

4 May 2023

FIRST NICKEL SULPHATE PRODUCED FROM JAGUAR ORE AS PILOT PLANT PROGRAM SUCCESSFULLY CONCLUDES

Pilot Program confirms Jaguar's ability to produce a high-quality nickel sulphate product for the fast-growing EV market

- Key results from the final phases of the Jaguar Nickel Sulphide Project refinery pilot testwork include:
 - Nickel sulphate successfully produced from Jaguar for the first time.
 - Very efficient cobalt recovery in the solvent extraction (SX) circuit. Over 99% of cobalt extracted from the Phase 2 raffinate with minimal loss of nickel (0.3-0.7% nickel).
 - A high-purity cobalt hydroxide by-product has been produced, to benefit overall project economics.
- These key results build on the previous positive results from Phase 1 & 2 of the refinery pilot plant program.
- The pilot testwork program has been very successful in either meeting or exceeding the pre-testwork goals and delivering a robust data package for use in the DFS refinery process design, which is currently underway with the Company's engineering partner Ausenco.
- Samples of Jaguar nickel sulphate product are now available for marketing and strategic off-take discussions.
- Work to date confirms the quality of the Jaguar Project and its potential to produce a battery-grade nickel sulphate product for the rapidly growing EV market.
- Centaurus remains well-funded with approximately \$23 million in cash at the end of the March Quarter.

Centaurus Metals (ASX Code: CTM, OTCQX: CTTZF) is pleased to announce that it has successfully produced the first-ever nickel sulphate from its flagship Jaguar Nickel Project in Brazil as part of the final phase of work undertaken as part of the Jaguar Pilot Plant testwork program.

The successful production of nickel sulphate, cobalt hydroxide and zinc hydroxide concludes the pilot program with only analytical assay work on the products and thickening and filtration vendor testing on the cobalt and zinc hydroxide products to be completed over the next month.



Figure 1: First nickel sulphate from Jaguar Pilot Plant Program.

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Centaurus' piloting program for the Jaguar Project has been developed to provide detailed chemistry and process engineering data for the DFS and future front-end engineering design (FEED) requirements, as well as to ensure a high-quality nickel product is achieved for marketing and strategic off-take discussions.

Centaurus Metals Managing Director, Darren Gordon, said the completion of the Pilot Plant Testwork Program marked another pivotal step in the development of the Jaguar Project as a major new green nickel sulphide project capable of delivering battery-grade products to the fast-growing electric vehicle market.

"The nickel industry is experiencing transformational demand for nickel sulphate as a critical product that is essential in the new generation of high-performance lithium-ion batteries required for EV's and other renewable energy applications.

"The successful delivery of a high-quality nickel sulphate product is a huge milestone for the Company and the Jaguar Project, and I would like to thank the technical team for their hard work in achieving this fantastic result. This shows that Jaguar is ready to produce a product that is perfectly tailored for the new wave of nickel demand over the coming decade and beyond. The high-quality data from this program also feeds into the ongoing DFS and will allow us to complete the critical process flowsheet design work required to finalise the refinery plant design."

Pilot Plant Testwork

As noted in the metallurgical update from 15 March 2023, the bulk concentrate used as feed for piloting of the refinery had the following product specification (Table 1).

Table 1: Pilot Bulk Concentrate Sample Analysis

Ni (%)	Cu (%)	Co (%)	Zn (%)	Al (%)
11.2	0.72	0.31	3.07	0.44
Cl (%)	As (%)	F (%)	Fe (%)	K (%)
<0.01	<0.01	<0.01	30.3	0.13
MgO (%)	Fe/MgO	Pb (%)	S (%)	P (%)
2.56	11.9	0.05	36.7	0.42

The scope of the refinery piloting was split into four phases of work as follows:

- Phase 1: Concentrate feed preparation, pressure leaching, and copper solvent extraction.
- Phase 2: Calcium and zinc removal via solvent extraction.
- Phase 3: Cobalt and nickel solvent extraction circuits.
- Phase 4: Nickel sulphate crystallisation plus zinc and cobalt hydroxide precipitate production.

Phase 1 and Phase 2 were completed previously, with results reported on 15 March 2023.

