Level 1
3 Ord Street
West Perth WA 6005
E admin@poseidon-nickel.com.au
T +61 8 6167 6600

POSEIDON NICKEL

ASX Announcement
14 September 2023

PROJECTS AND EXPLORATION UPDATE

KEY POINTS

- **Black Swan Restart Project**
  - The Final Investment Decision (FID) remains on hold given uncertain global markets, allowing time for additional confirmatory metallurgy testwork to be completed
  - First phase of the confirmatory metallurgical testwork initial analysis from existing diamond core indicates the non-sulphide nickel content is consistent with the Bankable Feasibility Study
  - Second phase metallurgy diamond drill core samples for further flotation testwork was obtained from August 2023 drill program
  - Restart workstreams ongoing, including offtake and project debt financing documentation, design and engineering studies with Western Power and discussions with potential accommodation providers
- **Lake Johnston Exploration**
  - Assays received to date have returned elevated Ni and Cu along with highly anomalous platinum group elements among other positive characteristics confirming strong prospectively of the Western Ultramafic Unit
  - Follow up drilling to progress all anomalous geochemistry trends identified along the Western Ultramafic Unit including Maggie Hays West, is expected to commence in October 2023
- **Cost Reduction Initiatives**
  - Cost reduction strategies across the Company are being finalised with further details to be provided in coming weeks
- **Black Swan Expansion Project – 2.2Mtpa Throughput**
  - Prefeasibility study on track to be completed late in 2023
    - GR Engineering Services finalising the processing plant capital and operating cost estimates
    - Mining optimisation underway based on preliminary cost information
    - Concentrate sample testing ongoing with potential customers
    - Pressure oxidation testwork being undertaken to provide additional information for the study
- **Black Swan Exploration**
  - Drilling completed on previously announced Target 5 with no significant mineralisation intersected or defined DHEM conductors identified
- **Windarra Project**
  - Negotiations progressing on gold tailings treatment and South Windarra water access agreement with local resources company

Poseidon Nickel Limited (ASX: POS, "the Company") is pleased to provide a project and exploration update.

Managing Director and CEO, Peter Harold, commented: *"Although global inflation is returning to anticipated levels, commodities markets remain volatile and somewhat depressed, as a result the final investment decision remains on hold. In the meantime, the company is continuing to progress various work streams while at the same time looking at areas where we can reduce our business costs.*

The first phase of the confirmatory metallurgical testwork has shown that the interim non-sulphide nickel assay results from existing diamond drill core are consistent with the Black Swan November 2022 Bankable Feasibility Study.

The second phase of metallurgical testwork is well underway using diamond core from drilling completed during August 2023. The drill program was designed to obtain samples representative of all the material to be mined from the proposed open pit. Samples are currently being assayed after which composite samples will undergo locked cycle flotation tests to confirm the sulphide nickel recoveries and concentrate quality achievable across all three zones within the Black Swan resource – hangingwall, main and footwall. The full testwork program is expected to be completed in the first quarter 2024.

The defined Target 5 EM plate was drill tested in early September 2023 and unfortunately did not return any significant mineralisation or DHEM conductors. These results do not eliminate the possibility of mineralisation in areas north of Silver Swan as surveys only cover 50 metres around the previous drill holes. We will continue to assess the exploration potential at Black Swan and will consider future exploration programs aimed at growing the higher grade resources.

The recent reconnaissance drilling program at Lake Johnston has been highly successful in identifying anomalous and coincident nickel copper and PGE trends at several areas along the WUU. These metal associations and other positive attributes are considered strong vectors to nickel sulphides. The company is planning a high priority follow up program along the WUU, which includes drilling at Maggie Hays West where a potential new channel has been identified. The next phase of drilling is mainly comprised of further infill fences of drilling that will provide geological certainty for future deeper drill testing.

Given the temporary deferral of the FID we are reviewing all of the costs across the business, both at the asset and corporate levels, with the aim of taking costs out of the business. We plan to implement these cost saving initiatives shortly and will provide additional details of the changes and estimated savings in the coming weeks."

BLACK SWAN

Black Swan Restart Project

The status of pre-start workstreams progressing at Black Swan:

- Processing plant – plant refurbishment contract with GR Engineering Services Limited, awaiting confirmation of metallurgy.
- Accommodation – discussions continue with a provider for options over 150 rooms in Kalgoorlie.
- Power – Western Power are progressing engineering and design studies on infrastructure upgrades required to provide the allocated power.
- Metallurgy – diamond drilling to provide samples for metallurgical testwork completed (see separate section).
- Human Resources: workplace planning in place, team recruitment on hold.

Offtake and Debt Financing

The Company continues to negotiate offtake and project debt financing with two large international groups. Both groups have provided draft offtake and financing agreements.

Metallurgical Testwork

The Black Swan Disseminated Mineral Resource was updated by Golders in early June 2023 on the return of assays from a 112-hole RC program drilled from the base of the pit (refer to ASX Announcement "*Updated Resource provides more Nickel at Black Swan*" dated 7 June 2023).

