

9 March 2021

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

ANDRADE COPPER DEPOSIT – UPDATED RESOURCE ESTIMATE AND SCOPING STUDY SHOWING POSITIVE ECONOMICS

Sydney, Australia, - Aguia Resources Limited (ASX:AGR) (**'Aguia'** or the **'Company'**) is pleased to announce an updated Resource Estimate and a Scoping Study showing positive economics for its Andrade Copper Deposit located in the State of Rio Grande do Sul in southernmost Brazil.

The Scoping Study was conducted by independent consulting firm GE21 Consultoria Mineral Ltda ('GE21') in Brazil and includes pit optimization and design, mine scheduling, capital expenditure ('CAPEX') and operational expenditure ('OPEX') estimates, and an economic analysis based on the potential production of penta-hydrated copper sulphate (base case) or the production of copper cathode (metallic copper) as an alternative case. Please see overleaf.

Highlights

- An updated Resource Estimate with an Indicated Resource of 18.03Mt at 0.41% Cu and 1.87g/t Ag, and an Inferred Resource of 3.98Mt at 0.53% Cu and 2.06 g/t Ag.
- Mine scheduling based on mineable resources containing Indicated Resource of 8.51Mt at 0.41% Cu and Inferred Resource of 3.21Mt at 0.53% Cu.

Andrade Copper Project Highlights				
	Copper Sulphate Production	Copper Cathode Production		
Post-Tax NPV @ 5% Discount Rate	A\$112.3 million	A\$108.1 million		
Internal Rate of Return (IRR)	67.1% post-tax	43.5% post-tax		
Production Rate (average)	1 million tonnes/year ROM after 4 years of ramp-up	1 million tonnes/year ROM after 4 years of ramp-up		
Life of Mine (LOM)	14 years	14 years		
Capital Expenditure (CAPEX)	A\$9.39 million (A\$10.33 million with contingency)	A\$18.12 million (A\$19.93 million with contingency)		
Operating Expenditure (OPEX)	A\$1.15k/tonne	A\$4.60k/tonne		
Sales Price	A\$2.77k/tonne	A\$10.90k/tonne		
EBITDA (average for years 1 to 14)	A\$19.7 million/year	A\$19.1 million/year		
Strip Ratio (average for LOM)	1.63:1.00 (tonnes waste to tonnes ore)	1.63:1.00 (tonnes waste to tonnes ore)		
Run of Mine (ROM)	11.7 million tonnes	11.7 million tonnes		
Pay-back	1.9 years	4.1 years		

Aguia Resources Limited | ABN 94 128 256 888 Level 12, 680 George Street, Sydney NSW 2000 | Telephone 02 8280 7355 Facsimile 02 9287 0350 www.aguiaresources.com.au

Management Commentary

Managing Director Dr. Fernando Tallarico said: "Just like our Três Estradas Phosphate Project, Andrade also has very robust project economics and is another example of Aguia's ability to secure projects that have low CAPEX requirements, compelling NPVs, and excellent IRRs.

Our strategy is all about building solid underlying cash flows from multiple projects in the one region, all of which are underpinned by large, multi-generational resources, and Andrade is another such project. I look forward to sharing the results of our Andrade Drilling Plan with you as this exciting project unfolds."

Background

The Andrade Copper Project ('**Andrade**' or '**the Project**') is located 260km southwest of Porto Alegre, the capital city of Rio Grande do Sul State in southern Brazil. The project consists of six granted exploration permits covering a total area of 5,158.7 hectares.

An extensive geological and geophysical database was developed for the Project as a result of extensive exploration campaigns that included a surface mapping program, the reprocessing of an historical airborne geophysical data package, stream sediment sampling, ground geophysical survey (Induced Polarization and Magnetometry), a petrographic study, and mapping and resampling of 18 historical trenches. The Project's drilling database includes detailed logging and geochemistry from 48 diamond drill holes totalling 8.985,89 metres, 23 historical trenches that were re-sampled totalling 1,645.61 metres, and 10,074 assay records. Core logging reported rock-type, structure, alteration, weathering state, and geotechnical parameters (rock quality designation, joint surface, joint angles, etc).

Copper mineralisation at Andrade is almost entirely disseminated granular chalcocite (Cu_2S) with minor chalcopyrite ($CuFeS_2$) hosted in basic to intermediate meta-volcanic rocks. At the surface an oxidised portion with dominant malachite ($Cu_2(CO_3)(OH)_2$) occurs.

In February 2021, Aguia announced the results of metallurgical tests conducted by ALS Metallurgy Services at their laboratory in Perth, Western Australia, on samples from Andrade. These included copper recoveries of 93.4% and 84.4% in the rougher flotation circuit on the High-Grade (HG) and Low-Grade (LG) samples, respectively. In a single sighter leach test on the HG and LG samples, copper extraction reached 96.0% and 99.0%, respectively.

Mineral Resource Estimate

GE21, an independent Brazilian consulting firm, conducted the mineral resource estimate. The resource estimate was supported by a fully diluted block model. The block model covers all modelled domains and waste rocks. The information carried in the block model includes:

- Rock type for mineralized and waste material
- The mineralisation and waste density
- Interpolated copper (%), silver (ppm), and copper equivalent grades via Ordinary Kriging
- Interpolated copper (%), silver (ppm) and copper equivalent grades via Nearest Neighbour Method (NN Check)
- Mineral Resource Classification
- The number of composites and drill holes used for interpolation
- Search radius

The resource estimate for the Andrade deposit was reported considering open pit and underground mineral resources at a cut-off grade of 0.2% Cu. No mineral reserves have been estimated for the Project.

The updated mineral resource estimate consists of an Indicated Resource of 18.03Mt at 0.41% Cu and 1.87g/t Ag and an Inferred Resource of 3.98Mt at 0.53% Cu and 2.06 g/t Ag. The JORC (2012) Code standards were used for Mineral Resource classification.

Table 01 – Mineral Resource Estimate.								
	Aguia Resources Limited – Andrade Deposit Effective date 01/02/2021							
Class		kt	Cu (%)	Ag (ppm)	Metal			
Class	Dominium				Cu (klb)	Ag (koz)		
	LG OXI	630	0.43	3.07	5 958	62		
	LG SUFT	17,038	0.38	1.72	143 752	944		
INDICATED	HG SULF	368	1.54	6.55	12 482	77		
	Sub-Total	18,036	0.41	1.87	162,187	1,084		
INFERRED	LG OXI	348	0.37	1.66	2 816	19		
	LG SUFT	3,085	0.35	1.73	23 736	172		
	HG SULF	546	1.67	4.19	20 071	74		
	Sub-Total	3,980	0.53	2.06	46,619	264		

Notes:

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

2. Open pit resources are stated within a preliminary pit shell, above a cut-off grade of 0.2% Cu.

3. Cut-off grades were calculated using a copper price of US\$3.50/lb and a silver price of US\$20/oz.

4. Average bulk densities of 2.68 t/m³ for high grade domains and 2.60 t/m³ for low grade and waste domains were applied.

5. Mining loss of 5% and mining dilution of 5% factors have been applied to the reported figures.

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

7. The Scoping Study referred to in this report is based on low-level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

8. Totals may not sum due to rounding.

9. The Mineral Resources Estimate was developed by GE21.

10. Bernardo Horta Cerqueira Viana BSc (Geo) MAIG, a full-time employee of GE21 is the CP responsible for the Andrade Copper Mineral Resources Estimate.

Mining and Processing

The mining plan forecasts a total of 11.72 million tonnes run of mine (ROM) mined at a strip ratio of 1.63 (waste to ore, in tonnes). The project comprises an open-pit, truck and shovel operation with a life of mine (LOM) of 14 years. The mine plan model adopted is a "diluted" model, adding approximately 5% dilution and 95% of recovery to the source model.

The mine production scheduling was generated following the assumptions below:

- Production rate: 500kt/year in the first four years
- 1.000kt ROM per year, after year four
- Mass stabilization

Table 02 – Mineable Resources – Pit Design	Results.
--	----------

Block dimensions 5x5x5 (m)						
	Mine Recovery 95%, Dilution 5%					
	(Effective	date 01/03/2021)				
Material	Mt	Cu (%)	CuSO _{4.} 5H ₂ O (Mt)			
Indicated	8.51	0.41	0.14			
Inferred	3.21	0.53	0.07			
Total ROM	11.72	0.44	0.21			
Waste	19.11					
Strin Ratio	1.63					

Notes:

Mineral Resources were estimated using Geovia Whittle 4.3 software and the following economic parameters: Sale price for CuSO₄5H₂O(t) = AUD\$2,382.00 (Exchange rate A\$1.00 = R\$3.80).

2. Mining costs: A\$3.08/t mined, processing costs: A\$8.31/t ROM and G&A: A\$22.59/t CuSO4.5H2O.

3. Dilution 5% and Recovery 95%

4. Final slope angle: oxidized 45°, fresh rock = 55°

5. Waste = 19.1Mt

6. Strip Ratio = 1.63 t/t (Waste/Ore)

7. The Competent Person responsible for the Mineable Resources estimate is Guilherme Gomides Ferreira, BSc. (MEng), MAIG, an employee of GE21

	ROM		Wasto	Strip	ROM distribution		
Period	Mass	Grade	CuSO ₄ .5H ₂ O	Waste	Ratio	Ratio mine life	
	(kt)	Cu (%)	(kt)	(kt)	(t/t)	Indicated	Inferred
Year 1	500	0.32	6.4	826	1.7	80	20
Year 2	500	0.35	7.0	701	1.4	80	20
Year 3	500	0.36	7.2	926	1.9	80	20
Year 4	500	0.37	7.3	899	1.8	80	20
Year 5	1,000	0.41	16.4	1,660	1.7	52	48
Year 6	1,000	0.42	17.0	1,745	1.7	64	36
Year 7	1,000	0.42	16.7	2,146	2.1	78	22
Year 8	1,000	0.41	16.4	2,071	2.1	85	15
Year 9	1,000	0.38	15.2	1,951	2.0	96	4
Year 10	1,000	0.41	16.3	1,785	1.8	100	0
Year 11	1,000	0.50	20.1	1,575	1.6	100	0
Year 12	1,000	0.51	20.6	1,320	1.3	100	0
Year 13	1,000	0.59	23.6	1,019	1.0	18	82
Year 14	718	0.61	17.4	484	0.7	0	100
Total	11,718	0.44	207.6	19,107	1.6		

Table 03 – Mine Scheduling.

Production Scenarios

The Scoping Study considered two production scenarios for the Andrade Copper Project:

- Base Case Production of Penta-hydrated copper sulphate (CuSO_{4.5}H₂O)
- Alternative Case Production of copper cathode (metallic copper) •

AGUIA

ANDRADE COPPER DEPOSIT - UPDATED RESOURCE ESTIMATE AND SCOPING STUDY SHOWING **POSITIVE ECONOMICS** Page |4

Base Case - Penta-Hydrated Copper Sulphate Production

For supply to the agribusiness market, the process allows the production of Copper Sulphate. The solution from the extraction plant would be pumped to a crystallization unit composed of agitated tanks where the acid concentration is increased to 200g/l and temperature reduced to 10°C. This is a batch process, and the cycle is 2 hours.

The slow stirring causes the suspension of the smaller crystals, allowing their growth along the process. After the termination of the cycle, the solution is centrifuged, and the crystals are washed and dried. The solution is then pumped back to the SX step.

Considering extraction of 85% and recovery of 82%, the Penta-Hydrated Copper Sulphate (CuSO₄.5H₂O) production is estimated at 14,700t/y after year 4.

Alternative Case – Copper Cathode Production (Metallic Copper)

In the copper SX/EW process, crushed oxidized copper ore is piled into a heap that is irrigated with a sulphuric acid solution. Copper is leached from its minerals with lixiviant to produce PLS (pregnant leach solution). The solution is drawn off from the base of the heap through piping.

In the stripping stage, copper ions are moved from the loaded organic phase back to the aqueous phase to form the rich electrolyte. The barren organic solution is recycled back to extraction. The sulphuric acid concentration of the aqueous solution leaving the extraction stage (raffinate) is adjusted to the appropriate level by adding water or sulphuric acid.

The mixture of raffinate, water and sulphuric acid forms lixiviant, and it is recycled back to leaching.

Rich electrolyte leaving the stripping is mixed with spent electrolyte in electrolyte blending to achieve the proper concentration in the electrowinning feed.

When copper ions are reduced from the ionic solution, they form a pure metal surface on the cathode. High purity copper cathodes are produced in the electrowinning.

Considering the extraction of 85% and recovery of 82%, the annual production is estimated at 3,600t of Cu.

Base Case Economics

The financial model in the GE21 Scoping Study indicates a post-tax IRR of 67.1% and a NPV of A\$112.3 million using a 5% discount rate. The financial model is based on the following assumptions:

- The Scoping Study assumes a long-term Penta-hydrated copper sulphate price of A\$2,775.40/tonne
- The Andrade Copper Project will have a life of mine of 14 years that will require an initial capital expenditure of A\$9.39 million (A\$10.33 million including contingency)

The costs for the project include the initial capital cost (Initial CAPEX) and the operational cost (OPEX). All costs are expressed in Australian Dollars and an exchange rate of A\$1.00 = R\$3.80 is used.

Financial Analysis	Post-Tax
CAPEX (A\$ M)	10.3
NPV (A\$ M)	112.3
IRR (%)	67.1
Payback time (years)	1.9

Table 04 - Financial Results Summary – Base Case.

Alternative Case Economics

The financial model in the GE21 Scoping Study indicates a post-tax IRR of 43.5% and a NPV of A\$108.1 million using a 5% discount rate. The financial model is based on the following assumptions:

- The Scoping Study assumes a long-term copper cathode price of A\$10,905.10/tonne
- The Andrade Copper Project will have a life of mine of 14 years that will require an initial capital expenditure of A\$18.12 million (A\$19.93 million including contingency)

The costs for the project include the initial capital cost (Initial CAPEX) and the operational cost (OPEX). All costs are expressed in Australian Dollars and an exchange rate of A\$1.00 = R\$3.80 is used.

Financial Analysis	Post-Tax
CAPEX (A\$ M)	19.9
NPV (A\$ M)	108.1
IRR (%)	43.5
Payback time (years)	4.1

 Table 05 - Financial Results Summary – Alternative Case.

Project Funding

The initial CAPEX required to fund the Andrade Copper Project for Penta-Hydrated Copper Sulphate production (base case) is A\$9.39 million (A\$10.33 million with contingency and for Copper Cathode production (alternative case) A\$18.12 million (A\$19.93 million with contingency).

Once the Company makes a decision on the production route (base case or alternative case), CAPEX funding is intended to be through a mix of debt and equity. The Company is in active dialogue with prospective investors and is pursuing a number of options to fund the required CAPEX with debt, equity or potentially through investment at the asset level.

Cautionary Statements

The Scoping Study is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves. Further evaluation work and appropriate studies are required before Aguia will be in a position to estimate any ore reserves or to provide any assurance of an economic development case.

The Scoping Study is based on the material assumptions provided in the full report overleaf. These include assumptions about the availability of funding. While Aguia considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

AGUIA ANDRADE COPPER DEPOSIT – UPDATED RESOURCE ESTIMATE AND SCOPING STUDY SHOWING POSITIVE ECONOMICS P a g e | 6

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Despite the understanding that Inferred Resources are not a determining factor for project viability, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

AUTHORISED FOR ISSUE TO ASX BY FERNANDO TALLARICO, MANAGING DIRECTOR OF AGUIA RESOURCES LIMITED

For further information, please contact:

Aguia Resources Limited - Investor Relations ABN: 94 128 256 888 Level 12, 680 George Street, Sydney NSW 2000 Australia E: <u>investor.relations@aguiaresources.com.au</u> P: +61 (0) 419 960 560 W: www.aguiaresources.com.au

For enquiries, please contact Ben Jarvis (Six Degrees Investor Relations) at <u>ben.jarvis@sdir.com.au</u> or +61 (0) 413 150 448.

