



Developing a globally significant nickel project for a clean energy future

# **DECEMBER 2022 QUARTERLY ACTIVITIES REPORT**

Jaguar Mineral Resource increased to 108.0Mt @ 0.87% Ni for 938,500 tonnes of contained nickel metal; Definitive Feasibility Study (DFS) continues and remains on track for delivery by mid-2023

#### 24 January 2023

## JAGUAR NICKEL SULPHIDE PROJECT

Updated JORC 2012 Mineral Resource Estimate (MRE) confirms Jaguar as one of the world's premier nearsurface nickel sulphide development projects, with the Jaguar Global MRE growing to now contain an estimated:

GLOBAL: 108.0Mt @ 0.87% Ni for 938,500 tonnes of contained nickel.

Measured and Indicated component of the Global MRE increased by over 100% to:

• MEASURED & INDICATED: 85.8Mt @ 0.85% Ni for 730,300 tonnes of contained nickel.

High-grade component of the MRE increased to 28.6Mt @ 1.51% Ni for 431,800 tonnes of contained nickel, with 30% of this resource located within 100m of surface.

The mineralisation remains open both at depth and locally along plunge and strike, with significant potential to continue to grow the MRE.

Key work programs for the Jaguar Definitive Feasibility Study (DFS) were well advanced during the Quarter, including:

- Pricing proposals were received from mining contractors to support the development of the DFS opex, open pit optimisations and mine planning work. Commercial and technical evaluation of the proposals is underway.
- The process design for the concentrator circuit of the processing facility was finalised and major equipment pricing was received from suppliers. Commercial & technical evaluation is well advanced.
- Process design and the layout of the refinery circuit and non-process plant infrastructure (NPI) commenced.
- An additional ~2.5 tonnes of diamond core was drilled and transported from the Jaguar project site to Perth to generate an additional 300kg of concentrate required for the pilot testwork program.
- The pilot plant setup at ALS Laboratories in Perth was completed just prior to the end of the quarter, ready for the 2-phase pilot testwork program to commence in January 2023.
- Initial design and licencing work commenced to connect to the 230kV national power grid for the Project's integrated concentrator and refining circuit power requirements.
- Geotechnical drilling for the final design of the roads and bridges from Tucumá and Ourilândia do Norte to site was completed.

## CORPORATE

Cash at 31 December 2022 of \$34 million.

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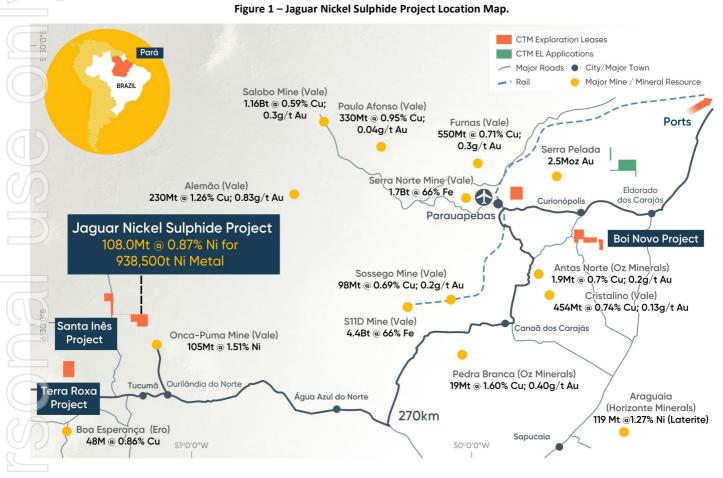
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# **JAGUAR NICKEL PROJECT**

The Jaguar Nickel Sulphide Project, located in the world-class Carajás Mineral Province of northern Brazil (Figure 1), was acquired from global mining giant, Vale S.A. ("Vale") in April 2020.



## UPDATED MINERAL RESOURCE ESTIMATE

Centaurus delivered an updated Mineral Resource Estimate (MRE) for the Jaguar Project during the December Quarter, cementing its position as a Tier-1 global nickel sulphide development project with class-leading greenhouse gas (GHG) emission credentials.

The updated JORC 2012 Mineral Resource Estimate (MRE), comprising **108.0Mt** @ **0.87%** Ni for **938,500** tonnes of contained nickel (Table 1), confirms Jaguar as one of the largest nickel sulphide resources held by an ASX-listed company and the largest outside of the major mining companies<sup>1</sup>.

Importantly, the success of the in-fill resource development program completed over the last 12 months has resulted in a **100% increase in the Measured & Indicated component of the Resource to 85.8Mt** @ **0.85% Ni for 730,300 tonnes of contained nickel, representing more than 75% of the Global MRE**. The Measured and Indicated component of the MRE is set to underpin the Company's maiden Ore Reserve Estimate and Definitive Feasibility Study (DFS), due for completion in mid-2023.

The global MRE at Jaguar has **increased by 28%** since the previous Resource Estimate that was announced in December 2021 and **+ 80% since** the Company's maiden Resource was announced in June 2020 (Figure 2).

<sup>&</sup>lt;sup>1</sup> See Figure 3 for Operating and Undeveloped ASX-listed projects by size of contained nickel metal and Table 5 for Underlying Data References.

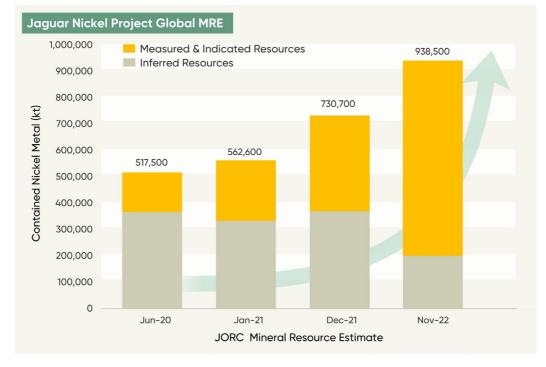


#### Table 1 – The Jaguar JORC Mineral Resource Estimate (MRE) – November 2022

Grade						Contained Metal				
Classification*	Mt	Ni %	Cu %	Co ppm	Zn %	Ni	Cu	Со	Zn	
Measured	14.0	1.06	0.07	391	0.48	149,400	9,800	5,500	67,300	
Indicated	71.7	0.81	0.06	238	0.31	580,900	42,300	17,000	223,300	
Measured & Indicated	85.8	0.85	0.06	263	0.34	730,300	52,000	22,500	290,700	
Inferred	22.2	0.94	0.09	291	0.24	208,200	19,700	6,500	53,700	
Total	108.0	0.87	0.07	269	0.32	938,500	71,700	29,000	344,400	

\* Within pit limits cut-off grade 0.3% Ni; below pit limits cut-off grade 0.7% Ni; Totals are rounded to reflect acceptable precision, subtotals may not reflect global totals. All oxide material is considered as waste and therefore not reported as Resources.