The updated Mineral Resource identified a significant increase in the Non-Sulphide Nickel (NSNi) content within the modelled mineralised zones and a significantly lower sulphur to nickel ratio (S:Ni ratio) in the Hangingwall zone. Follow-up work was conducted in June 2023 and July 2023 to verify the NSNi analyses from prior drilling campaigns however suitable clarification could not be sort given the lack of NSNi assay data in historical drilling programs and the differing NSNi assay methods used between laboratories. To improve the metallurgical certainty further test work was recommended utilising additional samples from diamond drill core to validate the recoveries across the orebody and confirm the concentrate quality with respect to the Fe:MgO ratio.

The follow up first phase metallurgical testwork program commenced immediately following the July 2023 capital raise:

- Existing diamond drill core intervals from previous holes (PBSD038, PBSD052, PBSD054, PBSD057 and PBSD061, refer to ASX Announcement *"Black Swan Restart Project Update"* dated 5 April 2022) drilled from the Gosling drive into the base of the Black Swan Deposit have been selected and sent to Strategic Metallurgy laboratory to validate metallurgical recoveries. These samples represent the Main, Hangingwall and Footwall zones and provide spatial representation of the latter years of the mine plan. The results from this testwork will provide information on the NSNi content and the nickel recovery for each ore zone with results expected by late October 2023. Interim assay results for the metallurgical composites sampled from diamond drill core available from the 2020/21 Gosling drilling program are summarised in Table 1. While the nickel grade for these samples is relatively high compared to the overall Black Swan serpentinite resource, the underlying Non-Sulphide Nickel (NSNi) content is in line with the metallurgical samples utilised for the November 2022 Feasibility Study (BFS) which is considered a positive outcome.

TABLE 1 - INTERIM ASSAY RESULTS FROM METALLURGICAL SAMPLES

BSD Ore Zone	Tonnage Proportion of Mine Plan (%)	Met Comps (No.#)	As (%)	Co (%)	Fe (%)	MgO (%)	Ni (%)	S (%)	SiO2 (%)	NSNi (%)	S/Ni Ratio	%NSNi
Main	51.6	28	0.040	0.022	5.80	37.1	1.14	1.72	34.8	0.090	1.51	8.0
Footwall	25.7	21	0.040	0.020	5.84	37.7	0.78	1.24	33.8	0.123	1.60	15.8
Hangingwall	22.7	21	0.038	0.015	4.75	37.1	0.99	0.66	37.6	0.126	0.67	12.7

The significantly lower sulphur to nickel (S:Ni) ratio for the Hangingwall zone is clearly evident in the metallurgical samples collected. The implication is that when processing high proportions of the Hangingwall material more Silver Swan Tailings (SST) may need to be added to maintain an acceptable Fe:MgO ratio in the final concentrate. There is sufficient SST resource available to allow for higher proportions to be added when required.

- To undertake the second phase of the metallurgical testwork 10-hole in pit diamond drill program was completed in August 2023. This has provided representative metallurgical samples of the early production phase of the Project. The drilling covered the three mineralised zones across the strike length of the deposit, located in both the serpentinite and talc carbonate rock types. The drilling also collected additional samples to progress the metallurgical testwork for the Expansion Project.

- The samples are now at the laboratory to analyse for both base metals and non-sulphide nickel (NSNi). In addition, all the core has been scanned for talc using Hylogger with a selection of samples to be sent for confirmatory QXRD talc estimation. Talc estimates (via Hylogger and QXRD technique), are critical to accurately delineate (and remove from the sample selection process) the talc carbonate ore type. Locked cycle flotation tests (LCTs) will then be completed on the serpentinite only mineralised intercepts. LCTs will be completed separately on each ore zone and will include ore blend LCTs using the Silver Swan underground ore and appropriate proportions of the SST. The ore blend LCTs are required to confirm that acceptable concentrate quality specifications, in particular the Fe:MgO that can be achieved for each ore zone. Given the broad scope of the testwork program the metallurgical testwork program is expected to be completed during the first quarter of 2024.

FIGURE 1: BLACK SWAN – IN PIT DIAMOND DRILLING

2.2Mtpa Expansion Project

The Expansion Project prefeasibility study is on track for completion in late 2023 with the following workstreams progressing:

- The GRES engineering and processing study, which will provide plant refurbishment capital expenditure and processing operating costs, is on track to be completed this month. The study will also include an assessment of the metallurgical testwork completed to date for the Expansion Project, which has utilised a 50:50 blend of the serpentinite and talc carbonate ore types to produce a lower grade rougher concentrate;
- Mine plan optimisation work commenced in the September quarter and Entech are currently reviewing mining costs for the larger open pit design;
- Engagement with potential customers for the rougher concentrate remains ongoing with concentrate samples supplied to interested parties to confirm suitability as a feed source for their hydrometallurgical processes; and
- Work has recently commenced on a pressure oxidation testwork program using the same concentrate samples to assist with prefeasibility study assumptions.

