

QUARTERLY REPORT 31 DECEMBER 2022

HIGHLIGHTS

- **Black Swan 1.1Mtpa Feasibility Study**
 - Poseidon on track to become Australia's next nickel sulphide concentrate producer
 - The Feasibility Study contemplating the mining and processing of 1.1Mtpa of feed from Black Swan Project could deliver free cash flows of **\$333 million with a pre-tax NPV₈ of \$248 million and an IRR of 103%** at spot nickel and A\$/US\$ on date of study release
 - Updated Black Swan Project Ore Reserves of **3.5Mt averaging 1.0% Ni containing 35kt Ni**
 - High-grade concentrate of **~15% Ni, < 6% MgO and an Fe:MgO ratio of 5:1** can be produced which is a sought after feed for conventional nickel smelters
- **Black Swan 1.1Mtpa Restart Activities (smelter grade concentrate)**
 - Offtake and financing proposals received with shortlisted parties to conduct due diligence during the March 2023 quarter
 - Assuming FID is made during first half 2023, concentrate production could commence mid 2024 taking advantage of the strong nickel price environment
- **Black Swan 2.2Mtpa Expansion Project (rougher concentrate)**
 - Resource definition drilling commenced from the open pit floor to convert more Inferred to Indicated to potentially provide more reserves for the Expansion Project
 - 2.2Mtpa Black Swan Project Expansion Feasibility Study work is well progressed
- **Lake Johnston**
 - Exploration Incentive Scheme grant of \$180,000 awarded to assist with testing the highly prospective and underexplored Western Ultramafic Unit for new nickel sulphides
- **Share Placement and Share Purchase Plan (SPP)**
 - Share placement completed raising \$5.9 million (before costs), 168.6 million new shares issued at 3.5 cents per share
 - SPP targeting \$3 million was heavily oversubscribed with valid applications of approximately \$9 million. The Company accepted \$6 million on the same terms as the placement
- **Corporate**
 - Cash and investments were **\$14.7 million** at 31 December 2022, including funds from the share placement and SPP

Poseidon Nickel (ASX: POS, “the Company”) is pleased to report on its activities and progress achieved for the December quarter 2022.

Managing Director and CEO, Peter Harold, commented: *“The December quarter saw the Company reach a significant milestone with the completion and release of the 1.1Mtpa Black Swan Feasibility Study. The Company is now focused on securing an offtake partner and suitable financing for the project.*

Discussions with offtake parties and potential financiers began in earnest over the quarter with interest from over 30 parties for the 1.1Mtpa project that produces a sort after smelter grade concentrate. We have been delighted with the level of interest from both offtakers and financiers and will now shortlist parties and allow those selected to undertake due diligence during the March 2023 quarter.

The 2.2Mtpa Black Swan Expansion Project Feasibility Study work is well advanced. This project is investigating operating the mill at nameplate capacity and producing a rougher concentrate. The benefits of this project would enable more of the Black Swan Resource to be converted to Reserve and increasing the annual production of nickel contained in concentrate thereby enhancing project economics.

We also completed a share placement and heavily oversubscribed SPP in December 2022, raising \$12 million before costs. These funds will support the Company through to the Final Investment Decision for the Black Swan Project restart, which is expected during the June 2023 quarter. These funds will also enable us to finalise the 2.2Mtpa Black Swan Project Expansion Feasibility Study and undertake an extensive exploration drill program at Lake Johnston.”

BLACK SWAN

Poseidon reached an important milestone with the completion of the Black Swan 1.1Mtpa Feasibility Study during the quarter (refer ASX announcement – *Positive Black Swan Feasibility Study*, 21 November 2022).

The study demonstrated that the project could deliver free cash flows of ~\$333 million, pre-tax NPV₈ of ~\$248 million and an IRR of 103%, based on the prevailing Australian dollar nickel price in November 2022 (~\$A17.60/lb). The mining inventory consists of the Black Swan Open Pit disseminated ore, Silver Swan and Golden Swan underground ore, existing stockpiles and Silver Swan Tailings. A high-grade concentrate, acceptable to conventional nickel smelters, is produced with an estimated C1 unit cost of US\$4.50/lb and all-in sustaining cost of US\$4.90/lb (Ni in concentrate before smelter deductions).

Existing infrastructure at Black Swan supports pre-production capital expenditure of ~\$50 million and the Company also has significant carried forward tax losses to utilise (~\$187 million).

1.1Mtpa Feasibility Study Overview

The Black Swan Bankable Feasibility Study (BFS) contemplates the treatment of 1.1Mtpa of ore with the production of a very favourable smelter grade concentrate (“**Phase 1 Black Swan Project**” or the “**Project**”).

The BFS is based on the plan to mine ore from the Black Swan Disseminated (BSD) open pit (serpentinite ore only), Silver Swan and Golden Swan high-grade underground mines, supplemented with Silver Swan Tailings and existing surface stockpiles (disseminated serpentinite material) and process these feed sources through the existing concentrator and associated infrastructure. The total mine inventory is presented in Table 1.

TABLE 1: MINING INVENTORY FEED SOURCES TO PROCESSING FACILITY

Feed Source	JORC Compliance	Feed Tonnage (Mt)	Nickel Grade	Contained Nickel (kt)
Black Swan Disseminated	Proved & Probable Reserves ³	3.3	0.7%	22.1
Silver Swan		0.2	5.0%	9.0
Golden Swan		0.1	4.0%	4.0
Feed Source from Ore Reserve⁶		3.6	1.0%	35.1
Silver Swan Tailings	Measured Resource ²	0.4	0.9%	3.2
Existing Surface Stockpiles	Indicated Resource ²	0.6	0.5%	3.2
Existing Surface Stockpiles	Inferred Resource ²	0.4	0.5%	2.0
Feed Source from Mineral Resources		1.4	0.6%	8.4
Total feed sources¹		5.0	0.9%	43.5

1. Rounding of numbers may result in slight differences in calculated and cumulative numbers.
2. Refer to Appendix 1 for the Black Swan Project Nickel Mineral Resources Statement
3. Refer to Appendix 2 for the Black Swan Project Nickel Mineral Reserves Statement

The study is based on refurbishing and operating the existing 2.2Mtpa processing capacity plant at a processing rate of 1.1Mtpa to align with the available processing mine inventory of 5.0Mt, presenting a post development project life of four years. Plant refurbishment and mine development works are expected to take about 11 months.

