

27 July 2022

JAGUAR TAKING SHAPE AS A GLOBALLY SIGNIFICANT NICKEL PROJECT AS ESSENTIAL PROJECT MILESTONES ARE DELIVERED

In-fill drilling and flotation testwork complete, updated MRE on track, DFS advancing well

- > In-fill drill program now complete with updated Mineral Resource Estimate on track for the end of Q3 2022.
- Based on the current MRE of the Jaguar deposits and recent pit optimisation work used to design the in-fill drill program, the pits are coalescing into one with a strike extent of 3km, up to 1km width and depths that extend to over 300m while maintaining a low strip ratio of approximately 7.5:1.
- Flotation testwork now complete, with over 50 bulk flotation tests completed to produce over 400kg of concentrate ready to use as feed for pilot plant testing of the planned pressure oxidation circuit.
- The delivery date for the Definitive Feasibility Study (DFS) has been reviewed by Ausenco and the Company and is now targeted for the end of March 2023, in part due the expansion in the overall Project design flowing from the significantly larger Jaguar Resource base and project footprint and in part due to delays in being able to start the pilot program as originally scheduled.
- > A Final Investment Decision (FID) remains on track for the end of Q3 2023, after relevant environmental approvals have been secured.
- > In addition to the main nickel sulphate product from Jaguar, by-product credits are planned to be delivered from a copper cathode recovery circuit and separate zinc and cobalt mixed sulphide precipitates.
- Foundation geotechnical investigations and sterilisation drilling of major infrastructure areas (IWL, Waste Dumps and Process Plant site) have been completed with, importantly, no economic mineralisation intersected in the sterilisation work.
- > New Core Shed being built on site at Jaguar capable of holding 280,000m of drill core.
- > Plant nursery established to assist with the Company's revegetation efforts for the creation of fauna corridors around the project area.
- > Enrolment process for a 1,500-person construction training program has commenced and has been received very well by the local community.
- Vale royalty on the production of nickel sulphate agreed at a rate of 0.55%. The royalty rate, should the Company ever produce a nickel concentrate product, will remain at 0.75% as established under the original agreement to acquire the Jaguar Project.
- Experienced London-based nickel marketing executive, Mr Robert Aird, appointed as Head of Nickel Sales on consulting basis.
- > Centaurus remains well-funded with \$60 million in cash and no debt.

Centaurus Metals (ASX Code: **CTM**) is pleased to provide an update on the progress of the Jaguar Nickel Project Definitive Feasibility Study (DFS) and project development initiatives, with the latest work continuing to clearly demonstrate the enormous scale of the project.

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



Commenting on the DFS progress, Centaurus Metals Managing Director, Mr Darren Gordon, said: "The Jaguar Project is continuing to reveal its world-class credentials with each package of work that we complete. With in-fill drilling now complete and a significant amount of work already well advanced for the Definitive Feasibility Study, the broader project development is now really beginning to gather speed.

"What is continuing to shine through at Jaguar is the sheer scale of the Project. It is not too often in a mining project that you get to develop a mine plan where the open pits are likely to extend over 3km along strike, be up to 1km wide and extend to depths of over 300 metres while still maintaining a low strip ratio of approximately 7.5:1.

"Given the increased scale of the Project and COVID-related delays in starting the pilot testwork program, we have agreed with Ausenco that the DFS will now be targeted for delivery at the end of March 2023, rather than the end of 2022 as originally conceived. This will provide additional time to complete all the DFS work to a very high standard, without compromising the overall delivery schedule for the Project.

"We are still targeting a Final Investment Decision at the end of Q3 2023, once all environmental approvals have been secured, paving the way for us to deliver the world's next significant green nickel project."

MINERAL RESOURCE ESTIMATE (MRE) UPDATE

The December 2021 Mineral Resource Estimate (MRE) comprises **80.6Mt @ 0.91% Ni for 730,700t of contained nickel** (Table 1), with the Indicated component of the Resource being **43.4Mt @ 0.92% Ni for 397,000t of contained nickel**, representing 54% of the Global MRE.

