CentaurusMetals
Limited

The Jaguar Nickel Sulphide Project
VALUE-ADD SCOPING STUDY

EXECUTIVE SUMMARY
MAY 2021

www.centaurus.com.au

Contents

This Jaguar Nickel Sulphate Project (JNP) Value-Add Scoping Study has been prepared by Centaurus Metals with assistance from the following engineering and technical advisors:

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1. Executive Summary

1.1 INTRODUCTION

Centaurus Metals Ltd (CTM) has completed a Value-Add Scoping Study for the development of the Jaguar Nickel Sulphide Project (JNP), located in the State of Pará, Brazil. The Value-Add Scoping Study assesses the construction of a Nickel Sulphate Plant which comprises a conventional flotation concentrator and a hydrometallurgical circuit to produce nickel sulphate and a zinc rich Mixed Sulphide Precipitate (MSP) from open pit and underground mining operations.

In September 2019, CTM through its subsidiary Aliança Mineração Ltda (Aliança) executed a Sales & Purchase Agreement with Vale Metais Básicos SA (Vale) that transferred 100% of the JNP to Aliança. Drilling at Jaguar commenced in November 2019.

In March 2021, the Company updated the JORC 2012 Indicated and Inferred Mineral Resource Estimate (MRE) to 58.9Mt at 0.96% Ni for 562,600 tonnes of contained nickel.

CTM engaged DRA Pacific Ltd (DRA) and Entech Pty Ltd (Entech) to complete the JNP Scoping Study based on the March 2021 MRE. Resource development and greenfields drilling is ongoing and a further MRE update is planned for Q4 2021. Future Mineral Resource updates will underpin the JNP Pre-Feasibility Study planned for completion in early 2022.

The JNP is 100% owned by Aliança, a wholly owned Brazilian subsidiary of Centaurus Metals Ltd.

1.2 PROJECT LOCATION

The JNP is located within a 30km^2 tenement package in the São Félix do Xingú municipality in the western portion of the world-class Carajás Mineral Province in the state of Pará (Figure 1). The Carajás Mineral Province is Brazil's premier mining hub, containing one of the world's largest known concentrations of bulk tonnage IOCG deposits as well as hosting the world's largest high-grade iron ore mine at S11D.

The JNP is ideally located close to existing infrastructure, just 35km north of the regional centre of Tucumã (population +35,000) where a 138kV power sub-station is located.

The commercial airports closest to the project area are in the cities of Marabá and Parauapebas, accessible by paved roads from Tucumã, 380km and 270km respectively. There is a regional airport for smaller flights in Ourilândia do Norte (population +30,000), which is 9km east of Tucumã. The project is located about 640km to southwest of Belém, the capital of Pará State. The project is centred at 6°29'15" S latitude and 51°12'10" W longitude.

1.3 PROJECT BASIS

The development of the JNP Value-Add Scoping Study comprises the following project concepts:

- → The establishment of a conventional open pit, and from year 4, underground mining operations to supply 2.7Mtpa of ore to a nickel sulphide flotation plant and hydrometallurgical circuit for approximately 13 years;
- → The construction of a nickel sulphate plant which includes a conventional nickel sulphide flotation plant and hydrometallurgical circuit capable of processing up to 2.7Mtpa of ore;
- → The building of a tailings storage facility (TSF) that is integrated within the mined waste (IWL);
- → The upgrade works required for the 40km access road from Tucumã to the site;
- → The inclusion of a 39km – 138kV power line from the Tucumã sub-station to site to supply up to 50MW peak power demand;
- → The construction of a village to accommodate 400 workers for the project implementation stage;
- → The inclusion of all non-processing infrastructure including office and administration buildings, gate house, warehousing, heavy vehicle workshop, ponds and general facilities.

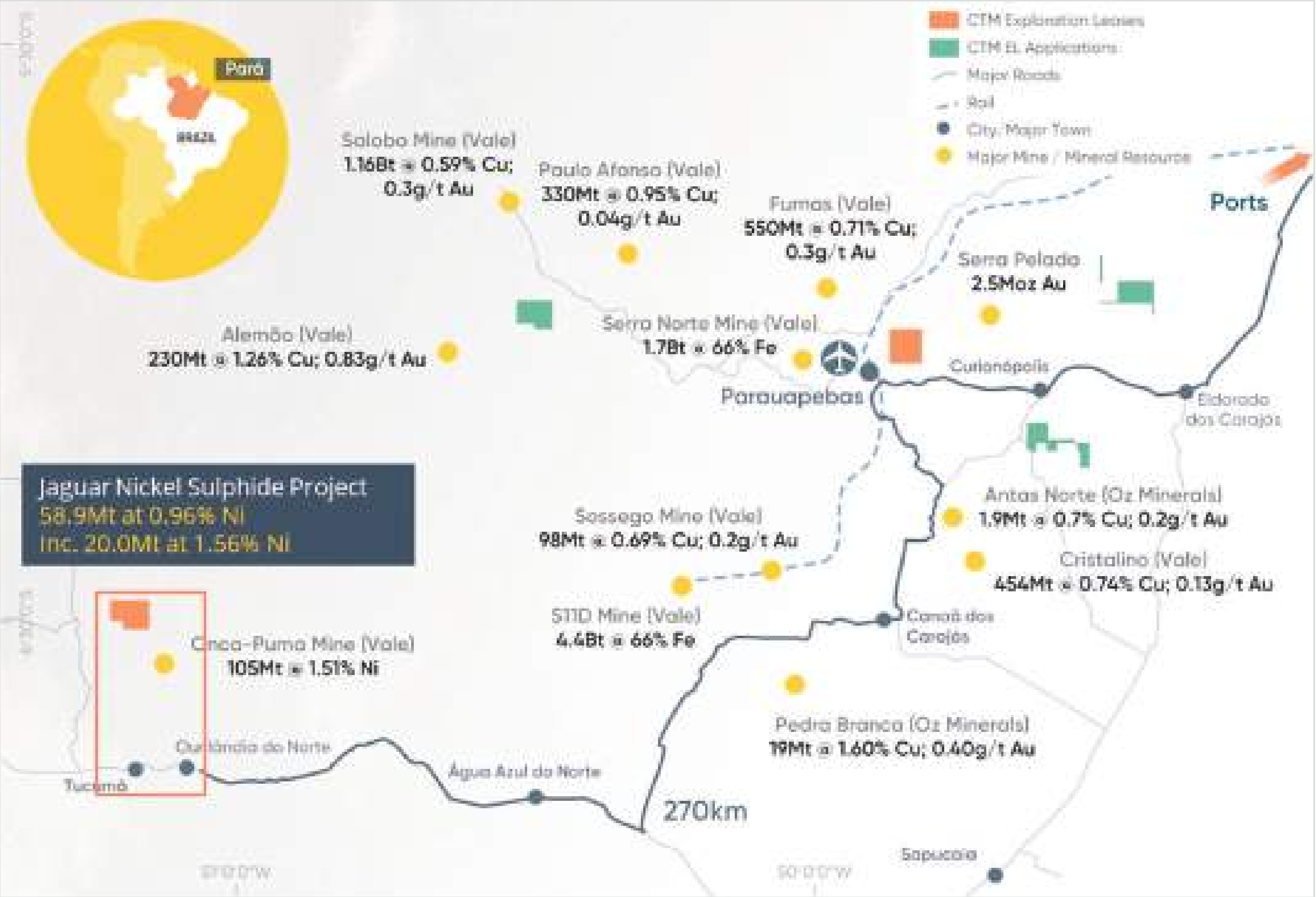


Figure 1 *- The Jaguar Nickel Sulphide Project location in the Carajás Mineral Province, Brazil*

1.4 KEY PROJECT METRICS

Assumption	Units	Value-Add
Average LOM Exchange Rate	USD/BRL	5.00
Average LOM Exchange Rate	USD/AUD	0.75
Average LOM Exchange Rate	EUR/BRL	5.80
Ni Price	US$/t	16,530
Ni Sulphate Premium	US$/t	1,102
Ni Price	US$/lb	7.50
Ni Sulphate Premium	US$/lb	0.50
Corporate tax rate, Year 1-10	%	15
Corporate tax rate, Year 11 Onwards	%	34
Discount Rate - Real	%	8
Physicals		
Production Target		45.0Mt @ 0.80% Ni for 361,700t Contained Ni
Mill Feed	Mt	33.7
Contained Ni in Mill Feed	t	341,300
Mill Feed Head Grade	% Ni	1.01%
Recovered Ni to Concentrate	t	278,300
Nickel Recovery to Concentrate	%	81.5%
Recovered Ni in Sulphate	t	262,100
Recovered Zn in MSP	t	80,500
Recovered Co in MSP	t	7,300
Recovered Ni in MSP	t	3,100

***Table 1** - Financial Model Assumptions*

The outcomes of the JNP Value-Add Scoping Study are summarised in Table 2. These metrics confirm that further processing of concentrate to create a higher value nickel sulphate product significantly increases the value of the JNP and delivers outstanding financial outcomes including an estimated project post tax NVP$_8$ of A$1,108M, a post-tax IRR of 52% and a rapid post tax capital payback of 1.8 years.

C1 cash costs of US$3.29/lb of nickel in sulphate (including by-product credits) reflect both the significant open pit volumes and the low operating cost environment in Brazil and provide the JNP with a significant competitive advantage over other much deeper underground nickel sulphide projects and nickel laterite projects.

Whilst the C1 cash cost for the production of nickel sulphate is higher than the C1 cash cost for the base case, the cash operating margin has increased from USD$2.74/lb Ni to USD$4.27/lb Ni and the net revenue to C1 cost ratio has increased to 2.4, reflecting the higher margin and demonstrating that the production of nickel sulphate from Jaguar further protects the Company from unfavourable movements in nickel price and exchange rates.

Key Results	Units	Value-Add
Capital Costs		
Development Capital	US$M	288
Sustaining and Deferred Capital	US$M	213
Operating Costs (100% payable basis)		
C1 Cash Costs	US$/lb	3.29
Royalties	US$/lb	0.28
Total Operating Costs	**US$/lb**	**3.57**
Sustaining and Deferred Capital	US$/lb	0.37
All-in Sustaining Costs (AISC)	**US$/lb**	**3.94**
Development Capital	US$/lb	0.49
All-in Costs	**US$/lb**	**4.43**
Financial Metrics		
Total Revenue	US$M	4,532
Project Cashflow - pre-Tax	US$M	1,942
NPV$_8$ - pre-Tax	**US$M**	**1,030**
EBITDA	**US$M**	**2,443**
IRR - pre-Tax	%	60
Tax Paid	US$M	376
Project Cashflow - post Tax	US$M	1,566
NPV$_8$ - post Tax	**US$M**	**831**
Project Cashflow - post-Tax	A$M	2,088
NPV$_8$ - post Tax	**A$M**	**1,108**
IRR - post Tax	%	52
Capital Payback Period – post Tax	**Years**	**1.8**

***Table 2** - Key Project Results*

Project NPVs are estimated from the assumed Financial Investment Decision (FID) date for the project which for the purposes of the Study, coincides with the commencement of construction activities. Project cashflows are on a real, pre finance basis.

1.5 CONCLUSIONS AND RECOMMENDATIONS

The JNP Value-Add Scoping Study confirms that the development of an open pit and underground mining operation supplying a 2.7Mtpa flotation concentrator and hydrometallurgical circuit to produce a high purity nickel sulphate and MSP by-product, containing zinc, cobalt, nickel and copper is technically and commercially feasible.

Given the outstanding results delivered by the JNP Value-Add Scoping Study, the Board of Centaurus has approved the Company to proceed immediately to Definitive Feasibility Study (DFS) for the production of +20,000 tpa of nickel in sulphate at Jaguar over the initial mine life of ~13 years.

The DFS by its very nature will also incorporate the study of the production of a nickel concentrate, as this is the product feed to the hydromettalurgical (nickel sulphate) circuit.

Comparison of the Base Case Scoping Study (sulphide concentrate product) and the Value-Add Scoping Study is shown in Table 3. The investment in the downstream processing of an additional US$110 million (including US$18.2 million contingency) adds considerable value to the project via the recovery of additional nickel from Resource to Production Target and higher nickel sulphate recoveries to concentrate. When combined, these higher recoveries start ~30% to 262,000 tonnes of nickel. The additional contained nickel (in sulphate) then attracts a higher product payability, raising the total revenue by 87% to US$4.53 billion (~A$6.04 billion).

Key Results	Units	Base Case	Value-Add
Production Target - Physicals			
Mining	Mt	32.8	45.0
Grade	%	0.84	0.80
Contained Nickel	t	275,600	361,700
Milling	Mt	24.0	33.7
Grade	%	1.08	1.01
Contained Nickel	t	260,300	341,300
Production			
Nickel Concentrate/Sulphate	t	1,284,700	1,175,500
Grade	% Ni	15.8	22.3
Contained Nickel	t	203,300	262,100
Production By-products in MSP			
Cobalt	t	2,800	7,300
Zinc	t	N/A	80,500
Nickel	t	N/A	3,100
Project Life	yrs	10.0	12.9
Capital Costs			
Development Capital	US$M	178	288
Sustaining and Deferred Capital	US$M	138	213
Operating Costs (100% payable basis)			
C1 Cash Costs	US$/lb	2.41	3.29
Royalties	US$/lb	0.25	0.28
Total Operating Costs	US$/lb	2.66	3.57
Sustaining and Deferred Capital	US$/lb	0.31	0.36
All-in Sustaining Costs (AISC)	US$/lb	2.97	3.94
Development Capital	US$/lb	0.40	0.49
All-in Costs	US$/lb	3.37	4.43
Cash Operating Margin	US$/lb	2.74	4.27
Financial Metrics			
Total Revenue	US$M	2,422	4,532
Project Cashflow - pre-Tax	US$M	914	1,942
NPV_8 - pre-Tax	US$M	543	1,030
EBITDA	US$M	1,230	2,443
IRR - pre-Tax	%	62%	60%
Tax Paid	US$M	137	376
Project Cashflow - post Tax	US$M	778	1,566
NPV_8 - post Tax	US$M	452	831
IRR - post Tax	%	54%	52%
Capital Payback Period – post Tax	Years	1.9	1.8

***Table 3** - Comparison of Base Case and Value-Add Scoping Studies*

2. Geology & Resources

The various deposits at the JNP differ from most nickel sulphide deposits mined to date globally because they are of hydrothermal origin, with the nickel sulphide mineralisation being of high tenor (tenor referring to the Ni concentration in 100% sulphides) with low Cr and Mg content and not directly associated with mafic-ultramafic rocks. It is interpreted that the JNP mineralisation represents a hybrid hydrothermal style between magmatic Ni-Cu-PGE sulphide and IOCG mineralisation.

2.1 GEOLOGY

The JNP is located in the Carajás Mineral Province (Carajás), which contains one of the world's largest known concentrations of large tonnage IOCG deposits. The Igarapé Bahia Cu-Au deposit was discovered in 1985 and it was recognised that the deposit belonged to the IOCG deposit class. Since then, many IOCG deposits of three principal ages (NeoArchean- 2.72-2.68Ga, 2.6-2.45Ga and PaleoProterozoic 1.8Ga) have been discovered making the Carajás one of the world's premier IOCG regions.

The Carajás also hosts the world's largest source of high-grade iron ore, as well as being a significant source of gold, manganese and lateritic nickel, testament to its mineral endowment.

The JNP is located at the intersection of the WSW-trending Canaã Fault and the ENE-trending McCandless Fault, immediately south of the NeoArchean Puma Layered Mafic-Ultramafic Complex, which is host to the Puma Lateritic Nickel deposit (Figure 2).

The Jaguar mineralised bodies are hosted within sheared sub-volcanic porphyritic dacites of the Serra Arqueada Greenstone belt, adjacent to the boundary with a tonalite intrusive into the Xingu basement gneiss, while Onça Preta and Onça Rosa are tabular mineralised bodies hosted within the tonalite. The hydrothermal alteration and mineralisation form sub-vertical to vertical bodies structurally controlled by regional ductile-brittle mylonitic shear zones.

Sulphide assemblages are similar in both ore types, differing only in modal sulphide composition and structure. The mean sulphide assemblage (in order of abundance) is pyrite, pentlandite, millerite, violarite, pyrrhotite and sphalerite with trace vaesite, nickeliferous pyrite and chalcopyrite (Figure 3).

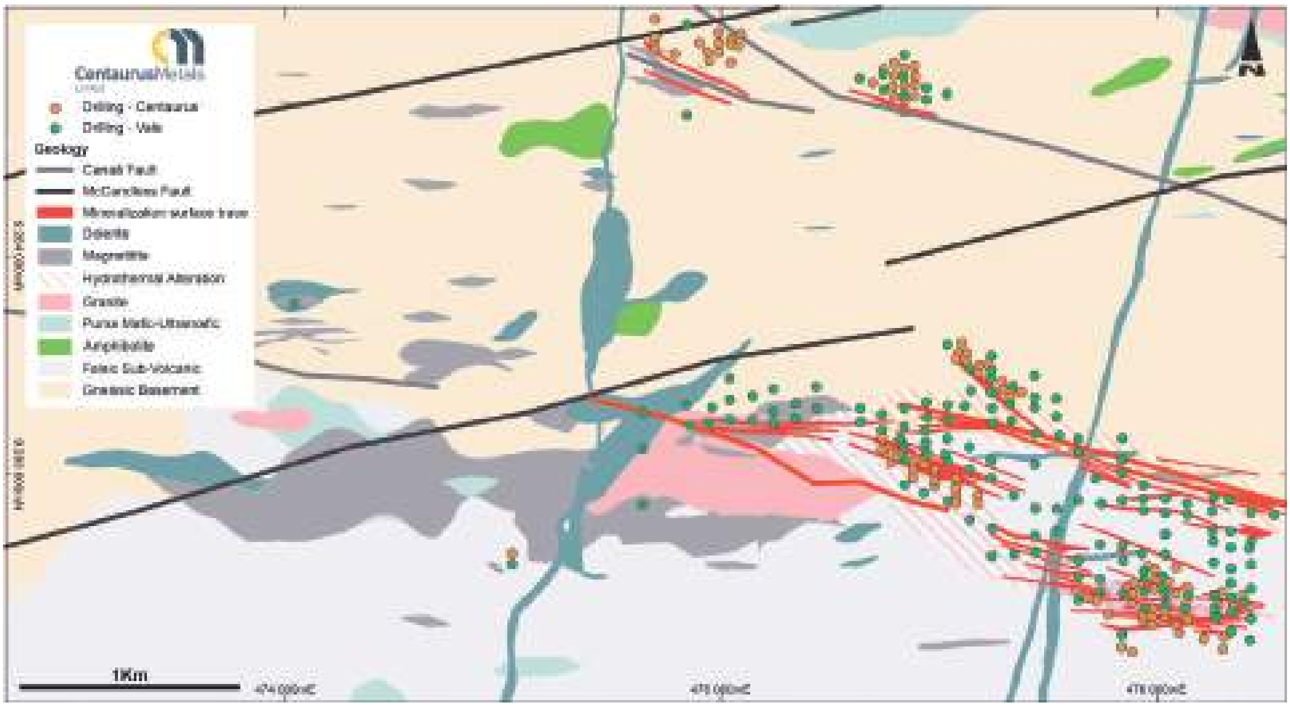


__Figure 2__ - The Jaguar Nickel Sulphide Project Geology

Figure 3 - Core photos from drill hole JAG-DD-20-034; 128.2.2 to 131.9m: Semi-massive and massive sulphides
(metallic bronze/yellow) with magnetite (black) mineralisation hosted in altered dacite. Sulphides comprising pyrite, pentlandite, millerite, chalcopyrite and minor sphalerite. Interval returned 3.7m at 8.55% Ni, 0.43% Cu and 0.12% Co from 128.2m

The most abundant type constitutes low-grade nickel mineralisation, occurring within veins concordant with the foliation, that is associated with the biotite-chlorite alteration. The target high-grade nickel mineralisation is associated with the magnetite-apatite-quartz alteration. It occurs as veins and breccia bodies consisting of irregular fragments of extensively altered host rocks within a sulphide-magnetite-apatite rich matrix. Mineralised breccias form semi-massive sulphide bodies up to 30m thick parallel to, or crosscutting, biotite-chlorite rich zones (Figure 4).

