



Developing a globally significant nickel project for a clean energy future

## MARCH 2024 QUARTERLY ACTIVITIES REPORT

*Jaguar Feasibility Study (FS) reshaped to focus on concentrate project in response to changed nickel market conditions – scheduled for completion by late June; Jaguar EIA approved and Preliminary Licence granted; Metallurgical testwork confirms potential to produce high-purity direct reduction pellets from Jambreiro Project*

24 April 2024

### JAGUAR NICKEL SULPHIDE PROJECT, BRAZIL

- Decision made to develop the Jaguar Project in two phases, with the first phase focusing on the production of a nickel sulphide concentrate, with a second downstream nickel sulphate refinery phase to follow when and if market conditions allow.
- This will significantly reduce the first phase development capital costs compared to an integrated project and result in a more robust project through the price cycle given the Jaguar Project's anticipated low operating costs, stemming in large part from its access to clean, low-cost power.
- The Jaguar Concentrate Feasibility Study will be based on the study work already completed for the fully integrated nickel sulphate project with the reshaped study to be delivered by the end of June.
- Environmental Impact Assessment (EIA) approved and Preliminary Licence (LP) formally issued by the Pará State Environmental Agency – SEMAS. The Installation Licence Application (PCA) was also lodged with SEMAS just after Quarter end.
- Jaguar's class-leading carbon footprint credentials independently reconfirmed, with life-of-mine CO<sub>2</sub> footprint assessed at 7.27t CO<sub>2</sub>/tonne Ni Eq with the footprint estimated to be lower than 94% of global nickel production, once in production.

### JAMBREIRO IRON ORE PROJECT, BRAZIL

- In response to growing interest from potential off-take partners and customers to reduce Scope 3 emissions and their overall carbon footprint, Centaurus has commenced a study on the potential to produce a Direct Reduction (DR) quality pellet feed concentrate from Jambreiro.
- Sighter tests from a potential offtaker demonstrated a high-purity DR iron concentrate could be produced.
- Follow up, bench-scale metallurgical testwork delivered consistent high-grade, low-impurity results on ore from multiple phases of the proposed Jambreiro mine plan.
- Average product specification from bench-scale work shows an Fe grade of 67.8% with a combined Silica + Alumina level of 1.72% - well under the 2% threshold required to achieve DR quality.

### CORPORATE

- Cash at 31 March 2024 of \$29.4 million.

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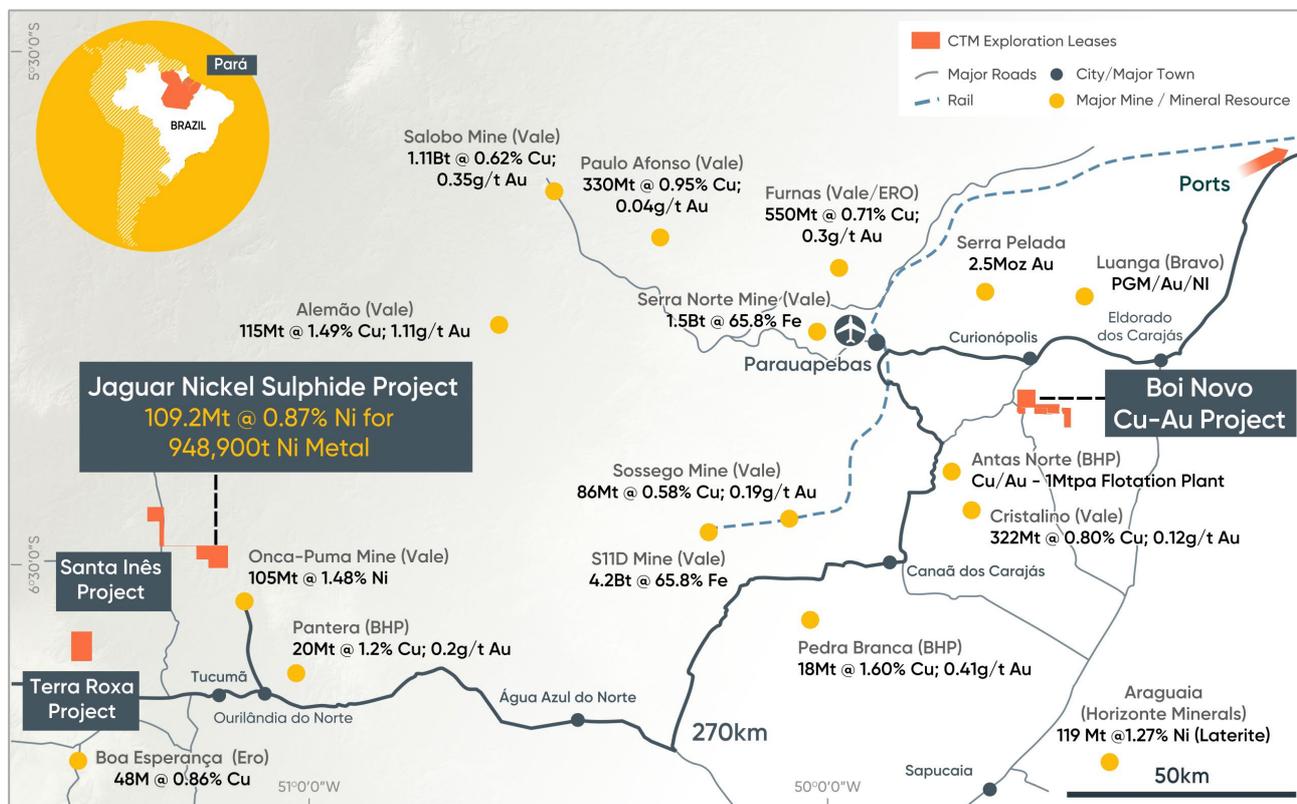




## JAGUAR NICKEL PROJECT

The Jaguar Nickel Sulphide Project is located in the world-class Carajás Mineral Province of northern Brazil (Figure 1).

Figure 1 – Jaguar Nickel Sulphide Project Location Map.



### FEASIBILITY STUDY & PROJECT DEVELOPMENT

Over recent months, the Company has been monitoring the change in nickel market conditions, principally as a result of increasing supply from Indonesia with a corresponding change in underlying supply and demand dynamics. The LME nickel price fell by over 36 per cent in 2023, from around \$25,000/t to recent lows below US\$16,000/t, forcing a number of mine closures globally in high-cost environments including in Australia and eliminating the premium that was previously available for nickel sulphate production.

During the Quarter, as a result of this significantly changed market landscape, the Centaurus Board decided to reshape the current Feasibility Study – deferring the parts of the study relating to a fully integrated downstream nickel sulphate project and focusing instead on completing the Feasibility Study based on an initial nickel concentrate-only project. The development of a potential downstream refinery can be considered in future when market conditions improve.

