

Centaurus Metals (CTM AU)

11 May 2020

Ticker: CTM AU

Net cash (Mar 2020): A\$7.5m

Project: Jaguar

Market cap: A\$57m

Price: A\$0.22/sh

Country: Brazil

RECOMMENDATION: NOT RATED / COVERED

Centaurus acquired Jaguar from Vale in a 2019 land-swap, allowing access to (i) a project unseen by the wider market, which is (ii) heavily drilled but on a bulk-tonnage basis, leaving (iii) the opportunity to quickly define a mid-size high grade pitable nickel-sulfide project with (iv) underground legs and satellite growth. The asset is of rare hydrothermal derivation, hence higher-grades, bulk scale and deep roots. We like the blend of scale and grade; scale attractive to majors comes from the legacy 40Mt Ni @ 0.78%, while an SCPe 10-15Mt @ 1.5-2% provides grade sufficient for a junior to self-develop. We see plenty of growth beyond the drilling limited to 250m as ore zones are open to depth, with undrilled tenements to the west showing more geophysical anomalies, itself a valuable deposit characteristic that speeds vectoring. Metallurgical work points to >80% recovery to a desirable low-As, low-Mg, 16% Ni concentrate. Within Brazil, the location is ideal logistically and politically, being sufficiently inland to be away from population centers, but not so far to be in jungle or indigenous areas, and lying adjacent to Vale’s Onça Puma ‘mega mine’ for infrastructure. Centaurus remains catalyst heavy with a maiden resource expected in 2H20. The rarity of nickel sulfides, particularly high-grade ones with exploration upside, make Centaurus stand out; at 12.5Mt @ 1.75% (mid-point of our resource estimate), we estimate the stock trades at just US\$142/t resource against peers trading at US\$100-600/t resource, and US\$1,500-2,500/t reserve. The scarcity of nickel sulphide projects should command a premium, as exemplified by the A\$628m asset valuation of Legend Mining in Australia.

Figure 1: Asset location in middle ground showing ease of access

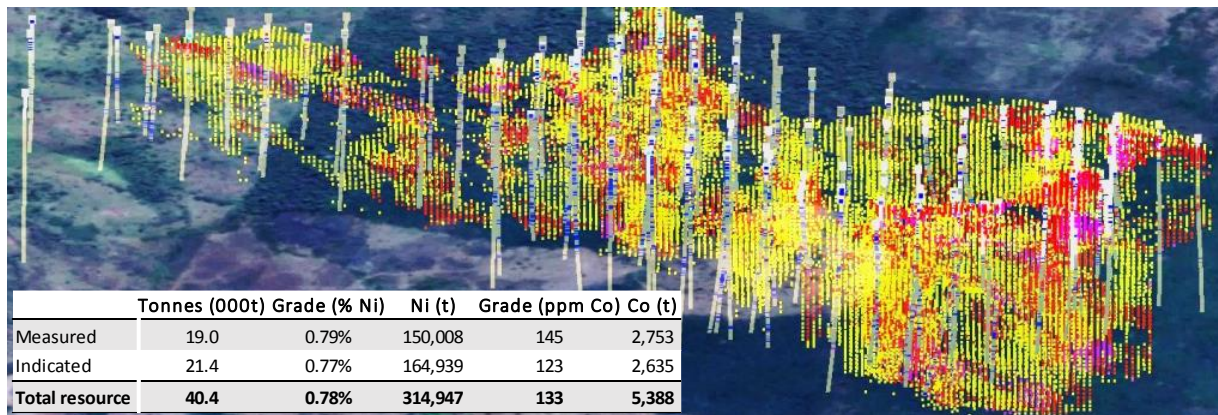


Source: SCP

SCP RADAR: Experienced Brazilian Centaurus unlocking nickel sulfide value from Vale discovery

Without a single press release, Vale scoped their 2008 Carajás discovery quickly with 55,000m of drilling and initial metallurgical studies. Vale’s focus was a bulk-tonnage asset. The non-JORC 40.4Mt @ 0.78% Ni defined lacked the mammoth size to “move the needle”, lying dormant until acquired in 2H19. Centaurus has been active in Brazil for over a decade having explored for and developed base, ferrous and precious metals, giving them a strong in country team led by Brazilian ex-Vale engineer Bruno Scarpelli.