About Aguia:

Aguia Resources Limited, ("Aguia") is an ASX listed multi commodity company (AGR:ASX) with pre-production phosphate and copper sulphate projects located in Rio Grande do Sul, the southernmost state of Brazil. Aguia has 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 and to the activity being undertaken to gualify 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 which it appears. Mr. Guilherme Gomides Ferreira, a Mining Engineer and employee of GE21, registered as a Competent Person in the AIG (Australian Institute of Geoscientists). Mr. Ferreira has sufficient relevant experience to the style of mineralization, mining methods and process to qualify as a Competent Person as defined in the JORC Code (2012). 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 Institute of Geoscientists). Mr. Viana has sufficient relevant experience to the style of mineralization to qualify as a Competent Person as defined in the JORC Code (2012). Mr. Viana also meets the requirements of a Competent Person under the AIM Note for Mining, Oil and Gas Companies. Mr. Porfirio Cabaleiro Rodriguez is a Mining Engineer and full-time director and owner of GE21 and is registered as Competent Person in the AIG (Australian Institute of Geoscientists), he has sufficient relevant experience to the style of mineralization to qualify as a Competent Person as defined in the JORC Code (2012). Mr. Viana, Mr. Ferreira and Mr. Rodriguez consent to the inclusion in this report of the matters based on the GE21 study in the form and context in which it appears.

AGUIA ANDRADE COPPER DEPOSIT – UPDATED RESOURCE ESTIMATE AND SCOPING STUDY SHOWING POSITIVE ECONOMICS P a g e | 7

Caution regarding forward-looking information:

This press release contains "forward looking information" within the meaning of applicable Australian securities legislation. 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 forwardlooking 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 other factors 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.

ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT –

Updated Resources Estimate and Scoping Study - Memorandum

Caçapava do Sul, RS, BRASIL

Prepared by GE21 Ltda on behalf of:

Aguia Resources Limited

Effective Date: Issue Date:

01/02/2021 09/03/2021

Authors:

Bernardo H. C. Viana – (Geologist) MAIG Porfirio Cabaleiro Rodriguez – (Mining Engineer) FAIG Guilherme Gomides Ferreira – (Mining Engineer) MAIG





Authors:	Porfírio Cabaleiro Rodriguez		Mining Engineer	BSc (Mine Eng) FAIG		
	Bernardo Horta Cerqueira Viana		Geologist	BSc (Geo) MAIG		
	Guilherme Gomides Ferreira		Mining Engineer	BSc (Mine Eng) MAIG		
Effective Date		1 st of February, 2021				
Issue Date:		9th of March, 2021				
GE21 Projec	ct Nº:	GE21_201117				
Version:		Final				
Work Directory:		S:\Projetos\Aguia-Re	esorces\201117-SSAnd	ade\23_Relatorio		
Print Date:		09 March, 2021March 8, 2021				
Copies:		Aguia Resources Lin GE21 Consultoria Mi	nited (1) ineral (1)			

Document Modifications

Version	sion Description		Author(s)	Date
This is a scanned signature wide of the by Company. The person and signatory consents for the purpose of this document Poprio Cabaleiro Rodriguez		This is a scanned signature held on file by Company. The person and signatory consents to its the purpose of this doctment of the purpose of Bernardo H. C. Viana		
Porfirio Cabaleiro Rodriguez		Bernardo H de C Viana		
Mining Engineer - Director		Geologist - Director		
This is a scanned signature bett on file by Company. The person and signatory consent the super only for the purpose of this decuments Ferreira		This is a scan person and signa	ned signature held or tory consents to its u this documen	n file by Company. The se only for the purpose of t
	Guilherme Gomides Ferreira			
Mir	Mining Engineer – Project Coordinator			

UNITS, SYMBOLS AND ABBREVIATIONS

Abbreviations				
Long Form	Short	Notes		
A million years	Ма			
American Dollar	US\$			
Australian Dollar	AUD\$			
Australian Institute of Geoscientists	AIG	Professional association		
Brazil	BR			
Canadian Institute of Mining	CIM			
Canadian Dollar	CAD\$			
Capital Expenditure	CAPEX			
Centimetre	cm			
Certified Reference Materials	CRM			
Compensação Financeira por Exploração Mineral	CFEM			
Competent Person	СР			
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			

Abbreviations				
Long Form	Short	Notes		
Minimum	Min			
North	N			
Ordinary Kriging	ОК			
Operational Expenditure	OPEX			
Ounces	oz			
Quality Assurance and Quality Control	QAQC			
Brazilian Real	R\$ or BRL			
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			

ÍNDEX

1	INTRO	DUCTION	10					
2	OBJEC	TIVE	12					
3	LOCAL	RESOURCES AND INFRASTRUCTURE	13					
4	GEOLO	GEOLOGY1						
5	EXPLO	RATION	17					
6	DRILLI	DRILLING1						
7	SAMPLE PREPARATION, ANALYSES AND SECURITY							
	7.1 7.2	DENSITY SAMPLING METHOD AND APPROACH	21					
	73		22					
	7.3.1	STANDARDS (CRM)	22					
	7.3.2	DUPLICATES	25					
	7.3.3	BLANKS	28					
	7.3.4	CHECK ASSAY PROGRAM	29					
8	MINER	AL RESOURCES	29					
	8.1	Maiden Resources Estimated by RPA	29					
	8.2	MINERAL RESOURCE DATABASE	32					
	8.3	GEOLOGICAL INTERPRETATION AND 3D SOLIDS	32					
	8.4	MINERAL RESOURCE ASSAYS	33					
	8.5	CAPPING LEVELS	33					
	8.6	COMPOSITING	34					
	8.7	VARIOGRAPHY	35					
	8.8	DENSITY DATA	36					
	8.9	BLOCK MODELS	36					
	8.10	SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS						
	8.11		37					
	8.12	CLASSIFICATION	40					
	8.13	CUT-OFF GRADE AND WHITTLE PARAMETERS	40					
	8.14	MINERAL RESOURCE REPORTING	42					
9	MINING	B METHODS	43					
	9.1	Introduction	43					
	9.2	Geotechnics	44					
	9.3	Pit Optimization	44					
	9.4	Pit Design	47					
	9.5	Mine Scheduling	49					
	9.6	Mine Fleet Sizing	50					
		-						

	9.7	Mine Layout	52	
10	RECOVERY METHODS			
	10.1	Exploratory Test Works	54	
	10.2	Process Route Description	55	
	10.3	Base Case - Penta-Hydrated Copper Sulphate Production	58	
	10.3.1 Estimated Production			
	10.4	Alternative Case - Metallic Copper Production	58	
	10.4.	1 Estimated Production	59	
11	Market	Study	59	
12	CAPEX and OPEX			
	12.1	Base Case - Penta-Hydrated Copper Sulphate	60	
	12.2	Alternative Case - Metallic Copper Production	61	
13	ECON	OMIC ANALYSIS	61	
	13.1	Taxes	61	
	13.2	Federal Taxes	62	
	13.3	State Taxes	63	
	13.4	Discounted Cash Flow - Base Case	63	
	13.4.1 Sensitivity Analysis65			
	13.5	Discounted Cash Flow - Alternative Case	66	
14	PROJE	ECT FUNDING	69	
15	CONC	LUSIONS AND RECOMMENDATION	69	
16	REFEF	RENCES	71	

FIGURES

Figure 1 – Project Location Map.	10
Figure 2 – Tenement permit areas - Location map.	12
Figure 3 – Geological map of the Andrade deposit area.	15
Figure 4 – Mineralization Styles at Andrade.	16
Figure 5 – Map of Drillholes at the Andrade Deposit.	19
Figure 6 – Representative Drillhole and Geological Vertical Cross Section.	20
Figure 7 – Control chart: standard G394-4.	23
Figure 8 – Control chart: standard AMIS0071.	23
Figure 9 – Control chart: standard AMIS0072.	24
Figure 10 – Control chart: standard AMIS0088.	24
Figure 11 – Control chart: standard AMIS0119.	25
Figure 12 – Control chart: duplicates (copper).	26
Figure 13 – Control chart: duplicates (silver).	26
Figure 14 – Control chart: blind duplicates (copper).	27
Figure 15 – Control chart: blind duplicates (silver).	27
Figure 16 – Control chart: blank (copper).	28
Figure 17 – Control chart: blank (silver).	29
Figure 18 – 3D Mineralization Model – Andrade Deposit (source: RPA's Technical Report on the A Deposit).	ndrade 33
Figure 19 – Ag (ppm) Probability Plot – Capping definition.	34
Figure 20 –Directional Variograms of LG + HG samples.	35
Figure 21 – Visual inspection and comparison of block grades with composite and assay grades – c and block model vertical section.	Irillhole 38
Figure 22 – North Swath Plot Analysis for Cu (%) - X.	39
Figure 23 – North Swath Plot Analysis for Cu (%) - Y.	39
Figure 24 – North Swath Plot Analysis for Cu (%) - Z.	40
Figure 25 – Mineral Resource Block Model and Resource Shell Performed in Whittle Software.	41
Figure 26 – Pit Optimization pushbacks evolution.	46
Figure 27 – Final Pit Design.	48
Figure 28 – Drill Rig Fleet Requirement per Year.	51
Figure 29 – Excavator Fleet Requirement per Year.	51
Figure 30 – Truck Fleet Requirement per Year.	52
Figure 31 – Andrade Project Layout.	53

Figure 32 Block diagram for crushing and stacking route.	56
Figure 33 Block Diagram – Leaching.	57
Figure 34 - Block diagram for the SX process.	58
Figure 35 – NPV Sensitivity Diagram (Base Case).	65
Figure 36 - NPV Sensitivity Diagram (Alternative case).	68

TABLES

Table 1 – Tenement Permits Area Summary.	11
Table 2 - Certified Reference Materials.	22
Table 3 – RPA drilling Summary in 2008.	30
Table 4 - RPA's Modelled Variogram Parameters for Andrade.	31
Table 5: RPA's Search Ellipse Parameters for Grade Interpolation.	31
Table 6: RPA's Maiden Mineral Resource Estimate.	31
Table 7 - Andrade Resource Assay Statistics.	34
Table 8 - Modelled Variogram Parameters for Andrade.	36
Table 9 - Block Model Properties.	36
Table 10 - Search Ellipse Parameters for Grade Interpolation.	37
Table 11 – Cu/Ag Average Values Comparison Between Assays, Composites and Blocks.	38
Table 12: Input Cost Assumptions Under Requirement of	42
Table 13 - Mineral Resource Estimate.	43
Table 14 – Geotechnical Slopes.	44
Table 15 – Optimization Parameters.	45
Table 16 – Pit Optimization Results.	46
Table 17 – Final Pit Design results.	47
Table 18 – Pit Design Results.	49
Table 19 – Mine Scheduling.	50
Table 20 - Distribution of the ROM by category in the mine life.	50
Table 21 – Summarized Project CAPEX – Base Case.	60
Table 22 – Mine OPEX Estimation – Base Case.	61
Table 23: Metallic Copper production CAPEX.	61
Table 24 - Metallic Copper production OPEX.	61
Table 25 - Annual Cash Flow – Base Case.	64
Table 26 - Discounted Cash Flow Results - Base case.	65
Table 27 – Annual Cash Flow – (Metallic Copper Production).	67
Table 28 – Discounted Cash Flow Results – Alternative case.	68





1 INTRODUCTION

Aguia Resources Limited (Aguia) contracted GE21 Consultoria Mineral Ltda (GE21) to prepare a Technical Report and Scoping Study that is compliant with JORC (2012) for the Mineral Resources and Mineable Resources of 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).



Figure 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. The details regarding the agreement can be accessed in the announcement of February 27, 2019 (<u>https://aguiaresources.com.au/asx-announcements/aguia-acquires-andrade-copper-project-drills-1-83-cu-over-28-8m-including-2-55-cu-over-19-4m-and-5-4-cu-over-2-25m/</u>).

All the option payments listed in the above announcement were considered acquisition cost and thus sunk exploration costs and not included into the CAPEX. A royalty of 1% Net Smelter Return (NSR) on the property is payable to Referencial. The royalty can be bought out from Referencial for a payment of CAD\$ 2,000,000.

The project will be an open pit mine of 1.0 Mtpy of ROM, to the processing plant, which will produce an average of 8,690 tpy of copper sulphate concentrate.

All costs are expressed in Australian Dollars and the exchange rate used is AUD \$1.00 = R\$ 3.80.





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

Geologist Bernardo Viana, a professional with 18 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.

Competent Person Mr. Guilherme Gomides Ferreira, a mine engineer that has 15 years of experience in open mining with a focus on mining planning (Pit optimization, mining scheduling and fleet), economic analysis (CAPEX/OPEX, DCF), risk analysis, Ore Reserves and mine reconciliation. He has experience dealing with various commodities, such as phosphate, iron ore, gold, copper, lithium, vanadium and PGM. Mr. Ferreira is a member of the Australian Institute of Geoscientists (MAIG).

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, 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, 2019.

GE21 using new drill hole data, a new geological interpretation, and a new geostatistical approach, re-estimated the resource, upgrading the Mineral Resource classification from a 100% inferred Resource to 82% Indicated resource, based on a classical approach based on variografic measure of mineralization continuity.

The 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), previously Departamento Nacional de Produção Mineral (DNPM), as listed in Table 1.

Six exploration permits cover the immediate surroundings of the Andrade deposit, with a total area of 5,158.7 ha (see Figure 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 – Tenement Permits Area Summary.







Figure 2 – Tenement permit areas - Location map.

2 OBJECTIVE

GE21 Consultoria Mineral Ltda. (GE21) was engaged by Aguia Resources Limited to develop an update resources estimation and a Scoping Study on the copper deposit, with a focus on the potential production of copper sulphate and production of copper cathode as alternative. The Scoping Study was developed in accordance with the provisions of JORC Code (2012).





The Scoping Study referred to in this report is based on low-level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

The economic analysis presented in the Chapter 12 is based on potentially recoverable resources.

3 LOCAL RESOURCES AND INFRASTRUCTURE

Caçapava do Sul (Caçapava) 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 excellent infrastructure and is easily accessible. 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 300m 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, 2013 in Caçapava (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. The main drainage pattern is rectangular dendritic, with low density in areas of sedimentary cover and high density in areas of metapelite exposure.

4 GEOLOGY

The Project area is located 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 located within the São Gabriel Domain, composed of 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±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 corresponds to 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.

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).







Figure 3 – Geological map of the Andrade deposit area.

On 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.

Geochronologic and isotopic data classifies the copper mineralization hosted in the schists of the Vacacaí Metamorphic Complex (which belong to the Passo Feio Formation) 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 4 shows mineralization styles at Andrade.

AND-19-001 (SEC20030) 24.34m @ 0.91% Cu, 7.69g/t Ag (Including 12.55m @ 1.35% Cu, 10.53g/t Ag)



Alteration: pervasive albite > sericite > hematite Infill: calcite veinlets Mineralization: chalcocite aggregates in alteration > infill

Alteration: pervasive chlorite > quartz + albite aggregates Infill: calcite veinlets ± chlorite > quartz + albite aggregates Mineralization: chalcocite + bornite disseminated > bornite + chalcopyrite infill aggregates



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.





5 EXPLORATION

Previous exploration activities in the region carried out by Referencial include a 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 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.

6 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 2,004.5m and in 2010, Boart Longyear drilled 25 holes totalling 6,401.85m.

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 0.5m. 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 cores 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 of two drillholes named AND-20-004 and AND-20-005 totalling 197.15m of drilling.

Aguia followed the same procedures as Referencial except data was logged on paper prior to being entered into a digital database. Holes drilled by Aguia were used to guide the wireframe model but did not inform the estimate as assay results were not available at the time of the estimate.

Figure 5 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 6.







Figure 5 – Map of Drillholes at the Andrade Deposit.







Figure 6 – Representative Drillhole and Geological Vertical Cross Section.

7 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 boundaries. Sample lengths were a minimum of 0.5m and a maximum of 1.5m.

Following the photographs and density measurements, the core was split in half and along sample interval lines by trained technicians 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 methods PREP-31and PREP-31b (rock and drill samples). The sample was dried if required and crushed to 70% less than 2mm, 250g, and 1kg, respectively.

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





All 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.

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.

7.1 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 the core of each drill hole surrounding and within the resource area. The samples for density measurements were selected at 20m intervals from surface and shifted where required to avoid lithological boundaries. A section of core 15cm to 20cm long was selected at 20m 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.

7.2 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.

7.3 QUALITY CONTROL AND QUALITY ASSURANCE MEASURES

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).

7.3.1 STANDARDS (CRM)

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 2.

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

Table 2 -	Certified	Reference	Materials.
-----------	-----------	-----------	------------

All CRMs were pre-packaged in 50g 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 7 to Figure 11).



Figure 7 – Control chart: standard G394-4.



Figure 8 – Control chart: standard AMIS0071.







Figure 9 – Control chart: standard AMIS0072.



Figure 10 – Control chart: standard AMIS0088.







Figure 11 – Control chart: standard AMIS0119.

7.3.2 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 12 to Figure 15).











Figure 13 – Control chart: duplicates (silver).







Figure 14 – Control chart: blind duplicates (copper).



Figure 15 – Control chart: blind duplicates (silver).





