

## BLACK SWAN RESTART & COMPANY UPDATE

### KEY POINTS

#### Black Swan Smelter grade concentrate project

- **Resource update** – all assays received, update due late May/early June 2023
- **Offtake & Debt Financing** – short list reduced to two parties, with final negotiations of offtake and debt financing agreements underway
- **Timetable** – targeting Final Investment Decision on the Black Swan restart late June/early July 2023

#### Other projects

- **Black Swan Expansion Project** – metallurgical testwork continues, concentrate samples supplied to potential customers for testing
- **Proposed Kalgoorlie pCAM Hub** – MMI conditional grant no longer being negotiated
- **Lake Johnston** – stage 1 drill program of ~6,600m completed, assay results expected late June 2023

**Poseidon Nickel Ltd (ASX: POS, “Poseidon” or “the Company”)** is pleased to report on the continued progress towards the restart of the Black Swan project based on the November 2022 Bankable Feasibility Study for the 1.1Mtpa mill feed option to produce smelter grade concentrate (refer to Company ASX announcement “*Positive Black Swan Feasibility Study*”, dated 21 November 2022). Various work streams continue to be progressed as the Company heads towards the restart with the Final Investment Decision (FID) on track to be made late June/early July 2023.

**Managing Director and CEO, Peter Harold commented:** “*The offtake and project financing work streams continue with the shortlist reduced to two parties with whom we are now negotiating separate offtake and project financing agreements. We are aiming to execute documents with the successful party in late June/early July 2023.*”

*We continue to study the Expansion Project with metallurgical testwork progressing and rougher concentrate samples provided to potential customers for testing of downstream processing. The attraction of the Expansion Project is that annual production of nickel in concentrate could increase and the mine life could be extended due to the ability to treat talc carbonate material which is not included in the current Ore Reserves. The key to unlocking the value of the talc carbonate material is finding the most attractive customer for the proposed product which is a major focus of the expansion study.”*

## Black Swan Disseminated Resource Drilling Program

The Company completed a 112-hole reverse circulation drilling program for a total of 10,845 metres, from the bottom of the open pit, into the Black Swan Disseminated Resource in February 2023. All assay results have been received with the resource model update due for delivery late May/early June 2023.

The principal aims of the drill program were:

- to increase the confidence in the Black Swan Resource, by infilling the area extending approximately 125 metres immediately below the existing Black Swan open pit with the objective to better delineate the metallurgically important serpentinite and talc-carbonate hosted resources in this area and to lift most of these resources into Measured and Indicated;
- to provide more detailed production scheduling for commencement of operations; and
- to supply additional material for ongoing metallurgical testwork on the Expansion Project.

## Workstreams for the Restart

The main workstreams are progressing as follows:

- Offtake and financing – see below
- Pre-works at Black Swan
  - Resource upgrade – due late May/early June 2023
  - Processing plant – contract for plant refurbishment being negotiated
  - Approvals – continuing to work on obtaining any outstanding approvals
  - Personnel – planning continues for the onboarding of the technical team post FID
  - Accommodation – progressing a number of options in and around Kalgoorlie

## Offtake and Debt Financing

The Company was delighted with the strong interest received for offtake and project debt financing. The two groups who have provided the most attractive offtake and debt financing terms have been shortlisted and we have progressed to negotiating separate offtake and project debt financing agreements with both parties. We anticipate being in a position to execute binding agreements with one party in late June/early July 2023.

## Final Investment Decision (FID) – Smelter Grade Concentrate (1.1Mtpa feed)

We are aiming for FID late June/early July 2023.

## Expansion Project - Feasibility Study

Work continues on the Expansion Project which is based on treating 2.2Mtpa of mill feed and producing a rougher concentrate. The rougher concentrate product has a lower nickel grade and higher magnesium oxide content than conventional smelter feed and is more attractive as a feed for either pressure oxidation (POX) or high-pressure acid leach (HPAL) plants rather than a conventional nickel smelter. Metallurgical studies are continuing to determine the optimum rougher concentrate grade and metallurgical recovery and typical specifications to allow for potential offtakers to provide indicative terms. These terms will be a key component in determining the economics of the Expansion Project. Concentrate samples have been supplied to potential customers for testwork.

## Pure Battery Technologies Kalgoorlie pCAM Hub project - Modern Manufacturing Initiative - Conditional Grant Update

Pure Battery Technologies (PBT) was awarded a \$119.6 million conditional Modern Manufacturing Initiatives (MMI) Grant (reference number: MMIMCS000152) from the Federal Australian Government in March 2022 to advance their proposed battery material refinery hub project in Kalgoorlie (**the Kalgoorlie pCAM Project**) (refer ASX release titled “\$119.6 million Modern Manufacturing Initiative Grant for Integrated Battery Material Refinery Hub in Kalgoorlie” dated 17 March 2022).

PBT had been negotiating the terms of the conditional grant with the Department of Industry, Science and Resources and we understand that for various reasons, the Department has decided to discontinue further negotiations with PBT in respect of the grant.