Black Swan Exploration

Work undertaken by geological consultants, Newexco Exploration (Newexco) and our geological team identified several exploration targets (priority targets are displayed in Figure 2). Target 5 was identified as a high priority target which consists of a series of unexplained historic electromagnetic anomalies located to the north of the high-grade Silver Swan channel, approximately 1,000m below surface.

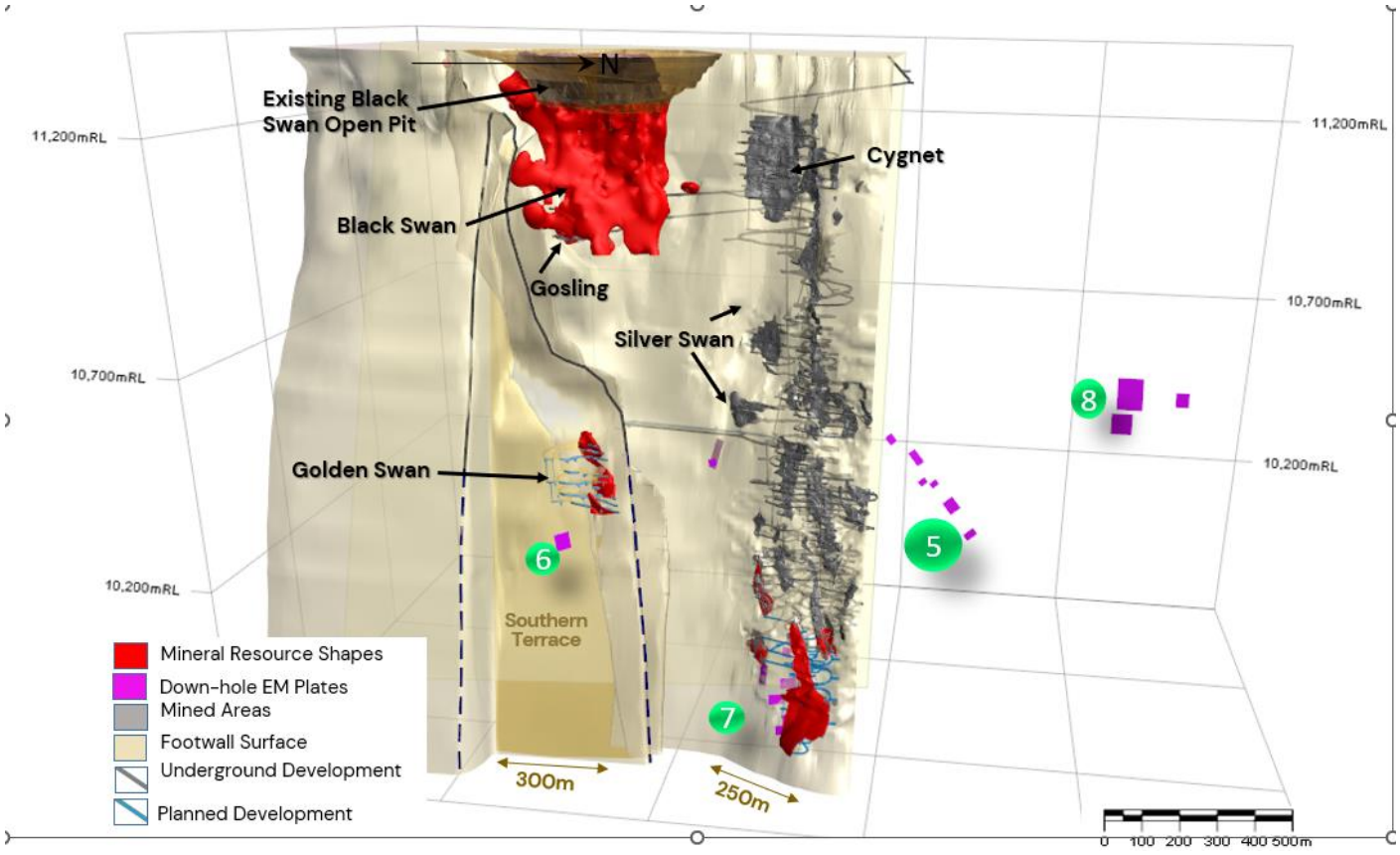

FIGURE 2: BLACK SWAN – PRIORITY DRILL TARGETS IN THE VICINITY OF THE SILVER SWAN HIGH-GRADE CHANNEL

To test Target 5, a 400m hole was drilled from the Silver Swan decline. In addition, a nearby historic hole was reopened and surveyed. The EM surveys utilising the underground EM loop did not replicate the historic anomalies that were identified using the surface loop.

However, the new hole has provided additional information on the location of the basal contact and the presence of an embayment feature towards the northern channel. Further geological assessment of this area is ongoing.