Table 1. Vale historic resource for Jaguar showing 100m spaced grid drilling for 315kt Ni

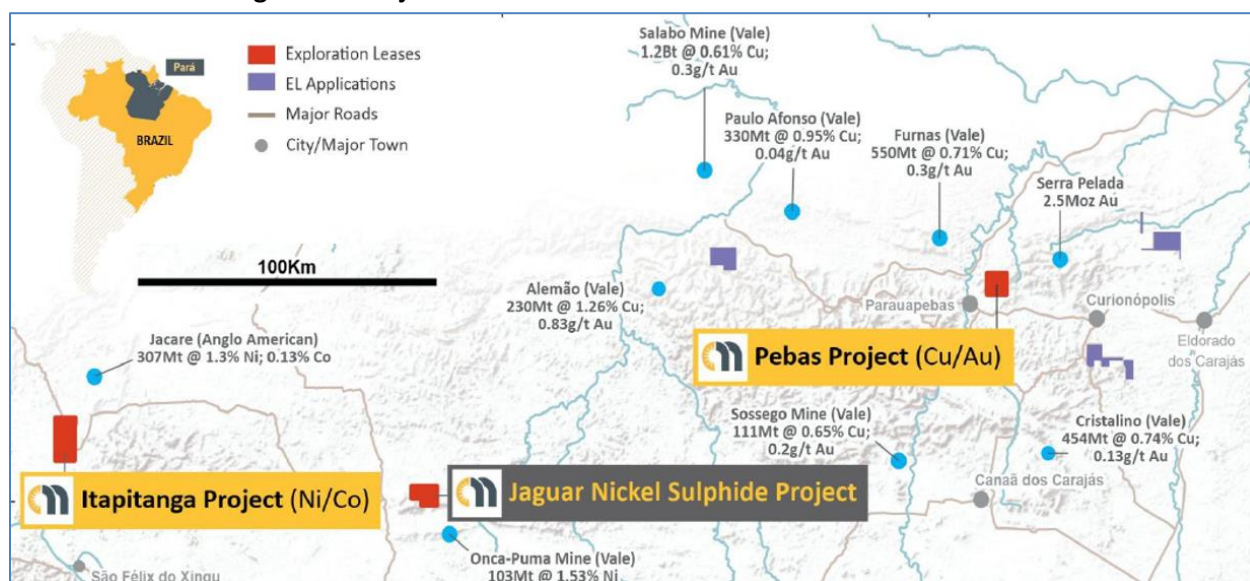


Source: Jaguar

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Acquisition: Jaguar was acquired in a land-swap for exploration ground around Vale's Salobo mine, an upfront US\$250k, US\$1.75m due within three years, construction funding or FS commencement, US\$5m due at first production, and a 0.75% royalty and a ROFR on concentrate discussed below. **Location:** the project lies on farmland, well outside the 10 km area of influence from native jungle where other Brazilian projects have had problems historically. The project, and all drainage, is away from indigenous reserves around 15km east. Three landowners cover 80% of the project. Centaurus has a positive relationship with them exemplified by full access for exploration being granted quickly post-acquisition, with Vale historically having helped land owners register the farms, a key step in gaining access. Mining towns of Tucumã and Ourilândia do Norte lie 35km to the south, access is by road with a 230kVA substation 15km SE at the Onça-Puma ferronickel plant.

