

Centaurus Metals Limited

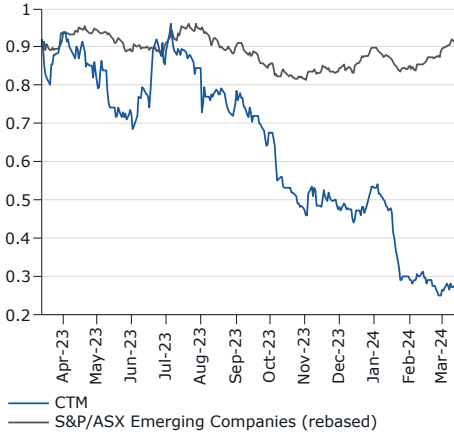
EV Materials

Paul Howard | Analyst | Canaccord Genuity (Australia) Ltd. | phoward@cgf.com | +61.8.9263.1155
Timothy Hoff | Analyst | Canaccord Genuity (Australia) Ltd. | THoff@cgf.com | +61.2.9263.2745

Rating SPECULATIVE BUY <i>from UNDER REVIEW</i>	Price Target A\$0.80 <i>previously UR</i>
CTM-ASX	Price A\$0.28

Market Data

52-Week Range (A\$) :	0.23 - 0.99
Avg Daily Vol (000s) :	137
Market Cap (A\$M) :	138.6
Shares Out. (M) :	495.0
Dividend /Shr (A\$) :	0.00
Net Debt (Cash) (A\$M) :	34.7
Enterprise Value (A\$M) :	111.7
Cash (A\$M) :	1.2
NAV /Shr (A\$) :	0.80
NAV /Shr (5%) (A\$) :	1.56
P/NAV (x) :	0.36



Source: FactSet

Priced as of close of business 13 March 2024

Centaurus Metals Limited (ASX:CTM) is a nickel sulphide focussed developer aiming to bring the 100%-owned Jaguar Project into production by 2027.

A simplified nickel sulphide concentrate operation

Last week, Centaurus Metals (CTM-ASX) announced that it was [deferring the downstream component of its upcoming DFS](#) for the Jaguar Nickel Sulphide Project in Carajás Mineral Province, Brazil. This has led us to review our assumptions. CTM will now revert to a more conventional sulphide concentrate production scenario, reshaping the initial Scoping Study released in March 2021, albeit with 66% more metal in resource. This simplified sulphide DFS, shifting away from that of nickel sulphate production, is set to be delivered by the end of June.

Why the reshaping of the Jaguar DFS? Given the fall in nickel company values over the past 12 months owing to a sharp drop in the nickel price in response to increased supply out of Indonesia, CTM could have been facing upwards of a US\$750m capex hurdle in the Jaguar DFS. Straight concentrate production will allow for a much more palatable capex figure and likely lower operating costs, in our view.

What a new DFS could look like for Jaguar? CTM has grown the Jaguar resource base considerably in the three years since the Scoping Study as outlined in our [initiation of coverage](#). As per our assumptions table in Figure 1, we assume a 70Mt @ 0.85% Ni open pit mining inventory (versus a 109Mt @ 0.87% Ni resource inclusive of 86Mt @ 0.85% Ni M&I) producing 22kt of nickel sulphide (NiS) for 20 years at a C1 of US\$4.80/lb and AISC of <US\$6.00/lb versus a CG long-term nickel price of US\$9.25/lb and spot of US\$8.23/lb. We model a straight line grade (0.85% Ni) and strip ratio (7.1:x) profile. We expect capex for a 3.5Mtpa plant to be in the order of US\$400m, noting that Ero Copper Corp. (ERO-TSX: C\$23.00 | BUY, C\$26.00 target, Dalton Baretto, Canaccord Genuity Corp.) is nearing completion of a US\$310m, 3.5Mtpa open pit operation at Tucumã some 50km from CTM's Jaguar, with first production expected in 2H24 (Figure 2). While ERO will produce a copper concentrate, we see close similarities in likely costs to build large base metals projects in the region. We have inflated our assumed operating costs for Jaguar by 40-50% on CTM's Scoping Study assumptions. We model an 18-month build, with first production coming in early CY27. We estimate average EBITDA and FCF at A\$250mpa and A\$134mpa, respectively.

Alternative opportunities: For Jaguar, we do not write off up-scaling of throughput given the long mine life/large resource, but this comes with increased capex. Conversely and perhaps more likely, CTM may look to mine the higher-grade portions of the Jaguar pits in a smaller-scale, less capital intensive offering, noting the 28.6Mt @ 1.51% Ni high-grade component of the resource; with 30% of this high-grade sitting within 100m of surface.