Continued successful step-out and extensional drilling has contributed to the delivery of an exceptional 421,000 tonnes of additional contained nickel metal since the Company's maiden Resource in June 2020, reflecting an impressive track record of **defining new resources at the rate of ~165,000 tonnes of contained nickel per annum** through a sustained and focused drilling program at Jaguar.

At 938,500 tonnes of contained nickel, Jaguar is the sixth largest nickel sulphide resource held by an ASX-listed Company and the largest outside of the majors (Figure 3). Of all deposits that are open pit or combined open pit/underground operations, only BHPs' Leinster Operations has a higher head-grade than Jaguar.

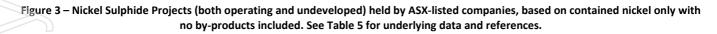
Underpinned by a 0.87% Ni Resource head-grade, Jaguar is expected to be one of the highest grade open-pit nickel sulphide operations globally.

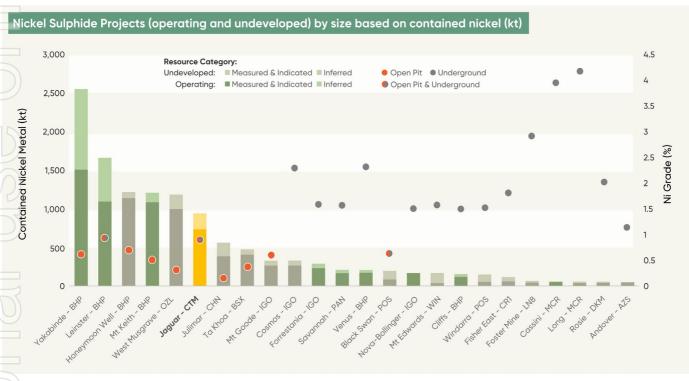
The successful in-fill drilling at the Jaguar and Onça Deposits means that more than 75% of the Global MRE is now classified in the higher-confidence Measured and Indicated categories. These Measured and Indicated Resources will be available for conversion to Ore Reserves as part of the DFS due for completion this year.

In-fill drilling targeting the first three years of operation at Jaguar Central and Onça Preta has returned a Measured Resource estimate of **14.0Mt** @ **1.06% Ni for 149,400 tonnes** of contained nickel metal. The high-grade and higher confidence resources will be an important part of the early mine plan during the project payback period.



The Jaguar mineralisation remains open down-dip at all deposits and locally along strike, with outstanding potential to continue strong resource growth driven by step-out and extensional drilling targeting DHEM conductor plates and greenfields drilling of the extensive regional exploration pipeline.





Importantly, within the Jaguar Global MRE there is a significant high-grade component of **28.6Mt @ 1.51% Ni for 431,800 tonnes** of contained nickel metal, which has been estimated using a 1.0% nickel cut-off grade across the total Mineral Resource (see Table 2). The grade-tonnage curve for the project is shown in Figure 4.

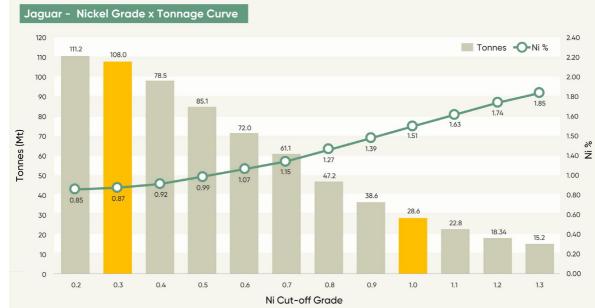
Within the High-Grade MRE, around 30% of the contained nickel sits less than 100m from surface. This demonstrates that near-surface high-grade resources are available to assist in optimising the project in the early years of operations to support capital payback.

	Ni% Cut	Ni% Cut-off Grade			Tonnes Grade					Metal Tonnes				
~	In-pit	Below pit	Mt	Ni %	Cu %	Co ppm	Zn %	Ni	Cu	Со	Zn			
49	0.2	0.7	111.2	0.85	0.06	263	0.31	946,800	72,100	29,300	347,900			
	0.3	0.7	108.0	0.87	0.07	269	0.32	938,500	71,700	29,000	344,400			
	0.4	0.7	98.5	0.92	0.07	282	0.34	904,600	69,400	27,800	330,400			
	0.5	0.7	85.1	0.99	0.08	304	0.36	843,800	64,800	25,800	302,400			
	0.6	0.7	72.0	1.07	0.08	327	0.37	772,300	62,300	24,800	276,400			
	0.7	0.7	61.1	1.15	0.09	348	0.38	701,400	54,200	21,300	231,600			
	0.8	0.8	47.2	1.27	0.10	377	0.40	597,500	45,900	17,800	191,100			
	0.9	0.9	36.6	1.39	0.11	406	0.43	507,900	38,800	14,900	156,400			
	1.0	1.0	28.6	1.51	0.11	435	0.45	431,800	32,500	12,400	129,100			
	1.1	1.1	22.8	1.63	0.12	460	0.46	371,400	27,100	10,500	105,700			
	1.2	1.2	18.4	1.74	0.13	486	0.48	321,100	23,100	9,000	88,800			
	1.3	1.3	15.2	1.85	0.13	507	0.49	280,900	19,800	7,700	74,200			

\* Totals are rounded to reflect acceptable precision, subtotals may not reflect global totals

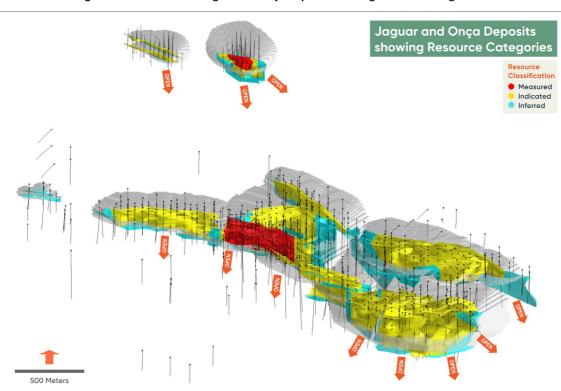


Figure 4 – Jaguar Deposit – Nickel grade-tonnage curve. (Nickel cut-off grade is variable for in-pit resources but not less than 0.7% Ni for below-pit Resources).



