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## SPEC BUY

Current Price	\$0.29
Valuation	\$0.80
TSR	162%

Code: **ASX:CTM**  
Sector: **Materials**

Shares on Issue (m):	<b>495</b>
- Fully Diluted (m)	<b>497</b>
Market Cap (A\$m):	<b>143</b>
- Fully Diluted (\$m):	<b>143</b>
Cash (A\$m) (Estimate):	<b>31</b>
Debt (A\$m) (Estimate):	<b>0</b>
Enterprise Value (A\$m):	<b>111</b>

52 wk High/Low (ps):	<b>A\$0.96</b>	<b>A\$0.25</b>
12m av. daily vol. (Mshs):		<b>691</b>

<b>Advanced Projects</b>	<b>Stage</b>
Jaguar	Scoping (DFS mid-2024)
Jambreiro	PFS

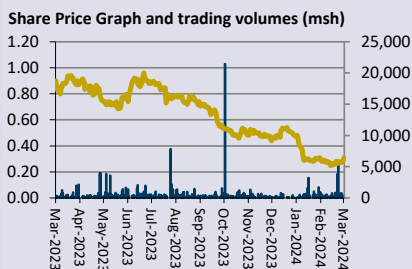
<b>Jaguar</b>	<b>Mt</b>	<b>Ni %</b>
Measured	14.00	1.06
Indicated	72.60	0.81
Inferred	22.60	0.93

<b>Key Metrics:</b>	<b>FY29e</b>	<b>FY30e</b>	<b>FY31e</b>
P/E (x)	0.8	0.7	0.8
EV/EBITDA (x)	0.5	0.4	0.4

<b>Financials:</b>	<b>FY29e</b>	<b>FY30e</b>	<b>FY31e</b>
Revenue (\$m)	424	480	471
EBIT (\$m)	272	303	289
NPAT (A\$m)	236	262	256

<b>Directors</b>	
Didier Murcia	Chairman
Darren Gordon	Managing Director / CEO
Bruno Scarpelli	Executive Director
Mark Hancock	Non-Executive Director
Chris Banasik	Non-Executive Director

<b>Top Shareholders</b>	<b>%</b>
McCusker Holdings Pty Ltd	13.8
Harmanis	5.1
Sprott Inc.	4.0
Regal	4.0



Please refer to important disclosures from page 18

Friday, 15 March 2024

## Centaurus Metals (CTM)

### Concentration Reorientation

Analyst | George Ross

#### Quick Read

Nickel macro sentiment has driven CTM's share price southward we maintain high conviction on the quality of the Jaguar Nickel Sulphide Project. The Jaguar Definitive Feasibility Study is expected by mid-year and will assess the viability of producing a saleable nickel sulphide concentrate. Suspension of plans for pressure oxidation and hydrometallurgical refinement for nickel battery metals will reduce both upfront capital requirements and technical risk. Production of a concentrate lowers metal payabilities and revenues. While nickel sentiment has soured, pricing remains strong, trading at over US\$18,000/t, and higher than our long-term real price of \$17,769/t. CTM's 100% owned Jambreiro remains under appreciated by the market. The Boi Novo exploration project has the potential to yield a significant copper-gold discovery.

#### Key Points

**Jaguar Project Concentration Pivot:** CTM has announced it will rework the planned Jaguar Nickel Sulphide Project DFS for initial production of a nickel sulphide concentrate rather than sulphate as had been planned. This modification eliminates significant upfront capital expenditure requirements required for hydrometallurgical processing whilst also reducing technical execution risk. The study will adopt assumptions planned for the beneficiation and flotation stages of the planned sulphate production plant. This will leave the door ajar to build hydrometallurgical refinement circuits including POX and crystallisation at a later date.

**Argonaut Jaguar Model Update:** We have updated our detailed development model for production of a nickel sulphide concentrate product. Under our base case assumptions our model generates a Build-Date NPV(9) of A\$794M, equivalent to \$1.60 per share of undiluted capital.

**Jambreiro Sleeper Asset:** Since acquisition of Jaguar, the market has heard little about CTM's 100% owned Jambreiro iron ore asset. Studies are currently underway for production of a direct reduction pellet feed concentrate, potentially lifting revenues. The capital hurdle to development of Jambreiro is expected to be much lower than Jaguar and could provide CTM with positive cashflow. Update and reissue of relevant permits is currently underway. Under our base assumptions we estimate a Post-Tax Build Date NPV(9) of A\$170M equivalent to \$0.34 per share.

**Boi Novo Wildcard:** Exploration is currently underway at CTM's Boi Novo Iron-Oxide-Copper-Gold project. The Carajas is recognised as globally significant IOCG province and hosts deposits such as Salobo, Paulo Afonso and Cristalino. Upcoming work programs will include electromagnetic geophysical surveys and drilling.

#### Recommendation & Price Target

We maintain our Speculative Buy recommendation and ascribe a \$0.80 price target.



### Centaurus Metals (ASX:CTM)

(Assumed 70% Retention of Jaguar)

<b>Recommendation</b>	<b>Spec Buy</b>
<b>Current Price (A\$)</b>	<b>0.29</b>
<b>Price Target (A\$)</b>	<b>0.80</b>
<b>TSR</b>	<b>162%</b>

### Equities Research

Analyst: George Ross

<b>Sector</b>	<b>Metals &amp; Mining</b>
<b>Issued Capital (Mshs)</b>	<b>495</b>
<b>Market Cap (M)</b>	<b>A\$142M</b>

Profit & loss (\$M)	Unit	2029E	2030E	2031E	2032E
<b>Revenue</b>	<b>A\$M</b>	<b>424</b>	<b>480</b>	<b>471</b>	<b>454</b>
+ Other income/forwards	A\$M	0	0	0	0
- Operating costs	A\$M	-167	-182	-182	-182
- Royalties	A\$M	-25	-28	-28	-27
- Corporate & administration	A\$M	-8	-8	-8	-8
<b>Total Costs</b>	<b>A\$M</b>	<b>-200</b>	<b>-219</b>	<b>-218</b>	<b>-216</b>
<b>EBITDA</b>	<b>A\$M</b>	<b>224</b>	<b>261</b>	<b>253</b>	<b>238</b>
- margin	%	53%	54%	54%	52%
- D&A	A\$M	48	42	36	1
<b>EBIT</b>	<b>A\$M</b>	<b>272</b>	<b>303</b>	<b>289</b>	<b>239</b>
+ Finance Income/Expense	A\$M	-9	2	8	14
<b>PBT</b>	<b>A\$M</b>	<b>263</b>	<b>305</b>	<b>297</b>	<b>252</b>
- Tax expense	A\$M	-27	-43	-41	-39
- Remeasurement	A\$M	0	0	0	0
<b>NPAT</b>	<b>A\$M</b>	<b>236</b>	<b>262</b>	<b>256</b>	<b>213</b>

Cash flow (\$M)	Unit	2029E	2030E	2031E	2032E
+ Sales	A\$M	421	480	471	454
- Cash costs	A\$M	-187	-219	-218	-217
- Forwards	A\$M	0	0	0	0
- Tax payments	A\$M	-17	-40	-42	-40
- Stamp duty/other	A\$M	0	0	0	0
+ Interest & other	A\$M	-9	2	8	14
<b>Operating activities</b>	<b>A\$M</b>	<b>208</b>	<b>223</b>	<b>219</b>	<b>211</b>
- Property, plant, mine devel.	A\$M	-7	-6	-5	-5
- Acquisition/ asset sale	A\$M	0	0	0	0
- Exploration & evaluation	A\$M	0	0	0	0
<b>Investment activities</b>	<b>A\$M</b>	<b>-7</b>	<b>-6</b>	<b>-5</b>	<b>-5</b>
+ Borrowings	A\$M	-140	-89	0	0
- Lease payments	A\$M	0	0	0	0
- Dividends	A\$M	0	0	0	0
+ Equity	A\$M	0	0	0	0
Financing activities	A\$M	-140	-89	0	0
<b>Cash change</b>	<b>A\$M</b>	<b>61</b>	<b>128</b>	<b>214</b>	<b>207</b>

Balance sheet	Unit	2029E	2030E	2031E	2032E
<b>Cash</b>	<b>A\$M</b>	<b>91</b>	<b>219</b>	<b>433</b>	<b>640</b>
Receivables	A\$M	30	30	29	28
Inventories	A\$M	6	6	6	6
Other current assets	A\$M	0	0	0	0
<b>Total current assets</b>	<b>A\$M</b>	<b>127</b>	<b>255</b>	<b>468</b>	<b>674</b>
Property, plant & equip.	A\$M	0	0	0	0
Exploration Properties	A\$M	0	0	0	0
Investments/other	A\$M	0	0	0	0
<b>Total non-curr. assets</b>	<b>A\$M</b>	<b>285</b>	<b>249</b>	<b>217</b>	<b>189</b>
<b>Total assets</b>	<b>A\$M</b>	<b>413</b>	<b>504</b>	<b>685</b>	<b>863</b>
Trade payables	A\$M	27	28	28	28
Short term borrowings	A\$M	89	0	0	0
Other	A\$M	28	28	28	28
<b>Total curr. liabilities</b>	<b>A\$M</b>	<b>144</b>	<b>56</b>	<b>56</b>	<b>55</b>
Long term borrowings	A\$M	0	0	0	0
Other	A\$M	0	0	0	0
<b>Total non-curr. liabil.</b>	<b>A\$M</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total liabilities</b>	<b>A\$M</b>	<b>144</b>	<b>56</b>	<b>56</b>	<b>55</b>
<b>Net assets</b>	<b>A\$M</b>	<b>268</b>	<b>448</b>	<b>629</b>	<b>808</b>