7.3.3 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 16 and Figure 17). These results indicate that there may be some low-level contamination occurring at the laboratory.



Figure 16 – Control chart: blank (copper).






Figure 17 – Control chart: blank (silver).

7.3.4 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.

8 MINERAL RESOURCES

8.1 Maiden Resources Estimated by RPA

The Andrade drill hole database comprised 38 surface (Table 3) diamond drill holes with a total length of 8,406.34m and 19 historical trenches re-sampled by Referencial in 2009 and 2010 which total 1,088.46m. There are 8,000 assay records. This includes historical drilling performed in 2009 and 2010 and historical re-sampled trenches. Five diamond core holes drilled by Aguia in 2019 (382.40m) and 2020 (197.15m) were not used in RPA's estimate. As a result, these holes were only used to guide the interpretation of wireframes.





				-		
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
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 3 – RPA drilling Summary in 2008.

The maiden Mineral Resource estimate by RPA in 2019 for the Andrade deposit included open pit and underground resources. The estimate was supported by a Geovia GEMS 6.8 block model with blocks sized 5m by 5m by 5m. An isotropic, omnidirectional variogram 30m





range was used for interpolation on a search ellipsoid range vaying from 150 to 300m. (Table 4 and Table 5).

The Mineral Resources were constrained by three dimensional (3D) mineralized wireframes. A resource shell was used to define the open pit resources. The underground resources are reported below the resource shell at a higher cut-off grade, from mineralized areas with contiguous blocks above the underground cut-off grade.

	<u> </u>										
Cu%	Azimuth	Dip	Orientation	Nugget	C1	Range 1	C2 Sill	Range 2			
OMNI	0	20°	Strike	0.15	0.65	5m	0.20	30m			
OMNI	0	20°	Strike	0.05	0.3	8m	0.65	60m			

Table 4 - RPA's Modelled Variogram Parameters for Andrade.

	Table 5. KFA's Search Empse Farameters for Grade interpolation.												
Composites Search Ellipse GEM Rotation (ADA)			(ADA)										
ALL DOMAINS	Estimation Pass	Min.	Max.	SVx (m)	SVy (m)	SVz (m)	Principal Azimuth	Principal Dip	Intermediate Azimuth	Estimation Method	Search type		
1 m Comp.	1	4	12	150	100	100	0	20	0		Ellipsoid		
Cu / Ag	2	2	12	300	200	200	0	20	.0 0		⊏iiipsoia		

Cable 5: RPA's Search Ellipse Parameters for Grade Interpolation.

For the Andrade deposit, all estimated blocks above the cut-off grade were reported as Inferred Mineral Resources based on the interpreted wide spaced nature of the drilling (100m x 100m), as presented in Table 6.

Aguia Resources Limited – Andrade Deposit - March 13, 2019									
			Cu Grade	Ag Grade	Cu	Ag			
		(kt)	(%)	(g/t)	(klb)	(koz)			
Oxide	Open Pit	1,337	0.43	2.54	12,778	109			
Sulphide	Open Pit	8,796	0.51	2.15	98,525	607			
	Underground	675	1.42	8.06	21,185	175			
Total Inferred Mineral Resources		10,807	0.56	2.56	132,488	891			

Table 6: RPA's Maiden Mineral Resource Estimate.

GE21 using measures of continuity based on the new databases, with five more drill holes, and a more extensive variographic analysis, reviewed the resource estimation as reported ahead.





8.2 MINERAL RESOURCE DATABASE

The Andrade drill hole database comprises 43 surface diamond drill holes with a total length of 8,406.34m and 23 historical trenches re-sampled by Referencial in 2009 and 2010 which total 1,645.61m and one gallery with a total length 23m. There are 10,074 assay records. This includes historical drilling performed in 2009 and 2010 and historical re-sampled trenches. Five diamond core holes drilled were by Aguia in 2019/2020 (579.55m).

8.3 GEOLOGICAL INTERPRETATION AND 3D SOLIDS

GE21 used as a base, the geological interpretation provided by RPA, as it already had considered the five new drill hole information as guide on the wireframes 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 0.20% Cu, while 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 the 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 wireframes were built using 3D polylines snapped to the drill hole intervals on crosssections spaced 100m 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 1,400m along the strike, dipping approximately 60° to the west, and to depths of up to 400m below surface. Figure 18 illustrates the extents of the mineralized wireframes and identifies the low and high-grade zones.

The high-grade population presents a shallowly (approximately 20°) south plunging feature. 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.







Figure 18 – 3D Mineralization Model – Andrade Deposit (source: RPA`s Technical Report on the Andrade Deposit).

8.4 MINERAL RESOURCE ASSAYS

The Andrade drill hole database includes all the oxide trench sampling and fresh rock drill holes. The resource assays represent the samples captured inside the mineralization wireframes. There are two mineralized wireframes, low-grade (LG) and high-grade (HG), and a surface that separates oxide (OXI) and fresh rock interface. The Andrade resource assays average 1.0m in length and extend from 6,619,400N to 6,620,900N.

8.5 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 (Figure 19), 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, a total of 14 samples were capped. Capping was not considered necessary for the copper estimate.







Figure 19 – Ag (ppm) Probability Plot – Capping definition.

8.6 COMPOSITING

The assays within the mineralized domains were composited to one metre lengths, starting at the up-hole wireframe boundary and resetting at each new wireframe. Composites shorter than 0.5m were discarded. The Andrade composites average 1.0m in length. Approximately 1.3% of the composites have lengths that are less than one metre Table 7 presents the composites statistic by mineralized dominium.

	Copper (%)									
DOMAIN	Count	Mean	Median	Standard Deviation	Minimum	Maximum	Coefficient of Variation			
OXI	1,034	0.27	0.16	0.35	0.003	3.70	1.27			
LG SULF	1,288	0.36	0.28	0.26	0.002	2.35	0.72			
HG SULF	122	1.82	1.51	1.30	0.13	6.69	0.71			
Silver (g/t)										
DOMAIN	Count	Mean	Median	Standard Deviation	Minimum	Maximum	Coefficient of Variation			
OXI*	1,034	2.92	1.45	3.86	0.003	20	1.32			
LG* SULF	1,288	1.79	0.99	2.71	0.002	20	1.51			
HG SULF	122	5.16	2.00	9.00	0.003	57	1.74			

Table I - Allulaue Nesoulce Assay Statistics	Table 7	- Andrade	Resource	Assay	Statistics
--	---------	-----------	----------	-------	------------

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





8.7 VARIOGRAPHY

GE21 updated the variographic analysis using Leapgrog software, reaching robust variograms indicating notable continuity in the main direction of the ore body, associated to a minor anisotropy in the normal direction.

The modelled nugget was defined from the downhole semi-variograms and the two spherical models came from the directional variograms. These two modelled structures likely represent the low and high-grade samples that were combined in the experiments. There was insufficient data to model a separate high-grade zone. The semi-variograms fitted by GE21 are provided in Figure 20. Table 8 presents the Gems ADA numeric pattern for the modelled semi-variograms.







TYPE	Elem	Dip Az	Dip	Pitch	Nugget	C1Sill	Range 1	C2 Sill	Range 2
DIREC	Cu%	270	50°	27	0.25	0.35	40m	0.42	80m
DIREC	Ag (g/t)	270	50°	27	0.48	0.048	50m	0.47	100m

Table 8 - Modelled Variogram Parameters for Andrade.

8.8 DENSITY DATA

Density was measured by Referencial on uncoated core samples using a standard weight in water/weight in air methodology, reporting values 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).

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

8.9 BLOCK MODELS

The resource estimate is supported by a fully diluted block model constructed in Geovia Surpac 6.8. The block model covers all modelled domains and waste rocks.Table 9 - Block Model Properties.

Table 9 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 (%), silver (ppm), and copper equivalent grades via Ordinary Kriging.
- Interpolated copper (%), silver (ppm) and copper equivalent grades via Nearest Neighbour Method (NN Check).
- Mineral Resource Classification.
- Number of composites and drill holes used for interpolation.
- Search radius.

	Y (m)	X (m)	Z (m)
Min. Coordinates	256650	6619150	-200
Max. Coordinates	257610	6621030	425
Blocs dimensions	40	40	5
Subblocks dimensions	5	5	5
Rotation	0	0	0

Table 9 - Block Model Properties.

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





Fully diluted 5m by 5m by 5m blocks 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.

8.10 SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS

Copper, silver and equivalent cooper were estimated into the block model using ordinary kriging of one metre (minimum 0.5m) composites within the mineralized domains. For all elements, four 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 until the thirty 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 copper.

min 4	max	per drill	A21110011	Thunge	Dip	1.0m	M*	v	~	1
4	12				- 10		M*	,	^	2
	12	2	0	25	50	1.3	8	40	40	5
4	12	2	0	25	50	1.3	8	40	40	5
4	12	2	0	25	50	1.3	8	40	40	5
2	12	2	0	25	50	1.3	8	40	40	5
	4 4 2	4 12 4 12 2 12	4 12 2 4 12 2 2 12 2	4 12 2 0 4 12 2 0 2 12 2 0	4 12 2 0 25 4 12 2 0 25 2 12 2 0 25	4 12 2 0 25 50 4 12 2 0 25 50 2 12 2 0 25 50	4 12 2 0 25 50 1.3 4 12 2 0 25 50 1.3 2 12 2 0 25 50 1.3	4 12 2 0 25 50 1.3 8 4 12 2 0 25 50 1.3 8 2 12 2 0 25 50 1.3 8	4 12 2 0 25 50 1.3 8 40 4 12 2 0 25 50 1.3 8 40 2 12 2 0 25 50 1.3 8 40 2 12 2 0 25 50 1.3 8 40	4 12 2 0 25 50 1.3 8 40 40 4 12 2 0 25 50 1.3 8 40 40 2 12 2 0 25 50 1.3 8 40 40 2 12 2 0 25 50 1.3 8 40 40

Table 10 - Search Ellipse Parameters for Grade Interpolation.

*- RSM = Major/Sem-Major axis; RMM = Major/Minor axis

8.11 BLOCK MODEL VALIDATION

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

- 1. Visual inspection and comparison of block grades with composite and assay grades;
- 2. Statistical comparison of resource assay and block grade distributions;
- 3. Inspection of swath plots with composites and block grades elevations and northings;

GE21 compared the block grades with the composite grades on sections and plans and found that the block grades were a good approximation of the composite grades in most areas of the deposit. Occasional minor grade smearing and banding occur locally when changes in wireframe dip or strike restrict the access to composites. As the Project advances and closer spaced definition drilling becomes available, additional refinements would be possible to both the mineralized wireframe domains and the interpolation procedure. Figure 21 presents a typical vertical cross section for the Andrade deposit.







Figure 21 – Visual inspection and comparison of block grades with composite and assay grades – drillhole and block model vertical section.

Table 11Table 11 presents the copper and silver averages, by domain, of assays, composites, and interpolated blocks. The comparison between interpolated block values by OK and NN-Check shows a decrease of average grades for both copper and silver. This difference is associated to krigagem smoothing. The comparison includes all the interpolated blocks prior to classification.

DOMAIN	Assays	Composites	Blocks OK	Blocks NN					
		Average Cu %							
OXI	0.28	0.28	0.32	0.40					
LG	0.36	0.36	0.37	0.37					
HG	1.84	1.85	1.54	1.58					
		Average Ag g/t							
OXI	3.06	3.02	2.45	2.29					
LG	1.98	1.98	2.27	2.70					
HG	5.18	5.18	5.73	7.01					

Table 11 – Cu/Ag Average Values Comparison Between Assays, Composites and Blocks.





GE21 examined swath plots of the distribution of copper and block grades interpolated using Ordinary Kriging and the Nearest Neighbour Method estimated by northing, easting, and elevation. GE21 did not identify any problems with the distribution of interpolated grades. Figure 22 – North Swath Plot Analysis for Cu (%) to Figure 24 present an example for copper swath plots by XYZ in the grade domain.



Figure 22 – North Swath Plot Analysis for Cu (%) - X.



Figure 23 – North Swath Plot Analysis for Cu (%) - Y.

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021







Figure 24 – North Swath Plot Analysis for Cu (%) - Z.

8.12 CLASSIFICATION

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

GE21 built a wireframe envelope constraining the blocks estimated in the first and second passes of the interpolation, until 80m anisotropic searching ellipse, to associate to the Indicated Resources, all remaining blocks, still inside the resource pit was declared as Inferred Resource.

8.13 CUT-OFF GRADE AND WHITTLE PARAMETERS

GE21 used the Indicated and Inferred Resource blocks and the input assumptions in Table 12 to generate an open pit shell (Figure 25) 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".







Figure 25 – Mineral Resource Block Model and Resource Shell Performed in Whittle Software.

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 and considering operations of similar size within the larger region. The operation is envisaged to utilize both open pit and underground mining methods.





ltem	ltem	Unit	
Economic Parameters	Sell Price	AUD\$/t CuSO₄.5H₂O	4,764.00
ROM	Density	g/cm³	model
	Grade (Cu)	%	model
Waste	Density	g/cm³	2.60
Mining	Mining recovery	%	95
	Dilution		5
Block Model	Х	m	5
	Y		5
	Z		5
Slope Angle	oxided	0	45
	Fresh rock		55
Metallurgical recovery	Cu	%	82
Cut-off	Cu	%	0.17
Costs	Mining	AUD\$/t mov	3.11
	Process	AUD\$/t ROM	8.31
	G&A	AUD\$/t product	22.69

Table 12: Input Cost Assumptions Under Requirement o	f
Reasonable Prospects for Economic Extraction	

8.14 MINERAL RESOURCE REPORTING

Mineral Resources for the Andrade deposit was reported for open pit resources at a cutoff grade of 0.2% Cu.

The combined open pit and underground Mineral Resource estimate for the Andrade deposit is summarized in Table 13. No Ore Reserves have been estimated for the Project. 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 01/02 2021						
Class	Dominium	1-4	Cu	Ag	Me	tal
Class	Dominium	ĸt	(%)	(ppm)	Cu (klb)	Ag (koz)
INDICATED	LG OXI	630	0.43	3.07	5 958	62
	LG SUFT	17,038	0.38	1.72	143 752	944
	HG SULF	368	1.54	6.55	12 482	77
	Sub-Total	18,036	0.41	1.87	162,187	1,084
	LG OXI	348	0.37	1.66	2 816	19
INFERRED	LG SUFT	3,085	0.35	1.73	23 736	172
	HG SULF	546	1.67	4.19	20 071	74
	Sub-Total	3,980	0.53	2.06	46,619	264

Table 13 - Mineral Resource Estimate.

Notes:

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

2. Open pit resources are stated within a preliminary pit shell, above a cut-off grade of 0.2% Cu.

3. Cut-off grades were calculated using a copper price of US\$3.50/lb and a silver price of US\$20/oz.

4. Average bulk densities of 2.68 t/m³ for high grade domains and 2.60 t/m³ for low grade and waste domains were applied.

5. Mining loss of 5% and mining dilution of 5% factors have been applied to the reported figures.

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

7. The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

8. Totals may not sum due to rounding.

9. The Mineral Resources was developed by GE21.

10. Bernardo Horta Cerqueira Viana BSc (Geo) MAIG a full-time employee of GE21is the CP responsible for the Andrade Copper Mineral Resources estimate.

9 MINING METHODS

9.1 Introduction

The Andrade Project will be an open pit operation utilizing a contractor fleet with a hydraulic excavator (2.5m³ capacity) and 36t haul trucks, along with corresponding ancillary equipment. The mine planning model adopted is a "diluted" model, adding approximately 5% dilution and 95% of recovery to the source model.

The disposal of waste rock will be executed on an area close to the pit. The site shall be adequately prepared to include drainage at its base and channels to direct the flow of water with the aim of aiding geotechnical stability and mitigating the erosion of the stockpiled material. The operation of this phase, in accordance with the ascending method, shall begin during the construction of the heap at the base of this area. Waste rock will be disposed of by truck, which will then be uniformly distributed and levelled by an operator using a tractor. The procedure is then repeated, stacking another bank above the original one, while maintaining a ramp for the trucks to be able to access the area.





9.2 Geotechnics

Table 14 presents the geotechnical parameters that were adopted. GE21 uses this data based on a similar project, in the same geologic environment, but recommends Aguia initiate a geotechnical and geohydrologic assessment in future studies.

Lithotype	Face angle (º)	Bench width (m)	Bench height (m)	Inter-ramp general slope (º)
Oxidized	59	2	5	45
Fresh rock	73	2	5	55

Table 14 – Geotechnical Slopes.