Ongoing Feasibility Study work suggests that this approach will have a significantly lower capital cost compared to an integrated project and will ensure that the Jaguar Project remains robust and should deliver strong financial returns throughout the commodity price cycle. It also takes into account the significantly more challenging outlook for nickel than when the Feasibility Study for a downstream value-added product commenced. This is particularly important given the recent decline in investor sentiment towards ASX-listed nickel companies and the impact this has had on all nickel company market capitalisations and funding options within the sector.

Centaurus' focus has always been on delivering maximum value from the Jaguar Project by minimising, where possible, equity dilution and risk for existing shareholders. Given the recent changes in the nickel market, the Board considers that the pursuit of a larger, more capital-intensive downstream project with heightened technical risks is not consistent with this objective at the current time.



The decision to defer the downstream component of the study was not taken lightly, however ongoing weakness in the nickel market – in particular with softer nickel sulphate pricing reflecting the rise of nickel supply out of Indonesia – combined with a rising cost environment, means that the sound rationale used by the Company to support the commencement of the downstream refinery study no longer held and that an alternate development pathway needed to be adopted.

The Board firmly believes that an initial concentrate-only approach for the Project will deliver outcomes that are consistent with its core objectives of maximising value, minimising equity dilution for existing shareholders and achieving the best possible risk-adjusted returns.

The Company retains full optionality to develop the downstream second phase of the Project in the future when supported by market conditions and as the market for low carbon emission Class-1 nickel matures to support the inclusion of a genuine green premium in its pricing structure.

Much of the work for a Feasibility Study on the concentrate project had already been completed as part of the existing workstreams and will remain as currently designed, including the mine plan, site layout, process flowsheet and concentrate product specification. The majority of work activities required for the Concentrate Feasibility Study were completed by Ausenco by the end of the Quarter, with finalisation of the capital estimate and implementation plan remaining.

Centaurus is now undertaking the necessary financial modelling and estimates to enable the release of the Concentrate Feasibility Study by the end of June 2024. The concentrate study is expected to show robust economics underpinned by low operating costs which are globally competitive (including with Indonesian nickel supply), in large part due to the clean, low-cost power (~US\$0.03/kWh) that is available to the Project from the 230kV national grid in Brazil.

Beyond the delivery of the Concentrate Feasibility Study, the Company expects that there will be ongoing scope to further optimise and refine key project parameters moving into the next phase of development and engineering work for the Project.

Concurrent with the Concentrate Feasibility Study work being completed, the Company will continue with its strategic partnering process, supported by Standard Chartered Bank, to evaluate partnering and funding options for the revised Project. Many groups have expressed strong interest in the Jaguar Project and the supply of a low carbon emission nickel sulphide concentrate product from the Project given increasing concerns from end-users around the growing dependence on Indonesia for future nickel supply.

As Centaurus works towards finalisation of the Concentrate Feasibility Study, it will closely monitor its cash expenditures and implement cost saving initiatives in order to protect its strong cash position of ~\$29 million and limit spending to areas of maximum value-add for the Company, consistent with its high-level objectives.

## **Capital Cost Estimation**

### *Mining*

Since no changes have been made to the mine plan for the concentrate production scenario, capital estimation for the development of mine and associated infrastructure is well developed.

Capital costs for mining comprise contractor mobilisation and site establishment, mining area infrastructure development (waste dump and open pit clearing, roads, drainage and sediment control) and mining activities associated with mining waste for IWL construction.

Mine operations will commence early in the construction program to supply waste for construction of the tailings storage facility, the ROM pad and to ready the mine area for ore supply.

It is worth noting that the mineralisation extends very close to surface over most of the deposits and minimal mining of the fully oxidised profile is required before sustainable ore production can be achieved.



## *Processing – Concentrator*

Following the re-scoping of the feasibility study to develop the Project in two phases, significant work has been undertaken by the Centaurus Project team and Ausenco's Perth and Brazilian offices to remove the refinery and re-engineer the various interfaces for a concentrator-only start up.

Whilst minimal work was necessary to modify the process flow sheet for the plant, a full review of equipment selection, earthworks, civil, concrete, steel and electrical material take off estimates (MTOs) were completed. Plant services including the water balance and water treatment have also been completed for the initial concentrate project.

The re-estimation of capital costs for the plant will be undertaken in the first half of Q2 2024.

## **Operating Cost Estimation**

### *Mining*

The mine will be developed as an open pit mining operation utilising the services of contractors for all vegetation and topsoil clearing, drill and blast, load and haul, grade control drilling, dewatering and crusher feed duties. Centaurus has obtained pricing from suitably qualified contractors for provision of these services.

Fleet requirements have been estimated from first principles with operating costs then built up using the contractor market rates and first principles build-up of owner's costs. Centaurus' mining department will provide geological, geotechnical, mine planning, survey and mine management functions contractor services for implementation.

Diesel will be free issued to contractors for their reasonable use in order to minimise costs by taking full advantage of taxation concessions available to the Company. Fuel costs will be based on market quotes from suppliers active in the area. A price of R\$4.80 (US\$0.96) per litre will be used for the study.

Underground mining will not form part of the project study since Mineral Resource Estimates (MRE) outside the open pits to be mined are mostly classified as Inferred and, therefore, cannot be used in the DFS.

All mining costs from the start of Year 3 will be considered as operating costs for the FS. Costs in Years 1 and 2 will be considered a pre-construction capital cost of the Project.

### *Processing – Concentrator*

Re-scoping of the process flow sheet for a concentrator-only development case significantly simplifies and reduces the complexity of the processing plant, reducing power demand, the quantities and variety of reagents and the labour required to operate and maintain it.

Minor operational changes in respect to how the flotation circuit will be operated will be made to improve the nickel grade of the concentrate and reduce the tonnage of concentrate to be shipped. The operation is now being designed to produce, on average, 153,000 tonnes of concentrate per year.

The operating costs for the processing and maintenance departments are being estimated for the revised flow sheet and changes in concentrate production, however all unit costs for reagents have been received from earlier market pricing undertaken for the refinery case.

The Company will connect to the 230kV national grid in Brazil with the network being 80% renewable energy. As a result, carbon emission levels associated with use of power from the grid is very low. Nevertheless, Centaurus plans to buy 100% of the Jaguar power demand from renewable sources. Based on FS work, the cost of power (including transmission and taxes) will be approximately US\$0.03 per kWh.

The overall layout of the Jaguar Project is represented diagrammatically in Figure 2.



Figure 2 – Jaguar Concentrator Layout Schematic



## STRATEGIC PARTNERING PROCESS

The strategic partnering process is continuing with strong interest received to date from a wide range of counterparties, including Western and Asian strategic investors, global battery manufacturers, chemical companies and financial investors.

This broad range of strategic interest highlights the unique market positioning of the Jaguar Nickel Sulphide deposit as one of the very few advanced stage, large-scale nickel sulphide projects globally, underpinned by its Mineral Resource which hosts nearly one million tonnes of contained nickel in an open-pit nickel sulphide deposit.

Furthermore, the Project's expected low carbon footprint has significant strategic appeal to the counterparties involved in the electric vehicle (EV) battery supply chain, particularly in North America and Europe.