Phase 3 Results

Phase 3 was designed to extract cobalt (for a by-product revenue stream), with minimal nickel loss, followed by the purification of the nickel solution to allow Phase 4 to be undertaken, being the production of nickel sulphate and the production of zinc hydroxide and cobalt hydroxide by-products.

From the Phase 3 solvent extraction work, two product streams were produced:

1. A high-purity nickel strip solution for nickel sulphate production; and
2. A cobalt strip solution to produce a cobalt hydroxide by-product.

These are in addition to the zinc strip solution, for a zinc hydroxide by-product, produced in Phase 2. These three solutions were submitted to Strategic Metallurgy Pty Ltd in Perth to facilitate the Phase 4 work program.

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The Phase 3 piloting of cobalt solvent extraction has been completed using a C272 extractant and a solvent extraction circuit that was successful in extracting over 99% of the cobalt while only losing less than 0.7% of the nickel (Table 2).

Table 2: Phase 3 Product Average Solution Concentrations

Solution	Co (mg/L)	Mg (mg/L)	Mn (mg/L)	Ni (mg/L)	Zn (mg/L)
Nickel Strip Solution	< 0.5	3.0	< 0.5	91,170	1.5
Cobalt Strip Solution	8,071	28,357	570	1,935	13.0

The Phase 3 test work shows that a high-purity cobalt hydroxide by-product can be generated which will provide another revenue stream not considered in prior economic assessments of the project.

Phase 4

As noted above, Phase 4 (the final stage of the pilot work program) involved the production nickel sulphate as well as the production of zinc hydroxide and cobalt hydroxide as by-products of the Project.

The Company has now successfully produced nickel sulphate as shown in Table 3, with the product awaiting final assay.

The pilot work targeted a sulphate specification in the range outlined in Table 3 below, as this range specification aligns with the indicative requirements for a premium battery-grade nickel sulphate product from potential offtakers.

The final assays, due in approximately four weeks' time, are expected to confirm the Jaguar nickel sulphate product specification sits comfortably within the target range.

Approximately 96% of the nickel contained in the nickel concentrate feed to the pilot plant (based on daily pilot data) was recovered to nickel sulphate, meaning an overall recovery of nickel from ore to sulphate of 75% (at the average head grade of the Mineral Resource Estimate (MRE) of 0.87% Ni).

Table 3: Target Nickel Sulphate Specification for Jaguar

	Element	Measure	Target Specification
Nickel	Ni	%	22.0 - 22.3
Cobalt	Co	ppm	10 - 20
Copper	Co	ppm	5 - 10
Zinc	Zn	ppm	5 - 10
Iron	Fe	ppm	5 - 10
Manganese	Mn	ppm	10 - 20
Calcium	Ca	ppm	10 - 20
Magnesium	Mg	ppm	10 - 50
Potassium	K	ppm	10 - 100
Sodium	Na	ppm	10 - 100

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In addition to the nickel sulphate production, the Company has been able to successfully produce zinc hydroxide and cobalt hydroxide by-products (Figure 2), the final specification of which will also be delivered in the next four weeks. The by-products will be an additional source of revenue in the DFS economics which were not considered in prior economic assessments of the Project.

Figure 2: Product suite from Jaguar Refinery Pilot Testwork Program



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

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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.

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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 at the Jaguar Project.

SECTION 1 - SAMPLING TECHNIQUES AND DATA

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

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> • 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. ¼ core samples have been taken from 187 resource drill holes across all deposits as well as hole core samples from 34 designated metallurgical drill holes (twins of resource holes). • Samples from RC drilling are split to make 3-5kg samples. The sample is placed in a plastic sample bag with a sample tag before being sent to the laboratory.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> • 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.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • 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.