Figure 2: Carajás Province mineral endowment and infrastructure

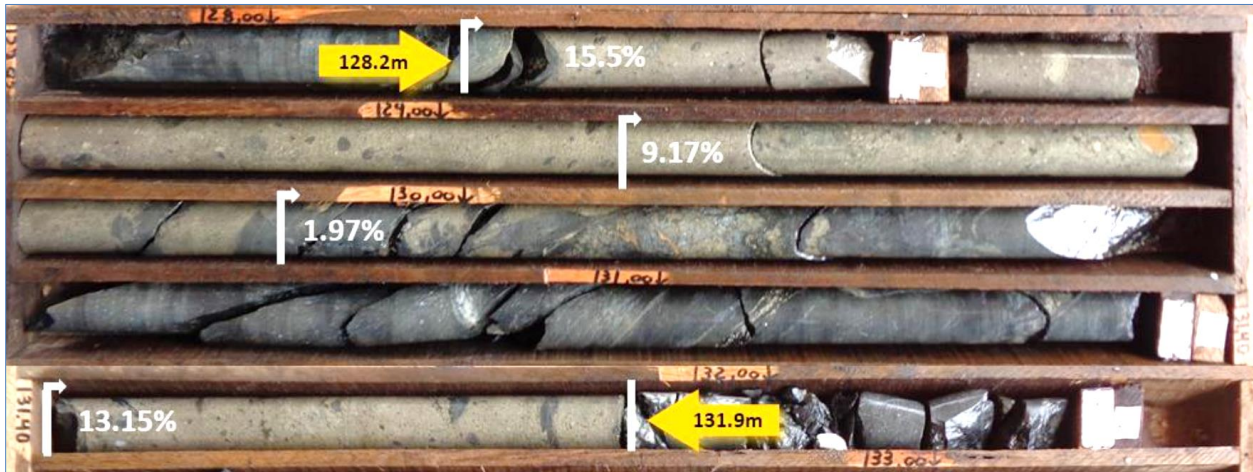


Source: Centaurus Metals

Atypical geology provides advantages for exploration

Jaguar is unusual in the universe of Nickel sulfide deposits, having formed hydrothermally rather than as a flow / intrusion cumulate, with similarities in ore controls to Iron oxide copper gold (IOCG) deposits in the region. Carajás' preeminence as an IOCG district demonstrate the large hydrothermal fluid volumes regionally. At Jaguar, during orogenesis, nickel was likely scoured from ultramafic plutons 2km away, transported through major WNW regional scale faults, and re-precipitated at its current location. Jaguar thus has low copper and PGEs compared to magmatic nickel systems, with LREE and iron enrichment. Ore is hosted in volcanics and volcanoclastics as (i) lower grade disseminated to stringer sulfides that comprise most of Vale's tonnage, but also (ii) high-grades in higher strain portions of shear zones, characterized by discrete massive to semi-massive sulfide and magnetite. As the higher grades express themselves within single coherent faults, rather than broad anastomosing shear zones, they offer excellent targets for mineable high-grade ore zones. Importantly, the semi-massive to massive sulfides within higher-grade zones are detectable, from ground magnetics given magnetite is the dominant infill mineral, and more precisely with downhole electromagnetics. This provides a straightforward set of geophysical tools to help detect relatively small, steeply dipping targets, and ultimately improving the future ROI from exploration.

