

## Centaurus Metals (CTM AU)

# Jaguar roars with maiden JORC: initiating coverage

RECOMMENDATION: **BUY**

PRICE TARGET: **A\$0.95/sh**

RISK RATING: **HIGH**

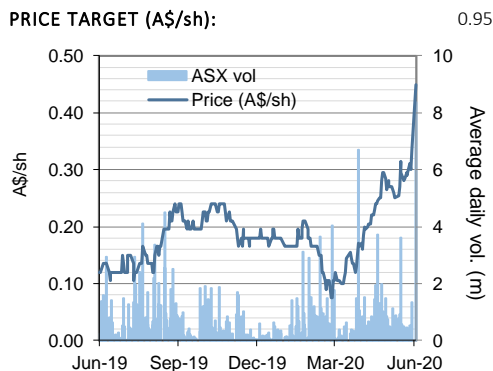
### SHARE DATA

Shares (basic, FD)	262 / 302
52-week high/low (Ac)	0.08 / 0.45
Market cap (A\$m)	118
Net cash (debt) (A\$m)	7.5
FD EV (A\$m)	122
Average daily value (A\$m, 3M)	0.27

FINANCIALS	CY22E	CY23E	CY24E
Nickel produced (000t Ni)	-	-	2.3
Revenue (US\$m)	-	-	34.7
AISC (US\$/t Ni)	-	-	2,043
Net income (US\$m)	(5.4)	(2.4)	(5.4)
EPS (USc)	-	-	-
PER (x)	-	-	-
CFPS (US\$)	-	-	-
P/CF (x)	-	-	-
EBITDA (US\$m)	(5.5)	(2.9)	10.3
EV/EBITDA (x)	-	-	32.5x

FF FD NAV: Pit only	CY22E	CY23E	CY24E
1xNAV <sub>7%</sub> -14,000 A\$m	494	615	730
1xNAV <sub>7%</sub> -14,000 A\$/sh	1.50	1.87	2.22
FF FD NAV: Pit + UG	CY22E	CY23E	CY24E
1xNAV <sub>7%</sub> -14,000 A\$m	648	780	913
1xNAV <sub>7%</sub> -14,000 A\$/sh	1.97	2.37	2.78

### PRICE TARGET (A\$/sh):



Source: Fidessa

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### Brazilian nickel sulphide developer

Centaurus' maiden resource this week is on the Jaguar project in Brazil, acquired from Vale in a 2019 with a legacy 40Mt @ 0.8% Ni. Centaurus changed tack to focus on a smaller high-grade resource, leading to this week's 21Mt @ 1.56% Ni as high-grade continuity was shown, but within a larger 48Mt @ 1.08% Ni. Jaguar is of rare hydrothermal derivation, meaning bulk scale with deep high-grade roots. This offers the triple-play of intermediate size and grade open pits, a smaller high-grade underground, and future optionality on a 'mega mine' of size attractive to majors, putting this firmly on the M&A radar in our view.

### Maiden resource larger than expected, with high-grade roots

This week's 21Mt @ 1.6% is a firm beat on our 10-15Mt expectations. Only 0.4Mt of this is transitional as the top-of-fresh-rock is only ~15m deep. We think the higher-grade ore, and conductors at depth, show potential for a high-grade underground extending our modelled life. Undrilled geophysical anomalies offer further satellite potential, with geophysics and shallow depths speeding drilling.

### Strong logistics and metallurgy support development

Jaguar is well located logistically and politically, being sufficiently inland to be away from population centres and receive tax discounts, but not in jungle or indigenous areas, and next to Vale's Onça Puma for infrastructure. Ore comes to surface for initial open pit mining, while met work points to 82% recovery to a desirable low-As, low-Mg, 16% Ni concentrate, with nearby rail access to ports.

### New pitable JORC dwarfs peers; potential >5Mt underground also

Centaurus now has ~2x the metal of Panoramic (A\$168m, US\$208/t EV/insitu), ~3x that of Mincor (A\$268m, US\$803/t), and half the metal of Western Areas (A\$712m, US\$376/t), yet trades at just US\$156/t, less than a quarter of peers. We think this valuation gap will now close with the maiden JORC. Better, the bottom of the Onça resources has drilled 6-9m @ 3.1-5.3% Ni, indicative of future underground potential. The SCPe 1-2Mt @ 2.5-3.0% per 100m vertical could drive >5Mt if continuity is proven. Starting at <300m, UG resource growth should be faster and cheaper than peers at >600m, offering faster equity upside.

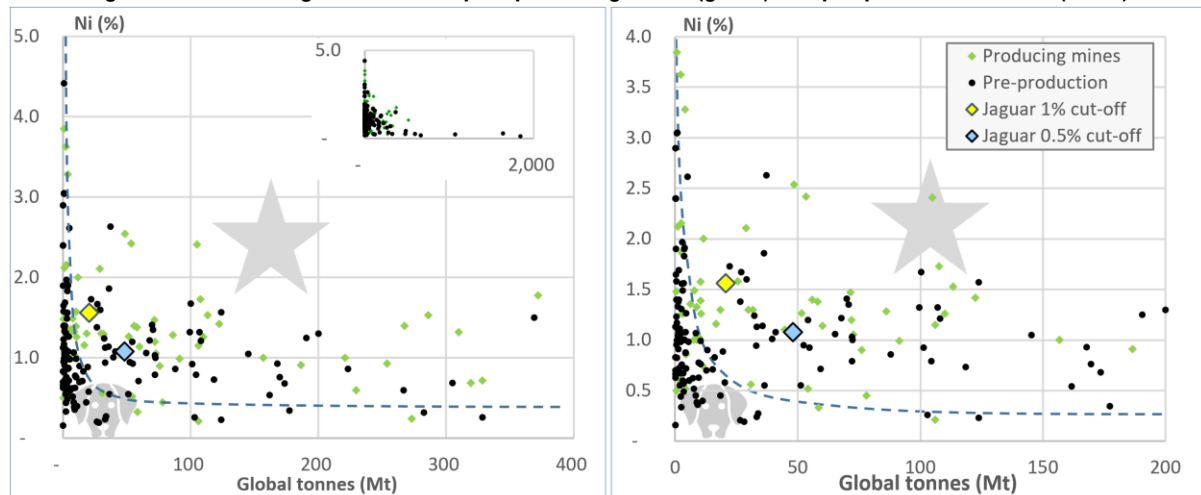
### Initiating coverage with BUY rating and A\$0.95/sh

Taking a 75% reserve conversion of the 20Mt 1% cut-off resource, we model a reserve of 15Mt at a diluted 1.50% Ni for a 10 year life at 1.5Mtpa producing 18kt pa @ US\$7,879/t AISC. This drives an NPV<sub>7%-14,000</sub> of A\$569m. Adding in resource outside SCP inventory at just 1% (i.e. US\$140/t) and cash drives our A\$623m NAV. We use a 0.4xNAV multiple given the early stage of the project, and initiate with a BUY rating and A\$0.95/sh PT. Accounting for equity and debt, we estimate a fully-funded fully-diluted 1xNAV at first production of A\$2.22/sh or A\$2.78/sh with an underground. At just 0.17-0.22xNAV with/without an UG, we see no ASX (or global) peer with the same resource upside, or valuation upside, making Centaurus a high-conviction name for us.

## Globally leading resource with size and grade

We show Centaurus' maiden resource below at both bulk (0.5% Ni cut-off) and selective (1.0% cut-off) grade. While the larger-tonnages assets are dominated by laterite outside Norilsk, what is immediately apparent is that Jaguar is a stand-out sulphide resource on both a bulk-tonnage lower cut-off grade, and a higher cut-off grade more suited to future underground mining.

