AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT



5 November 2021

CENTAURUS TAKES KEY DEVELOPMENT STEP AT JAGUAR WITH LODGEMENT OF UPDATED MINING LEASE APPLICATION

All key statutory reports now submitted for large-scale nickel sulphide project; approvals process on track

Centaurus Metals (ASX Code: **CTM**) is pleased to advise that it has taken another important step towards the development of its flagship 100%-owned **Jaguar Nickel Project** in northern Brazil after lodging an updated Mining Lease Application (MLA) revising the original MLA lodged by Vale in 2013.

The MLA update, which has been lodged with the ANM (*Agência Nacional de Mineração*/National Mining Agency) accounts for the revision of the scale and scope of the mining and processing activities based on the Jaguar Nickel Sulphate Project outlined in the Scoping Study released in May this year. The primary document in the MLA process is the PAE (*Plano de Aproveitamento Econômico*/Economic Utilization Plan), which demonstrates both the commercial viability of the Jaguar Project as well as the Company's capacity to implement it.

The application contemplates open pit and underground operations to supply 2.7Mtpa of ore to a nickel sulphide flotation plant and hydrometallurgical circuit to produce ~20,000tpa of nickel in sulphate plus by-products¹.

The Company presented the detail of the PAE and Mining Lease Application to the ANM in Belem with the presentation being very well received.

Figure 1 – Centaurus' Brazil based team present the Jaguar Nickel Project to the ANM in Belém, Brazil.

Left-right: Ruy Lacourt (CTM Mining Engineer Specialist), Fabiola Daronch (ANM General Manager - Pará), Bruno Scarpelli (CTM Executive Director), Marcos Cordeiro (ANM Mines Department Manager) and Gaudius Montresor (CTM Exploration Manager)



¹ Refer to the Value-Add Scoping Study released to the market on 31 May 2021 for full details of the Production Targets and the material assumptions underlying the Study. All the material assumptions underpinning the Production Targets, continue to apply and have not materially changed.

Australian Office

Centaurus Metals Limited Level 2, 1 Ord Street West Perth WA 6005 AUSTRALIA



Brazilian Office

Centaurus Brasil Mineração Ltda Avenida Barão Homem de Melo, 4391 Salas 606 e 607 - Estoril CEP: 30.494.275, Belo Horizonte MG BRAZIL ASX: CTM
ACN 009 468 099
office@centaurus.com.au
T: +61 8 6424 8420





Centaurus' Managing Director, Mr Darren Gordon, said the lodgement of the updated Mining Lease Application marked another very important step in the pathway to production at Jaguar.

"Lodging the PAE brings us one step closer to production at Jaguar. The Project will deliver huge economic benefits to the local region through the creation of around 800 jobs during construction and over 1,000 jobs during operations. These new jobs, when combined with the strong stream of royalties and taxes that will flow into the local community annually over the project life, will ensure the Project creates a lasting positive legacy for generations to come.

"We expect that royalties and taxes from the Project will amount to more than US\$400 million over the initial 13year project life, with over half of this flowing directly to the local region. The ability of the Jaguar Project to positively impact the lives of the local community in a sustainable manner is very appealing for Centaurus as a Company committed to the highest possible ESG standards.

"With Brazil having a well-established mining regulation system and a clear road map to mining, we look forward to working with the ANM to getting the updated Mining Lease Application approved in a timely manner so we can continue to advance the development and construction of the project and realise these substantial economic and community benefits.

"Importantly, the Brazilian Government announced in June this year that nickel is a key part of its strategic minerals policy and of high importance for the transition to electrification. As a global leader in renewable energy, Brazil is also in the enviable position of being able to be a leader in green mining with the Jaguar Project set to be flagship project for the country in this regard."

The graph in Figure 2 below shows where Jaguar is estimated to rank on a global basis on the Skarn Associates GHG Nickel Intensity Curve. When in operation, the E1 (Scope 1+2+downstream) emissions for the production of nickel sulphate on site at Jaguar are expected to be extremely low at 4.69 tonnes of CO₂/tonne of nickel equivalent², which is lower than 97% of existing global nickel production.