Figure 3: Massive to semi-massive sulfides from Jaguar South

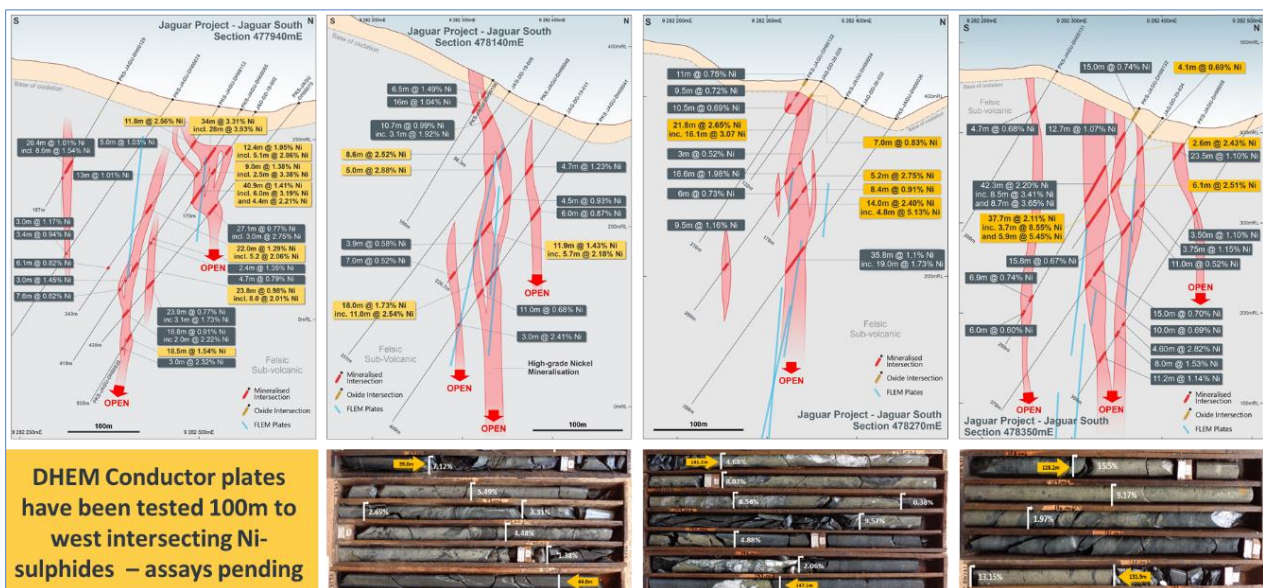


Source: Centaurus Metals

Switch to higher-grades a game-changer for project development

To define the scale of the disseminated mineralization Vale initially grid-drilled on a 100m spacing. Isolated hits of higher-grade massive breccia and shear-hosted ore hinted at the potential, but left continuity questions. Onça Rosa and Onça Preta are hosted in the granitic basement, forming a tabular ore body in a dilatant jog, while the Jaguar resource are structurally controlled mylonitised dacites, meaning both have high-grade zones in semi- and massive-sulfides, and lower-grade haloes of disseminated material. Centaurus' 9,000m of drilling, in addition to the 55,000m from Vale, has now defined good continuity of the higher-grade ore bodies readily amenable to early mining. Recent highlights include **38m at 2.1% Ni** from 109m and **22m @ 2.6% Ni** from 22m at Jaguar S., and **10m @ 4% Ni** from 62m at Onça Preta and **9m @ 3.3% Ni** from 281m at Onça Rosa. A maiden resource is targeted for mid-year, focusing on the higher grade massive and semi-massive sulphide zones: we expect 10-15Mt @ 1.5-2% Ni. This will broadly segregate into near-surface pitable material including disseminated, semi- and massive sulphides, with UG resources tapping deeper roots on higher grade semi- and massive sulphides.

Figure 4. Jaguar South sections over >600m strike and >300m depth



DHEM Conductor plates have been tested 100m to west intersecting Ni-sulphides – assays pending

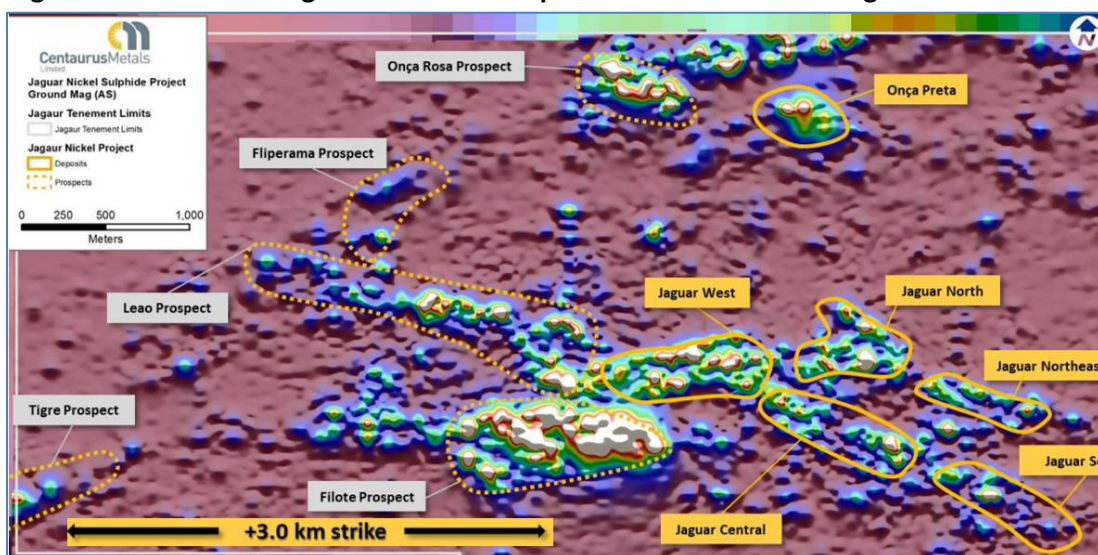
Source: Centaurus

Upside potential

Centaurus has not drilled deeper than 300m vertical, averaging ~250m vertical. The re-focus on high-grade allows underground mining and shows an obvious path for growth - down. The interpretation from detailed drilling clearly shows a sub-vertical orientation on the high-grade ore and serves to emphasize how the orebody is wide open at depth, towards its hydrothermal genesis. Paired with downhole EM to target sulfide lodes adding tons at depth is a low-risk strategy. We draw parallels with **Rio Narcea's Aguablanca** which had similar resource metrics to what we expect at 15Mt at 0.6%Ni and 0.5% Cu, after proving depth extensions to 400m, Lundin's 2007 acquisition valued that asset at US\$550m.

Most of the existing resource sits at Jaguar and Onça Preta. Outside that, several high-priority satellite targets have been highlighted by geophysics. Vale didn't drill Western parts of the tenement as they focused on the core. Having secured access agreements with landowners, Centaurus infilled the entire area with detailed ground magnetics and is now surface-sampling and mapping. A fixed loop EM-survey will be the final step to define initial targets. Prospects such as Tigre and Filote are quickly emerging as priorities and could be ready for future drilling as soon as 2H20.