FIGURE 3: BLACK SWAN – TARGET 5 UNDERGROUND DIAMOND DRILLING

LAKE JOHNSTON

Western Ultramafic Unit Exploration

During May 2023 the Company completed an initial program of shallow air core (AC) and reverse circulation (RC) drilling to delineate 14km of the interpreted overturned basal contact of the Western Ultramafic Unit (WUU) (Refer ASX Announcement "*Exciting Greenfields Nickel Intersections at Lake Johnston*" dated 3 July 2023).

The May 2023 drill program enhanced the prospectivity of the WUU, by identifying numerous prospects for follow-up. This included Maggie Hays West, where Ni:Cu regolith anomalism up dip from isolated historic nickel sulphide drill intersections was identified. The drilling also confirmed the thickening of the WUU at Maggie Hays West to 400 metres and the development of an embayed contact due to a possible channel feature. One of the RC drillholes (PLJA171) was drilled through the basal contact at Maggie Hays West returning MgO values averaging 37% (max. 41 % MgO) and Ni:Cr ratios averaging 4.3 which is indicative of fertile channel facies ultramafic cumulate rocks at the base of the thickened WUU (Refer ASX Announcement "*Exciting Greenfields Nickel Intersections at Lake Johnston*" dated 3 July 2023).

Following release of these results, the 4.0m composite samples returning >0.4% Ni results within the WUU were resampled on 1.0m intervals and submitted for the base metal suite analysis along with platinum (Pt) and palladium (Pd). These assays were received mid-August 2023 and confirm the nickel anomalism and indicate coincident combined Pt +Pd in various prospects along the belt (refer Figure 4). Individual values of up to 254ppb combined Pt + Pd were returned and are commonly greater than 50ppb.The results are summarised in Table 2 with the collar location data available in Appendix 1, Table 3.

TABLE 2: DRILLHOLE INTERCEPTS OF >50 PPB COMBINE PT + PD FROM RECENT 1M RESAMPLING OF >0.4% NI IN AIR CORE AND RC DRILLING

Prospect	Hole	From (m)	To (m)	Width (m)	PGE (ppb) Pd + Pt
Johnny Turk	PLJA066	13	18	5	68.1
	including	***17***	***18***	***1***	***104.8***
Maggie Hays North	PLJA072	8	23	15	84.2
	including	***8***	***9***	***1***	***108.3***
Maggie Hays West	PLJA076	25	26	1	50.0
Maggie Hays West	PLJA078	12	28	16	81.5
	including	***25***	***26***	***1***	***125.3***
	and	***30***	***36***	***6***	***138.4***
Maggie Hays West	PLJA080	33	42	9	61.2
Maggie Hays West	PLJA081	40	47	7	66.2
Maggie Hays West	PLJA082	31	32	1	56.9
Maggie Hays West	PLJA083	24	28	4	70.2
Maggie Hays West	PLJA084	31	37	6	65.7
Maggie Hays West	PLJA085	12	14	2	61.9
Maggie Hays West	PLJA086	21	24	3	59.7
	and	27	37	10	52.7
	and	41	42	1	65.7
	and	49	50	1	57.7
Windy Hill	PLJA087	28	29	1	62.4
Windy Hill	***PLJA091***	***4***	***19***	***15***	***137.1***
	and	29	32	3	51.8
	and	36	38	2	60.8
Windy Hill	PLJA092	4	10	6	75.8
	including	***6***	***7***	***1***	***110.9***
	and	12	15	3	51.6
	and	19	20	1	81.9
Windy Hill	PLJA093	12	14	2	69.0
Jaymee Ruth	PLJA116	7	17	10	79.0
	including	***11***	***12***	***1***	***158.9***
Jaymee Ruth	PLJA119	16	19	3	62.3
Jaymee Ruth	PLJA124	13	20	7	89.5
	including	***15***	***16***	***1***	***234.8***
Windy Hill	***PLJA140***	***0***	***28***	***28***	***132.1***
Johnny Turk	PLJA148	16	25	9	75.4
	including	***20***	***21***	***1***	***100.7***
	including	***23***	***24***	***1***	***114.0***

Round Top	PLJA158	84	85	1	93.5
Johnny Turk	PLJA170	90	91	1	59.7
Maggie Hays West	PLJA172	11	14	3	64.1
	PLJA172	65	66	1	53.1
Windy Hill	PLJA173	16	21	5	61.2
	PLJA173	43	44	1	53.1