Centaurus is confident that the strategic partnering process will deliver an attractive package of funding for the Project based on the strong interest levels and engagement seen to date.

## PROJECT APPROVALS

The Company took several important steps towards securing key project approvals for the Jaguar Project during the Quarter, with the receipt of technical approval of its Mining Lease Application (PAE) by the ANM (the Brazilian National Mining Agency); the approval of the Environmental Impact Assessment (EIA) and formal issue of the Preliminary Licence (LP) by the Pará State Environmental Agency – SEMAS; and the grant of the combined Preliminary Licence ("LP") and Installation Licence ("LI") for the high-voltage powerline.

### *Technical Approval of Mining Lease Application (PAE)*

The technical approval of the Plan of Economic Exploitation (PAE) from the ANM is an important validation of the Jaguar Project and allows for the formal issue of the Mining Lease to proceed once the Installation Licence (LI) is issued by the Environmental Agency.

The technical approval of the PAE indicates that all technical requirements have been met in relation to the grant of the Mining Lease as well as recognition of the Company's capacity to implement the Project. The issue of the LI by SEMAS is now the final step needed before the Mining Lease is formally granted.



## *Approval of EIA and Issue of Preliminary Licence*

During the Quarter, the Company received the approval of the Pará State Environmental Committee (COEMA) for the Jaguar Nickel Sulphide Project Environmental Impact Assessment (“EIA”) and the formal issue of the Preliminary Licence (“LP”).

The issue of the LP is a key milestone for the Company and the Jaguar Nickel Sulphide Project as it attests to the fact the overall definition of the project is both environmentally and socially sound. Historically, this is the most challenging stage of the environmental approval process in Brazil.

As a result of receiving the LP, the Company can now commence the next stage of the environmental approval process, which begins with lodgement of the Installation Licence (“LI”) Application – in the form of a document called the Environmental Control Plan (“PCA”) – with the Environmental Agency. The PCA for the Jaguar Project was lodged with SEMAS just after Quarter-end on 3 April 2024.

Once the LI is approved, the Company will have all the environmental approvals required to commence the on-site construction of the Jaguar Nickel Sulphide Project. The Company is looking forward to securing the Installation Licence in the second half of 2024.

## *Environmental Agency Approval of the Jaguar Powerline Route and Issue of LP/LI*

Concurrently with the grant of the LP for the main Jaguar Project, the Company also received the grant of the combined Preliminary Licence (“LP”) and Installation Licence (“LI”) for the high-voltage powerline that will supply power to the Jaguar Nickel Sulphide Project, following approval of the environmental study for the powerline route.

In respect to the powerline route, the LP/LI approval is the final environmental regulatory milestone necessary for the construction of the 38km long 230kV powerline, which will provide a reliable low-cost, low-emission source of power to the Jaguar Project.

The environmental studies for the powerline were lodged in August 2023 following the collection of a large amount of data in the preceding 12-month period.

The Brazilian Ministry of Mines and Energy (MME) approved the connection of Jaguar Project to the national high-voltage grid in October 2023 and, with this, the only approval now required before commencement of construction of the powerline can begin is the authorisation from the energy regulatory agencies ONS/ANEEL.

## **OCCUPATIONAL HEALTH AND SAFETY**

At the end of the quarter the Company had worked more than 400,000 hours and 21 months without an LTI. The 12-month reportable injury frequency rate at the end of the Quarter was 8.3 and the 12-month severity rate was 0.

## **ENVIRONMENTAL, SOCIAL & GOVERNANCE**

### **Local Community Support Plan**

The 2023/2024 annual plan for the works to be undertaken in partnership with local governments was defined to prioritise domestic waste. This has involved a study of the average composition and volume of waste generated in the three municipalities around the Jaguar Project, with a view to then implementing three courses of action:

- ▶ Educational campaign about reduction, re-use and segregation of domestic waste;
- ▶ Composting centre for education; and
- ▶ Recycling of domestic waste.

At the end of the quarter, the Company had set up a total of 10 recyclable waste bins in the towns of São Félix do Xingu, Tucumã and Ourilândia do Norte. This initiative has reduced the amount of waste taken to the regional waste dumps, as well as created revenue streams for local waste recycling businesses. The goal is to eliminate six tonnes of recyclable waste from going to local dumps by the end of June 2024. By the end of the Quarter, 5.2 tonnes had already been removed.



**Jaguar GHG Emissions**

A review of the Jaguar Project’s carbon footprint during the Quarter by specialist metals and mining ESG research company, Skarn Associates, has confirmed that the Project continues to demonstrate its credentials as one of the world’s foremost nickel projects in terms of its carbon footprint, putting it in a strong position to attract strategic investment from potential partners seeking new supply of nickel concentrate.

Skarn was commissioned by the Company to update its previous emissions assessment work on the basis of a concentrate-only project given the Company’s recently announced decision to de-risk the Jaguar Project in response to the changed nickel market environment by focusing on an initial development as a concentrate-only project (see above).

Skarn’s work involved studying the emission levels forecast to be generated from the production of a nickel concentrate product on site at Jaguar and then shipped to markets in the Atlantic Basin for further downstream processing to a final saleable product.

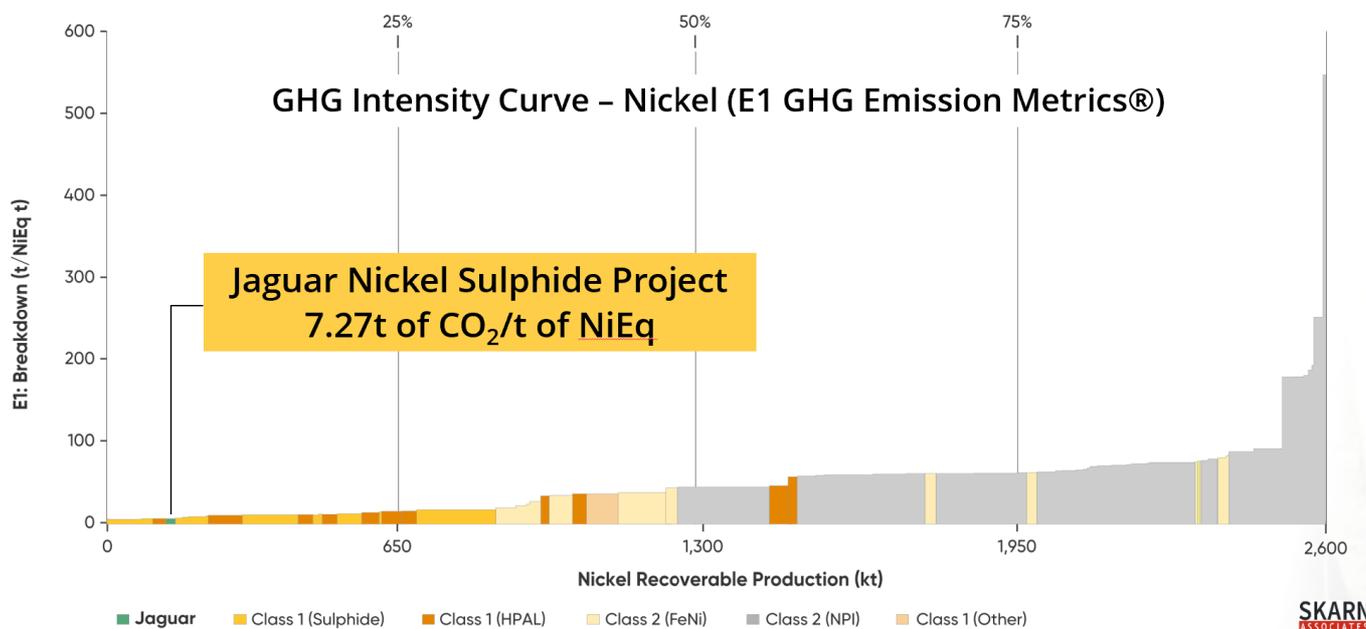
The results of this study continue to demonstrate that the Jaguar Project, once in production, is expected to be class-leading in terms of its carbon footprint, reflecting its unique attributes as a high-grade, open-pittable nickel sulphide project powered by 100% renewably sourced energy which will be distributed by the 230kV national power grid in Brazil.