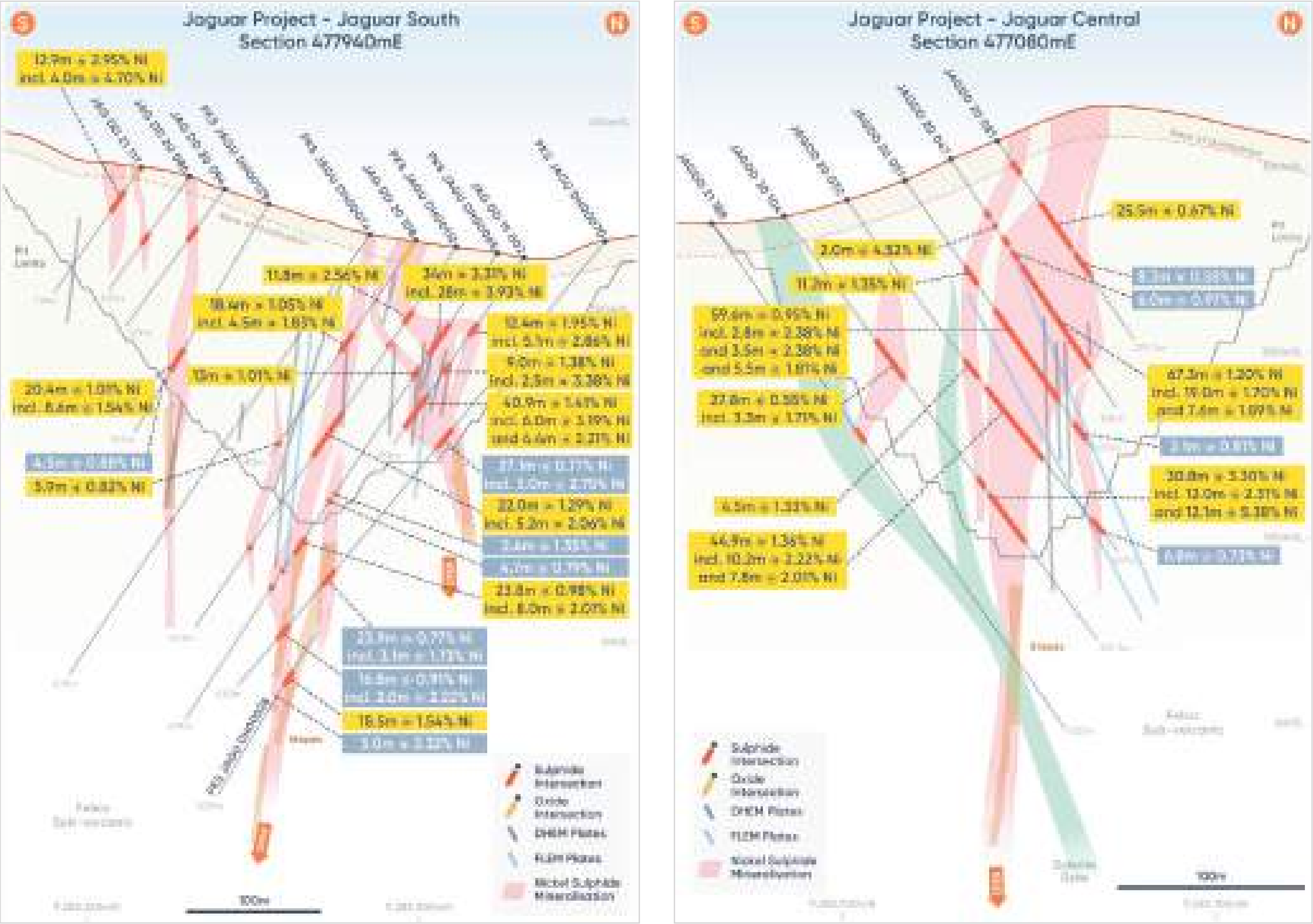


Figure 4 - Cross-Sections of the Jaguar South Deposit 477940mE (left) and Jaguar Central Deposit 477080mE (right)
(showing a number of significant drill intersections (in yellow) with DHEM conductor plates in blue)

Mineralisation at the Onça Preta and Onça Rosa deposits is predominantly of the second type, forming tabular semi-continuous to continuous bodies both along strike and down dip (Figure 5).

Regolith at the deposit is in-situ and comprises a thin soil layer overlying a decomposed saprolite transitional zone. The thickness to the base of the transitional zone generally varies from 5m to 25m (max. 34m).

Within the JNP tenement there are also several untested targets characterised by magnetic and/or electromagnetic anomalies located along favourable structures.

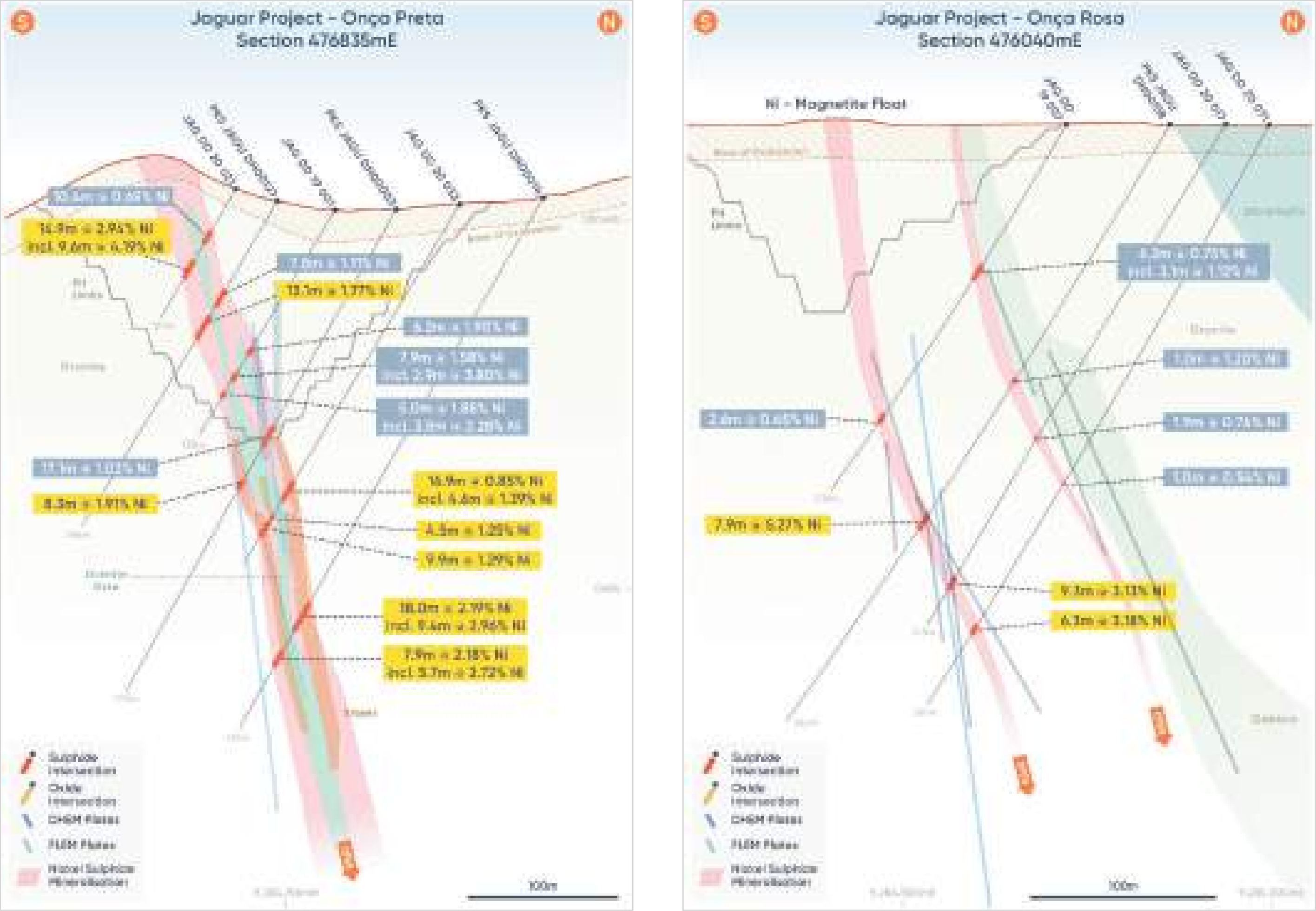


Figure 5 - Cross-Section of the Onça Preta Deposit 476835mE (left) and the Onça Rosa Deposit 476040mE (right)
(showing the significant drill intersections (in yellow) with DHEM conductor plates in dark blue and FLEM plates in light blue).

2.2 GEOTECHNICAL

Entech completed a geotechnical study for the JNP to determine the pit slope angles to be used for the pit and stope optimisation runs and final design of the mine.

The typical rock mass can be characterised as 'Good' in the near-surface open-pittable environment. Final pit slopes have 10m (oxide) – 20m (fresh) benches and 5-10 m wide berms. The final pit walls of the deepest pit (Jaguar South) reach maximum heights of 290m at the highwall located on the southern side of the pit. Final slopes are expected to have average inter-ramp angles of between 40° - 49° in fresh rock and 33° in oxide material.

For the underground mining environment, the rock mass conditions improve with depth and can be generally classified as 'Good' to 'Very Good'. The orebody geometry and rock mass conditions at the Jaguar deposits favours the use of a top down longhole open stoping method. For the proposed stope heights of 25m, preliminary stope open spans ranging from 30-50m have been recommended, dependent on the deposit.

2.3 RESOURCES

The JORC 2012 Mineral Resource Estimate (MRE) update was completed by independent resource specialists Trepanier Pty Ltd in March 2021. The updated JORC 2012 Indicated and Inferred Mineral Resource Estimate (MRE) is 58.9Mt at 0.96% Ni for 562,600 tonnes of contained nickel. The Value-Add Scoping Study uses the same resource block model as the Base Case Scoping Study.

The Jaguar MRE is based on 169 Vale drill holes for a total of 56,592m of drilling and 98 Centaurus drill holes for a total of 17,941m of drilling (total project drilling 74,533m). All drill holes were drilled at 55°-75° towards azimuth of either 180° or 360°.

The JNP is unique in terms of nickel sulphide orebodies as the high-grade nickel sulphide mineralisation comes almost to surface and continues at depth. More than 80% of the nickel metal in the maiden MRE is within 200m of surface, demonstrating the strong open pittable potential of the Project. Over 97% of the Resource is comprised of fresh sulphides, with no oxide material being reported (Table 4).

Potential mining methods include a combination of open pit and underground. As such, a 0.3% Ni cut-off grade has been applied to material less than 200m vertical depth from surface to reflect potential open cut mining opportunities. A Ni cut-off grade of 1.0% Ni was applied below 200m from surface to reflect higher cut-offs expected with potential underground mining. The JNP MRE at various cut-off grades is shown in Table 5, with the reported JNP MRE highlighted in dark grey.

The estimate was resolved into 10m (E) x 2m (N) x 10m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Indicated Mineral Resources are defined nominally on 50m E x 40m N spaced drilling (predominantly where CTM has completed infill drilling) and Inferred Mineral Resources nominally 100m E x 40m to 100m N with consideration given for the confidence of the continuity of geology and mineralisation. The Jaguar Mineral Resource has therefore been partially classified as Indicated with the remainder being Inferred according to JORC 2012 (Figure 6).

		Tonnes	Grade			Metal Tonnes		
Classification	**Ore Type**	**Mt**	**Ni %**	**Co ppm**	**Zn %**	**Ni**	**Co**	**Zn**
Indicated	Transition Sulphide	0.7	0.96	250	0.52	6,900	200	3,640
	Fresh Sulphide	19.4	1.13	326	0.48	218,900	6,300	93,120
	Total Indicated	**20.1**	**1.12**	**323**	**0.48**	**225,800**	**6,500**	**96,760**
Inferred	Transition Sulphide	0.9	0.79	239	0.24	6,800	200	2,160
	Fresh Sulphide	37.9	0.87	230	0.32	330,000	8,700	121,280
	Total Inferred	**38.8**	**0.87**	**230**	**0.32**	**336,800**	**8,900**	**123,440**
Total		**58.9**	**0.96**	**262**	**0.37**	**562,600**	**15,400**	**220,200**

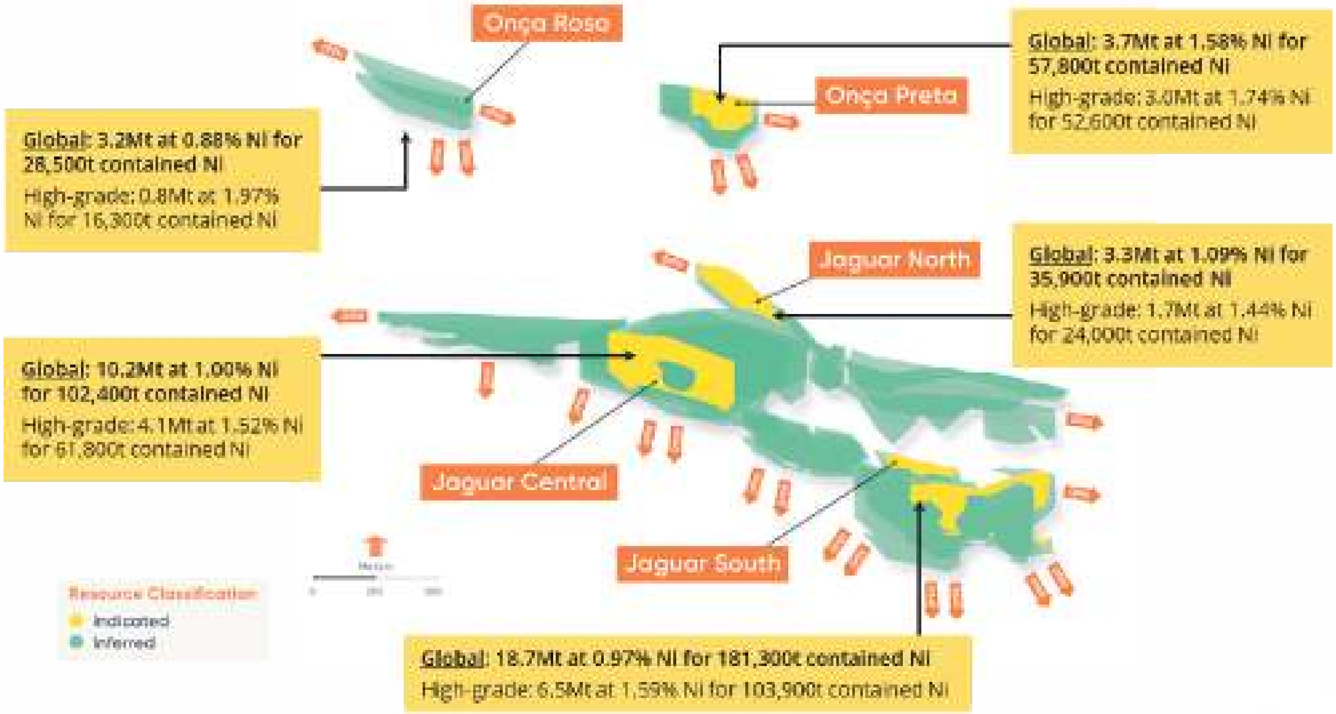
Table 4 - The Jaguar JORC Mineral Resource Estimate (MRE)

** Within 200m of surface cut-off grade 0.3% Ni; more than 200m from surface cut-off grade 1.0% Ni; Totals are rounded to reflect acceptable precision. Subtotals may not reflect global totals.*

Ni% Cut-off Grade		Tonnes	Grade			Metal Tonnes		
Surface - 200m	**+ 200m**	**Mt**	**Ni %**	**Co ppm**	**Zn %**	**Ni**	**Co**	**Zn**
0.3	**1.0**	**58.9**	**0.96**	**262**	**0.37**	**562,600**	**15,400**	**220,200**
0.4	1.0	56.0	0.99	270	0.39	552,200	15,100	217,400
0.5	1.0	49.9	1.05	287	0.37	524,900	14,300	208,100
0.6	1.0	42.0	1.15	311	0.45	481,200	13,100	191,000
0.7	1.0	34.8	1.25	339	0.49	434,500	11,800	172,300
0.8	1.0	28.6	1.36	367	0.53	388,400	10,500	151,200
0.9	1.0	23.8	1.46	394	0.55	347,700	9,400	131,000
1.0	1.0	20.0	1.56	419	0.56	311,100	8,400	111,300
1.1	1.1	16.1	1.68	468	0.60	270,700	7,500	96,200
1.2	1.2	13.0	1.81	526	0.64	235,300	6,900	84,000
1.3	1.3	10.8	1.92	581	0.68	208,100	6,300	74,200

Table 5 - The Jaguar JORC Indicated and Inferred MRE at various Ni% Cut-Off Grades*

Totals are rounded to reflect acceptable precision; subtotals may not reflect global totals.