The resource category development has also been very successful in correlating well with the interpretation of the previous Inferred Resource. In addition to providing increasing control on the mineralised zones and grade distribution, the closer spaced drilling has also helped develop an important structural model for the Project, which will support resource extension drilling and potential new discoveries.

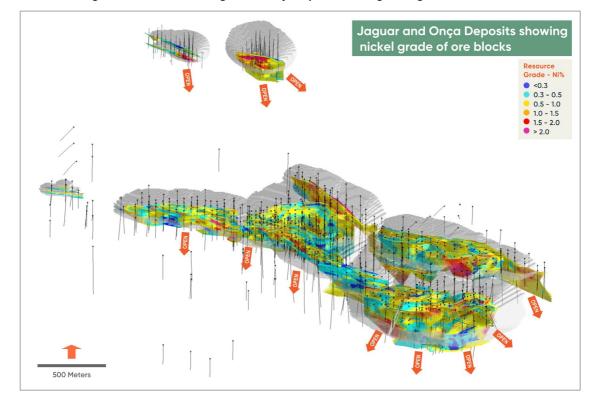
The Jaguar MRE covers the six Jaguar deposits, two Onça deposits and the Tigre Deposit, as outlined in Table 3 and Figures 5 & 6. The Project also hosts an outstanding pipeline of greenfields targets, and the Company expects to make more discoveries to continue to contribute to the organic growth of the Jaguar Resource.



#### Figure 5 – 3D view of the Jaguar and Onça Deposits showing Resource Categories.



Figure 6 – 3D view of the Jaguar and Onça Deposits showing nickel grade of ore blocks.



#### Table 3 – The Jaguar JORC Mineral Resource Estimate by Deposit – November 2022

			Grade					Contained	Metal	
Deposit	Classification	Mt	Ni %	Cu %	Co ppm	Zn %	Ni	Cu	Со	Zn
	Indicated	27.6	0.87	0.05	198	0.13	240,300	13,000	5,500	37,200
Jaguar South	Inferred	7.0	1.10	0.07	262	0.09	76,300	4,600	1,800	6,400
	Total	34.6	0.92	0.05	211	0.13	316,500	17,600	7,300	43,600
	Measured	8.9	0.88	0.05	252	0.56	78,600	4,900	2,300	50,400
	Indicated	2.9	0.61	0.04	207	0.24	17,300	1,000	600	6,700
Jaguar Central	Inferred	0.7	0.68	0.05	210	0.19	4,500	300	100	1,200
	Total	12.5	0.81	0.05	239	0.47	100,400	6,200	3,000	58,400
	Indicated	2.7	1.14	0.17	383	1.19	30,900	4,500	1,000	32,200
Jaguar North	Inferred	0.5	1.19	0.23	387	1.16	5,700	1,100	200	5,600
	Total	3.2	1.15	0.18	383	1.19	36,600	5,600	1,200	37,800
	Indicated	10.2	0.61	0.04	189	0.62	62,000	3,600	1,900	63,500
Jaguar Central North	Inferred	4.0	0.66	0.04	197	0.44	26,100	1,700	800	17,600
	Total	14.2	0.62	0.04	191	0.57	88,100	5,300	2,700	81,100
	Indicated	13.3	0.71	0.09	269	0.50	95,100	11,700	3,600	66,100
Jaguar Northeast	Inferred	3.5	0.89	0.21	317	0.55	31,200	7,200	1,100	19,300
	Total	16.8	0.75	0.11	279	0.51	126,200	18,900	4,700	85,400
	Indicated	7.8	0.72	0.03	168	0.13	56,200	2,300	1,300	9,800
Jaguar West	Inferred	0.9	0.75	0.04	157	0.05	6,900	300	100	400
	Total	8.7	0.72	0.03	167	0.12	63,100	2,600	1,500	10,200
	Measured	8.9	0.88	0.05	252	0.56	78,600	4,900	2,300	50,400
lanuar Davida	Indicated	64.5	0.78	0.06	216	0.33	501,800	36,100	13,900	215,500
Jaguar Deposits	Inferred	16.5	0.91	0.09	254	0.31	150,500	15,200	4,200	50,500
	Total	89.9	0.81	0.06	226	0.35	730,900	56,200	20,400	316,400
	Measured	5.1	1.39	0.10	636	0.33	70,800	4,900	3,200	17,000
Onca Preta	Indicated	4.5	1.19	0.09	517	0.15	53,800	4,100	2,300	6,900
Unça Preta	Inferred	4.5	1.08	0.08	436	0.07	49,200	3,700	2,000	3,000
	Total	14.2	1.23	0.09	534	0.19	173,900	12,700	7,600	26,900
	Indicated	1.9	0.98	0.08	281	0.03	18,200	1,400	500	500
Onça Rosa	Inferred	0.04	0.92	0.05	304	0.02	400	20	10	10
	Total	1.9	0.98	0.07	282	0.03	18,600	1,400	500	500
	Indicated	0.8	0.86	0.09	303	0.04	7,100	700	200	300
Tigre	Inferred	1.2	0.70	0.06	248	0.02	8,100	700	300	300
	Total	2.0	0.77	0.07	271	0.03	15,100	1,400	500	600
	Measured	14.0	1.06	0.07	391	0.48	149,400	9,800	5,500	67,300
Jaguar MRE	Indicated	71.7	0.81	0.06	238	0.31	580,900	42,300	17,000	223,300
Jaguar Wike	Inferred	22.2	0.94	0.09	291	0.24	208,200	19,700	6,500	53,700
	Total	108.0	0.87	0.07	269	0.32	938,500	71,700	29,000	344,400

\* Within pit limits cut-off grade 0.3% Ni; below pit limits cut-off grade 0.7% Ni; Totals are rounded to reflect acceptable precision, subtotals may not reflect global totals. All oxide material is considered as waste and therefore not reported as Resources.



