

## QUARTERLY REPORT 30 JUNE 2021

30 July 2021

### HIGHLIGHTS

- **Golden Swan Drilling**
  - Golden Swan Drill Drive (465 metres) successfully completed late April 2021
  - Golden Swan resource drilling is progressing well with several assays returned showing high-grade nickel intersections. Resource drilling targeting completion early August
  - Down Hole Electro Magnetic (DHEM) survey results from holes that are peripheral to Golden Swan have correlated well to the previously interpreted EM plates and the current mineralised extents
  - Further drilling of the Southern Terrace well commence in August
- **Black Swan Scoping Study (post quarter end)**
  - GR Engineering Services (GRES) delivered a capex and opex scoping study in July on the restart of the Black Swan processing plant. The two options considered were (a) 150ktpa and (b) 1.1Mtpa
- **Windarra Tailings Project**
  - Definitive Feasibility Study (DFS) progressed to completion over the quarter. Results subsequently released, demonstrating robust project economics
  - Termination of the Windarra State Agreement progressed during the June quarter and expected to be completed during the next quarter
- **Corporate Finance**
  - Cash position of \$7.9 million on 30 June 2021, down from \$15.4 million at the end of the March 2021 quarter

**Poseidon Nickel (ASX: POS, “the Company”)** is pleased to report on its activities for the June quarter 2021.

Managing Director and CEO, Peter Harold, commented: *“Over the June quarter Poseidon achieved a number of milestones. The business successfully completed the 465 metre Golden Swan drill drive providing a safe platform from which to undertake resource drilling of the Golden Swan mineralised zone. The positioning of the drive has been critical to the speed with which we have progressed the Golden Swan resource drilling program.*

*We also progressed the Windarra gold tailings DFS and have now released the results of the study which show a robust project and the current spot A\$ gold price. In addition, GR Engineering advanced the scoping study on the estimated refurbishment and operating costs of the 150ktpa Silver Swan high grade circuit and the 1.1Mtpa lower grade circuits. The results have since been released with capital cost estimates well below what I had expected and the estimated time to refurbish each circuit only six months.*

*The next six months look incredibly exciting for the Company as we look to deliver the maiden Golden Swan resource, continue drill testing the very prospective Southern Terrace and move towards an FID on our high grade nickel inventory at Black Swan.”*

## Golden Swan Drill Drive

WestAuz completed the drill drive development underground at Black Swan in late April 2021. The new drill drive established two dedicated drill positions to facilitate the resource definition drilling of the Golden Swan mineralisation. Progress on the Golden Swan resource definition drilling program is currently ahead of schedule and under budget which in part attributed to the positioning of the drill drive.

The dimensions of the drive (5.5 metres high by 5.2 metres wide) and the ground support measures implemented (meshing and shotcrete) ensure that it will be suitable to be used as a means of access for any potential future mining of the Golden Swan mineralisation.



FIGURE 1: GOLDEN SWAN DRILL DRIVE

In addition to the drill drive, WestAuz performed rehabilitation works in the Silver Swan decline to support the planned Silver Swan infill drilling program which is designed to convert more of the current Silver Swan Resource into Reserve classification<sup>1</sup>. This drilling program is expected to commence later this year and is designed to add more high-grade nickel tonnes to the Black Swan mining inventory.

## Golden Swan Resource Drilling

The Resource Definition drilling program commenced in late April 2021 and was well progressed at quarter end, with 37 holes completed for a total of 10,575 metres drilled. The entire program is expected to consist of 60 holes for a total of 15,000 drilling metres. Significant assays results received over the quarter included:

- PGSD019: 8.45 metres at 1.05% Ni
- PSGD017: 1.0 metre at 14.5% Ni
- PSGD016: 9.5 metres at 3.8% Ni, and 31 metres at 2.41% Ni
- PSGD013: 17.4 metres at 3.16% Ni including 3.4 metres at 8.18% Ni
- PSGD011: 4.1 metres at 3.95% Ni
- PSGD010: 10.55 metres at 3.17% Ni
- PSGD004: 1.25 metres at 5.14% Ni
- PSGD003: 7.0 metres at 3.92% Ni
- PSGD002: 3.8 metres at 5.56% Ni
- PSGD001: 3.05 metres at 6.72% Ni

Note that additional results have since been released (refer to the ASX announcement 6 and 27 July 2021). As the understanding of the mineralised Golden Swan zone increases, drilling is focused on following and infilling the mineralised zone to Indicated Resource levels of confidence (see Figure 2, on following page).