The Company has now completed Resource development in-fill drilling across all the Jaguar and Onca Deposits at the Jaguar Project. Drilling was designed to upgrade all Resources within a constrained US\$22,000/t nickel price pit shell limit into the higher- confidence Indicated category.

Further in-fill drilling to upgrade Indicated Resources into Measured has also been completed to provide additional confidence in the MRE that will underpin the early stages of mining and nickel production. The in-fill drill results continue to support the current geological model and demonstrate the continuity of the mineralisation both down-dip and along strike.

The Company is targeting more than 500,000t of contained nickel in the Measured and Indicated categories of **the next MRE**, **planned for the end of Q3 2022**, **which will underpin the Jaguar Project Definitive Feasibility Study** (**DFS**) **and initial Ore Reserve Estimate.** With the completion of the in-fill drilling, the drill rigs have now moved to Resource growth focused step-out and extensional drilling as well as new discovery greenfields drilling.

MINE ACTIVITIES

Geotechnical Investigations

Geotechnical logging of selected exploration drill core, subsequent modelling of major geotechnical domains and drilling of a geotechnical drill program have been completed to support open pit wall design. Samples from the drill core representing differing lithologies were collected and sent to the Federal University of Minas Gerais (UFMG) for strength testing.

An additional drill program including four short holes designed to test the rock mass conditions in the upper levels of the Jaguar South Pit Southern Wall was completed in early July.

Results have shown the rock conditions for the pits to be generally good to very good. Localised zones of weak rock mass conditions associated with biotite alteration will require local management but are spatially constrained and their location and extents are well understood.

Open pit wall and underground stope designs for the DFS will be finalised in the next 2-3 weeks.



Mine Design and Scheduling

Open pit optimisations, designs and strategic schedules have been undertaken on the current MRE using a range of nickel prices from US\$17,500 per tonne to US\$22,000 per tonne.

The largest shells based on the US\$22,000 per tonne nickel price were used for infrastructure layout to limit the potential for interference between infrastructure and potential future mine expansions. These shells were also used to design the MRE in-fill drill-out program to maximise the conversion of Inferred Resources to the Measured and Indicated categories for the next MRE update at the end of Q3 2022.

A conservative pit shell based on a US\$17,500/t nickel price was selected for mine planning work. It is interesting to note however that in a number of areas within the deposits, the optimisation shells bottom out on the base of the December 2021 MRE model and were therefore constrained by the depth of drilling. As noted above, new step-out drilling has commenced now that the in-fill drill program has been completed.

The open pits designed on the current MRE now extend over a continuous strike length of 3km along the strike extent of the Jaguar Deposits. The separate pits identified in the Scoping Study have coalesced into a single pit (Figure 1) up to 1km wide and with depths that extend to over 300m. The Onça pits remain as two separate pits with over 1.5km strike length, with Onça Preta now up to 245m deep. The overall project strip ratio remains low at approximately 7.5 to 1.

Scheduling of open pit and underground operations has confirmed mining rates and sequences required to maximise value within processing and waste dump development constraints, and these will form the basis of contractor pricing ahead of the mine planning to be used in the DFS. Detailed schedules and information packages for contractor pricing will be sent to contractors in August.

PROJECT LAYOUT

The Project layout for Jaguar has been evolving during the DFS work, especially with the growth in scale of the MRE and corresponding increase in optimised pit shells. The current planned layout for the Project is shown in Figure 1.



Figure 1 – Project Layout at Jaguar



PROCESS FLOWSHEET & METALLURGICAL TESTWORK PROGRAMS

Comminution

Comminution testwork and modelling have shown a wide range of grinding power requirements for different parts of the deposits. Jaguar South, the largest deposit, contains the hardest ore with a Ball Mill Work Index (BWI) of 17.4kWhr/t, whilst Jaguar North is the softest with a BWI of only 10kWhr/t. Consequently, the comminution circuit capacity will vary greatly depending on feed blend. A minimum design throughput of 2.7Mtpa on the hardest ore has been set for the comminution plant design in the DFS. This throughput is consistent with the Scoping Study¹ released in May 2021 though it is expected that the softer (lower BWI) ore will be able to feed through the plant at higher throughput rates once in operations.