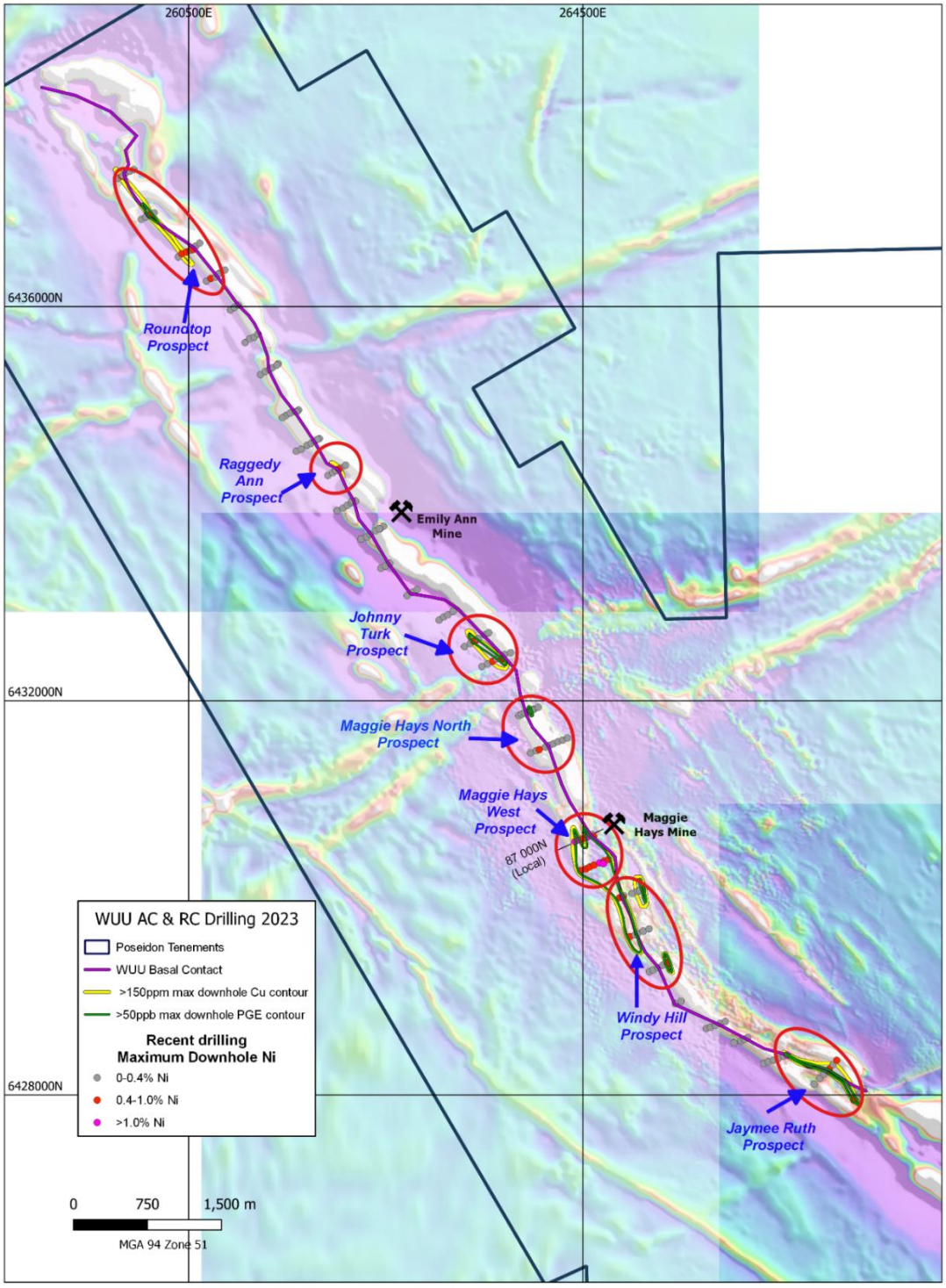

FIGURE 4: DRILL HOLE LOCATION PLAN OF THE RECENT DRILLING AT LAKE JOHNSTON TARGETING THE WESTERN ULTRAMAFIC UNIT SHOWING MAXIMUM DOWN HOLE NICKEL AND COINCIDENT >150 PPM COPPER AND >50PPB COMBINED PGE CONTOURING

At the Maggie Hays West Prospect, the PGE results closely emulate the Ni and Cu intersections. Importantly, the cumulative grades of Pt + Pd not only appears to increase towards the interpreted basal contact but best developed along the contact (refer Figure 5). This further enhances the hypothesis that the drilling has possibly identified a mineralised basal flow unit that is part of an open ended mineralised channel target that can be inferred to be up to 400m wide. A discrete magnetic feature has also been recognised over the main target area at Maggie Hays West. **The interpretation presents a compelling high priority target for follow up drilling.**