Global: 3.2Mt at 0.88% Ni for 28,500t contained Ni
High-grade: 0.8Mt at 1.97% Ni for 16,300t contained Ni

Global: 3.7Mt at 1.58% Ni for 57,800t contained Ni
High-grade: 3.0Mt at 1.74% Ni for 52,600t contained Ni

Global: 3.3Mt at 1.09% Ni for 35,900t contained Ni
High-grade: 1.7Mt at 1.44% Ni for 24,000t contained Ni

Global: 10.2Mt at 1.00% Ni for 102,400t contained Ni
High-grade: 4.1Mt at 1.52% Ni for 61,800t contained Ni

Global: 18.7Mt at 0.97% Ni for 181,300t contained Ni
High-grade: 6.5Mt at 1.59% Ni for 103,900t contained Ni

Figure 6 - The Jaguar MRE Block Model

Resource Classification, Indicated Resources in yellow and Inferred Resources in green.

2.4 NEAR MINE RESOURCE & EXPLORATION UPSIDE

The JORC MRE for the JNP considers the six Jaguar Deposits and two Onça Deposits. There is significant potential to expand both the shallow and deeper high-grade Resources within the Project via several growth fronts.

2.4.1 Mineral Resource Growth

Drilling in 2021 will focus on the following target areas ahead of the next Resource update expected in Q4 2021 to support planned Pre-Feasibility Study activities:

→ **Jaguar Central**

- Step-out drilling is planned to test the DHEM conductors and potential down-dip extensions of the high-grade mineralisation shoot; and
- Further drilling is planned along strike and down-plunge to test new DHEM and FLEM conductors to the west and east where drilling on historical sections is wide-spaced (over 100m between holes).

→ **Jaguar South**

- Step-out drilling is planned to test the DHEM conductors and potential down-dip extensions of the high-grade mineralisation within the main mineralised zones; and
- Drilling is planned along strike to test an interpreted high-grade plunge to the east-northeast, targeting new DHEM conductors.

→ **Jaguar Central North**

- In-fill drilling to upgrade the resource category within the Scoping Study open pit limits; and
- Drill the target 'Z-structure', part of a set of newly identified fold axis and high-grade mineralisation shoots at the intersections of the Jaguar Central North Deposit with the Jaguar Central and Jaguar North Deposits;

→ **Jaguar West & Jaguar North-east**

- Maiden in-fill and extensional drilling is planned to target historical high-grade zones and EM conductor plates with a focus on potential in-pit resources.

→ **Jaguar North**

- Step-out drilling is planned to test the DHEM conductors and potential down-dip extensions of the high-grade mineralisation; and
- Drilling is planned along strike to test new FLEM conductors coincident with large ground magnetic anomalies to the northwest and southeast (at the 'Z-structure'), both untested areas.

→ **Onça Preta & Onça Rosa**

- Step-out drilling is planned to test DHEM conductors and potential down-dip extensions of the high-grade mineralisation. The Onça deposits are less than 250m from the Puma Layered Mafic-Ultramafic Complex which is interpreted to be the potential source of the hydrothermal nickel, and itself representing an outstanding target for more high-grade nickel sulphide mineralisation.

2.4.2 Exploration Upside

The JNP sits at the intersection of two of the most important mineralising structures in the Carajás Mineral Province, the Canãa and McCandless Faults. There are multiple prospects and targets that have yet to be drill-tested within the JNP, characterised by magnetic and/or electromagnetic (EM) anomalies coincident with significant soil geochemical support.

Detailed soil sampling and FLEM surveys and identified multiple priority drill targets. The first four priority targets to be tested are (Figure 7):

→ **The Filhote Prospect** – A 200m Fixed Loop Electromagnetic (FLEM) conductor plate coincident with a broad (+1.1km) ground magnetic signature and PGE-Ni-As-Cr-Cu soil geochemical anomaly. Recent exploratory holes returned grades of up to 1.3g/t Pd, 0.34g/t Pt and 0.48% N;

→ **The Leão Prospect** – more than 2.5km strike target that hosts multiple GeoTEM, FLEM and ground magnetic anomalies coincident with Ni-Cu-Cr-V-Au soil anomalism. Only three holes have ever been drilled at Leão, with one hole returning 3.0m at 1.06% Ni and 0.21% Cu;

→ **The Tigre Prospect** – a strong discrete (+800m) GeoTEM anomaly coincident with multiple ground magnetic anomalies and supported by a +1.0km continuous Ni-Cr-As-Au geochemical signature. There are no historical drill holes in the Tigre Prospect; and

→ **The Puma Contact Prospect** – a 750m long Ni/Cu anomaly along the southern contact of the Puma mafic-ultramafic intrusive with the basement granite, coincident with a 950m long conductor dipping 78º to the north-northeast and extends down to 500m. This plate is coincident with the southern contact between the Puma ultra-mafic intrusive and the basement granite, an outstanding target for structurally-controlled zones of high-grade nickel sulphide.

RC drilling of the greenfields targets is underway with results expected to be received in Q3 2021. Any new discoveries will be followed up and included in the Pre-Feasibility resource update expected later in 2021.

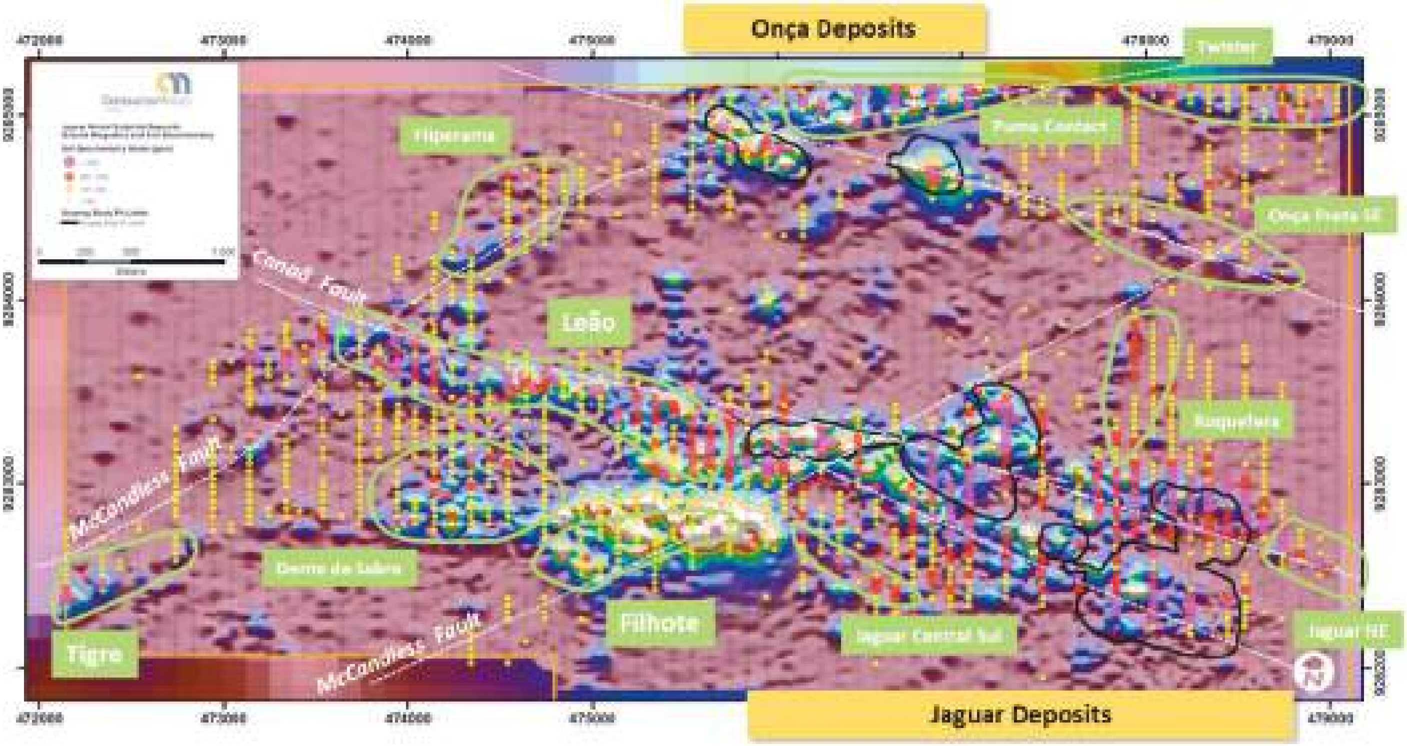


Figure 7 - *The Jaguar Nickel Project – Soils Geochemistry (Ni) over Ground Magnetics (Analytic Signal)*

3. Production Targets & Mine

The Value-Add Scoping Study for the JNP considers an integrated open pit and underground Production Target estimate of 45.0 Mt at 0.80% Ni for a total of 361,700t of contained nickel metal. The deposits will deliver a Mill Feed of 33.7Mt at 1.01% Ni to a nickel sulphate processing facility at a nominal rate of 2.7Mtpa for 13 years.

Centaurus engaged Australian mining specialist Entech to undertake the Mining and Geotechnical studies for the Scoping Study. Re-Metallica, a Brazilian mining engineering consultancy firm, was engaged to undertake a peer review and advise Entech on local mining productivities and costs.

3.1 OPEN PIT

Pit Optimisations

Pit optimisations were based on the Indicated and Inferred Mineral Resource categories only. The Mineral Resource models for Jaguar and Onça were re-blocked to a Smallest Mining Unit (SMU) dimension of 5 mE x 4 mN x 5 mR. Re-blocking dilutes out the narrow-modelled lodes from the original MRE into larger blocks resulting in an ore dilution of 22% and ore loss of 17% for the Jaguar Deposits and ore dilution of 37% and ore loss of 19% for the Onça Deposits.

Various pit optimisations were run, and the pit shells derived at conservative nickel prices of US$13,800/t (Jaguar – Pit 92) and US$13,500/t (Onça – Pit 90) were selected. These shells were selected to provide the basis for a robust and conservative pit design. In total there are eight (8) open pit mining areas within the Onça and Jaguar deposits, see Figure 8 and Figure 9 below.

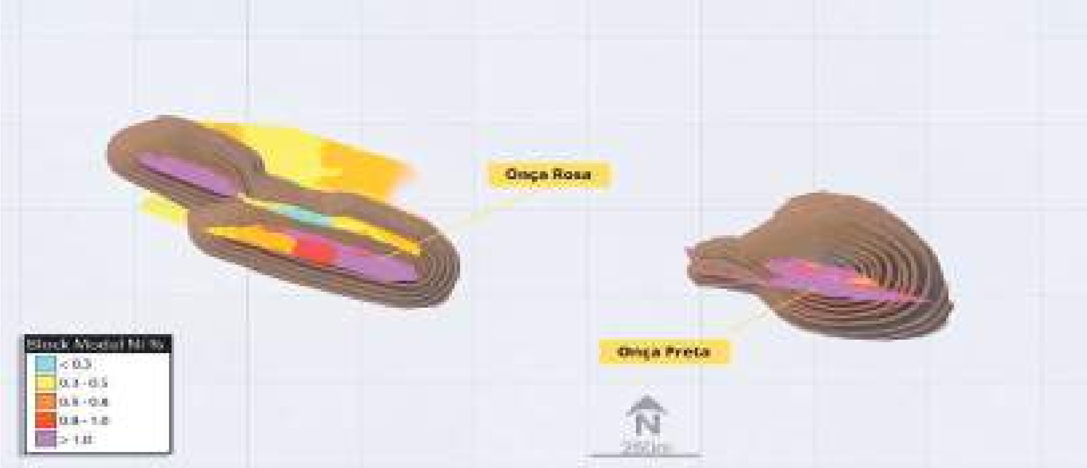


Figure 8 *- Selected Optimisation Shells and Proposed Mine Design – Onça Pits*

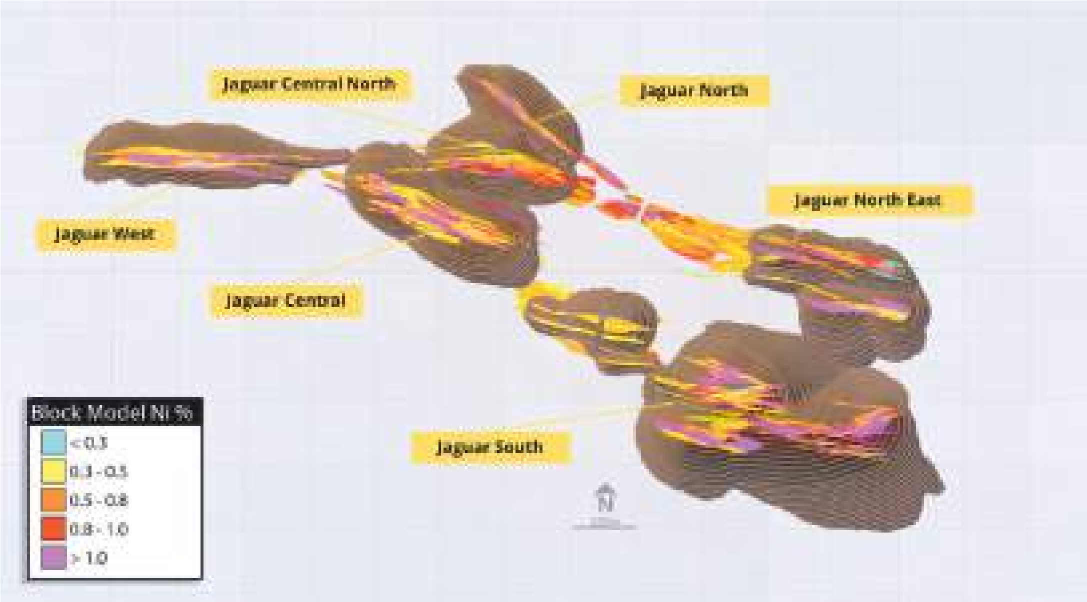


Figure 9 *- Selected Optimisation Shells and Proposed Mine Design – Jaguar Pits*

Pre-Operations Preparation

An initial stage of mine development will prepare the site to ensure the continuity of production during operations.

The focus will be to construct the required access roads from the mine to the process plant, waste dumps, low grade ore stockpiles and the Integrated Waste Landform (IWL) tailings facility. The starting IWL requires 3.58M bcm of waste material to be delivered and compacted in place ahead of the start of processing.

Additionally, the removal of the necessary topsoil and preparation of waste dumps and low-grade stockpiles will be completed. The topsoil will be stockpiled in areas that will allow easy access for future rehabilitation of degraded areas. Pre-strip will be completed by the chosen mining contractor.

Mine Design

A minimum mining width of 20m was used as a guide to open pit design when dealing with small mining areas within the open pit. Pit floor working areas and "goodbye cuts" at the base of pits respect the same minimum mining width. A bench height of 20m within all fresh material and 10m within all weathered materials was employed for all open pit designs completed for Jaguar and Onça. The haul road width is determined to be 15m wide for a single lane ramp and 25m wide for a dual lane ramp.

Pit exit ramps have been designed to allow access to the ROM-pad area (for high-grade and low-grade material), primary crusher, and the primary waste storage areas including the Integrated Waste Landform (IWL) whilst maintaining a minimum haulage distance. Where possible, ramp development has been restricted to the footwall side of the pit to minimise the strip ratio.

Mining Operations

All open pit mining operations are proposed to be undertaken by a mining contractor. The mine operations will be run by the mining contractor working from Monday to Sundays (inclusive) in three shifts of eight hours with four operational teams. Results show the best equipment combination to be 45t excavators loading 45t capacity trucks on 5m flitch heights and blasting on a 10m bench height. All the proposed equipment is common in the local Brazilian mining industry.

The mining contractor will also provide all auxiliary support services such as maintenance of roads and accesses, dust control and site drainage. It is expected that the mining contractor will start with roughly 500 employees working on three shifts.

Waste Dumps and Stockpile Management

Three waste dumps have been planned, all being designed to be as flat as possible, with one of those being part of the Integrated Waste Landform (IWL) tailings storage facility. The lifts are planned to be a maximum of 10m with berms of 6m. Each lift is constructed at an approximate angle of repose of 33°. The maximum waste dump height will be 90m.

3.2 UNDERGROUND

Stope Optimisations

Stope optimisations were based on the Indicated and Inferred Resource categories only. Cut-off grades (COG) are based on a Net Smelter Return (NSR) and were determined using NSR revenue, operating costs and processing information provided by CTM, with benchmarked mining costs from the Entech database and publicly available data on mining costs in South America.

Mineable Shape Optimiser (MSO) was used to generate economic stope shapes, based on cut off grades. Two scenarios were run for both the Onça and Jaguar mineral resource models. COGs were rounded to $50 and $80. Stope design inputs were from the Entech database and assumed a long-hole open stoping mining method.

Stope Optimiser Parameters	Units	Values
Minimum Mining Width	m	3.0
HW / FW Dilution	m	0.6/0.6
Maximum Footwall Angle	degrees	40
Stope Section Length	m	2.5
Sub-Level Height	m	25
Minimum Interstitial Pillar	m	10
Cut-off Grade	NSR (USD)	50, 80

Table 6 - *Stope Optimisation Inputs*

Scenarios were run excluding weathered material and value generated from material with an unclassified resource class was removed. A summary of the parameters used to generate the MSO shapes is shown in Table 6.

Although positive MSO optimisations were achieved for five separate deposits Centaurus decided to focus only on the underground deposits with more than 10,000t of contained nickel metal. Consequently, the Onça Preta, Jaguar South, Jaguar Central and Jaguar North Deposits were considered for the purpose of the Value-Add Scoping Study.

(A) OPTIMISATION RESULTS – ONÇA DEPOSITS

At the Onça Deposit, the MSO $80 inventory was adjusted by removing material that will either be depleted through open-pit mining or determined uneconomic when considering access development requirements. The resulting inventory was infilled with stope designs generated on the incremental cut-off grade (NSR $50), constrained to the fully costed cut-off grade boundaries. The resulting inventory was used as the basis of mine design and evaluation.