When in operation, the E1 emissions for the production of nickel concentrate at Jaguar are expected to be extremely low at 7.27 tonnes of CO<sub>2</sub>/tonne of nickel equivalent (NiEq), which is lower than 94% of existing global nickel production and demonstrates the investment quality of the Jaguar Project from an emissions perspective.

Jaguar’s on-site ‘E0’ GHG Emission levels (see Figure 5 for Skarn emission level definitions) are extremely low at only 1.55t CO<sub>2</sub>/t NiEq.

The graph in Figure 3 below shows where Jaguar ranks on a global basis on the Skarn Associates GHG Nickel Intensity Curve.

**Figure 3 – Skarn Associates GHG Intensity Curve – Nickel (E1 GHG Emission Metrics®)**

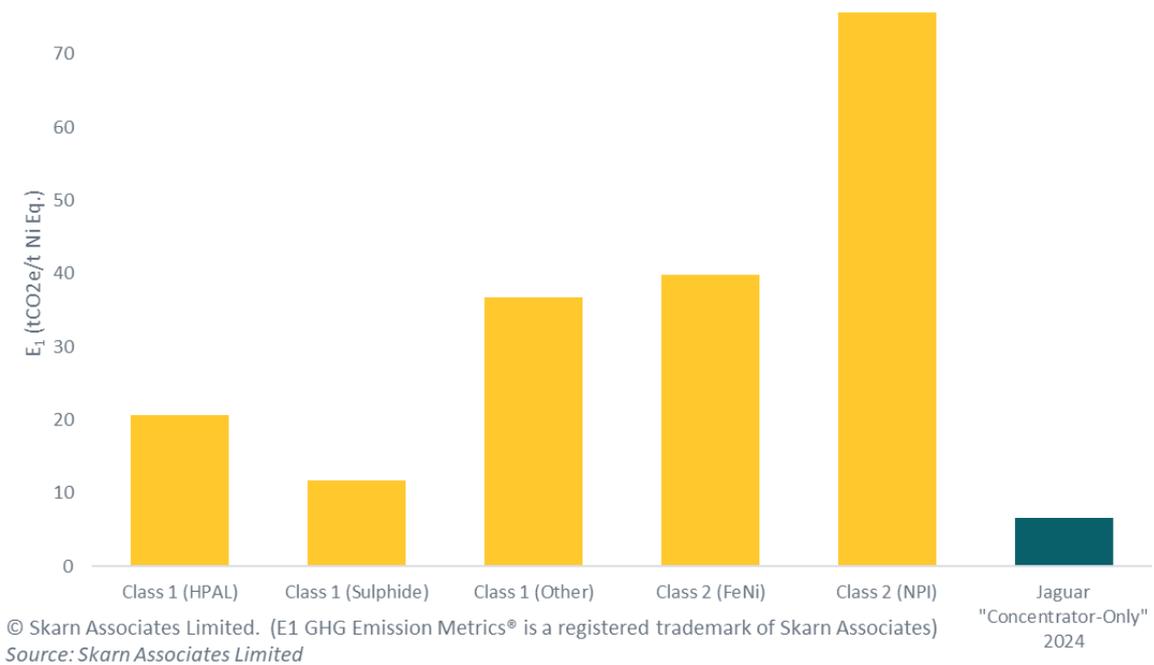


The low emission levels are a function of the relatively high-grade nickel coming from open pit mining sources and, importantly, the fact that Centaurus will be able to source its power on the grid from 100% renewable sources.

The assessed emission levels will be 85% lower than the industry average (production weighted) of 48.6 tonnes of CO<sub>2</sub>/tonne of nickel equivalent (assessed for the 2023 year). Figure 4 demonstrates where the Jaguar Nickel Sulphide Project sits from an emission perspective relative to other sources of Class-1 nickel as well as Class-2 nickel from various production processes.



Figure 4 – Industry Average E1 (Scope 1+2+Downstream) GHG Emissions by Nickel Product



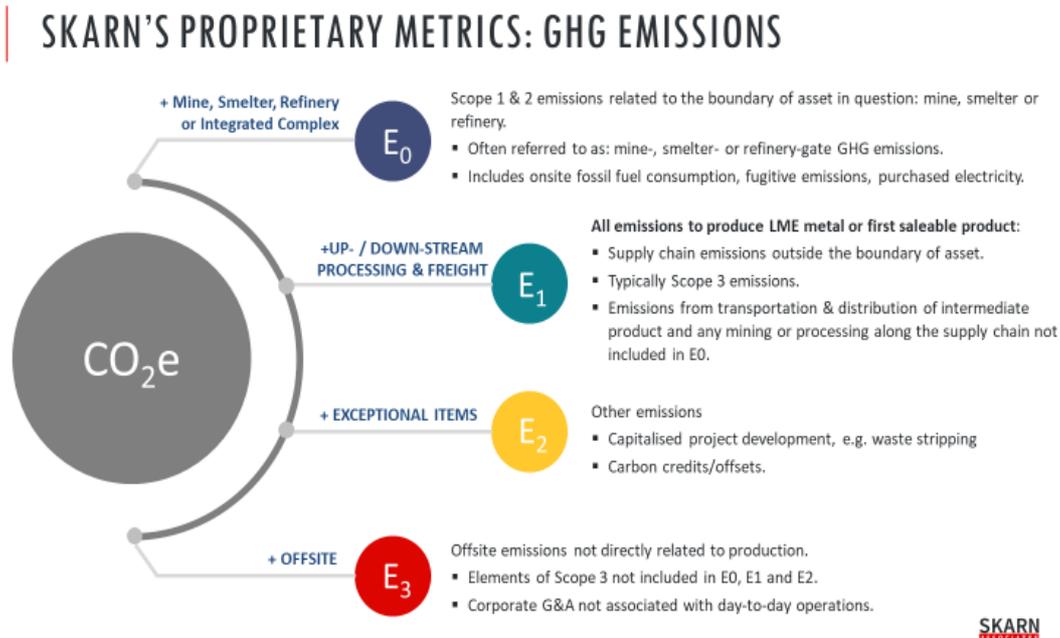
As can be seen in Figure 4, there are major positive environmental benefits to be gained from producing nickel in Brazil, where 100% renewable power is available to the Company via the 230kV national grid, even if the product is a nickel concentrate that needs to be shipped and processed in another location.