With this understanding, process flowsheet development and equipment sizing for the comminution circuit have been agreed with Ausenco. The flowsheet will include single-stage crushing with a jaw crusher followed by SAG and Ball Mill for grinding with pebble crushing. Preparation of process design criterion and engineering packages for vendor pricing has commenced.

Flotation

Process flowsheet development and equipment selection for the flotation circuit, inclusive of flash flotation, has been completed with Ausenco in preparation of vendor packages for pricing. The flowsheet provides for a conventional nickel flotation circuit. The Jaguar ore requires a rougher-scavenger design only to produce a bulk nickel-copper-zinc-cobalt sulphide concentrate, with no requirement for cleaning or regrind.

The flotation test work required for the design of the flotation flowsheet is now complete, with over 50 bulk flotation tests completed to produce over 400kg of concentrate ready for pilot plant testing of the planned pressure oxidation circuit.

The time taken to collect this bulk sample has, however, been longer than anticipated. The difficult operating conditions created by buoyant metals markets, challenging global logistics for the movement of samples and COVID absenteeism has placed pressure on our laboratory service supplier, leading to delays in the completion of the metallurgical testwork program. These delays have slowed the planned start of the pilot plant test work.

METSIM Process Modelling

There has been a significant amount of development of the METSIM process model (which models reaction chemistry through the hydrometallurgical circuit) and alignment with the results of the batch and batch-continuous autoclave testwork. The model, being completed with the assistance of Ausenco, is being used to define the autoclave operating conditions for the pilot stage test program and, from there, to simulate hydrometallurgical conditions with minor variations in feed characteristics and operating conditions.

Pressure Oxidation

Preparations for the pilot pressure oxidation test program have been significantly advanced, testing various operating conditions and reagent addition rates to define the pilot program test conditions. In concert with this work, development of the METSIM process model has also been significantly advanced with good correlation achieved between the reaction chemistry model to actual batch and batch-continuous test results.

Final pre-pilot batch and batch-continuous testwork, as well as final refinement to the METSIM model, is nearing completion to allow the final pilot flow sheet and reagent addition rates to be locked down for the pilot program. Once we have completed this last remaining testwork, the pilot testing can commence with this now targeted for mid-August.

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



The pilot test will run for an 8-week period, with multiple phases of work, which will culminate with the delivery of nickel sulphate and other final products as well as assist in providing the design criteria for Ausenco to use in the development of the overall process flowsheet for the DFS.

Ore Sorting

Composites of Jaguar South and Jaguar Central ore, the open pits containing the majority of the mineralisation at Jaguar, were tested at Steinert Australia's facilities in Perth (see composite sample information in Table 2). Results using a combination of induction and x-ray sensors were very encouraging with very low nickel losses and good separation of ore from non-mineralised material.

The ore composites were crushed to -50mm and then screened to remove the -12mm material. The coarse fraction, with a feed grade ranging from 0.4 to 0.7% nickel, was passed through the sorter in two passes, firstly with the induction sensor then the "tail" again passed through an x-ray sensor. Nickel sulphide recoveries of 85-98% were achieved in the ore sorter process with the mass pull varying from 40 to 60%. Nickel in the ore sorter waste stream was very low grade at 0.02 to 0.11%.

Figure 2 below illustrates the recent DFS ore sorter nickel sulphide recovery in relation to mass recovery when compared to the initial scoping study sighter testing. The results show that the recent bulk testing (over 700kg of sample was tested) produced superior results over the scoping study testing, with much higher nickel recoveries achieved with lower mass recoveries.