Figure 1. Resource against current / past producing mines (green) and pre-production assets (black)



Source: SCP, S&P

## Valuation out of step with Australian peers: Jaguar the better asset, and cheaper valuation

Below we show the EV/in-situ for global resources of Centaurus against Australian peers. Firstly, we note Chalice and Legend trading at 3-6x higher valuation. While those discoveries are exciting, they remain unquantified, with material permitting / drilling under cover required, respectively. Share price momentum reflects this, with **both of those names down ~25% since May 1, while Centaurus is up 131% over the same period**. Looking at the producers and developers, what is immediately apparent is that nickel sulphides in Australia are very low tonnage and trade at high premiums, e.g. developer Mincor trades at SCP 0.8xNAV<sub>7%-14k</sub> assuming Cassini reserves add 50%, or 1.1xNAV<sub>7%-14k</sub> defined reserves or 1.4xNAV<sub>7%-12500</sub>. Centaurus now has ~2x the metal of Panoramic, ~3x that of Mincor, and half that of A\$712m mkt cap Western Areas, even including Western Areas' 19.9% holding in Panoramic. We detail the value on a bottom-up DCF basing later in this report, but more simplistic metrics imply valuation multiples above current levels.

Figure 2. EV/in-situ valuations for ASX nickel companies

	Mincor	W. Areas*	Panoramic	Poseidon	Centaurus	Chalice	Legend
FD market cap (A\$m)	342	723	168	71	132	286	392
Attr. FD EV net cash / fr. options (A)	230	542	86	50	118	238	493*
Resource (000t NiEq)	196	988	285	419	534	-	-
Grade (% NiEq)	3.8%	1.2%	2.1%	1.0%	1.1%	-	-
<b>EV/resource (US\$/t)</b>	<b>803</b>	<b>376</b>	<b>208</b>	<b>81</b>	<b>152</b>	-	-
Reserve (000t NiEq)	65	294	151	28	-	-	-
<b>EV/reserve (US\$/t)</b>	<b>3516</b>	<b>1841</b>	<b>570</b>	<b>1758</b>	-	-	-

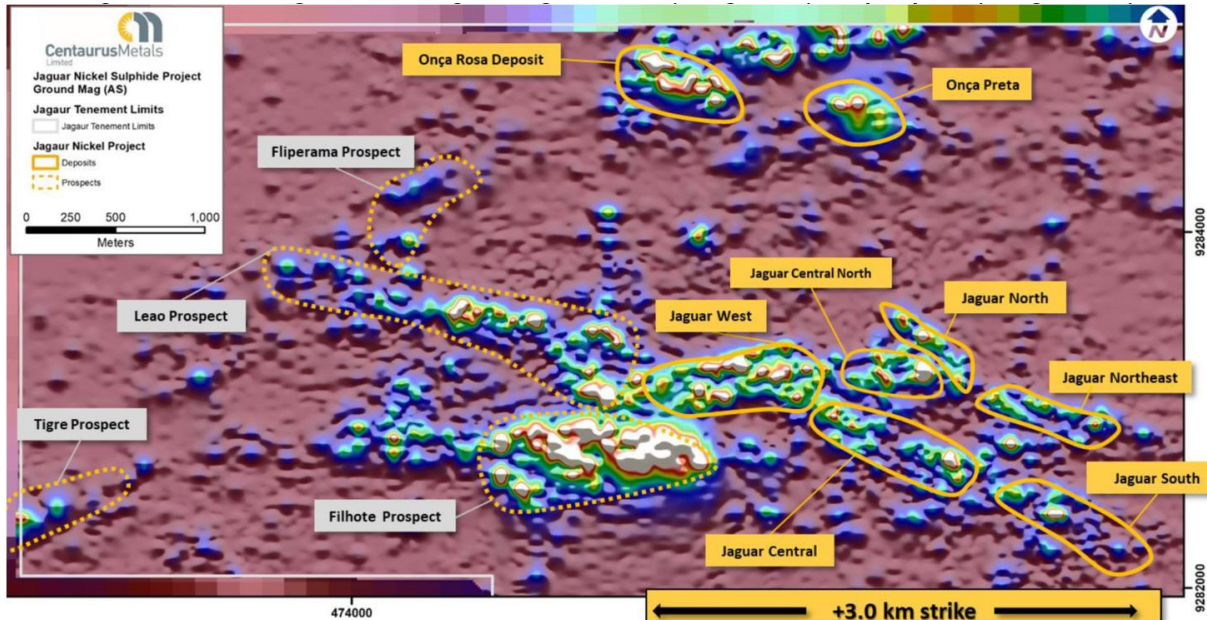
Source: company data, June 26, NiEq = spot in-situ 573c/lb Ni, 269c/lb Cu and US\$12.93/lb Co at spot 0.685 AUD/USD; \*adj for 70% ownership, W Areas incl. 20% of Panoramic to reflect their 20% holding in Panoramic

## With substantial upside to come from here

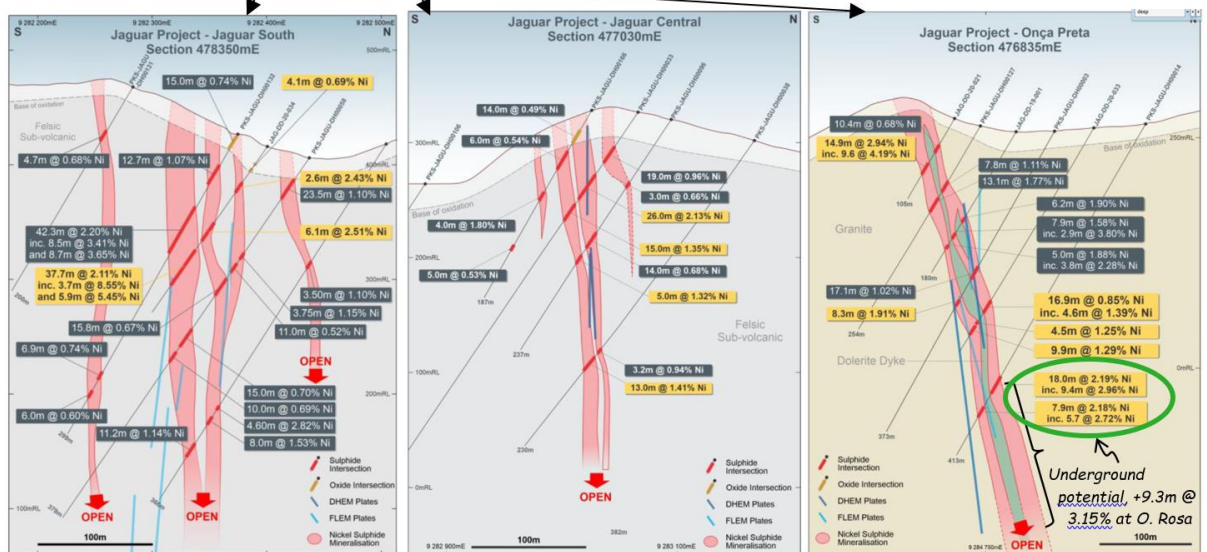
As we describe below in our DCF valuation, if every hole dusts from here there is substantial upside to the current NAV of A\$623m or A\$788m including an underground. However, we expect a lot more nickel. This week's resource acts as a global unit from which to optimise pits on a grade-tonnage curve and strip; we would expect around 75% reserve conversion on the higher cut off 21Mt @ 1.6% Ni. Consequently, we see two areas of upside; (i) underground and (ii) satellite pits. For an underground Onça Preta / Rosa deposits are intrusive hosted, making tighter higher-grade lodes. Specifically, those two assets have deepest drill hits of 5.7m @ 2.7%, and 9.3m @

3.13% Ni, respectively. These two hits are only ~270m and ~220m below surface. We like Mincor because of the combination of imminent cash-flow with the Cassini discovery still growing at depth. However, like most Australian komatiite resources, that asset already extends >700m below surface, meaning reserve growth will take time and be expensive. Jaguar's shallow drilling to date (80% of metal <200m below surface) means the company should be able to define underground reserves faster and cheaper than deep peers in Australia. As to strike extensions, Figure 3 below shows the broad ENE-WSW structures (Onça Rosa > Tigre) and intersecting ESE-WNW structures (Jaguar South > Jaguar West), with multiple geophysical anomalies not yet drilled.