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Criteria	Commentary
Logging	<ul style="list-style-type: none"> 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. Logging for drilling is qualitative and quantitative in nature. All historical and new diamond core has been photographed. Geologists complete a visual log of the RC samples on 1m intervals at the time of drilling. Logging captures colour, rock-type, mineralogy, alteration, and mineralisation style. Logging is both qualitative and quantitative. Chip trays have been collected, photographed, and stored for all drill holes to-date.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> Diamond Core (HQ/NQ) was cut using a core saw, ¼ core was sampled. Sample length along core varies between 0.3 to 4.0m, with an average of 1.48m; sampling was done according to lithological contacts and generally by 1m intervals within the alteration zones and 2m intervals along the waste rock. There is no non-core sample within the historical drill database. For RC sampling 1m samples are taken from the cyclone and then split by rifle splitter (if dry) or manually (if wet) using the fish-bone technique. Sample weight is between 3-5kg. QAQC: Standards (multiple standards are used on a rotating basis) are inserted every 20 samples. Blanks have been inserted every 20 samples. Field duplicates are completed every 30 samples. Additionally, there are laboratory standards and duplicates that have been inserted. Centaurus has adopted the same sampling QAQC procedures which are in line with industry standards and Centaurus's current operating procedures. Sample sizes are appropriate for the nature of the mineralisation. All historical geological samples were received and prepared by SGS Geosol or ALS Laboratories as 0.5-5.0kg samples. They were dried at 105°C until the sample was completely dry (6-12hrs), crushed to 90% passing 4mm and reduced to 400g. The samples were pulverised to 95% passing 150µm and split further to 50g aliquots for chemical analysis. New samples are being sent to ALS Laboratories. The samples are dried, crushed and pulverised to 85% passing 75µm and split further to 250g aliquots for chemical analysis. During the preparation process grain size control was completed by the laboratories (1 per 20 samples). Metallurgical samples are crushed to 3.35mm and homogenised. Samples are then split to 1kg sub-samples. Sub-samples are ground to specific sizes fractions (53-106µm) for flotation testwork.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> Chemical analysis for drill core and soil samples was completed by multi element using Inductively Coupled Plasma ICP-AES (multi-acid digestion); ore grade analysis was completed with Atomic Absorption (multi-acid digestion); sulphur analysis was completed with Leco, and Au and PGEs completed via Fire Assay. New samples are being analysed for 48 elements by multi element using ME-MS61 (multi-acid digestion) at ALS Laboratories; ore grade analysis was completed with ICP-AES (multi-acid digestion); sulphur analysis was completed with Leco, and Au and PGEs completed via Fire Assay. ALS Laboratories insert their own standards at set frequencies and monitor the precision of the analysis. The results reported are well within the specified standard deviations of the mean grades for the main elements. Additionally, ALS perform repeat analyses of sample pulps at a rate of 1:20 (5% of all samples). These compare very closely with the original analysis for all elements. Vale inserted standard samples every 20 samples (representing 5%). Mean grades of the standard samples are well within the specified 2 standard deviations. All laboratory procedures are in line with industry standards. Analysis of field duplicates and lab pulp duplicates have returned an average correlation coefficient of over 0.98 confirming that the precision of the samples is within acceptable limits. Vale QAQC procedures and results are to industry standard and are of acceptable quality. All metallurgical chemical analysis is completed by ALS laboratories
Verification of sampling and assaying	<ul style="list-style-type: none"> All historical samples were collected by Vale field geologists. All assay results were verified by alternative Vale personnel. The Centaurus CP has verified the historical significant intersections. Centaurus Exploration Manager and Senior Geologist verify all new results and visually confirm significant intersections. No twin holes have been completed. All primary data is now stored in the Centaurus Exploration office in Brazil. All new data is collected on Excel Spreadsheet, validated, and then sent to independent database administrator (MRG) for storage (DataShed). No adjustments have been made to the assay data.

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Criteria	Commentary
<i>Location of data points</i>	<ul style="list-style-type: none"> All historical collars were picked up using DGPS or Total Station units. Centaurus has checked multiple collars in the field and has confirmed their location. All field sample and mapping points were collected using a Garmin handheld GPS. An aerial survey was completed by Esteio Topografia and has produced a detailed surface DTM at (1:1000 scale). The survey grid system used is SAD-69 22S. This is in line with Brazilian Mines Department requirements. New drill holes are sighted with handheld GPS and after completion picked-up by an independent survey consultant periodically. Downhole survey for all the historical drill holes and Centaurus hole up to JAG-DD-19-012 used Maxibor equipment. All new drill holes are being downhole surveyed using Reflex digital down-hole tool, with readings every metre.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> 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, Jaguar West, Jaguar Northeast and Onça Preta and Onça Rosa.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> 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°) to achieve intersections at the most optimal angle.
<i>Sample security</i>	<ul style="list-style-type: none"> 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.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> The Company is not aware of any audit or review that has been conducted on the project to date.