Figure 2 – Ore Sorting – Nickel Sulphide x Mass Recovery

The successful separation of waste from mineralisation through the ore sorter continues to support the use of this technology in the Project's processing flowsheet to both upgrade ore and to reject waste dilution from feed to the processing plant. The clear benefit from ore sorting is to minimise non-mineralised material from displacing ore from the comminution and flotation circuits whilst also elevating the feed grade to the plant.

Further work will be required to quantify the benefits to a DFS level of confidence, and the Company will continue to pursue options to achieve this confidence level through the remainder of the DFS.



The fine fraction was passed over a magnetic drum to test if there is potential to upgrade this material prior to comminution. Whilst there was very good upgrade of the grade in the fines fraction to the magnetic concentrate, the nickel losses to the waste stream were generally high and so no further work is planned to attempt to upgrade the fines fraction. All fines from the crushing of feed to the ore sorter will be processed in the comminution circuit.

By-Products Study

Technical, high level economic and market assessment of the options available to Centaurus for maximising the value from copper, zinc and cobalt metals leached during the Pressure Oxidation leach process have concluded. The review has determined that the best value, over and above the nickel sulphate product stream, is achieved when the flowsheet includes a copper cathode recovery circuit and separate zinc and cobalt mixed sulphide precipitate products. These will form the basis for the DFS process design with finalisation of their inclusion in the DFS subject to confirmation of sales terms.

DEFINITIVE FEASIBILITY STUDY TIMING

The delivery date for the Definitive Feasibility Study (DFS) has been reviewed by Ausenco and the Company and is now targeted for the end of March 2023, in part due the growth in the overall Project design flowing from the significantly larger Jaguar Resource base and project footprint, and in part due to delays in being able to start the pilot program as originally scheduled.

The Final Investment Decision remains targeted for the end of Q3 2023 after relevant environmental approvals having been secured.

INFRASTRUCTURE

Tailings Storage Facility Designs

Two tailings storage facilities will be built on site to contain processing tailings because of differing geochemical characteristics and risk classification. The flotation tailings, comprising approximately 90% of the process tailings stream, will be stored in an Integrated Waste Landform (IWL) style facility. Residue from the Pressure Oxidation Circuit, which accounts for approximately 10% of the process waste stream and which will contain elevated levels of some metals and sulphates, will be stored in a separate POX Residue Facility.

The detailed design of the IWL was provided to the Company in late June, whilst the POX Residue Facility design was delivered last week. Due to limited suitable construction material (mostly suitable clays) at Jaguar, the IWL will be constructed with a partial HDPE lining (walls only) to limit potential for seepage. The POX residue will be dewatered using a filter press to produce a filter cake product with lower moisture content before being stacked inside a fully HDPE plastic lined facility to ensure no loss of potential leachates from this facility. The POX Residue Facility will comprise four cells, with cells to be progressively built over the life of the mine as production dictates.

Geotechnical Investigations of Major Infrastructure Areas

Foundation geotechnical investigations and modelling for major infrastructure areas in the project layout have been completed. This work covers the waste dumps, Tailings Storage Facility (IWL), POX Residue Facility and the Process Plant area. Follow-up work will be required in the Process Plant area once final layouts are completed and the location of major loads determined.

Sterilisation Drilling of Major Infrastructure Areas

More than 6,000m of RC sterilisation drilling has been completed covering all areas at the project where major infrastructure is proposed to be located. Sterilisation drilling first tested priority exploration targets over planned infrastructure as well as pattern drilling. Importantly, no economic mineralisation has been intersected in the sterilisation drilling to-date and the Company is satisfied that that the major infrastructure sites have been sterilised.



Power Supply

The generation of power for the national power grid in Brazil consists of hydro, solar, wind and thermal power generation facilities supplying the national network through a fully interconnected distribution system. The Tucumã substation, owned by the Pará state power company, Equatorial, located 40km south of the Project, is serviced by a 138kV power line.

The design of the power line connecting the Tucumã sub-station to the site was completed and submitted to Equatorial for approval. Coupled with this, Equatorial has been asked to formally confirm the transmission capacity of the Tucumã substation.