Over the life of the project, the Phase 1 Black Swan Project will produce 200kt of smelter grade concentrate averaging 15% nickel containing ~30kt of nickel from the various feed sources representing an average metal recovery of 68%.

Completion of the BFS is a key milestone in Poseidon's "Fill the Mill" strategy which aims to build Poseidon into a sustainable nickel producer delivering value through performance and growth. The Black Swan restart is the basis to achieving our first strategic pillar of our "Pathway to Production".

The BFS includes substantial work completed since the 2018 Black Swan Feasibility Study. Metallurgical breakthroughs with the addition of a rougher concentrate regrind stage and the blending of Silver Swan Tailings into the processing feed have reduced the risks associated with high MgO levels in concentrate, that can impact the marketability of the concentrate product to conventional smelters. This is further supported by the BSD Resource update which includes delineation of the talc content in the resource model to more accurately define the serpentinite ore zones which are more amenable to producing a smelter grade concentrate.

Mineral Resource updates following the resource drilling of the BSD, Silver Swan and Golden Swan resources, the release of the Maiden Resource for the Silver Swan Tailings, plus the inclusion of the surface BSD ore stockpiles, results in a total combined Mineral Resource for the Black Swan Project of 31.5Mt averaging 0.68% Ni for 214kt of contained nickel. The Black Swan Project Mineral Resource is summarised in Table 2.

TABLE 2: BLACK SWAN PROJECT MINERAL RESOURCE INVENTORY (NOVEMBER 2022)

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	BLACK SWAN PROJECT MINERAL RESOURCE SUMMARY												
			MEASURED & INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
Black Swan	2012	0.4%	10,700	0.75	80,000	18,200	0.55	101,000	28,900	0.63	181,000	0.01	4,500	0.02	5,800
Silver Swan	2012	1.0%	138	9.00	12,450	8	6.00	490	146	8.80	12,940	0.16	240	0.36	530
Golden Swan	2012	1.0%	112	4.70	5,200	48	2.20	1,050	160	3.90	6,250	0.08	120	0.30	480
Silver Swan Tailings	2012	NA	675	0.92	6,200	-	-	-	675	0.92	6,200	0.07	460	0.04	270
Sub-Total Ni, Co, Cu Resources	2012		11,625	0.90	103,850	18,260	0.60	102,540	29,880	0.69	206,390	0.02	5,320	0.02	7,080
Stockpiles	2012	0.4%	1,200	0.49	5,900	400	0.53	1,900	1,600	0.5	7,800	NA	NA	NA	NA
Total Ni Resources	2012		12,825	0.86	109,750	18,660	0.56	104,440	31,480	0.68	214,190	-	-	-	-

Note: totals may not sum exactly due to rounding. NA = Information Not Available from reported resource model. Refer to Appendix 1 for the Black Swan Project Nickel Mineral Resources Statement

Conversion of Resources to Reserves for the BFS was contingent on feeding material types to the concentrator which are amenable to producing a smelter grade concentrate with an MgO content and Fe:MgO ratio that is suitable for potential offtake partners. Producing a conventional smelter grade concentrate limits the amount of combined Mineral Reserves that can be processed to the Measured and Indicated Resources of Silver Swan and Golden Swan and the serpentinite ore type in the BSD Measured and Indicated Resources which contains the appropriate lower MgO grades. The resulting Mineral Reserve for the 1.1Mtpa smelter grade concentrate project is presented in Table 3.

TABLE 3: 2022 BLACK SWAN PROJECT ORE RESERVE ESTIMATE

	JORC Compliance	Nickel Sulphide Reserves			
			Tonnes (Kt)	Ni% Grade	Ni Metal (kt)
BLACK SWAN PROJECT					
Black Swan Disseminated	2012	Proved	579	0.7	4.2
		Probable	2,608	0.7	17.7
Silver Swan	2012	Proved	-	-	-
		Probable	179	5.0	9.0
Golden Swan	2012	Proved			
		Probable	100	4.0	4.0
Total Ni Reserves	2012	Proved	579	0.7	4.2
		Probable	2,887	1.1	30.7
		Total	3,466	1.0	34.9

*Calculations have been rounded to the nearest 1,000t of ore, 0.1% Ni grade and 100t of metal. Refer to Appendix 2 for the Black Swan Project Nickel Mineral Reserves Statement

Within the current proposed 1.1Mtpa restart pit outline, a significant portion of the BSD Mineral Resource has not been converted to Mineral Reserves due to metallurgical constraints to produce a saleable concentrate, if treated. The more magnesium rich resources that are not converted to reserves is subject to ongoing assessment in the Expansion Project 2.2Mtpa Feasibility Study to produce a rougher concentrate. If study findings are positive, it would potentially convert a larger amount of the BSD Resource to Reserves and deliver a longer term project.

The BSD Resource is large and continues well beyond a depth of the planned open pit for the proposed 1.1Mtpa restart. This portion of the BSD Resource may be subject to feasibility studies in the future, however it is not included in the proposed 1.1Mtpa smelter grade concentrate restart pit or the 2.2Mtpa rougher grade concentrate studies underway.

Locked cycle tests confirmed the benefit of the two metallurgical breakthroughs for the project which reduce MgO content in concentrate and improve the Fe:MgO ratio being:

- inclusion of a rougher concentrate regrind stage in the flowsheet; and
- addition of Silver Swan Tailings to the feed blend.

The results of the locked cycle tests which reflect the concentrate specifications for the BFS are summarised in Table 4. Results presented are typical range for each test.

TABLE 4: CONCENTRATE SPECIFICATIONS

Element	Unit	BSD Only	BSD + 7.5% Silver Swan Tailings + 5% Silver Swan
Ni	%	17.1	15.0
Cu	%	0.6	0.6
Co	%	0.5	0.4
MgO	%	5.7	4.4
Fe	%	25.9	29.6
Fe:MgO	Ratio	4.5	6.7
As	ppm	3,400	3,800
S	%	38.4	36.2

Based on available feed sources, the BFS assumes that 5.0Mt of feed containing 44.3kt of nickel will be processed over a four-year period to produce 200kt of concentrate grading 15% Ni containing 30kt of nickel (the Production Target). The quarterly processing feed source and production target profile for the Project life are presented in Figure 1 and Figure 2.