Share Capital		2029E	2030E	2031E	2032E
New shs issued/exerciseable	M	0	0	0	0
Average issue price	ps	0.00	0.00	0.00	0.00
Total Cash Raised	A\$M	0	0	0	0
Ordinary shares - end	M	671	671	671	671
Diluted shares - end	M	671	671	671	671

Key Financials/Ratios	Unit	Date			
		2029E	2030E	2031E	2032E
GCFPS	c	124.0	133.2	130.7	126.1
CFR	X	0.2	0.2	0.2	0.2
EPS	c	35.2	39.1	38.2	31.8
PER	X	0.8	0.7	0.8	0.9
Yield	%	0%	0%	0%	0%
Interest cover	x	6.7	0.0	0.0	0.0
ROCE	%	66%	60%	42%	28%
ROE	%	88%	59%	41%	26%
Gearing	%	32%	0%	0%	0%

Jaguar Project Performance		2029E	2030E	2031E	2032E
Ore Mined					
Tonnage	Mt	3.3	3.5	3.5	3.5
Ni	%	0.95	0.95	0.94	0.90
Co	%	0.03	0.03	0.03	0.03
Payable Metal Produced					
Nickel	kt	17.0	20.0	19.6	18.8
Cobalt	kt	0.3	0.3	0.3	0.3
Payable Nickel Costs					
C1 Cost Net-BP	US\$/t Ni	3.51	3.27	3.32	3.45
AISC Net-BP	US\$/lb Ni	4.17	3.88	3.91	4.04
C1 Cost Ore Milled	US\$/t Ore	47.1	44.1	44.0	43.7

Project Valuation	A\$M	A\$/sh
Jaguar Build Date Post-Tax NPV(9)   100% Ownership	778	1.57
Jambreiro Build Date Post-Tax NPV(9)   100% Ownership	191	0.39

Company Valuation Summary	Spot		Forecast	
	A\$M	A\$/sh	A\$M	A\$/sh
Jaguar Post-Tax NPV(9) 70% Ownership	462	0.93	457	0.92
Study Stage Risk Discount -25%	-110	-0.22	-114	-0.23
Jambreiro Post-Tax NPV(9) 100% Ownership	238	0.48	161	0.32
Study Stage Risk Discount -25%	-60	-0.12	-40	-0.08
Regional Exploration	20	0.04	20	0.04
Corporate Overheads	-65	-0.13	-65	-0.13
Cash (Estimate)	31	0.06	31	0.06
Debt	0	0.00	0	0.00
Future Option/Equity^	-87	-0.18	-75	-0.15
<b>Valuation</b>	<b>407</b>	<b>0.82</b>	<b>374</b>	<b>0.76</b>

^ Future Option/Equity Dilution is calculated using an NPV formula that considers value of dilutionary shares/options in future periods against the current project valuation

Directors & Management	
Didier Murcia	Chairman
Darren Gordon	Managing Director / CEO
Bruno Scarpelli	Executive Director
Mark Hancock	Non-Executive Director
Chris Banasik	Non-Executive Director
Natalia Streltsova	Non-Executive Director

Top Shareholders	M shs	%
McCusker Holdings Pty Ltd	59	14
Harmanis	22	5
Sprott Inc.	18	4
Regal	17	4

Jaguar Project Resources	Mt	Ni %	Co %
Measured	14	1.06	0.04
Indicated	73	0.81	0.02
Inferred	23	0.93	0.03
<b>Total</b>	<b>109</b>	<b>0.87</b>	<b>0.03</b>

## Jaguar - Returned to Sulphide Concentrate Scenario

CTM has advised that in response to ongoing negative macro nickel sentiment, the upcoming Jaguar Definitive Feasibility Study (Q2 CY2024) will be reframed to produce a nickel sulphide concentrate rather than nickel sulphate as recently planned. Plans for hydrometallurgical processing will not be entirely abandoned, but instead suspended until market conditions improve.

Elimination of process equipment required for pressure-oxidation, purification and crystallisation will substantially reduce upfront capital requirements, reduce process operating expenditure and reduce project technical risk. Production of nickel in a saleable sulphide concentrate form will reduce applicable metal payabilities and per unit revenues.

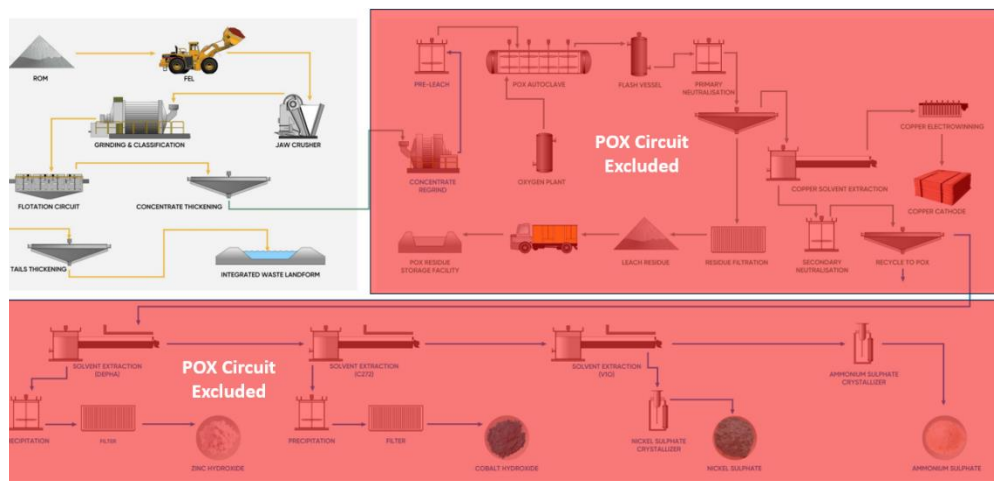
The DFS will integrate outcomes of existing pit optimisations, site layout, process flowsheet and concentrate specifications as were intended for the now suspended hydrometallurgical processing scenario.

As reframed, the project will produce approximately ~20ktpa of nickel in sulphide 11.2% nickel sulphide concentrate. We estimate a 75% payability for nickel contained within concentrate inclusive of all TCRC's. We expect cobalt payability will be reduced to approximately 50% and other byproduct credits eliminated.

Considering the market headwinds CTM and other nickel players are facing we think the reshaped approach is prudent. The final POX integrated initial capital number would most likely have frightened the market, especially considering the recent sell off CTM has endured. Jaguar is a world class nickel sulphide asset we expect it to perform well without the value optimisation provided hydrometallurgical processing. Configuring the initial build to enable the bolt on of hydrometallurgical processing leaves the door open to production of battery precursor chemicals.

We expect partnership discussions will continue with external parties. A change in output product, might attract a different class of partner. Jaguar's sulphide concentrate would be viewed as desirable to both metal traders and refiners. Battery chemical refiners might find the product particularly desirable due to its low carbon footprint. While the notion of a 'green premium' has failed to materialise within metal markets, a low emission product should still be viewed as desirable by some buyers.

Figure 1: Previously proposed Jaguar DFS flowsheet with circuits proposed to be excluded shaded red.



Source: Argonaut after CTM

**A switch back to a nickel sulphide concentrate reduces initial capital requirements and risk**

**The door has been left ajar to pursuing hydrometallurgical processing in the future**

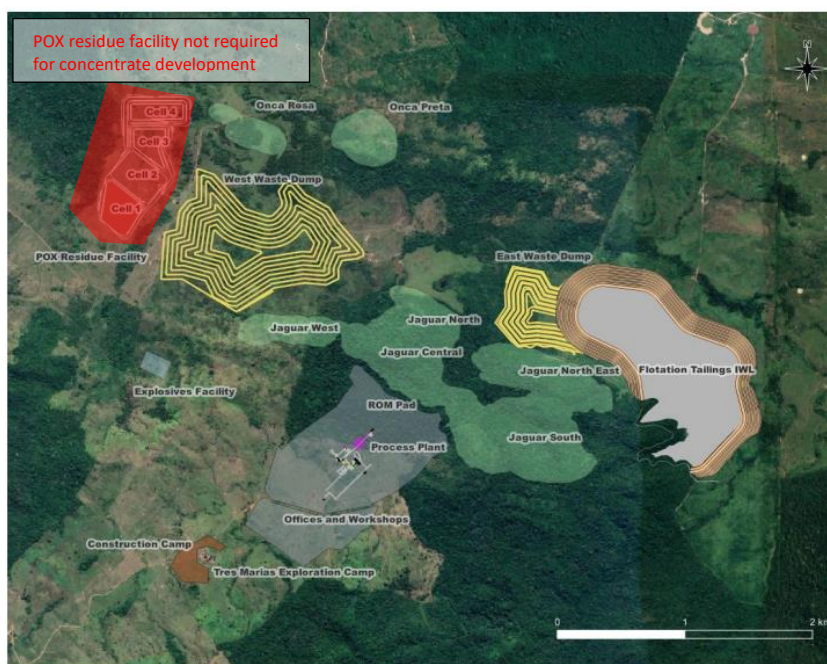
## Argonaut Jaguar Concentrate Development Model

Our rescoped Jaguar development model generates a build date Post-Tax NPV(9) of A\$778M (US\$505M). Our build date Pre-Tax NPV(9) estimate is A\$947M (US\$616M).