(B) OPTIMISATION RESULTS – JAGUAR DEPOSITS

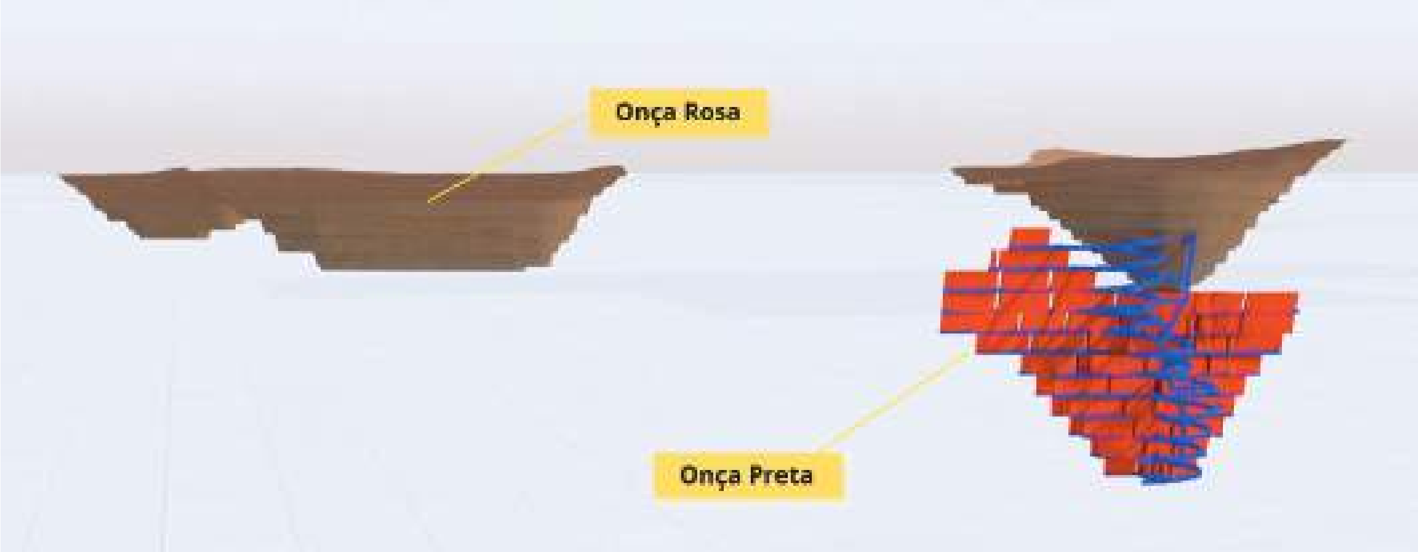


Figure 10 - *Section View - Onça Preta Underground Deposit (Looking North)*

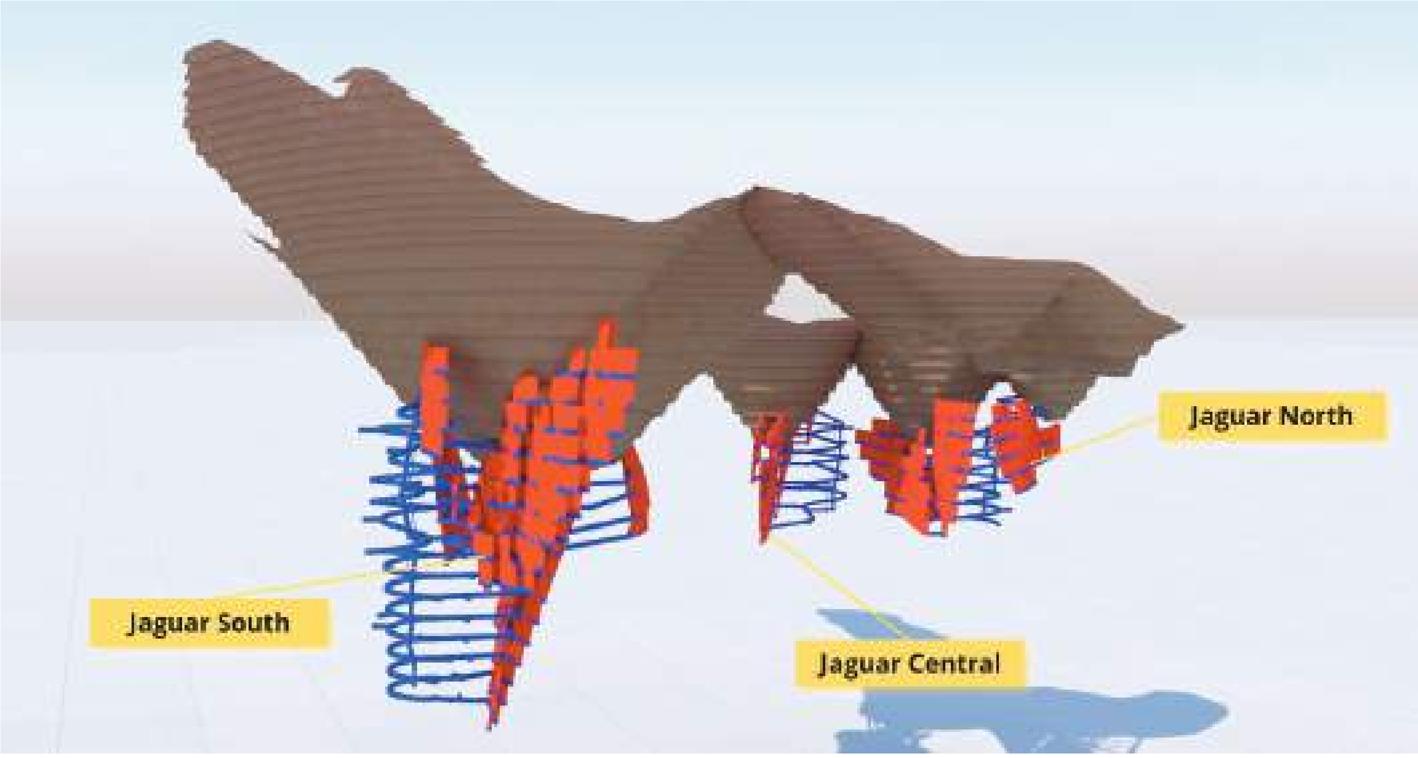


Figure 11 *- Section View Jaguar South, Central and North Underground Deposits (Looking West)*

The Production Target was determined for Jaguar deposits using MSO optimisation in the same manner as the Onça deposits. The resulting inventory was used as the basis of mine design and evaluation, see Figure 11 above.

3.3 MINING OPERATIONS

The proposed underground mining method is top down longhole open stoping. Stopes are extracted in a longitude mining direction from the orebody with levels to be accessed from the hangingwall. To reduce capital development, portals have been designed close to the bottom of the pits.

Declines have been designed using a 1:7 gradient, on the hanging wall side of the orebody, having a 50m stand off from the orebody, and aiming for central access to the orebody for a more efficient mine. Operating lateral development represents ore drives which are driven along strike. Development design definitions are outlined in Table 7.

The underground productivities were based on benchmark data for the proposed mining fleet and are sourced from the Entech database of similar equipment and mining methodology. Productivity rates are shown in Table 8.

Development	Dimension	Profile
Decline	5.5 mW x 5.8 mH	Arched
Escapeway Drive	4.5 mW x 4.5 mH	Arched
Level Access	5.0 mW x 5.0 mH	Arched
Ore Drive	5.0 mW x 5.0 mH	Arched
Escapeway Rise	1.3 m Diameter	Circle
Return Air Rise	4.0 mW x 4.0 mH	Square

Table 7 *- Development Profiles and Dimensions*

Equipment Description	Max individual Task Rate	Maximum monthly rate
Twin Boom Jumbo	6 m/d	240m/month
50 t Truck	N/A	100,000tkm/month
21 t Loader	1,000 t/d	50,000t/month
Production Drill	180 m/d	5,000m/month
Raise bore Slot (760mm)	4 m/d	90m/month
Charge-up Unit	N/A	N/A
Raisebore	3 m/d	90m/month

Table 8 *- Productivity Rates*

3.4 INTEGRATED MINE SEQUENCING

The conceptual mine production schedule is illustrated in Figure 12. It has been assumed that mobilisation of the mining fleet will begin in Q1 2024 which is 6 months ahead of first production. This will allow time for the mine contractor to carry out pre-strip and construction of the IWL. The integrated open pit and underground mine scheduling, as set out in Table 9, was carried out targeting the production of approximately 2.7Mt of ROM ore to the crusher per annum.

The high-grade material (>0.6% Ni) goes directly to the ROM stockpile whilst low-grade open pit (0.3-0.6% Ni) material goes to the ore-sorter stockpile. High-grade material is fed to the crushed ore stockpile preferentially over the ore-sorter product.

The underground mines commence once the associated open pits are near completion to allow portals near the pit base, however, no underground mining is scheduled within the first three years of open pit operations. A steady flow of ore is mined and fed to the mill assuming a maximum throughput rate of 2.7Mtpa whilst maintaining ROM stocks of approximately three to eight months of feed.

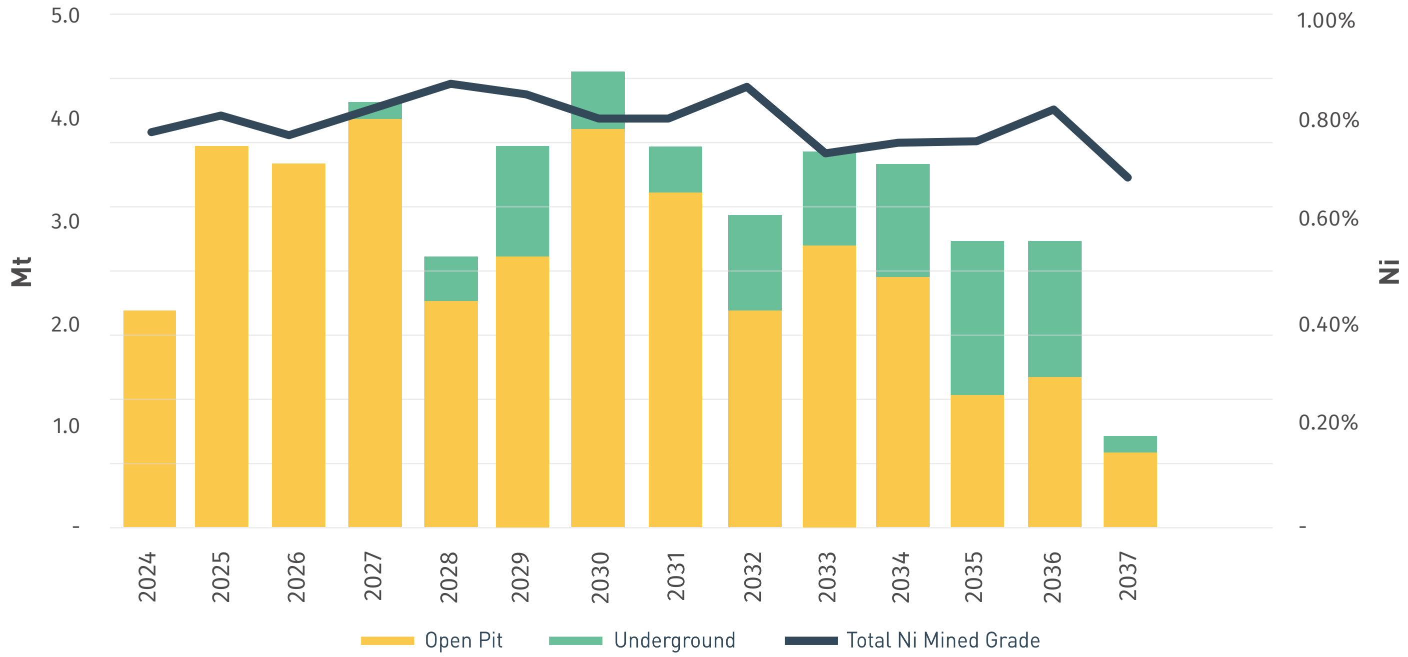


Figure 12 - Integrated Mine Production Schedule

Calendar Year	Units	Total	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Open Pit																
Waste Moved	Mt	239.3	22.2	30.1	32.4	22.3	21.2	23.5	23.6	10.4	10.0	10.7	9.9	10.1	10.5	2.4
Ore Mined	Mt	36.6	2.1	3.8	3.6	4.1	2.2	2.6	3.9	3.3	2.2	2.8	2.5	1.3	1.5	0.7
Nickel Grade	%	0.76	0.78	0.81	0.78	0.82	0.85	0.70	0.74	0.74	0.76	0.70	0.69	0.61	0.74	0.63
Underground																
Ore Mined	Mt	8.5				0.1	0.4	1.1	0.6	0.5	0.9	0.9	1.1	1.5	1.2	0.1
Nickel Grade	%	1.01				0.88	0.98	1.23	1.18	1.36	1.14	0.82	0.90	0.89	0.92	1.00

Table 9 - Integrated Mine Production Schedule Annual Results

3.5 PRODUCTION TARGET & MILL FEED

The life of mine open pit Production Target, based on the Jaguar and Onça open pits, is 36.6Mt at 0.76% Ni for a total of 276,300 tonnes of contained nickel metal (see Table 10 below). The high-grade ROM (>0.6% Ni cut-off) material component is 20.4 Mt @ 1.02% Ni and the low-grade ore-sorter feed component (0.3-0.6% Ni cut-off) is 16.2 Mt @ 0.42% Ni. The total waste movement from the open pit mining operation is expected to be 239.3Mt at a strip ratio of 6.5:1 during the life of mine (including pre-strip waste material).

The life of mine Production Target for the Jaguar South, Jaguar Central, Jaguar North and Onça Preta underground operations is 8.5 Mt at 1.01% Ni for a total of 85,400t of contained nickel metal.

The total Production Target for the JNP is 45.0Mt at 0.80% Ni for a total of 361,300 tonnes of contained nickel metal. Approximately 52% of the contained nickel metal in the Production Target is in the Indicated Resource Category. Importantly, 83% of the first three years of operations are in the Indicated Resource Category.

The low-grade open pit ore-sorter feed will be processed by an ore-sorter circuit at the ROM. The ore-sorter product, estimated at 4.8 Mt @ 0.98% Ni, will be fed to the crushed ore stockpile. The ore-sorter reject will be back-loaded to waste deposits.

The integrated open pit and underground mill feed for the JNP is 33.7 Mt at 1.01% Ni for a total of 341,300t of contained nickel metal, see Table 10 below.

Mining Method	Material Type	Resource Category	Ore Mt	Ni %	Ni Metal kt
Open Pit	High-grade	IND	12.8	1.09%	140.2
	> 0.6% Ni	INF	7.6	0.90%	68.1
		Mill Feed	**20.4**	**1.02%**	**208.3**
	Low-grade	IND	7.2	0.42%	30.2
	0.3-0.6% Ni	INF	9.0	0.42%	37.8
		Total	**16.2**	**0.42%**	**68.0**
		IND	20.0	0.85%	170.4
		INF	16.6	0.64%	105.9
Open Pit Production Target		**Total**	**36.6**	**0.76%**	**276.3**
Underground		IND	1.4	1.30%	17.6
		INF	7.1	0.96%	67.9
Underground Production Target		**Mill Feed**	**8.5**	**1.01%**	**85.4**
		IND	21.4	0.88%	187.9
		INF	23.7	0.73%	173.8
Total Production Target		**Total**	**45.0**	**0.80%**	**361.7**
Ore-sorter Product*		**Mill Feed**	**4.8**	**0.98%**	**47.3**
LOM Mill Feed		**Total**	**33.7**	**1.01%**	**341.3**

*Ore-sorter product is processed pre-concentrator from open pit low grade material

Table 10 *- Production Target & Mill Feed Estimation*

4. Metallurgy

The key metallurgical goal of the Value-Add Scoping Study was to investigate and test the viability of producing a relatively low nickel grade bulk sulphide concentrate through a conventional flotation process and further processing this concentrate into a high value nickel sulphate product.

4.1 ORE CHARACTERISATION

To date 105 mineralogical composites reflecting over 1,300m of diamond core drilling from within the significant ore zones have been selected (56 from Jaguar South, 7 from Onca Preta, 27 from Jaguar Central and 15 from Jaguar North) for testing. The composites are comprised of ¼ NQ drill core sourced from CTM's drilling campaigns with the samples selected packed and air freighted to Perth. These samples are the basis of the mineralogical understanding of the JNP. Each composite has been analysed with a combination of some or all the following analytical techniques:

- Comprehensive assaying adopting the same assay protocol as the geological block model with water soluble nickel, non-sulphide nickel, fluorine, chlorine and silica added to the assay suite;
- Xray diffraction (XRD) quantitative mineralogy to determine the nature of the minerals and their relative concentrations;
- Microprobing of minerals for trace element determination;
- Optical mineralogy to understand texture, grain size and mineral associations for metallurgical performance estimations; and
- Comminution testing (SMC, BWi and Ai) of composites to evaluate the scale and energy requirements of the different ore types to achieve test work metallurgical outcomes.

A general summary of the ore characteristics of the main individual deposits are outlined below:

Jaguar South

- Grain size of the nickel sulphides (3:1 millerite to pentlandite) is coarse suggesting a modest 75µm grind should be targeted.
- The ore in this zone is the hardest and will determine the milling circuit design.
- Biotite, chlorite and quartz makeup ~60% of this zone.
- Iron sulphides (in particular pyrite) has the lowest concentration of all zones tested (less than 5%).
- Talc levels are minimal at less than 1%.
- Iron oxide (magnetite) concentrations in this zone are ~5%.

Jaguar Central

- Grain size of the nickel sulphides (almost entirely millerite) is very coarse suggesting a modest 75µm grind is acceptable, as per the recommended grind size for Jaguar South.
- The ore hardness in this zone does not influence the milling circuit design.
- Biotite, chlorite and quartz have similar compositions to those of Jaguar South (~53%).
- Iron sulphides (in particular pyrite) is similar to Jaguar South (7%).
- Talc levels are more significant than Jaguar South at ~4%.
- Iron oxide (magnetite) concentrations in this zone are similar to Jaguar South (7%).