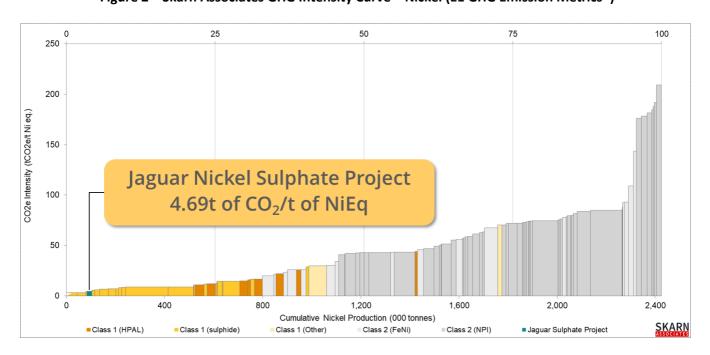


Figure 2 - Skarn Associates GHG Intensity Curve - Nickel (E1 GHG Emission Metrics®)

² Refer to the Jaguar GHG Emissions Assessment released to the market on 2 August 2021



For further information on the Company please visit www.centaurus.com.au to view our latest corporate presentation or contact:

-ENDS-

For further enquiries please contact:

Nicholas Read Read Corporate M: +61 419 929 046 T: +61 8 9388 1474

info@readcorporate.com.au

Authorised for release by:

Darren Gordon

Managing Director

Centaurus Metals Ltd

T: +61 8 6424 8420

office@centaurus.com.au

Competent Persons' Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Roger Fitzhardinge who is a Member of the Australasia Institute of Mining and Metallurgy. Mr Fitzhardinge is a permanent employee and shareholder of Centaurus Metals Limited. Mr Fitzhardinge has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Fitzhardinge consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the new March 2021 Jaguar Mineral Resource is based on information compiled by Mr Lauritz Barnes (consultant with Trepanier Pty Ltd) and Mr Roger Fitzhardinge (a permanent employee and shareholder of Centaurus Metals Limited). Mr Barnes and Mr Fitzhardinge are both members of the Australasian Institute of Mining and Metallurgy. Mr Barnes and Mr Fitzhardinge have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Fitzhardinge is the Competent Person for the database (including all drilling information), the geological and mineralisation models plus completed the site visits. Mr Barnes is the Competent Person for the construction of the 3-D geology / mineralisation model plus the estimation. Mr Barnes and Mr Fitzhardinge consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.



APPENDIX A – Compliance Statements for the Jaguar Project

The following Tables are provided for compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results and Mineral Resources at the Jaguar Project.

SECTION 1 - SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections).