Skarn Associates’ proprietary E1 GHG Emission Metrics® relate to all emissions to produce LME nickel metal or first saleable product and includes Scope 1 and 2 mine site emissions from the mining and processing of ore plus any freight and downstream processing required to get to first saleable product (refer Figure 5).

Emission intensities are stated on a recovered nickel-equivalent basis, calculated using average 2023 metal prices. Emissions are pro-rated across all commodities produced by the mine, based on contribution to gross revenue.

There is a significant difference between Jaguar’s E0 (Scope 1 and 2) GHG Emissions and E1 (E0 plus Scope 3) GHG Emissions, given the majority of the E1 GHG Emission levels relates to freight and downstream processing of the nickel concentrate that will now be produced at Jaguar. Jaguar’s on-site ‘E0’ GHG Emission levels are extremely low at only 1.55t CO<sub>2</sub>/t NiEq.

Figure 5 – Skarn Associates Proprietary Metrics for GHG Emissions





### Local Workforce Training Programs

During the Quarter, the Company further advanced the enrolment process for construction training, with over 1,700 applications received to date from all over the region.

The Company intends to train up to 1,500 people in various trades that will allow them to be able to seek employment once construction of the Jaguar Project commences.

The training programs are intended to be conducted in conjunction with the Brazilian industry training college (SENAI), with the planned training programs scheduled to commence in Q2 2024.

### Plant Nursery

During the Quarter, the Company planted further native species seedlings over 5.8Ha to revegetate previously cleared farmland. Since the start of the revegetation program in October 2022, more than 30Ha has been revegetated and the Company is now only 3.6Ha short of a positive balance of revegetated area versus cleared areas at Jaguar. The planned revegetation will allow new forest corridors to be established around the site to assist with the movement, protection and biodiversity of flora and fauna.

## BOI NOVO COPPER-GOLD PROJECT

The Boi Novo Copper-Gold Project, secured as part of Centaurus' Horizon II Business Development and Growth Strategy in NE Brazil, covers 35km<sup>2</sup> of highly prospective ground in the Carajás Mineral Province – the world's premier Iron-Oxide Copper-Gold (IOCG) address. The Project is located 30km from Parauapebas (population 250k), the regional centre of the Carajás, and less than 20km from BHP's Antas Norte copper flotation plant (Figure 1).

The Boi Novo Copper-Gold Project tenure covers a portion of the eastern margin of the Estrela Granite Complex that has intruded the Neoproterozoic Grão Pará Group, part of the highly prospective Itacaiúnas Supergroup which hosts all known Iron-Oxide Copper-Gold (IOCG) deposits within the Carajás Mineral Province.

A WSW-ENE orientated regional scale thrust fault traverses the Project area that could represent the conduit for hydrothermal fluids required to form the IOCG mineralisation that is targeted at the Boi Novo Project. Structural control is particularly important with IOCG mineralisation in the Carajás, with most of the known deposits occurring along splays off crustal scale extensional faults formed by magmatic-hydrothermal processes.

The soil sampling and surface mapping programs continued at Boi Novo during the March Quarter, in-filling the line spacing which is currently at 200m spacing across most of the tenure Figure 6.

An Induced Polarisation (IP) ground survey was close to completion at the end of the Quarter. IP has traditionally been the geophysical survey of choice for targeting IOCG deposits in the Carajás, as it responds well to the broad disseminated sulphide mineralisation style associated with the known IOCG deposits.

The Carajás IOCG deposits often have high-grade breccia zones within the deposits, consisting of interconnected semi-massive to massive sulphides. These zones are conductive and can return discrete EM anomalies within the broader IP anomaly.

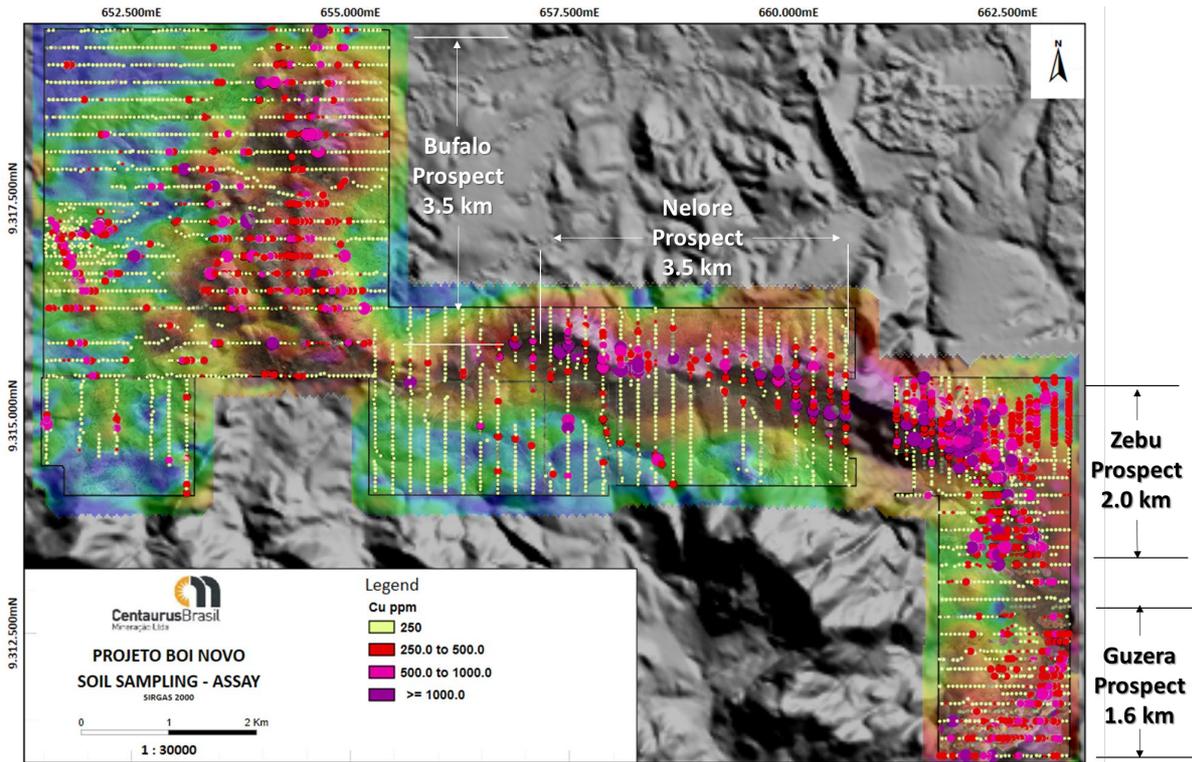
Consequently, the Company has planned a Fixed-Loop Electromagnetic (FLEM) survey to be completed by the Company's in-house geophysical survey team.