Funding: Our model assumes US\$450m (A\$670m) inclusive of working capital could be required to build Jaguar. To aid funding, we assume a 20% project sell down to a strategic partner at FID; for 20% of the project NPV, less a 20% discount. This could yield US\$120m (A\$180m) in funding with CTM to retain 80% ownership of the project (Figure 3). This would leave CTM with a ~US\$240m (A\$360m) funding gap, which we assume is covered through a mix of debt and equity.

Valuation and recommendation: We have updated our model for what we think an initial DFS assessing NiS concentrate production at Jaguar will look like. Our unrisks NAV equates to \$1.25/sh for CTM. Adding 50% risking to our valuation given the unknowns around funding, scale, and costs, our price target is \$0.80 (\$0.70 at spot). We therefore retain our SPECULATIVE BUY rating on valuation grounds.

We believe a nickel development asset is a challenging sell in this current market environment. However, Jaguar is one of the largest undeveloped nickel projects on the ASX and is potentially low cost owing to the power supply situation in Brazil (hydro). When the tides turn and nickel pricing is more favorable, CTM will be one of the first files to be dusted off, in our view.

Figure 1: CTM prior and Canaccord Genuity project assumptions

cg/	Units	CTM Scoping Study March 2021	CTM Value-Add Scoping Study May 2021	CGe May 2023	CGe Mar 2024	CGe Spot
Resource tonnes	Mt	58.9	58.9	108.0	108.0	108.0
Resource grade	%	0.96%	0.96%	0.87%	0.87%	0.87%
Assumed mine inventory	Mt	32.8	45.0	81.0	70.0	70.0
Avg LOM Nickel grade	%	0.84%	0.80%	0.81%	0.85%	0.85%
Strip ratio	w:o	6.5	6.5	7.1	7.1	7.1
Mine Life	yrs	10	12.5	20.0	20.0	20.0
Milled	Mt	24	33.7	59.0	68.5	68.5
Avg LOM Nickel grade	%	1.08%	1.01%	0.96%	0.85%	0.85%
Average annual ore processed	Mtpa	2.4	2.7	3.0	3.5	3.5
Nickel recovery	%	78%	82%	75%	75%	75%
LOM recoverable nickel	kt	203	262	424	437	437
Avg annual recoverable nickel sulphide	ktpa	20	21	21	22	22
Average LOM nickel price	US\$/lb	7.50	7.50	9.00	9.25	8.23
Total Revenue	US\$M	2,422	4,530	7,995	6,311	5,955
Total Operating Costs	US\$M	1,377	2,469	2,710	4,148	4,128
Mining - o/p	US\$/t	2.41	2.62	3.30	3.50	3.50
Mining - underground	US\$/t	50.54	47.53	-	-	-
Processing	US\$/t	11.33	28.02	28.00	17.00	17.00
G&A + Logistics	US\$/t	5.68	4.59	5.46	5.00	5.00
C1	US\$/lb	2.41	3.29	4.28	4.80	4.80
AISC	US\$/lb	2.97	3.94	5.00	5.87	5.85
Royalties	US\$M	110	165	199	140	133
Total Project capital	US\$M	316	501	654	640	640
Pre-production capital	US\$M	178	288	393	400	400
Sustaining capital	US\$M	138.0	213	262	240	240

Source: Company Reports, Canaccord Genuity estimates

Figure 2: CG assumptions versus ERO DFS assumptions

cg/	Units	CGe Mar 2024	Ero Copper - Tucumã Copper Project
Strip ratio	w:o	7.1	3.7
Mine Life	yrs	20.0	12.0
Milled	Mt	68.5	41.6
Average annual ore processed	Mtpa	3.5	3.5
Mining - o/p	US\$/t	3.50	2.23
Processing	US\$/t	17.00	5.92
G&A + Logistics	US\$/t	5.00	1.52
Total Project capital	US\$M	640	506
Pre-production capital	US\$M	400	310
Sustaining capital	US\$M	240	196

