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# JAGUAR NICKEL SULPHIDE PROJECT'S CLASS-LEADING CARBON FOOTPRINT CREDENTIALS INDEPENDENTLY RECONFIRMED

New independent ESG assessment confirms Jaguar's credentials as a world-leading, low-emission nickel project

- Estimated E1 (Scope 1 + Scope 2 + freight + downstream) Green House Gas (GHG) emissions for the Jaguar Nickel Sulphide Project are forecast to be class-leading at 7.27 tonnes of CO<sub>2</sub>/tonne of nickel equivalent for the proposed production and external downstream processing of a nickel concentrate product.
- Life-of-mine CO<sub>2</sub> footprint assessed to be lower than 94% of global nickel production, once in production.
- The Jaguar GHG E1 emission levels are 85% lower than the nickel industry average of 48.6 tonnes of CO<sub>2</sub>/tonne of nickel equivalent.
- GHG assessment reaffirms Jaguar's credentials as one of the best undeveloped nickel sulphide projects in the world, ideally positioned to attract strategic investment and demand from potential off-take customers targeting production of Class-1 nickel.

Centaurus Metals Ltd (ASX-CTM) is pleased to advise that, following a review of the carbon footprint of its 100%owned Jaguar Nickel Sulphide Project in Brazil by specialist metals and mining ESG research company Skarn Associates, 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 recently 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 ASX announcement, 1 March 2024).

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 a nickel concentrate at Jaguar are expected to be **extremely low at 7.27 tonnes of CO<sub>2</sub>/tonne of nickel equivalent**, 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 3 for Skarn emission level definitions) are extremely low at only 1.55t CO<sub>2</sub>/t NiEq. Further, based on current Feasibility Study work, the cost of distributed power to Jaguar is estimated to be very low at approximately US\$0.03/kWh.

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The graph in Figure 1 below shows where Jaguar ranks on a global basis on the Skarn Associates GHG Nickel Intensity Curve.



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  $CO_2$ /tonne of nickel equivalent (assessed for the 2023 year). Figure 2 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 2 – Industry Average E1 (Scope 1+2+Downstream) GHG Emissions by Nickel Product

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As can be seen in Figure 2, 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<sup>®</sup> 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 3).

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 EO (Scope 1 and 2) GHG Emissions and E1 (EO 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 'EO' GHG Emission levels are extremely low at only 1.55t CO<sub>2</sub>/t NiEq.

Centaurus' Managing Director, Mr Darren Gordon said: "Jaguar is one of the best undeveloped nickel sulphide projects globally. The resource base is large at just under 1 million tonnes of contained nickel metal and the work by Skarn clearly demonstrates that Jaguar has very strong ESG credentials, underpinned by its estimated very low levels of GHG Emissions.

"We are pleased that the work by Skarn Associates has continued to confirm that the Jaguar Project will have a low carbon footprint given the relatively high-grade nature of the planned mill feed and the fact that we will source 100% of the power for the Project from renewable sources (principally hydro and solar). At 7.27 tonnes of CO<sub>2</sub>/tonne of nickel equivalent for its E1 GHG emission level, the Jaguar Project will be one of the lowest carbon emission projects in the nickel industry; even more impressive is the on-site E0 emission level, which is estimated to be only 1.55t CO<sub>2</sub>/t NiEq."

#### **About Skarn Associates**

Skarn Associates is based in London and their mission is to bridge the research gap between mine economics and ESG. Founded in 2016, since early 2020 Skarn has focused on creating high-quality, independent, forward-looking mining sector ESG analysis, especially energy use and carbon emissions from mining, smelting and refining operations.

Commodities covered include nickel, gold, aluminium, zinc, iron ore, metallurgical coal and copper. Skarn has become a leader in mining sector greenhouse gas benchmarking, having developed unique methodologies and datasets, including its proprietary E0 and E1<sup>™</sup> emissions metrics.

For more information visit www.skarnassociates.com



#### Figure 3 – Skarn Associates Proprietary Metrics for GHG Emissions



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