Criteria	opply to all succeeding sections). Commentary
Sampling techniques	Historical soil sampling was completed by Vale. Samples were taken at 50m intervals along 200m
sampling techniques	spaced north-south grid lines.
	 Surface material was first removed, and sample holes were dug to roughly 20cm depth. A 5kg
	sample was taken from the subsoil. The sample was placed in a plastic sample bag with a sample
	tag before being sent to the lab.
	 Surface rock chip/soil samples were collected from in situ outcrops and rolled boulders and
	submitted for chemical analysis.
	 The historical drilling is all diamond drilling. Drill sections are spaced 100m apart and generally there
	is 50 to 100m spacing between drill holes on sections.
	Core was cut and ¼ core sampled and sent to commercial laboratories for physical preparation and
	chemical assay.
	At the laboratories, samples were dried (up to 105°C), crushed to 95% less than 4mm,
	homogenized, split and pulverized to 0.105mm. A pulverized aliquot was separated for analytical
	procedure.
	 Sample length along core varies between 0.3 to 4.0m, with an average of 1.48m; sampling was done
	according to lithological contacts and generally by 1m intervals within the alteration zones and 2m
	intervals along waste rock.
	 Current drilling is being completed on spacing of 100m x 50m or 50m x 50m. Sample length along
	core varies between 0.5 to 1.5m
	• Core is cut and ¼ core sampled and sent to accredited independent laboratory (ALS).
	For metallurgical test work continuous downhole composites are selected to represent the
	metallurgical domain and ¼ core is sampled and sent to ALS Metallurgy, Balcatta, Perth.
	 Samples from RC drilling are split to make 3-5kg samples. The sample is placed in a plastic sample
	bag with a sample tag before being sent to the laboratory.
Orilling techniques	Historical drilling was carried out between 2006 to 2010 by multiple drilling companies (Rede and
,	Geosol), using wire-line hydraulic diamond rigs, drilling NQ and HQ core.
	• Vale drilled 169 drill holes for a total of 56,592m of drilling in the resource area. All drill holes were
	drilled at 55°-60° towards either 180° or 360°. The resource considers 49 drill holes completed by
	Centaurus for a total of 17,941m of drilling. All drill holes were drilled at 55°-75° towards either
	180° or 360°.
	Current drilling is a combination of HQ and NQ core (Servdrill).
	• The current RC drilling is completed by Geosenda Sondagem using a face sampling hammer (4.5").
	Sample is collected from the sample cyclone in large plastic sample bags. Samples are then split
	either by riffle splitters or manually (fish bone method) where there is high moisture content.
	• All RC holes were sampled on 1m intervals. Sample size, sample recovery estimate and conditions
	were recorded.
Orill sample recovery	Diamond Drilling recovery rates are being calculated at each drilling run.
	For all diamond drilling, core recoveries were logged and recorded in the database for all historical
	and current diamond holes. To date overall recoveries are >98% and there are no core loss issues
	or significant sample recovery problems.
	To ensure adequate sample recovery and representativity a Centaurus geologist or field technician
	is present during drilling and monitors the sampling process.
	 No relationship between sample recovery and grade has been demonstrated. No bias to material
	size has been demonstrated.
	RC sample weights are taken for all samples and a recovery estimate are made where the sample
	is not wet. Where the sample is wet a visual estimate of the sample recovery is made. The estimated
	recovery is approximately 90%, which is considered acceptable for the deposit type.
	To ensure the representative nature of the sample, the cyclone and sample hoses are cleaned after
	each metre of drilling, the rig has two cyclones to facilitate the process. Additionally, extra care is
	taken when drilling through the water table or other zones of difficult ground conditions.
	 No quantitative twinned drilling analysis has been undertaken at the project to date.
Logging	Historical outcrop and soil sample points were registered and logged in the Vale geological mapping
	point database.
	All drill holes have been logged geologically and geotechnically by Vale or Centaurus geologists.