Once the ground geophysical surveys are completed, a drill program is likely to be carried out to test the priority targets, as well as any new targets generated by the FLEM survey. Given the favourable location and ease of access to the Boi Novo Project from the regional centre of Parauapebas, any drill program is likely to be unrestricted by weather during the upcoming regional wet season.

The Company has land access agreements in place and is the process of obtaining water and drill licences to allow for the maiden drill program to start in Q2 2024.



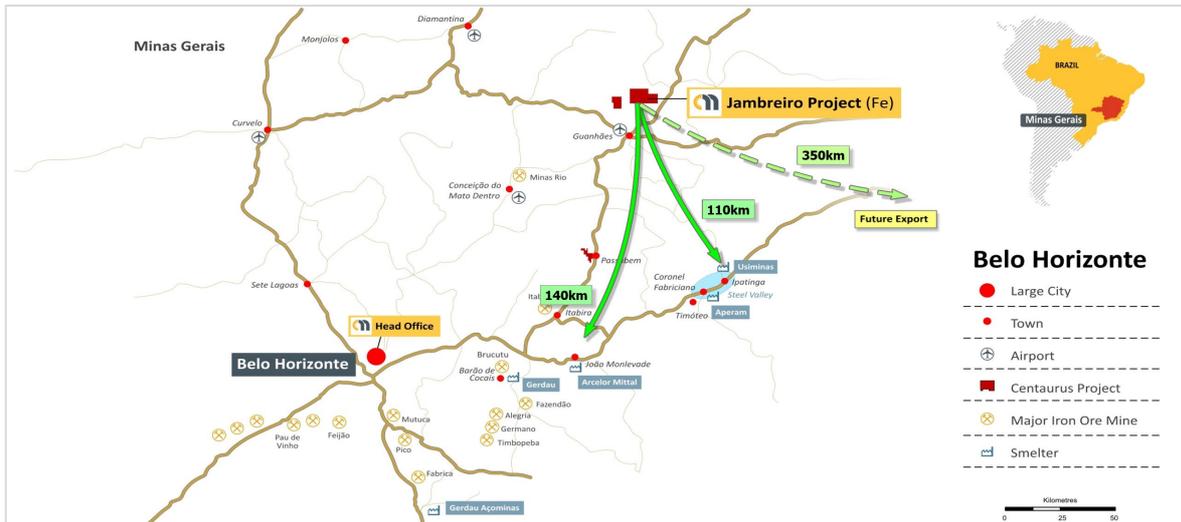
Figure 6 – The Boi Novo Copper-Gold Project, copper-in-soils over Drone Magnetics survey (ASA)<sup>1</sup>.



## JAMBREIRO IRON ORE PROJECT

The Company’s 100%-owned Jambreiro Project is located in south-east Brazil (Figure 7) close to the Company’s head office in the city of Belo Horizonte.

Figure 7 – Jambreiro Iron Ore Project Location.



During the Quarter, in response to growing interest from potential off-take partners and customers, Centaurus commenced a new study on the potential of its 100%-owned Jambreiro Iron Ore Project (‘Jambreiro’) in Brazil to deliver a Direct Reduction (DR) quality pellet feed concentrate.

Jambreiro is an advanced iron ore project located in south-eastern Brazil near the regional centre of Belo Horizonte.

<sup>1</sup> Refer ASX Release of 28 November 2023. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the competent persons findings were presented have not been materially modified from the original announcement.



It formed part of Centaurus' foundational portfolio of strategic minerals projects in Brazil and comprises a substantial Mineral Resource for which Centaurus continues to evaluate potential development and monetisation pathways.

The strong push by steelmakers to lower greenhouse emissions has resulted in iron ore producers being encouraged to maximise grade and minimise impurities.

With this in mind, Centaurus is now investigating the possibility of producing a DR quality pellet feed product from the Jambreiro ore, targeting a +68% Fe product with combined grades of Silica (SiO<sub>2</sub>) and Alumina (Al<sub>2</sub>O<sub>3</sub>) being under 2%.

DR pellet feed product is used to produce DR pellets, which in turn are then used as feed for Electric Arc furnaces. DR pellet feed material has a lower overall carbon footprint compared to ore that can only be fed into Blast Furnace (BF) steel mills. With steel producers increasingly focusing on strategies to reduce their carbon footprint, the production of DR quality iron ore greatly assists in achieving this objective.

Initial sighter tests undertaken by a potential off-taker were able to show that ore from the Jambreiro deposit was able to produce a DR quality pellet feed material, with the specifications outlined below using both magnetic separation (Table 1) and flotation beneficiation processes (Table 2).<sup>2</sup>

The Jambreiro ore tested was a composite from friable itabirite outcrop, located in the central portion of the project area. The composite had a head grade of 38-39% Fe. The testwork was completed on the basis of grinding 100% of the feed.

**Table 1 – Jambreiro DR quality Pellet Feed Testwork Results – Magnetic Separation**

Product	Mass Recovery (%)		Grades (%)						Fe Recovery (%)
	Global	Stage	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Mn	P	LOI	
Analysed Feed	100.00	100.00	38.18	42.99	0.92	0.02	<0.023	0.46	
Concentrate	45.01	45.01	<b>68.39</b>	<b>1.12</b>	<b>0.57</b>	<b>0.03</b>	<b>&lt;0.023</b>	<b>0.14</b>	<b>80.36</b>
Tailings	54.99	54.99	13.68	74.55	1.02	0.01	0.029	0.60	19.64
Calculated Feed	100.00	100.00	38.30	41.50	0.82	0.02	<0.023	0.39	100.00

PFRD Route Grinding at P95 = 150 µm + WHIMS Rougher + Cleaner (no LIMS)

**Table 2 – Jambreiro DR Quality Pellet Feed Testwork Results – Flotation**

Product	Mass Recovery (%)		Grades (%)						Fe Recovery (%)
	Global	Stage	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Mn	P	LOI	
Analysed Feed	90.50	100.00	39.21	42.22	0.56	0.01	<0.023	0.07	
Concentrate	44.62	49.30	<b>68.88</b>	<b>0.93</b>	<b>0.59</b>	<b>0.02</b>	<b>&lt;0.023</b>	<b>0.06</b>	<b>86.07</b>
Tailings	45.88	50.70	10.84	82.25	0.43	0.00	<0.023	0.14	13.93
Calculated Feed	90.50	100.00	39.45	42.16	0.51	0.01	<0.023	0.10	100.00

PFRD Route Grinding at P95 = 150 µm + Desliming + Flotation

In light of the very encouraging results from the tests, the Company commenced further bench-scale testwork and a high-level study to:

- ▶ Assess the nature of changes required to the previous Jambreiro sinter feed process flowsheet to be able to achieve a DR pellet feed product;
- ▶ Understand metal and mass recoveries for the production of DR pellet feed material;
- ▶ Determine the nature of any additional capital requirements required in the process plant to be able to achieve the desired product specification; and
- ▶ Assess the additional revenue that can be generated from the production of a premium DR pellet feed material compared to a Sinter Feed Blast Furnace (BF) concentrate specification which was historically considered for Jambreiro.