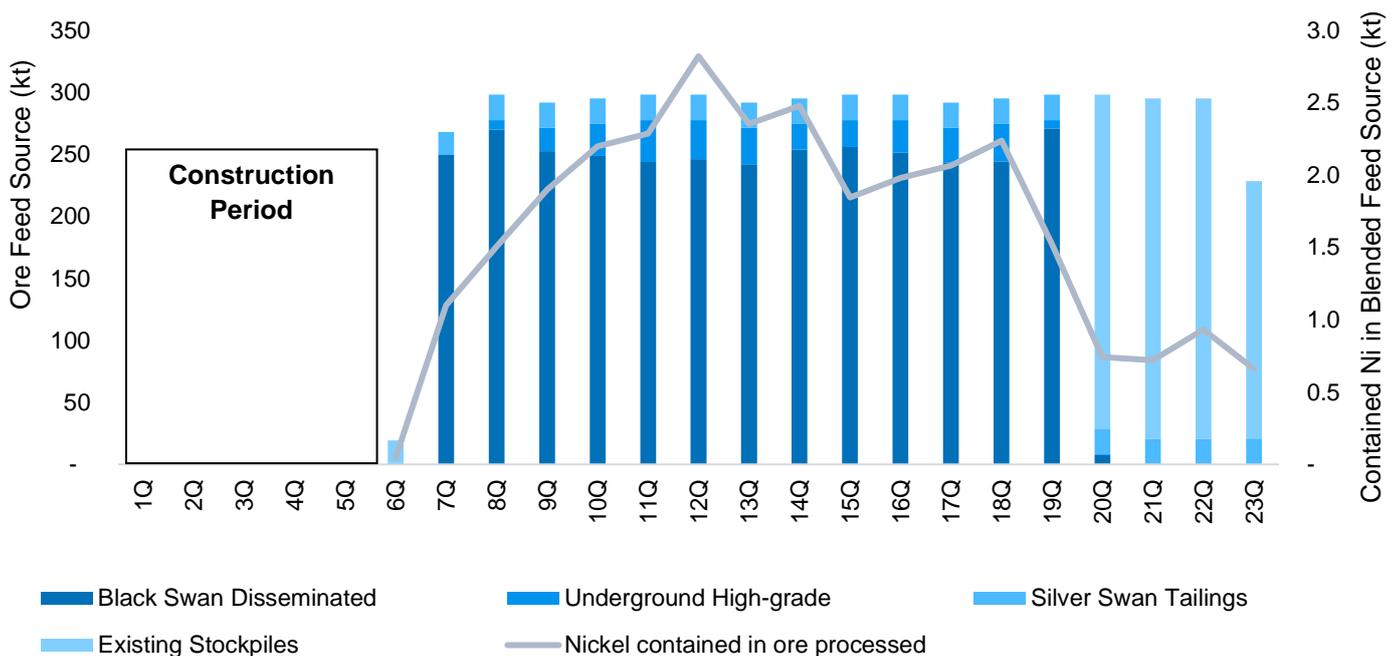


FIGURE 1: QUARTERLY MILL FEED SOURCE PROFILE

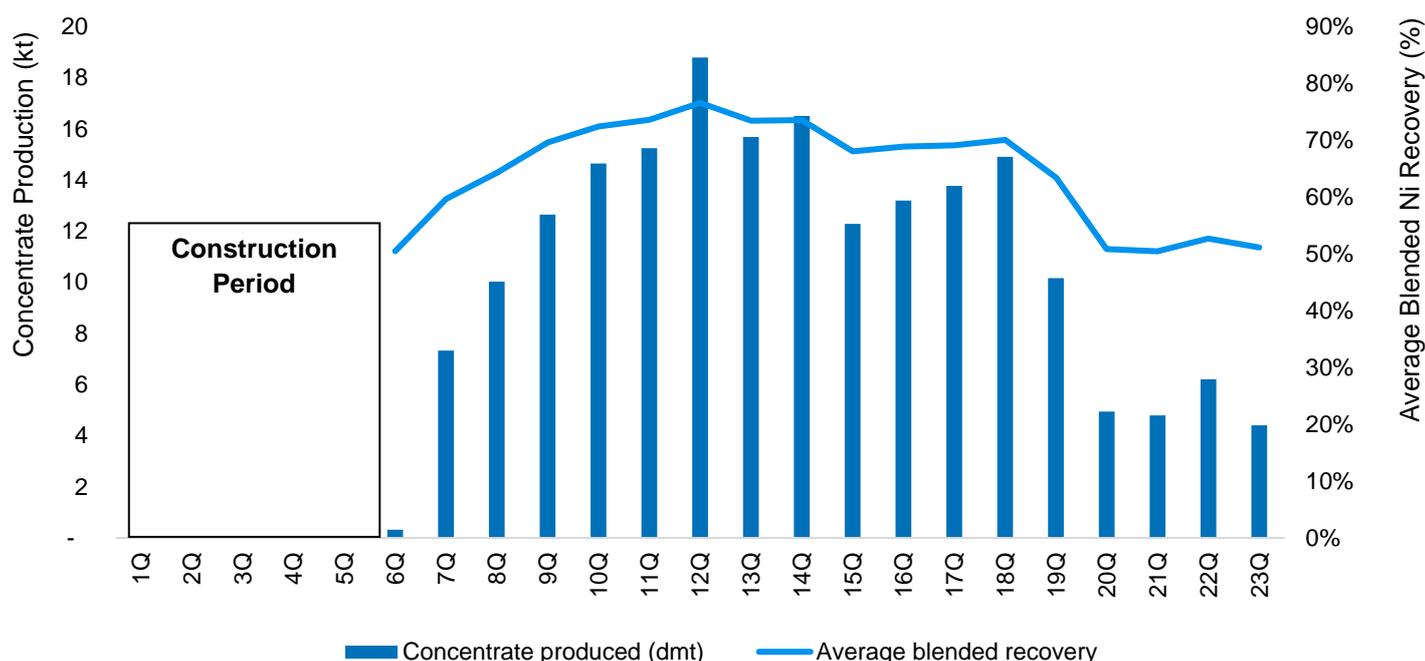


FIGURE 2: QUARTERLY CONCENTRATE PRODUCTION PROFILE

The Phase 1 Black Swan Project has attractive economics assuming the Base Case economic assumptions of nickel price forward curves (as of 17th November 2022) for the initial operating period to December 2025, then a flat US\$10.00/lb and AUD:USD\$0.65 for the production period beyond this date. Forecast nickel price and foreign exchange rate by quarter are presented in Table 5.