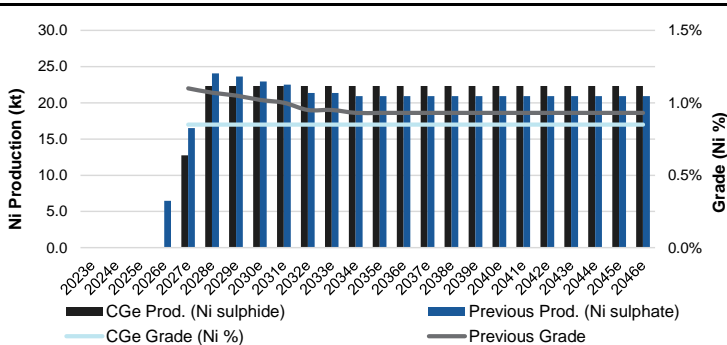
Source: Company Reports, Canaccord Genuity estimates

Figure 3: Project sell down assumptions

Project Selldown:	How much?	When?	Amount?
20% of NPV at the time -20% discount	20%	Jun-25	
NPV (US\$m) @ 30-Jun-25			\$754
20% of NPV (US\$m) @ 30-Jun-25			\$151
20% of NPV (US\$m) @ 30-Jun-25 -20% discount			\$121
20% of NPV (A\$m) @ 30-Jun-25 -20% discount			\$180