Jaguar North

- Grain size of the nickel sulphides (almost exclusively millerite) is very coarse indicating a grind of 75µm is acceptable, as per the recommended grind size for Jaguar South and Jaguar Central.
- As with Jaguar Central the ore in this zone will not influence the design of the milling circuit.
- Biotite, chlorite and quartz are one-third of the levels identified in Jaguar South and Jaguar Central (22%).
- Iron sulphides (mainly pyrite) is similar to both Jaguar South and Jaguar Central (5%).
- Talc becomes more significant at Jaguar North at ~8% concentration.
- Iron oxide (magnetite) concentrations increase (25%).

Onca Preta

- → Grain size of the nickel sulphides (mainly pentlandite) is similar to Jaguar South reconfirming that a 75µm grind is suitable.
- → The ore in this zone, like Jaguar Central and Jaguar North, will not influence milling circuit design.
- → Biotite, chlorite and quartz are similar to Jaguar North (22%).
- → Pyrite concentrations are the highest of all zones tested (9%).
- → Talc concentrations are similar to Jaguar Central (8%).
- → Iron oxide (magnetite) levels are highest in this zone making up 50% of the ore zone.

4.2 ORE SORTING TESTING

Within the Jaguar ore deposits the high-grade mineralised zones are part of a broader mineralised system which contains lenses of narrower equally high-grade mineralisation. When the minimum mining block size estimations are coupled with the mining recovery and dilution adopted for the resource, this type of material is consequently diluted resulting in lower block grade values.

Ore sorting has been considered as it is a commercially validated process that can concentrate these lower grade mining blocks resulting in products with similar grades to the high-grade mineralisation. This has significant advantages including;

- the processing capacity can be reduced,
- the tailings volume produced will be less,
- significantly less potentially acid forming waste will be created for surface disposal, and most importantly
- the risk of mining dilution on process plant feed grade will be reduced.

Pilot testing of low-grade (0.47% Ni) samples was carried out at Steinert's ore sorting facility located in Perth, Western Australia. Testing included trialing of different sorting sensors (inductive and x-ray) and programming settings to allow mass recovery to metal recovery relationships to be developed. The results are tabulated below (Table 11).

	Mass (%)	Nickel Grade (%)	Nickel Recovery (%)	Sulphur Grade (%)	Sulphur Recovery (%)
Feed		0.47		0.36	
High Grade Test	25.1	1.23	65.2	1.09	73.5
High Recovery Test	68.3	0.66	95.3	0.52	99.0
High Recovery Tailings	31.7	0.07	4.7	0.01	1.0

Table 11 *- Ore Sorting Results*

Modelling of the data generated from the pilot testing allowed a mass recovery curve to be developed. For the purposes of this study, Centaurus has selected a mass recovery of 30% for the low-grade mining blocks providing a total nickel recovery of ~70% and a nickel sulphide recovery of ~79% for inclusion in the production schedule. Likewise, cobalt recovery has been reviewed with a recovery of ~71% applied to the product generated from the ore sorting process. More detailed testing in future studies is planned.

4.3 FLOTATION TESTING

Flotation test work has been completed on five composites from the main deposits (adopting a conventional grind and float flowsheet). The objective of this test work was to produce a high sulphur recovery concentrate with the ensuing concentrate being predominately sulphides of varying nickel grades. Recoveries are expected to improve with cleaner tests. Figure 13 illustrates the sulphide nickel responses of the rougher tests of the various composites.

The results align with the mineralogy, in that the nickel sulphides are fast floating and high initial grades can be expected, particularly with the Jaguar Central and North composites containing millerite as the dominate nickel sulphide.

The non-sulphide nickel content of the individual orebodies is variable across the deposits and has been estimated from the non-sulphide nickel assays collected from mineralogical investigations. The resultant non-sulphide nickel relationship (Figure 14) has been developed on material below the oxidisation layer in fresh ore.

The resultant analysis has determined even though the Jaguar zones have differing non-sulphide gangue minerals and variable nickel concentrations within these gangue minerals, a relationship between the percentage of non-sulphide nickel of a sample and the total nickel grade of the sample is able to be modelled. The modelling indicates the Jaguar ore zones appear to have good correlation to each other, however, the Onca ore tested, due to its different deposition environment has lower levels of non-sulphide nickel present for a given nickel grade.

Table 12 summarises the sulphide nickel recoveries of each ore zone tested. These composites have higher than modelled non-sulphide nickel (and resulting total nickel recoveries) due to the inclusion of some metallurgical sub-samples being derived from within the transition and oxide (shallow) zones of the respective ore zones. Examining the tabulated data below the simple bulk rougher flotation flowsheet selected can achieve high nickel sulphide recoveries at suitable nickel grades for further site-based processing.

Deposit	% Ni Feed	% Non-sulphide Ni in Feed	Sulphide Ni Recovery	Total Ni Recovery
Jaguar South	1.03	0.14	95%	82.1%
Jaguar Central	1.03	0.16	95%	80.2%
Jaguar North	0.86	0.14	95%	79.5%
Onça Preta	1.28	0.12	95%	86.1%

Table 12 *- Scoping Study Recovery Estimation Summary*

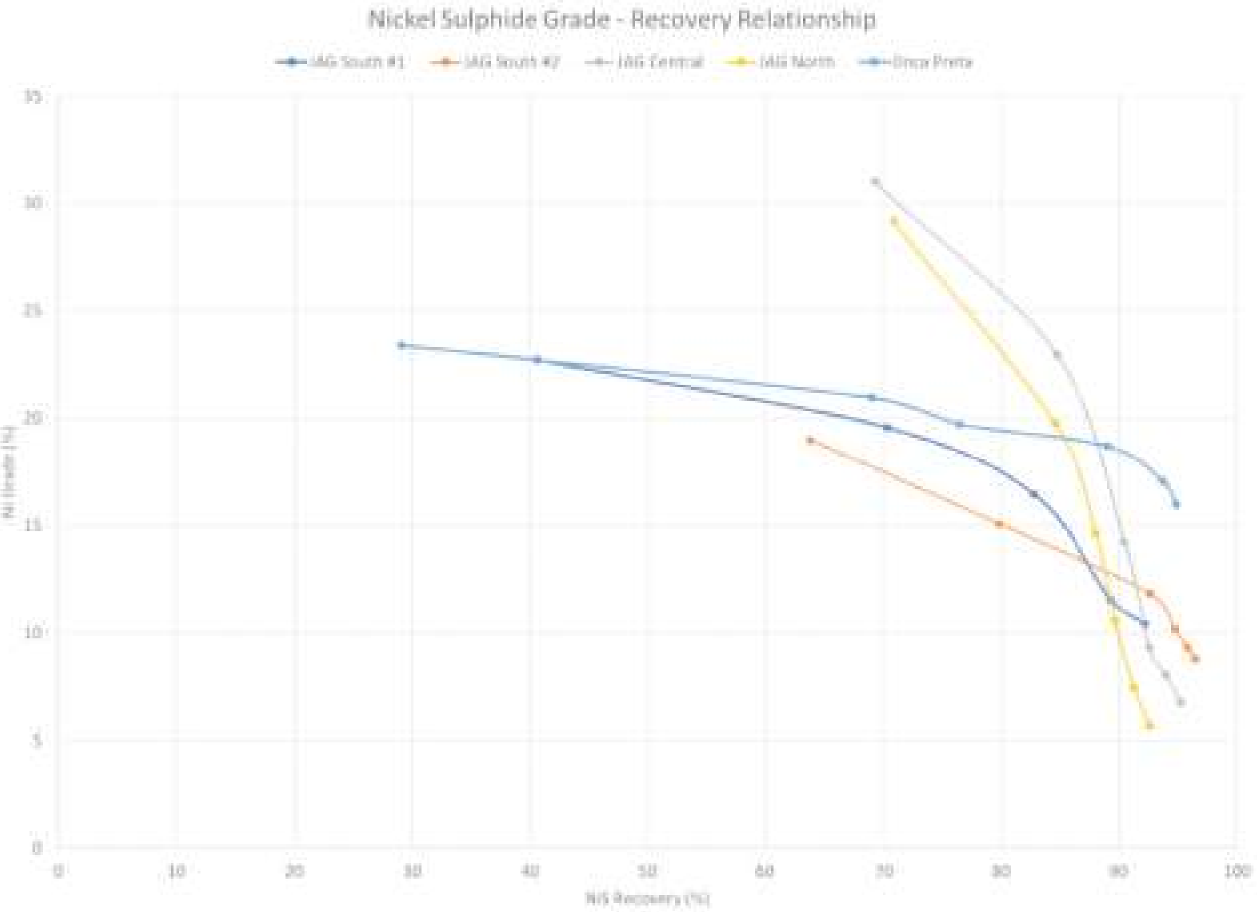


Figure 13 *- Rougher Floatation Results*

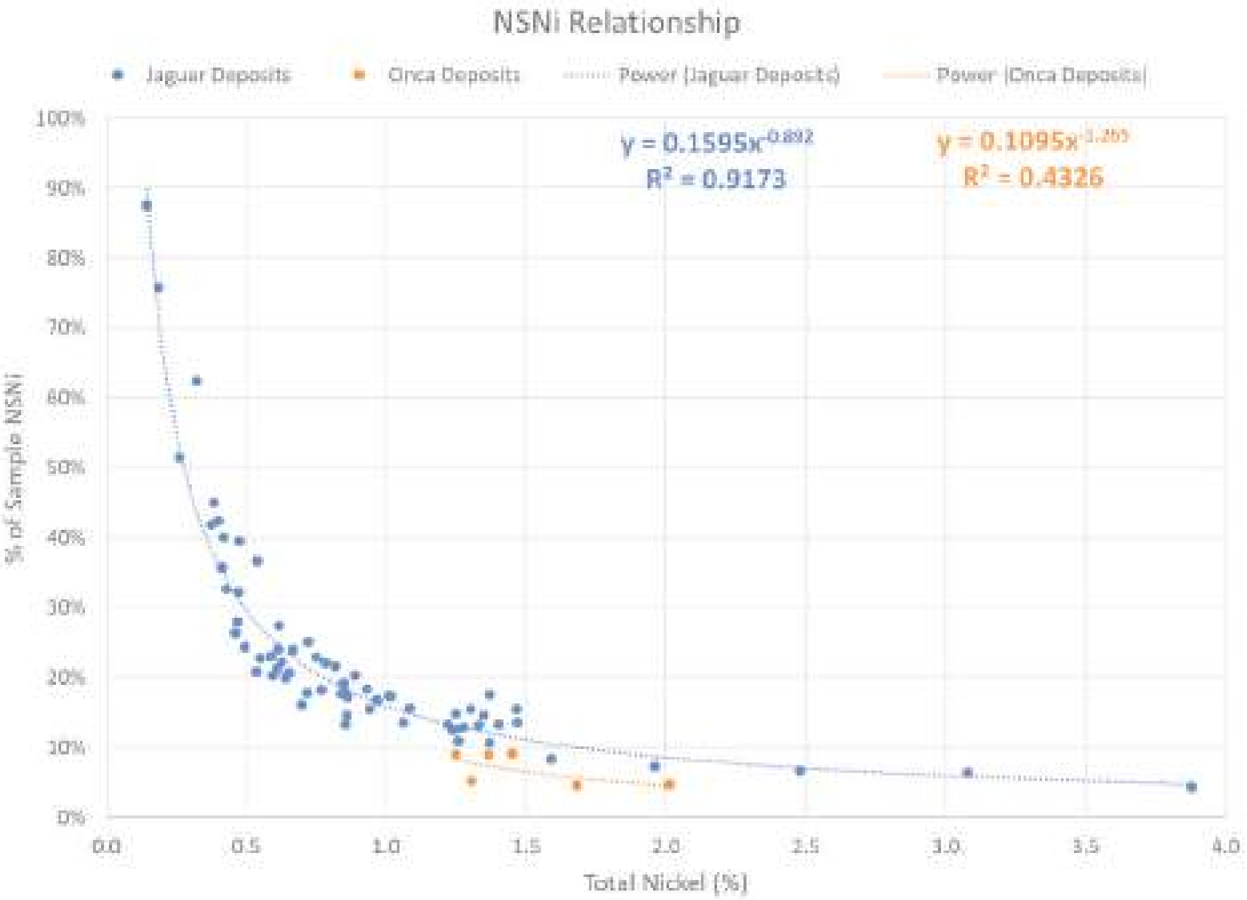


Figure 14 *- Non-Sulphide Nickel Estimation*

4.4 HYDROMETALLURGICAL TESTING

Hydrometallurgical testing was completed to determine if a high sulphide concentrate produced from a traditional base metal flotation circuit could be successfully leached to extract nickel into solution. The proposed flowsheet included oxidation, neutralisation, solid/liquid separation, solution impurity removal, production of an intermediate high value mixed metal sulphide and nickel sulphate crystallisation. These unit operations have so far been developed from existing design data available from commercial operations. This process flowsheet add-on has numerous advantages compared to production of a bulk sulphide concentrate including:

- Allows the flotation circuit to maximise nickel, cobalt and zinc recoveries through targeting high sulphur recoveries at lower concentrate grades (in comparison to the Base Case whereby final grade and recovery need to be jointly considered).
- High-quality nickel sulphate products attract higher nickel equivalent values compared to sulphide concentrates;
- Nickel sulphate is likely to attract a premium of at least US$1,000/tonne over the LME nickel metal contract value;
- Centaurus expects rising demand for nickel sulphates from the ongoing electrification of industry and the growing demand for key battery metals;
- Eliminates the risk of potential concentrate payability issues;
- Trucking and shipping volumes are reduced; and
- Importantly, the combined residue from both the flotation and hydrometallurgical processes have orders of magnitude fewer sulphides present compared to a conventional sulphide concentrate project, further reducing the potential environmental impact of the surface storage of the tailings.

Testing of both atmospheric and pressure leaching (POx) was completed to determine the appropriate leaching method to be studied. The testing was conducted on a blend of flotation concentrates sourced from Onça Preta and Jaguar South Deposits.

The testing concluded (Table 13) that pressure leaching clearly provided the best extractions for nickel, copper and cobalt (+99%) and therefore this process was selected for the study. This process testing was followed by four (4) additional larger scale POx tests confirming previous metal extractions and sulphur extractions.

In addition to further pressure oxidisation testing, additional testing, as set out below, has been planned to confirm the flowsheet:

- Neutralisation and impurity reduction testing prior to solvent extraction stages;
- Solvent extraction testing;
- Mixed precipitate confirmation testing;
- Nickel sulphate crystallisation confirmation testing;
- Investigating the value of adding copper into the MSP;
- Investigating if there is value in separating copper, cobalt and zinc within the MSP into multiple products or specifications; and
- Completing a technical and economic evaluation of producing fertiliser by-products (ammonia sulphate).

***Figure 15** - Jaguar Nickel Sulphide Pressure Oxidation images. The POx residue material would be sent to tailings. The green POx nickel solution will be crystalised to produce a nickel sulphate product*

					Metals Recovery			
Test	**Solvent**	**Pressure**	**Temp.**	**Time**	**Ni%**	**Cu%**	**Co%**	**S%**
Atmospheric	H_2SO_4	1bar	95˚C	24 hrs	53.1	56.5	18	50.1
Pressure (POx)	H_2SO_4	30bar	220˚C	~1 hr	99.1	99.5	99.8	96.9

***Table 13** - Preliminary Leach Selection Results*

5. Process Plant

5.1 PLANT DESIGN

The JNP process facility has been designed to treat 2.7Mtpa of ore in a flotation concentrator with an additional hydrometallurgical process to produce nickel sulphate hexahydrate crystals and a mixed sulphide precipitate (MSP) of cobalt, zinc and nickel. The proposed process plant flowsheet design was based on commercially available unit operations.

ROM high and low-grade ores are crushed through two (2) separate crushing circuits with the low-grade ore further processed via an X-ray ore sorting circuit to remove waste from the low-grade ore. The crushed and stockpiled ore is ground in a SAG mill and Ball mill circuit including pebble crushing (SABC) with a grind size P80 of 75 µm.

The ground slurry is conditioned with reagents and processed in a rougher and scavenger flotation circuit to produce a, low grade/high sulphur recovery concentrate that is thickened and stored in agitated tanks providing a 72-hour buffer to the downstream (POx) operations. The tailings is thickened and disposed of in a purpose-built tailings storage facility.

The flotation concentrate is pressure leached with oxygen (1 hour residence time at 30bar pressure and temperature of 220°C) and the pressure leached slurry returns to atmospheric pressure via a flash vessel, including off-gas scrubbing, and this slurry is neutralised with limestone to remove some solution impurities. The partially neutralised slurry is later "washed", the solution is separated from the solid residue in a 6-stage counter current decantation circuit (CCD), the washed solution further neutralised to remove additional solution contaminants and the waste directed to the flotation tailings stream.