TABLE 5: BASE CASE ECONOMIC INPUTS

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Concentrate Production	kt	-	17.7	61.3	57.7	43.8	15.4
Nickel Price	US\$/lb	12.15	12.58	12.18	10.00	10.00	10.00
AUD: USD rate	AUD: USD	0.68	0.68	0.68	0.70	0.70	0.70
Basis of assumption		Forward Curves ¹			Management Forecast ²		

1. Nickel Price forward curves for 2023, 2024 and 2025 from LME website on close of Thursday 17th November 2022 inputted as Year 1, Year 2 and Year 3 respectively. AUD:USD forward curves inputted from an external source based on close of Thursday 17th November 2022.
2. Management estimate for period beyond forward curve inputs is US\$10.00/lb nickel price and AUD:USD \$0.70. Management has conservatively estimated these economic inputs based on expected nickel pricing to support the projected nickel demand over the medium term. Alternative upside nickel pricing scenarios have been considered based on positive outlook for nickel, see below.

Assuming Base Case nickel price and foreign exchange inputs, the economic outcomes for the BFS are presented in Table 6. All economic outcomes are presented in Australian dollars unless specified otherwise.

TABLE 6: PROJECT BASE CASE PRE-TAX ECONOMIC EVALUATION SUMMARY

Economic Outputs	Base Case
Revenue	\$809M
Operating Costs	\$483M
Capital Expenditure ¹	\$99M
Net Cash Flow	\$227M
Pre-tax NPV₈²	\$167M
IRR	86%
Payback Period ³	1.3 years
C1 Cash Cost ⁴	US\$4.56/lb
AISC Cash Cost ⁵	US\$4.90/lb
Average Ni price	US\$11.6/lb
Average FX (USD/AUD)	0.69

1. Capital expenditure includes \$50 million of pre-production capital expenditure with the remainder of capital expenditure incurred post first ore production.
2. NPV is based on real cash flow forecasts and represents value as at projected start date of concentrator refurbishment being 1 July 2023.
3. Period post completion of concentrator refurbishment.
4. C1 cash costs include operating cash costs including mining, processing, geology, OHSE, site G&A, concentrate transport, less by-product divided by nickel in concentrate produced (100% basis before smelter deductions). Excludes development and sustaining capex, pre-production costs and royalties.
5. AISC - are C1 cash costs plus royalties and sustaining capital. Excludes development capital and preproduction costs.

Alternative economic scenarios considered were the 'Spot Case', being the prevailing nickel price and foreign exchange (as of 17th November 2022), and an 'Upside Case' which assumed a flat US\$15.00/lb nickel price and flat AUD: USD \$0.65. Both scenarios presented positive economic outcomes as presented in Table 7.

TABLE 7: ALTERNATIVE PROJECT PRE-TAX ECONOMIC SCENARIOS

Economic Outputs	Upside Case	Spot Ni Price & FX
Revenue	\$1,207M	\$919M
Operating Costs	\$498M	\$487M
Capital Expenditure ¹	\$99M	\$99M
Net Cash Flow	\$610M	\$333M
Pre-tax NPV₈²	\$470M	\$248M
IRR	188%	103%
Payback Period ³	1.0 year	1.4 years
C1 Cash Cost ⁴	US\$4.36/lb	US\$4.52/lb
AISC Cash Cost ⁵	US\$4.81/lb	US\$4.89/lb
Average Ni price	US\$15.0/lb	US\$11.8/lb
Average FX (USD/AUD)	0.65	0.67

1. Capital expenditure includes \$50 million of pre-production capital expenditure with the remainder of capital expenditure incurred post first ore production.
2. NPV is based on real cash flow forecasts and represents value as at projected start date of concentrator refurbishment being 1 July 2023.
3. Period post completion of concentrator refurbishment.
4. C1 cash costs include operating cash costs including mining, processing, geology, OHSE, site G&A, concentrate transport, less by-product divided by nickel in concentrate produced (100% basis before smelter deductions). Excludes development and sustaining capex, pre-production costs and royalties.
5. AISC - are C1 cash costs plus royalties and sustaining capital. Excludes development capital and preproduction costs.

The economic modelling at the assumed metal prices shows that mining the BSD, Silver Swan and Golden Swan ores with the inclusion of the Silver Swan Tailings and existing stockpiled material and processing on site to produce a smelter-grade concentrate has attractive cash flow, NPV and IRR.

The BFS presents a Project funding requirement of circa \$90 million. This funding requirement comprises of ~\$50 million pre-mine production capital expenditure with the remainder representing working capital mainly associated with building up sufficient concentrate inventory stockpiles for assumed 5,000 tonne shipments.

Next Steps

Based on the positive BFS outcomes the Company is progressing the following workstreams as we move towards a Final Investment Decision (FID):

- Discussions with potential offtake partners to agree definitive terms ahead of signing an appropriate offtake agreement;
- Discussions with potential contractors:
 - for the refurbishment of the Black Swan concentrator and associated infrastructure; and
 - for mining and ore processing operations.
- Completion of the 2.2Mtpa Expansion Project Feasibility Study which presents an opportunity to significantly increase annual concentrate production and contained nickel and the further enhancement of the project economics;
- Complete the 10,000 metre resource drilling program to convert further Inferred Resources at Black Swan to Indicated, and to increase the Measured and Indicated resource base for the 1.1Mtpa and 2.2Mtpa projects; and
- Discussions with selected project finance partners to secure appropriate funding for the restart of operations at Black Swan.

Offtake and Financing

During the quarter the Company issued further information to parties that have previously expressed an interest in offtake and/or project financing. The Company will short list a select group of parties and move forward with detailed due diligence including access to the data room and site visits. The aim is to have both offtake and project financing concluded early in the June 2023 quarter so the FID can be made during that quarter.

The process is continuing with strong interest from prospective parties.