9.3 Pit Optimization

The determination of the optimal pit was based on:

- The definition of the economic and geometric parameters in order to produce the economic function, and legal and proprietary restrictions;
- A calculation of the interlocking of optimal pits using Geovia Whittle 4.3 software;
- The selection of the minimum optimal pit with enough mineralized material to supply a production of 1.0 Mtpa during Life of Mine (LOM).

The economic and geometric parameters were defined from a combination of first principles and GE21's database of projects of similar scale and characteristics.

The sequence of optimal pits was obtained by varying the revenue factor from 30% to 200% with respect to the product's selling price. To determine the evolution of the pits over time, an annual production scale of 1.0 Mtpa of ROM was established at an Annual Discount Rate of 8%. Table 15 presents the pit optimization first-pass parameters used to define the sequence of pits, Table 16 Presents the pit optimization results and Figure 26 shows the evolution of optimization pushbacks resulting graph with the chosen pit for the Andrade Copper Project highlighted.





	lte	em	Unit	Value
Economic		Sell Price	AUD\$/t CuSO4	2,382.00
	ROM	Density	g/cm³	model
	ROM	Grade (Cu)	%	model
	Waste	Density	g/cm³	2.60
	Mining	Mining recovery	%	95
.	5	Dilution		5
		Х		5
Physical	Block Model	Y	m	5
		Z		5
	Slopo Anglo	Oxidized	0	45
	Slope Angle	Fresh rock		55
	Metallurgical recovery	Cu	%	82
	Cut-off	Cu	%	0.17
		Mining	AUD\$/t mined	3.08
C	Costs	Process	AUD\$/t ROM	8.31
COSIS		G&A	AUD\$/t product	22.59

Table 15 – Optimization Parameters.





Table 16 show the pit optimization results. The chosen pit was the number 5 (highlighted) in which the incremental S.R. = 1.66 in relation to pit 4. The next pit (6) has an incremental S.R. of 3.71.

Dit Dov Factor		Rock	Ore (Mt)	Waste	Strip Ratio	Cu
PIC	Rev. Factor	(kt)	(kt)	(kt)	(t/t)	(%)
1	0.3	2.90	0.92	1.98	2.16	1.05
2	0.4	4.69	1.74	2.95	1.69	0.82
3	0.5	7.80	3.82	3.97	1.04	0.57
4	0.6	19.74	8.92	10.82	1.21	0.46
5	0.7	26.78	11.56	15.22	1.32	0.43
6	0.8	58.47	18.28	40.19	2.20	0.41
7	0.9	65.72	19.78	45.94	2.32	0.41
8	1.0	69.77	20.52	49.25	2.40	0.40
9	1.1	72.80	20.91	51.88	2.48	0.40
10	1.2	77.05	21.44	55.61	2.59	0.40
11	1.3	78.23	21.58	56.65	2.63	0.40
12	1.4	84.23	21.98	62.25	2.83	0.40
13	1.5	85.70	22.12	63.59	2.87	0.40
14	1.6	87.79	22.27	65.52	2.94	0.40
15	1.7	89.13	22.40	66.74	2.98	0.40
16	1.8	90.73	22.51	68.22	3.03	0.40
17	1.9	91.54	22.57	68.96	3.05	0.40
18	2.0	92.54	22.64	69.90	3.09	0.40

Table	16 –	Pit O	otimization	Results.
Table	10 -	1 11 0	punization	nesuits.









9.4 Pit Design

The Mine Design or Pit Design, consists of projecting, based on an optimal pit, an operational pit that allows for the safe and efficient development of mining operations.

The methodology consists of establishing an outline of the toes and crests of the benches, safety berms, work sites and mining site access ramps while adhering to the geometric and geotechnical parameters that were defined. GE21, due the nature of the report, does not project any ramp or primary access in the pit design. The assumptions that were adopted for the operationalization of the final pit shells for each period of mining were:

- Minimize the loss of mineralized material;
- Define the access routes to attain shorter average transport distances.

Table 17 presents the geometric parameters that were adopted to develop the mine design. The data was based on the GE21 database of similar projects. Figure 27 presents the Final Pit Design results.

Description	Unit	Value
Road Ramp width	m	10
Ramp maximum grade	%	10
Face Angle – Oxidized	degree	59
Face Angle – Fresh Rock	degree	79
Slope Angle – Oxidized	degree	34
Slope Angle – Fresh Rock	degree	45
Bench height	m	5
Berm width	m	2
Mine width	m	25

Table 17 – Final Pit Design results.







Figure 27 – Final Pit Design.





The Pit Design results are shown in Table 18.

	Table 18	8 – Pit Design Results.					
	Block dimensions 5x5x5 (m)						
	Mine Red	covery 95%, Dilution 5%					
	(Effec	tive date 01/03/2021)					
Material	Mt	Cu (%)	CuSO₄5H₂O(Mt)				
Indicated	8.51	0.41	0.14				
Inferred	3.21	0.53	0.07				
Total ROM	11.72	0.44	0.21				
Waste	19.11						
S.R	1.63						

Mineral Resources were estimated using Geovia Whittle 4.3 software and the following economic parameters: Sale price for CuSO₄5H₂O(t) = AUD\$2,382.00 (Exchange rate AUD\$1.00 = R\$3.80). Mining costs: AUD\$3.08/t mined, processing costs: AUD\$8.31/t ROM and G\$A: AUD\$22.59/t CuSO₄5H₂O.

Dilution 5% and Recovery 95%

The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

Final slope angle: oxidized 45° , fresh rock = 55°

Waste = 19.1Mt

Strip Ratio = 1.63 t/t - (Waste/Ore)

The Competent Person responsible for the estimate of Mineable Resource is Guilherme Gomides Ferreira, BSc. (MEng), MAIG, an employee of GE21

9.5 Mine Scheduling

The mine production scheduling was generated in GEOVIA Whittle[™] 4.7.1, where the following assumptions were used:

- Production rate: 500kt/year in the first four years and 1.000kt of ROM per year; after year four and;
- Mass stabilization;

The mine scheduling results are presented in Table 19 below. The percentage of Mineral Resource mined, including resources of Indicated and Inferred categories, during mine life is presented in Table 20 below. Inferred Resources are not the determining factor for project viability.

The mining schedule was done directly in Whittle software and then mathematically adjusted to fit to yearly periods. There is no operational scenario designed for the presented schedule. GE21 strongly recommends a to review the mining schedule as soon Aguia review the Scoping Study.

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





		RON		Weste	Strip
Period	Mass Grade Cus		CuSO ₄ .5H ₂ O	waste	Ratio
	(kt)	Cu (%)	(kt)	(kt)	(t/t)
Year 1	500	0.32	6.4	826	1.7
Year 2	500	0.35	7.0	701	1.4
Year 3	500	0.36	7.2	926	1.9
Year 4	500	0.37	7.3	899	1.8
Year 5	1,000	0.41	16.4	1,660	1.7
Year 6	1,000	0.42	17.0	1,745	1.7
Year 7	1,000	0.42	16.7	2,146	2.1
Year 8	1,000	0.41	16.4	2,071	2.1
Year 9	1,000	0.38	15.2	1,951	2.0
Year 10	1,000	0.41	16.3	1,785	1.8
Year 11	1,000	0.50	20.1	1,575	1.6
Year 12	1,000	0.51	20.6	1,320	1.3
Year 13	1,000	0.59	23.6	1,019	1.0
Year 14	718	0.61	17.4	484	0.7
Total	11,718	0.44	207.6	19,107	1.6

Table 19 – Mine Scheduling.

Table 20 - Distribution of the ROM by category in the mine life.

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Indicated	80%	80%	80%	80%	52%	64%	78%	85%	96%	100%	100%	100%	18%	0%
Inferred	20%	20%	20%	20%	48%	36%	22%	15%	4%	0%	0%	0%	82%	100%

9.6 Mine Fleet Sizing

Mine equipment will be provided by the contractor. The mining equipment is based on a small-scale projection to meet the selectivity requirements of the proposed mine. A CAT 345 hydraulic excavator, or similar, equipped with a bucket with a volume of 2.5m³ was selected, as well as Scania trucks, or similar, with 36t of capacity. DX800 rotary type drills, with a 4" diameter drill bit, were selected for the drilling of the rock.

GE21 has estimated the required yearly mine fleet to achieve the mine schedule. The results are shown in Figure 28 to Figure 30 below.







Figure 28 – Drill Rig Fleet Requirement per Year.



Figure 29 – Excavator Fleet Requirement per Year.







Figure 30 – Truck Fleet Requirement per Year.

9.7 Mine Layout

Figure 31 presents the Andrade Project Site Layout. This layout presents the main structures of the project and were arranged based on the following assumptions:

- Minimized haulage distance between Mine/Plant and Mine;
- Final Pit, Waste dump, Plant and access layout.





Figure 31 – Andrade Project Layout.

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





10 RECOVERY METHODS

Disclaimer: The term "ore" hereby used is only a generic reference for the material and does not implies that resources and/or reserves have been estimated.

The copper from the Andrade Deposit is going to be recovered through a heap leaching process and SW/EW (solvent extraction and electrowinning) for metallic copper production as copper cathodes. As an alternative to electrowinning, a crystallization and precipitation unity is being studied for the production of Penta-Hydrated copper sulphate (CuSO₄.5H₂O).

This document describes the process route foreseeing for Andrade Copper Ore for a 1Mty of ROM, widely used for similar small deposits.

The copper cathode is easily saleable to refineries for metallic copper production and the Penta-Hydrated Copper Sulphate (CuSO₄.5H₂O) to the agribusiness industry, a strong market in the region.

10.1 Exploratory Test Works

The process proposed is based on the results of exploratory metallurgical test works conducted by ALS Laboratories in Australia where Flotation and Acid Leaching tests were performed. Complementary test-works are required to confirm the selected route and define operational and economic parameters and plant design.

Flotation Test Works

Two flotation test works were carried out with samples classified as "High-Grade" and "Low-Grade".

The High-Grade test showed an accrual copper recovery on the rougher stage of 93%, and mass pull of 6.4% with 8 minute residence time. Final concentrate Cu grade reached 28.5%. Additional recovery in the scavenger step reached 0.9%, with final recovery of 94%. Sample recalculated grade was 1.98%.

The Low-Grade test indicates an accrual recovery on the rougher stage of 82% and mass pull of 2.7% after 5.5 minutes residence time. Final concentrate Cu grade reached 20.7%. Additional recovery in the scavenger stage reached 2%, with final recovery of 84%. Sample recalculated Cu grade was 0.68%.

Acid Leaching Test Works

Exploratory agitated leaching tests with two samples – High-Grade and Low-Grade, ground to minus 75µm, were carried out to estimate the leachability and maximum recovery achievable in the process. Oxidation-reduction potential was controlled >450mV by peroxide addition and pH kept around 1.0 through the addition of sulfuric acid. Tests were carried out at a temperature of 60°C.





High-Grade test results showed extraction of 96% after 24 hours under agitation, with a total acid consumption of 173kg/t. Recalculated head grade was 2.2%.

Low-Grade test results showed extraction of 88% after 24 hours under agitation, with a total acid consumption of 260 kg/t. Recalculated head grade was 0.66%.

10.2 Process Route Description

The selected process route is composed of the following unitary operations:

Crushing & Screening

The ROM is reclaimed by a front loader which discharges in a hopper equipped with a vibratory feeder with a grizzly at the end, whose oversize feeds a primary jaw crusher. The passing ore is joined to the product of the crusher.

The crushed ore is conveyed to a primary 2-decks vibratory screen, openings 37mm and 12.5mm. The oversize of both decks feed a secondary cone crusher, whose product feeds a secondary 1-deck vibratory screen, opening 12.5mm.

The oversize feeds a tertiary cone crusher, whose product is discharged in a tertiary 1deck vibratory screen. The oversize from that screen is conveyed back to the tertiary cone crusher, closing the circuit.

The passing ore in 12.5mm deck from all, primary, secondary, and tertiary screens, are joined and feeds the agglomeration step.

Agglomeration

The ore finer than 12.5mm is conveyed to an agglomerating drum, where a 60g/l diluted solution of sulfuric acid (H₂SO₄) is added, at a rate of 30kg/t (base 100). The residence time is estimated at 2 minutes.

Stacking

The agglomerated ore is conveyed by semi-mobile and mobile conveyors ("grasshoppers") to the heap leaching pad. The ROM is stacked in 6m height heaps, in a total area of 160.000m², suitable for a leaching cycle estimated at 180 days for an extraction of 85%.

For this Scoping Study, permanent pads are being considered, with a final heap height of 36 m.

Tailings will be deposited in heap leaching. When each heap is exhausted, a new ROM layer will be deposited, starting the new heap construction. GE21 estimated four heap layers to finish the process.

The heap leach pad is lined with a geomembrane of LLDPE (linear low-density polyethylene) to prevent infiltration of the pregnant solution (PLS) in the soil. This liner is covered with spreading fine crushed ore to avoid mechanical damage to the lining system.





A drainage piping system is installed under the heap to collect the PLS and to flow it to the ditches and ponds.



Figure 32 shows a block diagram for that route.

Figure 32 Block diagram for crushing and stacking route.

Leaching

After stacking, a dripping net is installed on top of the heap, feeding a diluted solution of 25g/l sulfuric acid, at a specific rate of 13l/h/m². The expected cycle is 180 days for an extraction of 85%.

The copper sulphate (CuSO₄) PLS is collected by a drainage system under the heap and flows through ditches to storage ponds. pH and oxidation-reduction potential are strictly controlled.





Figure 33 shows the proposed leaching block diagram.



Figure 33 Block Diagram – Leaching.

Solvent Extraction (SX) and Electrowinning (EW)

The PLS is pumped from the pond to a solvent extraction plant, where it is mixed with an organic reagent that absorbs, selectively, the Cu++ ions. The copper is distributed between the organic and aqueous phases, according to its solubility in each one.

After the separation of each phase in a decanter, the aqueous phase is pumped to the raffinate pond and, from there, back to the heap in a closed circuit, after acid make-up.

The organic phase is stripped using strong H_2SO_4 . The electrolyte is pumped to the electrowinning circuit, where the copper ions are reduced and electroplated in cathodes. Those cathodes are removed and are ready for shipment. Figure 34 shows the block diagram for this process.







Figure 34 - Block diagram for the SX process.

10.3 Base Case - Penta-Hydrated Copper Sulphate Production

For supply the agribusiness market, the process allows the production of Copper Sulphate. The solution from the extraction plant would be pumped to a crystallization unit composed of agitated tanks where the acid concentration is increased to 200g/l and temperature reduced to 10°C. This is a batch process and the cycle is 2 hours.

The slow stirring causes the suspension of the smaller crystals, allowing their growth along the process. After the termination of the cycle, the solution is centrifuged, and the crystals are washed and dried. The solution is then pumped back to the SX step.

10.3.1 Estimated Production

Considering the extraction of 85% and recovery of 82%, the Penta-Hydrated Copper Sulphate (CuSO₄.5H₂O) production is estimated at 14,700t/y after year 4.

10.4 Alternative Case - Metallic Copper Production

The copper SX/EW process crushed oxidized copper ore is piled into a heap that is irrigated with a sulphuric acid solution. Copper is leached from its minerals with lixiviant to produce PLS (pregnant leach solution). The solution is drawn off from the base of the heap through piping.

To remove the impurities, the solution is purified and concentrated in the solvent extraction process. In the extraction stage, copper ions are selectively moved from the aqueous





phase to the organic phase by means of an organic extraction chemical in an organic solvent. The copper-containing loaded organic solution is washed with water to remove impurities.

In the stripping stage, copper ions are moved from the loaded organic phase back to the aqueous phase to form the rich electrolyte. The barren organic solution is recycled back to extraction. The sulphuric acid concentration of the aqueous solution leaving the extraction stage (raffinate) is adjusted to the appropriate level by adding water or sulphuric acid.

The mixture of raffinate, water and sulphuric acid has formed lixiviant, and it is recycled back to leaching.

Rich electrolyte leaving the stripping is mixed with spent electrolyte in electrolyte blending to achieve the proper concentration in the electrowinning feed.

When copper ions are reduced from ionic solution, they form a pure metal surface on the cathode. High purity copper cathodes are produced in the electrowinning.

Spent electrolyte is recycled back to stripping.

10.4.1 Estimated Production

Considering the extraction of 85% and recovery of 82%, the metallic copper annual production is estimated at 3,600t of Cu.