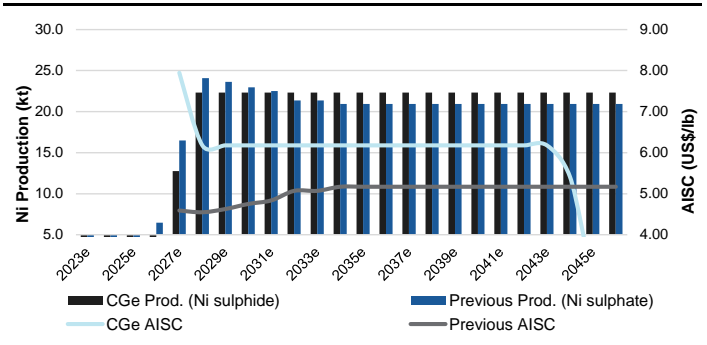
Source: Canaccord Genuity estimates

Figure 4: CGe current vs prior production and grade



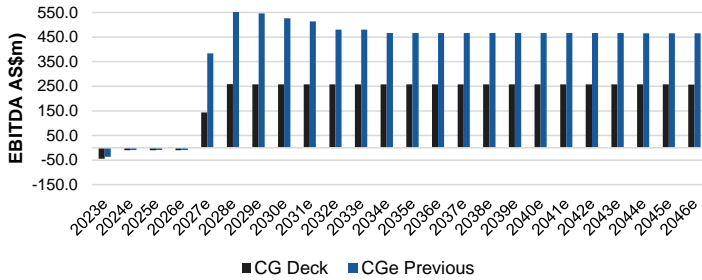
Source: Canaccord Genuity estimates

Figure 5: CGe current vs prior production and AISC



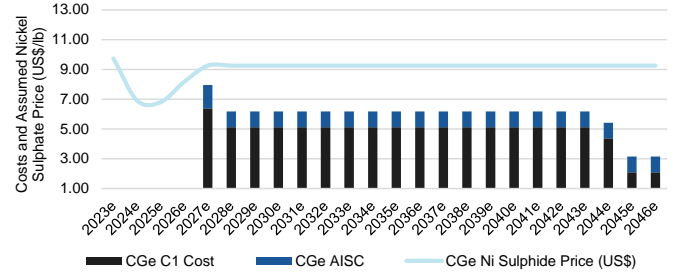
Source: Canaccord Genuity estimates

Figure 6: CGe current vs prior EBITDA



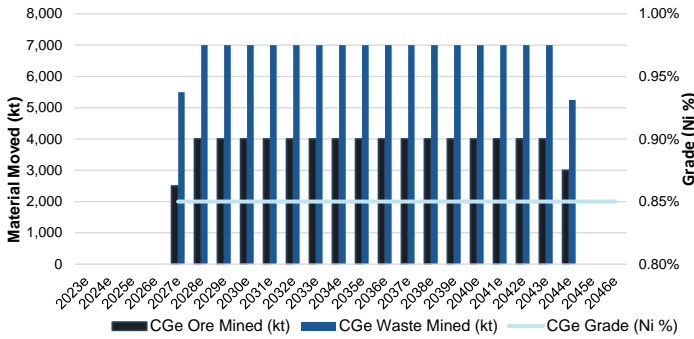
Source: Canaccord Genuity estimates

Figure 7: CGe C1, AISC and pricing



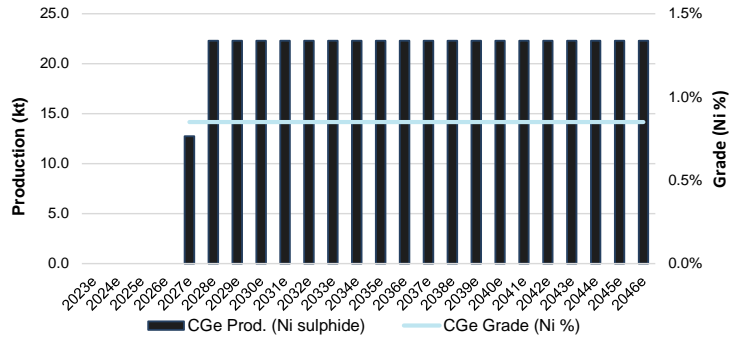
Source: Canaccord Genuity estimates

Figure 8: CGe material mined and grade



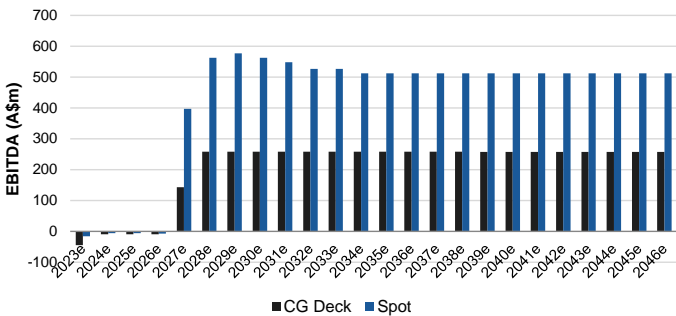
Source: Canaccord Genuity estimates

Figure 9: CGe production and grade



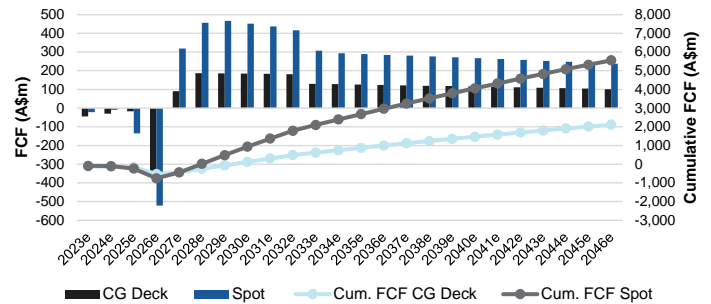
Source: Canaccord Genuity estimates

Figure 10: CGe EBITDA at CG deck and spot



Source: Canaccord Genuity estimates

Figure 11: CGe free cash flow at CG deck and spot



Source: Canaccord Genuity estimates

Figure 12: Financial Summary

Centaurus Metals Ltd		ASX:CTM			
Analyst :	Paul Howard			Rating:	SPEC BUY
Date:	13/03/2024			Target Price:	A\$0.80
Year End:	December				
Market Information					
Share Price	A\$	0.28			
Market Capitalisation	A\$m	138.6			
12 Month Hi	A\$	0.99			
12 Month Lo	A\$	0.23			
Issued Capital	m	495.0			
Options	m	0.0			
Fully Diluted	m	495.0			
Valuation					
		A\$m	Risk Adj.	A\$/share	
Jaguar	NPV @ 12%	390.6	50%	0.46	
Potential by-product credits		-	0%	-	
Exploration & Other assets		50.0		0.06	
Corporate		(24.2)		(0.03)	
Net Cash as at 31-Dec-23		34.7		0.04	
ITM Options		-		-	
Future Equity		208.8		0.25	
TOTAL NAV		659.9		0.79	
Price/NAV				0.36x	
Target Price				0.80	
Assumptions					
		2022a	2023e	2024e	2025e
Nickel Price (US\$/lb)		11.89	9.73	6.92	6.80
Cobalt Price (US\$/lb)		28.95	15.57	12.70	12.70
AUD:USD		0.69	0.67	0.67	0.67
Sensitivity					
Production Metrics					
		2025e	2026e	2027e	2026e
Jaguar					2027e
Nickel sulphate (kt)		0.0	0.0	12.8	22.3
Cash cost (A\$/lb Ni payable)		0.0	0.00	9.13	7.32
AISC (A\$/lb Ni payable)		0.0	0.00	11.35	8.83
Resources					
		Mt	Ni (%)	Ni (kt)	
Jaguar Project					
Measured		14	1.07	149	
Indicated		72	0.81	581	
Inferred		22	0.94	208	
Total		108	0.87	939	
Assumed Mining Inventory					
		Mt	Ni (%)	Ni (kt)	
Jaguar Project					
Open Pit		70	0.85	595	
Underground		0	0.00	0	
Total		70	0.85	595	
Iron Ore Assets					
		Mt	Fe (%)	Fe (Mt)	
Jambreiro					
Proved		35.4	25.8%	9	
Probable		13.1	27.2%	4	
Total		48.5	26.2%	13	
Resources					
		Mt	Fe (%)	Fe (Mt)	
Jambreiro, Canavial, Passabém					
Total		193.7	29.0%	56	
Company Description					
Centaurus Metals Limited (ASX:CTM) is a nickel sulphide developer aiming to bring the 100%-owned Jaguar Project into production by 2027. The project is located in the world-class Carajás Mineral Province in Brazil. Scoping Studies for both an upstream mining operation to produce nickel sulphide concentrate, and a downstream value-add scenario to produce +20ktpa of nickel in sulphate have been completed. A DFS is expected in the JunQ24 and will be underpinned by a 66% larger resource.					