The Jaguar South, Jaguar Central and Onça Preta Deposits contain the majority of the MRE and are expected to underpin the strength of the Jaguar DFS. Measured in-fill drilling was also completed at Jaguar South and the results correlated very well with the model; however, delays in receiving assay results have meant that Measured Resources could not be reported for Jaguar South at the time of release of the MRE. It is expected that Measured Resources for Jaguar South will be included in the next MRE update.

## **DRILLING & EXPLORATION PROGRAMS**

In conjunction with the release of the MRE update during the quarter, the Company also reported new assay results from previously unreleased drill holes. The assay results were included in the MRE upgrade. These holes include both resource development in-fill drilling as well as resource step-out drilling that have contributed to the resource growth.

Highlights of new assay results from drilling at the Jaguar South (JS), Jaguar North (JN), Jaguar Northeast (JNE), Jaguar Central North (JCN) and Onca Preta (OP) Deposits include the following down-hole intervals:

- > 4.0m at 9.22% Ni from 12.0m in JAG-DD-22-384 (JN)
- > 23.5m at 1.96% Ni from 129.0m, including 15.6m at 2.31% Ni from 136.4m in JAG-DD-22-457 (JS)
- > 42.5m at 1.01% Ni from 496.0m, including 3.9m at 2.42% Ni from 534.6m in JAG-DD-22-455 (JS)
- > 11.0m at 2.48% Ni from 42.0m, including 6.0m at 3.76% Ni from 47.0m in JAG-DD-22-444 (JS)
- > 14.4m at 1.68% Ni from 264.7m in JAG-DD-22-426 (JS)
- > 24.5m at 0.90% Ni from 10.5m in JAG-DD-22-415 (JNE)
- > 26.2m at 0.83% Ni from 265.3m in JAG-DD-22-418 (JS)
- > 4.5m at 4.31% Ni from 110.5m in JAG-DD-22-408 (JNE)
- > 13.0m at 1.53% Ni from 86.0m including 7.0m at 2.51% Ni from 87.0m in JAG-RC-22-140 (OP)
- > 14.0m at 1.33% Ni from 103.0m including 5.0m at 2.11% Ni from 111.0m in JAG-RC-22-140 (OP)
- > 33.6m at 0.61% Ni from 225.0m in JAG-DD-22-466 (JCN)
- > 27.6m at 0.68% Ni from 142.6m in JAG-DD-22-412 (JCN)
- > 17.5m at 1.14% Ni from 24.8m, including 5.9m at 2.32% Ni from 25.7m in JAG-DD-22-418 (JS)
- > 17.0m at 1.01% Ni from 50.0m in JAG-DD-22-422 (JNE)
- > 19.1m at 0.77% Ni from 44.8m in JAG-DD-22-391 (JNE)
- > 12.0m at 1.52% Ni from 176.0m in JAG-RC-22-145 (OP)
- > 10.4m at 1.62% Ni from 72.1m in JAG-DD-22-417 (JS)
- > 10.2m at 1.41% Ni from 234.8m in JAG-DD-22-397 (JS)

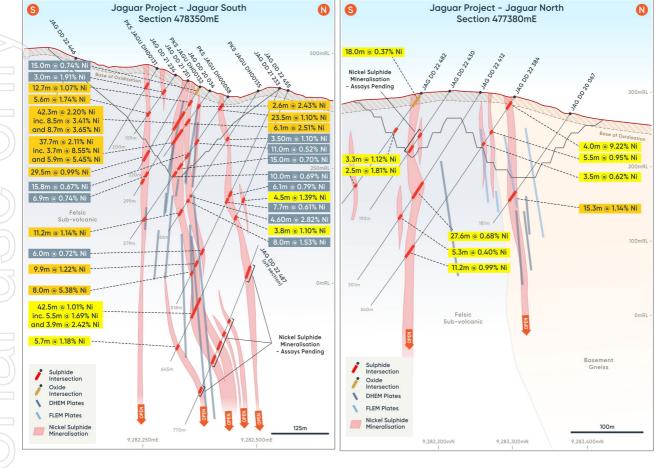
Step-out drill hole JAG-DD-22-455, the third deepest hole completed at the Jaguar South deposit, returned **42.5m** at **1.01% Ni** from 496.0m including **3.9m at 2.42% Ni** (Figure 7). This was one of the last holes to be included in the MRE update and demonstrated the down-dip continuity of the Jaguar South mineralisation and contributed to the resource growth of the deposit.

Drill-hole drill hole JAG-DD-22-487<sup>2</sup>, currently the deepest hole drilled at Jaguar South with an end-of-hole depth of 770m, intersected new broad zones of stringer to semi-massive nickel mineralisation around 100m down-dip from JAG-DD-22-455. Although this hole was not included in the MRE update, it demonstrates the continuity of the deep mineralisation and is expected that the hole will contribute to future MRE growth. See Figure 7 for a cross-section with visual estimates shown in Table 4.

<sup>&</sup>lt;sup>2</sup> Visual estimates are uncertain in nature and hence in no way are intended to be a substitute for analytical results. All intervals have been sampled and the analytical results will be reported to the market when the Company receives them. Drill hole JAG-DD-22-487 collared on section 478390mE, due to drill hole azimuth deviation the hole has deviated off-section and is included in section 478350mE.



Figure 7 – The Jaguar South Deposit Cross-Sections 478350mE and Jaguar North Deposit 477380mE showing existing drilling, DHEM conductor plates in dark blue and FLEM conductor plates in light blue.