11 MARKET STUDY

In the current scenario of falling demand and short-term supply, the market should still register 90kt in 2020. Copper prices are expected to fall this year to an average of US\$5,063/t or (US\$2.30/lb). For the next few years (2021 to 2023) supply growth is expected to exceed 4.7%. This extra amount of metal will hit the market along with additional production from the Qulong and Yulong mines (in China), Timok, Copper Panama, Grasberg, Oyu Tolgoi and Olympic Dam, among others. With supply growth exceeding consumption, there are projected growing surpluses in the metals market and as a result, inventories will start to rise and prices are expected to start falling. Projected surpluses will increase inventories until 2023 consequently lowering metal prices by an annual average of US\$5,401/t (US\$2.45/lb). Starting in 2024, prices are expected to begin an upward trend until reaching a long-term price level of \$7,275/ t (US\$3.30/lb) that is expected to remain until 2030. This increase of price and the decrease in inventories, should provide sufficient confidence to producers to reactivate closed mines, carry out expansions, extend the life of the mine and, eventually, develop projects necessary to reduce the gap between supply and demand. Considering all these factors, we are confident that our long-term price should be sufficient to close the supply gap in order to maintain market balance and maintain balance for the next decade. (Source: Global copper long-term outlook Q1 2020 - Wood Mackenzie - March 2020).

The World Bank estimates in 2025, a Copper Metallic Price of US\$6,600.00/t (source:worldbank.org/commodites – October 2020). GE21 used in this study for Penta Hydrated





Copper Sulphate a sell price of AUD\$2,775.00/t and for Metallic Copper a sell price of AUD\$ 10,905.00/t.

12 CAPEX and OPEX

12.1 Base Case - Penta-Hydrated Copper Sulphate

The costs of the base case (Penta-Hydrated Copper Sulphate production) project include the initial capital cost (Initial CAPEX) and the operational cost (OPEX). All costs are expressed in Australian Dollars and an exchange rate of AUD\$1.00 = R\$3.80 is used. The CAPEX is presented in Table 21 and the OPEX in Table 22.

The capital costs cover the following major cost centres:

- Mine Equipment;
- Infrastructure;
- Processing Plant;
- Others.

Item	Value AUD\$(M)			
Mine Equipment	0.19			
Infrastructure (road, civil work, terrain preparation, power)	2.82			
Processing Plant	4.87			
Others (buildings, security facilities)	1.51			
Contingency (10%)	0.94			
Total	10.33			

Table 21 – Summarized Project CAPEX – Base Case.

There is an additional CAPEX of AUD\$4.86M in year 4 related to processing plant expansion.

The CAPEX and OPEX were estimated through a combination of experience and familiarity with similar mining projects in the region, as well as the use of industry guidelines and databases.

The OPEX costs presented in Table 22 were estimated according to the values used in similar project operations.





Item	Units	Value
Mine	AUD\$/t mined	3.08
Plant	AUD\$/t ROM	8.31
G&A	(AUD/t Copper sulphate product)	22.59

Table 22 – Mine OPEX Estimation – Base Case.

12.2 Alternative Case - Metallic Copper Production

GE21 developed an alternative scenario for Metallic Copper production. The CAPEX and OPEX of this scenario are presented in Table 23 and Table 24 respectively. The market forecast by the World Bank in October 2020 expects that the long-term copper price will be US\$7,000.00/t. GE21 used in this report a long-term copper price of AUD\$10,905.00/t.

Item	Value AUD\$(M)
Mine Equipment	0.19
Infrastructure (road, civil work, terrain preparation, power)	2.82
Processing Plant	13.6
Others (buildings, security facilities)	1.51
Contingency (10%)	1.81
Total	19.93

Table 23: Metallic Copper production CAPEX.

There is additional CAPEX of AUD\$13.6M in the year 4 related to processing plant expansion.

Table 24 - Metallic Copper production OPEX.

Item	Units	Value
Mine	AUD\$/t mined	3.08
Plant	AUD\$/t ROM	8.31
G&A	(AUD\$/pound of copper)	0.04

13 ECONOMIC ANALYSIS

13.1 Taxes

The current Brazilian taxation system was introduced by the 1988 Constitution, which granted the power to Federal, State and Municipal Governments to collect taxes.

With the enactment of Law No. 11,638/07, Brazilian Corporate Law underwent significant changes, aiming primarily at enabling the convergence of Brazilian accounting practices with the International Financial Reporting Standards ("IFRS"). Law 12,973/14 currently





regulates the tax implications derived from adopting the international accounting standards in Brazil.

The company is registered in the National Register of Economic Activity (CNAE) under the category Extraction of copper ores, lead, zinc and other non-ferrous metallic minerals not previously specified (CNAE 0729-4/04). According to the Mercosul Common Nomenclature (NCM), the products are Cupric copper sulphate (NCM 2833.25.20) and refined cathode copper and its elements (NCM 7403.11.00) for tax purposes.

13.2 Federal Taxes

Federal taxes vary according to their nature. The most important to the upstream industry are those levied on:

CFEM – Financial Compensation for the Exploitation of Mineral Resources

Financial Compensation for the Exploration of Mineral Resources (CFEM) is the consideration paid to the Government of Brazil for the extraction and economic exploration of Brazilian mineral resources. CFEM focuses on net sales of the raw mineral product, or on the intermediate cost of production when the mineral product is consumed or transformed in an industrial process. The CFEM rate for this project is 2.0%.

<u>Revenues / Sales</u>

Social Contributions on Gross Revenues (PIS and COFINS), exempt in case of exportation according to the Law No. 10.833/03, art. 6, I and Law No. 10.637/02, art. 5, I;

Excise Tax

Federal Value-Added Tax (IPI), industrialized products destined exportation are immune from the tax, covering all products (Federal Constitution, article 153, § 3, item III).

Profits / Net Income: Corporate Income Tax (IRPJ), and Social Contribution on Profits (CSLL)

- a. Corporate Income Tax (IRPJ): is the taxable income, understood as the accounted for net income (profit or loss) as per financial statements as of the end of the tax period (quarter or year), adjusted by add-backs and exclusions provided by the tax legislation. According to Law No. 9,249/95, art. 3: 25% rate (15% rate plus a 10% surtax on annual taxable income exceeding BRL240,000.00).
 - Taxpayers may choose one of the three taxation methods provided by the tax legislation for purposes of calculating IRPJ and CSLL: Taxable Income (*Lucro Real*), Estimated Profit (*Lucro Presumido*) and Arbitrated Income (*Lucro Arbitrado*);
 - Taxpayers that choose the Taxable Income method are eligible to calculate IRPJ annually (*Lucro Real Anual*) or quarterly basis (*Lucro Real Trimestral*). In case of





adoption of the annual calculation period, tax anticipations (advance payments) must be calculated and collected (if applicable) monthly, based on monthly revenues (*Receita Bruta e Acréscimos*) or year-to-date accounted for net Income (*Balancete de Suspensão e Redução*);

- Tax losses, understood as the IRPJ Net Operating Losses (NOLs) and the CSLL negative bases (CSLL NOLs) have no statute of limitations, remaining available for an indefinite period. NOLs offsetting is limited to 30% of a given period's Taxable Income / CSLL positive tax base;
- IRPJ and CSLL calculations in the Estimated Profit and Arbitrated Profit methods are not based on the company's Net Income, but rather on determining deemed profit percentages, which varies according to the company's activities. Under these methods, IRPJ and CSLL payments are due quarterly (Law No. 9,249/95, art. 15). The profit presumption for the mining industry is 8%.
- b. Social Contribution on Profits (CSLL): Similar to the IRPJ's tax base, at 9% rate (Law No. 7,689/88, art. 3, III). In the case of Estimated Profit, the mining industry's profit presumption is 12% for this tax (Law No. 9,249/95, art. 20).

13.3 State Taxes

The 1988 Federal Constitution granted the Brazilian States authority to collect tax on circulation of goods and interstate and intercity transportation services and communications, including import operations.

It is not a cumulative tax, that is, such tax is only assessed on the increase in the price of the product in each phase of its "circulation" process. ICMS calculation is similar to a VAT-type system. In each payment period, the taxpayer must check the amount of ICMS debts (generated on the circulation of goods/rendering of services) and ICMS credits (generated on the acquisition of goods). If the taxpayer has more debits than credits, it will have to pay the tax on the difference.

However, in international operations to recipients abroad, the Federal Constitution exempt it (Federal Constitution, art. 155, X).

13.4 Discounted Cash Flow - Base Case

A Discounted Cash Flow – DCF – base case scenario (Copper Sulphate Production) was developed to assess the project based on economic-financial parameters, on the results of the mine scheduling, and on the Sustaining CAPEX and OPEX estimate.

The Project base case estimates a Net Present Value of AUD\$111.6 million, at a Discount Rate of 5% per year post tax, as presented in Table 25 and Table 26Table 26.

AGUIA



Table 25 - Annual Cash Flow – Base Ca	ase.
---------------------------------------	------

Discounted Cash Flow																
Period	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Mine (kt)		1 326	1 201	1 426	1 399	2 660	2 745	3 146	3 071	2 951	2 785	2 575	2 320	2 019	1 202	30 825
ROM (kt)	-	500	500	500	500	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	718	11 718
Waste (kt)	-	826	701	926	899	1 660	1 745	2 146	2 071	1 951	1 785	1 575	1 320	1 019	484	19 107
Cu Grade (%)	-	0.32	0.35	0.36	0.37	0.41	0.42	0.42	0.41	0.38	0.41	0.50	0.51	0.59	0.61	0.44
Metallurgical Recovery Cu (%)	-	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Produto Cu (Libras*1000)	-	2 876	3 160	3 247	3 305	7 431	7 669	7 532	7 418	6 885	7 386	9 071	9 288	10 681	7 884	93 835
Concentrated Cu Sulfate (t)	-	5 218	5 734	5 891	5 997	13 482	13 915	13 667	13 460	12 493	13 401	16 459	16 852	19 379	14 305	170 252
Sale Price Cu (AUD\$/t)	-	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.4	2 775.44
Gross Revenue AUD\$x1000	-	14 482	15 914	16 351	16 645	37 418	38 621	37 931	37 357	34 673	37 195	45 681	46 770	53 786	39 704	472 525
OPEX (AUD\$ x1000)		(8 920)	(8 600)	(9 116)	(9 047)	(16 579)	(16 790)	(17 672)	(17 485)	(17 299)	(16 890)	(16 513)	(15 857)	(15 085)	(10 317)	(196 172)
Mine	-	(4 593)	(4 278)	(4 784)	(4 717)	(7 949)	(8 156)	(9 020)	(8 837)	(8 655)	(8 254)	(7 884)	(7 241)	(6 484)	(4 149)	(95 002)
Loading and Transportation - Total AUD\$*1000	-	(2 223)	(2 025)	(2 322)	(2 279)	(4 190)	(4 318)	(4 809)	(4 696)	(4 626)	(4 378)	(4 204)	(3 798)	(3 321)	(2 130)	(49 319)
Drilling and Blasting AUD\$*1000	-	(1 382)	(1 266)	(1 474)	(1 450)	(2 771)	(2 850)	(3 223)	(3 153)	(3 041)	(2 887)	(2 692)	(2 455)	(2 176)	(1 332)	(32 151)
PayRoll and Topography AUD*1000	-	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(687)	(13 533)
Process AUD\$ *1000	-	(4 153)	(4 153)	(4 153)	(4 153)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(5 965)	(97 323)
Process Costs AUD\$ *1000	-	(4 153)	(4 153)	(4 153)	(4 153)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(5 965)	(97 323)
G&A (AUD\$x1000)	-	(175)	(169)	(179)	(177)	(325)	(329)	(347)	(343)	(339)	(331)	(324)	(311)	(296)	(202)	(3 847)
Net Revenue AUDR\$ x1000)	-	14 482	15 914	16 351	16 645	37 418	38 621	37 931	37 357	34 673	37 195	45 681	46 770	53 786	39 704	472 525
EBITDA (AUD\$ x1000)	-	5 561	7 314	7 235	7 597	20 838	21 831	20 259	19 872	17 373	20 305	29 167	30 913	38 700	29 387	276 353
Depreciation (AUD\$ x1000)	-	(1 575)	(1 575)	(1 575)	(1 575)	(2 549)	(974)	(974)	(974)	(974)	-	-	-	-	-	(12 746)
EBIT (AUD\$ x1000)	-	3 986	5 739	5 660	6 022	18 289	20 857	19 285	18 898	16 400	20 305	29 167	30 913	38 700	29 387	263 608
IRPJ (15% of R\$ 240 000/year EBIT)	-	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(133)
AIR (25% sobre Exc R\$ 0.24 mi/ano do EBIT)	-	(274)	(302)	(311)	(317)	(4 557)	(5 198)	(4 806)	(4 709)	(4 084)	(5 060)	(7 276)	(7 713)	(9 659)	(7 331)	(61 597)
CSLL (9% do EBIT)	-	(104.3)	(114.6)	(117.7)	(119.8)	(1 646.0)	(1 877.1)	(1 735.7)	(1 700.8)	(1 476.0)	(1 827.4)	(2 625.0)	(2 782.2)	(3 483.0)	(2 644.8)	(22 255)
Royalties(1% Net Smelter Return)	-	(109)	(120)	(123)	(126)	(282)	(291)	(286)	(282)	(262)	(281)	(345)	(353)	(406)	(300)	(3 566)
CFEM (2% Gross Revenue)	-	(290)	(318)	(327)	(333)	(748)	(772)	(759)	(747)	(693)	(744)	(914)	(935)	(1 076)	(794)	(9 451)
Free Operating Cash Flow (AUD\$ x1000)	-	4 775	6 449	6 346	6 692	13 596	13 682	12 664	12 424	10 849	12 383	17 998	19 121	24 067	18 308	192 099
Depreciation (AUD\$ x1000)		1 575.3	1 575.3	1 575.3	1 575.3	2 549.2	973.8	973.8	973.8	973.8	-	-	-			12 746
Free Operating Cash Flow (AUD\$ x1000)	-	6 350	8 025	7 922	8 268	16 145	14 656	13 638	13 398	11 823	12 383	17 998	19 121	24 067	18 308	192 099
CAPEX (AUD\$ x1000)	(10 323)	(2 230)	-	-	(4 869)	-	-	-	-	-	-	-	-	-	2 230	(15 192)
Mine	(188)		-	-	-	-	-	-	-	-	-	-	-	-	-	(188)
Plant	(4 869)	-	-	-	(4 869)	-	-	-	-	-	-	-	-	-	-	(9 738)
Infraestructure	(2 820)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2 820)
Others	(1 508)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1 508)
Working Capital	. ,	(2 230)	-	-	-	-	-	-	-	-	-	-		-	2 230	-
Contingency	(938)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(938.4)
Cash Flow (AUD\$ x1000)	(10 323)	4 120	8 025	7 922	3 399	16 145	14 656	13 638	13 398	11 823	12 383	17 998	19 121	24 067	20 538	176 907
NPV (AUD\$ x1000)	112 394	WACC 5	%													




CAPEX (AUD\$ M)	10.3	
NPV (AUD\$ M)	112.4	
IRR (%)	67.1	
Payback time (years)	1.9	

Table 26 - Discounted Cash Flow Results - Base case	e.
---	----

13.4.1 Sensitivity Analysis

A sensitivity analysis was undertaken to evaluate the impact of the resulting economic indicators for the following attributes, within the cash flow:

- WACC;
- Sell price;
- CAPEX;
- Mine OPEX;
- Plant OPEX.

The WACC, OPEX, NPV and CAPEX, was evaluated by varying its value from -15% to +15%. Figure 35 shows the sensitivity analysis developed by GE21.



Figure 35 – NPV Sensitivity Diagram (Base Case).

GE21 concluded based on its Sensitivity Analysis that project profitability is most affected by the penta-hydrated copper sulphate price.





13.5 Discounted Cash Flow - Alternative Case

A Discounted Cash Flow – DCF – alternative case scenario (Metallic Copper Production) was developed to assess the project based on economic-financial parameters, on the results of the mine scheduling, and on the Sustaining CAPEX and OPEX estimate.

The Project alternative case estimates a Net Present Value of AUD\$107.4 million, at a Discount Rate of 5% per year post tax, as presented in Table 27 and Table 28Table 26.





Table 27 – Annual Cash Flow – (Metallic Copper Production).