We apply a 9% WACC for discounted cashflow modelling. Our base case nickel forecast flat lines at a long term US\$17,769/t or US\$8.05/lb (real) from January 2028. This is slightly higher than our previously utilised US\$17,500/t Ni assumption. Nickel is currently trading at ~US\$18,135/t on the London Metals Exchange.

We have rescoped our Jaguar development model as an 18-year concentrate only operation. We assume US\$400M in initial capital expenditure requirements including preliminary pit pre-strip. We model a 3.5Mtpa open pit mining operation with ore mined at 6:1 strip ratio. Our mining model includes 65Mt of inventory averaging 0.87% Ni, 0.03% Co. We anticipate the first 3-years of open pit production would source ore from the Jaguar South and Central deposits, yielding slightly higher than average LOM metal grades.

Figure 2: Jaguar DFS layout as at August 2024.



Source: Argonaut after CTM

No underground mining is considered in our development scenario. We consider underground mining at higher grade deposits such as Onca Preta and Onca Rosa as sources of potential upside to the project.

We model a 3.5Mtpa comminution and flotation circuit for production of 210ktpa of sulphide concentrate containing an 24ktpa of nickel, or 18ktpa of payable metal assuming a 75% payability and 0.5ktpa of payable cobalt (50% payability). Our model assumes a full circuit nickel recovery of 80% and cobalt recovery of 55%.

Elemental characterisation of bulk concentrate generated during previous pilot flotation test work is shown in Figure 7. The output product would be attractive to a range of refiners, particularly those with hydrometallurgical capacity. The >11% Ni sulphide product would be trucked to rail or port for ultimate seaborne export into the Atlantic.

**Our rescoped Jaguar model estimates a Post-Tax Build Date NPV(9) of A\$778M with a 27% IRR**

**Site layout is expected to remain the same**

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

Source: CTM

Jaguar's concentrate product could be treated by either pyrometallurgical or hydrometallurgical refiners

Our model includes aggregate Gross Revenue royalties (government and private) of 5.8% for a sulphide concentrate. Our notional tax rate is set at a discounted 15% for the first 10-years as per government provisions and then 34% thereafter.

Our model estimates a C1 Cost per tonne of ore milled of US\$41.7 and AISC of US\$50.2 per tonne of ore milled. Treatment and refining charges are accounted for in the percentage rate of metal payability. This results in a C1 cash cost of US\$3.39/lb of payable Ni metal and an AISC of US\$4.12/lb over life of mine.

Table 2: Key Jaguar model variables and parameters.

Argonaut Jaguar Project Model Key Variables & Parameters			
<b>Pre-Tax Project Value (9% DR)</b>		<b>Jaguar Performance LOM</b>	
Pre-tax Current NPV	796 A\$M	Mined Per Annum (Avg)	3.5 Mtpa
Pre-tax Build Date NPV	947 A\$M	LOM Strip Ratio	6.0 x
<b>Post-Tax Project Value (9% DR)</b>		Mined Grade Average (LOM)	
Post-tax Current NPV	653 A\$M	Ni	0.86 %
Post-tax Build Date NPV	778 A\$M	Co	0.03 %
Operation Start Date	Jan-28	Tonnes Milled (Avg)	3.4 Mtpa
Initial Capital Cost	400 US\$M	Avg Metal in Product	
Growth/Sustaining Capital	223 US\$M	Nickel	Avg pa   LOM
Metal Prices (Long Term Real)		Cobalt	23   417 kt
Nickel	17,769 US\$/t	0.6   10 kt	
Nickel	8.1 US\$/lb	Nickel Payability	75 %
Cobalt	33,317 US\$/t	Cobalt Payability	50 %
Cobalt	15.1 US\$/lb	Payable Metal Produced	
AUDUSD	0.65 x	Nickel	Avg pa   LOM
First 10 Years Federal Tax Rate	15.00 %	Cobalt	18   313 kt
Full Tax Rate after 10 Years	34.00 %	0   1 kt	
Gross Revenue Royalties	5.80 %	C1 Cost /t ore Milled	41.7 US\$/t
		AISC Cost /t ore Milled	50.2 US\$/t
		Payable Nickel Costs (Avg During Operations)	
		C1 Net Byproducts	3.39 US\$/t Ni
		AISC Net ByProducts	4.12 US\$/lb Ni
		AIC Net ByProducts	4.14 US\$/lb Ni

Source: Argonaut

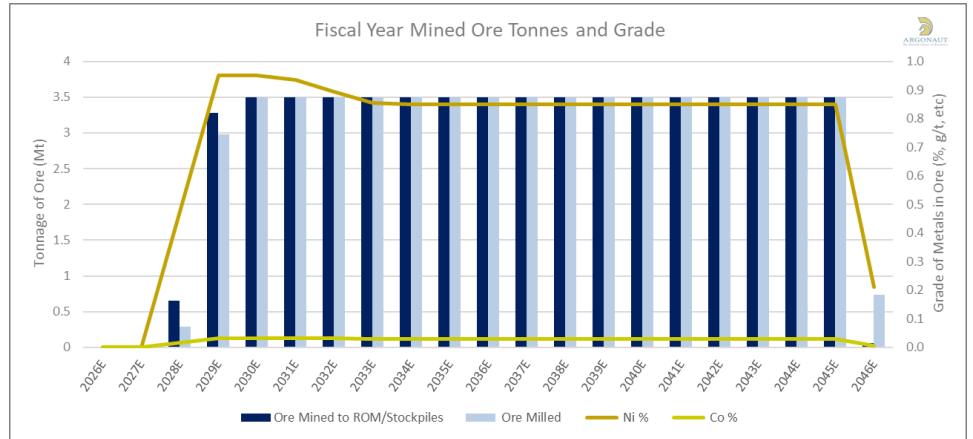
18kt of payable nickel in concentrate produced per annum

Table 3: Jaguar average operating cost per tonne milled over LOM.

Operating Cost Estimate	US\$ /t ore Milled LOM
Mining Cost	20.4
Stockpile Rehandling	0.0
Processing Cost	12.0
Administration	1.2
Transport & Logistics	8.1
Treatment/Refining Charge	0.0
<b>C1 Cash Cost (No BP Credit)</b>	<b>41.7</b>
Royalties (Various)	5.5
Sustaining Capital	2.9
<b>AISC (No BP Credit)</b>	<b>50.2</b>
Growth Capital	0.2
<b>AIC (No BP Credit)</b>	<b>50.3</b>

Source: Argonaut

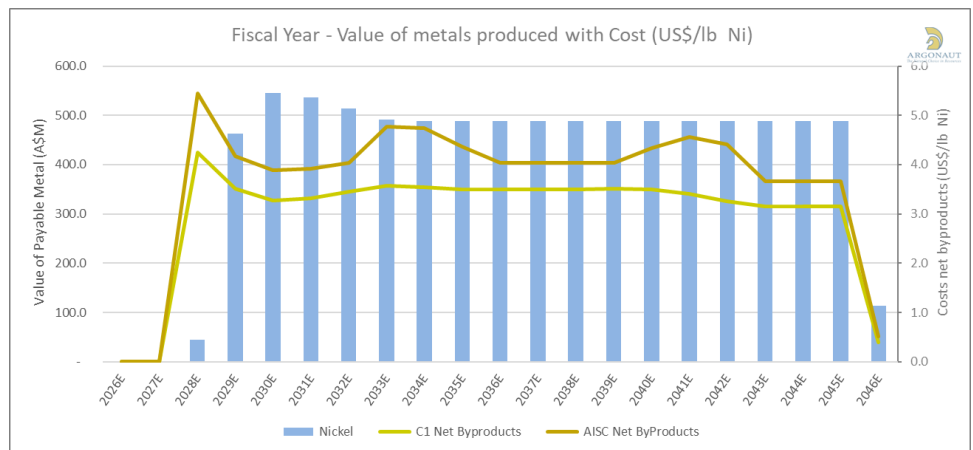
Figure 3: Argonaut's Jaguar mining inventory tonnage and grade profile with tonnes milled.



The mine is scheduled to produce 3.5Mtpa of ore per annum at a 6.0 waste strip ratio

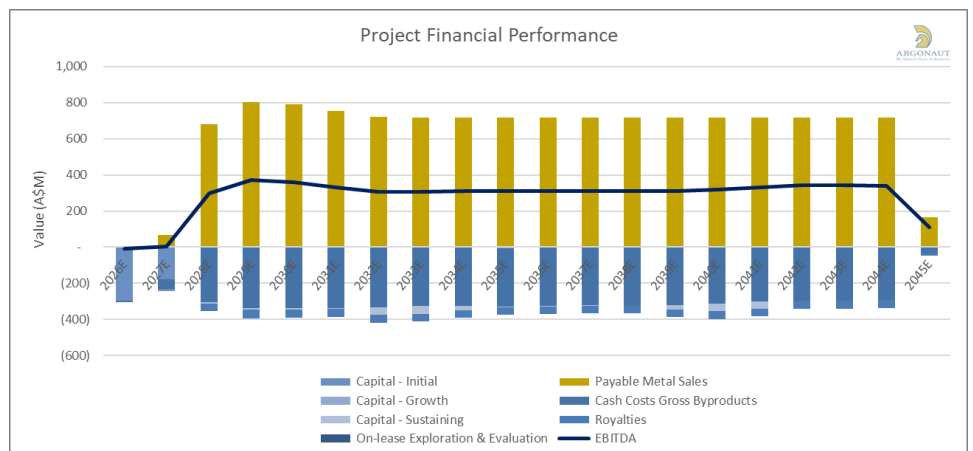
Source: Argonaut

Figure 4: Jaguar value of payable nickel metal in sulphide concentrate with costs.