Profit & Loss (A\$m)					
		2022a	2023e	2024e	2025e
Revenue		0.0	0.0	0.0	0.0
Other Income		0.5	0.0	0.0	0.0
Operating Costs		0.0	0.0	0.0	0.0
Exploration expensed/written off		-36.2	-39.4	-5.0	-5.1
Corporate/Other expenses		-7.9	-5.3	-4.8	-4.8
EBITDA		-43.6	-44.8	-9.8	-9.9
Dep'n		-0.4	0.0	0.0	0.0
Net Interest		1.3	0.9	1.0	2.9
Other		0.0	0.0	0.0	0.0
Tax		0.0	14.9	1.3	1.1
NPAT (reported)		-42.6	-29.0	-7.5	-5.9
Abnormals		0.0	0.0	0.0	1.0
NPAT		-42.6	-29.0	-7.5	-5.9
EBITDA Margin					
		<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
EV/EBITDA					
		<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
EPS		-\$0.086	-\$0.059	-\$0.015	-\$0.012
EPS Growth		22%	85%	-78%	-33%
PER		-3.3x	-4.8x	-18.5x	-23.4x
Dividend Per Share		\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield		0.0%	0.0%	0.0%	0.0%
Cash Flow (A\$m)					
		2022a	2023e	2024e	2025e
Cash Receipts		0.0	0.0	0.0	0.0
Cash paid to suppliers & employee		-3.8	-5.3	-4.8	-4.8
Tax Paid		0.0	0.0	0.0	0.0
Exploration and growth		-36.2	-38.2	-4.8	-4.8
+/- Working cap change		0.0	0.0	0.0	1.0
Operating Cash Flow		-40.0	-43.5	-9.6	-9.6
Exploration evaluation		0.0	0.0	-20.0	-20.4
Capex		0.0	0.0	0.0	-168.0
Other		-6.9	-1.3	0.0	180.0
Investing Cash Flow		-6.9	-1.3	-20.0	-8.2
Debt Drawdown (repayment)		0.0	0.0	0.0	178.8
Share capital		72.5	47.5	30.0	178.8
Dividends		0.0	0.0	0.0	0.0
Net interest		0.0	-2.1	1.0	2.9
Financing Cash Flow		72.5	45.4	31.0	181.7
Opening Cash		8.3	34.0	34.7	36.8
Increase / (Decrease) in cash		25.6	0.6	1.3	163.9
FX Impact		0.2	0.1	0.8	0.8
Closing Cash		34.0	34.7	36.8	201.4
Op. Cashflow/Share					
		-\$0.08	-\$0.09	-\$0.02	-\$0.02
P/CF					
		<i>nm</i>	-3.2x	<i>nm</i>	-14.4x
FCF					
		<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
EV/FCF					
		<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
FCF Yield					
		-34%	-32%	-21%	-13%
Balance Sheet (A\$m)					
		2022a	2023e	2024e	2025e
Cash + S/Term Deposits		34.0	34.7	36.8	201.4
Other current assets		1.4	0.0	0.0	100.8
Current Assets		35.4	34.7	36.8	302.2
Property, Plant & Equip.		8.9	8.9	8.9	176.9
Exploration & Develop.		0.0	0.0	0.0	168.0
Other Non-current Assets		0.1	0.0	0.0	0.0
Payables		4.6	0.0	0.0	0.0
Short Term Debt		2.0	0.0	0.0	0.0
Long Term Debt		0.7	0.0	0.0	178.8
Other Liabilities		0.8	2.5	165.1	429.8
Net Assets		49.3	67.9	90.4	263.2
Shareholders Funds		236.3	283.8	313.8	492.6
Reserves		-5.8	-5.8	-5.8	-5.8
Retained Earnings		-181.1	-210.1	-217.6	-223.5
Total Equity		49.3	67.9	90.4	263.2
Debt/Equity					
		1%	0%	0%	71%
Net Debt/EBITDA					
		0.8x	0.8x	3.8x	21.0x
Net Interest Cover					
		<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
ROE					
		-86%	-43%	-8%	-2%
ROIC					
		-285%	-324%	-84%	-1%
Book Value/share					
		0.10	0.14	0.18	0.53