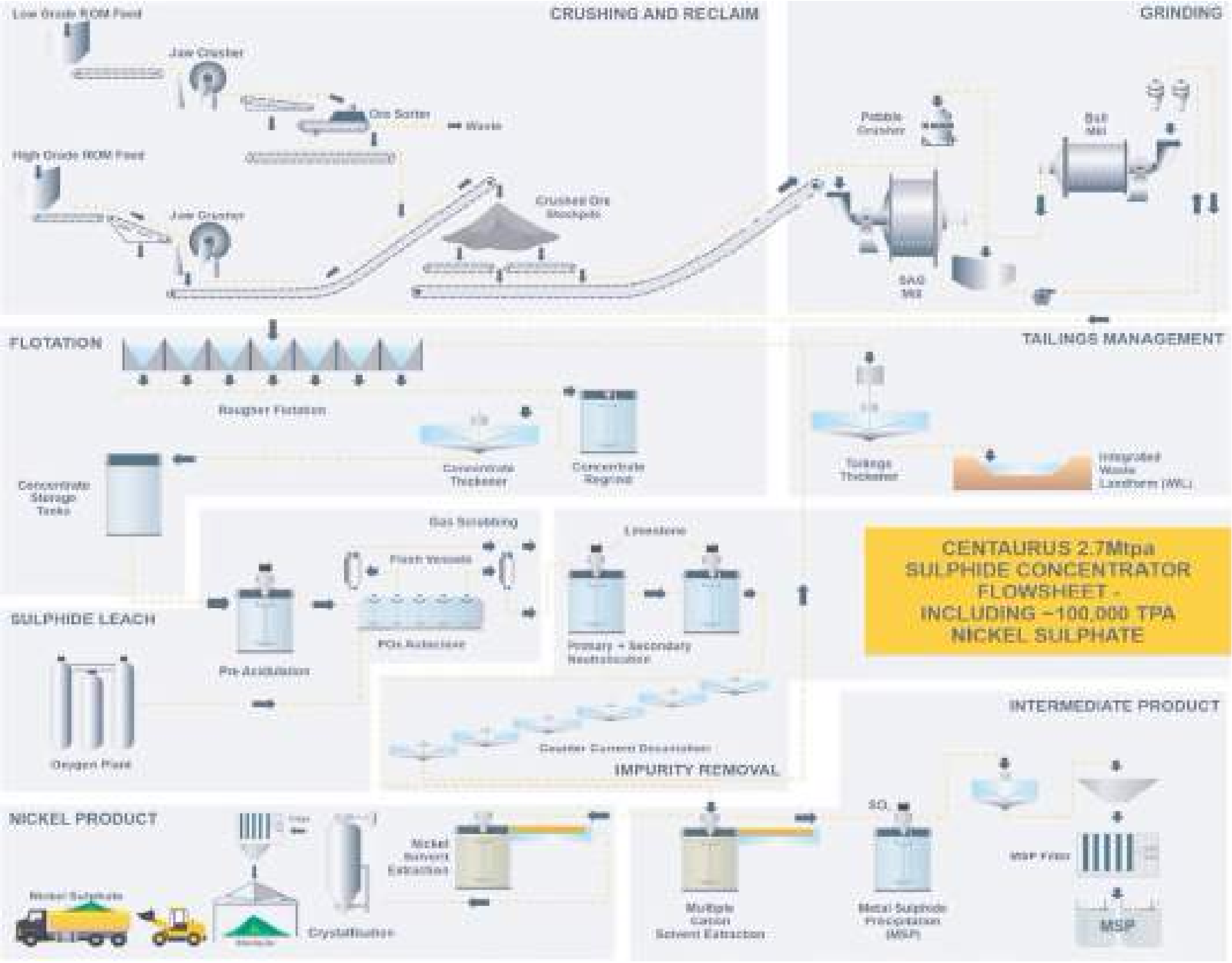


Figure 16 - Nickel Sulphate (Value-Add) Flowsheet

The purified solution (containing nickel, cobalt, and zinc) is processed in a solvent extraction circuit to preferentially extract cobalt and zinc from the solution with nickel remaining in solution. The extracted cobalt and zinc are finally stripped, washed, precipitated, filtered and bagged in 2t bags as an intermediate mixed sulphide precipitate (MSP).

The solution, containing primarily nickel, is pumped to a further solvent extraction (SX) stage that preferentially extracts the nickel from the solution. The extracted nickel is stripped and washed; the high grade, high purity resultant nickel solution is evaporated in a draft tube crystalliser that concentrates the solution (growing ~2mm, 99.5% nickel sulphate hexahydride crystals). These nickel sulphate crystals are continuously harvested, filtered and finally bagged for sale.

From operational year 4 underground activities require a 40,000m^3 per month paste backfill plant. The addition of paste backfill underground has many benefits, allows greater extraction of ore from underground, improves the stability/safety of underground mining and reduces the amount of tailings stored in the IWL. The paste backfill plant is designed to filter live tailings (up to 30% of the process production), mixing this material with a cement binder and depositing this material in exhausted underground stopes.

A simplified flowsheet for the flotation and hydrometallurgical processes are displayed in Figure 16 with notable design output values summarised in Table 14.

Average Annual LOM Metrics		Units	Value
Concentrate Throughput		tpa	**266,000**
Concentrate Feed Grade	**Nickel**	% Ni	8.10
	Copper	% Cu	0.56
	Cobalt	% Co	0.22
	Zinc	% Zn	2.46
Nickel Sulphate Production	**Nickel Grade**	% Ni	22.3
	Nickel Recovery	% Ni	94.2
	Tonnes	tpa	91,000
MSP Production	**Nickel Grade**	% Ni	2.3
	Nickel Recovery	% Ni	1.1
	Cobalt Grade	% Co	5.4
	Cobalt Recovery	% Co	95.0
	Zinc Grade	% Zn	59.3
	Zinc Recovery	% Zn	95.0
	Tonnes	tpa	10,500

Table 14- *Summary of Hydrometallurgical Performance*

5.2 GLOBAL USE OF PRESSURE OXIDATION (POX)

Whilst there are numerous examples of POx autoclaves operating around the world the vast majority are in gold operations with ores that are highly refractory and therefore are not overly analogous to the key consideration for their use at the Jaguar Nickel Project.

These refractory gold operations oxidise the sulphide present to "free" the gold for traditional CIL leaching of gold. Examples of these circuits are Lihir in PNG (46Moz reserve) and Pueblo Viejo Mine in the Dominican Republic (6.55Moz in reserve producing 500koz/yr). These operations are only viable due to the following metrics; long mine lives, increased precious metal recoveries which significantly increase annual revenues, low neuralising costs, lower (compared to Australia) labour costs, and lower unit power costs.

There are only a few examples of POx autoclaves being used in the nickel industry, most notably Harjavalta in Finland, which has been leaching nickel/copper/cobalt mattes for more than 20 years (similar chemistry although a higher-grade sulphide intermediary to that of Jaguar concentrate), Murrin Murrin in Western Australia (operating for more than 15 years), Vale's Long Harbour refinery in Newfoundland, Canada and a recent project, Terrafame, also in Finland.

The scarcity of site-based nickel value-adding projects is not due to the technical or chemistry complexity (the separation of these elements has been well understood for +20 years) but rather a result of the underlying economics combined with the low overall demand for nickel salts. The more recent interest in producing higher value nickel products on mine sites has been driven by the anticipated demand from the EV sector and therefore the additional revenue and margin that can be achieved when selling a nickel sulphate product to this EV market compared to cost (payability factor) of selling a nickel concentrate product to traditional nickel smelters.

Despite the increased margin for nickel suphate products, the fundamental underlying economic constraints of committing additional and significant capital to implement sulphate production processes still exist, usually due to high operating costs (labour, power, and neutralising costs) that significantly reduce the incremental revenue to a level that makes the return on investment too low (or negative) to justify the capital risk.

These impediments do not apply to the Jaguar Nickel Project with its mine life of more than 13 years, low-cost renewable power (hydro and solar), low-cost neutralising limestone and a low-cost labour force of highly trained operational personnel (compared to Australia).

There are, however, some very large, low-cost nickel sulphide operations world-wide that could adopt this technology (Norilsk, Vale and Jinchuan for example), however, these operations/provinces are not generally incentivised to do so given the jurisdictions have all already committed significant capital to build nickel smelters and refineries. There is no immediate economic incentive for these existing operations to change current products/processes.

BHP Nickel West is currently commissioning a nickel sulphate crystallising plant at Kwinana, south of Perth WA, treating a fraction of the solution generated from their matte leaching process to produce 100,000t (22.3kt nickel in sulphate).

5.3 PLANT PROCESSING PROFILE

The treatment profile for the Value-Add Scoping Study was developed to process 2.7Mtpa run-of-mine ore, equivalent of 225,000t per month or up to 22,300 tonnes of nickel in sulphate per annum.

High-grade ROM feed from open pit and underground operations represents 86% of the mill feed and the schedule is modelled to preferentially treat this material in preference to ore-sorted feed. This option creates an operational schedule at a relatively constant feed grade for 13 years, as illustrated in Figure 17.

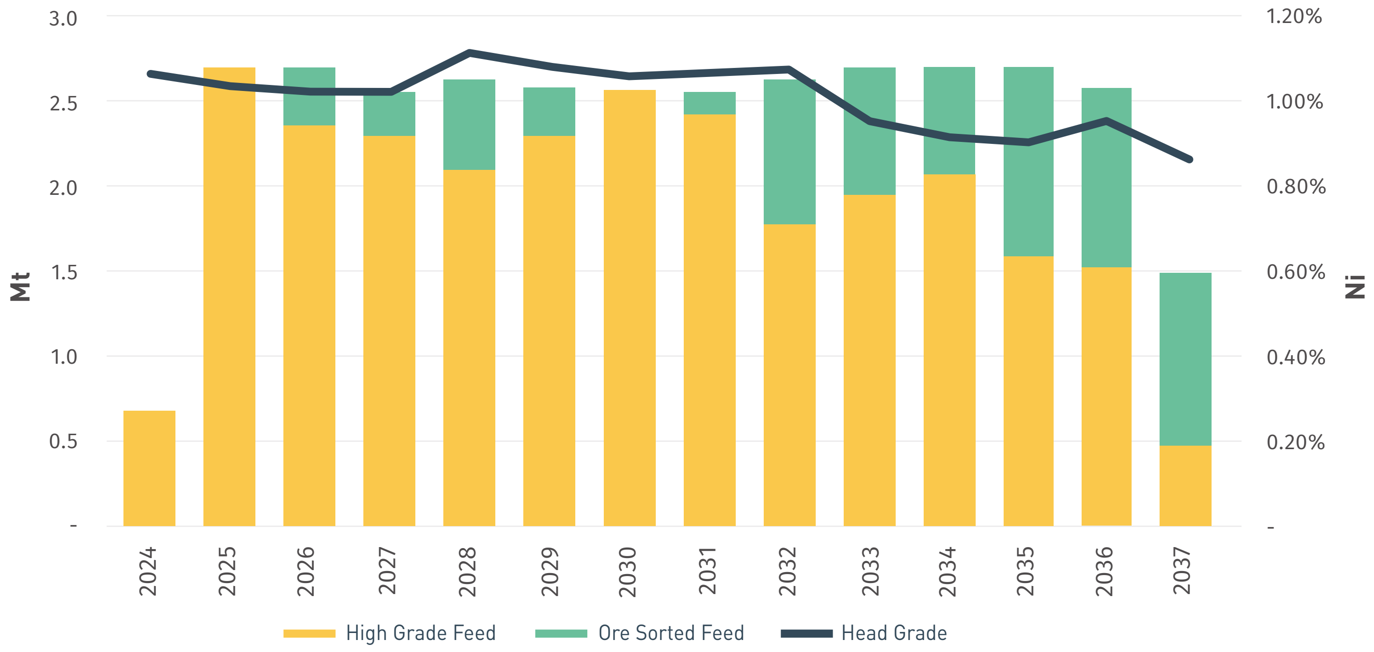


Figure 17 - *Tailings Storage Facility and Mine Waste Stockpile Locations*

6. Mine Site Infrastructure & Services

The JNP process plant location was selected by CTM based on the current pit layout with the aim of minimising earthworks and taking advantage of the local topography. The location of the Tailing Storage Facility (TSF) was selected by CTM to minimise the tailings pumping duty using a single stage of centrifugal pumping, and to ensure natural water flows in the area were not impeded.

6.1 TAILINGS STORAGE FACILITY

Tailings expert Mr Chris Lane of L&MGSPL supported the Company in the completion of the conceptual tailings design study. An Integrated Waste Landform (IWL) was selected as it meets world's best practice; achieving the highest safety factors of any TSF design through using mine waste appropriately, minimising disturbance areas, allowing for reliable long-term storage of potentially acid forming waste and allowing for significant rehabilitation prior to closure. Due to permitting requirements, the Company is proceeding with the detailing of this design for inclusion in the approval process.

- → Up to 25.3Mt of ore being milled from open-pit mining.
- → Up to 8.5Mt of ore being milled from underground mining.
- → 90% of underground stope void will be backfilled with tailings.

Using the above criterion and assumed settled density of 80% solids, the volume storage requirement of the project is 14.8Mm^3. Including both the designed TSF and tailings deposition in an available, completed open pit (Jag West of 6Mm^3), 19Mm^3 of tailings storage volume has been identified (+25% additional volume over current requirements).

DRA has completed a preliminary design of an IWL tailings facility using conservative, Western Australian, design principals:

- → Upstream wall slope 2.5H:1V.
- → Downstream wall slope 3.5H:1V.
- → Crest of wall 56m of compacted/select fill waste (plus an internal clay liner).

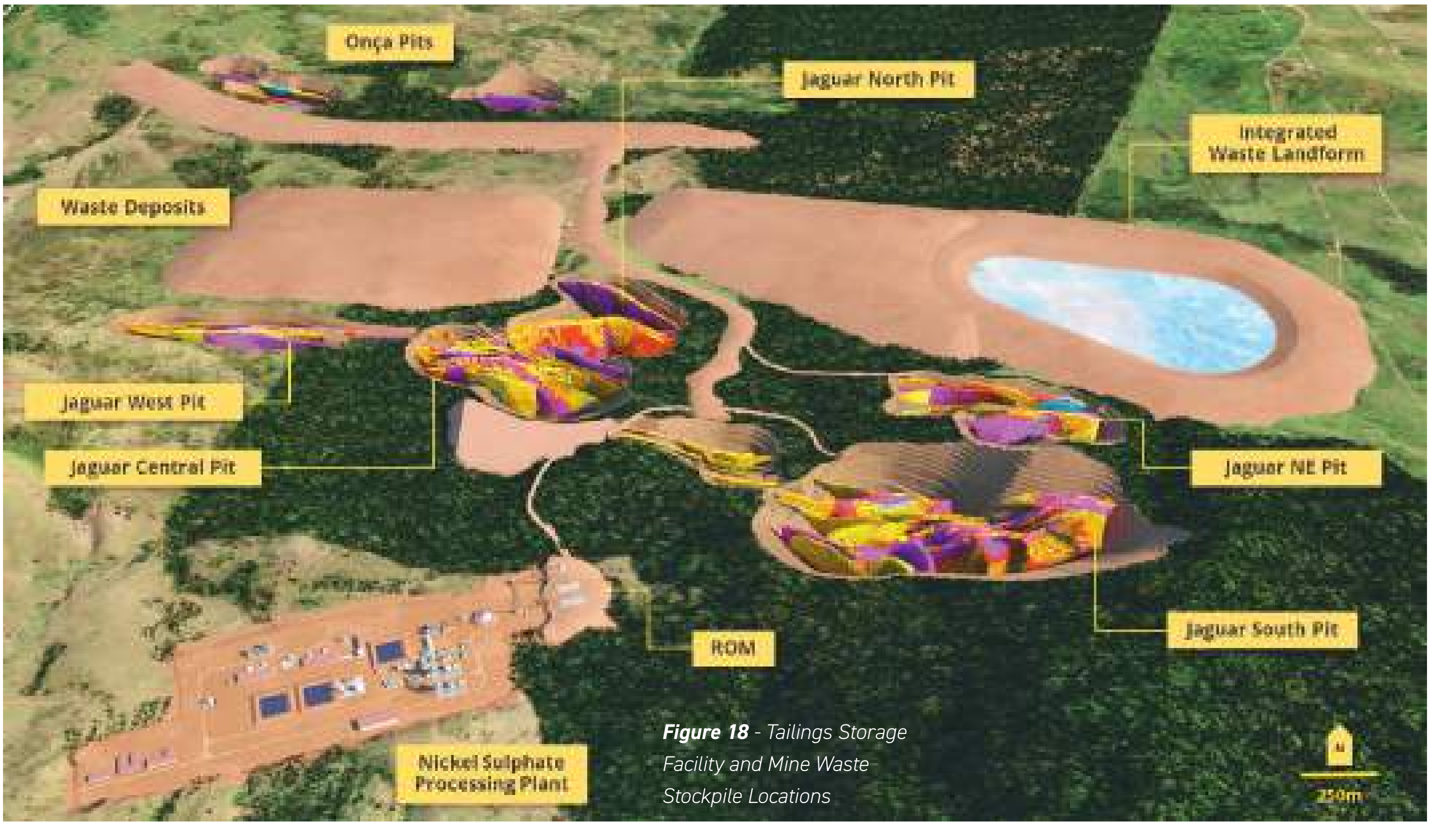


Figure 18 *- Tailings Storage Facility and Mine Waste Stockpile Locations*

6.2 ACCESS ROAD

The study has identified that the 40km access road between Tucumã and the project site requires upgrading. The site access road upgrade scope will be a combination of upgrading existing municipal roads and a section of new road into the JNP infrastructure area. These upgrades will improve the road surface and drainage to facilitate reliable transport of consumables/equipment, and the safe transiting of personnel to and from site.

6.3 POWER

Power will be supplied to site by a 138kV transmission line (approximate length 39km) which is connected to the national energy grid at Tucumã (see Figure 19) to the JNP. The 138kV power will be reduced to 13.8kV and reticulated to the high voltage sub-station that reticulates the power to high voltage loads (i.e. Mill Motors, Oxygen Plant Compressors and underground mine ventilation fans) and various step-down transformers distributed around the JNP. The 13.8kV power will be distributed around the site via a combination of above ground aerials and direct buried cables as required.

6.4 NON-PROCESSING INFRASTRUCTURE

Allowance for the following non-processing infrastructure has been included within the study:

- Gatehouse/security facilities;
- Administration building;
- Training buildings;
- Laundry, change house and ablution facilities;
- Control room and communication infrastructure;
- Crib/meal and restaurant facilities;
- Emergency services (firefighting and medical) buildings and equipment;
- Workshops and warehouse;
- Laboratory;
- Reagent stores; and
- Mining magazines and emulsion plant.

Other allowances include:

- Temporary facilities specific to implementation activities;
- Mobile plant required to support the process plant operations (excluding mining vehicles and earthmoving equipment);
- Water supply for construction and operations. These have been designed to source water from the local river and distribute to all processes and infrastructure areas within the project;
- Solid waste temporary storage; and
- Potable and waste water treatment plants

Figure 19 *- 138kV National Grid connection at Tucumã*

7. Project Implementation

A preliminary construction schedule was developed for the project based on an Engineering, Procurement, Construction, and Management (EPCM) basis for all aspects of the project.

The schedule indicates an overall duration of approximately 15 months from commencement of construction to the practical completion of the project prior to commissioning and ramp-up. Lead times for critical long-lead items were confirmed from equipment suppliers. Other equipment package lead times were based on similar previous projects.

Twenty four months have been allowed for the DFS, including all reserve drilling) for the DFS and to complete front-end engineering design (FEED), attaining all commercial pricing and financing.