Figure 3. Ground magnetics showing existing resources (orange solid) and prospects (orange dotted)



M&I&Inf	Jag South	J. Central	Onca Preta	J Northeast	J Cent. N	J West	J. North	Onca Rosa
Tonnes (000t)	15.5	7.4	3.6	7.0	5.1	4.5	2.8	2.1
Grade (% Ni)	1.10	1.13	1.59	0.85	0.85	0.90	1.14	1.49
Ni metal (000t)	170.7	83.4	56.6	59.5	43.1	41.0	32.3	30.9
Of total metal (%)	33%	16%	11%	11%	8.3%	7.9%	6.2%	6.0%



Source: SCP, modified from Centraurus

Valuation compelling even if every exploration hole dusts from here (which we don't expect)

Our favourite names always have the same combination, an existing compliant resource that if taken into production offers material value upside, plus the twin-pillar of material metal upside. Centaurus is no different – we model Jaguar on a DCF basis, with scoping study in 4Q20, PFS in 2021, and DFS plus construction start in 2023.



At this early stage, sizing and strip ratio remain the last unknown, so we take a scenario approach. Our base case is 15Mt @ 1.5% grade into the pit based on a 75% reserve conversion of the 1% cut-off resource of 20.6Mt @ 1.56% Ni. We use US\$2.50/t mining, US\$20/t processing and US\$2.50/t G&A, with costs derived from peers in Table 1. Mining costs of US\$2.50/t are globally standard among producers despite feasibility studies consistently being 20% lighter. With a slightly higher bond work index than peers, as some ore hosted is intrusive rock hosted, we conservatively model US\$20/t processing costs, well over Equinox (gold), but well under much smaller Jaguar Mining Inc. (also gold).

**Table 1. Peer unit costs as compared to SCP estimates for Centaurus**

	Equinox		Jaguar		Centaurus
	Aurizona pit	Aur. Piaba UG	Turmalina	Caete	Jaguar
Product	Gold	Gold	Gold	Gold	Nickel
Data	2019 actual	PFS	2020 forecast	2020 forecast	SCPe
Mill throughput from OP (kt pa)	2,880	-	-	-	1,500
Mill throughput from UG (kt pa)	-	1,000	2,000	540	-
OP Strip ratio	5.2	-	-	-	8.0
BWI (kwh/t)	8.2	13	not stated	not stated	16
		<b>Operating costs</b>			
Mining method	Conventional OP	L/hole stoping	C&F	SL stope & C&F	OP
Plant type	Grav/leach	Grav/leach	Grav/float/leach	Grav/flot/leach	Flotation
OP mining cost (US\$/t rock)	2.30	-	-	-	2.5
UG mining cost (US\$/t ROM)		34	37	43	50
Processing cost (US\$/t ROM)	10	12	30	31	20
G&A cost (US\$/t milled)	4.9	4.9	2.8	6.2	2.5
		<b>Capital costs</b>			
Capital costs (US\$m)	144	72		105	235
Sust capex per year (US\$m)	14	12	12	9	15
Capital intensity (US\$/t pa)	50	72		194	106
Sust capex intensity (US\$/t pa)	5	12	6	16	10

Source: Company data, SCP

To sensitise, we model a 10-year mine life at 1/10<sup>th</sup> of the inventory, with a base case of 10 years at 1.5Mtpa at flat forward grade. Onça Preta is higher grade, so we expect early-year high-grade on starter pits there, which would also support a box-cut for underground access. For capex, peers range dramatically with every case suffering from 'exceptions', the average is US\$106k/t pa so we adopt \$100k/t pa, with a US\$10m pre-strip to remove surface weathered material in the starting mining area (~15m). This equates to US\$160m for our 1.5Mtpa base case, lifting as the reserve size is sensitised. Of note, royalties are high at 2% to state and 2.5% private, but being in the Amazon, 34% tax drops to just 15.2%, more than offsetting this.

**Table 2. SCP modelled parameters for Jaguar mine without and with an underground operation**

Jaguar (100%)	Pit only	Pit + UG	Jaguar (100%)	Pit only	Pit + UG
Pit inventory (Mt ore)	15.0	15.0	Pit mining cost (US\$/t ROM)	2.5	2.5
Grade (% Ni)	1.50%	1.50%	Processing cost (US\$/t ROM)	20.0	20.0
UG inventory (Mt ore)	-	2500	G&A cost (US\$/t ROM)	2.50	2.50
Grade (% Ni)	-	2.8%	Transport to China (US\$/t con)	195	195
Nickel mined (000t Ni)	225	294	C1 cost (US\$/lb, LOM average)	7,618	7,461
LOM average ROM (000t pa)	1463	1458	AISC (US\$/lb, LOM average)	7,879	8,060
Recovery (LOM, %)	80%	80%	Initial capex (US\$m)	265	265
Production (avg, 000t Ni in con pa)	17.6	19.6	LOM sustaining capex (US\$m)	47.06	140.59
Mine life (years)	10.3	12.0	Discount rate (%)	7.0%	7.0%
Nickel price (US\$000/t)	14,000	14,000	Project NPV (A\$m)	<b>569</b>	<b>734</b>
Payability (%)	75.0%	75.0%	Asset IRR (%)	<b>37%</b>	<b>40%</b>

Source: SCP estimates

## Underground likely to add materiality to economics

Our base case excludes an underground. We are very confident that one will come in given the high-grade and good lateral continuity, but tonnes, diluted grade and development capex are unclear at this stage. To show the potential impact, we show scenarios for a 320ktpa UG from Y3, the same as Mincor's Cassini, using US\$30/t underground sustaining capex (vertical and lateral development) and A\$30m establishment capex, with UG feed scavenging from the pit until the UG completes. In all likelihood, a small expansion would add to the ROM feed once UG material comes in offering upside to our base case. The beauty is that this gives time to establish initial pits to reduce box-cut capex, as well as giving time for additional deeper drilling. For our base case we model

2.75% Ni, ~10% dilution on our average of high- and low-cases (Table 3) based on deep drilling grades at the Onça deposits. Our tonnage is based on thickness from deepest holes at Onças, with strike based on drilled extend. We conservatively use <200m vertical, in reality the entire strike won't be high-grade, but we would expect better vertical extent, i.e. for our tonnage and vertical continuity assumptions to even each other out. Impressively, this shows an NPV of A\$140-230m under core scenarios (Table 3B). Even on this strike extent, two declines working multiple levels should readily be able to deliver 2,000tpd, double our existing estimates.