Source: Argonaut

Figure 5: Jaguar financial performance with sales revenues, costs and EBITDA.

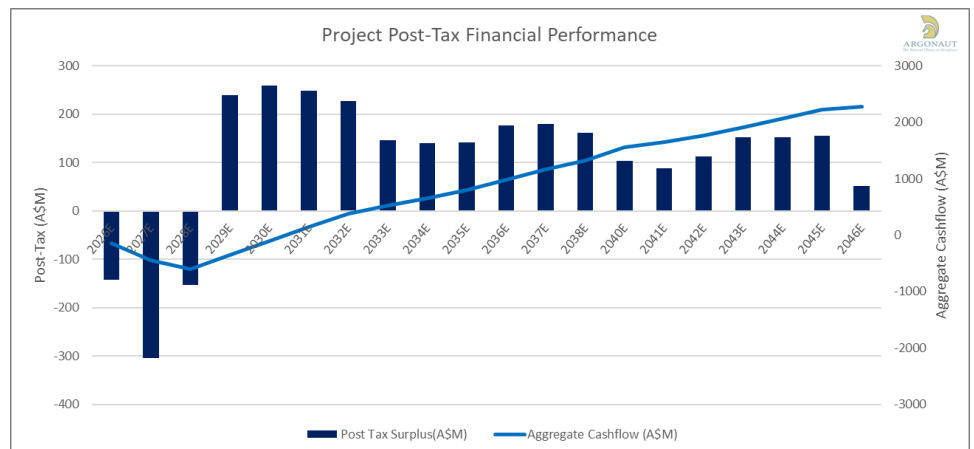


EBITDA of approximately A\$300M over life of mine (100% basis)

Source: Argonaut



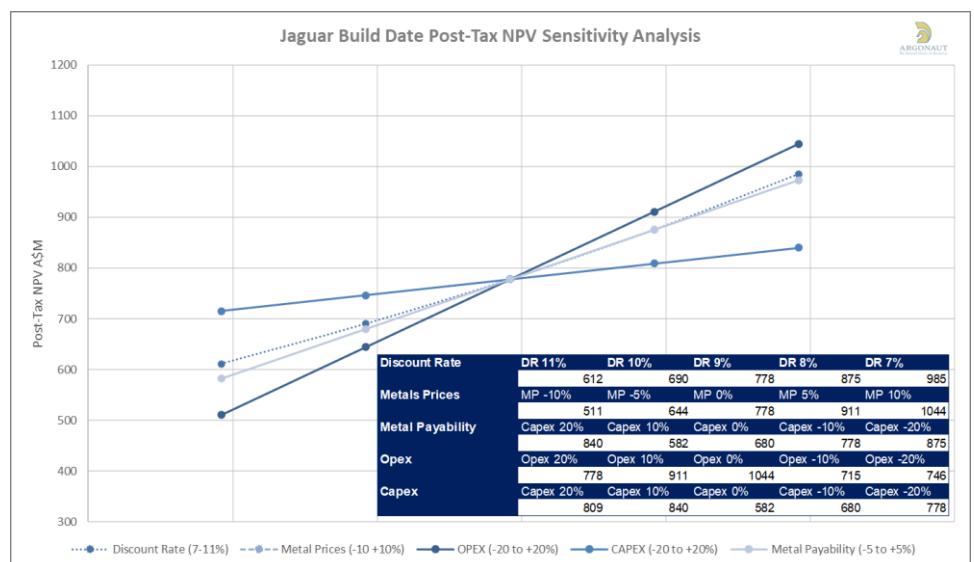
Figure 6: Jaguar Post-Tax financial performance with aggregate cashflow.



Aggregate positive cashflow of over \$2 billion over life of mine

Source: Argonaut

Figure 7: Jaguar project Argonaut Model sensitivity analysis.



At a discount rate of 7% our Post Tax NPV rises to A\$985M

Source: Argonaut

Table 4: Jaguar Project Resources by deposit.

Resource	Mt	Ni %	Cu %	Co ppm	Zn %	Ni Metal (kt)
Jaguar South (II)	35.8	0.91	0.05	211	0.12	327
Jaguar Central (II)	12.5	0.81	0.05	239	0.47	100
Jaguar North (II)	3.2	1.15	0.18	383	1.19	37
Jaguar Central North(II)	14.2	0.62	0.04	191	0.57	88
Jaguar North East (I)	16.8	0.75	0.11	279	0.51	126
Jaguar West (II)	8.7	0.72	0.03	167	0.12	63
Onca Preta (II)	14.2	1.23	0.09	534	0.19	174
Onca Rosa (I)	1.9	0.98	0.07	282	0.03	19
Tigre (II)	2.0	0.77	0.07	271	0.03	15
Total Global MRE	109.2	0.87	0.07	268	0.32	949

Source: CTM

## Jambreiro – Sleeper Value

CTM’s second major Brazilian asset the Jambreiro Iron Ore Project remains largely ignored by the market. The project is located 250km north-east of the city of Belo Horizonte. Jambreiro incorporates three deposits containing a mix of friable, semi-compact and colluvium itabirite iron ore grading an average 28% Fe. The key commercial benefit of



**The 2019 Jambreiro PFS evaluated an operation of 1Mtpa 65% Fe**

concentrate produced from itabirite ore is its quality. The concentrate is high grade with very low phosphorous, alumina and silica content.

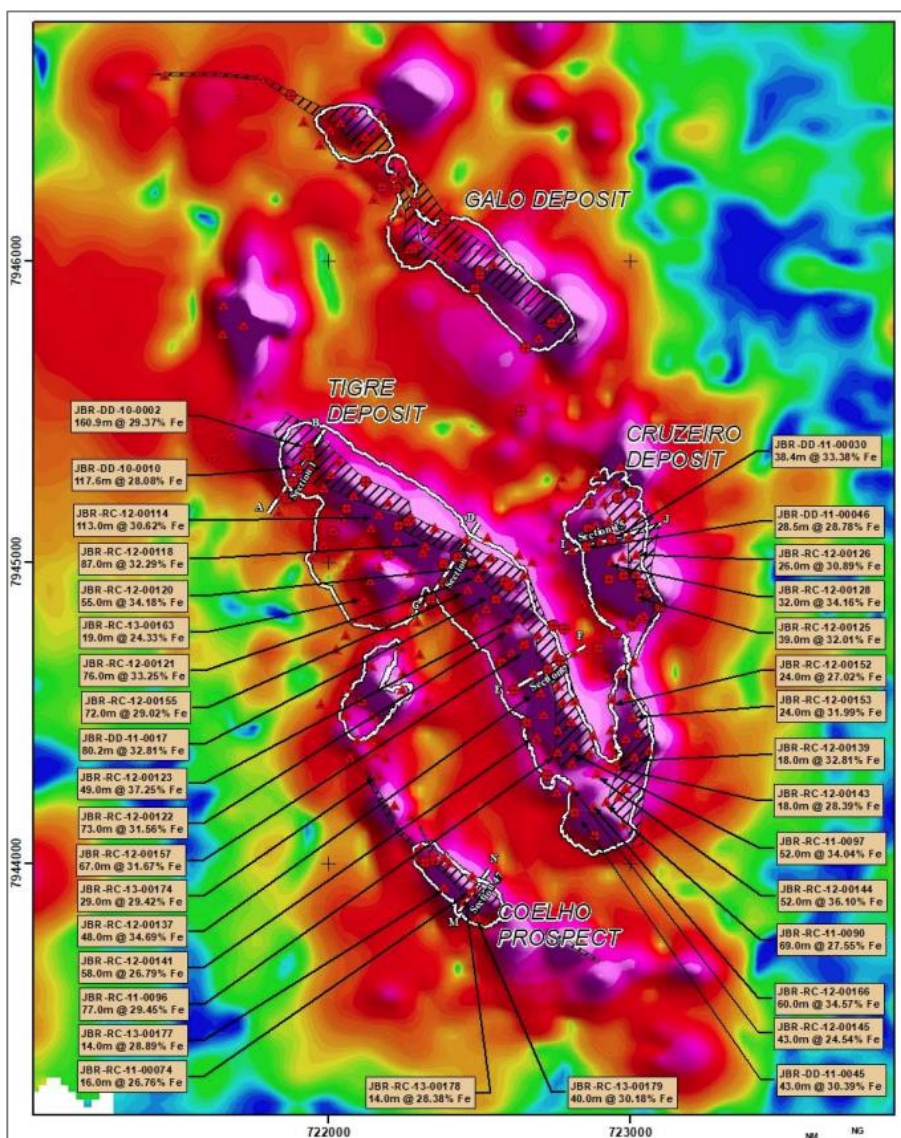
CTM's 2019 Jambreiro PFS evaluated an 18-year, 1Mtpa +65% Fe operation at an Fe 62% reference price of US\$75/t (Mine Gate FOB US\$41/t). Under base cost parameters including pre-production capital costs of A\$60M, the study estimated a Post-Tax NPV(8) of A\$115M. The study assumed a C1+Royalty operating cost of A\$29.0/t product.