Criteria	Commentary
	 Drill samples are logged for lithology, weathering, structure, mineralisation and alteration among other features. Logging is carried out to industry standard and is audited by Centaurus CP. Logging for drilling is qualitative and quantitative in nature. All historical and new diamond core has been photographed. Geologists complete a visual log of the RC samples on 1m intervals at the time of drilling. Logging captures colour, rock-type, mineralogy, alteration and mineralisation style. Logging is both qualitative and quantitative. Chip trays have been collected, photographed and stored for all drill holes to-date.
Sub-sampling techniques and sample preparation	 Diamond Core (HQ/NQ) was cut using a core saw, ½ core was sampled. Sample length along core varies between 0.3 to 4.0m, with an average of 1.48m; sampling was done according to lithological contacts and generally by 1m intervals within the alteration zones and 2m intervals along the waste rock. There is no non-core sample within the historical drill database. For RC sampling 1m samples are taken from the cyclone and then split by rifle splitter (if dry) or manually (if wet) using the fish-bone technique. Sample weight is between 3-5kg. QAQC: Standards (multiple standards are used on a rotating basis) are inserted every 20 samples. Blanks have been inserted every 20 samples. Field duplicates are completed every 30 samples. Additionally, there are laboratory standards and duplicates that have been inserted. Centaurus has adopted the same sampling QAQC procedures which are in line with industry standards and Centaurus's current operating procedures. Sample sizes are appropriate for the nature of the mineralisation. All historical geological samples were received and prepared by SGS Geosol or ALS Laboratories as 0.5-5.0kg samples. They were dried at 105°C until the sample was completely dry (6-12hrs), crushed to 90% passing 4mm and reduced to 400g. The samples were pulverised to 95% passing 150µm and split further to 50g aliquots for chemical analysis. New samples are being sent to ALS Laboratories. The samples are dried, crushed and pulverised to 85% passing 75µm and split further to 250g aliquots for chemical analysis.
	 During the preparation process grain size control was completed by the laboratories (1 per 20 samples). Metallurgical samples are crushed to 3.35mm and homogenised. Samples are then split to 1kg subsamples. Sub-samples are ground to specific sizes fractions (53-106µm) for flotation testwork.
Quality of assay data and laboratory tests	 Chemical analysis for drill core and soil samples was completed by multi element using Inductively Coupled Plasma ICPAES (multi-acid digestion); ore grade analysis was completed with Atomic Absorption (multi-acid digestion); sulphur analysis was completed with Leco, and Au and PGEs completed via Fire Assay. New samples are being analysed for 48 elements by multi element using ME-MS61 (multi-acid digestion) at ALS Laboratories; ore grade analysis was completed with ICP-AES (multi-acid digestion); sulphur analysis was completed with Leco, and Au and PGEs completed via Fire Assay. ALS Laboratories insert their own standards at set frequencies and monitor the precision of the analysis. The results reported are well within the specified standard deviations of the mean grades for the main elements. Additionally, ALS perform repeat analyses of sample pulps at a rate of 1:20 (5% of all samples). These compare very closely with the original analysis for all elements. Vale inserted standard samples every 20 samples (representing 5%). Mean grades of the standard samples are well within the specified 2 standard deviations. All laboratory procedures are in line with industry standards. Analysis of field duplicates and lab pulp duplicates have returned an average correlation coefficient of over 0.98 confirming that the precision of the samples is within acceptable limits. Vale QAQC procedures and results are to industry standard and are of acceptable quality. All metallurgical chemical analysis is completed by ALS laboratories
Verification of sampling and assaying	 All historical samples were collected by Vale field geologists. All assay results were verified by alternative Vale personnel. The Centaurus CP has verified the historical significant intersections. Centaurus Exploration Manager and Senior Geologist verify all new results and visually confirm significant intersections. No twin holes have been completed. All primary data is now stored in the Centaurus Exploration office in Brazil. All new data is collected on Excel Spreadsheet, validated and then sent to independent database administrator (MRG) for storage (DataShed). No adjustments have been made to the assay data.
Location of data points	All historical collars were picked up using DGPS or Total Station units. Centaurus has checked multiple collars in the field and has confirmed their location. All field sample and mapping points were collected using a Garmin handheld GPS.



Criteria	Commentary
	 An aerial survey was completed by Esteio Topografia and has produced a detailed surface DTM at (1:1000 scale). The survey grid system used is SAD-69 22S. This is in line with Brazilian Mines Department requirements. New drill holes are sighted with handheld GPS and after completion picked-up by an independent survey consultant periodically. Downhole survey for all the historical drill holes and Centaurus hole up to JAG-DD-19-012 used Maxibor equipment. All new drill holes are being downhole surveyed using Reflex digital down-hole tool, with readings every metre.
Data spacing and distribution	 Soil samples were collected on 40m spacing on section with distance between sections of 200m and 400m depending on location. Sample spacing was deemed appropriate for geochemical studies. The historical drilling is all diamond drilling. Drill sections are spaced 100m apart and generally there is 50 to 100m spacing between drill holes on sections. Centaurus is in the process of closing the drill spacing to 100m x 50m or 50m x 50m. No sample compositing was applied to the drilling. Metallurgical samples to date have been taken from Jaguar South, Jaguar Central, Jaguar North and Onça Preta.
Orientation of data in relation to geological structure	 Historical drilling was oriented at 55°-60° to either 180° or 360°. This orientation is generally perpendicular to the main geological sequence along which broad scale mineralisation exists. Mineralisation is sub-vertical; the majority of the drilling is at low angle (55-60°) in order to achieve intersections at the most optimal angle.
Sample security	 All historical and current samples are placed in pre-numbered plastic sample bags and then a sample ticket was placed within the bag as a check. Bags are sealed and then transported by courier to the ALS laboratories in Vespasiano, MG. All remnant Vale diamond core has now been relocated to the Company's own core storage facility in Tucumã, PA.
Audits or reviews	The Company is not aware of any audit or review that has been conducted on the project to date.