Discounted Cash Flow																
Period	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Mine (kt)		1 326	1 201	1 426	1 399	2 660	2 745	3 146	3 071	2 951	2 785	2 575	2 320	2 019	1 202	30 825
ROM (kt)	-	500	500	500	500	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	718	11 718
Waste (kt)	-	826	701	926	899	1 660	1 745	2 146	2 071	1 951	1 785	1 575	1 320	1 019	484	19 107
Cu Grade (%)	-	0.32	0.35	0.36	0.37	0.41	0.42	0.42	0.41	0.38	0.41	0.50	0.51	0.59	0.61	0.44
Metallurgical Recovery Cu (%)	-	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Produto Cu (Libras*1000)	-	2 876	3 160	3 247	3 305	7 431	7 669	7 532	7 418	6 885	7 386	9 071	9 288	10 681	7 884	93 835
Concentrated Cu Metallic (t)	-	1 304	1 433	1 473	1 499	3 370	3 479	3 417	3 365	3 123	3 350	4 115	4213	4 845	3 576	42 563
Sale Price Cu (AUD\$/t)	-	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.1	10 905.08
Gross Revenue AUD\$x1000	-	14 225	15 632	16 061	16 350	36 755	37 937	37 259	36 696	34 059	36 536	44 872	45 942	52 833	39 001	464 158
OPEX (AUD\$ x1000)		(8 920)	(8 600)	(9 116)	(9 047)	(16 579)	(16 790)	(17 672)	(17 485)	(17 299)	(16 890)	(16 513)	(15 857)	(15 085)	(10 317)	(196 172)
Mine	-	(4 593)	(4 278)	(4 784)	(4 717)	(7 949)	(8 156)	(9 020)	(8 837)	(8 655)	(8 254)	(7 884)	(7 241)	(6 484)	(4 149)	(95 002)
Loading and Transportation - Total AUD\$*1000	-	(2 223)	(2 025)	(2 322)	(2 279)	(4 190)	(4 318)	(4 809)	(4 696)	(4 626)	(4 378)	(4 204)	(3 798)	(3 321)	(2 130)	(49 319)
Drilling and Blasting AUD\$*1000	-	(1 382)	(1 266)	(1 474)	(1 450)	(2 771)	(2 850)	(3 223)	(3 153)	(3 041)	(2 887)	(2 692)	(2 455)	(2 176)	(1 332)	(32 151)
PayRoll and Topography AUD*1000	-	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(988)	(687)	(13 533)
Process AUD\$ *1000	-	(4 153)	(4 153)	(4 153)	(4 153)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(5 965)	(97 323)
Process Costs AUD\$ *1000	-	(4 153)	(4 153)	(4 153)	(4 153)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(8 305)	(5 965)	(97 323)
G&A (AUD\$x1000)	-	(175)	(169)	(179)	(177)	(325)	(329)	(347)	(343)	(339)	(331)	(324)	(311)	(296)	(202)	(3 847)
Net Revenue AUDR\$ x1000)		14 225	15 632	16 061	16 350	36 755	37 937	37 259	36 696	34 059	36 536	44 872	45 942	52 833	39 001	464 158
EBITDA (AUD\$ x1000)	-	5 305	7 032	6 946	7 303	20 176	21 147	19 588	19 210	16 759	19 646	28 358	30 085	37 748	28 683	267 986
Depreciation (AUD\$ x1000)	-	(3 322)	(3 322)	(3 322)	(3 322)	(6 043)	(2 721)	(2 721)	(2 721)	(2 721)	-	-	-	-	-	(30 216)
EBIT (AUD\$ x1000)	-	1 982	3 710	3 623	3 980	14 133	18 426	16 867	16 490	14 039	19 646	28 358	30 085	37 748	28 683	237 770
IRPJ (15% of R\$ 240 000/year EBIT)	-	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(133)
AIR (25% sobre Exc R\$ 0.24 mi/ano do EBIT)	-	(269)	(297)	(305)	(311)	(3 517)	(4 591)	(4 201)	(4 107)	(3 494)	(4 896)	(7 074)	(7 505)	(9 421)	(7 155)	(57 143)
CSLL (9% do EBIT)	-	(102.4)	(112.5)	(115.6)	(117.7)	(1 271.9)	(1 658.3)	(1 518.0)	(1 484.1)	(1 263.5)	(1 768.2)	(2 552.2)	(2 707.7)	(3 397.3)	(2 581.5)	(20 651)
Royalties(1% Net Smelter Return)	-	(109)	(120)	(123)	(126)	(282)	(291)	(286)	(282)	(262)	(281)	(345)	(353)	(406)	(300)	(3 566)
CFEM (2% Gross Revenue)	-	(285)	(313)	(321)	(327)	(735)	(759)	(745)	(734)	(681)	(731)	(897)	(919)	(1 057)	(780)	(9 283)
Free Operating Cash Flow (AUD\$ x1000)		4 530	6 181	6 070	6 412	14 360	13 838	12 828	12 594	11 050	11 961	17 481	18 591	23 457	17 858	207 426
Depreciation (AUD\$ x1000)		3 322.3	3 322.3	3 322.3	3 322.3	6 043.2	2 720.8	2 720.8	2 720.8	2 720.8	-	-	-			30 216
Free Operating Cash Flow (AUD\$ x1000)	-	7 853	9 503	9 393	9 734	20 403	16 559	15 549	15 315	13 771	11 961	17 481	18 591	23 457	17 858	207 426
CAPEX (AUD\$ x1000)	(19 931)	(2 230)			(13 604)										2 230	(33 535)
Mine	(188)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(188)
Plant	(13 604)	-	-	-	(13 604)	-	-	-	-	-	-	-	-	-	-	(27 208)
Infraestructure	(2 820)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2 820)
Others	(1 508)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1 508)
Working Capital		(2 2 3 0)	-	-	-	-	-	-	-	-	-	-		-	2 230	
Contingency	(1 812)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1 811.9)
Cash Flow (AUD\$ x1000)	(19 931)	5 623	9 503	9 393	(3 870)	20 403	16 559	15 549	15 315	13 771	11 961	17 481	18 591	23 457	20 088	173 891
NPV (AUD\$ x1000)	108 110	WACC	5%													





Table 20 - Discounted Gash Flow Results - Alternative Gase.		
CAPEX (AUD\$ M)	19.9	
NPV (AUD\$ M)	108.1	
IRR (%)	43.5	
Payback time (years)	4.1	

Table 28 – Discounted Cash Flow Results – Alternative	case.
---	-------

A sensitivity analysis was undertaken to evaluate the impact of the resulting economic indicators for the following attributes, within the cash flow:

- WACC;
- Sell price;
- CAPEX;
- Mine OPEX;
- Plant OPEX.

The WACC, OPEX, NPV and CAPEX, was evaluated by varying its value from -15% to +15%. Figure 36 shows the sensitivity analysis developed by GE21.



Figure 36 - NPV Sensitivity Diagram (Alternative case).

GE21 concluded based on its Sensitivity Analysis that project profitability is most affected by the cathode price.





14 PROJECT FUNDING

The Capital Expenditure (CAPEX) required to fund the Andrade Copper Project, regarding the Penta-Hydrated Copper Sulphate production (base case) is AUD\$ 9.39 million (AUD\$ 10.33 million with contingency). The required CAPEX regarding the Copper Cathode production (alternative case) is AUD\$ 18.12 million (AUD\$ 19.93 million with contingency).

According to Aguia, once the Company take a decision on the production route (base case or alternative case), the CAPEX should be fund through a mix of debt and equity. The Company is in active dialogue with prospective investors and is pursuing a number of options to fund the required CAPEX with equity or potentially through investment at the asset level.

15 CONCLUSIONS AND RECOMMENDATION

The Mineral Resource Estimate for the Andrade Copper Project was updated by GE21 from a maiden Resources Estimate prepared by RPA with an effective date of February 1, 2021. GE21 estimated Indicated Mineral Resources totalling 18.03Mt grading 0.41% Cu and 1.87 g/t Ag containing 162,187klb of copper and 1,084koz of silver, and Inferred Mineral Resources totaling 3.98Mt grading 0.53% Cu and 2.06 g/t Ag containing 46,619klb of copper and 264koz of silver.

The Andrade Project will be an open pit operation utilizing a contract mining fleet with a hydraulic excavator (2.5m³ capacity) and 36t haul trucks along with corresponding ancillary equipment. The mine planning model adopted is a "diluted" model, adding approximately 5% dilution and 95% of recovery to the source model.

This Scoping Study presents the Project's technical and economic viability potential to produce Penta-hydrated Copper Sulphate. According to economic analysis, the project's NPV is AUD\$ 112.4 million @ Discount Rate of 5% and an internal rate of return (IRR) of 67.1%. GE21 developed an alternative scenario considering Metallic Copper (copper cathode). The economic analysis result is a NPV of AUD\$108.1 million @ Discount Rate of 5% and an IRR of 43.5%.

The results of the Scoping Study referred to in this report is preliminary in nature. It is based on low-level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

GE21 recommends continuing this study with the preparation of a Pre-Feasibility Study in accordance with JORC 2012 or the CIM NI43.101 definitions.

Recommendation from GE21

- Regarding the Mineralization Model and the Resources Estimation, an additional drilling program is recommended, with the objective of:
 - Checking the open High-Grade zones with potential to improve the resource grades;

Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





- Improving the geological model confidence and upgrade the mineral resources classification to Measured and Indicated.
- Regarding the metallurgical test works, GE21 present the following comments and recommendations:
 - Tests were carried out on single, exploratory samples, representing high and low-grade. Results indicate the amenability for both process – froth flotation and acid leaching. It is strongly recommended new geometallurgical tests are undertaken to confirm the assumptions and ore variability;
 - Conduct complementary heap leaching process in column tests under ambient temperature. Agitated tests were carried out under optimum conditions, not reproduceable at industrial scale;
 - Acid leaching does not recover silver, in flotation, over 70% of the contained Ag is recovered. A trade-off study is recommended to select the more attractive route.
- Based on the results, GE21 recommends, for this Scoping Study, to consider a copper extraction of 85% and overall recovery of 82%.
- Develop environmental studies to map potential project risks.
- Improve the Copper Sulphate Market Study.
- Improve the accuracy of CAPEX and OPEX estimation.
- Execution of a complete feasibility study, including a geotechnical drilling campaign, hydrological studies, detailed engineering, and mining scheduling.

The estimated cost of implementing all of these recommendations is AUD\$4.5M (Four million five hundred thousand Australian Dollars).





16 REFERENCES

- Almeida, M. E.; Gottlieb, O. R.; Regodeso, J. and Teixeira, M. A. (1974), Chemistry of Brazilian Leguminosae .18. New peltogynoids from three Peltogyne species. Phytochem., 13, 1225-1228
- Almeida, D. P. M.; Zerfass, H. & Basei, M. A. S. 1996. Mineralogia, geoquímica e novas idades para o vulcanismo ácido da Bacia do Camaquã. In: Congresso Brasileiro de Geologia, 39., Salvador, 1996, Anais..., SBG, v. 2, p. 19-21
- ANM Agência Nacional de Mineração acesso em 21 de agosto de 2020] Disponivel em: http://anm.gov.br
- Carvalho P.F. de. 1932. Reconhecimento Geológico do Rio Grande do Sul, Rio de Janeiro, Boletim do Instituto Geológico de Mineração Brasileira, 66: I -72.
- HARTMAN, H. L., 1987, Introductory Mining Engineering. John Willey & Sons, NY.Manual de Produção CATERPILLAR – Edições 25, 26 e 27
- HARTMANN L. A. E REMUS M. V. D., 2000. Origem e evolução das rochas ultramáficas do Rio Grande do Sul desde o Arqueano até o Cambriano. In: Holz M e De Ros L. F. Geologia do Rio Grande do Sul. Ed. CIGO/UFRGS, p. 53-78.
- INCRA Instituto Nacional de Colonização e Reforma Agrária(Consulta de Imóveis Ruraisl/Acervo fundiário)[acesso em 14 de agosto de 2020] Disponivel em: http://acervofundiario.incra.gov.br/acervo/acv.php
- LEITES, S. R.; LOPES, R. C.; Wildner, W.; Porcher, C. A. & Sander, A. 1990. Divisão litofaciológica da Bacia do Camaquã na folha Passo do Salsinho, Caçapava do Sul, RS, e sua interpretação paleoambiental. In: Congresso Brasileiro de Geologia. 36, Natal, 1990. Boletim..., p. 300-312
- Lima, E. F. & Nardi, L. V. S. 1998. O vulcanismo shoshonítico e alcalino da Bacia do Camaquã: Estado do Rio Grande do Sul –Brasil, In: Congresso Uruguayi de Geologia, 2., Punta del Este, 1998. Actas..., p. 263-268.
- OLIVEIRA, J. M. M. T. 1992. Formação Arroio dos Nobres: depósitos marinhos ou continentais? Uma discussão. In: Workshop Sobre as Bacias Brasilianas, 1., São Leopoldo, 1992. Boletim..., UNISINOS. pp. 106-112.
- Open Pit Mine Planning and Design The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. – AIME – Editores JOHN T. CRAWFORD, III E WILLIAM A. HUSTRILID
- Paim, P. S. G., Chemale Jr., F. & Lopes, R. C. 2000. A Bacia do Camaquã. In: M. Holz, M. & L. F. De Ros, L. F. (eds.) Geologia do Rio Grande do Sul. CIGO/UFRGS, Porto Alegre, p.231-274.
- SILVA, R.R: Relatório Final Positivo De Pesquisa Mineral. Referencial Geologia Mineração E Meio Ambiente Ltda.
- Surface Mining The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. AIME Editor EUGENE PFLEIDER
- Technavio Copper Sulphate Market in Brazil 2020-2024.
- Wikipedia: https://pt.wikipedia.org/wiki/Wikip%C3%A9dia:P%C3%A1gina_principal





Attachment 01- Mine Master Plan









Aguia Resources Limited; Andrade Copper Project; Caçapava do Sul; RS, Brasil Updated Resources Estimate and Scoping Study - Memorandum - March 9th, 2021





Attachment 02- Cartographic Layout











ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY – AGUIA RESOURCES LTD.



JORC Code, 2012 Edition – Table 1 report template

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

Criteria	JORC Code Explanation	Commentary
Sampling techniques	 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. 	 In the Andrade Project area procedures for diamond drilling samples were compliant with mineral industry standards. Samples were sent to laboratories that are commercial fee-for-service testing facilities and are independent of Aguia. The Andrade deposit was defined using diamond core drilling, and surface trench sampling. 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).
	 Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 	 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. 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.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
	explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	 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.). 	 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 2,004.5m and in 2010, Boart Longyear drilled 25 holes totalling 6,401.85m. 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. Downhole measurements of azimuth and dip deviation were taken at three metre intervals using a Reflex Maxibor survey tool. In 2019, 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. 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 of two diamond drillholes named AND-20-004 and AND-20-005 totalling 197.15m of drilling.
Drill sample recovery	 Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 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 and core recovery records. 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. There was no investigation about relationship between sample recovery and grade.





Criteria	JORC Code Explanation	Commentary
Logging	 Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 	• 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.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography.	• The logging is qualitative in nature. A photographic record is maintained for all core boxes with each photograph recording three boxes.
	 The total length and percentage of the relevant intersections logged. 	100% diamond drillholes was logged.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. 	• 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.
	 If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. 	• 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.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	 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. 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.
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	 Lab management system is consistent with ISO 9001:2008 requirements for sampling preparation. Industry standard procedures were employed, including ensuring non-core samples are adequately homogenized before. Pulp splits are collected and retained in storage. ALS does introduce on routine basis certified reference material within every batch of samples,



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
		namely appropriate standards, duplicates and blanks. A QAQC report is sent together with the assay certificates.
	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	Whether sample sizes are appropriate to the grainsize of the material being sampled.	• 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.
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.	 The ICP method used is industry standard and considered appropriate for the analysis of base metal hosted mineralisation. Sample preparation and analysis was completed at ALS's Belo Horizonte laboratory in Brazil using standard crushing and pulverization techniques. 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, TI, U, V, W, Zn). All Cu and Co 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). 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.
	• 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.	A hand held XRF, Delta Analyser CS-4000 by Innov-X Systems, was employed to pre scan samples.
	 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 	• For the core sampling, Aguia used certified reference materials (standard), supplied by the Instituto de Tecnologia Augusto Kekule (ITAK). ITAK-809 and ITAK-833 are low grade and high grade copper standard, respectively and ITAK-628 is a low grade gold standard. In addition, fine and coarse blank samples were prepared from barren quartz veins. Also pulp duplicates were inserted in the batches. The control is considered appropriate to the sampling type and grades.





Criteria	JORC Code Explanation	Commentary
	established.	 CONTROL SAMPLES FINE BLANK FINE FINE FINE BLANK FINE FINE BLANK FINE FINE FINE FINE FINE BLANK FINE FINE BLANK FINE FINE BLANK FINE FINE FINE FINE FINE FINE FINE FINE
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Two twin boreholes were completed by Aguia. The assay results and mineralized intervals present good correlation with the original drill holes. All core was logged by Referencial geologists and verified by Aguia geologists; data was entered digitally into a comprehensive database program. Electronic data was verified against paper logs and original assay certificates by GE21. Assay data did not need to be adjusted.
Location of data points	 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. 	 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.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
	Specification of the grid system used.	Coordinates are recorded in Universal Transverse Mercator (UTM) using the SAD69 Datum, Zone 22S.
	Quality and adequacy of topographic control.	No topographic survey was conducted at the Andrade by the Company yet.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	• 5 diamond drill holes were completed by Aguia Resources in a target area, checking low- and high-grade copper mineralisation.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY – AGUIA RESOURCES LTD.