**Table 3. (A) UG potential size at Onça only, (B) Underground NPV sensitivities to size and grade**

Underground potential	High	Low	Avg.	UG NPV (A\$m)	1.5Mt	2.0Mt	2.5Mt	3.0Mt	3.5Mt
Onça Preta strike (m)	300	150		<b>2.50% grade</b>	83	107	128	150	181
Onça Rosa strike (m)	600	450		<b>2.75% grade</b>	108	138	<b>165</b>	192	230
Onça Preta grade (Ni %)	2.75%	2.00%	2.38%	<b>3.00% grade</b>	132	169	202	235	279
Onça Rosa grade (Ni %)	3.75%	2.75%	3.25%	<b>3.25% grade</b>	157	201	239	277	328
<b>Total grade (Ni %)</b>	<b>3.42%</b>	<b>2.56%</b>	<b>2.99%</b>						
Lateral thickness (m)	7	6							
SG	3.5	3.1							
Vertical iteration (m)	100	100							
<b>Ore / 100m vertical (kt)</b>	<b>2,205</b>	<b>1,116</b>	<b>1,661</b>						

Source: SCP estimates

## Initiate coverage with BUY rating and A\$0.95/sh PT

Based on a 15Mt reserve at 1.5%, we model 1.5Mtpa of production at an AISC of US\$7,879/t. After capex of US\$160m, and using a US\$14,000/t flat forward nickel price, we derive a 1xNAV<sub>7%-1400</sub> of A\$623m (Table 4). An underground of 2.5Mt @ 2.75% (Table 3A) diluted grade would add A\$165m to this with potential to expand this at depth (Table 3B). However, we conservatively model a 1% in-situ value (e.g. US\$140/t) for the 33Mt (293kt Ni) in this week's resource that lies outside our open-pit mining inventory. This drives an A\$623m NAV, putting Centaurus on just 0.21-17xNAV without/with an UG, demonstrative of the upside.

**Table 4. NAV and sensitivities**

Commodity price	CY20E	CY21E	CY22E	CY23E	CY24E	Asset value: 1xNPV project @ build start (A\$m, ungeared)*					
Ni price (US\$/t)	14,000	14,000	14,000	14,000	14,000	Asset NPV (A\$m)					
Ni price (US\$/t, payable)	10,500	10,500	10,500	10,500	10,500	11,500	12,750	14,000	15,250	16,500	
<b>1xNAV project valuation*</b>	<b>A\$m</b>	<b>o/ship</b>	<b>NAVx</b>	<b>A\$/sh</b>		9.0% discount	232	363	495	627	758
Jaguar NPV (build start)	<b>569</b>	100%	0.4x	0.75		7.0% discount	280	424	<b>569</b>	<b>713</b>	<b>857</b>
UG expln (4% in-situ ex SCP mined)	41	100%	1.0x	0.14		5.0% discount	336	495	654	812	971
Cash (1Q20)	7.5	100%	1.0x	0.02		Ungeared project IRR:	23%	31%	37%	44%	50%
Cash from ITM options	6.0	100%	1.0x	0.02		Asset NPV @ 1.5% (A\$m)					
<b>1XNAV A\$ @ 2Q20</b>	<b>A\$623m</b>			<b>0.93</b>		10.0Mt	12.5Mt	15.0Mt	17.5Mt	20.0Mt	
<i>*Build start, ex fin. cost + G&amp;A, dil. for optns not build</i>			<i>P/NAV today:</i>	0.22x		US\$12,750/t	270	347	424	501	579
						US\$14,000/t	366	467	<b>569</b>	<b>670</b>	<b>771</b>
						US\$15,250/t	462	588	713	838	963
						Avg production (Kt Ni pa):					
						12.0	13.2	14.4	15.6	16.8	

Source: SCP estimates

## Risks

- **Reserve size and grade:** conversion of the resource will depend on strip and open pit mining dilution. Any underground reserve is speculative at this stage, mitigated by good deep drilling.
- **Strip ratio:** is estimated by us, and will likely be the key constraint to reserve conversion. This is mitigated by our reserve conversion of only 75%, or 43% of the global metal content.
- **Permitting:** is a risk, mitigated by absence of peer hurdles of land ownership or forest/indigenous reserves.
- **Dilution risk:** our fully-funded fully-diluted share count is dependent on equity pricing and dilution.

## Catalysts

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

<b>Ticker:</b> CTM AU	<b>Price / mkt cap:</b> A45c/sh / A\$118m	<b>P/NAV today:</b> 0.17x	<b>Country:</b> Brazil
<b>Author:</b> B Saller / C Tonkin	<b>Rec/0.4xNAV7% PT:</b> BUY, A115c/sh	<b>1xNAV7%<sub>2021</sub> FF FD:</b> A\$1.84c/sh	<b>Asset:</b> Jaguar

Commodity price	CY20E	CY21E	CY22E	CY23E	CY24E
Ni price (US\$/t)	14,000	14,000	14,000	14,000	14,000
Ni price (US\$/t, payable)	10,500	10,500	10,500	10,500	10,500

1xNAV project valuation*	A\$m	o/ship	NAVx	A\$/sh
Jaguar NPV (build start)	734	100%	0.4x	0.97
UG expln (4% in-situ ex SCP mined)	41	100%	1.0x	0.14
Cash (1Q20)	7.5	100%	1.0x	0.02
Cash from ITM options	6.0	100%	1.0x	0.02
<b>1XNAV A\$ @ 2Q20</b>	<b>A\$788m</b>			<b>1.15</b>

\*Build start, ex fin. cost + G&A, dil. for optns not build P/NAV today: 0.17x

Asset value: 1xNPV project @ build start (A\$m, ungeared)*					
Asset NPV (A\$m)	11,500	12,750	14,000	15,250	16,500
9.0% discount	311	473	634	795	957
7.0% discount	376	555	734	912	1,091
5.0% discount	452	651	851	1,050	1,250
Ungeared project IRR:	25%	33%	40%	47%	53%
Asset NPV @ 1.5% (A\$m)	10.0Mt	12.5Mt	15.0Mt	17.5Mt	20.0Mt
US\$12,750/t	398	477	555	632	710
US\$14,000/t	529	632	734	835	937
US\$15,250/t	659	786	912	1,038	1,164
Avg production (Kt Ni pa):	14.4	15.6	16.8	18.0	19.2
Asset NPV @ 15Mt (A\$m)	1.00%	1.25%	1.50%	1.75%	2.00%
US\$12,750/t	148	351	555	758	961
US\$14,000/t	281	508	734	959	1,185
US\$15,250/t	415	664	912	1,161	1,410
Avg production (Kt Ni pa):	20.4	22.9	25.4	28.0	30.5

\*Project level NPV, excl finance costs and central SGA, discounted to build start

SOTP company valuation	2Q20	2Q21	2Q22	2Q23	4Q24
Jaguar NPV	593	635	679	734	1,070
Centra G&A and finance cost	(50)	(45)	(40)	(38)	(30)
Net cash	5.7	10.2	2.7	78	(133)
Cash from ITM options	6.0	6.0	6.0	6.0	6.0
NAV (A\$m)	555	606	648	780	913
FD share count (m)	302	329	329	489	489
1xNAV7%/sh FF FD (A\$/sh)	1.84	1.84	1.97	2.37	2.78
ROI (% pa)		310%	109%	74%	58%

Exit value: 1xNAV/sh company @ 2024 first production (A\$, geared)^					
1xNAV (A\$/sh)	11,500	12,750	14,000	15,250	16,500
9.0% discount	1.40	1.96	2.52	3.08	3.65
7.0% discount	1.56	2.17	2.78	3.38	3.99
5.0% discount	1.76	2.41	3.07	3.73	4.39

Production (Y1 from 3Q2)	CY24	CY25	CY26	CY27	CY28
Jaguar production (000kt Ni)	2.3	18.0	18.8	21.2	21.2
C1 cost (US\$/t Ni)	1,945	5,713	5,672	5,547	5,547
AISC cost (US\$/t Ni)	2,043	5,909	5,965	6,130	6,130