The study outlined the mining of ~2.3Mt of ore per annum with at an average waste strip ratio of 0.68. Initially mined material would grade just under 34% Fe and taper over life of mine. The friable nature of ore will make mining free dig in the initial period of operations.

Jambreiro ore will be processed via a flowsheet involving screening, concentration and scavenging (Figure 12). Pilot scale tests of the flowsheet achieved a 65.9% Fe sinter feed with low impurities.

Figure 8: Overview map of Jambreiro with proposed pits.

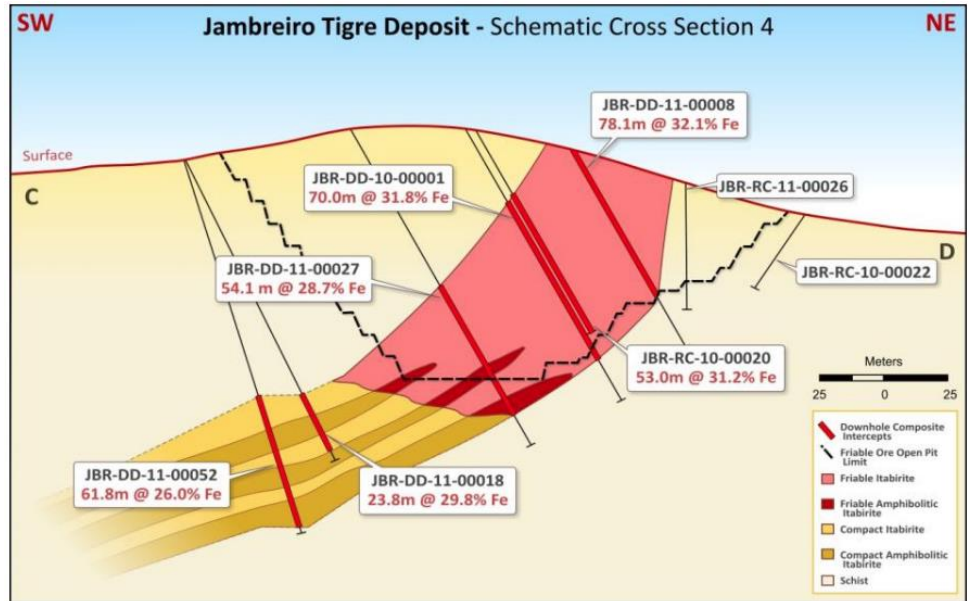
Several pits would be used to source friable itabirite iron mineralisation



Source: CTM



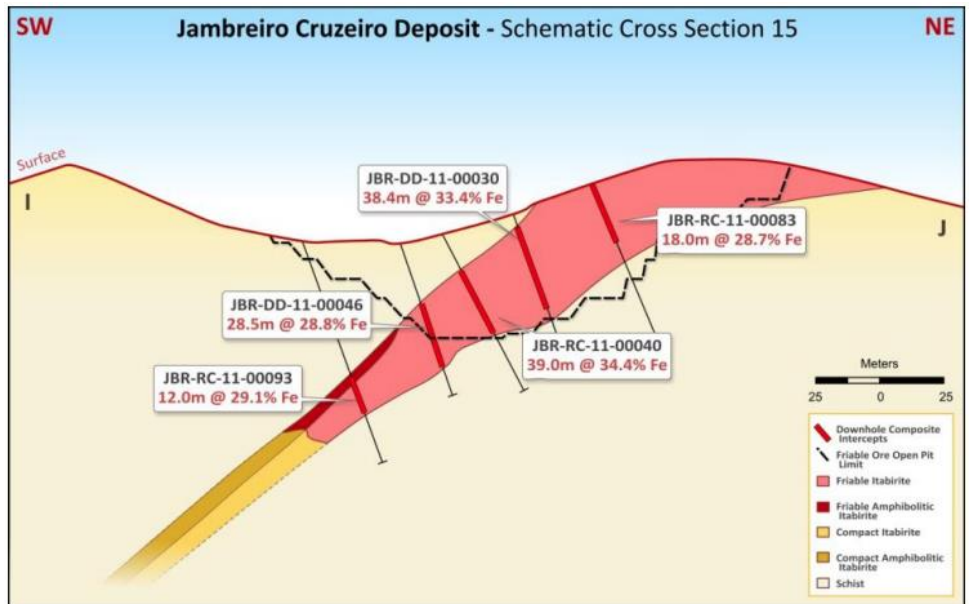
Figure 9: Jambreiro Tigre deposit cross section.



Source: CTM

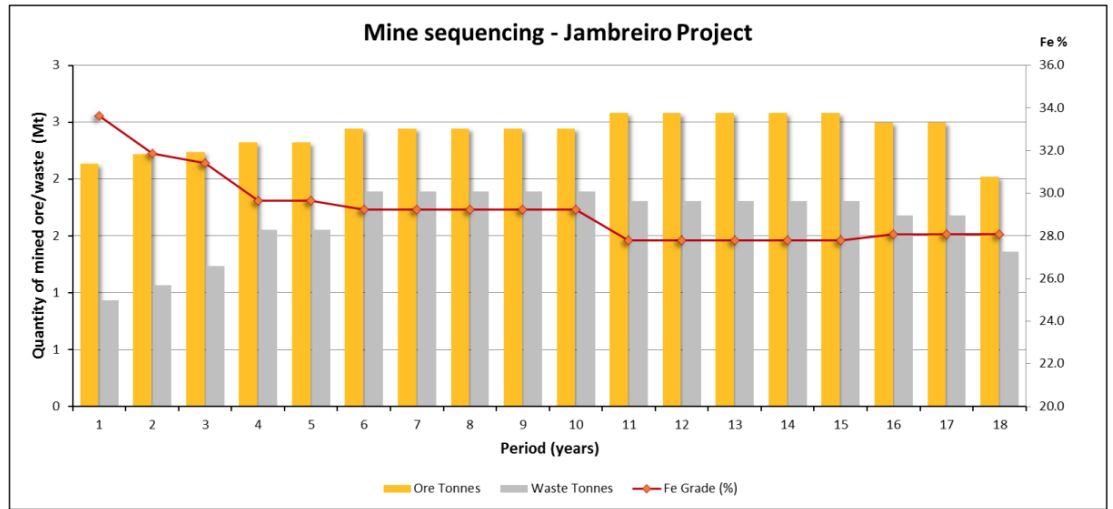
Deposit geometry ensures low strip ratios

Figure 10: Jambreiro Cruzeiro deposit cross section.



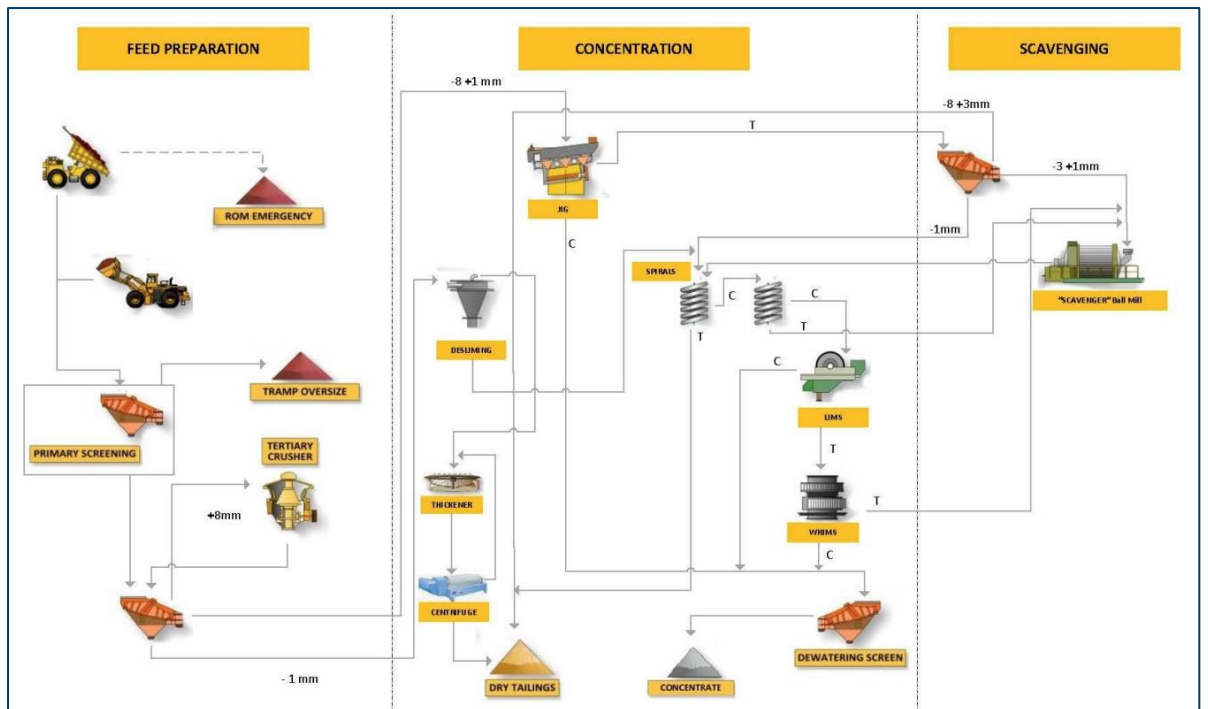
Source: CTM

Figure 11: Jambreiro PFS mine sequencing.