Black Swan Restart Activities

Dewatering of the Black Swan open pit was completed during the quarter. This has allowed resource drilling to commence within the open pit to further convert Inferred Resources to the Indicated classification, with two RC drilling rigs currently operating on-site.

The Open Pit will now only require minimal works to restart operations, which are expected to be completed during the final stages of the plant refurbishment.

2.2Mtpa Expansion Project Feasibility Study

The Black Swan 2.2Mtpa Expansion Feasibility Study continues to progress with some of the work undertaken for the 1.1Mtpa study able to be used for the 2.2Mtpa study. Work required to complete the 2.2Mtpa Feasibility Study includes further metallurgical testwork to confirm the grade and recovery of the rougher concentrate, amenability of the rougher concentrate to processing via external HPAL plants, pCAM or pressure oxidation (POX), along with the associated costs for each option and costs to construct and operate a POX plant at Black Swan. Additional flotation testwork on varying feed grades and blend ratios of the serpentinite and talc carbonate ores is also underway to confirm the optimum grade versus recovery curve.

A larger Stage 2 open pit design is close to being finalised along with updated mining rates and optimisation of the mining schedule with the combined talc carbonate and serpentinite ore sources.



FIGURE 3 – BLACK SWAN OPEN PIT DRILLING

LAKE JOHNSTON

Lake Johnston Exploration

Exploration Incentive Scheme grant awarded

During the quarter the Company was awarded a Western Australian State Government grant of \$180,000 under the Exploration Incentive Scheme (EIS) for the planned drilling program on the Western Ultramafic Unit at Lake Johnston.

Offered under Round 26 of the Western Australian State Government's co-funded Exploration Incentive Scheme (EIS), the grant awarded to Poseidon will reimburse the Company for up to 50% of direct drilling costs and 50% of mobilisation costs (capped at \$5,000), up to a combined maximum of \$180,000 towards the cost associated with the planned Western Ultramafic exploration program.

Exploration activities planned for March 2023 quarter

A systematic RC drill program totalling 15,000 metres has been planned at regular 400m line spacing to test the basal contact position in fresh rock with planned hole depths to 100 metres. This drilling program will assist in mapping the basal contact and delineate geochemical vectors towards nickel sulphide mineralisation. The drilling program is expected to commence shortly after completion of the Black Swan resource drilling currently underway.

The Western Ultramafic Unit is interpreted to represent the extruded portion of the intrusive body that has breached the BIF unit. The stratigraphic contact position that is located between the extrusive komatiite and the underlying BIF unit is named the basal contact. As the extrusive lavas flow over the basal contact, melting and assimilating of the sulphidic BIF unit occurs, which is conducive for the formation of nickel sulphide. It is within the channelised, embayed positions of the extrusive ultramafic unit as it flows along the basal contact is where nickel sulphides can accumulate to form massive sulphides deposits. Thus, finding the channelised flows along the Western Ultramafic basal contact is a key exploration target of the proposed reverse circulation (RC) drill program. All the stratigraphic units have subsequently been deformed and overturned over the length of the Company's tenement portfolio at Lake Johnson, refer to Figure 5.

The basal contact of the Western Ultramafic is considered a high priority target for potential economic nickel sulphide mineralisation. Although sparsely drilled with a distinct lack of effective drilling in the near surface environment, historical nickel sulphide intersections drilled by previous explorers throughout the belt prove the fertility of the unit and have had little follow-up, refer Figure 4. Coupled with this, ground EM has failed to produce distinct conductive responses as the BIF response has swamped the data.

The Lake Johnston Project remains an important part of the Company's strategy going forward and studies to consider options for restarting this project will begin once the Black Swan Project is in production.