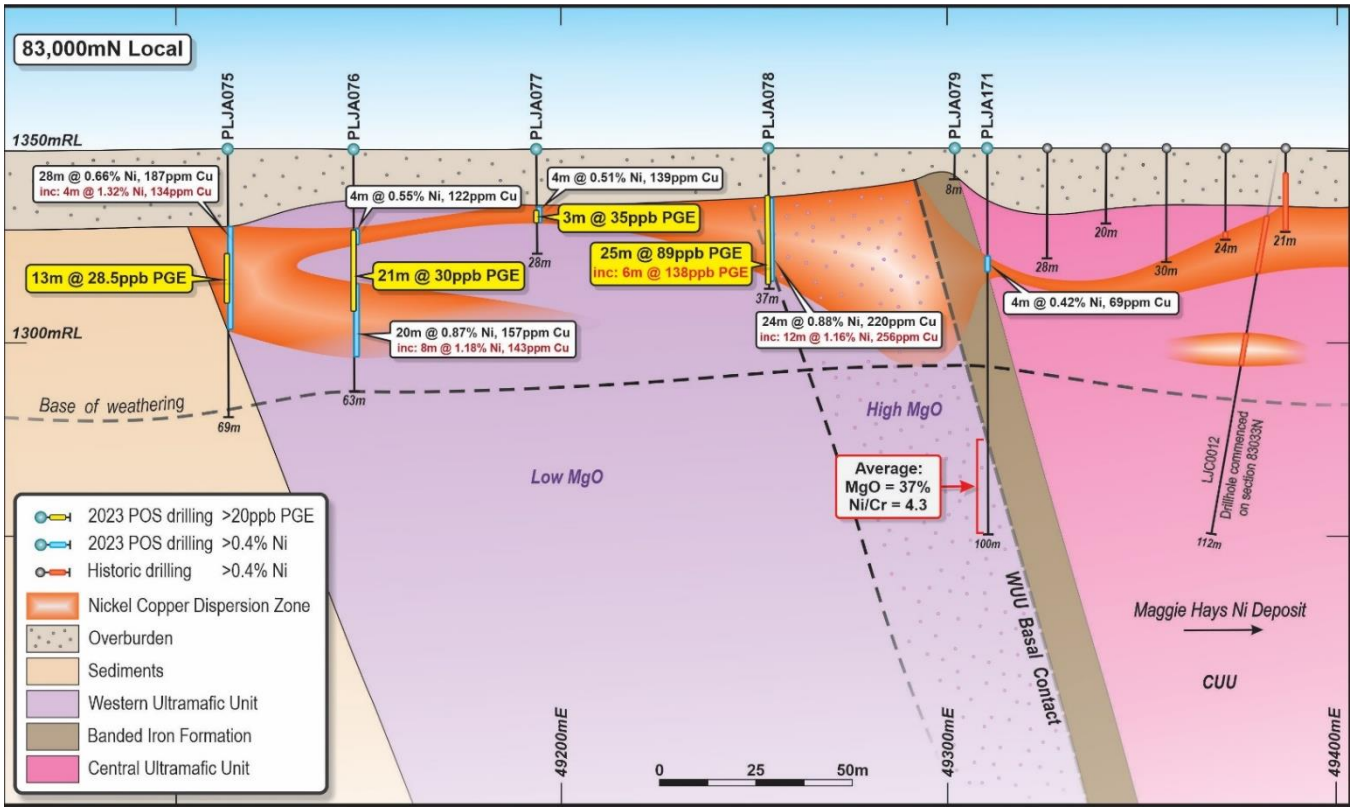

FIGURE 5: MAGGIE HAYS WEST - SECTION 83 000N (LOCAL GRID), SHOWING COINCIDENT COMBINED PT + PD RESULTS FROM 1M RESAMPLING OF >0.4% NI INTERSECTIONS, NI:CU DISPERSION AND HIGH MGO BASAL FLOW

Next Steps

A drilling program including aircore (AC) and reverse circulation (RC) has been planned to commence in October 2023. The drilling is designed to test both the Maggie Hays West and six other prospects along the WUU where coincident Ni, Cu and PGE anomalism has been identified close to the interpreted basal contact, refer Figure 4.

Further AC and RC drilling has been planned at the remaining six regional nickel prospects along the WUU. This drilling will target the recently defined geochemical anomalism on already cleared lines and is covered by a previously approved POW, refer Figure 4.

At Maggie Hays West, drilling has been planned to delineate the identified channel feature. A new Program of Work with drill lines spaced at 100m over a 700m strike length has been submitted. This program will further assist in better defining the WUU basal contact morphology and to target the interpreted channel at depth.

WINDARRA

Gold Tailings Project

Following the termination of the Binding Heads of Agreement with Green Gold Projects Pte Ltd in July 2023 the Company received an expression of interest from a resources company with facilities close to Windarra to process the Lancefield gold tailings and potentially the Windarra gold tailings along with accessing the water resource in the South Windarra pit.

Both parties are currently negotiating terms and working on drafting formal documentation.

COST SAVING INITIATIVES

The Company is reviewing all costs across the business both at the asset and corporate levels with the aim of taking costs out of the business. Further details will be provided of the planned changes and estimated cost savings once they have been finalised.

The plan is to implement these cost saving initiatives from September 2023.

This announcement was authorised for lodgement by the Board of Poseidon Nickel Limited.

Peter Harold
Managing Director & CEO

14 September 2023

For further information contact Peter Harold: + 61 (0)8 6167 6600.

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 420,000 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 with the aim of being a +15,000tpa nickel producer. 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, the Abi Rose and more recently the Maggie Hays West mineralisation at Lake Johnston.

The Company completed a Bankable Feasibility Study on Black Swan in November 2022 which will be the first project to restart. This could be 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.

A Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield was completed in mid-2022. A potential partner for this project is currently conducting due diligence on the Lancefield gold tailings and accessing the water in the South Windarra pit.