To deliver and implement the most cost-effective project, the Value-Add Scoping Study has identified that it is critical that early FEED works are completed (including designing/specifying and procurement some major equipment components with extended lead times) within the study phase. Metso/Outotec has completed scoping level budgetary pricing and lead time estimates for the equipment identified in this study, based on their recent in-country experience.

Environmental approvals remain on the critical path with the Installation Licence (LI) required before construction can commence. The LI is presently targeted for the end of Q1 2023.

8. Operations & Human Resources

Once in operation, the Jaguar mine will require a total of 250 direct staff. Most of these staff have been assumed to be located in the local towns of Tucumã or Ourilândia do Norte or recruited from the surrounding Carajás Mineral Province. Training of the unskilled work force will occur during the construction and project implementation phase.

The mine operations will be run by the mining contractor and work from Monday to Sundays (inclusive) in three shifts of 8 hours with 4 operational teams. The mine contractor work force is expected to vary between 300-500 people.

The processing department, the largest direct employer of personnel, will work the industry standard 8 hour shifts with 4 operational teams, with a workforce of 165 people. The administrative and technical services workforce is estimated to be 80 people and will work 44 hours per week, according to Brazilian labour laws.

9. Environmental & Mining Approvals

The key approvals for the JNP are the Mining Lease Grant from ANM (National Mining Agency) and the Environmental Approvals that are a three (3) stage approval process from the State Environmental Agency (SEMAS). The process to source these licences/approvals and some other considerations are set out below:

9.1 MINING LICENCE (PAE – PLAN OF ECONOMIC ASSESSMENT)

The JNP comprises one Exploration Lease (EL), 856.392/1996, that covers an area of 30km^2 which has a valid Mining Lease Application (PAE - Plan of Economic Feasibility). The license is 100% owned by Aliança, a wholly owned Brazilian subsidiary of CTM.

The current PAE, which envisaged a large bulk-tonnage open pit mine and processing plant, was lodged with the Brazilian Mines Department (ANM) in March 2013 and is currently pending approval. The Company will lodge an updated PAE in Q2 2021 based on the findings of the Value-Add Scoping Study. The ANM can grant the Mining Lease only after the Company has received the Installation Licence (LI) from the State Environmental Agency (SEMAS).

9.2 ENVIRONMENTAL LICENCES

PRELIMINARY LICENCE (LP) APPROVAL

The Preliminary Licence is the key environmental approval required for the Project and takes the most time to secure. The application for the LP comes from the lodgement of an Environmental Impact Assessment (EIA/RIMA).

The lodgement of the EIA/RIMA is planned for Q2 2021. All of wet and dry season environmental studies (water, flora, fauna, air quality, noise, archaeology, malaria etc) are completed with lodgement awaiting technical information from this Scoping Study.

Approval of the LP demonstrates that the Pará State considers the overall project definition to be socially and environmentally sound and can go ahead. The LP is also the main license required by project financiers. It is expected that SEMAS will take ~12 months to approve the EIA/RIMA from the time it is lodged and this approval will grant the Company the LP.

INSTALLATION LICENCE (LI) APPROVAL

In order to make application for the Installation Licence (LI), the Company is required to lodge an Environmental Control Plan ("RCA/PCA") document with SEMAS and this will be done as soon as the LP is approved. The RCA/PCA report also has more detail of the environmental programs that flow from the plant layout, particularly in relation to emissions and pollution control and also covers how flora/fauna will be managed during the operations phase.

The approval of the RCA/PCA and LI grant allows project construction to commence. It is expected that SEMAS will take ~9 months to approve the RCA/PCA and grant the LI. The LI is therefore expected to be approved by the end of Q1 2023 at which point construction is able to commence. All pre-strip, mine preparation activities and plant commissioning can also commence under the LI approval

OPERATING LICENCE (LO) APPROVAL

Once the project is built, an inspection of the project by SEMAS officers is required to ensure the plant was built in accordance with the specifications advised to SEMAS during the LI Process. It is the final approval to start commercial production. Approval will grant the Company its Operational Licence (LO). Construction is expected to take 15 months from the commencement of work and therefore the LO is expected to be granted in Q4 2024. Once the LO is issued commercial production from the plant can occur.

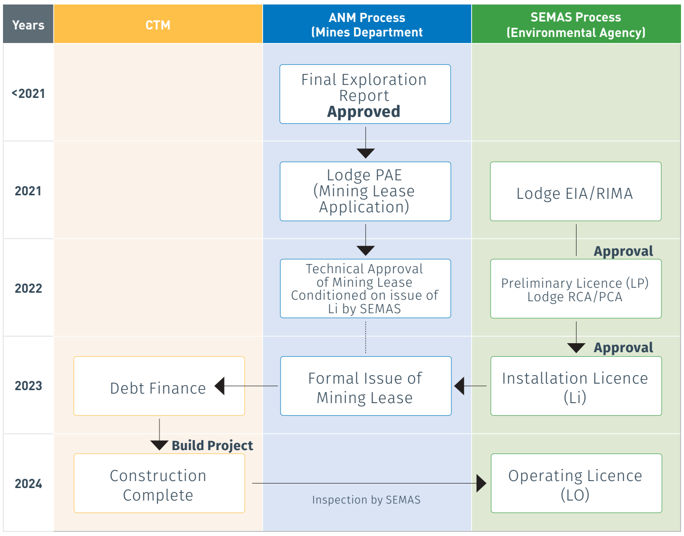


Figure 20 *- JNP Project ANM and SEMAS Approvals Process*

10. Social Responsibility & Sustainability

Centaurus has operated in Brazil for more than 13 years and understands the importance of social responsibility. The Company is integrating all the social issues (which have been defined by the industry as Environmental, Social and Governance issues), into an overall risk management strategy across all operations.

10.1 LOCAL EMPLOYMENT

The Jaguar Project is located 40km from local towns of Tucumã or Ourilândia do Norte, with a combined population of ~70,000 people. The workforce will be mainly sourced from the local population that reside in these towns, supplemented by experienced external operational and technical staff as required. The project will have a positive social impact by providing additional job opportunities and training in mining skills. The JNP will create an estimated 1,000 construction jobs and then maintain an operational workforce of circa 250 company employees and approximately 500 mining contractors for the 13-year operational duration. This will not only provide direct employment, but will also stimulate the local economies creating a number of indirect employment and business opportunities. The project will also bring royalties and tax incomes to the municipal and state governments.

More than 90% of the workforce currently working on the project, including employees and outsourced labour, are from the south eastern region of the State of Pará.

10.2 COMMUNITY INITIATIVES

Centaurus has partnerships with the two villages closest to the project site in order to improve their sanitation systems, including waste disposal, water supply and sewage treatment. Furthermore, the Company has carried out the construction of bridges, installation of culverts and upgrade of road between Tucumã and the site. The upgrade is planned to continue during the upcoming dry season (June – Nov 2021).

10.3 COVID RESPONSE

Centaurus has taken a number of important steps to safeguard the health and safety of the Company's workers, their families and the wider community while at the same time maintaining business continuity during the COVID-19 pandemic.

These include the introduction of a number of new protocols, revised working arrangements and social distancing practices as well as making a significant contribution to the local municipal health services of Tucumã and São Félix do Xingu through the purchase of masks, gowns, hand sanitiser and COVID-19 test kits to better equip them for the delivery of health services into their respective communities whilst COVID-19 remains active.

A nurse dedicated to the management of the Company's COVID-19 activities test employees routinely and any personnel who are feeling unwell or showing COVID-19 like symptoms. A dedicated site camp for field employees to stay during the course of the working week has been established, enhancing social distancing measures by limiting employee contact with the broader community during the working week.

To date, COVID-19 has had relatively minimal impact on the Company's operations and the tight protocols adopted by the Company have been highly effective in managing the risk of transmission.

11. Product Logistics

The nickel sulphate hexahydrate and MSP products are filtered, dried and bagged (2t) for transport. Considering the estimated production volume of these products, the logistic alternatives between the JNP and ports have been reviewed. For local haulage transportation there are two port load-out possibilities:

→ Vila do Conde; located 903km from the Project site. This port is a well-organized industrial port, with ample area which can be leased directly from the port authority or from other third parties. The products would have to be trucked the whole distance.

→ Itaqui Port (São Luís); this would require access to Vale's rail infrastructure (Parauapebas, ~250km via road).

***Figure 21** - Vila do Conde Port, Pará State, Brazil*

For the Value-Add Scoping Study, the Company has allowed for the transportation of the products from JNP to the Vila do Conde port, shown in Figure 21, where the products would be loaded on to export vessels using a containerised solution for the nickel sulphate and MSP. This methodology is applicable for use in either port in the future. Access to Vale's rail infrastructure will be explored in future studies.

12. Market & Nickel Pricing Assumptions

12.1 NICKEL MARKET

Nickel is mainly used in the production of stainless steel and other alloys and can be found in food preparation equipment, mobile phones, medical equipment, transport, buildings, power generation and increasingly in battery usage. The current size of the nickel market size is approximately 2.5Mtpa with overall nickel use growing at an annual rate of 4% over the last decade.

Nickel demand for batteries has grown fourfold in the 6-year period from 2012 to 2018, with the growth occurring from a low base of approximately 33,000tpa or 2% of the market. Scenarios for the increased rate of adoption of electric vehicles (EVs) conservatively forecast required additional nickel volumes of between 750,000 tonnes and 2 million tonnes per annum.

Nickel demand from EV use will far exceed nickel production from existing operations in any scenario of EV adoption.

EV nickel demand requires Class-1 nickel principally provided by sulphide projects and as well as laterite projects using HPAL. NPI production typically provides nickel for stainless steel production.

Importantly, sulphide projects have carbon footprints significantly lower than HPAL and NPI Projects which will drive end users of Class 1 nickel to seek out sulphide nickel where it is available.

The forecast rapid increase in the adoption of electric vehicles and the growing importance of battery technology will logically drive increased demand for higher purity nickel. Stated government policy in relation to renewable energy and EVs and strategic targets for EV production set by global automotive manufacturers all support this paradigm.

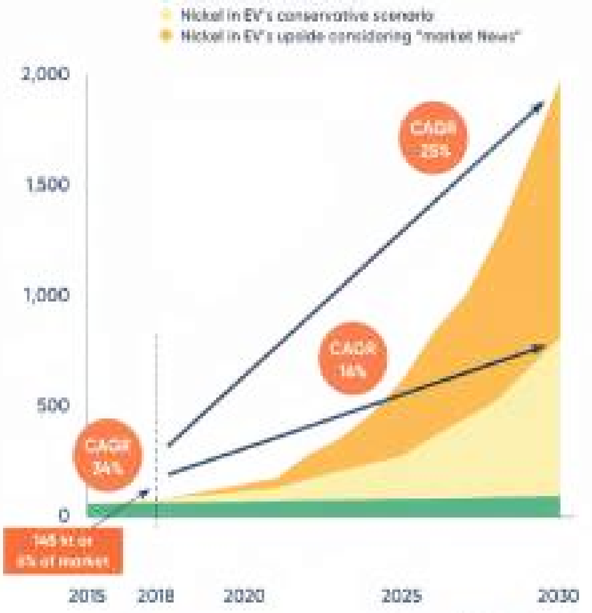


__Figure 22__- EV Nickel Demand Scenarios

Source: Vale, Terra Studio

12.2 NICKEL PRICE ASSUMPTION

Figure 23 shows the historical LME nickel price for the 10-year period from 2010 to 2020. The nickel price closed the 2020 year at US$16,540/tonne and is presently around US$17,000/tonne.

Figure 23 *- Historical Nickel Price*

Global stimulus spending has resulted in strong demand for stainless-steel, while forecasts of stronger and quicker uptake of electric vehicles in the future continues to firm support for the view of a positive outlook for Class 1 nickel, particularly nickel sulphate that is proposed to be produced at Jaguar under this study option.

The JNP Value-Add Scoping Study assumes a nickel sulphate price of US$17,632/tonne. This assumption is based on a conservative (especially when referenced against a number of major investment bank nickel price forecasts for the middle of the decade) estimate of the LME nickel price of US$16,530/tonne (US$7.50/lb) from the time of planned first production from Jaguar in the second half of 2024. In addition to the LME price assumption (which was the same price assumption used in the Jaguar Base Case Scoping Study), a conservative sulphate premium of US$1,102/tonne (US$0.50/lb) has been applied to arrive at the nickel sulphate price assumption for this Value-Add Scoping Study.

The sulphate premium being applied is less than the current estimated cost of producing nickel sulphate by dissolving nickel briquettes in acid, a significant likely source of nickel sulphate if more nickel sulphide mines are not developed.

12.3 JAGUAR PRODUCTION

Nickel Sulphate Product

The Jaguar project is forecast to produce up to 100,000 tpa of nickel sulphate hexahydrate (99.5% purity) over the life of the project (13 years) for a total of 262.1kt of contained nickel in sulphate at an average annual production rate of 20,300t of nickel in sulphate, see Figure 24.

Mixed Sulphide Precipitate Product

The indicative specifications of Jaguar MSP are summarised in Table 15.

Metal	MSP Grade	Payability
Zinc	59.3%	85%
Cobalt	5.4%	30%
Nickel	2.3%	Nil
Copper	0.1%	Nil

Table 15 *- Jaguar Average LOM MSP Concentrate Specification*

The Company anticipates that it will sell the MSP in its current form to zinc smelters, either in Brazil or in the international markets. The payabilities applied in the Scoping Study economics are both consistent with other known zinc rich and iron deficient sulphide precipitates and standard zinc sulphide concentrate terms which are indicatively 85% payable subject to a minimum deduction of 8 units. Given the zinc smelters can and do recover cobalt in the form of a cake and the cobalt content in the Jaguar MSP is significant, it is reasonable to assume a payability of 30% for cobalt.

The Company will investigate further processing of the MSP during the DFS phase of work and investigate whether it is economic to prepare two MSPs, one for cobalt/copper and one for zinc to further enhance the economics of the project.

Offtake

Under the terms of the Jaguar Sale and Purchase Agreement (SPA), Vale have a first right to 100% of offtake from the Jaguar project priced on an arm's length basis. This feature of the SPA provides some measure of offtake risk mitigation. Notwithstanding this, the Jaguar nickel sulphate products will be highly sought-after, given the growing demand from the EV battery market, resulting in a low marketing risk to the JNP.

Sulphide logistic terms have been assumed to also be applicable for nickel sulphate; CIF delivery with the seller meeting the costs of transport and discharge to the buyer's port and insurance. An allowance of US$70/tonne of nickel sulphate has been provided for these costs.

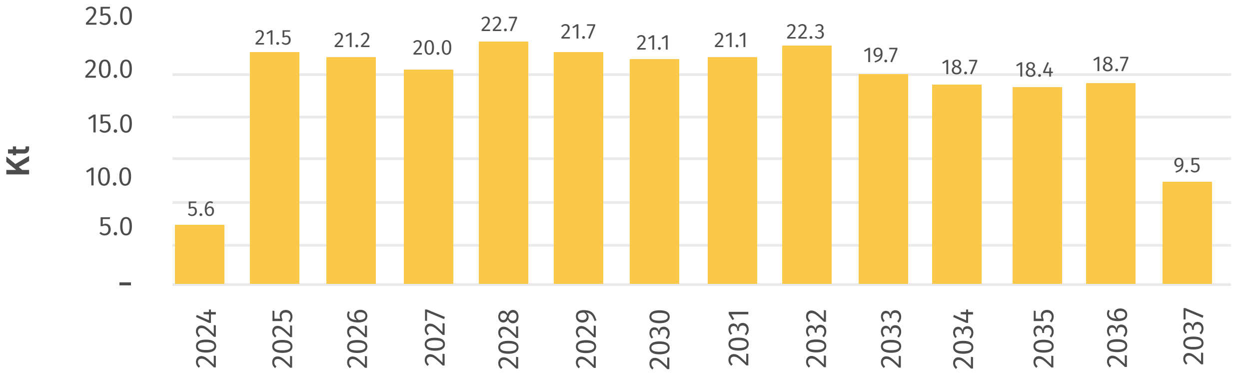


Figure 24 *- Nickel in sulphate*

13 Capital Cost Estimate

13.1 PRE-PRODUCTION CAPITAL

The pre-production capital cost estimate developed for the JNP includes costs associated with the procurement, construction and commissioning required to establish the project facilities prior to achieving commercial production.

The capital cost estimate has been completed by Entech (Mining operations) and DRA (Process plant and infrastructure) with CTM input where necessary. Formal enquiries to several process plant suppliers based on technical and commercial scope of works support the estimate. Table 16 summarises the total project capital costs including direct costs, indirect costs and contingency required prior to the commencement of commercial production.

Pre-strip, TSF, Waste Dump & Mine Access

No capital has been included for mining fleet as the operation is proposed to be undertaken by a mining contractor. Costs for pre-strip waste removal and development of the TSF are included. The initial lift of the TSF requires 3.58M bcm of waste which will be taken from the pit area pre-strip at a total cost of US$32.9M. The mining contractor will also establish the pits, waste dumps and site haul roads.

The same mining contractor would be responsible for the pre-operation's infrastructure earthworks including the preparation for the contractor facilities, plant and weighbridge sites.

Processing and Non-Process Infrastructure

The nickel sulphate processing and non-processing capital cost estimate is presented in first quarter 2021 United States dollars (US$) to an accuracy of ±40%. The estimated capital cost for the Jaguar Nickel process plant and process plant infrastructure has been produced using a priced mechanical equipment list as the basis. Earthworks, electrical and instrumentation costs have been developed from material take-offs and validated database rates.

Access Road & Power Line

Approximately 40km of road between Tucumã and the project site will be upgraded as part of the project. This will be undertaken by a local civil contractor and is presently estimated to cost US$6.2M.

Power will be supplied to site by a 138kV line connected from site to the national energy grid at Tucumã. The total length of the transmission line route is 39km with an estimated total cost of US$8.6M, sourced from a local power company proposal.

13.2 SUSTAINING AND DEFERRED CAPITAL

Total sustaining and deferred capital costs for the project are US$212.8M.

The principal deferred capital costs are associated with open pit and underground mining as follows:

- US$98.2M associated with overburden removal and cut-backs; and
- US$87.0M for decline development, mine infrastructure and ventilation.