#### Table 4 – Visual estimates of intersected mineralisation in drill hole JAG-DD-22-487.

	Deposit	Drill hole	From (m)	To (m)	Interval	Descriptio	n of Sulphide Mineralisation*			
P	Jagaur South	JAG-DD-22-487	397.3	402.4	5.1	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	403.1	422.5	19.4	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	422.5	426.3	3.8	Stringer and semi-massive	5-10% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	426.3	436.8	10.5	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	439.6	442.1	2.6	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	449.1	452.2	3.1	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	546.1	561.0	14.9	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	577.4	584.3	6.9	Stringer and semi-massive	5-10% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	602.4	610.5	8.1	Disseminated to Stringer	2-5% sulphides comprising py, mlr, pn, sp,po			
	Jagaur South	JAG-DD-22-487	610.5	621.7	11.2	Stringer and semi-massive	5-10% sulphides comprising py, mlr, pn, sp,po			
Total down hole width of mineralisation:					85.6	m (including 21.9m of stringer to semi-massive )				

\*pyrite (py), milerite (mlr), pentalndite (pn), chalcopyrite (cp), pyrhotite (po), sphalerite (sp)

Resource in-fill drilling at Jaguar South during the quarter continued to produce outstanding in-pit intersections including **11.0m at 2.48% Ni** from 42.0m, **including 6.0m at 3.76% Ni** from 47.0m in JAG-DD-22-444, which is inside the Scoping Study three-year mine plan and indicates high-grade optionality during the anticipated project payback period.

Drill hole JAG-DD-22-457, another in-fill hole, returned **23.5m at 1.96% Ni** from 129.0m, including **15.6m at 2.31% Ni** from 136.4m, which is located immediately below the current base of the Scoping Study pit. This was the last drill hole to be included in the updated MRE and made a positive contribution to the Resource with the potential to drive the pit deeper at Jaguar South as part of the DFS study set for delivery mid-2023.

In-fill drilling at Jaguar North continued to be successful in confirming the current geological model and improving the understanding of the Inferred Resource interpretations, with an outstanding shallow in-fill intersection of **4.0m at 9.22% Ni** from 12.0m in Hole JAG-DD-22-384 (Figure 8). High-grade massive nickel sulphide intervals near-surface like this are expected to build flexibility into the mine plan in the early years and help complete payback as quickly as possible.



Figure 8 – JAG-DD-21-384 (Jaguar North), 12.0m to 16.0m: Semi-massive to massive sulphides (dark metallic bronze) mineralisation with magnetite alteration (black) hosted in basement gneiss. This interval returned 4.0m at 9.22% Ni, 0.19% Cu and 0.24% Co from 12.0m.



Mineralisation at all these deposits remain open down-dip and locally along strike into previously untested ground outside of the current resource block model. Additional DHEM programs are planned. Currently, the Company has the capacity to survey down to 800m and is investigating options for a +1,000m winch that will allow for deeper surveys. Once DHEM surveys are completed, additional step-out and extensional drilling will be planned.

#### **Mineral Resource Growth**

The November 2022 JORC MRE update for the Jaguar Nickel Project is from the six Jaguar deposits, two Onça deposits and the Tigre deposit. Importantly, significant potential remains to expand the Resources from within the current deposits through down-dip drilling primarily, but also though extensional drilling along strike at some of the deposits.

The nature of the hydrothermal mineralisation at the Jaguar Project points to a deep plumbing system which remains to be tested beyond current drill depths. The average drill hole depth to date is only 225m and **the Company has now completed only 24 diamond holes of a total of 536 diamond holes (less than 5%) to end-of-hole depths of more than 500m, with all deep holes intersecting stringer to semi-massive nickel mineralisation.** 

DHEM surveys continue to indicate that the high-grade mineralisation is **continuous and open at depth across all deposits**. There is also significant potential to extend some of the key deposits along strike in some directions. Drilling for 2023 will focus on both project development (including in-fill, geotechnical and metallurgical drilling) as well as resource growth on multiple target areas.

## DEFINITIVE FEASIBILITY STUDY (DFS), PROJECT DEVELOPMENT AND INFRASTRUCTURE INITIATIVES

In addition to the drilling and associated support activities detailed above, significant activity was progressed in respect to the DFS, project development initiatives and future infrastructure access. These activities are also reflected in Exploration & Evaluation expenditure for the quarter and are detailed further below.

## Mining

Pricing proposals were received from five earthmoving contractors and two explosives suppliers at the end of the quarter to support the open pit planning work for the DFS. These proposals are under commercial and technical evaluation to select pricing for use in open pit planning for the DFS, utilising the most recent Mineral Resource Estimate orebody model.



### **Pilot Plant Testwork**

Process flowsheet development to prepare for the pilot testwork program was the principal focus of metallurgical testwork during the quarter. The work completed during the quarter was designed to ensure that the pilot equipment was sized appropriately to provide the required mass flow rates during the pilot program.

As reported in the September Quarterly announcement, modifications made in the September quarter to the flowsheet around the autoclave resulted in the need for additional concentrate feed for the pilot program. As a result, an additional ~2.5 tonnes of diamond core was drilled and transported from the Jaguar Project site to Perth to generate an additional 300kg of concentrate required to ensure that sufficient concentrate mass was available for the completion of the pilot program scope of work.

Flotation and additional POX batch tests were completed to characterise the additional concentrate prior to blending with existing materials for the pilot program.

Considerable work was completed to finalise the process flowsheet for the solvent extraction sections of the plant in order to manage not only the metal extraction but also the chemistry of the major effluent streams. These amendments have resulted in improvements in zinc recovery to a high-grade product and the management of waste streams from the primary and secondary neutralization circuits.

The pilot plant testwork program will now commence in January 2023 and will be conducted in two phases. The first phase will test the pressure oxidation, primary neutralization and copper recovery to solution and will be conducted over a two-week period. This will be followed by the second phase – also of two weeks' duration – to test the solvent extraction and production of final products. Metal coupons for insertion into the autoclave to test materials of construction were received and prepared.

The pilot plant setup was completed just prior to the end of the quarter ready for the Centaurus pilot testwork program to commence in January 2023, after the return of the ALS team from holidays.