Source: Company Reports, Canaccord Genuity estimates, FactSet

Appendix: Important Disclosures

Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Sector Coverage

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

Investment Recommendation

Date and time of first dissemination: March 13, 2024, 09:46 ET

Date and time of production: March 13, 2024, 09:46 ET

Target Price / Valuation Methodology:

Ero Copper Corp. - ERO

Our target price is based on an equal weighting of 5.0x ntm EBITDA and 1.0x NAV, both measured as at January 1, 2025.

Centaurus Metals Limited - CTM

Our price target (NPV12%) is on a fully diluted basis and risked 50% to account for changing scope of the project. Our project valuation is based on our interpreted development/production scenario at Jaguar. Given the early stage of development of the project along with the financing and permitting stages to progress through, we have applied a 50% risk weighting to our project valuation to capture project and financing risks. Our net asset valuation per share is based on a fully financed scenario inclusive of equity dilution and fully drawn project debt.

Risks to achieving Target Price / Valuation:

Centaurus Metals Limited - CTM

Financing risks

As an exploration and development company with no material income, CTM is highly reliant on equity and debt markets to fund development of its assets and progress its regional exploration pipeline. Further, we can make no assurances that accessing these markets will be done without further dilution to shareholders.

Exploration and development risks

Exploration is subject to a number of risks and can require a high rate of capital expenditure. Risks can also be associated with conversion of resources and lack of accuracy in the interpretation of geochemical, geophysical, drilling and other data. No assurances can be given that exploration will delineate further mineral resources nor that the company will be able to convert the current Mineral Resource into Ore Reserves. The Scoping Studies completed to date are at a low (+/-40%) level of accuracy and present both upside and downside risk to our valuation.

Operating risks

If/when in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (meeting design recoveries within a complex flowsheet), materials handling and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets considerably and negatively impact valuation. Further, the actual characteristics of an ore deposit may differ significantly from initial interpretations which can also materially impact forecast production from original expectations.

Commodity price and currency fluctuations

As with any development company, CTM is directly exposed to commodity price and currency fluctuations. Commodity price fluctuations are driven by many macroeconomic forces including inflationary pressures, interest rates and supply and demand factors. These factors could reduce the profitability, costing and prospective outlook for the business.

Geopolitical risks

CTM's key asset is located in Brazil, which is considered an emerging market. As such, CTM, through the Jaguar Nickel Sulphide Project, carries a higher degree of economic, political, social, legal and legislative risk. Brazil has a well-established and stable mining industry.

Ero Copper Corp. - ERO

Ero is subject to operating risks, as well as fluctuations in metal prices and the BRL exchange rate. In addition, the company currently has a significant amount of financial leverage.

Distribution of Ratings:

Global Stock Ratings (as of 03/13/24)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	605	65.83%	22.64%
Hold	134	14.58%	8.21%
Sell	13	1.41%	15.38%
Speculative Buy	157	17.08%	47.77%
	919*	100.0%	

*Total includes stocks that are Under Review

Canaccord Genuity Ratings System

BUY: The stock is expected to generate returns greater than 10% during the next 12 months.

HOLD: The stock is expected to generate returns from -10% to 10% during the next 12 months.

SELL: The stock is expected to generate returns less than -10% during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

Given the inherent volatility of some stocks under coverage, price targets for some stocks may imply target returns that vary temporarily from the ratings criteria above.

*As of January 1, 2024, the Ratings History Chart will reflect the new Canaccord Genuity Ratings System as defined above.

Risk Qualifier

SPECULATIVE: The stock bears significantly above-average risk and volatility. Investments in the stock may result in material loss.