Refer to Appendices for a list of all drilling hole results received over the period. For a more detailed description of the Golden Swan Drilling refer to the ASX announcement dated 27 July 2021.

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<sup>1</sup> Details of Resources and Reserves are detailed in ASX Announcement dated 18 March 2021 "Golden Swan Development Update"

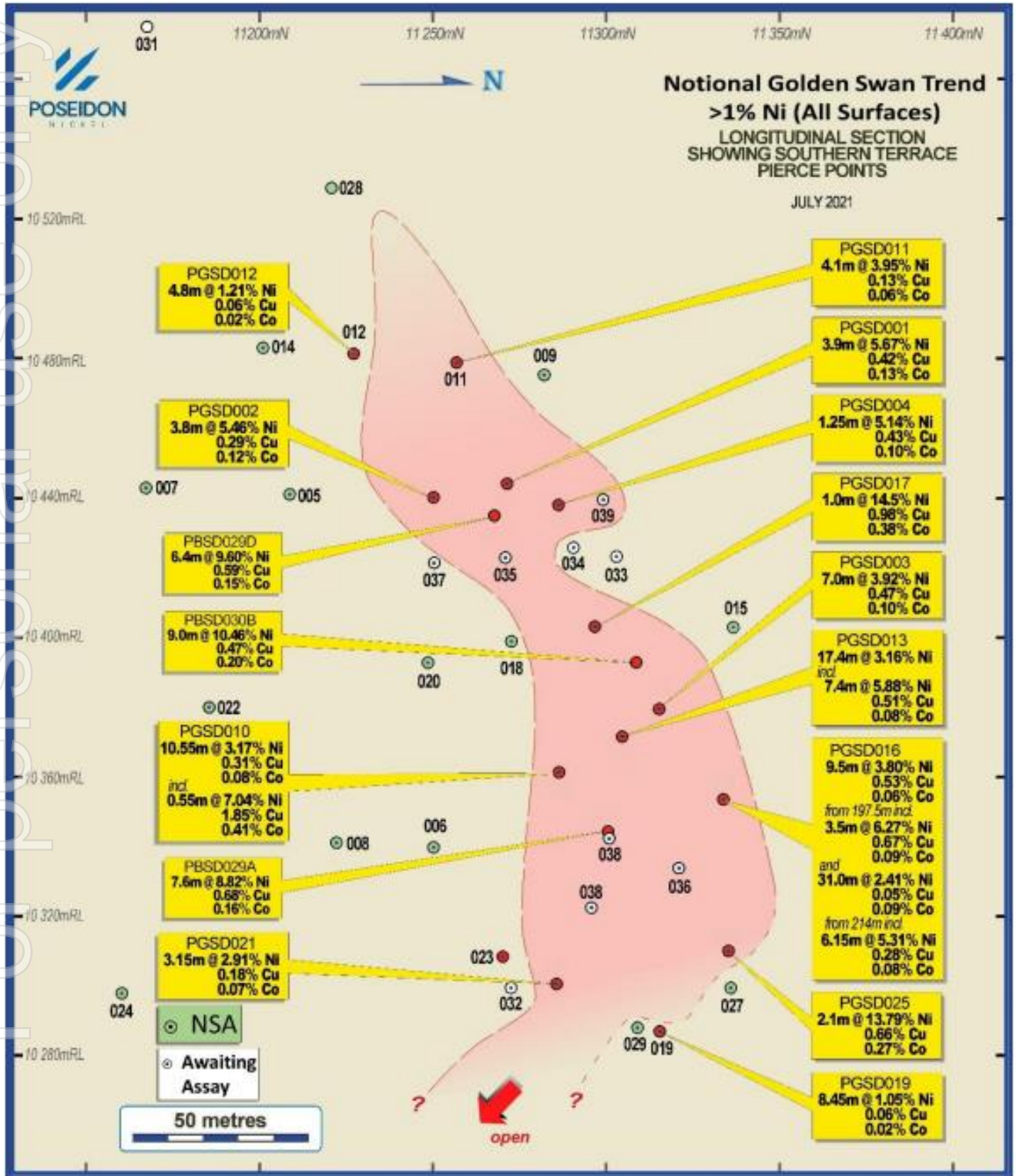


FIGURE 2: SIMPLIFIED GOLDEN SWAN LONG SECTION SHOWING PIERCE POINTS AND SIGNIFICANT DRILL RESULTS

## Black Swan Scoping Study

During the quarter the Company engaged GRES to complete a scoping study on the costs of refurbishment and operation of the Black Swan processing plant. Substantial progress was made on the scoping study with two processing capacities examined, 150ktpa for high grade ores using the Silver Swan Plant and 1.1Mtpa for the lower grade ores using the Black Swan Plant.

Subsequent to quarter end the scoping study was finalised and findings released, refer to ASX announcement “Scoping Studies Completed on capex and opex for Black Swan Processing Options” dated 27 July 2021.

## Windarra Gold Tailings Project

By the end of quarter the Company had substantially completed the Windarra DFS. Subsequent to quarter end the DFS was released, refer to ASX announcement “Windarra Gold Tailings Feasibility Study Highlights Robust Project” dated 23 July 2021.

The DFS expands on the work previously released in the Pre-Feasibility Study (PFS) (refer ASX Announcement 22 June 2020) including the reclamation of gold tailings from the North and South dam of the decommissioned Windarra TSF by hydraulic methods (water cannon or dredging) for subsequent processing in a purpose built 1.5Mtpa gold tailings processing plant. The DFS includes the Lancefield gold tailings which is added to the production base. Lancefield is expected to be reclaimed via conventional mechanical mining methods and hauled via road train from Lancefield to the Windarra site.

The DFS was prepared with assistance from several well recognised and independent mining consultants and contractors.