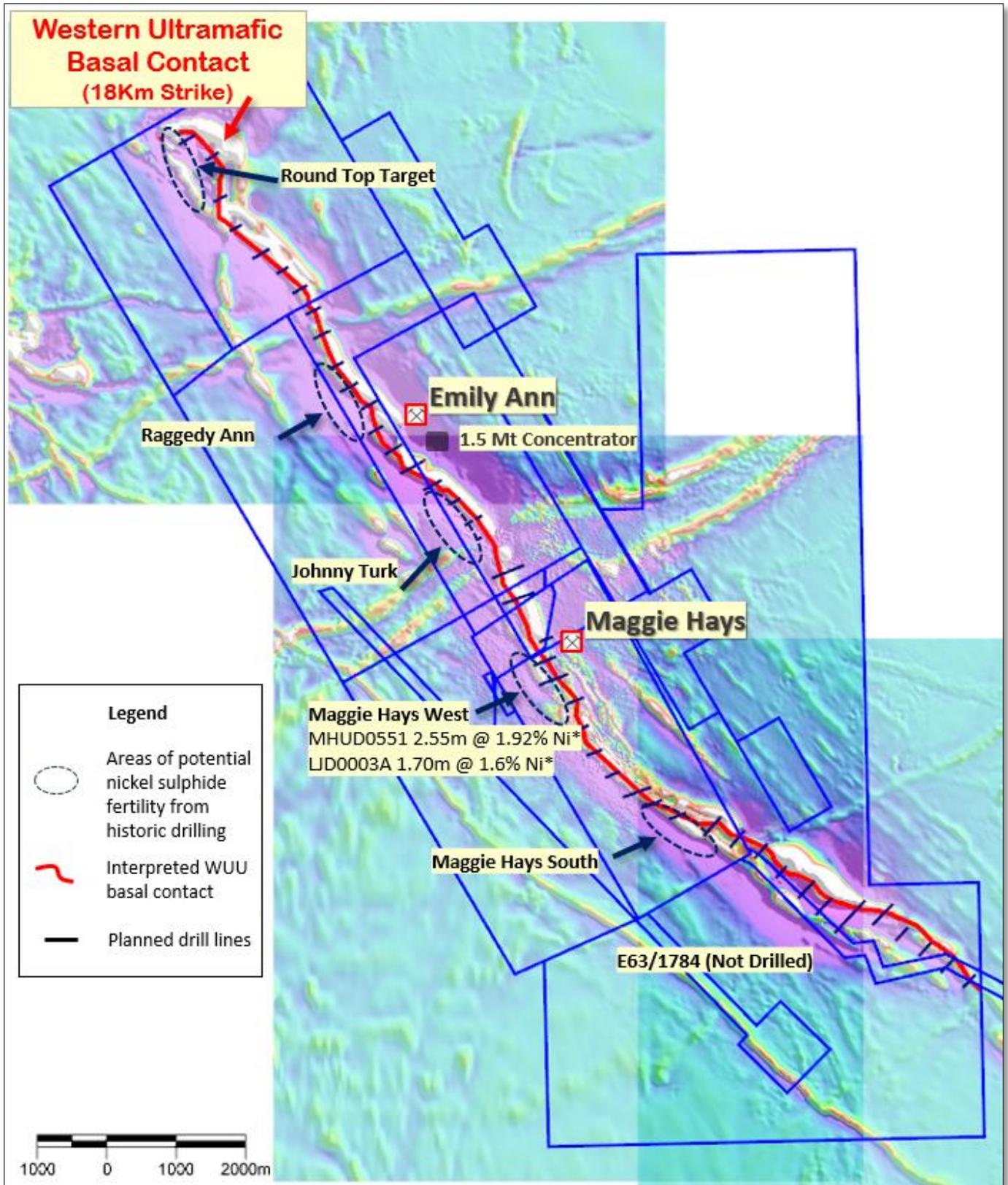


FIGURE 4: INTERPRETED BASAL CONTACT POSITION OF THE WESTERN ULTRAMAFIC OVERLAYING MAGNETICS WITH HIGHLIGHTED AREAS OF POTENTIAL NICKEL SULPHIDE FERTILITY IDENTIFIED FROM HISTORIC DRILLING CONDUCTED BY PREVIOUS OWNERS, AND NOT PUBLICLY REPORTED. BASAL CONTACT TO BE TESTED IN UPCOMING 15,000M RC DRILL PROGRAM.

** REFER TO ASX ANNOUNCEMENT "NEW MINERALISED ZONE IDENTIFIED AT LAKE JOHNSTON" DATED 18TH FEBRUARY 2015*

WINDARRA

Windarra Gold Tailings Project

A binding Heads of Agreement (HoA) was signed on 6 September 2022 with Green Gold Projects (GGP) to earn into the Windarra Gold Tailings Project. The Company will retain 8% of the project once various pre-conditions have been met.

Over the quarter GGP progressed its metallurgical testwork using Windarra samples to apply its proprietary tailings processing technology. The objective of this testwork is to improve gold recovery and is a condition precedent of the HoA ahead of GGP progressing toward developing the project. This testwork will be completed over the next quarter, the results of which will dictate whether a full feasibility study is then undertaken by GGP. GGP was granted a three-month extension to 30 April 2023 to complete their metallurgical testwork.

For more information on the Windarra Gold tailings HoA refer the ASX announcement titled “*Windarra Gold Tailings Heads of Agreement*” dated 7 September 2022.

OPERATIONS

Operating Update

Black Swan

Black Swan continued on care and maintenance during the quarter. Activities over the period included dewatering and resource drilling from within the Black Swan open pit as well as ongoing routine inspections and maintenance activities of the underground workings.

Activities on site were completed without any significant safety incidents.

Windarra

Windarra remained on care and maintenance during the quarter.

Lake Johnston

Lake Johnston remained on care and maintenance during the quarter.

CORPORATE

Placement and Share Purchase Plan raised \$12 million

The Company completed a placement during the period to raise \$5.9 million before costs through the issue of 168.6 million shares at 3.5 cents a share, from new and existing institutional, professional and sophisticated investors.

Directors have agreed to subscribe for 2,857,143 new shares as part of the placement, subject to shareholder approval. Management and employees also participated in the placement.

The Company also completed a Share Purchase Plan (SPP) which was heavily oversubscribed with applications of approximately \$9 million, well in excess of the \$3 million targeted. As a result of the over-subscription, Poseidon’s board of directors exercised its discretion under the terms of the SPP to accept a total of \$6 million in applications for the issue of approximately 171.4 new shares.

Pure Battery Technologies

Pure Battery Technologies (PBT) feasibility study to develop a pCAM refinery project in Kalgoorlie continues to progress. The rougher concentrate product from the 2.2Mtpa feasibility study would be suitable feed for the proposed pCAM plant. PBT's feasibility study, being conducted by Worley, is expected to complete during 2Q 2023. Poseidon continues to support PBT by providing material for metallurgical testwork as part of the study.

Financial

As at 31 December 2022, the Company held cash and current investments totalling \$14.7 million, which includes funds received from the share placement and SPP.

Over the quarter, Poseidon's net cash outflow from operating and investing activities totalled \$4.2 million which included \$2.4 million of exploration and evaluation costs.

Costs incurred over the quarter of \$3.7 million were lower than the forecast of \$4 million. This was largely due to delays in various non-core activities.

There were no production or development activities conducted over the period and as such no production or development expenditures were incurred.

Related party expenses over the quarter totalled \$133,032, all of which were fees paid to Directors.

Costs of \$6.1 million are forecast over the next quarter, with the increase from the December 2022 quarter driven primarily by drilling activities at Black Swan.

This Quarterly Activities Report was authorised for lodgement by the Board of Poseidon Nickel Limited.



Peter Harold
Managing Director & CEO

31 January 2023

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About Poseidon Nickel Limited

Poseidon Nickel Limited (ASX Code: POS) is a nickel sulphide exploration and development company with three projects located within a radius of 300km from Kalgoorlie in the Goldfields region of Western Australia and a resource base of around 400,000 tonnes of nickel and 180,000 ounces of gold.

Poseidon's strategy is focused on the exploration and eventual restart of its established nickel operations in Western Australia. A critical element of this strategy has been to acquire projects and operations with significant existing infrastructure, large nickel resources and geological prospectivity likely to lead to resource growth through the application of modern exploration techniques.

Poseidon owns the Windarra, Black Swan and the Lake Johnston Nickel Projects. In addition to the mines and infrastructure including concentrators at Black Swan and Lake Johnston, these projects have significant exploration opportunities demonstrated by the discovery of the Golden Swan Resource at Black Swan and the Abi Rose mineralisation at Lake Johnston.

Black Swan will be the first project to restart followed by Lake Johnston and then Windarra, subject to favourable Feasibility Studies, appropriate project financing structures being achieved, the outlook for the nickel price remaining positive and all necessary approvals being obtained.