Road Upgrade Work

Final bridge designs for seven of the nine bridges on the road between Tucumã and site have been completed with pricing obtained from 2 construction contractors for the construction of these first seven bridges.

The work will see concrete and steel bridge structures replace the existing timber structures, which could not carry the weight of the equipment required to be brought to site as part of the project development. Construction of all required bridge upgrade work is planned to commence after the 2023 wet season (May 2023).

A civil engineering design package has been awarded for the upgrade of approximately 60km of roads in and around the Jaguar Project. The road upgrade engineering work will provide the design required to upgrade the roads to a level that will allow heavy equipment to be brought to site and provide safe conditions year-round to enable the steady flow of personnel to and from site on a daily basis.

Separately, a new round of road upgrade/maintenance work will commence in the coming weeks in conjunction with the local municipalities to improve drainage in some areas of the road and restore the overall road quality for the benefit of the local communities of Tucumã and Sao Felix do Xingu that use the roads and to ensure movement of Centaurus personnel to and from site can be undertaken in a safe and productive manner.

To facilitate the design, additional high-quality aerial topographic surveys have been completed, SPT (Standard Penetration Test) drilling commenced, and satellite imagery purchased. The survey work will result in detailed information to support scoping the full road rebuild works package to support construction and operations.

New Core Shed

The Company is in the process of building a **new core shed on site at Jaguar**. The existing core shed in the town of Tucumã can hold approximately 140,000 metres of core and we are fast approaching the limits of its capacity (Figure 3).

The new shed will be 50m long x 20m wide x 4m high and **will be able to hold +280,000 metres of drill core** as well as storing all exploration related samples generated from the project. The shed foundation work has been completed (see Figure 3 below) and the installation of the shed itself will commence in early August. Once the new shed build is complete, core from the existing storage area will be moved to site and the Tucumã shed will become a dedicated core processing facility.

On Site Accommodation

Following the purchase of the possession rights for the third land parcel in 2021, the Company is now using the farmhouse that came as part of the acquisition as a base for new on-site accommodation (Figure 4). Upgrade work of this site was completed in early July. This work has increased the on-site housing capacity at Jaguar (over two sites) to over 160 people.



Figure 3 – Existing Core Shed (left) and build of new core shed (right)



Figure 4 – New On-site Accommodation at Jaguar



ENVIRONMENTAL & SOCIAL

The Company adopted its formal environmental, social and governance (ESG) policy framework late in 2021. The framework is based on the recommendations and principles of two key ESG authorities:

- Towards Sustainable Mining (TSM) Principles; and
- Principles of Responsible Investment (PRI).

TSM is the Mining Association of Canada's (MAC) commitment to responsible mining. It is a set of tools and indicators to drive performance and ensure that key mining risks at any operation are managed responsibly. The PRI defines responsible investment as a strategy and practice to incorporate environmental, social and governance factors in investment decisions and active ownership. The PRI is a global organisation that encourages and supports the uptake of responsible investment practices in the investment industry.



Centaurus' ESG program combines the TSM and PRI principles with actions to be implemented during exploration and operations. The following initiatives have already been undertaken by the Company to date within the Jaguar Project region:

- All Centaurus employees working on the Jaguar Project live in the local town with their families, solidifying the relationship between the Company and the local community.
- More than 90% of the current project workforce, including employees and outsourced labour, are from the south-eastern region of the State of Pará.
- More than 80% of the Company's investment expenditure relating to exploration and development work at the Jaguar Project to date has been awarded to the local community through drilling contracts, engagement of consultants and services and purchase of equipment and supplies.
- During the collection of social data, more than 95% of the local community interviewed were in favour of the project.

GHG Emissions

Since January 2022, the Company has been monitoring Scope 2 greenhouse gas (GHG) emissions and sinks associated with the Jaguar Project. The main carbon sink is the standing forest. The main source of carbon from the Project at present is the combustion of diesel to run drill rigs.