Source: CTM

Figure 12: Jambreiro 2019 PFS flow sheet.



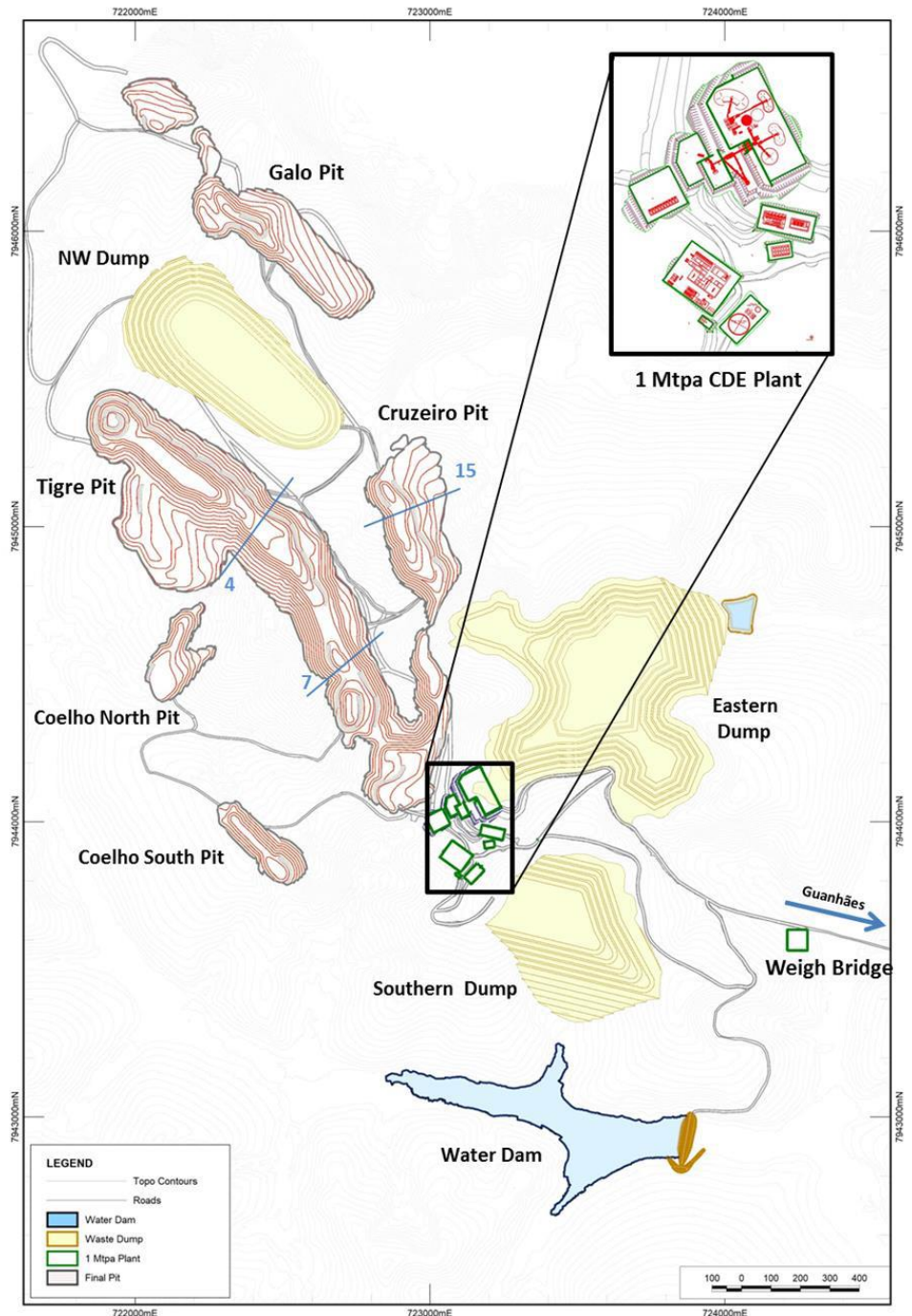
Source: CTM

Table 5: Jambreiro pilot plant test work product characteristics.

		Sinter Feed
Chemical Analysis	Fe (%)	65.9%
	SiO <sub>2</sub> (%)	4.3%
	Al <sub>2</sub> O <sub>3</sub> (%)	0.8%
	P (%)	0.01%
	Mn (%)	0.04%
	LOI (%)	0.42%

Source: CTM

Figure 13: Jambreiro site layout.



Site layout for the 1Mtpa operation

Source: CTM

### Direct Reduction Pellet Feed Concentrate Option

**A DR feed product could provide benefits to revenues**

Earlier this week CTM reported that it has commenced a new study on the potential for Jambreiro to deliver a high-grade Direct Reduction (DR) quality pellet feed concentrate. DR pellet feed product is used to produce DR pellets, which in turn are then used as feed for Electric Arc furnaces. Production of steel using electric-arc-furnaces fed by DR feed lowers the overall carbon footprint of steel production compared to conventional blast furnace processing.

Recent sighter on Jambreiro itabirite samples with a head grade of 38-39% Fe successfully generated concentrates grading >68% Fe with recoveries ranging between 80-86% Fe.

Test flowsheets included grinding to 150µm followed by either magnetic separation (WHIMS) or desliming and flotation.

CTM will now complete a high-level study to assess the revenue benefits, process recovery characteristics and capital/operating costs of augmenting the existing Jambreiro flowsheet to produce a DR pellet feed.

## Argonaut Jambreiro Model

We have completed a detailed project production and financial model for Jambreiro using modified 2019 PFS assumptions. Under our base model parameters, we estimate a Build Date Post-Tax NPV(9) of A\$191M, valued at A\$161M today (construction starting 2027).

Our model assumes production of 1Mtpa of 65% Fe concentrate over an 18-year mine life. We estimate an AISC operating cost of A\$41.44/t ore milled resulting in an AISC of A\$50.49/t 62% Fe product produced. We assume initial capital requirements of A\$80M (up from \$60M in the 2019 PFS) and have escalated operating costs.

Our NPV estimate is based on a 9% discount rate and long-term Fe 62% reference forecast price of US\$90/t, equivalent to a mine gate FOB price of US\$50/t (A\$77/t). Spot pricing for Fe 62% product is ~US\$133/t. Additional value could be added assuming positive DR studies, however, for the moment we exclude this upside.

Royalties and other similar charges are estimated at 10%. We apply a flat 34% tax rate over life of mine.

An updated EIA/RIMA was lodged in September 2023 with the environmental agency in Minas Gerais State, Supram, for Jambreiro. All environmental licences required to build Jambreiro (3Mtpa scale potential) were previously held by the Company but lapsed during the period when the Project was put on hold. New approvals are anticipated to be received in Q3 2024.

*Table 6: Argonaut Jambreiro Model key variables and parameters.*

Argonaut Jambreiro Project Model Key Variables & Parameters			
<b>Pre-Tax Project Value (9% DR)</b>		<b>Jaguar Performance LOM</b>	
Pre-tax Current NPV	227 A\$M	Tonnes Mined (LOM)	40.0 Mt
Pre-tax Build Date NPV	271 A\$M	Tonned Benefiated (pa)	2.3 Mt
<b>Post-Tax Project Value (9% DR)</b>		Ore Metal Grades	
Post-tax Current NPV	161 A\$M	Fe	29.10 %
Post-tax Build Date NPV	191 A\$M	Metal Payabilities	
Operation Start Date	1/01/2027	Fe	100 %
Initial Capital Cost	80 A\$M	Payable (Avg pa/LOM)	Avg pa   LOM
Process Plant Design Rate	0.94 Mtpa	Fe	1   17.9 Mt
Long Term Forecast Metal Prices		C1 Cost /t ore Milled	29.3 A\$/t
Fe 62%	90 US\$/t	AISC Cost /t ore Milled	35.8 A\$/t
Adjusted Mine Gate FOB	50 US\$/t	Payable Costs	
AUDUSD	0.65 x	C1 Net Byproducts	41.44 A\$/t Fe
Tax Rate	34.00 %	AISC Net ByProducts	50.49 A\$/t Fe
Royalties and Other Charges	10.00 %	AIC Net ByProducts	51.20 A\$/t Fe

Source: Argonaut

**We estimate a Build Date Post-Tax NPV9 of A\$191M with an IRR of 45%**

**Strong project metrics**

Figure 14: Argonaut Jambreiro mining schedule with ore tonnes and grade.