During the quarter the Company has continued to progress the termination of the Windarra State Agreement. The State and Poseidon are expecting to sign the termination documents during August 2021 with the repealing of the State Agreement including to completion of the Parliamentary process expected prior to the end of next quarter. Following termination of the existing State Agreement, the Windarra tenure (including the nickel and gold tailings projects) will operate under the WA Mining Act.

## Operating Update

### Black Swan

Primary activities at Black Swan over the quarter included completion of the Golden Swan drill drive, substantial progress on the Golden Swan Resource drilling program and the Black Swan processing facility scoping study while the site remained on care and maintenance.

### Windarra

The Windarra Gold Tailings DFS was completed and the results released in late July.. Windarra care and maintenance activities continued to be performed over the period.

### Lake Johnston

Lake Johnston remained on care and maintenance during the quarter.

The Company has engaged NewExco to undertake an exploration target review of the project. Substantial progress was made on this report over the quarter with findings to be received during the next quarter.

Following receipt of NewExco's report, the Company will continue to explore a range of strategic options for the Lake Johnston asset including divestment, joint venture, updated restart studies and recommencing exploration.

## COVID Update

The Company and its contractors continue to operate within the safe operating parameters as per the WA Government requirements.

## Financial

As at 30 June 2021, the Company held cash and current investments totaling \$7.9 million.

Over the June 2021 quarter, Poseidon's net cash outflow from operating and investing activities totalled \$7.5 million. Cash expenditures included \$6.6 million of exploration and evaluation costs, of which \$3.4 million was spent on the Golden Swan drill drive, \$1.9 million on exploration activities and \$0.1 million on the Windarra gold tailings project DFS. The remainder of exploration and evaluation costs relate to operations supporting these projects and care and maintenance activities across the three sites.