12-Month Recommendation History (as of date same as the Global Stock Ratings table)

A list of all the recommendations on any issuer under coverage that was disseminated during the preceding 12-month period may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <http://disclosures-mar.canaccordgenuity.com/EN/Pages/default.aspx>

Required Company-Specific Disclosures (as of date of this publication)

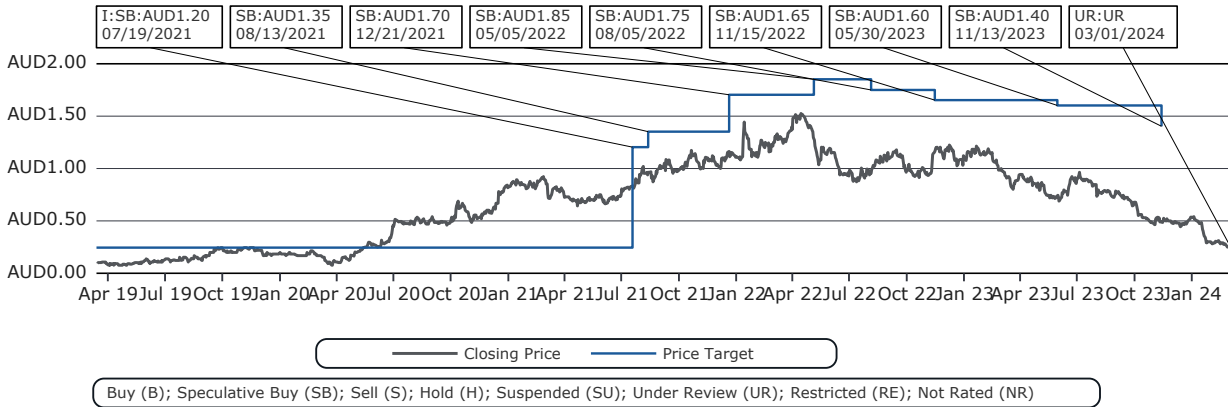
Centaurus Metals Limited and Ero Copper Corp. currently are, or in the past 12 months were, a client of Canaccord Genuity or its affiliated companies. During this period, Canaccord Genuity or its affiliated companies provided investment banking services to Centaurus Metals Limited and Ero Copper Corp..

In the past 12 months, Canaccord Genuity or its affiliated companies have received compensation for Investment Banking services from Centaurus Metals Limited and Ero Copper Corp. .

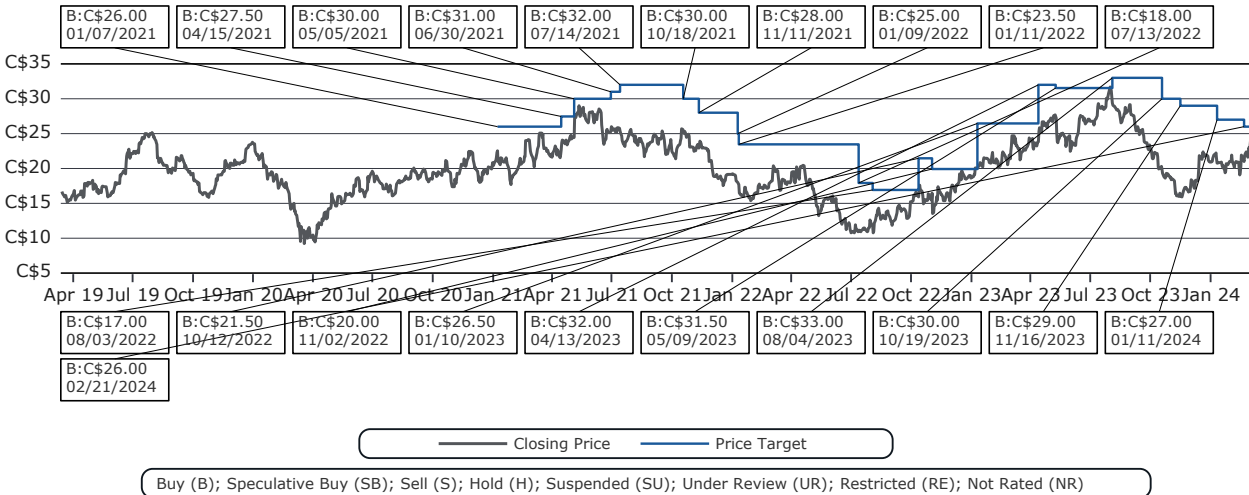
In the past 12 months, Canaccord Genuity or any of its affiliated companies have been lead manager, co-lead manager or co-manager of a public offering of securities of Centaurus Metals Limited or any publicly disclosed offer of securities of Centaurus Metals Limited or in any related derivatives.