The pilot test will culminate with the delivery of nickel sulphate and other final products for product marketing, as well as assisting in providing the design criteria for Ausenco to use in the development of the overall process flowsheet for the DFS.

#### **Process Plant Engineering**

In the September quarter, the concentrator section of the processing facility, consisting of crushing, grinding and flotation and thickening circuits, was finalised for the study and capital equipment packages were progressively issued for pricing. Pricing for the major equipment was received from suppliers through the December quarter, with the commercial and technical evaluation process well advanced.

Layout of the refinery and non-process plant infrastructure commenced but was not finalised in the December quarter.

#### Infrastructure

Early works to facilitate the construction of the project will include the upgrade of up to 60km of gravel roads, drainage culverts and two bridges between the townships of Ourilândia do Norte and Tucumã and site. The addition of approximately 20km of road to improve access to Ourilândia do Norte will allow all freight to and from site to bypass both the townships and minimise disturbance to the communities. Draft agreements were sent to the three municipalities involved (Tucumã, São Félix do Xingu and Ourilândia do Norte), whereby the Company will be responsible for the road upgrade work and the local governments will secure environmental approvals and negotiate access with landowners.

## AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT



Geotechnical drilling for the final design of the roads and bridges from Tucumá and Ourilândia do Norte to site was completed and laboratory analysis of samples for foundation design and materials of construction were nearing completion at the end of the quarter. This work will be completed in January 2023, allowing final design to be completed for the issuing of tender packages for construction to commence on selected works in the 2023 dry season.

Initial design and licencing work commenced during the quarter to connect to the 230kV national grid rather than the 138kV state grid, including the assessment of the preferred route and interconnection options. The Project's power requirements for an integrated concentrator and refining circuit have resulted in the need to access the higher voltage line for the delivery of more stable and secure power than what would have been available with the 138kV line.

Initial meetings with the Ministry of Mines and Energy have been scheduled for January 2023 to formally discuss the Project and its power requirements and to commence electrical engineering and permitting processes.

## **Off-take Discussions**

Off-take discussions are continuing in relation to the products to be produced from Jaguar. Vale has the right to product at arm's length market-based pricing under the original acquisition agreement for the Jaguar Project. Centaurus retains discretion over what nickel products will be produced at Jaguar.

The introduction of the Inflation Reduction Act by the US Government has highlighted the strategic importance of energy metals like nickel and, in particular, those that can be sourced in geopolitically stable jurisdictions with a low-emission footprint.

Brazil fits these criteria well as it is South America's largest pro-mining jurisdiction, the 8<sup>th</sup> largest global economy and currently more than 80% of the country's grid power is delivered from renewable sources. It is anticipated that the Jaguar Project will be able to secure 100% renewably sourced power by the time it is in production.

With its very large metal endowment, the Jaguar Project is extremely well placed to capitalise on the fast-growing EV and battery metals market.

#### **New Site Core Shed**

Following completion of the construction of a new core shed on site at Jaguar (with a capacity of 300,000 metres of core) during the previous quarter, the Company commenced the process of setting up the shelving system at the new shed and moving the core from the existing shed in Tucumá to site. At the end of the quarter, this process was nearing completion as shown in Figures 9 and 10.



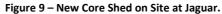




Figure 10 – New Core Shed on Site at Jaguar.



## **ENVIRONMENTAL, SOCIAL & GOVERNANCE**

The Company's formal environmental, social and governance (ESG) policy framework – adopted in late 2021 – is based on the recommendations and principles of two key ESG authorities:

- Towards Sustainable Mining (TSM) Principles; and
- Principles of Responsible Investment (PRI).

TSM is the Mining Association of Canada's (MAC) commitment to responsible mining. It is a set of tools and indicators to drive performance and ensure that key mining risks at any operation are managed responsibly. The PRI defines responsible investment as a strategy and practice to incorporate environmental, social and governance factors in investment decisions and active ownership. The PRI is a global organisation that encourages and supports the uptake of responsible investment practices in the investment industry.

Centaurus' ESG program combines the TSM and PRI principles with actions to be implemented during exploration and operations. The following initiatives have already been undertaken by the Company to date at the Jaguar Project region:

- All Centaurus employees working on the Jaguar Project live in the local town with their families, solidifying the relationship between the Company and the local community.
- More than 90% of the current project workforce, including employees and outsourced labour, are from the
  south-eastern region of the State of Pará.
  - More than 90% of the Company's investment expenditure relating to exploration and development work at the Jaguar Project to date has been awarded to the local community through drilling contracts, engagement of consultants and services and purchase of equipment and supplies.
- During the collection of social data, more than 95% of the local community interviewed were in favour of the Project.
- Construction and operation of a plant nursery on site with a capacity of 10,000 seedlings.

#### **GHG** Emissions

Since January 2022, the Company has been monitoring Scope 2 greenhouse gas (GHG) emissions and sinks associated with the Jaguar Project. The main carbon sink is the standing forest. The main source of carbon from the Project at present is the combustion of diesel to run drill rigs.

The Jaguar Project currently represents a carbon sink, removing about 11,000 tonnes of GHG annually from the atmosphere, which is equivalent to removing circa 2,570 internal combustion engine vehicles (4.6 tonne GHG per vehicle per year) from the roads each year.



Based on the work completed with Skarn Associates previously, the Jaguar Project is expected to have GHG emissions that are less than 97% of global nickel production once in operation.

### Water Wells

Bore hole pumping tests on five bores drilled to assess the quantity and quality of groundwater inflows to the open pit operations have indicated that low flow rates are to be expected, which is very positive for the overall project development. Hydrogeological modelling of the pump test results commenced in December to quantify the flows and aquifer characteristics. This modelling will be completed in January. Groundwater quality is good enough to be discharged to surface water bodies without prior treatment and is not required for process water.

## **Plant Nursery**

During the quarter, the Company's plant nursery continued to be expanded with the propagation of new seedlings to build out the stocks of plants available (see Figure 11 below) for the revegetation of previously cleared farmland. This revegetation program commenced during the quarter.