Costs incurred over the quarter amounted to \$6.8 million compared to a forecast of \$7.6 million, with the variance to forecast resulting primarily due to the Golden Swan resource drilling program progressing under budget. Total cash expenditure for the quarter was \$7.5 million with previously announced deferral of payments from the prior quarter being paid in April 2021.

The Company received a \$0.5 million R&D tax refund during the quarter relating to activities during the FY20 financial year.

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

Related party expenses over the quarter totalled \$0.1 million:

- \$1,374 paid to Black Mountain Metals Pty Ltd for consultancy services provided to Poseidon with regards to technical studies conducted on the Company's mining assets; and
- \$73,717 fees paid to Directors.

Poseidon has forecasted costs of \$6.5 million over the next quarter, of which \$3.2 million is estimated for Golden Swan and Southern Terrace exploration activities and \$0.1 million to progress studies on the commencement of operations at Black Swan. The remaining expenditure includes support services for works being undertaken at Black Swan, care and maintenance costs at Lake Johnston and Windarra and corporate costs.

## Other

Poseidon assisted Singaporean authorities with an investigation relating to possible fraudulent trading offences under Singaporean law involving two Singaporean companies and the purported sale of nickel products. Poseidon has advised Singaporean authorities that the Company did not enter into any sales agreements with the two Singaporean companies.

There were no material changes in mineral tenements during the period (as shown in Table 4).

*This Quarterly Activities Report was authorised for release by the Poseidon Board of Directors.*



**Peter Harold**  
**Managing Director and CEO**

30 July 2021

**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 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 where project risk capital and operating costs are low. A critical element of this strategy has been to acquire projects and operations with high levels of geological prospectivity likely to lead to potential substantial extension of the operation's life 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 Abi Rose deposit at Lake Johnston and the recent discovery of the Golden Swan mineralisation at Black Swan. The Company is also undertaking a Definitive Feasibility Study on retreating the gold tailings at Windarra given the strength of the A\$ gold price.

## Drill Hole Summary

**Table 1: Golden Swan Drill Hole Summary at 30 June 2021**

CollarID	EAST	NORTH	RL	Dip	Azimuth (True)	TD (m)
PGSD001	10305.38	11303.32	10457.88	-6.2	63.1	210
PGSD002	10305.38	11303.32	10457.88	-5.9	69.7	213
PGSD003	10321.54	11320.82	10457.3	-30.6	55.3	206
PGSD004	10305.38	11303.32	10457.88	-6.9	56.1	218
PGSD005	10305.38	11303.32	10457.88	-6.4	76.4	257
PGSD006	10321.54	11320.82	10457.3	-29.8	68.4	275
PGSD007	10305.38	11303.32	10457.88	-6.5	82.0	278
PGSD008	10321.54	11320.82	10457.3	-28.3	80.9	312
PGSD009	10305.38	11303.32	10457.88	8.7	64.1	176
PGSD010	10321.54	11320.82	10457.3	-31.5	66.2	257
PGSD011	10305.38	11303.32	10457.88	8.2	71.4	197
PGSD012	10305.38	11303.32	10457.88	8.1	78.7	225
PGSD013	10321.54	11321.82	10458.3	-30.8	61	248
PGSD014	10305.38	11303.32	10457.88	7.2	85.3	243
PGSD015	10305.38	11303.32	10457.88	-17.8	49.6	231
PGSD016	10321.54	11321.82	10458.3	-32.7	51.8	266
PGSD017	10305.38	11303.32	10457.88	-18.5	56	231
PGSD018	10305.38	11303.32	10457.88	-18.7	62.6	222
PGSD019	10321.54	11321.82	10458.3	-39.2	55	308
PGSD020	10305.38	11303.32	10457.88	-17.8	68.6	261
PGSD021	10321.54	11321.82	10458.3	-37.8	61.4	317
PGSD022	10305.38	11303.32	10457.88	-16.9	79.9	330
PGSD023	10321.54	11321.82	10458.3	-38	68	287
PGSD024	10305.38	11303.32	10457.88	-26.5	80.4	389.9
PGSD025	10321.54	11321.82	10458.3	-39	48.5	293
PGSD026	10305.38	11303.32	10457.88	7.8	102	422.7
PGSD027	10321.54	11321.82	10458.3	-45	48.8	308.5
PGSD028	10305.38	11303.32	10457.88	22.3	80.1	263.9
PGSD029	10321.54	11321.82	10458.3	-43.9	54.6	323.4
PGSD030	10321.54	11321.82	10458.3	-48.5	42.8	335
PGSD031	10305.38	11303.32	10457.88	32	97	67
PGSD032	10321.54	11320.82	10457.3	-42.5	68.7	290.4
PGSD033	10305.38	11303.32	10457.8	-11.8	53.2	254.8
PGSD034	10305.38	11303.32	10457.8	-12	59.2	263.3
PGSD035	10305.38	11303.32	10457.8	-11.6	65.8	248.8
PGSD036	10321.54	11320.82	10457.3	-37.5	53.7	270
PGSD037	10305.38	11303.32	10457.8	-11.2	71.8	250