The IWL requires future dam raisings which are estimated to be US$7.8M. This does not include the costs of delivering and spreading waste material at the TSF site which is included in mine waste movement operating costs. The estimated cost of the paste plant is USD$8.8M, to be incurred in year 5 & 6. The JNP tenement is part of a Sale & Purchase Agreement with Vale, which includes a deferred payment of US$5.0M million on commencement of commercial production.

The Scoping Study assumes that the salvage value of the plant will offset the mine closure costs estimated to be incurred for environmental rehabilitation, plant removal and disposal and labour retrenchment costs at the completion of mining and processing activities.

Pro Production Capital Cost	Units	Value Add
Mining (IWL & Pre-Strip)	US$M	33.6
Flotation Circuit Equipment	US$M	38.4
Electrical	US$M	20.8
In-Plant Piping	US$M	6.3
General Site - Earthworks	US$M	3.4
Hydrometallurgical Circuit Equipment	US$M	66.4
Contractor Mobilisation Allowance	US$M	1.9
Engineering Design/Draft Labour	US$M	9.3
Project & Construction Management	US$M	13.6
Commissioning	US$M	2.0
Project Support Infrastructure	US$M	31.7
Owners Costs	US$M	17.9
Sub total	**US$M**	**245.3**
Contingency	US$M	42.2
TOTAL	**US$M**	**287.5**

Table 16 *- Pre-Production Capital*

14. Operational Cost Estimate

Operating costs vary over the life of the mine as the strip ratio changes. The operating cost estimate has been determined from the mining contractor proposals, supplier quotations and complementary data from recent studies of similar operations and database information.

The larger components of operating costs comprise contract mining, diesel fuel, oxygen, reagents and grinding media, labour and power. The operating cost estimate is presented in first quarter 2021 United States Dollars (USD) to an accuracy of ±40%. The project operating costs are outlined in Table 17 below. Figure 25 provides a further breakdown of costs.

Operating Cost	US$/t milled ore	US$/t metal	US$/lb Ni
Mining	33.20	4,221	1.91
Processing	28.02	3,562	1.62
Logistics	2.61	332	0.15
General & Administration	1.98	252	0.11
By-product Credit	(8.75)	(1,113)	(0.50)
Total C1 Costs	**57.06**	**7,254**	**3.29**

Table 17 *- Value-Add Scoping Study Operating Costs*

General & Administration costs include a provision for ongoing rehabilitation expenditure estimated at US$15.1M over the life of the project.

14.1 MINING

The mining contractor will be responsible for all open pit and underground mining and auxiliary operations. The mine operation costs are outlined in Table 18 and 19 below.

Open Pit Mining Operating Cost	LOM US$M	US$/t ore mined
Waste Mining	532.4	14.55
Ore Mining	106.0	2.90
Dayworks	14.6	0.40
Grade Control	36.2	0.99
Overheads	28.6	0.78
Total	**717.8**	**19.62**

Table 18 *- Open Pit Operating Costs*

Underground Mining Operating Cost	LOM US$M	US$/t ore mined
Ore Drive	61.0	7.22
Stope	231.9	27.43
Op Access	1.3	0.16
Dayworks	6.2	0.74
Grade Control	8.5	1.01
Mine Services	11.7	1.38
Mine Overheads	81.2	9.59
Total	**401.8**	**47.53**

Table 19 *- Underground Operating Costs*

Minor additional mining costs are primarily related to technical staffing and grade control costs. The average mining cost for the complete operation was estimated to be US$33.20/t of ore milled.

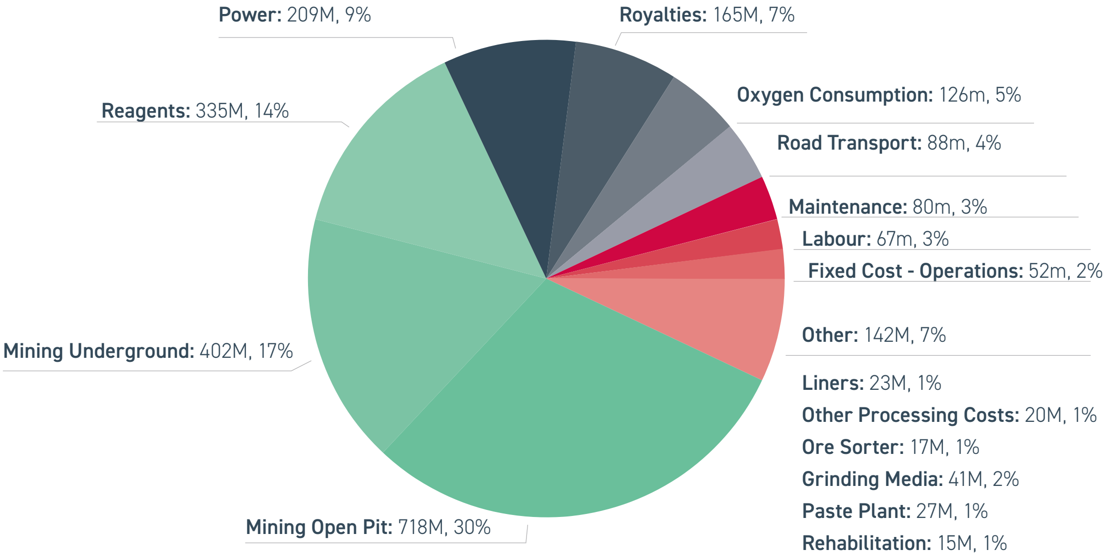


Figure 25 *- Value-Add Scoping Study LOM Operating Costs*

14.2 PROCESS

The estimates have been divided into key cost categories, summarising the average annual operating costs for processing ore at 2.7Mtpa for the designed sulphide concentrator and hydrometallurgical circuit. The key cost categories summarised in Table 20.

Operating Cost	LOM US$M	US$/t ore milled
Labour	66.9	1.98
Power	209.2	6.20
Maintenance	80.2	2.38
Reagents and Consumables	525.0	15.57
Paste Plant	26.9	0.80
Miscellaneous	36.5	1.07
Total	**944.7**	**28.02**

Table 20 *- Processing Operating Costs*

14.3 LOGISTICS

The Jaguar products are proposed to be transported via the existing road network 903km from site to the Villa de Conde Port near Belem. Based on benchmarking of similar operations in Brazil the costs of bulk material logistics which include storage at Port and stevedoring are estimated at US$61.0/tonne of concentrate. Sea freight is estimated to be US$70/tonne of concentrate to the Asian market.

14.4 GENERAL & ADMINISTRATION (G&A)

The cost of direct G&A activities consists of the site G&A team (including HSEC personnel and contractors) and the services provided by them, Excluding rehabilitation costs, G&A costs are estimated to be US$4.0M per year.

15. Financial Analysis

15.1 KEY ASSUMPTIONS

A comprehensive financial model for the JNP has been created as a key part of the Value-Add Scoping Study activities. The financial model incorporates physical, timing, cost and financial assumptions. The timing and financial assumptions are presented below with physical and cost assumptions detailed in the preceding sections of this report.

Commodity Prices

The key revenue assumption is the nickel price for the nickel sulphate which has been estimated at US$17,632/tonne, being a long-term LME nickel price of US$16,530/tonne plus a sulphate premium of US$1,102/tonne. The current LME nickel price is approximately US$17,000/tonne. Refer to Section 12.2 above for further comment on the nickel price assumption.

Royalties

The government royalty (CFEM) rate for base metals is 2% on the value of concentrate sales revenue, less certain allowable deductions for taxes charged in Brazil. For the purpose of the Value-Add Scoping Study a rate of 80% of the CFEM rate (ie 1.6% rate) is being applied to the nickel sulphate production revenue.

It is also assumed for the purpose of the study that there are no landowner royalties as Centaurus has already executed two possession agreements for land over the Jaguar Project with further agreements pending.

The tenement on which the JNP is located was acquired under a Sale & Purchase Agreement (SPA) with Vale. The terms of the SPA include a Net Operating Royalty (Gross) of 0.75% payable to Vale. Aliança also assumes the original obligation of Vale to BNDES for a 1.8% Net Operating Revenue royalty.

The Vale and BNDES royalty rates were based on the sale of a nickel concentrate with a reduced rate to be applicable for any value-added product produced so as to ensure the royalty burden was no more than applicable under the production of a nickel concentrate. At this point in time no specific negotiation of a lower royalty rate for nickel sulphate production has been undertaken with either party so a conservative reduction in the applicable royalty rates to 80% of the nickel concentrate royalty rate has been applied.

Foreign Exchange Rates

The foreign exchange assumptions used in the study are set out in Table 21 below:

	Assumption for Value-Add SS	Current May 2021
USD/BRL	5.00	5.40
EUR/BRL	5.80	6.50
AUD/USD	0.75	0.77
USD/CAD	1.33	1.21
EUR/USD	1.16	1.22

***Table 21** - Foreign Exchange Rates*

Whilst these rates represent conservative assumptions compared to current rates, management considers that these rates are more appropriate long-term assumptions given the significant recent volatility on financial markets. The rates used in the Value-Add Scoping Study are the same as those used in the Base Case Scoping Study.

Income Tax

The JNP is expected to be eligible for a 75% taxation concession which would be applied to the 25% corporate income tax rate. The Social Contribution Tax on Profits (CSLL) of 9% results in a total notional tax rate of 15.25%. This rate is applicable for the first 10 years of operations before reverting to the full tax rate of 34%.

15.2 FINANCIAL OUTCOMES

Table 22 summarises the key financial outcomes of the Value-Add Scoping Study based on the assumptions detailed in this section and throughput this document. Cashflows are discounted using a rate of 8% real with NPVs presented from FID.

15.3 SENSITIVITY ANALYSIS

Sensitivity analysis has been completed for NPV by assuming a 10% movement above and below the value of specified Value-Add study assumptions. The variables chosen for analysis and the outcome on project economics are shown in Figure 27 below.

Key Results	Units	Value-Add Case
Pre-Production Capex	US$M	287.8
Sustaining & Deferred Capex	US$M	212.8
Nominal Production Rate	Mtpa	2.7
Nickel Production	t	265.2
Gross Revenue	US$M	4,531.6
LOM Opex (net of by-product credits)	US$M	2,088.8
EBITDA	US$M	2,442.8
NPV8 – Pre-Tax	US$M	1,030.0
NPV8 – Post-Tax	US$M	830.8
NPV8 – Post-Tax	A$M	1,107.7
Internal Rate of Return – Pre-Tax	%	60%
Internal Rate of Return – Post-Tax	%	52%
Payback - Pre-Tax	years	1.6
Payback – Post-Tax	years	1.8

Table 22 *- Key Financial Results*

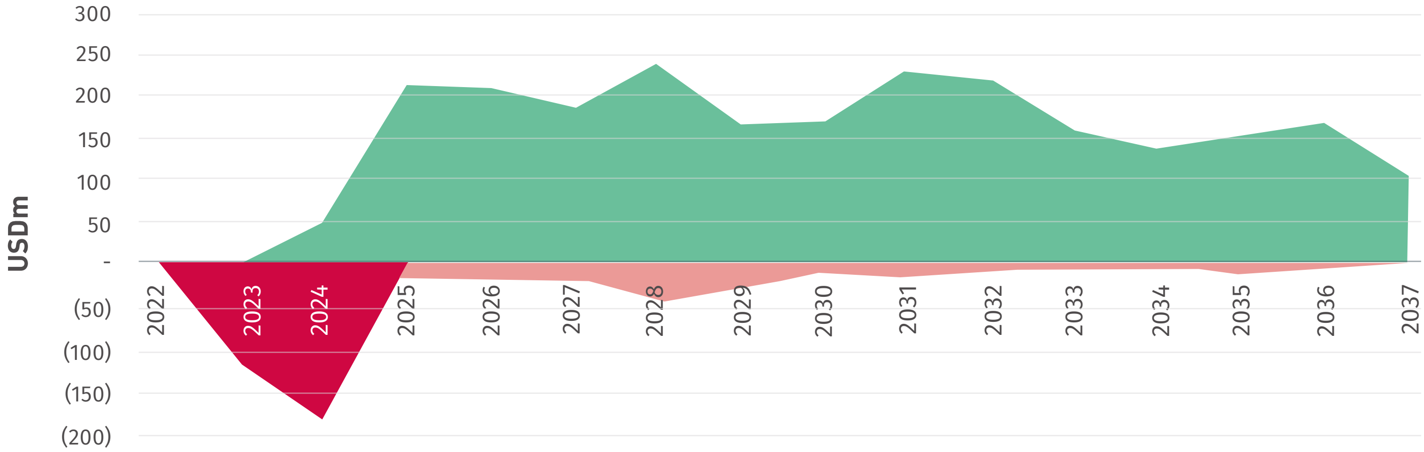
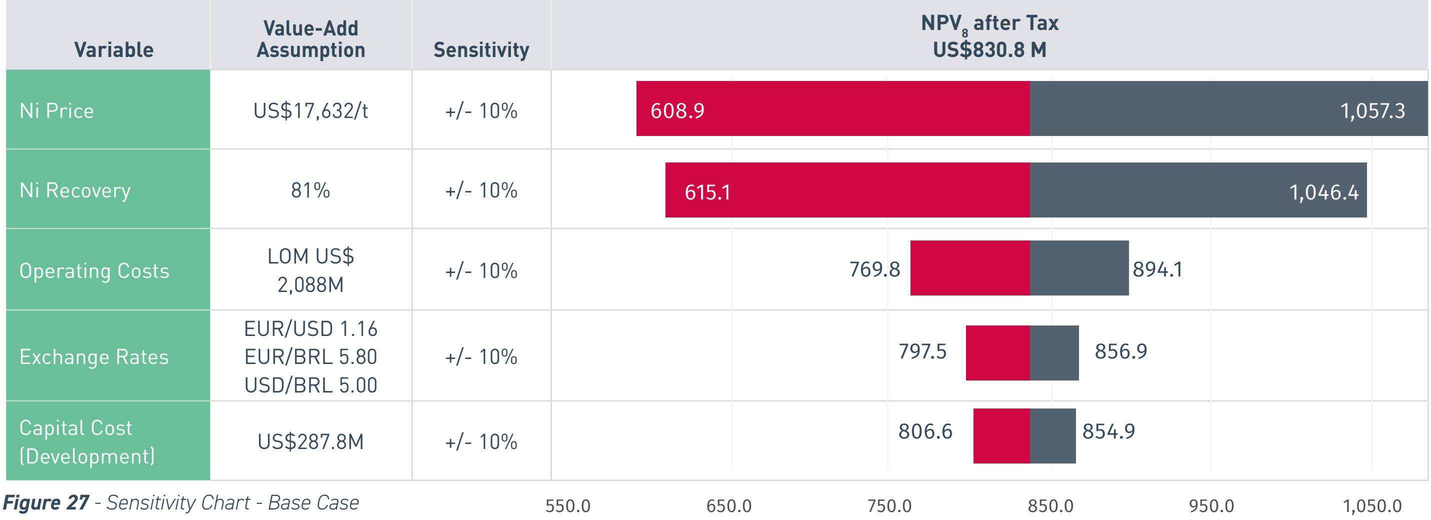


Figure 26 *- Project Cashflow Value-Add Case*



Variable	Value-Add Assumption	Sensitivity	NPV$_8$ after Tax US$830.8 M
Ni Price	US$17,632/t	+/- 10%	608.9 1,057.3
Ni Recovery	81%	+/- 10%	615.1 1,046.4
Operating Costs	LOM US$ 2,088M	+/- 10%	769.8 894.1
Exchange Rates	EUR/USD 1.16 EUR/BRL 5.80 USD/BRL 5.00	+/- 10%	797.5 856.9
Capital Cost (Development)	US$287.8M	+/- 10%	806.6 854.9

Figure 27 *- Sensitivity Chart - Base Case*

16. Conclusion & Recommendations

The Value-Add Scoping Study confirms that the development of a 2.7Mtpa mining operation and nickel sulphate processing plant at the JNP is technically and commercially feasible. The Centaurus Board has decided to immediately proceed to a Definitive Feasibility Study (DFS) on the project following the delivery of the exceptional economic outcomes seen in the Value-Add Scoping Study.

The DFS will focus on the production of a nickel sulphate product, though this by its very nature will require a study of the production of a nickel concentrate as the feed for the hydrometallurgical (nickel sulphate) circuit. As the Base Case Scoping Study is simply the concentrator component of the Value-Add Scoping Study the study of both Options in the DFS stage will allow the Company to complete the required trade-off analysis to a level that will allow an informed decision on how the project should move forward into production.

There are a number of work fronts that can bring opportunities and growth to the JNP, the primary being resource growth and process development.

The March 2021 JORC Indicated and Inferred MRE of 58.9Mt at 0.96% Ni for 562,600 tonnes of contained nickel metal underpins the Production Target of 45.0Mt at 0.80% Ni for a total of 361,700 tonnes of contained nickel metal, representing a conversion of approximately 65% of resources to Production Target. The Production Target in turn supports a Mill Feed of 33.7Mt at 1.01% Ni for 341,300 tonnes of contained nickel.

Pit optimisation work demonstrated that the cut-off grade can be lowered under the same technical parameters and cost scenarios that would result in larger conceptual open pits, longer mine life and additional metal tonnes. Further cut-off grade analysis will be carried out in the DFS. The JNP hosts multiple prospects and targets that have yet to be drill-tested, characterised by magnetic and/or electromagnetic (EM) anomalies coincident with significant soil geochemical support.

The Company will continue with an aggressive drilling plan focusing on resource development (infill) drilling as well as resource extension drilling at the six Jaguar deposits and two Onça deposits. There is significant potential to expand both the shallow and deeper high-grade Resources within these Deposits. This will be complemented with greenfields RC drilling to identify new discoveries.

Process development testwork focusing on process flow sheet optimisation will be ongoing, designed to optimise recovered nickel and achieve a high-quality nickel sulphate product with a valuable MSP product. In respect to the MSP, assessment of an additional process step of producing a separate copper/cobalt MSP and zinc MSP will be undertaken.

Additional ore sorting testwork will be undertaken which may increase the volume of economic nickel as well as further reducing the amount of potentially acid forming (PAF) waste reporting to the mine waste stockpiles thereby reducing environmental risks. These studies will be part of the DFS which will assist in determining the Project's optimal throughput size and economics.

The DFS will study the production of both nickel sulphate and nickel concentrate and is expected to be completed and delivered to the market in Q4 2022 with project financing target and to be in place by the end of Q2 2023.

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