AISC = C1 + sustaining capex + central G&A, C3 = AISC + depreciation

Year	Jaguar prod'n (000t Ni)	AISC (US\$/t Ni)
CY24	2.3	2,043
CY25	18.0	5,909
CY26	18.8	5,965
CY27	21.2	6,130
CY28	21.2	6,130

8,000

6,000

4,000

2,000

0kt

Resource/Inventory	Mt	Ni %	Mt	Ni %
	2Q20 JORC		SCP inventory	
M&I	11.5	1.29%	15.0	1.50%
Inferred	36.4	1.01%		
<b>Total</b>	<b>48.0</b>	<b>1.08%</b>	<b>Total</b>	<b>15.0</b>

Funding: uses		Funding: sources	
Capex (A\$m)	235	Cash 2Q20 (A\$m)	7.5
Drilling/FS cost (A\$m)	13.5	SCPe debt (A\$m)	141.2
Working capital (A\$m)	-	SCPe DFS equity @ spot (A\$m)	12.0
G&A and fin. cost (A\$m)	7.4	SCPe equity, 30% prem. (A\$m)	117.6
<b>Total uses: group (A\$m)</b>	<b>256.2</b>	<b>Total sources (A\$m)</b>	<b>278.4</b>

Share data (m)	Basic	FD	2H20	3Q22 (FF FD)
Shares (m)	261.5	302	329	489

Ratio analysis	CY20E	CY21E	CY22E	CY23E	CY24E
Shares out (m)	288.2	288.2	448.3	448.3	448.3
EPS (Ac/sh)	-	-	-	-	-
CFPS before w/c (A\$/sh)	-	-	-	-	-
EV (A\$m)	115.8	123.3	200.3	202.6	335.0
FCF yield (%)	-	-	-	-	-
PER (x)	-	-	-	-	-
P/CF (x)	-	-	-	-	-
EV/EBITDA (x)	-	-	-	-	32.5x

Income statement	CY20E	CY21E	CY22E	CY23E	CY24E
Revenue (A\$m)	-	-	-	-	34.7
COGS (A\$m)	-	-	-	-	23.3
<b>Gross profit (A\$m)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11.4</b>
G&A (A\$m)	1.6	1.6	2.1	2.5	1.0
Exploration (A\$m)	5.9	6.0	3.0	-	-
Finance costs (A\$m)	-	-	-	-	12.4
Tax (A\$m)	-	-	-	-	0.9
Other (A\$m)	0.2	0.2	0.3	(0.0)	2.0
<b>Net income (A\$m)</b>	<b>(7.7)</b>	<b>(7.9)</b>	<b>(5.4)</b>	<b>(2.4)</b>	<b>(4.8)</b>

Cash flow statement	CY20E	CY21E	CY22E	CY23E	CY24E
EBITDA (A\$m)	(7.8)	(8.0)	(5.5)	(2.9)	10.3
Add share based (A\$m)	0.3	0.4	0.4	0.4	0.1
Net change wkg cap (A\$m)	-	-	-	0.3	11.1
<b>Cash flow ops (A\$m)</b>	<b>(7.4)</b>	<b>(7.5)</b>	<b>(5.0)</b>	<b>(2.3)</b>	<b>(13.6)</b>
PP&E - build + sust. (A\$m)	0.1	-	-	117.6	118.8
PP&E - expl'n (A\$m)	-	-	-	-	-
<b>Cash flow inv. (A\$m)</b>	<b>(0.1)</b>	<b>-</b>	<b>-</b>	<b>(117.6)</b>	<b>(118.8)</b>
Share issue (A\$m)	12.0	-	-	117.6	-
Debt draw (repay) (A\$m)	-	-	-	-	141.2
<b>Cash flow fin. (A\$m)</b>	<b>12.0</b>	<b>-</b>	<b>-</b>	<b>117.6</b>	<b>141.2</b>
Net change in cash (A\$m)	4.2	(7.5)	(5.0)	(2.3)	8.8

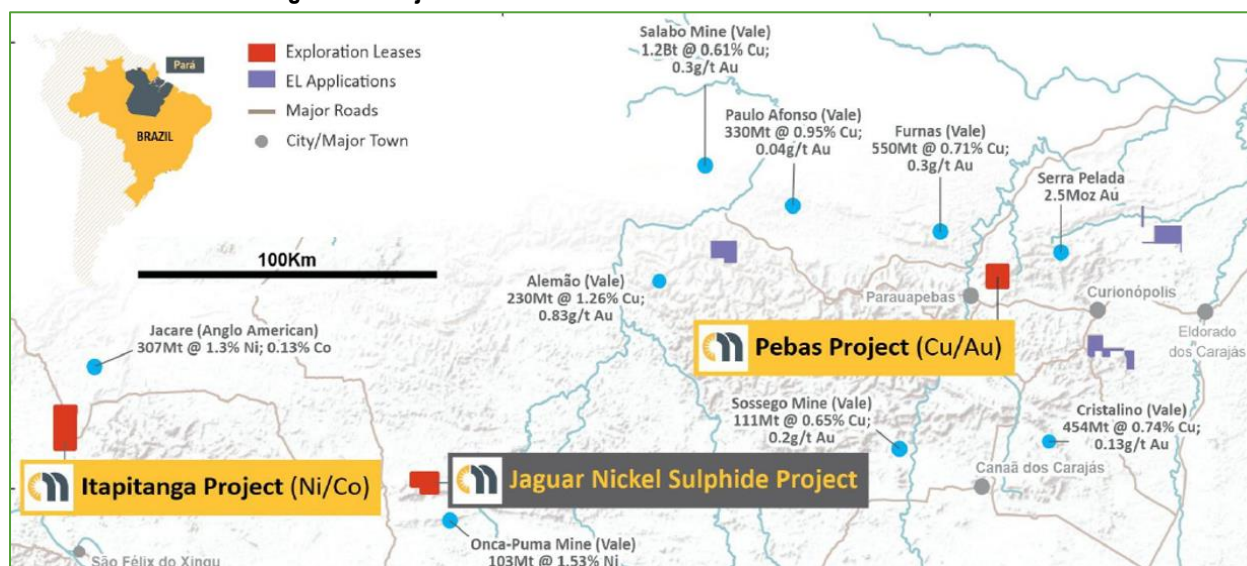
Balance sheet	CY20E	CY21E	CY22E	CY23E	CY24E
Cash (A\$m)	13.9	6.4	1.4	(0.9)	7.9
Acc rec. + invet. (A\$m)	0.3	0.3	0.3	0.1	18.8
PP&E & expl'n (A\$m)	3.3	3.3	3.3	121.0	237.5
<b>Total assets (A\$m)</b>	<b>17.5</b>	<b>10.1</b>	<b>5.1</b>	<b>120.1</b>	<b>264.2</b>
Debt (A\$m)	-	-	-	-	141.2
Accounts payable (A\$m)	0.6	0.6	0.6	-	7.7
Others (A\$m)	14.2	6.7	1.7	(0.9)	26.7
<b>Total liabilities (A\$m)</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>0.5</b>	<b>149.4</b>
Shareholders' equity (A\$m)	140.8	141.2	141.6	259.7	259.8
Reserves (A\$m)	(6.6)	(6.6)	(6.6)	(6.6)	(6.6)
Retained earnings (A\$m)	(117.8)	(125.7)	(131.1)	(133.5)	(138.3)
<b>Liabilities + equity (A\$m)</b>	<b>17.5</b>	<b>10.1</b>	<b>5.1</b>	<b>120.1</b>	<b>264.2</b>