# MINERAL RESOURCE STATEMENT

## Table 2: Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY													
			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)	
<b>BLACK SWAN PROJECT</b>																
Black Swan	2012	0.40%	9,600	0.68	64,900	21,100	0.54	113,800	30,700	0.58	179,000	0.01	4,200	NA	-	
Silver Swan	2012	4.50%	108	9.4	10,130	61	9.7	5,900	168	9.5	16,030	0.19	316	0.4	679	
<b>LAKE JOHNSTON PROJECT</b>																
Maggie Hays	2012	0.80%	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	
<b>WINDARRA PROJECT</b>																
Mt Windarra	2012	0.90%	922	1.56	14,500	3,436	1.66	57,500	4,358	1.64	72,000	0.03	1,200	0.13	5,700	
South Windarra	2004	0.80%	772	0.98	7,500	-	-	-	772	0.98	7,500	NA	-	NA	-	
Cerberus	2004	0.75%	2,773	1.25	34,600	1,778	1.91	34,000	4,551	1.51	69,000	NA	-	0.08	3,600	
<b>TOTAL</b>																
Total Ni, Co, Cu Resources	2004 & 2012	-	16,775	1.03	173,530	27,275	0.81	221,300	44,049	0.90	395,530	0.02	7,516	0.03	13,379	

Note: totals may not sum exactly due to rounding. NA = information Not Available from reported resource model. The Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

**Black Swan Resource** as at 22 July 2014 (see ASX announcement "Poseidon Announces Black Swan Mineral Resource" released 4<sup>th</sup> August 2014)

**Silver Swan Resource** as at 5 August 2019 (see ASX announcement "Silver Swan Resource Upgrade" released 5<sup>th</sup> August 2019)

**Maggie Hays Resource** as at 17 March 2015 (see ASC announcement "50% Increase in Indicated Resources at Lake Johnston" released 17<sup>th</sup> March 2015)

**Mt Windarra Resource** as at 7 November 2014 (see ASX announcement "Poseidon Announces Revised Mt Windarra Resource" released 7<sup>th</sup> 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<sup>st</sup> 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.

## ORE RESERVE STATEMENT

### Table 3: Nickel Projects Ore Reserve Statement

Nickel Sulphide Reserves	JORC Compliance	ORE RESERVE CATEGORY		
		PROBABLE		
		Tonnes (Kt)	Ni% Grade	Ni Metal (t)
<b>SILVER SWAN PROJECT</b>				
Silver Swan Underground	2012	130	5.2	6,800
Black Swan Open pit	2012	3,370	0.63	21,500
<b>TOTAL</b>				
Total Ni Reserves	2012	3,500	0.81	28,300

Note: Calculations have been rounded to the nearest 10,000 t of ore, 0.01 % Ni grade 100 t Ni metal and 10t of cobalt metal.