<sup>2</sup> Refer ASX Release of 12 March 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the competent persons findings were presented have not been materially modified from the original announcement.



This study work is being led by the Company’s own iron ore metallurgist and supported by the exploration team as required. The study will not have any impact on ongoing workflows for the Company’s flagship Jaguar Nickel Project and the delivery of the Jaguar Feasibility Study (see above).

Subsequent to the end of the Quarter, Centaurus reported positive results from the additional bench-scale metallurgical testwork on Jambreiro ore, confirming the potential for the project to produce a Direct Reduction Pellet Feed (DRPF) product across its entire projected mine life.

The average product specification achieved delivered an iron grade of 67.8% Fe, 1.08% Silica and 0.64% Alumina (Silica + Alumina of 1.72%)<sup>3</sup>, as shown in Figure 8, with this specification well within the 2% threshold required to achieve a DR quality product. The average Phosphorus grade in the concentrate product was very low at 0.011%. A summary of all the assay results for each concentrate produced is set out in Table 3.

Over the past 24 months, the average premium for the DRPF product has been 15-30% over the benchmark 62% Fe CFR China Index (Platts) price with premiums increasing and decreasing with corresponding movements in the iron ore price. The Company expects the demand for DRPF to increase over time as more steelmakers look to source iron ore that can deliver lower overall emissions to their business.

Figure 8 – Jambreiro Product Results from Bench-Scale Metallurgical Testwork Program

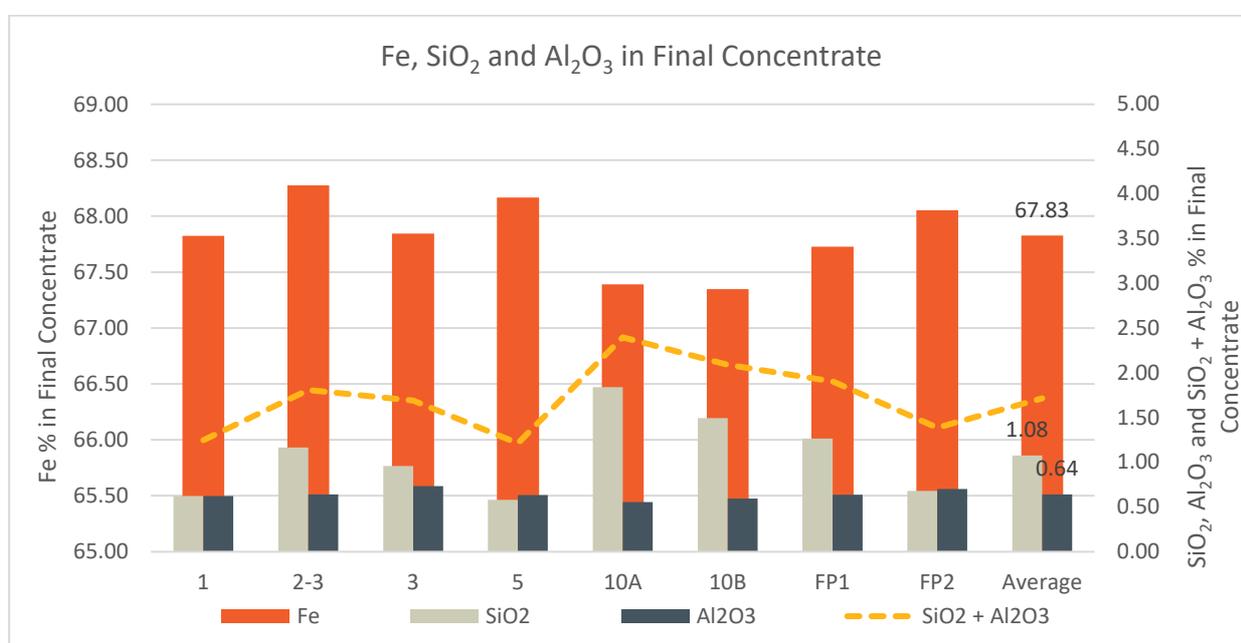


Table 3 – Jambreiro Product Results from Current Metallurgical Testwork Program

Sample	Final Concentrate Grades (%)											
	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	P	Mn	CaO	MgO	TiO <sub>2</sub>	Na <sub>2</sub> O	K <sub>2</sub> O	Cr <sub>2</sub> O <sub>3</sub>	LOI
1	67.82	0.62	0.62	0.004	0.05	0.02	0.06	1.10	<0.01	<0.01	0.04	0.12
2-3	68.27	1.17	0.64	0.010	0.11	<0.01	<0.01	0.17	<0.01	<0.01	0.02	0.06
3	67.85	0.96	0.73	0.011	0.17	<0.01	<0.01	0.43	<0.01	<0.01	0.03	0.31
5	68.17	0.58	0.63	0.012	0.21	0.02	0.07	0.60	0.05	<0.01	0.08	0.03
10A	67.39	1.84	0.56	0.015	0.12	0.01	0.03	0.57	<0.01	<0.01	0.04	0.16
10B	67.35	1.49	0.59	0.020	0.16	0.02	0.02	0.82	0.02	<0.01	0.04	0.26
Final Pit 1	67.73	1.26	0.64	0.011	0.14	0.02	0.03	0.68	<0.01	<0.01	0.04	0.07
Final Pit 2	68.05	0.68	0.70	0.014	0.17	<0.01	0.05	0.56	0.03	<0.01	0.03	0.18

<sup>3</sup> Refer ASX Release of 10 April 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the competent persons findings were presented have not been materially modified from the original announcement.



Based on the results from the new bench-scale testwork and all the extensive historical metallurgical testwork data on the Project, a METSIM model (using Usimpac software) has been developed to simulate the processing of multiple samples of ore through the selected flowsheet.

The results of the modelling for the proposed process flowsheet at the average grade of the current bench-scale testwork program delivered an average metallurgical recovery of 87.7% and an average mass recovery of 41.2%.

This new proposed flowsheet is very similar to the original Jambreiro flowsheet, which was designed to produce a sinter feed product. The differences, however, from the original flowsheet are:

- ▶ The removal of the jig,
- ▶ The inclusion of a new quaternary crusher; and
- ▶ The inclusion of a ball mill after the magnetic separators.