The Jaguar Project currently represents a carbon sink, removing about 12,000 tonnes of GHG annually from the atmosphere, which is equivalent to removing circa 2,570 internal combustion engine vehicles (4.6 tonne GHG per vehicle per year) from the roads each year.

As noted at the time of completing the Scoping Study last year, the Jaguar Project is expected to have GHG emissions less than 97% of global nickel production once in operation (Figure 4). Work done during the DFS on the pressure oxidation circuit indicates that, as a result of the nickel sulphides at Jaguar being able to be oxidised at lower temperatures and pressure than that assumed in the Scoping Study, **the amount of oxygen and limestone for residue neutralisation can be reduced, with the benefit being lowering operating costs and lowering GHG emissions**.

An update of the project emissions will be undertaken as part of completing the DFS, but it is expected the level of emissions should reduce further from the 4.69t of CO_2/t of NiEq assessed at the time of the Scoping Study (Figure 5).



Figure 5 – GHG Intensity Curve – Nickel



Construction Training Programs

An enrolment process for construction training has commenced. The Company intends to train up to 1,500 people in various trades that will allow them to seek employment once construction of the Jaguar Project commences. The training programs are intended to be conducted in conjunction with local industry training colleges with the training programs to commence in early 2023.

Interest from local residents was confirmed by the impressive number of applications for the various courses that will be offered by Centaurus for construction of the Jaguar Project. The courses are expected to be three months long on average and participants from the local community will be prioritised in the selection process.

Plant Nursery Established

The Company established a plant nursery on site (Figure 6) to facilitate the revegetation of some previously cleared farmland. This will allow new forest corridors to be established around the site to assist with the movement, protection and biodiversity of fauna.



Figure 6 – Recently established Plant Nursery on site at Jaguar

COMMERCIAL

Vale Royalty

The Company has agreed with Vale that the royalty rate applicable to the production of nickel sulphate from the Jaguar Project will be 0.55% (on Net Operating Revenue (NOR) being gross revenue less certain prescribed adjustments). The original agreement to acquire Jaguar saw Vale retain a 0.75% NOR royalty on the basis that production was a nickel concentrate. This royalty remains applicable should a nickel concentrate be produced but the Company is pleased to have worked closely with Vale to establish a new rate on nickel sulphate production given the higher revenue expected to be derived from the nickel in this form.



Appointment of Head of Nickel Sales

The Company is pleased to have appointed Mr Robert Aird on consulting basis as Head of Nickel Sales to coordinate our product marketing and nickel sales activities out of London. Robert will lead the discussions in respect to offtake for the Jaguar product (nickel and by-products).

Mr Aird is originally a chemical and minerals processing engineer who spent 20 years working for Trafigura trading copper and nickel concentrates and refined products. From 2014 to 2017 he was responsible for the start-up and development of their global nickel business. Since 2018 he has provided independent consulting services to a number of companies globally within the nickel raw materials industry, which provides him with an excellent and up to date insight into all aspects of the business.

Off-take Discussions

Off-take discussions in relation to the products to be produced from Jaguar are underway, remembering that Vale has the right to acquire all product at arm's length market-based pricing under the original Jaguar acquisition agreement. Centaurus retains total discretion over which nickel product/s will be produced at Jaguar.

For further information on the Company, please visit <u>www.centaurus.com.au</u> 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 Person's Statements

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 December 2021 Jaguar Mineral Resources 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.