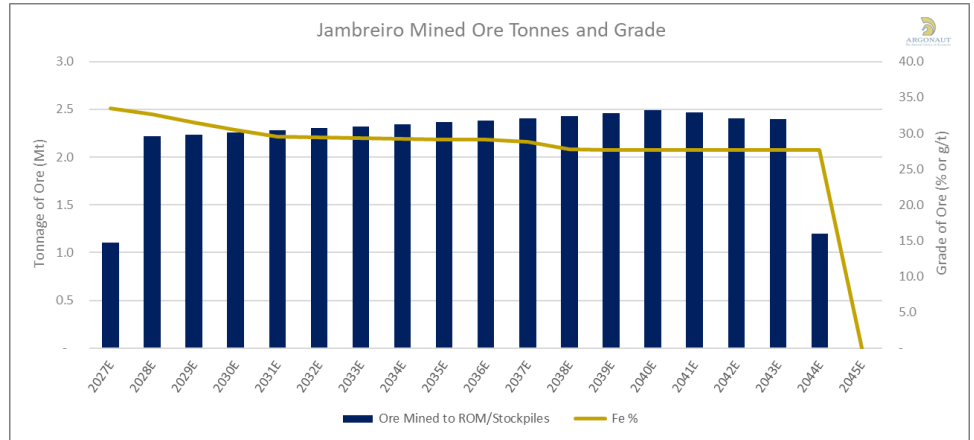


Figure 15: Jambreiro value of metals produced with C1 and AISC costs.

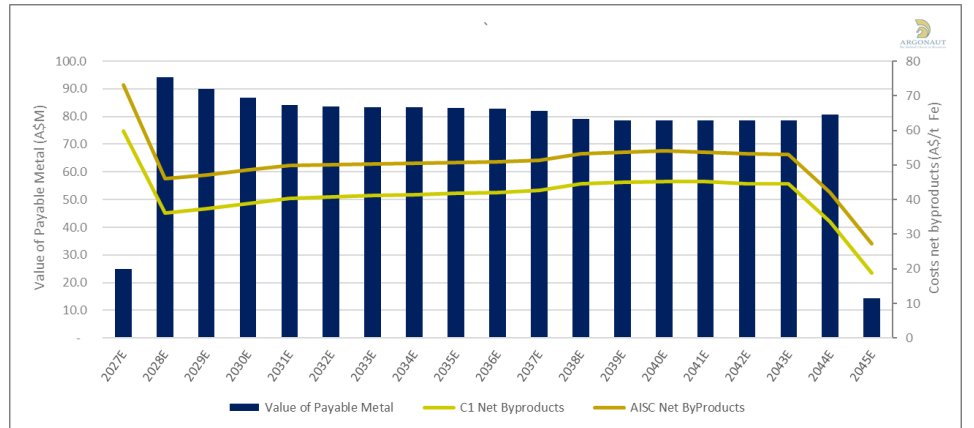


Figure 16: Jambreiro financial performance with costs and EBITDA.

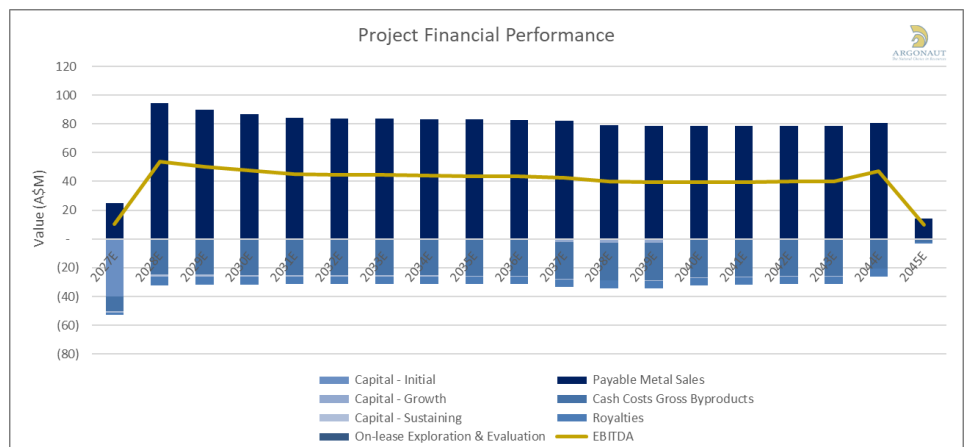
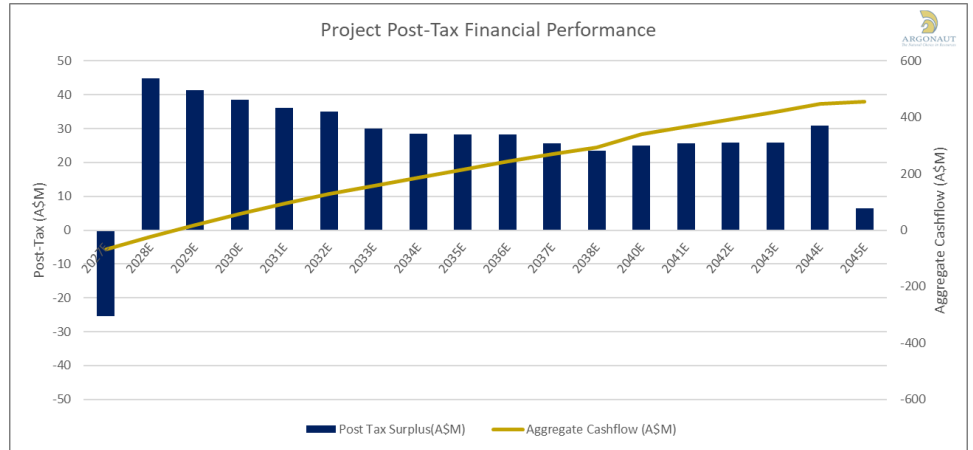
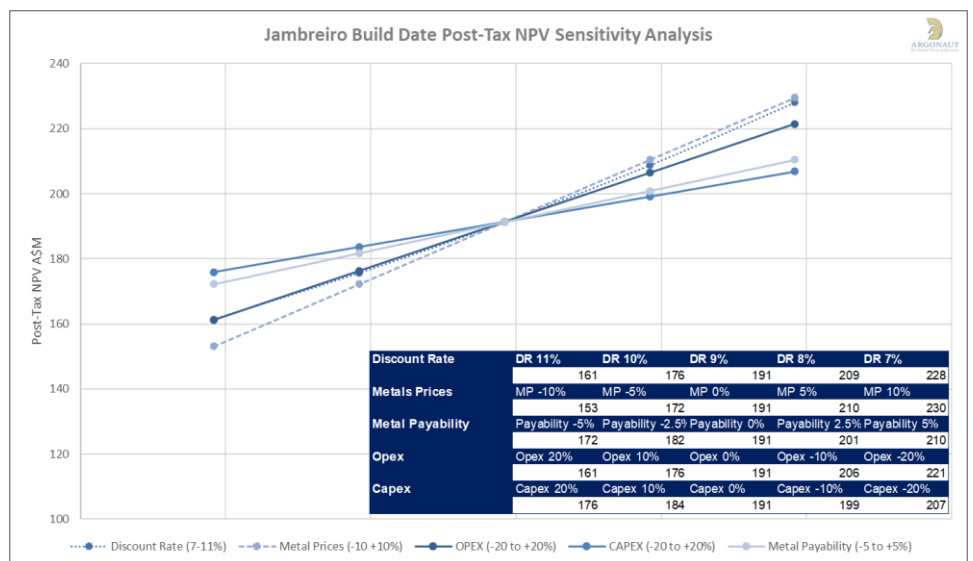


Figure 17: Argonaut model Jambreiro Post-Tax financial performance with surplus and aggregate cashflow.



Aggregate post tax cashflow of almost A\$500M over life of mine

Figure 18: Sensitivity analysis for Argonaut’s Jambreiro project development.



Our Jambreiro Build Date NPV increases to A\$228M at a 7% discount rate

Source: Argonaut

## Boi Novo IOCG Exploration

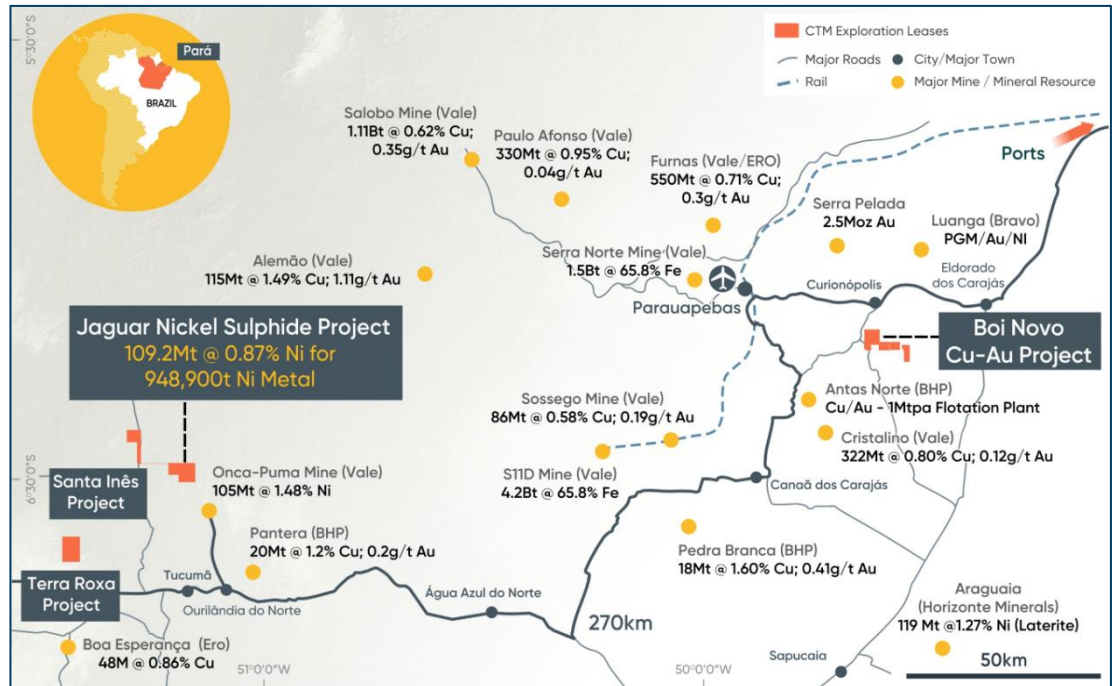
The Boi Novo Iron-Oxide-Copper-Gold project adds a third string to CTM’s bow. The project is located 30 kilometres east of the regional centre of Parauapebas (population 250k) and approximately 15km north-east of BHP’s (previously Oz Minerals) Antas Norte copper-gold mine. The Carajas is a world class IOCG province, hosting major deposit like Salobo and Cristalino (both Vale). Whilst studies and permitting progresses for Jaguar and Jambreiro, CTM will complete early stage, inexpensive exploration at Boi Novo. Planned activities will include fixed-loop electromagnetics and drilling.