SECTION 2 - REPORTING OF EXPLORATION RESULTS

(Criteria listed in the prece	Criteria listed in the preceding Section also apply to this section).	
Criteria	Commentary	
Mineral tenement and land tenure status	 The Jaguar project includes one exploration licence (856392/1996) for a total of circa 30km². A Mining Lease Application has been lodged that allows for ongoing exploration and project development ahead of project implementation. The tenement is part of a Sale & Purchase Agreement (SPA) with Vale SA. Two deferred consideration payments totalling US\$6.75M (US\$1.75 million on commencement of BFS or 3 years and US\$5 million on commencement of commercial production) and a production royalty of 0.75% are to follow. Centaurus has taken on the original obligation of Vale to BNDES for 1.8% Net Operating Revenue royalty. Mining projects in Brazil are subject to a CFEM royalty, a government royalty of 2% on base metal revenue. Landowner royalty is 50% of the CFEM royalty. Centaurus has secured possession rights to three properties over the Jaguar Project. The agreements remove exposure to the landowner royalty over the properties secured. The project is covered by a mix of cleared farmland and natural vegetation. The project is not located within any environmental protection zones and exploration and mining is permitted with appropriate environmental licences. 	
Exploration done by other parties	Historically the Jaguar Project was explored for nickel sulphides by Vale from 2005 to 2010.	
Geology	 Jaguar Nickel Sulphide is a hydrothermal nickel sulphide deposit located near Tucumã in the Carajás Mineral Province of Brazil. Jaguar is located at the intersection of the WSW-trending Canaã Fault and the ENE-trending McCandless Fault, immediately south of the NeoArchean Puma Layered Mafic-Ultramafic Complex. Iron rich fluids were drawn up the mylonite zone causing alteration of the host felsic volcanic and granite units and generating hydrothermal mineral assemblage. Late-stage brittle-ductile conditions triggered renewed hydrothermal fluid ingress and resulted in local formation of high-grade nickel sulphide zones within the mylonite and as tabular bodies within the granite. 	
Drill hole Information	 Refer to previous ASX Announcements for significant intersections from Centaurus drilling. Refer to ASX Announcement of 6 August 2019 for all significant intersections from historical drilling. 	



Criteria	Commentary
Data aggregation methods	 Continuous sample intervals are calculated via weighted average using a 0.3 % Ni cut-off grade with 2m minimum intercept width. There are no metal equivalents reported.
Relationship between mineralisation widths and intercept lengths	 Mineralisation is sub-vertical; the majority of the drilling is at low angle (55-60°) in order to achieve intersections at the most optimal angle. The historical drilling results in ASX Announcement 6 August 2019 reflect individual down hole
-	sample intervals and no mineralised widths were assumed or stated.
Diagrams	 Refer to Figures 1 & 2 of this announcement. Refer to previous ASX Announcements for maps and sections from Centaurus drilling included in the resource estimate.
Balanced reporting	 All exploration results received by the Company to date are included in this or previous releases to the ASX. For the current resource, a revised 0.3% Ni cut-off grade has been applied to material less than 200m vertical depth from surface in the estimation of the Global MRE with this being consistent with mineralisation domain modelling and reported significant intersection cut-off grades.
Other substantive exploration data	The Company has received geophysical data from Vale that is being processed by an independent consultant Southern Geoscience. Refer to ASX Announcements for geophysical information.
Further work	 Electro-magnetic (EM) geophysical surveys (DHEM and FLEM) are ongoing. In-fill and extensional drilling within the known deposits to test the continuity of high-grade zones is ongoing. Resource samples are continuously being sent in batches of 150-300 samples and will be reported once the batches are completed. Metallurgical testwork is ongoing. Geotechnical and hydrological studies for the proposed tailings facility and waste deposits have started.

SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)

Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)	
Criteria	Commentary
Database integrity	 The drilling database was originally held by Vale and received from them as csv exports. The drilling data have been imported into a relational SQL server database using Datashed™ (Industry standard drill hole database management software) by Mitchell River Group. All of the available drilling data has been imported into 3D mining and modelling software packages (Surpac™ and Leapfrog™), which allow visual interrogation of the data integrity and continuity. All of the resource interpretations have been carried out using these software packages. During the interpretation process it is possible to highlight drilling data that does not conform to the geological interpretation for further validation. Data validation checks were completed on import to the SQL database. Data validation has been carried out by visually checking the positions and orientations of drill holes.
Site visits	 The Competent Person responsible for Sampling Techniques and Data and Exploration Results, Mr Roger Fitzhardinge, has visited the site multiple times and overseen exploration activity and assumes responsibility for the sampling and data management procedures. No visits to the Jaguar site have been undertaken by the Competent Person responsible for the Mineral Resource Estimate (MRE), Mr Lauritz Barnes, due to travel restrictions (COVID-19).
Geological interpretation	 Sufficient drilling has been conducted to reasonably interpret the geology and the mineralisation. The mineralisation is traceable between multiple drill holes and drill sections. Interpretation of the deposit was based on the current understanding of the deposit geology. Centaurus field geologist supplied an interpretation that was validated and revised by the independent resource geologist. Drill hole data, including assays, geological logging, structural logging, lithochemistry, core photos and geophysics have been used to guide the geological interpretation. Extrapolation of mineralisation beyond the deepest drilling has been assumed up to a maximum of 100m where the mineralisation is open. Alternative interpretations could materially impact on the Mineral Resource estimate on a local, but not global basis. No alternative interpretations were adopted at this stage of the project. Geological logging in conjunction with assays has been used to interpret the mineralisation. The interpretation honoured modelled fault planes and interpretation of the main geological structures. Mineralisation at Jaguar occurs as veins and breccia bodies set in extensively altered and sheared



Criteria	Commentary
	 host rocks. Continuity of the alteration and sulphide mineralisation zones is good, continuity of local zones of semi-massive to massive sulphide is not always apparent. Mineralisation at the Onça Preta and Onça Rosa deposits predominantly forms tabular semi-continuous to continuous bodies both along strike and down dip. Post-mineralisation faulting may offset mineralisation at a smaller scale than that which can be reliably modelled using the current drill hole data.
Dimensions	 Jaguar South (primary mineralisation) covers an area of 1,200m strike length by 400m wide by 500m deep in strike length trending ESE-WNW. Individual domains dip sub-vertically with widths up to 20-30m. Jaguar Central (primary mineralisation) covers an area of 800m strike length by 250m wide by 420m deep trending ESE-WNW. Individual domains dip sub-vertically with widths up to 20-30m. Jaguar North (primary mineralisation) has a strike length of 600m by up to 25m wide by 300m deep, trending SE-NW. Jaguar Central North (primary mineralisation) covers an area of 700m strike length by 100m wide by 500m deep, trending E-W. Individual domains dip sub-vertically with widths up to 20-30m. Jaguar Northeast (primary mineralisation) covers an area of 1,000m strike length by 300m wide by 420m deep, trending ESE-WNW. Individual domains dip sub-vertically with widths up to 10-15m. Jaguar West (primary mineralisation) has a strike length of 1,000m by up to 80m wide by 350m deep, trending E-W. Individual domains dip sub-vertically with widths up to 10m. Onça Preta (primary mineralisation) has a strike length of 400m by up to 15m wide by 375m deep, trending E-W. Onça Rosa (primary mineralisation) has a strike length of 500m by up to 10m wide by 250m deep, trending ESE-WNW
Estimation and modelling techniques	 Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for Ni, Cu, Co, Fe, Mg, Zn and As. Drill hole samples were flagged with wire framed domain codes. Sample data were composited to 1m using a using fixed length option and a low percentage inclusion threshold to include all samples. Most samples (80%) are around 1m intervals in the raw assay data. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, no top-cuts were applied. Directional variograms were modelled by domain using traditional variograms. Nugget values are low to moderate (around 15-25%) and structure ranges up to 200 in the primary zones. Variograms for domains with lesser numbers of samples were poorly formed and hence variography was applied from the higher sampled domains. Block model was constructed with parent blocks for 10m (E) by 2m (N) by 10m (RL). All estimation was completed to the parent cell size. Three estimation passes were used. The first pass had a limit of 75m, the second pass 150m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 4 samples. Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting and elevation. Visual comparisons of input composite grades vs. block model grades were also comple
Moisture	The tonnages were estimated on an in-situ dry bulk density basis which includes natural moisture. Moisture content was not estimated but is assumed to be low as the core is not visibly porous.
Cut-off parameters	Potential mining methods include a combination of open pit and underground. A revised 0.3% Ni cut-off grade has been applied to material less than 200m vertical depth from surface in the estimation of the Global MRE with this being consistent with mineralisation domain modelling and reported significant intersection cut-off grades. A Ni cut-off grade of 1.0% Ni was maintained below 200m from surface to reflect higher cut-offs expected with potential underground mining.
Mining factors or assumptions	 It is assumed that the Jaguar deposits will be mined by a combination of open pit and underground mining methods. Conceptual pit optimisation studies have been completed by Entech to ensure that there are reasonable prospects for the eventual economic extraction of the mineralisation by these methods. Input parameters were benchmarked from similar base-metal operations in Brazil and Australia.