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Investment Banking services from Centaurus Metals Limited and Ero Copper Corp. in the next three months.

Centaurus Metals Limited Rating History as of 03/12/2024



Ero Copper Corp. Rating History as of 03/12/2024



Past performance

In line with Article 44(4)(b), MiFID II Delegated Regulation, we disclose price performance for the preceding five years or the whole period for which the financial instrument has been offered or investment service provided where less than five years. Please note price history refers to actual past performance, and that past performance is not a reliable indicator of future price and/or performance.

Online Disclosures

Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx>; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to disclosures@cgf.com. The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

General Disclaimers

See "Required Company-Specific Disclosures" above for any of the following disclosures required as to companies referred to in this report: manager or co-manager roles; 1% or other ownership; compensation for certain services; types of client relationships; research analyst conflicts; managed/co-managed public offerings in prior periods; directorships; market making in equity securities and related derivatives. For reports identified above as compendium reports, the foregoing required company-specific disclosures can be found in a hyperlink located in the section labeled, "Compendium Reports." "Canaccord Genuity" is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity LLC, Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 80%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity LLC, a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with

principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Investment Banking activities, or to recommendations contained in the research.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

From time to time, Canaccord Genuity salespeople, traders, and other professionals provide oral or written market commentary or trading strategies to our clients and our principal trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses also from time to time make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

Research Distribution Policy

Canaccord Genuity research is posted on the Canaccord Genuity Research Portal and will be available simultaneously for access by all of Canaccord Genuity's customers who are entitled to receive the firm's research. In addition research may be distributed by the firm's sales and trading personnel via email, instant message or other electronic means. Customers entitled to receive research may also receive it via third party vendors. Until such time as research is made available to Canaccord Genuity's customers as described above, Authoring Analysts will not discuss the contents of their research with Sales and Trading or Investment Banking employees without prior compliance consent.

For further information about the proprietary model(s) associated with the covered issuer(s) in this research report, clients should contact their local sales representative.

Short-Term Trade Ideas

Research Analysts may, from time to time, discuss "short-term trade ideas" in research reports. A short-term trade idea offers a near-term view on how a security may trade, based on market and trading events or catalysts, and the resulting trading opportunity that may be available. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (i.e. one-year or greater) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term 'Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or 'Speculative Buy' could be considered susceptible to a downward price correction, or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas are not ratings, nor are they part of any ratings system, and the firm does not intend, and does not undertake any obligation, to maintain or update short-term trade ideas. Short-term trade ideas are not suitable for all investors and are not tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein. Please contact your salesperson for more information regarding Canaccord Genuity's research.

For Canadian Residents:

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canaccord Genuity Corp. is registered and regulated by the Canadian Investment Regulatory Organization (CIRO) and is a Member of the Canadian Investor Protection Fund. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

For United States Persons:

Canaccord Genuity LLC, a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity LLC. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

For United Kingdom and European Residents:

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

For Jersey, Guernsey and Isle of Man Residents:

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.

CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

For Australian Residents:

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited or its Wealth Management affiliated company, Canaccord Genuity Financial Limited ABN 69 008 896 311 holder of AFS Licence No 239052. This report should be read in conjunction with the Financial Services Guide available here - [Financial Services Guide](#).

For Hong Kong Residents:

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited which is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Limited. (Contact Tel: +852 3919 2561) in respect of any matters arising from, or in connection with, this research.

Additional information is available on request.

Copyright © Canaccord Genuity Corp. 2024 – Member CIRO/Canadian Investor Protection Fund

Copyright © Canaccord Genuity Limited. 2024 – Member LSE, authorized and regulated by the Financial Conduct Authority.

Copyright © Canaccord Genuity LLC 2024 – Member FINRA/SIPC

Copyright © Canaccord Genuity (Australia) Limited. 2024 – Participant of ASX Group, Cboe Australia and of the NSX. Authorized and regulated by ASIC.

All rights reserved. All material presented in this document, unless specifically indicated otherwise, is under copyright to Canaccord Genuity Corp., Canaccord Genuity Limited, Canaccord Genuity LLC or Canaccord Genuity Group Inc. None of the material, nor its content, nor any copy of it, may be altered in any way, or transmitted to or distributed to any other party, without the prior express written permission of the entities listed above.

None of the material, nor its content, nor any copy of it, may be altered in any way, reproduced, or distributed to any other party including by way of any form of social media, without the prior express written permission of the entities listed above.