The planned revegetation will allow new forest corridors to be established around the site to assist with the movement, protection and biodiversity of fauna.



#### Figure 11 – Plant Nursery on Site at Jaguar.

#### **Community Consultation**

In December, presentations about the Jaguar Project were made to the mayors and councillors of the three municipalities in the region (Figure 12). These presentations were designed to prepare the local authorities for the official public hearings planned to be held as part of the environmental approvals process. The same presentations will be made to the broader community in all three municipalities in January 2023.

#### **Construction Training Programs**

During the quarter, the Company further advanced the enrolment process for construction training with over 1,900 applications to date having been received from all over the region. The Company intends to train up to 1,500 people in various trades that will allow them to be able to seek employment once construction of the Jaguar Project commences. The training programs are intended to be conducted in conjunction with local industry training college (SENAI), with the training programs to commence in H2 2023.



Figure 12 – Brazil Country Manager, Bruno Scarpelli, presenting Jaguar Project to the Sao Felix do Xingu and Tucumá Municipalities.



# JAMBREIRO IRON ORE PROJECT

The Company's 100%-owned Jambreiro Project, located in south-east Brazil (Figure 13) close to the Company's head office in the city of Belo Horizonte.



#### Figure 13: Jambreiro Iron Ore Project Location.

The Company has commenced the process to refresh all environmental licences required to develop the project. As part of this process, Supram (the Minas Gerais environmental agency) has advised that new wet and dry season environmental data will need to be collected to support a new Installation Licence application given the age of the data used in the originally approved LI. The new data is expected to be collected over the next 3-4 months, with the new application targeted for lodgement in July 2023. Approval is anticipated to be 12 months from lodgement.

The Company has also lodged the documentation to re-apply for all water permits necessary to operate the project. All water permits and environmental licences to build the Project were previously granted and should be granted again after the applications have been duly considered by the relevant agencies.

## CORPORATE

**Cash Position** At 31 December 2022, the Company held cash reserves of A\$34 million.



#### **Shareholder Information**

The Company's capital structure as of 31 December 2022 is as follows:

#### **Quoted Securities**

Capital Structure	Number
Fully paid ordinary shares (CTM)	427,106,273
Top 20 Shareholders	70.7%
Directors and Management Shareholding of Listed Securities	4.0%

#### Unquoted Options

Expiry Date	Exercise Price	Vested	Unvested
31/05/23	\$0.180	116,667	-
31/05/23	\$0.392	1,400,000	-
31/12/23	-	-	3,952,402
31/05/24	\$0.180	233,334	
31/05/24	\$0.405	-	1,400,000
31/12/24	-	-	1,134,372
31/12/25	-	-	1,225,220
		1,750,001	7,711,994

#### Listing Rule 5.3 Information

- 1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was A\$10.9 million. Details of the exploration activities to which this expenditure relates are set out above.
- 2. ASX Listing Rule 5.3.2: There were no mining production and development activities during the Quarter.
- 3. ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter totalled A\$282k. These payments relate to non-executive directors' fees, executive directors' salaries and entitlements and payments to MPH Lawyers, a director related entity, for the provision of legal services.

#### Additional Information Required by Listing Rule 5.3.3

Brazilian Tenements - Previously Held							
Tenement	Project Name	Location	Interest				
831.638/2004	Canavial	Minas Gerais	100%				
831.639/2004	Canavial	Minas Gerais	100%				
831.649/2004	Jambreiro (Mining Lease)	Minas Gerais	100%				
833.409/2007	Jambreiro (Mining Lease)	Minas Gerais	100%				
834.106/2010	Jambreiro (Mining Lease)	Minas Gerais	100%				
831.645/2006	Passabém	Minas Gerais	100%				
830.588/2008	Passabém	Minas Gerais	100%				
833.410/2007	Regional Guanhães	Minas Gerais	100%				
856.392/1996	Jaguar (Mining Lease Application)	Pará	100%				
850.130/2013	Pebas	Pará	100%				
850.475/2016	Itapitanga	Pará	100%				
851.571/2021	Terra Roxa (Jaguar Regional)	Pará	100%				
851.563/2021	Santa Inês (Jaguar Regional)	Pará	100%				
850.071/2014	Curionópolis Project	Pará	100%				
851.767/2021	Curionópolis Project	Pará	100%				
851.768/2021	Curionópolis Project	Pará	100%				
851.769/2021	Curionópolis Project	Pará	100%				
Australian Tenement		••					

#### Australian Tenements

Tenement	Project Name	Location	Interest	
EPM14233	Mt Isa	Queensland	10%(1)	

1. Subject to a Farm-Out and Joint Venture Exploration Agreement with Summit Resources (Aust) Pty Ltd. Summit has earned a 90% interest in the Project. Aeon Metals Limited has acquired 80% of Summit's Interest giving them a total interest of 72% of the tenement.



This Quarterly Activities Report is authorised for release by the Managing Director, Mr Darren Gordon.

DARREN GORDON MANAGING DIRECTOR

Table 5 – Data and References for Comparison of Nickel Sulphide Deposits held by ASX Listed Companies