Criteria	Commentary
Metallurgical factors or assumptions	 Metallurgical test work has been undertaken on multiple composite samples sourced from the Jaguar South and Onça Preta deposits. Material selection for test work was focused on providing a good spatial representation of mineralisation for the deposits. Bench scale test work to date has demonstrated that a conventional crushing, grinding and flotation circuit will produce good concentrate grades and metal recoveries, see ASX Announcements of 18 February 2020 and 31 March 2020 for more detail.
Environmental factors or assumptions	 Tailings analysis and acid drainages tests have been completed which underpin the preliminary tailing storage facility design (TSF), which is in progress. Waste rock will be stockpiled into waste dumps adjacent to the mining operation. The TSF and waste dumps will include containment requirements for the management of contaminated waters and sediment generation in line with Brazilian environmental regulations.
Bulk density	 On the new drilling, bulk densities were determined on 15 to 30 cm drill core pieces every 1m in ore and every 10m in waste. On the historical drilling the bulk densities were determined on drill core at each sample submitted for chemical analysis. Bulk density determinations adopted the weight in air /weight in water method using a suspended or hanging scale. The mineralized material is not significantly porous, nor is the waste rock. A total of 39,313 bulk density measurements have been completed. Of these, 4,040 were included in the analysis and are within the defined mineralised domains – and 4,031 are from fresh or transitional material leaving only 9 measurements from saprolite or oxide material. Oxide and saprolite material are excluded from the reported resource. Fresh and transitional measurements from within the mineralised domains we analysed statistically by domain and depth from surface and compared to Ni, Fe and S. A reasonable correlation was defined against Fe due to the magnetite in the system. The bulk density values assigned the mineralised domains by oxidation were as follows: Oxide: 2.0 Saprolite: 2.3 Transition: 2.6 Fresh: by regression against estimated Fe using: BD = (fe_ok*(0.0323)) + 2.6276
Classification	 The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralised zones, drilling density, confidence in the underlying database, a combination of search volume and number of data used for the estimation plus availability of bulk density information. Indicated Mineral Resources are defined nominally on 50mE x 40mN spaced drilling and Inferred Mineral Resources nominally 100mE x 100mN with consideration given for the confidence of the continuity of geology and mineralisation. Oxide and saprolite material are excluded from the Mineral Resource. The Jaguar Mineral Resource in part has been classified as Indicated with the remainder as Inferred according to JORC 2012.
Audits or reviews	This is the second Mineral Resource estimate completed by the Company. The current model was reviewed by Entech as part of their independent mining study.
Discussion of relative accuracy/ confidence	 The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The statement relates to global estimates of tonnes and grade.