Figure 5: Plan view of Jaguar with drilled deposits in solid lines and targets in dashed lines



Source: Centaurus Metals

Premium low-As low-MgO concentrate offers flexibility

Vale optimized work to deliver a high concentrate grade for Voiseys Bay, achieving >23% but at only 64% recovery. However, with host dacite and granitoid, nickel silicates that prohibit higher recovery on Australian projects are uncommon. Peers sell as low as 8-10% concentrate, or 12-14% for larger projects such as Leinster, so Centaurus can simply drop concentrate grade to improve recovery. 1Q20 results from two composites at Jaguar South and one from Onça Preta showed just this with 82% recovery to a 16% concentrate from 1.5%-1.6% Ni samples. Fe:MgO of 5.5:1, while lower than Vale's 8.6:1, is well above the ~1-4:1 common to large low-grade 'Type 2' deposits with requisite need to blend (higher MgO = higher temperature melt = higher energy cost + greater refractory lining degradation). At just 25ppm arsenic, Jaguar's concentrate is well under 500ppm levels common to industry. Combined concentrate grade, low MgO and low arsenic should command a premium as a blending source. Vale's concentrate ROFR (at market pricing) is useful as sales to Vale would allow access to rail infrastructure. The port of Belem lies ~950km away, so even trucking concentrate only equates to ~5% payability deduction, or ~half that if on rail. Further metallurgical testing is underway on a new 75kg composite sample from Jaguar South.

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Permitting

The terms of reference for environmental permitting have been agreed, so Centaurus is now collecting baseline data ahead of a target 2Q21 to lodge an EIA/RIMA. This timing would dovetail with the company's goal of delivering a PFS around the same time, outlining the project footprint and impact. Permitting is expected to be simpler than in other areas as most of the project is in pasture and farmland, well beyond the area of influence of any indigenous reservations and native forest.

Valuing the opportunity

We show EV/resource and EV/reserve for nickel sulfide peers below. Recent discovery Chalice is valued at A\$355m. Legend's 70% ownership gives an asset valuation of A\$628m, demonstrating the 'rightly or wrongly' premium that nickel sulphide names trade at on the ASX, itself a reflection of the scarcity value. There is a large variation in EV/resource from ~US\$100-600/t, and US\$1,500-2500/t reserve. Jaguars low-grade resource already puts Centaurus on just US\$100/t, or US\$100-200/t based on the high- and low-end SCP targets of 10Mt @ 1.5% Ni and 15Mt @ 2.0% Ni, clearly demonstrating a large upside if resources of this size can be taken through to reserve.

Table 2. Fully-diluted EV and EV/in-situ for nickel sulphide explorers, developers and producers

Nickel sulphide peers	Mincor	W. Areas	Panoramic	Poseidon	Centaurus			Chalice	Legend
					SCPe low ¹	SCPe high ²	Existing ³		
FD market cap (A\$m)	224	598	92	90	61	61	61	364	469
FD EV net cash / fr. options (A\$m)	168	417	102	59	48	48	48	355	440
Resource (000t NiEq)	188	931	295	419	150	300	315	-	-
EV/resource (US\$/t)	576	289	223	91	207	103	99	-	-
Reserve (000t NiEq)	65	264	150	28	-	-	-	-	-
EV/reserve (US\$/t)	2566	1577	679	2076	-	-	-	-	-

Source: company data, priced May 5, NiEq unadjusted in-situ at spot 559c/lb Ni, 238c/lb Cu and US\$13.41/lb Co at spot 0.646 AUD/USD; 1: 10Mt @ 1.5% Ni; 2: 15Mt @ 2% Ni; 3: Existing 40Mt @ 0.78% Ni

Why we like Centaurus

1. Deposit hasn't been explored through paradigm of high-grade junior producer
2. Near surface occurrence of semi- and massive-sulfides is globally unique
3. Semi and massive sulfides can be targeted predictively with surface and down-hole geophysics
4. Natural off-taker in Vale but sellable product if they don't exercise their ROFR
5. Initial permitting and metallurgy stages don't show any red flags

Catalysts

- Mid year: Maiden resource estimate
- 3Q20: Regional exploration at high priority targets
- 4Q20: Expected commencement of PFS pending internal scoping study
- 2Q21: Lodge environmental license

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