					Mea	Measured & Indicated			Inferred	d		Total	al	
Project	Project	Company	Development Stage*	Mine Type	Mt	Ni%	Ni Metal	Mt	Ni%	Ni Metal	Mt	Ni%	Ni Meta	
Yakabinde - BHP	Yakabinde	BHP <sup>1</sup>	Operating	Open Pit	246	0.6	1,500,800	170	0.6	1,037,000	416	0.6	2,537,80	
einster - BHP	Leinster	BHP1	Operating	Open Pit & Underground	112	1.0	1,093,700	64	0.9	559,600	176	0.9	1,653,30	
Honeymoon Well - BHP	Honeymoon Well	BHP <sup>1</sup>	Undeveloped - DFS	Open Pit	166	0.7	1,135,400	9	0.8	75,000	176	0.7	1,210,40	
VIt Keith - BHP	Mt Keith	BHP <sup>1</sup>	Operating	Open Pit	204	0.5	1,080,000	24	0.5	124,800	228	0.5	1,204,8	
West Musgrave - OZL	West Musgrave	OZL <sup>2</sup>	Undeveloped - PFS	Open Pit	331	0.3	990,000	59	0.3	190,000	390	0.3	1,180,0	
laguar - CTM	Jaguar	CTM	Undeveloped - SS	Open Pit & Underground	86	0.9	730,300	22	0.9	208,200	108	0.9	938,50	
lulimar - CHN	Julimar	CHN <sup>3</sup>	Undeveloped - MRE	Open Pit	240	0.2	384,000	110	0.2	176,000	350	0.2	560,00	
Ta Khoa - BSX	Ta Khoa	BSX <sup>4</sup>	Undeveloped - PFS	Open Pit	102	0.4	408,000	21	0.3	63,000	123	0.4	471,00	
VIt Goode - IGO	Mt Goode	IGO⁵	Undeveloped - DFS	Open Pit	41	0.7	272,700	12	0.5	60,000	53	0.6	332,70	
Cosmos - IGO	Cosmos	IGO⁵	Undeveloped - DFS	Underground	12	2.3	262,300	3	2.6	66,500	14	2.3	328,90	
Forrestania - IGO	Forrestania	IGO⁵	Operating	Underground	14	1.6	230,700	4	1.5	55,100	18	1.6	285,80	
Savannah - PAN	Savannah	PAN <sup>6</sup>	Operating	Underground	10	1.6	164,700	3	1.5	44,900	13	1.6	209,60	
/enus - BHP	Venus	BHP <sup>1</sup>	Operating	Underground	7	2.3	172,700	1	2.3	33,800	9	2.3	206,50	
Black Swan - POS	Black Swan	POS <sup>7</sup>	Undeveloped - PFS	Open Pit & Underground	10	0.8	82,700	21	0.6	115,500	31	0.6	198,20	
Nova-Bollinger - IGO	Nova-Bollinger	IGO⁵	Operating	Underground	11	1.5	168,400	0	1.3	900	11	1.5	169,20	
VIt Edwards - WIN	Mt Edwards	WIN <sup>8</sup>	Undeveloped - MRE	Underground	2	1.9	38,300	9	1.5	130,000	11	1.6	168,30	
Cliffs - BHP	Cliffs	BHP <sup>1</sup>	Operating	Underground	8	1.5	120,200	2	1.6	32,900	10	1.5	153,10	
Windarra - POS	Windarra	POS <sup>7</sup>	Undeveloped - PFS	Underground	4	1.3	57,000	5	1.8	91,500	10	1.5	148,50	
Fisher East - CR1	Fisher East	CR1 <sup>9</sup>	Undeveloped - SS	Underground	3	2.1	58,800	4	1.6	57,600	6	1.8	116,40	
Foster Mine - LN8	Foster Mine	LN8 <sup>10</sup>	Undeveloped - MRE	Underground	1	3.2	42,000	1	2.5	22,700	2	2.9	64,600	
Cassini - MCR	Cassini	MCR <sup>11</sup>	Operating	Underground	1	4.0	51,500	0	3.5	6,400	1	3.9	57,90	
ong - MCR	Long	MCR <sup>11</sup>	Undeveloped - DFS	Underground	1	4.2	38,600	0	4.1	18,400	1	4.2	56,90	
Rosie - DKM	Rosie	DKM <sup>12</sup>	Undeveloped - SS	Underground	2	2.1	42,300	1	1.8	13,700	3	2.0	56,00	
Andover - AZS	Andover	AZS <sup>13</sup>	Undeveloped - MRE	Underground	4	1.2	45,600	1	0.9	8,100	5	1.1	53,70	

# Appendix 5B

# Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity	
Centaurus Metals Limited	
ABN	Quarter ended ("current quarter")
40 009 468 099	31 December 2022

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(10,936)	(37,616)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	-	-
	(e) administration and corporate costs	(1,473)	(4,096)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	552	1,253
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	266
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(11,857)	(40,193)

2.	Cash flows from investing activities			
2.1	Payments to acquire or for:			
	(a) entities	-	-	
	(b) tenements	(500)	(3,367)	
	(c) property, plant and equipment	(682)	(2,708)	
	(d) exploration & evaluation	(355)	(832)	
2.2	Proceeds from the disposal of:			
	(a) entities	-	-	
	(b) tenements	-	-	
	(c) property, plant and equipment	-	20	

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(1,537)	(6,887)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	75,000
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	1,053
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	(3,330)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	72,723

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	47,094	8,259
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(11,857)	(40,193)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,537)	(6,887)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	72,723
4.5	Effect of movement in exchange rates on cash held	348	146
4.6	Cash and cash equivalents at end of period	34,048	34,048

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	94	230
5.2	Call deposits	33,954	46,865
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	34,048	47,094

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	282
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
	any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include ation for, such payments.	a description of, and an
Remun	eration to Executive Directors of \$199,000	
Fees p	aid to Non-Executive Directors of \$79,000	
l egal F	ees paid to MPH Lawyers a director related entity \$4,000	

7.	<b>Financing facilities</b> Note: the term "facility' includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at qu	arter end	-
7.6	Include in the box below a description of eac rate, maturity date and whether it is secured facilities have been entered into or are propo include a note providing details of those facil	or unsecured. If any add osed to be entered into af	tional financing

8.	Estim	nated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)		(11,857)
8.2		ents for exploration & evaluation classified as investing es (item 2.1(d))	(355)
8.3	Total r	elevant outgoings (item 8.1 + item 8.2)	(12,212)
8.4	Cash a	and cash equivalents at quarter end (item 4.6)	34,048
8.5	Unuse	d finance facilities available at quarter end (item 7.5)	-
8.6	Total a	available funding (item 8.4 + item 8.5)	34,048
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)		2.78
		the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3 ise, a figure for the estimated quarters of funding available must be included in ite	
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:		
	8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?		
	8.8.2	Has the entity taken any steps, or does it propose to take any s cash to fund its operations and, if so, what are those steps and believe that they will be successful?	
	8.8.3	8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Note: wi	here item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above	e must be answered

## **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 24 January 2023

Authorised by: Darren Gordon – Managing Director (Name of body or officer authorising release – see note 4)

#### Notes

- This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- 2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.