The Company has completed a Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield and has entered into a Heads of Agreement with Green Gold Projects whereby Green Gold will develop the project and Poseidon can retain an 8% free carried interest, subject to certain conditions precedent being satisfied.

COMPETENT PERSON STATEMENTS:

The information contained within this announcement is extracted from the reports titled:

- "Positive Black Swan Feasibility Study" released 21 November 2022
- "Black Swan Restart Update" released 12 July 2022
- "More Nickel in Updated Black Swan Mineral Resource" released 4 July 2022
- "Non-Executive Director Warren Hallam Appointment" released 1 June 2022
- "Silver Swan Resource Update" released 27 April 2022
- "Golden Swan Maiden Resource" released 27 October 2021
- "Silver Swan Tailings – Maiden Resource Estimate" released 15 September 2021
- "Windarra Gold Tailings DFS Highlights Robust Project" 23 July 2021
- "Gold Tailings Resource at Windarra updated to JORC 2012 Indicated" 22 Jun 2020.

which are available to view on www.poseidon-nickel.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and, in the case of Minerals Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement."

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

FORWARD LOOKING STATEMENTS:

This release contains certain forward looking statements including nickel production targets matters that may involve risks or uncertainties and may involve significant items of subjective judgement and assumptions of future events that may or may not eventuate (Forward Statements). Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "except", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position and performance are also forward-looking statements. No independent third party has reviewed the reasonableness of any such statements or assumptions. None of the Company, their related bodies corporate and their respective officers, directors, employees, or advisers represent or warrant that such Forward Statements will be achieved or will prove to be correct or gives any warranty, express or implied, as to the accuracy, completeness, likelihood of achievement or reasonableness of any Forward Statement contained in this release. Except as required by law or regulation, the Company assumes no obligation to release updates or revisions to Forward Statements to reflect any changes. Recipients should form their own views as to these matters and any assumptions on which any of the Forward Statements are based and not place reliance on such statements.

APPENDIX 1 - Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY															
			MEASURED			INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
BLACK SWAN PROJECT																		
Black Swan	2012	0.40%	10,700	0.75	80,000	-	-	-	18,200	0.62	101,000	28,900	0.63	181,000	0.01	4,500	0.02	5,800
Silver Swan	2012	1.00%	138	9	12,450	-	-	-	8	6.00	490	146	8.80	12,940	0.16	240	0.36	530
Golden Swan	2012	1.00%	112	4.7	5,200	-	-	-	48	2.20	1,050	160	3.90	6,250	0.08	120	0.30	480
Silver Swan Tailings	2012	NA	675	0.92	6,200	-	-	-	-	-	-	675	0.92	6,200	0.07	460	0.04	270
Stockpiles	2012	0.40%	1,200	0.49	5,900	-	-	-	400	0.53	1,900	1,600	0.49	7,800	NA	NA	NA	NA
LAKE JOHNSTON PROJECT																		
Maggie Hays	2012	0.8%	-	-	-	2,600	1.60	41,900	900	1.17	10,100	3,500	1.49	52,000	0.05	1,800	0.10	3,400
WINDARRA PROJECT																		
Mt Windarra	2012	0.9%	-	-	-	922	1.56	14,000	3,436	1.66	57,500	4,358	1.64	71,500	0.03	1,200	0.13	5,700
South Windarra	2004	0.8%	-	-	-	772	0.98	8,000	-	-	-	772	0.98	8,000	NA	-	NA	-
Cerberus	2004	0.75%	-	-	-	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000	NA	-	0.08	3,600
TOTAL																		
Total Ni, Co, Cu Resources	2004 & 2012		12,825	0.86	109,750	7,067	1.40	98,900	24,770	0.83	206,040	44,662	0.93	414,690	0.02	8,320	0.04	19,780

Note: totals may not sum exactly due to rounding. NA = Information Not Available from reported resource model.

- **Black Swan, Golden Swan, Silver Swan, Silver Swan Tailings and Stockpiles Resource** as at 21 November 2022 (see ASX announcement "Positive Black Swan Feasibility Study" released 21 November 2022)
- **Black Swan Resource** as at 4 July 2022 (see ASX announcement "More Nickel in Updated Black Swan Mineral Resource" released 4 July 2022)
- **Silver Swan Resource** as at 27 April 2022 (see ASX announcement "Updated Silver Swan Resource underpins significant increase in high-grade Indicated resource base" released 27 April 2022)
- **Golden Swan Resources** as at 27 October 2021 (see ASX announcement "Golden Swan Maiden Resource" released 27 October 2021).
- **Silver Swan Tailings Resource** as at 15 September 2021 (see ASX announcement "Silver Swan Tailings – Maiden Resource Estimate" released 15 September 2021)
- **Maggie Hays Resource** as at 17 March 2015 (see ASC announcement "50% Increase in Indicated Resources at Lake Johnston" released 17 March 2015)
- **Mt Windarra Resource** as at 7 November 2014 (see ASX announcement "Poseidon Announces Revised Mt Windarra Resource" released 7 November 2014)
- **South Windarra and Cerberus Resource** as at 30 April 2013 (see ASX announcement "Resource Increase of 25% at Windarra Nickel Project" released 1 December 2011)

The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

APPENDIX 2 - Nickel Projects Reserves Statement

Nickel Sulphide Reserves	JORC Compliance								
		Proved/Probable	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co % Grade	Co Metal (t)	Cu % Grade	Cu Metal (t)
BLACK SWAN PROJECT									
Black Swan	2012	Proved	579	0.7	4.2	NA	NA	NA	NA
		Probable	2,608	0.7	17.7	NA	NA	NA	NA
Silver Swan	2012	Proved	-	-	-	NA	NA	NA	NA
		Probable	179	5.0	9.0	NA	NA	NA	NA
Golden Swan	2012	Proved	-	-	-	NA	NA	NA	NA
		Probable	100	4.0	4.0	NA	NA	NA	NA
Total Ni, Co, Cu Reserves	2012	Proved	579	0.7	4.2	NA	NA	NA	NA
		Probable	2,887	1.1	30.7	NA	NA	NA	NA
		Total	3,466	1.0	34.9	NA	NA	NA	NA

Note: totals may not sum exactly due to rounding. NA = Information Not Available from reported resource model.