COMPETENT PERSON STATEMENTS:

The information in this report that relates to Exploration Targeting and Results is based on, and fairly represents, information compiled and reviewed by Ms Karyn Parker, who is an employee of Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists.

Ms Parker, has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012). Ms Parker consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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

- *"Exciting Greenfields Nickel Intersections at Lake Johnston" dated 3 July 2023*
- *"Updated Resource provides more Nickel at Black Swan" dated 7 June 2023*
- *"Black Swan Restart Project Update" dated 5 April 2022*

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	0.4%	800	0.78	7,000	15,100	0.73	111,000	10,400	0.69	71,000	26,300	0.72	189,000	0.02	4,000	0.03	7,900
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
Stockpiles	2012	0.4%	-	-	-	1,200	0.49	5,900	400	0.53	1,900	1,600	0.50	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%	-	-	-	722	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	-	NA	-
TOTAL																		
Total Ni, Co, Cu Resources	2004 &2012		**1,475**	**0.84**	**13,200**	**23,600**	**0.98**	**233,500**	**17,000**	**1.03**	**176,000**	**42,100**	**1.00**	**422,700**	**0.02**	**7,800**	**0.05**	**18,300**

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

- ***Black Swan Resource*** *as at 7 June 2023 (see ASX announcement "Updated Resource provides more Nickel at Black Swan" released 7 June 2023)*
- ***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 Resource*** *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)*
- ***Stockpile Resource*** *as at 22 July 2014 (see ASX announcement "Poseidon Announces Black Swan Mineral Resource" released 4 August 2014)*
- ***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)*

Appendix 2 - Nickel 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 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 Reserve, Silver Swan Reserve and Golden 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

DRILLHOLE COLLAR LOCATION DATA, REPORTED IN GDA 94 MGA ZONE 51

Prospect	Lease	Hole ID	Type*	East	North	RL	Dip	Azi (True)	EOH (m)
Johnny Turk	M 63/283	PLJA066	AC	263423	6432616	1354	-90	0	18
Maggie Hays North	M 63/283	PLJA072	AC	263970	6431901	1354	-90	0	35
Maggie Hays West	M 63/163	PLJA076	AC	264448	6430587	1350	-90	0	63
Maggie Hays West	M 63/163	PLJA078	AC	264552	6430616	1350	-90	0	37
Maggie Hays West	M 63/163	PLJA080	AC	264478	6430279	1350	-90	0	75
Maggie Hays West	M 63/163	PLJA081	AC	264532	6430293	1350	-90	0	47
Maggie Hays West	M 63/163	PLJA082	AC	264568	6430313	1350	-90	0	57
Maggie Hays West	M 63/163	PLJA083	AC	264613	6430333	1350	-90	0	48
Maggie Hays West	M 63/163	PLJA084	AC	264670	6430356	1350	-90	0	54
Maggie Hays West	M 63/163	PLJA085	AC	264718	6430376	1350	-90	0	36
Maggie Hays West	M 63/163	PLJA086	AC	264758	6430390	1350	-90	0	64
Windy Hill	M 63/163	PLJA087	AC	264871	6430002	1350	-90	0	63
Windy Hill	M 63/163	PLJA091	AC	265103	6430084	1350	-90	0	46
Windy Hill	M 63/163	PLJA092	AC	264978	6429608	1350	-90	0	39
Windy Hill	M 63/163	PLJA093	AC	265029	6429626	1350	-90	0	25
Jaymee Ruth	M 63/163	PLJA116	AC	266574	6428405	1350	-90	0	29
Jaymee Ruth	M 63/163	PLJA119	AC	266986	6428247	1350	-90	0	59
Jaymee Ruth	M 63/163	PLJA124	AC	267248	6427951	1350	-90	0	22
Windy Hill	M 63/163	PLJA140	AC	265360	6429336	1350	-90	0	28
Johnny Turk	M 63/283	PLJA148	AC	263394	6432605	1354	-90	0	34
Roundtop	M 63/282	PLJA158	RC	260106	6436934	1364	-90	0	100
Johnny Turk	M 63/283	PLJA170	RC	263679	6432425	1354	-90	0	100
Maggie Hays West	M 63/163	PLJA172	RC	264702	6430362	1350	-90	0	100
Windy Hill	M 63/163	PLJA173	RC	264906	6430005	1350	-90	0	88