			Grade			Contained Metal				
Deposit	Classification	Mt	Ni %	Cu %	Co ppm	Zn %	Ni	Cu	Со	Zn
	Indicated	13.9	1.01	0.05	220	0.18	139,800	6,900	3,100	25,200
Jaguar South	Inferred	13.7	0.86	0.04	195	0.13	118,000	6,200	2,700	17,600
	Total	27.6	0.93	0.05	208	0.15	257,800	13,100	5,700	42,700
	Indicated	10.2	0.92	0.06	262	0.51	94,000	6,100	2,700	52,300
Jaguar Central	Inferred	1.9	0.79	0.05	244	0.27	15,100	1,000	500	5,200
	Total	12.1	0.90	0.06	259	0.48	109,100	7,100	3,100	57,500
	Indicated	2.2	1.09	0.14	352	1.32	24,000	3,100	800	29,000
Jaguar North	Inferred	1.0	1.16	0.29	360	1.09	11,400	2,900	400	10,700
	Total	3.2	1.12	0.19	354	1.25	35,400	6,000	1,100	39,700
	Indicated	7.7	0.63	0.03	188	0.65	48,500	2,600	1,400	50,200
Jaguar Central North	Inferred	4.3	0.64	0.04	184	0.53	27,500	1,600	800	22,800
	Total	12.0	0.63	0.04	186	0.61	76,000	4,200	2,200	73,000
	Indicated	-	-	-	-	-	-	-	-	-
Jaguar Northeast	Inferred	9.1	0.84	0.10	278	0.51	76,700	9,200	2,500	46,900
	Total	9.1	0.84	0.10	278	0.51	76,700	9,200	2,500	46,900
	Indicated	5.6	0.73	0.03	165	0.11	40,800	1,700	900	6,100
Jaguar West	Inferred	1.7	0.77	0.04	158	0.10	13,200	700	300	1,700
	Total	7.3	0.74	0.03	163	0.11	54,000	2,400	1,200	7,800
	Indicated	39.5	0.88	0.05	224	0.41	347,100	20,400	8,900	162,800
Jaguar Deposits	Inferred	31.8	0.82	0.07	223	0.33	262,000	21,600	7,100	104,900
	Total	71.4	0.85	0.06	224	0.38	609,100	42,000	16,000	267,700
Onça Preta	Indicated	3.0	1.43	0.10	711	0.50	42,900	2,900	2,100	15,100
	Inferred	2.2	1.64	0.08	548	0.44	35,900	1,800	1,200	9,600
	Total	5.2	1.52	0.09	642	0.48	78,800	4,700	3,300	24,700
	Indicated	-	-	-	-	-	-	-	-	-
Onça Rosa	Inferred	2.1	1.28	0.09	353	0.05	26,600	1,900	700	1,000
	Total	2.1	1.28	0.09	353	0.05	26,600	1,900	700	1,000
	Indicated	0.8	0.86	0.09	307	0.04	7,000	700	300	300
Tigre	Inferred	1.2	0.79	0.07	289	0.02	9,200	800	300	200
	Total	2.0	0.82	0.08	296	0.03	16,200	1,500	600	500
	Indicated	43.4	0.92	0.06	259	0.41	397,000	24,000	11,300	178,200
Jaguar MRE	Inferred	37.2	0.90	0.07	251	0.31	333,700	26,100	9,400	115,700
	Total	80.6	0.91	0.06	256	0.36	730,700	50,100	20,600	293,900

Table 1 – The Jaguar JORC Mineral Resource Estimate by Deposit – December 2021

* Within pit limits cut-off grade 0.3% Ni; below pit limits cut-off grade 0.7% Ni; Totals are rounded to reflect acceptable precision, subtotals may not reflect global totals. All oxide material is considered as waste and therefore not reported as Resources.

Table 2 – Jaguar Nickel Sulphide Composites Drill Location and Intervals – Ore Sorter testwork

								Ore-sorting sample intervals		
Hole ID	Target	Easting	Northing	mRL	Azi	Dip	EOH Depth	Depth_From	Depth_To	Interval (m)
JAG-DD-21-214	Jaguar Central	476985	9282997	310	2	-55	102.2	27.5	31.7	4.2
								55.2	70.2	15.0
								84.6	95.1	10.5
JAG-DD-21-222	Jaguar South	477943	9282561	289	180	-55	121.5	57.3	71.2	13.9
								88.8	97.0	8.3
JAG-DD-21-229	Jaguar South	478347	9282377	425	180	-58	138.5	64.2	80.2	16.0



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	Commentary
Sampling techniques	 Historical soil sampling was completed by Vale. Samples were taken at 50m intervals along 200m 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 bage to the bage of the tab baratory.
Drilling techniques	 bag with a sample tag before being sent to the laboratory. 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 229 drill holes completed by Centaurus for a total of 47,917m 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.
Drill 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. 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.