09th March 2021





Criteria	JORC Code Explanation	Commentary
Data spacing and distribution	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	 Aguia has engaged GE21 Consultoria Mineral . a Brazilian consulting firm, to complete a JORC/NI 43-101 mineral resource estimate for the Andrade deposit, as part of its due diligence. 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. No material has been classified as a Measured Mineral Resource, and Ore Reserves are not being stated.
	Whether sample compositing has been applied.	Assay data was composited to one-metre length prior to resource estimation.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type	The sampling patterns used did not introduce an apparent sampling bias.
	 If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	The sampling patterns used did not introduce an apparent sampling bias.
Sample Security	The measures taken to ensure sample security.	• 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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• Aguia has engaged its own independent technical consultant, GE21 Consultoria Mineral . a Brazilian consulting firm, to complete a JORC/NI 43-101 mineral resource estimate for the Andrade deposit, as part of its due diligence Audits and reviews of sampling techniques were performed in these works.





Criteria	JORC Code Explanation	Commentary
		GE21 reviewed the sample collection techniques, quality control procedures, sample
		storage facility, and data integrity as part of a site visit carried out from the 27 to 28 October, 2020.
		• . GE21 is 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.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY – AGUIA RESOURCES LTD.



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	 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. 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. 	 The Andrade deposit as currently modelled is situated over three separate exploration tenements. 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. 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. Independent legal advice prepared for Aguia by William Freire Advogados Associados indicates that: Aguia satisfies the requirements for operating a mine within 150 km of the territorial borders of Brazil (the 'Border zone'). The tenements in question do not fall within conservation units or indigenous lands. Those tenements that are currently under application or awaiting a response from the relevant department are unlikely to be denied. There are no known impediments to obtaining a licence to operate in this area.





Criteria	JORC Code Explanation	Commentary
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	• 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:
		 1900-08 Artisanal Mining: Trenches, pits, shafts and drifts at Andrade and Primavera 1942 DNPM: (8 holes) Resource 462 kt at 0.8% Cu at Andrade
		 1942 DNPM: Resource 91 kt at 1.00% Cu and 29 kt at 1.74% Cu at Primavera
		1959 DNPM: (25 holes) Resource 560 kt at 0.7% Cu 100 kt at 1% Cu at Andrade and Primvera
		 1975 CRM: (13 holes) 3.3 Mt at 0.43% Cu at Andrade
		 1985 CBC: (8 holes) 502 kt at 0.55% Cu at Andrade
		 2009-10 Referencial: drilling completed (38 holes) at Andrade
		 2009 Referencial: drilling completed (11 holes) at Primavera
		2012-13 Referencial: Deeper IP (TITAN) 4 sections completed at Andrade and Primavera





Criteria	JORC Code Explanation	Commentary
Geology	 Deposit type, geological setting and style of mineralisation. 	 The Andrade deposit is located at the western flank of the Caçapava Granite. 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. 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. 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.
Drill Hole Information	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and 	 Andrade project have 43 drillholes, including 39 diamond drillholes drilled by Referencial Geologia and another 5 diamond drillholes drilled by Aguia. Drilling utilized for the resource estimate consists of 38 diamond drill holes drilled by Referencial from the 2009/2010 campaigns (8,406.34 m) and 19 historical trenches re-sampled by Referencial in 2009/2010 (1,088.46 m). More 3 diamond core boreholes drilled by Aguia in 2019 (382.40 m) were used in this estimate 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 more drillholes (AND-20-004 and AND-20-005), totalling 197.15 meters of drilling.





Criteria JORC Code Explanation	Commentary								
 interception depth hole length. If the exclusion of this 	Hole-Id	x	Y	z	Max_Depth	Executing company	AZ	DIP	Туре
information is justified on	CPV_AN_DDH001	257114.3	6620642	271.53	83.81	Geoserv	87	-50	Diamond Drilling
the basis that the information is not Material	CPV_AN_DDH002	257099	6620640	266.05	90.6	Geoserv	87	-60	Diamond Drilling
and this exclusion does	CPV_AN_DDH003	257123.2	6620032	248.84	150	Geoserv	87	-50	Diamond Drilling
understanding of the	CPV_AN_DDH004	257100.7	6620482	297.64	119.9	Geoserv	87	-50	Diamond Drilling
report, the Competent Person should clearly	CPV_AN_DDH005	257081.1	6619926	217.68	171	Geoserv	90	-70	Diamond Drilling
explain why this is the	CPV_AN_DDH006	257168.1	6620281	287.62	110.9	Geoserv	90	-50	Diamond Drilling
case.	CPV_AN_DDH007	257089.2	6619826	213.23	238.4	Geoserv	90	-70	Diamond Drilling
	CPV_AN_DDH008	257109.9	6620134	248.7	137.9	Geoserv	90	-50	Diamond Drilling
	CPV_AN_DDH009	257036.4	6619833	226.78	237	Geoserv	90	-70	Diamond Drilling
	CPV_AN_DDH010	257166.3	6620392	306.78	100.9	Geoserv	90	-60	Diamond Drilling
	CPV_AN_DDH011	257150.8	6620214	263.47	101.9	Geoserv	90	-60	Diamond Drilling
	CPV_AN_DDH012	257053.5	6619732	234.9	180	Geoserv	90	-60	Diamond Drilling
	CPV_AN_DDH013	257061.6	6620211	231.65	150	Geoserv	90	-60	Diamond Drilling
	CPV_AN_DDH014	257009.7	6619927	230.8	216	Geoserv	90	-70	Diamond Drilling
	CPV_AN_DDH015	257093.9	6620031	243.95	170	Geoserv	90	-70	Diamond Drilling
	PRI_AN_DDH017	256614	6619804	313.05	277.15	Geoserv	90	-70	Diamond Drilling
	PRI_AN_DDH018	257520.3	6619341	312.08	278.35	Geoserv	90	-70	Diamond Drilling
	PRI_AN_DDH025	257107.1	6619427	227.23	201.05	Geoserv	90	-60	Diamond Drilling
	PRI_AN_DDH027	256939.2	6619626	291.2	434.35	Geoserv	90	-60	Diamond Drilling
	PRI_AN_DDH029	257044.3	6619627	245.58	249.05	Geoserv	90	-60	Diamond Drilling





Criteria	JORC Code Explanation	Commentary								
		PRI_AN_DDH030	257056.3	6620429	271.84	218.75	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH031	257150.4	6619733	235.35	203.85	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH032	257252.9	6620930	359.62	184.7	Geoserv	90	-60	Diamond Drilling
		PRI_AN_DDH033	256905.6	6619526	267.71	504.35	Geoserv	90	-61	Diamond Drilling
		PRI_AN_DDH034	257201.2	6620527	323.88	164.9	Geoserv	90	-58	Diamond Drilling
		PRI_AN_DDH035	257000.1	6619520	263.07	247.58	Geoserv	90	-56	Diamond Drilling
		PRI_AN_DDH036	257001.6	6620529	274.76	223.5	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH037	257147.9	6620724	289.7	161.8	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH038	257050.4	6620725	278.84	143.85	Geoserv	90	-60	Diamond Drilling
		PRI_AN_DDH039	256949.2	6620433	238.82	242.75	Geoserv	90	-60	Diamond Drilling
		PRI_AN_DDH040	256953	6619737	262.72	427.05	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH041	256933.9	6620315	215.06	271.6	Geoserv	90	-60	Diamond Drilling
		PRI_AN_DDH042	257115.6	6619938	237.03	182.85	Geoserv	90	-42	Diamond Drilling
		PRI_AN_DDH043	257051.4	6620323	249.61	247.6	Geoserv	90	-60	Diamond Drilling
		PRI_AN_DDH044	257009.9	6620120	241.83	277	Geoserv	90	-59	Diamond Drilling
		PRI_AN_DDH045	256993.4	6619429	249.7	262.05	Geoserv	90	-58	Diamond Drilling
		PRI_AN_DDH047	256941.6	6619825	260.83	382.7	Geoserv	90	-68	Diamond Drilling
		PRI_AN_DDH049	257001.9	6620028	220.22	361.2	Geoserv	90	-59	Diamond Drilling
			<u>I</u>	<u> </u>	<u> </u>		1	1		<u> </u>



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
Data aggregation methods	 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. 	No exploration data were altered
Data aggregation methods	 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. 	Intercepts above 0.2% Cu are considered significant.
	 The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Metal equivalents were not reported.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. 	Core drilling was designed to intersect the full width of the copper mineralization at a high angle.
	 If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 	 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.



ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
	 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'). 	 Down hole lengths were reported. Relationships between true lengths and true thickness are shown in cross sections below.





Criteria	JORC Code Explanation	Commentary
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	W June Line 300 June June June 300 June June June 420 B June June June 301 June June June June June 302 June June



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
Balanced reporting	 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. 	 The drilling databases are highly organized with drilling Intercepts and it's grade x length reports are properly stored and readily available within on the drillhole database.
Other substantive exploration data	 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 	 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. Ground Geophysics Double-Dipole Induced Polarization/Resistivity method by AFC Geofisica.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



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 focussed 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.
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY

– AGUIA RESOURCES LTD.



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	 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. 	 Assay data is provided to Aguia in spreadsheet form and directly copied to the company's data system. The database was provided to GE21 in a digital format as a Microsoft Excel file.
	 Data validation procedures used. 	• Original assay certificates were provided to GE21 and 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 found no material issues with provided database and is of the opinion that it is suitable to support the estimation of a Mineral Resource.
Site Visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	Guilherme Gomides Ferreira and Bernardo Horta Cerqueira Viana undertaken a site visit on October 2020 for three days, when was possible to check fields works, and local infrastructure
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	 GE21 has confidence that the geological interpretation in cross section and along strike is robust enough to support the declaration of an Inferred Mineral Resource. The deposit shows good continuity along strike and down dip in terms of both grade and lithology.
	 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 a lithological assay based in an approach to define the boundaries of the copper mineralization and the following criteria: Minimum average grade of composite interval (hanging wall to footwall contact) is 0.20% Cu for low grade and 1.00% Cu for high grade.





Criteria	JORC Code Explanation	Commentary				
	 The effect, if any, of alternative interpretations on Mineral Resource estimation. 	 Cross sectional interpretations of high grade (>1% Cu) and low grade (>0.2% 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 metres. These two-dimensional interpretations were then linked in Geovia's SURPAC software using tie- lines to form three-dimensional mineralisation solids for block estimation, GE21 validated the model using Leapfrog software. 				
	The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	 A surface eight metres below the topography was used to define the oxidation horizon. 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. 				
Dimensions	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.	• 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.				
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.	 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 SURPAC software was used to estimate grades into a 3D block model, constrained by mineralization wireframes. Copper, silver and equivalent cooper were estimated into the block model using ordinary kriging of one metre (minimum 0.5m) composites within the mineralized domains. For all elements, four 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 until the thirty 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 copper. 				
	• 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 has been made.				



ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary				
	 The assumptions made regarding recovery of by-products. 	No estimation of recovery factors has been made.				
	 Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). 	None made.				
	 In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. 	 The parental block size of 40m (along strike) by 40 m (perpendicular to strike) by 5 m (vertical) was used. Drilling grid size is approximately 100 m x 100 m. Last campaign (five drill holes) not limited the mineralization interpretation. The mineralization was just refined. 				
	Any assumptions behind modelling of selective mining units.	None made.				
	Any assumptions about correlation between variables.	No assumptions were made.				
	• Description of how the geological interpretation was used to control the resource estimates.	• Directional and down hole variography analysis was undertaken on one-metre composites for Cu and Ag for all domains combined. GE21 considers that parameters, orientation, and fitted variogram models are appropriate and reasonable to estimate Resources				
	Discussion of basis for using or not using grade cutting or capping.	• GE21 composited all assay intervals to a length of one metre. 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.	 GE21 performed a visual validation of the block model by visually comparing block and borehole grades on a section by section basis. GE21 also produced a series of swath plots to compare kriging estimation and Nearest Neighoring with reasonable conformance. The resultant block estimates appear to be reasonable in comparison to the composite grades. GE21 believes that the estimation methodology and parameters are appropriate for the estimation of an Indicated and Inferred Mineral Resource. 				
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	 Sample weighting and assay analysis were performed on dry basis. 				



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	 Open pit Mineral Resources are reported within a conceptual pit shell generated in Geovia's Whittle software at a cut-off grade of 0.20% Cu. This was calculated based on input costs as detailed below and a uniform pit slope angle of 55°.





Mining factors or assumptions.	 Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made 	• 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 and considering operations of similar size within the larger region. The operation is envisaged to utilize both open pit and underground mining methods.					
			Item	Item	Unit		
			Economic Parameters	Sell Price	AUD\$/t CuSO4.5H2O	4,764.00	
			ROM	Density	g/cm³	model	
				Grade (Cu)	%	model	
			Waste	Density	g/cm³	2.60	
			Mining	Mining recovery	%	95	
				Dilution		5	
			Block Model	Х	m	5	
				Y		5	
				Z		5	
			Slope Angle	oxided	0	45	
				Fresh rock		55	
			Metallurgical recovery	Cu	%	82	





Criteria	JORC Code Explanation	Commentary					
			Cut-off	Cu	%	0.17	-
			Costs	Mining	AUD\$/t mov	3.11	
			-	Process	AUD\$/t ROM	8.31	
			-	G&A	AUD\$/t product	22.69	
							1
			×1,1km	Looking North	east	Resource Shell	Legend: Cu % 0 - 0.2 0.2 - 0.4 0.4 - 0.6 0.8 - 0.8 1.0 - 1.5 > 1.5




Criteria	JORC Code Explanation	Commentary
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.	 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). 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. While these test results are small in scale and may not reflect achievable performance on a commercial scale, GE21 believes that they are appropriate for use in a project at this stage of development. Recovery assumptions for the Scoping Study were based on exploratory metallurgical test works conducted by ALS Laboratories in Australia, where Flotation and Acid Leaching tests were performed. Complementary test-works are required to confirm the selected route and define operational and economic parameters and plant design.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
Environmental factors or assumptions	 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. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	 No environmental assessment study has been carried out to assess the likely environmental or social impacts of this project going into production. No location or design studies have been undertaken to identify potential locations for tailings management facilities or waste rock storage.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Criteria	JORC Code Explanation	Commentary
Bulk density	 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. 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. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 Density was measured by Referencial on uncoated core samples using a standard weight in water/weight in air methodology, reporting values on a dry basis. The density database contains 696 measurements. 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). GE21 and Aguia personnel identified that the values obtained by Referencial appear to be low for rock and mineralisation of this type. An initial cross-check program returned density values an average of 5% higher than the Referencial program. Once density measurements have been confirmed by an independent laboratory, the modelled density can be updated. The current values for density do not take into account the oxidation state or weathering profile.