Silver Swan Underground Reserve as at 26 May 2017 (see ASX announcement "Silver Swan Definitive Feasibility Study" released 26<sup>th</sup> May 2017)  
 Black Swan Open Pit Reserve as at 5 November 2014 (see ASX announcement "Poseidon Announces Black Swan Ore Reserve" dated 5<sup>th</sup> November 2014).

The Company The Company completed an upgrade to the Silver Swan Indicated Resource in 2019 which was based upon the 2015 Silver Swan Resource Estimate (refer to Table 1 above for the new Silver Swan Resource estimate). At this point it is not known the impact the update to the Silver Swan Resources will have on the Silver Swan Reserve.

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

## Tenements Held

### Table 4: Tenements Held as at 30 June 2021

AREAS OF INTEREST	TENEMENTS	ECONOMIC ENTITY'S INTEREST
Western Australia		
Windarra Nickel Assets	SA 38/261, G38/21, L38/121, L39/184, L38/199, L38/218, L39/221	100%
Windarra South	MSA 38/261, L38/119, L38/122, L38/220	100%
Woodine Well	M39/1075, L39/224	100%
Pool Well	M38/1244, M38/1245, L38/118	100%
Lake Johnston Nickel Assets	E63/1067, G63/0008, G63/0005, L63/0051, L63/0052, L63/0055, L63/0057, M63/0163, M63/0282, M63/0283, M63/0284, M63/0292, M63/0293, M63/0294, M63/0522, M63/0523, M63/0524, E63/1784	100%
Black Swan Nickel Assets	M27/0039, M27/0200, M27/0214, M27/0216, L27/0057, L27/0058, L27/0059, L27/0074, L27/0075, L27/0077, L27/0078, L24/0219, L24/0222, G27/	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 June 2021 Quarter

Nil

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements during the June 2021 Quarter

Nil

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements Acquired or Disposed of during the June 2021 Quarter

Nil

**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 Mr Andrew Pearce, who is an employee of Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists.*

*The information in this report which relates to the Black Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd. The information in this report which relates to the Black Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and who is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report which relates to the Silver Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, who was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Kahan Cervoj who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Silver Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full-time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report which relates to the Lake Johnston Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, who was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Lake Johnston Ore Reserves Project is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report that relates to Mineral Resources at the Windarra Nickel Project and Gold Tailings Project is based on, and fairly represents, information compiled by Mr Steve Warriner, who was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The Windarra Project contains Mineral Resources which are reported under JORC 2004 Guidelines as there has been no Material Change or Re-estimation of the Mineral Resource since the introduction of the JORC 2012 Codes. Future estimations will be completed to JORC 2012 Guidelines.*

*Mr Pearce, Mr Warriner, Mr Cervoj, Mr Weeks, Mr Glacken and Mr Keenan all have 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). Mr Warriner, Mr Cervoj, Mr Weeks, Mr Glacken and Mr Keenan have consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

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

**FORWARD LOOKING STATEMENT – INFERRED RESOURCE STATEMENTS:**

*The Company notes that an Inferred Resource has a lower level of confidence than an Indicated Resource and that the JORC Codes, 2012 advises that to be an Inferred Resource it is reasonable to expect that the majority of the Inferred Resource would be upgraded to an Indicated Resource with continued exploration. Based on advice from relevant competent Persons, the Company has a high degree of confidence that the Inferred Resource for the Silver Swan deposit will upgrade to an Indicated Resource with further exploration work.*

*The Company believes it has a reasonable basis for making the forward looking statement in this announcement, including with respect to any production targets, based on the information contained in this announcement and in particular, the JORC Code, 2012 Mineral Resource for Silver Swan as of May 2016, together with independent geotechnical studies, determination of production targets, mine design and scheduling, metallurgical testwork, external commodity price and exchange rate forecasts and worldwide operating cost data.*

**FORWARD LOOKING STATEMENTS:**

*This release contains certain forward looking statements including nickel production targets. 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.*

*Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance.*

*Forward looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if materially adverse, may affect the timing or the feasibility and potential development of the Golden Swan underground mine.*