Source: SCP estimates

## Jaguar asset

**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 4: Carajás Province mineral endowment and infrastructure



Source: Centaurus Metals

## Geology

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

	Tonnes (000t)	Grade (% Ni)	Ni (t)	Grade (ppm Co)	Co (t)
Measured	19.0	0.79%	150,008	145	2,753
Indicated	21.4	0.77%	164,939	123	2,635
<b>Total resource</b>	<b>40.4</b>	<b>0.78%</b>	<b>314,947</b>	<b>133</b>	<b>5,388</b>

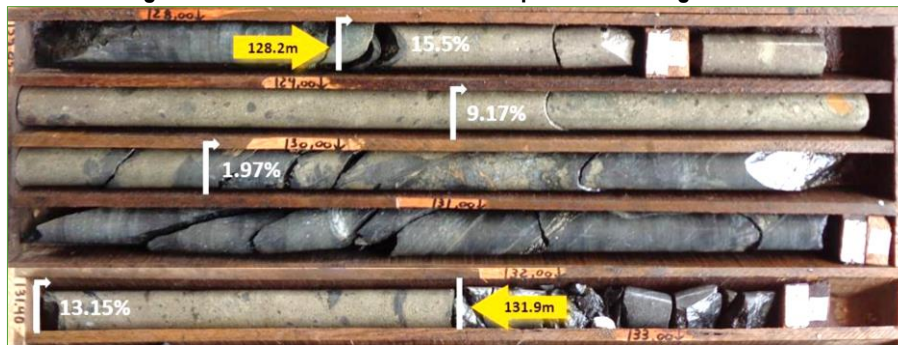
Source: Centaurus

Jaguar is unusual in the universe of Nickel sulphide 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' pre-eminence as an IOCG district demonstrate the large hydrothermal fluid volumes regionally. At Jaguar, during orogenesis, nickel was likely sourced 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 sulphides 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 sulphide 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 sulphides 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 small, steeply dipping targets, and ultimately improving the future ROI from exploration.

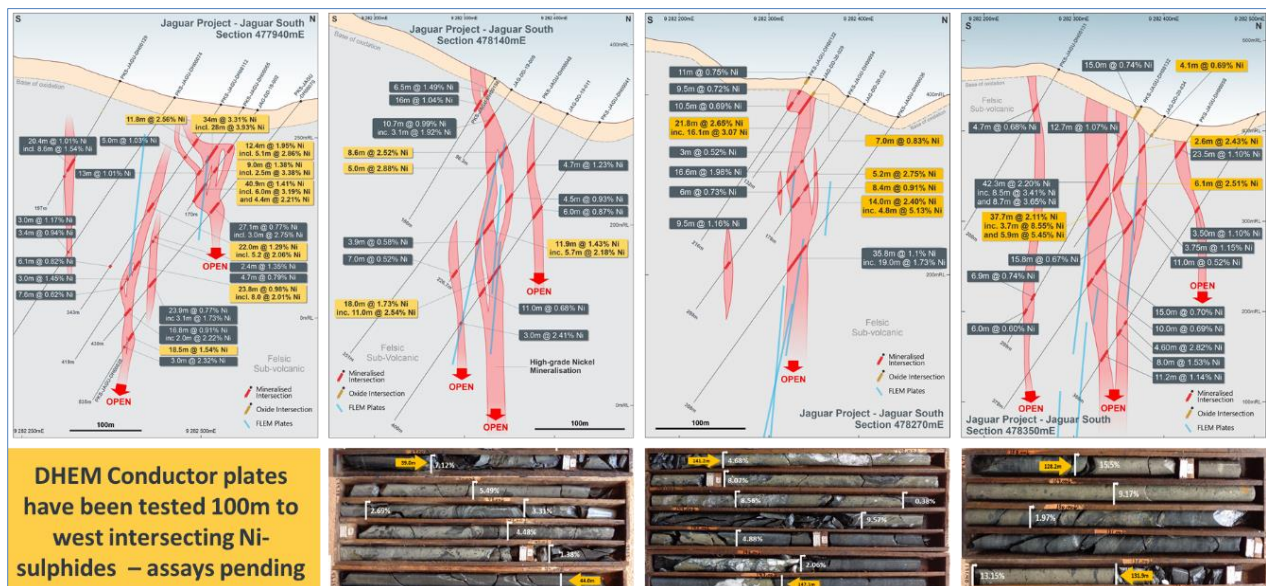
Figure 5: Massive to semi-massive sulphides from Jaguar South



Source: Centaurus Metals

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-sulphides, 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. 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 6. Jaguar South sections over >600m strike and >300m depth



Source: Centaurus

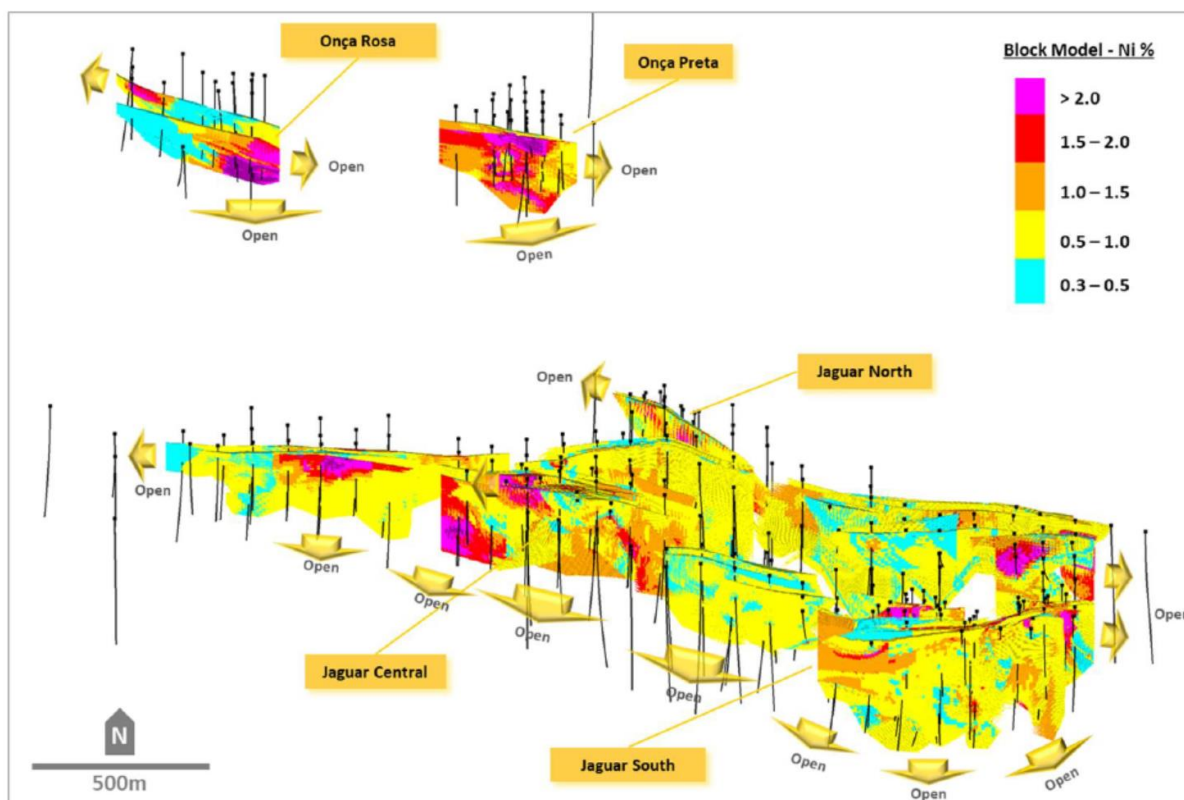
Resource

We show the block model and resource in Figure 7. Key points on the resource include;