$\left(\right)$

AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT & MEDIA RELEASE

Criteria	Commentary
	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	• Diamond Core (HQ/NQ) was cut using a core saw, ¼ core was sampled. Sample length along core
sample preparation	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 150 μ m 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 75μ m 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 sub-
	samples. 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 report each use of example value at a rate of 1/20.
	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.
Verification of sampling and	 All metallurgical chemical analysis is completed by ALS laboratories All historical samples were collected by Vale field geologists. All assay results were verified by
assaying	 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
	multiple collars in the field and has confirmed their location. All field sample and mapping points were collected using a Garmin handheld GPS.
	multiple collars in the field and has confirmed their location. All field sample and mapping points were collected using a Garmin handheld GPS.An aerial survey was completed by Esteio Topografia and has produced a detailed surface DTM at
	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					
	• 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 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. One final deferred consideration payment totalling US\$5.0M (on commencement of commercial production) and a production royalty (0.75% on a nickel concentrate product or 0.55% on a nickel sulphate product) 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 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.
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.



Criteria	Commentary
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 to 6 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

ommentary 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.
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).
 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 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.

Page 16



Criteria	Commentary
	• 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 1,250m strike length by 400m wide by 530m deep in strike length trending ESE-WNW. Individual domains dip sub-vertically with widths
	 ranging from a few metres up to 20-30m thick. 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 720m 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 1,200m strike length by 300m wide by 500m 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.
	• Leao East (primary mineralisation) has a strike length of 275m by up to 10m wide by 130m deep, trending ESE-WNW.
	• 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
	• Tigre (primary mineralisation) has a strike length of 500m by up to 10m wide by 250m deep, trending ESE-WNW.
Estimation and modelling	Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac [™] software for Ni, Cu, Co, Fo, Mg, Zn and As
techniques	 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
	 Directional valograms were modelled by domain using traditional valograms. 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.
Moisture	 Visual comparisons of input composite grades vs. block model grades were also completed. The tonnages were estimated on an in-situ dry bulk density basis which includes natural moisture.
Woisture	• 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. The new Jaguar
	MRE has been reported within a pit shell using modifying factors determined in the Jaguar Value- Add Scoping Study and metal prices of US\$20,000/t Ni, US\$44,000/t Co and US\$2,900/t Zn. Within
	the pit, a 0.3% Ni cut-off grade has been maintained. A higher grade 0.7% Ni cut-off grade has been
	used for resources below the pit shell reflective of the cut-off grade that was determined for the underground operations developed in the Scoping Study.
Mining factors or	 It is assumed that the Jaguar deposits will be mined by a combination of open pit and underground
assumptions	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
	 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, Jaguar Central, Jaguar West, Jaguar North, Jaguar Central North, Onça Rosa and Onça Preta deposits. Material selection for test work was focused on providing a good spatial representation of mineralisation for the deposits to date. Bench scale test work to date has demonstrated that a conventional crushing, grinding and flotation circuit will produce concentrate grades (10-15% Ni) and nickel sulphide recoveries (+95%)). Pressure leach testing has identified that 97-98% nickel extraction from concentrate into solution is reproducible. Metallurgical test work remains ongoing. See ASX Announcements of 18 February 2020, 17 March 2020, 31 March 2020 and 8 December 2021 for metallurgical test results
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 43,571 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 Work is in progress to further refine the relationships between bulk density and mineralised domains, and updates will be applied to the next iteration of the resource model.
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 third Mineral Resource estimate completed by the Company. The current model was reviewed by Entech as part of the MREEE assessment.
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.