.</li> </ul>

Classification • The	e basis for the classification of	Aguia Resources Limited – Andrade Deposit Effective date 31/12/2022							
the	Mineral Resources into varying			Lilective	Average	Value	Material Co	ontent	
cor	nfidence categories.	Class	Domain	Mass	OK_Cu	OK_Ag	OK_Cu	OK_Ag	
• Wh	nether appropriate account has			kt	%	g/t	t	kt. oz	
ber	en taken of all relevant factors		HG OX	0.13	1.38	12.21	1.73	0.05	
	relative confidence in		HG SULF	624	1.42	5.10	8 830	102	
I.e.		MEASURED		108	0.37	3.74	2/8	19	
ton	inage/grade computations,		Total	1 813	0.33	3.80	13 043	221	
cor	nfidence in continuity of geology		HG SULF	526	1.54	8.10	8 109	137	
and	d metal values, guality, guantity		LG OX	900	0.38	2.34	3 418	68	
and	d distribution of the data	INDICATED	LG SULF	19 341	0.37	1.78	71 569	1 105	
	a distribution of the data.		Total	20 766	0.40	1.96	83 096	1 310	
• vvn	lether the result appropriately		HG OX	0.13	1.38	12.21	1.73	0.05	
refl	lects the Competent Person(s)		HG SULF	1 150	1.47	6.47	16 939	239	
vie	w of the deposit.	MEA+IND		1 058	0.38	2.55	3 996	1 200	
			Total	20 572	0.37	1.04 2 11	75 202 96 138	1 532	
			HG SULF	173	1 60	7.71	2 765	43	
			LG OX	282	0.33	1.13	937	10	
		INFERRED	LG SULF	2 548	0.36	1.53	9 110	126	
			Total	3 003	0.43	1.85	12 812	179	
	<ul> <li>2. Miner</li> <li>3. Avera</li> <li>were ap</li> <li>4. Minin</li> <li>5. Miner</li> <li>6. Totals</li> <li>7. Berna</li> <li>respons</li> <li>Est</li> <li>Infe</li> <li>An</li> <li>res</li> <li>The</li> <li>and</li> <li>Der</li> <li>car</li> <li>It is</li> <li>Con</li> </ul>	ral Resources are str age bulk densities of oplied. Ing loss of 0% and mil- ral Resources are no ls may not sum due t ardo H. C. Viana BS- sible by the Andrade stimated blocks for erred. In exploration potent source pit. In e samples used to d analyzed in acco espite the wide spa impaign spacing all s the opinion of GE competent Person's	ated within a r 2.68 t/m3 for hing dilution o ot Mineral Res o rounding., c. (Geo) MAIG Copper Resol the Andrade tial of 11.5 M inform this e rdance with tial distributio ows a Measu 21 that the A view of the d	resource pit s high-grade d of 0% factors I serves and do G, a geologist urces estimate deposit are tat 0.35% ( estimate app standard ind on (100 m x ured and Ind Andrade Mir deposit	hell optimiz omains and have been o not have of and full-tin te. currently Cu and 2. Cu and 2. Dear to be dustry pra 100 m dr dicated re heral Reso	zed above a d 2.60 t/m3 applied to t demonstrate ne director a classified 43 g/t Au v of good qu ctice. ill hole spa source cla purce estin	a cut-off grad for low-grad he reported f ed economic and owner of as Measure vas also es uality and h cing), the n ssification. nate approp	le of 0.17 e and wa figures. viability. f GE21, is ed, Indic timated nave bee new drilli priately r	% Cu. ste domains s the CP ated, outside the n collected ng eflects the

Criteria	JORC Code Explanation	Commentary
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul> <li>Maiden Mineral Resource estimation and classification of the Andrade Copper Project was prepared by Roscoe Postle Associates Inc. (RPA), with an effective date of March 13th, 2019, as verified by GE21 on NI43-101 Technical Report titled "Technical Report on the Andrade deposit, State of Rio Grande do Sul, Brazil", issued May 2nd, 2019.</li> <li>GE21 using new drill hole data, a new geological interpretation, and a new geostatistical approach, re-estimated the resource to update the Mineral Resource classification based on variographic study and new diamond drilling campaign. GE21 professionals completed a site visit to the Andrade Copper Project on 27 to 28 October, 2020.</li> </ul>
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> </ul>	<ul> <li>The Mineral Resource at Andrade has been estimated using Industry standard procedures for a deposit of its nature.</li> <li>Inferred Mineral Resources are not Ore Reserves and should not be considered for mine planning and scheduling purposes. They reflect a volume of mineralised material that requires significant further investigation before being able to be considered an Ore Reserve as defined by the JORC Code (2012).</li> </ul>

Criteria	JORC Code Explanation	Commentary
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	<ul> <li>No production data from the Andrade deposit is available as the historic artisanal mining activity was not documented.</li> </ul>