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



Classification	The basis for the classification of the Mineral Resources into varying	Aquia Pesources Limited – Andrade Denosit –									
	 Whether appropriate account has been taken of all relevant factors. 	Effective date 01/02 2021									
	i.e. relative confidence in tonnage/grade computations.	Class	Dominium	Li	Cu	Ag	Metal				
	confidence in continuity of geology and metal values, quality, quantity	01035	Dominium	RI -	(%)	(ppm)	Cu (klb)	Ag (koz)			
	and distribution of the data.		LG OXI	630	0.43	3.07	5 958	62			
	 whether the result appropriately reflects the Competent Person(s)' 		LG SUFT	17,038	0.38	1.72	143 752	944			
	view of the deposit.		HG SULF	368	1.54	6.55	12 482	77			
		-	Sub-Total	18,036	0.41	1.87	162,187	1,084			
			LG OXI	348	0.37	1.66	2 816	19			
			LG SUFT	3,085	0.35	1.73	23 736	172			
			HG SULF	546	1.67	4.19	20 071	74			
			Sub-Total	3,980	0.53	2.06	46,619	264			
	Notes: 1. Definitions were 2. Open pit resourd 3. Cut-off grades v 4. Average bulk de 5. Mining loss of 5 6. Mineral Resourd 7. The Scoping Strittor to support estimating certainty that the co 8. Totals may not significant the co 9. The Mineral Resourd 10. Bernardo Horta Copper Mineral Resourd	a followed for Mineral ces are stated within vere calculated using ensities of 2.68 t/m ³ fo % and mining dilution ces are not Mineral R udy referred to in this on of Ore Reserves onclusions of the Sco sound ue to rounding. sources was develop a Cerqueira Viana BS esources estimate.	Resources. Mineral a preliminary pit she a copper price of U or high grade domain of 5% factors have eserves and do not report is based on I or to provide assuran oping Study will be r ed by GE21. Sc (Geo) MAIG a	Resources also ell, above a cut-o \$\$3.50/lb and a ns and 2.60 t/m ³ been applied to have demonstra ow-level technic nce of an econo ealised. full-time employ	o conform to JO off grade of 0.2' silver price of l for low grade a o the reported fi ated economic cal and econom mic developme ee of GE21is th	PRC (2012) Code % Cu. US\$20/oz. and waste domai gures. viability. ic assessments, ent case at this st ne CP responsib	ns were applied. and is insufficien age, or to provide le for the Andrade				





Criteria	JORC Code Explanation	Commentary
		 The global geological continuity of the deposit have been reasonably established, there is room for improvement in the assessment of variability in grade and local geometry The samples used to inform this estimate appear to be of good quality and have been collected and analyzed in accordance with standard industry practice, GE21 believes that all relevant factors have been taken into account for the preparation of this Mineral Resource estimate. It is the opinion of GE21 that the Andrade Mineral Resource estimate appropriately reflects the Competent Person's view of the deposit
Audits or reviews	 The results of any audits or reviews of Mineral Resource estimates. 	 GE21 conducted a detailed review of the block model provided by RPA and found no material issues in the estimation process or with the resulting model. GE21 review the resource model including 5 more recent drill holes, and rebuit y=the directional variograms, achieving that the updated model is of sufficient quality for the declaration of a partially Indicated Mineral Resources, completed with Inferred Mineral Resource.





Criteria	JORC Code Explanation	Commentary
Discussion of relative accuracy/ confidence	 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. 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. 	 The Mineral Resource at Andrade has been estimated using Industry standard procedures for a deposit of its nature. 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). The Mineral Resource estimate above is of the global tonnes and grade of the Andrade deposit as it is currently known.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	 No production data from the Andrade deposit is available as the historic artisanal mining activity was not documented.

09th March 2021



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY – AGUIA RESOURCES LTD.



ANDRADE COPPER PROJECT – AGUIA RESOURCES – EXPLORATION UPDATE

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	 Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	GE21 performed the import and validated the database information. For this Scoping Study,
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 The Competent Persons, Competent Persons, Guilherme Gomides Ferreira and Bernardo Horta Cerqueira Viana undertaken a site visit on October 2020 for three days, when was possible to check fields works, and local infrastructure





Study status	 The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered. The basis of the 	 A scoping study comprising mining studies, pit optimization, fleet sizing and mining Capex and Opex was developed, considering AACE Class 5 cost level. The Scoping Study referred to in this report is based on 75% of Indicated Resources and25% Inferred Resources and 0% Exploration Target, is also based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realized. The results of a Scoping Study needs to be undertaken with care to ensure there is no implication that Ore Reserves have been established or that economic development is assured.
Cut-off parameters	 The basis of the cut-off grade(s) or quality parameters applied. 	• 0.17 % Cu based on Scoping Study report: Andrade Copper Project, Rio Grande do Sul, Brazil.





	assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve	GE21 assi	umed the follo	wing parameters Ite	e for Pit optimizat	ion. Unit AUD\$/t CuSO4	Value 2,382.00
	application of			POM	Density	g/cm ³	model
	by optimisation or			KOM	Grade (Cu)	%	model
	detailed design).			Waste	Density	g/cm ³	2.60
A convention of the choice nature and appropriate the selected the selected of the select	• A conventional oThe choice, nature and		Physical	Mining	Mining recovery	%	95
	the selected				Dilution		5
	mining method(s) and other mining parameters including associated design issues such as			Block Model	Х	m	5
					Y		5
					Z	-	5
	pre-strip, access, etc.			Slope Angle	Oxidized	o	45
	The assumptions made regarding			elepe / ligie	Fresh rock	1	55
	geotechnical parameters (eg pit slopes, stope	cal rs (eg pit ope		Metallurgical recovery	Cu	%	82
	sizes, etc), grade control and pre-			Cut-off	Cu	%	0.17
	production drilling.The major		C	Costs	Mining	AUD\$/t mined	3.08



ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



and Mineral Resource model					Process	AUD\$/t R	OM	8.31		
used for pit and stope optimisation (if appropriate).					G&A	AUD\$/ produc	/t >t	22.59		
 The mining dilution factors used. The mining recovery factors used. Any minimum mining widths 	 The of tri A Ge 	ore will be mined a ucks with a volume otechnical study re	t a convention capacity of 3 ecommended	nal ope 6t. the foll	en pit operation, owing geometry	with excava	ators with pes angle	a bucket cap es:	pacity of	2.5m³ and
The manner in which Inferred Mineral Resources		Lithotype	Face angle (º)		Bench width (m)	Bench hei	ight (m)	Inter-ramp slope (º)	general	
are utilised in		Oxided	59		2	5		34		
mining studies and the sensitivity of		Fresh	79		2	5		45		
the outcome to their inclusion. • The infrastructure	• The f	ollowing below the	operational d	lesign	parameters.	·				
requirements of		Description		Unit		V	/alue			
mining methods.		Road Ramp width	ו	m		1	0			
		Ramp maximum	grade	%		1	0			
		Face Angle - Oxid	dized	degre	e	5	59			
		Face Angle – Fre	sh Rock	degre	ee	7	79			
		Slope Angle - Ox	idized	degre	ee	3	34			
		Slope Angle – Fre	esh Rock	degre	e	4	45			
		Bench height		m		5	5			
		Berm width		m		2	2			
		Mine Width		m		2	25			





	The final pit design is presented below:
--	--







	 The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, approximate and statemetal statemetal	The ROM is reclaimed by a front loader which discharges in a hopper equipped with vibratory feeder with a grizzly at the end, whose oversize feeds a primary jaw crusher. The passing ore is joined to the product of the crusher. The crushed ore is conveyed to a primary 2-decks vibratory screen, openings 37mm and 12.5mm. The oversize of both decks feed a secondary cone crusher, whose product feeds a secondary 1-deck vibratory screen, opening 12.5 mm. The oversize feeds a tertiary cone crusher, whose product is discharged in a tertiary 1-deck vibratory screen. The oversize from that screen is conveyed back to the tertiary cone crusher, closing the circuit. The passing ore in 12.5 mm deck from all, primary, secondary, and tertiary screens, are joined and feeds the acclomeration step.
Metallurgical factors or assumptions	 amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are 	agglomeration step. <u>Agglomeration</u> The ore finer than 12.5 mm is conveyed to an agglomerating drum, where a 60 g/l diluted solution of sulfuric acid (H ₂ SO ₄) is added, at a rate of 30 kg/t (base 100). The residence time is estimated in 2 min. <u>Stacking</u> The agglomerated ore is conveyed by semi-mobile and mobile conveyors ("grasshoppers") to the heap leaching pad. The ROM is stacked in 6m height heaps, in a total area of 160.000 m ² , suitable for a leaching cycle estimated in 180 days for an extraction of 85%. For effect of this PEA, permanent pads is being considered, with a final heap height of 36 m. Tailings will be deposited in heap leaching. When each heap will be exhausted, a new ROM layer will be deposited, starting the new heap construction. GE21 estimated 4 heap layers to finish the process. The heap leach pad is lined with a geomembrane of LLDPE (linear low-density polyethylene) to prevent infiltration of the pregnant solution (PLS) in the soil. This liner is covered with spreading fine crushed ore, to avoid mechanic damage on the lining system. A drainage piping system is installed under the heap to collect the PLS and to flow it to the ditches and ponds. Figure - 1 shows a block diagram for that route.





















ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



		The slow stirring causes the suspension of the smaller crystals, allowing their growing along the process. After the termination of the cycle, the solution is centrifuged, and crystals are washed and dried. Solution is pumped back to the SX step. Alternative Case – Metallic Copper Production GE21 developed an alternative scenario for Metallic Copper production
Environmental	 The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	 No environmental assessment study has been carried out to assess the likely environmental or social impacts of this project going into production.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation	• The 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.





(particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.		
---	--	--





	• The derivation of, or assumptions made, regarding projected capital	 Mining equipment will be rental, there isn't equipment cost estimation. CAPEX and OPEX information were estimated based on similar projects and GE21 data base. The table below presents the mining costs. Summarized Project CAPEX – Base Case:		
	 Costs in the study. The methodology used to estimate 	Item	Value AUD\$(M)	
	operating costs.	Mine Equipment	0.19	
	Allowances made for the content of	Infrastructure (Road, Civil Work, Terrain Preparation, Power)	2.82	
	deleterious	Processing Plant	4.87	
	elements.	Others (buildings, security facilities)	1.51	
	 The source of exchange rates used in the study. Derivation of transportation charges. The basis for 	Contingency (10%)	0.94	
		Total	10.33	
OSIS		Summarized Project CAPEX – Alternative Case:	Value	
	forecasting or	item	AUD\$(M)	
	treatment and	Mine Equipment	0.19	
	refining charges,	Infrastructure (Road, Civil Work, Terrain Preparation, Power)	2.82	
	penalties for failure	Processing Plant	13.6	
	to meet	Others (buildings, security facilities)	1.51	
	specification, etc.	Contingency (10%)	1.81	
	The allowances	Total	19.93	
	made for royalties payable, both Government and	The table below presents the mining costs:		



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



	Item	Units	Value
	Mine	AUD\$/t mined	3.08
	Plant	AUD\$/t ROM	8.31
	G&A	(AUD/t Copper sulphate product)	22.59
	Summarized Project OPEX – Alternativ	/e Case:	
	Item	Units	Value
	Mine	AUD\$/t mined	3.08
	Plant	AUD\$/t ROM	8.31
	G&A	(AUD\$/pound of copper)	0.04
Revenue factors factors	 Long term prices and exchange rat Exchange rate :AUD\$1.00 =R\$ 3.3 Copper Metallic Price : US\$3,80/pc 	te assumptions adopted in the Scoping Study f 30 ວund	or Mineable Resource a





Market assessment	 supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. 	 In the current scenario of falling demand and short-term supply, the market should still register 90kt in 2020. Copper prices are expected to fall this year to an average of \$ 5,063 / t or (\$ 2.30 / lb). For the next few years (2021 to 2023) supply growth is expected to exceed 4.7%. This extra amount of metal will hit the market along with additional production from the Qulong and Yulong mines (in China). Timok, Copper Panama, Grasberg, Oyu Tolgoi and Olympic Dam, among others. With supply growth exceeding consumption, there are projected growing surpluses in the metals market and as a result, inventories will start to rise and prices are expected to start falling. Projected surpluses will increase inventories until 2023 consequently lowering metal prices by an annual average of \$ 5,401 / t (\$ 2.45 / lb). Starting in 2024, prices are expected to begin an upward trend until reaching a long-term price level of \$ 7,275 / t (\$ 3.30 / lb) that is expected to remain at this level until 2030. This increase of price and the decrease in inventories, should provide sufficient confidence to producers to reactivate closed mines, carry out expansions, extend the life of the mine and, eventually, develop projects necessary to reduce the gap between supply and demand. Considering all these factors, we are confident that our long-term price should be sufficient to close the supply gap in order to maintain market balance and maintain balance for the next decade. (Source: Global copper long-term outlook Q1 2020 - Wood Mackenzi - March 2020.). GE21 used in the economic analysis the copper price of US\$ 3.80/pound. For Penta Hydrated Copper Sulphate a sell price of AUD\$2,775.00/t and for Metallic Copper a sell price of AUD\$10,905.00/t
----------------------	---	---



ANDRADE COPPER PROJECT INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



		 The below sumalizes the taxes that are taken into account in this project economics. Taxes Tax Rates Item % IRPJ(15% until R\$ 240.000,00 of 15 IRPJ (25 % over R\$ 240.000,00 of 25 CSLL(9% of EBITDA) 9 CFEM (2% of gross revenue) 2 The Project base case (Penta-hydrated Copper Suphate) estimates a Net Prese AUD\$ 112.4 million, at a Discount Rate of 5% per year post tax. 	Sent Value of
Economic	The inputs to the economic analysis to produce the net	CAPEX (AUD\$ M) NPV (AUD\$ M) IRR (%)	10.3 112.4 67.1
	to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs.	 Payback time (years) A sensitivity analysis was undertaken to evaluate the impact of the resultinindicators for the following attributes, within the cash flow: WACC Sell price Mine OPEX Plant OPEX. The WACC, OPEX, NPV, was evaluated by varying its value from -15% to +1 sensitivity analysis developed by GE21. 	1.9 ng economic 15%. Figure below shows t









ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



		 WACC Sell price Mine OPEX Plant OPEX. The WACC, OPEX, NPV, was evaluated by varying its value from -15% to +15%. Figure below shows the sensitivity analysis developed by GE21.
		Sensitivity Analysis -NPV
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	 As part of the baseline work, impacts on the social-economic and cultural components were identified in the area in which the Andrade Copper Project will be implemented. Each of these impacts have been ranked in significance and environmental plans and programs have been identified and proposed in the EIA
Other	• To the extent relevant, the	No relevant information to report.





impact of the	
following on the	
project and/or on	
the estimation an	
classification of th	e
Ore Reserves:	
Any identified	
material naturally	
occurring risks.	
The status of	
material legal	
agreements and	
marketing	
arrangements.	
The status of	
governmental	
agreements and	
approvals critical	
to the viability of	
the project, such	
as mineral	
tenement status,	
and government	
and statutory	
approvais. There	
must be	
arounds to ovpor	4
that all pocossan	
Government	
approvals will be	
received within th	
timeframes	
anticipated in the	
Pre-Feasibility or	
Feasibility study.	
Highlight and	





materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.





-	1						
		 The Scoping Study r insufficient to suppor this stage, or to prov 	eferred to in this t estimation of C ide certainty tha	report is based on low-l re Reserves or to provid the conclusions of the S	evel technical and economic le assurance of an economic of Scoping Study will be realized	assessments, and is development case at	
			1				
		Mine Recovery 95%, Dilution 5%					
		(Effective date 01/03/2021)					
		Material	Mt	Cu (%)	CuSO ₄ 5H ₂ O(Mt)		
		Indicated	8.51	0.41	0.14		
		Inferred	3.21	0.53	0.07		
		Total ROM	11.72	0.44	0.21		
Classification	The basis for the classification of the	Waste	19.11			1	
		S.R	1.63				
	Ore Reserves into varying confidence categories.	Mineral Resources were estimated using Geovia Whittle 4.3 software and the following economic parameters: Sale price for $CuSO_45H_2O(t) = AUD$2,382.00$ (Exchange rate AUD\$1.00 = R\$3.80).					
	Whether the result appropriately	Mining costs: AUD\$3.08/t mined, processing costs: AUD\$8.31/t ROM and G\$A: AUD\$22.59/t CuSO45H; Mineral reserves are the economic portion of the Indicated and Inferred mineral resources.					
	reflects the Competent	Dilution 5% and Recovery 95%					
	Person's view of the deposit. • The proportion of	The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.					
	Probable Ore Reserves that	Final slope angle: oxidized 45°, fresh rock = 55°					
	have been derived from Measured	Waste = 19.1Mt					
	Mineral Resources (if any).	Strip Ratio = 1.63 t/t - (Wa	ste/Ore)				



ANDRADE COPPER PROJECT

INDEPENDENT TECHNICAL REPORT – SCOPING STUDY



		The Competent Person responsible for the estimate of Mineable Resource is Guilherme Gomides Ferreira, BSc. (MEng), MAIG, an employee of GE21
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	 The Scoping Study have been independently reviewed by Porfírio Cabaleiro Rodriguez – Mining Engineer MAIG of GE21 Mining Consulting and
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an appropriate, a qualitative discussion of the factors which 	The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realized.





could affect the	
relative accuracy	
and confidence of	
the estimate.	
The statement	
should specify	
whether it relates	
to global or local	
estimates, and, if	
local, state the	
relevant tonnages,	
which should be	
relevant to	
technical and	
economic	
evaluation.	
Documentation	
should include	
assumptions made	
and the	
procedures used.	
Accuracy and appliedence	
coniidence	
aiscussions should	
discussions of any	
applied Modifying	
Eactors that may	
have a material	
impact on Ore	
Reserve viability.	
or for which there	
are remaining	
areas of	
uncertainty at the	
current study	
stage.	





 It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	
--	--