**AC = Aircore, RC = Reverse Circulation*

Appendix 4
Checklist of Assessment and Reporting Criteria
Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Air core and reverse circulation drilling was used to obtain 1m drill samples that were placed on the ground in 20m rows. Four metre composite samples were created using a spear to collect sample from each pile and produce a representative 1 to 2kg sample. • Each sample was crushed and pulverized and a 0.2g sample digested with a mixture of nitric, hydrochloric, perchloric and hydrofluoric acids before analysed via ICP-OES (SGS method GE_ICP40Q20). • All samples >0.4% Ni were resampled on one metre intervals with a spear to collect a 1-2kg sample. • 1m interval samples were submitted for base metal and PGE analysis via ICP-OES (SGS method GE_ICP40Q20) and fire assay (SGS method GE_FAM30V10), respectively.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Air core and reverse circulation drilling was conducted by Gyro Drilling Pty Ltd using a KL-150 rig. The holes were drilled with a 95 mm hole diameter, using a blade bit and face sampling hammers. • The majority of holes were vertical. Holes that were angled were drilled at -60 towards 250 and orientated using a compass and clinometer. • Collar locations were established using a hand- held GPS using GDA MGA zone 51 co-ordinate system.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recovery was estimated visually, and notes made in the logs. Sample recoveries were generally considered good to excellent. • No relationship between sample recovery and grade was recognized.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• All drill chip samples were logged into Geobank Mobile by Geolithic Pty Ltd field staff at the time of drilling. Logged chips were washed prior to recording geology (including lithology, weathering, mineralogy and alteration). Holes were validated before being exported to the Geobank database. • All holes were logged in full.

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Air core and RC samples were collected using a spear directly from the sample piles to give a 1-2kg composite sample over 4m. • Follow-up 1 m samples were taken using the same method of composite samples with >0.4% Ni. • Field duplicates were carried out every 100 samples, and Certified Referenced Materials (CRM) were used every 100 samples.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Samples were dispatched to SGS laboratories in Perth. • After crushing and pulverizing they were analysed by 4-acid exploration grade digest with ICP-OES finish • 1m samples were also crushed and pulverized and analysed via 4 -acid exploration grade digest with ICP-OES finish and precious metals determined by using lead collection technique with a 30g charge weight with ICP-MS instrument finish • CRMs standards and field duplicate samples were submitted at a rate of 1 in 50 throughout the course of the program. • Analysis of the results demonstrate a high degree of reliability can be assigned to the SGS analytical results. • No portable analysis tools were used in the determination of assay results.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Sampling was conducted by the logging geologists and field staff who are contractors to Geolithic Pty Ltd. Data was collected using Geobank Mobile which utilises a validation function before data can be exported into the Geobank database. • No adjustments have been made to the assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Collar locations were picked up after drilling using a hand-held GPS ±5m. • The grid used is GDA 94 MGA Zone 51. • No downhole surveys were conducted on the vertical holes.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The air core holes were generally spaced 50m apart on approximately 400m line spacing, utilising previously cleared lines. • The results being reported are mostly on 4m composite samples, and subsequent 1m intervals over selected intervals.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drill sample orientation is considered appropriate with respect to the geology being tested. • Bias introduced by drilling orientation is considered insignificant due to the depth of cover and lower penetration of residual bedrock
Sample security	• *The measures taken to ensure sample security.*	• All samples were placed in prenumbered calico bags and secured with a draw string. The calico samples were then placed in a polyweave bag and sealed with a cable tie annotated with sample numbers and then placed in a bulky bag. • Samples were collected by a transport company from site and transported to SGS Perth for assay.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews were completed during drilling

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Western Ultramafic Unit covers a strike length of 17km and extends through tenements M63/282, M63/283, M63/284,M63/163 and E63/1784. • Mining tenements M63/282, M63/283, M63/284 and M63/163 are all 100% owned by Poseidon Nickel Limited. • E63/1784 is a joint venture between Poseidon Nickel (80%) and Essential Metals Limited (20%). • The tenements are located 160km west of Hyden and straddle the Hyden-Norseman Road.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Maggie Hays and Emily Ann nickel mines were discovered by LionOre. Much of the exploration drilling and development was completed by LionOre which was taken over by Norilsk in 2007. Norilsk Nickel continued mining and developing the underground mines on and off until 2013. Poseidon Nickel purchased the operation from Norilsk in December 2014.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Emily Ann, Maggie Hays and Abi Rose nickel deposits are hosted within the Central Ultramafic Unit are intrusive-style massive and disseminated nickel deposits. The Western Ultramafic Unit, however, is considered to be a Kambalda-Style Komatiite.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• The Lake Johnston drill hole database has developed and been maintained in different software formats for 30 years. It contains data captured by 6,523 drill holes by numerous companies over this period.
		• The latest drill hole information pertaining to this announcement that has not been previously reported is listed as Table within the text.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate*	• When reporting nickel assay results, a cut-off grade of 0.4% Ni has typically been used to create weighted averages. • When reporting Platinum and Palladium the values have been added to give a combined PGE value. A cut off of 50 ppb has been used in the tabulated results.

Criteria	JORC Code explanation	Commentary
	short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No metal equivalents are used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Nickel, Copper and Combined PGE widths are reported as down hole lengths at Lake Johnston.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate maps and sections related to this latest Lake Johnston drilling have been included with the announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Significant intersections from the recent AC and RC programs are tabulated in Table 1 of the report. Both low and high grades and widths are reported.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No further substantive exploration data is necessary to support this announcement.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further drilling is being planned to test the results reported.