- **Black Swan, Golden Swan and Silver Swan Reserve** as at 21 November 2022 (see ASX announcement "Positive Black Swan Feasibility Study" released 21 November 2022)

The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

APPENDIX 3 – Gold Projects Ore Resource Statement

Windarra Gold Tailings Project North and South Dams Mineral Resource – JORC 2012 Tabulation

INDICATED							
	Tonnes (t)	AU (g/t)	Au (oz)	Ag (g/t)	As (ppm)	CU (ppm)	Ni (ppm)
North Dam	3,902,000	0.78	98,000	1.9	1,805	365	975
South Dam	850,000	0.50	14,000	0.6	645	355	2,533
Total	4,752,000	0.73	112,000	1.7	1,600	363	1,250

Windarra Gold Tailings Project Central Dam Mineral Resource – JORC 2012 Tabulation

INDICATED							
	Tonnes (t)	AU (g/t)	Au (oz)	As (ppm)	CU (ppm)	Ni (%)	
Central	6,198,000	0.37	74,000	435.0	270	0.3	

Lancefield Gold Tailings Mineral Resource – JORC 2012 Tabulation

INDICATED AND INFERRED							
	Tonnes (t)	AU (g/t)	Au (oz)	Ag (g/t)	As (ppm)	Cu (ppm)	Ni (ppm)
Indicated	1,210,084	1.27	49,278	3.61	2,789	314	70
Inferred	337,964	1.20	13,063	3.48	2,951	269	57
Total	1,548,048	1.23	62,341	3.58	2,824	304	67

Windarra Gold Tailings North and South Dams Resource: no cut-off grade has been used to report the resource, as potential mining method dictates removal of the entire dams. a dry bulk in situ density of 1.6 t/m³ has been used to derive tonnages. resource numbers in the above table may not sum exactly due to rounding.

Windarra Gold Tailings central Dam Resource: No cut-off grade has been used to report the resource, as the potential mining method dictates removal of the entire dam down to a specified elevation. The mineralisation has been reported above a flat elevation of 446 mRL; there are tailings below this level but these have been shown by drilling to contain no gold, and it is anticipated that the proposed mining method will not treat material below this elevation. A dry bulk in situ density of 1.6 t/m³ has been used to derive tonnages. Resource totals may not sum exactly due to rounding.

Windarra Gold Tailings Resource as at 22 June 2020 (see ASX announcement “Gold Tailings Resource at Windarra updated to JORC 2012 Indicated” 22 Jun 2020).

Lancefield Gold Tailings Resources as at 23 July 2021 (see ASX Announcement “Windarra Gold Tailings DFS Highlights Robust Project” 23 July 2021).

TENEMENTS HELD

Tenements Held as at 31 December 2022

AREAS OF INTEREST	TENEMENTS	ECONOMIC ENTITY'S INTEREST
Western Australia		
Windarra Nickel Assets	M261SA, G38/21, L38/121, L39/184, L38/199, L38/218, L39/221	100%
Windarra South	L38/119, L38/122, L38/220	100%
Woodline Well	M39/1075, L39/224	100%
Pool Well	M38/1244, M38/1245, L38/118	100%
Lake Johnston Nickel Assets	G63/8, G63/5, L63/51, L63/52, L63/55, L63/57, M63/163, M63/282, M63/283, M63/284, M63/292, M63/293, M63/294, M63/522, M63/523, M63/524, E63/1784 (80% interest)	100% (except for E63/1784)
Black Swan Nickel Assets	M27/39, M27/200, M27/214, M27/216, L27/57, L27/58, L27/59, L27/74, L27/75, L27/77, L27/78, L24/219, L24/222, L27/95, L27/96, G27/2	100%

E = Exploration Licence M = Mining Lease MSA = Mining Tenement State Act PL = Prospecting Licence L = Miscellaneous Licence

Mining Tenements Acquired or Disposed during the December 2022 Quarter

Nil

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements during the December 2022 Quarter

Farm-out Agreement

Under the terms of the Heads of Agreement with Green Gold Projects, Green Gold Projects currently owns 0% of the Windarra / Lancefield Gold Tailings Project Gold Rights. Refer to the ASX announcement Windarra Gold Tailings Heads of Agreement – re-lodgement dated 7th September 2022. Poseidon currently owns 100% of the Gold Rights of the Windarra / Lancefield Gold Tailings Project Gold Rights.

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements Acquired or Disposed of during the December 2022

Nil

Appendix 5B

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

Name of entity

Poseidon Nickel Limited

ABN

60 060 525 206

Quarter ended ("current quarter")

31 December 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	93	97
1.2 Payments for		
(a) exploration & evaluation (if expensed)	(1,240)	(2,249)
(b) development	-	-
(c) production	-	-
(d) staff costs	(933)	(1,896)
(e) administration and corporate costs	(906)	(1,226)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	58	100
1.5 Interest and other costs of finance paid	(39)	(77)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other – sundry income	-	-
1.9 Net cash from / (used in) operating activities	(2,967)	(5,251)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(36)	(297)
(d) exploration & evaluation (if capitalised)	(1,172)	(2,354)
(e) investments	-	-
(f) other non-current assets	-	-

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

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
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	(1,208)	(2,651)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	11,902	11,902
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(375)	(375)
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	11,527	11,527

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	7,362	11,089
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,967)	(5,251)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,208)	(2,651)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	11,527	11,527

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

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	14,714	14,714

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	14,714	7,362
5.2	Call deposits	-	-
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)	14,714	7,362

6. Payments to related parties of the entity and their associates

6.1	Aggregate amount of payments to related parties and their associates included in item 1	133
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

**Current quarter
\$A'000**

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

7. Financing facilities

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 quarter end

-

7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

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

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (Item 1.9)	(2,967)
8.2	Capitalised exploration & evaluation (Item 2.1(d))	(1,172)
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	(4,139)
8.4	Cash and cash equivalents at quarter end (Item 4.6)	14,714
8.5	Unused finance facilities available at quarter end (Item 7.5)	-
8.6	Total available funding (Item 8.4 + Item 8.5)	14,714
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	3.6

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

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?

Answer: N/A

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

Compliance statement

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

Date: 31 January 2023

Authorised by: The Board of Directors of Poseidon Nickel Ltd

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.
- 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.
- 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.
- 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

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

[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.