1. Almost 98% of the resource is fresh sulphides with no oxides and only 1.1Mt of 48Mt MRE is transitional sulphides
2. Almost 97% of the metal value is contained in nickel, we model no credits but expect Co credits
3. The dynamic cut-off already accounts for strip to a degree, with 0.5% cut <200m and 1.0% above that. We only model 15Mt in our mining inventory, using a nominally estimated 8:1 strip
4. At 1.0-1.3% cut off, tonnage of 21Mt @ 1.6% lifts to 12Mt @ 1.90%, providing flexibility on grade-tonnage trade off



Figure 7. Block model of Jaguar Resource



	Tonnes (Mt)	Ni (%)	Ni (Mt)	Cu (%)	Co (ppm)	Grade (% NiEq)	Tonnes (NiEq)	Ni (% val.)
Indicated - transition	0.30	1.09%	3.5	0.09%	310	1.20%	3.61	91%
Indicated - fresh	11.2	1.29%	145	0.09%	392	1.37%	154	94%
<b>Indicated - TOTAL</b>	<b>11.50</b>	<b>1.29%</b>	<b>149</b>	<b>0.09%</b>	<b>390</b>	<b>1.33%</b>	<b>153</b>	<b>97%</b>
Inferred - transition	0.83	0.99%	8.2	0.08%	287	1.03%	8.51	96%
Inferred - fresh	35.60	1.01%	361	0.07%	255	1.05%	372	97%
<b>Inferred - TOTAL</b>	<b>36.40</b>	<b>1.01%</b>	<b>369</b>	<b>0.07%</b>	<b>255</b>	<b>1.05%</b>	<b>381</b>	<b>97%</b>
Global - transition	1.13	1.04%	12	0.09%	293	1.08%	12.2	96%
Global - fresh	46.80	1.08%	506	0.07%	288	1.12%	522	97%
<b>GLOBAL TOTAL</b>	<b>48.00</b>	<b>1.08%</b>	<b>518</b>	<b>0.07%</b>	<b>288</b>	<b>1.11%</b>	<b>534</b>	<b>97%</b>

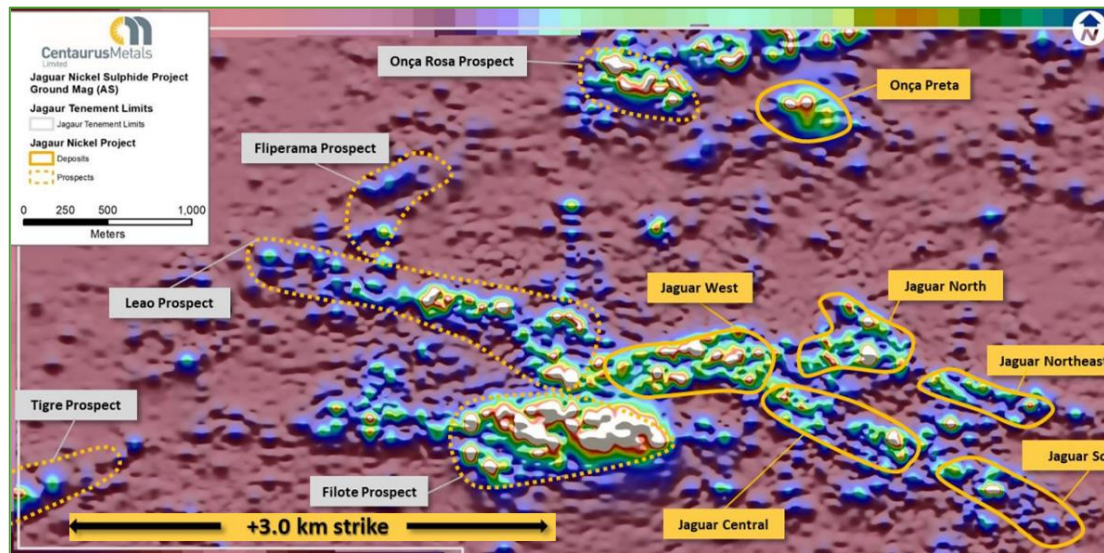
Source: Centaurus, equivalent valued done at in-situ grade, US\$5,942/t Cu, US\$29,000/t Co, US\$12,665/t Ni at June 28

**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 sulphide lodes adding tons at depth is a low-risk strategy. We draw parallels with **Rio Narcea’s Aguablanca** which had lesser resource metrics than Jaguar 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 Filhote are quickly emerging as priorities and could be ready for future drilling as soon as 2H20.

Figure 8. Plan view of Jaguar with drilled deposits in solid lines and targets in dashed lines