The original flowsheet was designed to produce a sinter feed as coarse as possible and, as such, the jig was included in the flowsheet. Removing the jig allows all of the ore to be crushed, deslimed and fed to the spirals, which in turn facilitates an easier production path to a pellet feed size fraction product. Further, given the goal is to now produce a high-grade, low-impurity pellet feed product, a ball mill has been included at the back end of the process flowsheet to reduce the grainsize to achieve pellet feed size fraction specification.

The Company expects these minor changes to have little effect on the process plant footprint and energy consumption, as the ball mill will only grind the final product and not the entire plant feed.

In addition to the metallurgical testwork, slimes dewatering testwork has also been completed using filter presses. The results from this work demonstrate that the filtered slimes cake (Figure 10) has a moisture content of 21-22%. Further, previous spirals tailings testwork using dewatering screens has delivered spirals tailings with a moisture content of 11%.

It is anticipated that the slimes cake and the spirals-tail will be able to be combined to deliver a tailings product with a moisture content well under the targeted level of 20% and, as a result, the tailings will be able to be dry stacked with mine waste. The spiral tailings represent approximately 80% of the total tailings material, with the slimes being only 20% of total tailings from the project.

Figure 10 – Jambreiro Filtered Tailings Cake



Centaurus is currently assessing the impact of the changes to the process flowsheet on previous capital and operating cost estimates so that the Company can confirm, at a high level, its expectations that the production of a DRPF product can deliver strong economics for the Company at a time when the steel industry is demanding lower-emission iron products as feed for its steel-making activities. This work should be completed in H1 2024.

The new Preliminary License (LP) is expected in H2 2024 and the Installation License (LI) in H1 2025. As the project had already been licensed in 2013 and significant environmental improvements were implemented in the project design, including the removal of the tailings dam, the Company expects no issues with the new approvals process.

Full details of the Jambreiro metallurgical testwork programs were provided in the Company's ASX Announcements dated 12 March and 10 April 2024.



## CORPORATE

### Cash Position

At 31 March 2024, the Company held cash reserves of A\$29.4 million.

### Shareholder Information

The Company's capital structure as of 31 March 2024 is as follows:

#### Quoted Securities

Capital Structure	Number
Fully paid ordinary shares (CTM)	494,997,337
Top 20 Shareholders	66.02%
Directors and Management Shareholding of Listed Securities	4.2%

#### Unquoted Options

Expiry Date	Exercise Price	Vested	Unvested
31/05/24	\$0.180	233,334	
31/05/24	\$0.405	1,400,000	
31/12/24	-	485,543	-
31/12/25	-	-	1,225,220
31/12/26	-	-	1,535,164
31/12/27	-	-	2,170,514
		<b>2,118,877</b>	<b>4,930,898</b>

### Additional Information Required by Listing Rule 5.3.3

#### Brazilian Tenements

Tenement	Project Name	Location	Interest
831.638/2004	Canavial	Minas Gerais	100%
831.639/2004	Canavial	Minas Gerais	100%
831.649/2004	Jambreiro (Mining Lease)	Minas Gerais	100%
833.409/2007	Jambreiro (Mining Lease)	Minas Gerais	100%
834.106/2010	Jambreiro (Mining Lease)	Minas Gerais	100%
831.645/2006	Passabém	Minas Gerais	100%
830.588/2008	Passabém	Minas Gerais	100%
833.410/2007	Regional Guanhões	Minas Gerais	100%
856.392/1996	Jaguar (Mining Lease Application)	Pará	100%
850.475/2016	Itapitanga	Pará	100%
850.239/2002	Terra Morena	Pará	100%
851.571/2021	Terra Roxa (Jaguar Regional)	Pará	100%
851.563/2021	Santa Inês (Jaguar Regional)	Pará	100%
850.071/2014	Boi Novo	Pará	100%
851.767/2021	Boi Novo	Pará	100%
851.768/2021	Boi Novo	Pará	100%
851.769/2021	Boi Novo	Pará	100%

#### Australian Tenements

Tenement	Project Name	Location	Interest
EPM14233	Mt Isa	Queensland	10% <sup>(1)</sup>

- Subject to a Farm-Out and Joint Venture Exploration Agreement with Summit Resources (Aust) Pty Ltd. Summit has earned a 90% interest in the Project. Aeon Metals Limited has acquired 80% of Summit's Interest giving them a total interest of 72% of the tenement.



## Listing Rule 5.3 Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was A\$5.4 million. Details of the exploration activities to which this expenditure relates are set out above.
2. ASX Listing Rule 5.3.2: There were no mining production and development activities during the Quarter.
3. ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter totalled A\$867k. These payments relate to non-executive directors' fees, executive directors' salaries, entitlements and short and long term incentives, payments to MPH Lawyers, a director related entity, for the provision of legal services.

This Quarterly Activities Report is authorised for release by the Managing Director, Mr Darren Gordon.

A handwritten signature in black ink, appearing to read 'Darren Gordon', is positioned above the printed name.

**DARREN GORDON**  
**MANAGING DIRECTOR**

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

<b>Centaurus Metals Limited</b>
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ABN

<b>40 009 468 099</b>
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Quarter ended ("current quarter")

<b>31 March 2024</b>
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<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation	(5,377)	(5,377)
(b) development	-	-
(c) production	-	-
(d) staff costs	-	-
(e) administration and corporate costs	(1,424)	(1,424)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	430	430
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	1,305	1,305
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(5,066)</b>	<b>(5,066)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	(31)	(31)
(c) property, plant and equipment	(147)	(147)
(d) exploration & evaluation	(78)	(78)
2.2 Proceeds from the disposal of:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3months) \$A'000</b>
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(256)</b>	<b>(256)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>-</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	34,674	34,674
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(5,066)	(5,066)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(256)	(256)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	56	56
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>29,408</b>	<b>29,408</b>

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>5. Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1 Bank balances	265	652
5.2 Call deposits	29,143	34,022
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>29,408</b>	<b>34,674</b>

<b>6. Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1 Aggregate amount of payments to related parties and their associates included in item 1	867
6.2 Aggregate amount of payments to related parties and their associates included in item 2	-

*Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.*

*Remuneration to Executive Directors of \$768,000 (which includes monthly salaries and short term and long term incentive payments)*

*Fees paid to Non-Executive Directors of \$86,000*

*Legal Fees paid to MPH Lawyers a director related entity \$13,000*

<b>7. Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
<b>7.4 Total financing facilities</b>	<b>-</b>	<b>-</b>
<b>7.5 Unused financing facilities available at quarter end</b>		<b>-</b>
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	(5,066)
8.2 Payments for exploration & evaluation classified as investing activities (item 2.1(d))	(78)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(5,144)
8.4 Cash and cash equivalents at quarter end (item 4.6)	29,408
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	29,408
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	<b>5</b>
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 24 April 2024

Authorised by: Darren Gordon – Managing Director  
(Name of body or officer authorising release – see note 4)

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**Mining exploration entity or oil and gas exploration entity quarterly cash flow report**

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**Notes**

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.