Existing targets are defined by soil geochemistry results associated with particular lithological contacts. A drone magnetics survey over the project area clearly defines iron rich formations within the host volcano-sedimentary sequence (Figure 20).



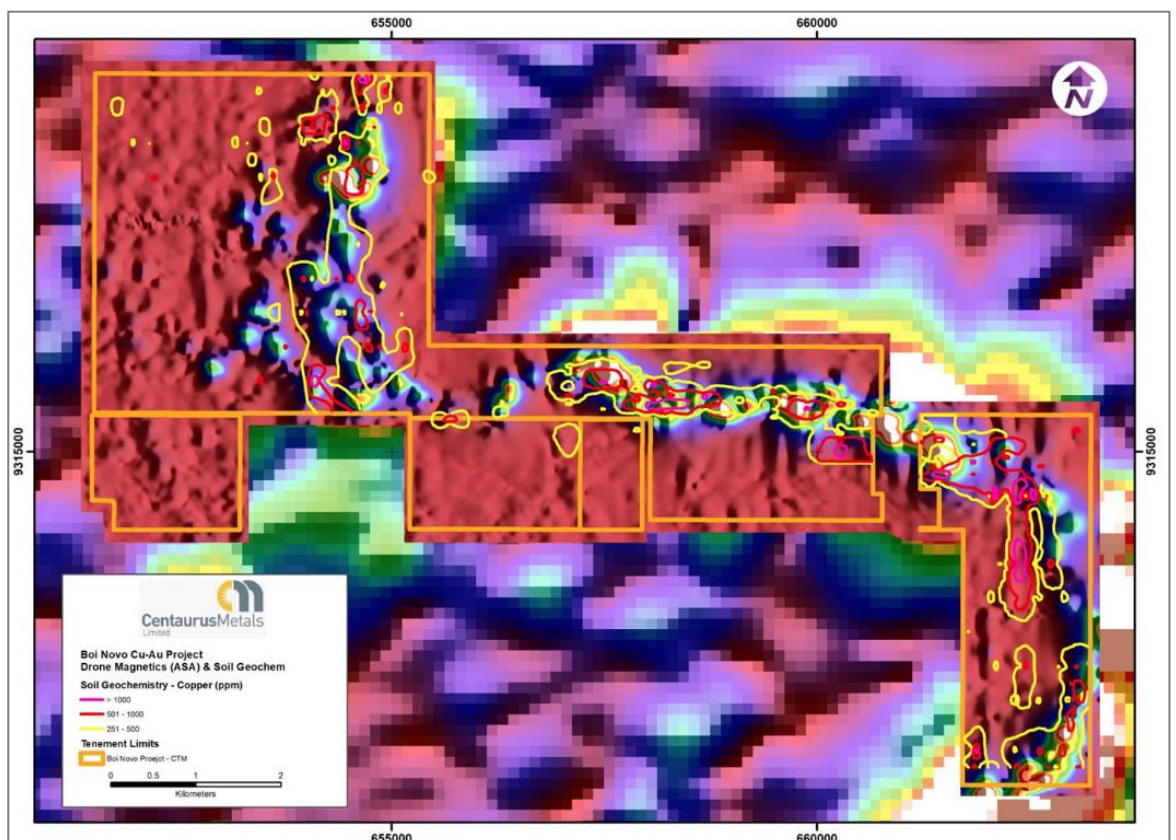
CTM is exploring in true elephant country and has a proven track record of base metal exploration success within the region. Discovery of an economic copper-gold system at Boi Novo could provide further support for the flagging share price.

Figure 19: Location of CTM's Pará projects including Jaguar.



Source: CTM

Figure 20: Boi Novo soil sampling overlaid on drone magnetic imagery.



Source: CTM

## Corporate Level Valuation

**Our Valuation integrates build of both the Jaguar and Jambreiro projects**

Our corporate level valuation assumes construction of Jaguar will be begin mid-CY2026, with operations ramping up from mid-CY2028. We assume capital requirements would be provided by a 30% selldown of the project for US\$106M, equivalent to 30% of our Build Date NPV. Funding shortfalls would be provided by debt and an equity raising. Using our base case assumptions, CTM's assumed 70% retained stake in Jaguar is today valued at NPV(9) A\$457M or A\$0.92 per share. We overlay a 25% discount to our Jaguar valuation to reflect maturity of studies and uncertainty in our assumptions. This will be relaxed once the Jaguar DFS is released.

The Jambreiro Iron Ore project remains CTM's sleeper project. Our base case NPV(9) model generates a current value of A\$161M, or \$0.32 per share for 100% of the project. Our model assumes development would begin at the beginning of January 2026, funded by equity and debt. We also apply a 25% study maturity discount overlay to reflect model uncertainty.

We include \$20M in value for regional exploration projects including Boi Novo.

Corporate overheads are presented as a the NPV of modelled heady company future outgoings. We estimate \$31M in current cash and equivalents with no major debt.

The impact of modelled future option and equity dilution is addressed. Our cashflow model supports both developments as currently scheduled.

*Table 7: CTM company level net asset valuation.*

Company Valuation Summary	Spot		Forecast	
	A\$M	A\$/sh	A\$M	A\$/sh
Jaguar Post-Tax NPV(9) 70% Ownership	462	0.93	457	0.92
Study Stage Risk Discount -25%	-110	-0.22	-114	-0.23
Jambreiro Post-Tax NPV(9) 100% Ownership	238	0.48	161	0.32
Study Stage Risk Discount -25%	-60	-0.12	-40	-0.08
Regional Exploration	20	0.04	20	0.04
Corporate Overheads	-65	-0.13	-65	-0.13
Cash (Estimate)	31	0.06	31	0.06
Debt	0	0.00	0	0.00
Future Option/Equity <sup>^</sup>	-87	-0.18	-75	-0.15
<b>Valuation</b>	<b>407</b>	<b>0.82</b>	<b>374</b>	<b>0.76</b>

<sup>^</sup> Future Option/Equity Dilution is calculated using an NPV formula that considers value of dilutionary shares/options in future periods against the current project valuation

Source: Argonaut

## Recommendation & Price Target

**We assign a Price Target of A\$0.80 per**

We maintain our Speculative Buy recommendation and ascribe a Price Target of \$0.80 per share (previously \$1.60 per share). Jaguar's quality Resources support reconfiguration of the development to a concentrate product. The door has been left open to proceed with hydrometallurgical circuits in the future when sentiment and valuations recover. We expect news on partnerships and funding options following completion of the reworked DFS. Jambreiro has been largely ignored by the market and should more than support CTM's share price on its own. The potential for identification of a copper discovery at Boi Novo presents a discovery wild card.



## Key Risks to valuation

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### Timelines

Our discounted cash flow model is time dependant. Any delay to scheduled development or production will adversely effect on our valuation.

### Metallurgical performance

Pilot POX test programmes have been completed with positive outcomes. Fluro-apatite is associated with mineralisation at the Jaguar project. Sulphide concentrate characterisation studies have concluded that fluorine is present at manageable levels for pyrometallurgical refiners. Deleterious elements are less of an issue for hydrometallurgical refiners.

### Commodity Pricing

Value estimates are based on consensus long term commodity price forecasts. A 10% difference to the price of nickel over the modelled life of mine will result in a ~25% shift in project valuation.

### Costs

Cost assumptions are based on operating and capital costs from CTM documentation and our knowledge of industry rates.

### Exploration success

Valuation assumes that future exploration and investments achieve acceptable returns. Subjective value is attributed to exploration assets at Jaguar.

### Interest rates/discount rates

Argonaut takes cash flow risk into account when choosing discount rates for different projects. Our valuation is sensitive to the discount rate used.

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**Important Disclosure**

The publishing analyst holds CTM shares.

Argonaut Securities Pty Ltd acted as Joint Lead Manager and Joint Bookrunner in respect of the Placement to raise approximately \$35M announced in July 2023 and received fees commensurate with this service. Argonaut holds or controls 759,976 CTM shares.

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