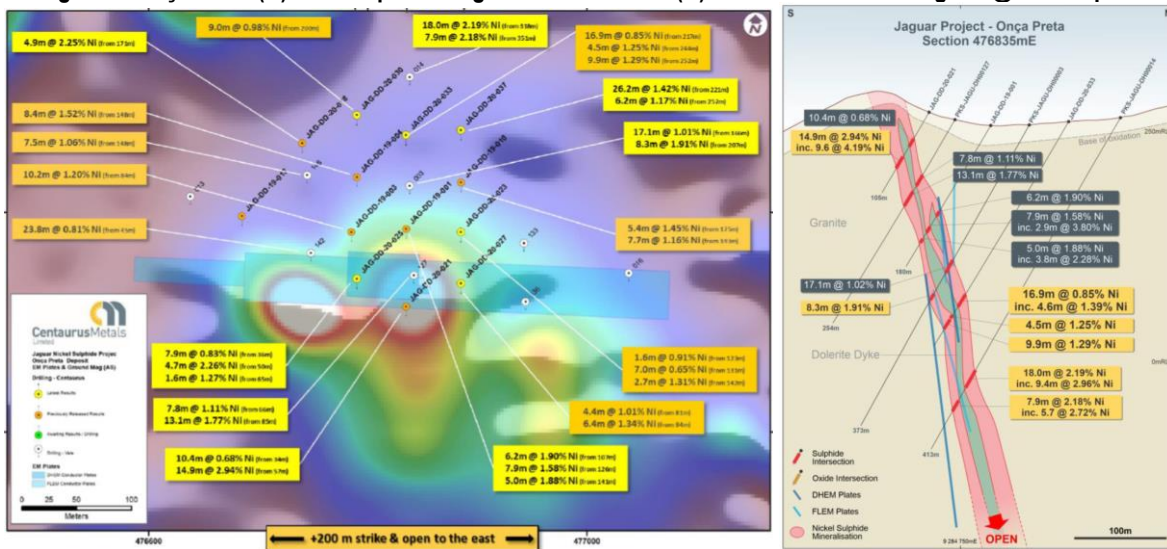


Source: Centaurus Metals

**Underground potential**

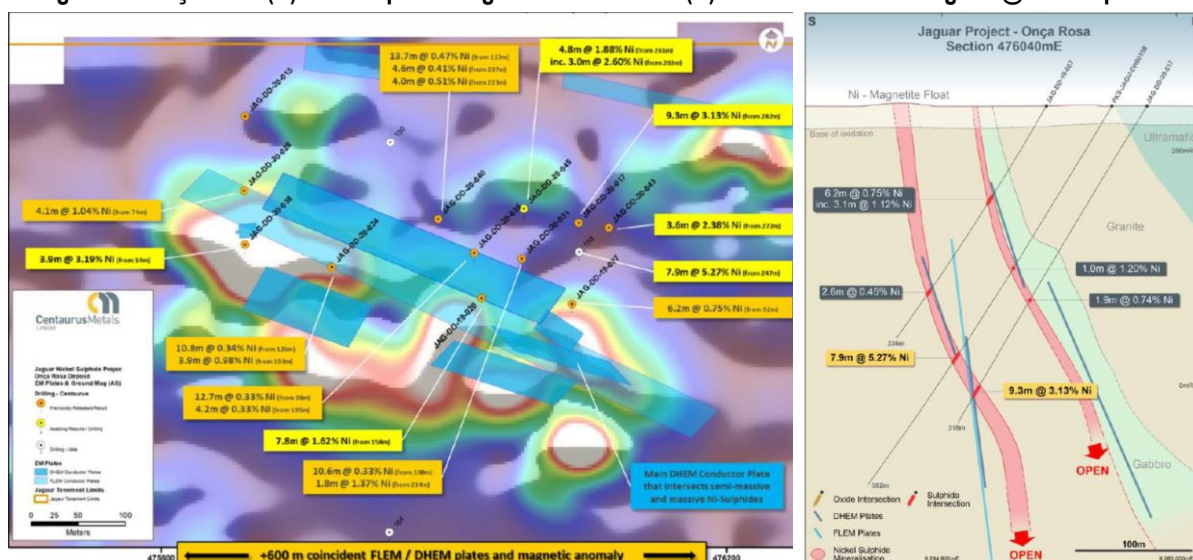
The higher grades at the project are in intrusive hosted ore at Onça Preta and Onça Rosa (Figure 9A, Figure 10A)Figure 9. In both cases, the deepest hole as hit ~3% grades over down-hole widths of 8-10m Onça Preta is the smaller of the two with ~200m strike, with the larger Onça Rosa extending over 600m. In both cases, grades of 3-5% are common in drilling (Figure 9B, Figure 10B).

Figure 9. Onça Preta (A) Plan map showing >200m strike and (B) cross section showing 6m @ 3% deepest hit



Source: Centaurus

Figure 10. Onça Rosa (A) Plan map showing >200m strike and (B) cross section showing 9m @ 3% deepest hit



Source: Centaurus

**Mining**

The nature of this deposit gives Centaurus the flexibility of open pit and underground operations. We model only a conventional open pit for now. We expect a bond work index of ~16kwh/t for Jaguar ore and 12kwh/t for Onça Preta ore which indicates competent rock and will likely result in steeper pit walls than Aurizona for example where the 8.4 kWh/t ore has led to 33-37° angles vs 49° slope angles in fresher 13kwh/t rock.

We expect to see 1.5Mtpa flowing through the plant, relating to a total 13.5Mtpa mined at our SCPe strip of 8:1, relatively modest by global standards. Coupled with the fact that topography allows for easy plant placement around the resource, we expect short hauls and expect mining would be easily achievable with 16-20 33t ADTs and 3-4 3m<sup>3</sup> FEL's or excavators, ideal for the high rainfall climate.

Although we have not added an underground section to our base case, we base potential underground operations at Onça Preta and Onça Rosa on the case in Table 3A with a target of 320ktpa over the two deposits but potential up to 720tpa. Examining the requirements for a 2,000tpd (720tpa) scenario, we think that this is achievable in each mine with one blast per day and just two trucks stoping per operation considering a long 10km round trip haul.

Table 6: ~2000tpd underground stoping

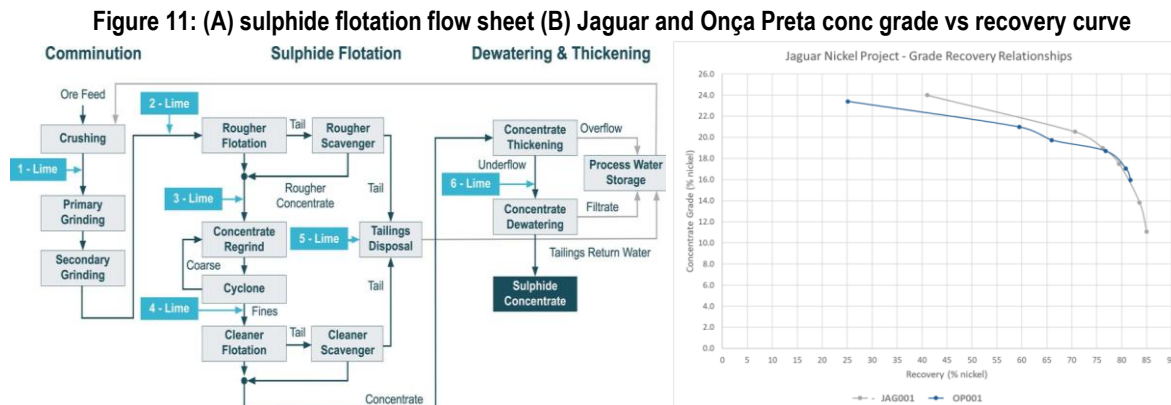
Deposit potential	Strike (m)	Grade (%)	Depth (m)	Thickness (m)	SG
Onça Preta	150	2.50%	200	6	3.1
Onça Rosa strike	450	3.0%	200	6	3.1
Production Potential	Ore start (mbs)	Decline to ore (m)	Interlevel spac'g (m)	Advance (m/blast)	Prod. (t/blast)
Onça Preta	350	2,450	15	3.5	977
Onça Rosa strike	350	2,450	15	3.5	977
Equipment required	Truck capaty (t)	Max haul dist (m, return)	Trip time @ 15km/h (min)	Min. hauls per day	Trucks needed
Onça Preta	20	10,000	40	49	2
Onça Rosa strike	20	10,000	40	49	2

Source: SCP estimates

**Processing**

Centaurus shows all the signs of a vanilla, nickel sulphide flotation plant, likened to those seen in Western Australia. We expect to see the usual crushing, milling, flotation, thickening and filter pressing. We expect recoveries of >80% at P<sub>80</sub> = 53µm based on test work done at Jaguar to date. This would produce a premium low Fe:MgO ~16% concentrate, although we conservatively only model 80% in our DCF.





Source: Zanin, Lambert, Du Plessis, Centaurus

## Marketing

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 the 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.

## 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.

## Why we like Centaurus

1. Deposit hasn't been explored through paradigm of a high-grade junior producer
2. Near surface occurrence of semi- and massive-sulphides is globally unique
3. Semi and massive sulphides 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

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1	SCP and its affiliates collectively beneficially owns 1% or more of any class of the issuer's equity securities <sup>1</sup>	YES
2	The analyst or any associate of the analyst responsible for the report or recommendation or any individual directly involved in the preparation of the report holds or is short any of the issuer's securities directly or through derivatives	YES
3	An SCP partner, director, officer or analyst involved in the preparation of a report on the issuer, has during the preceding 12 months provided services to the issuer for remuneration other than normal course investment advisory or trading execution services	NO
4	SCP has provided investment banking services for the issuer during the 12 months preceding the date of issuance of the research report or recommendation	NO
5	Name of any director, officer, employee or agent of SCP who is an officer, director or employee of the issuer, or who serves in an advisory capacity to the issuer	NO
6	SCP is making a market in an equity or equity related security of the issuer	NO
7	The analyst preparing this report received compensation based upon SCP's investment banking revenue for the issuer	NO
8	The analyst has conducted a site visit and has viewed a major facility or operation of the issuer	NO
9	The analyst has been reimbursed for travel expenses for a site visit by the issuer	NO

#### Sprott Capital Partners Equity Research Ratings:

Summary of Recommendations as of June 2020	
BUY:	14
HOLD:	1
SELL:	0
UNDER REVIEW:	0
TENDER:	2
NOT RATED:	1
TOTAL	18

<sup>1</sup> As at the end of the month immediately preceding the date of issuance of the research report or the end of the second most recent month if the issue date is less than 10 calendar days after the end of the most recent month