Whilst this is an understandably disappointing outcome for PBT and the critical minerals industry in WA generally, the decision by the Department of Industry, Science and Resources is of minimal impact to Poseidon given that:

- PBT and its proposed Kalgoorlie pCAM Project were one of a number of parties that Poseidon have been considering as potential offtakers for the Black Swan Expansion Project (rougher concentrate), some of which have existing HPAL projects in WA;
- none of the grant monies were ever intended for, or allocated to Poseidon or the Black Swan restart;
- the likely timing of development of the Kalgoorlie pCAM Project would not align with Poseidon’s intended timing for the Black Swan Restart (subject to Final Investment Decision being made); and
- Poseidon is well advanced on finalising offtake and debt financing for the Black Swan smelter grade project with other parties.

PBT has advised us they are proceeding with the bankable feasibility study for the Kalgoorlie pCAM Project and we intend to continue to provide support to PBT in terms of ore and concentrate samples for metallurgical testwork.

## LAKE JOHNSTON

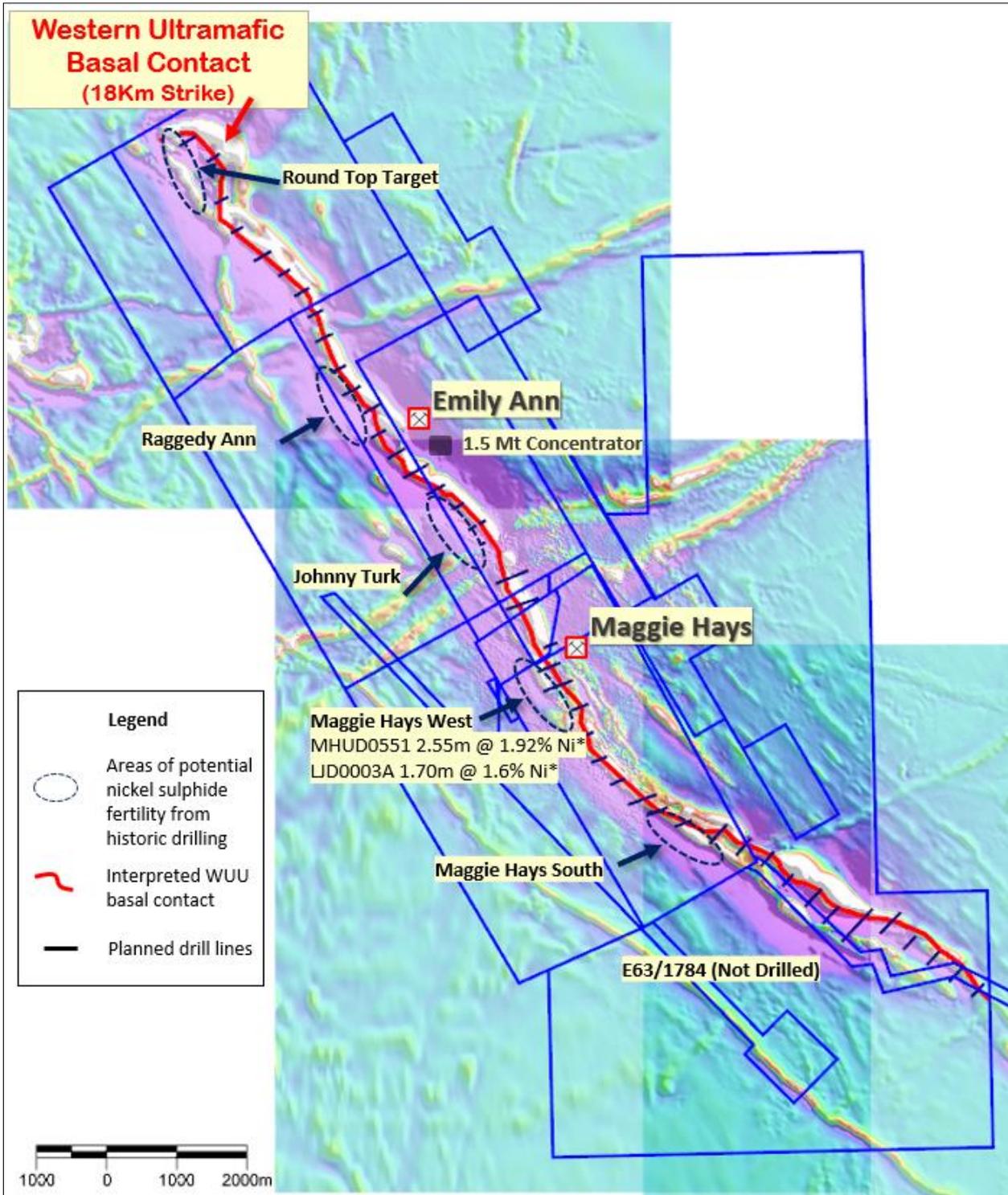
### Western Ultramafic drill program

#### Background

The Western Ultramafic Unit (WUU) is interpreted to represent the extruded portion of the intrusive body that has hosts the Maggie Hays and Emily Ann nickel sulphide deposits. The stratigraphic contact position that is located between the extrusive komatiite and the underlying Banded Iron Formation (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 and this is conducive for the formation of nickel sulphides within the ultramafic flow. It is within the channelised, embayed positions along the basal contact 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 planned drilling program. All the stratigraphic units have subsequently been deformed and overturned over the length of the Company’s tenements at Lake Johnson, see Figure 1.

Previously, the WUU had been sparsely drilled with a distinct lack of effective drilling in the near surface environment. Importantly, historical nickel sulphide intersections drilled by previous explorers prove the fertility of the unit and have had little follow-up. Coupled with this, ground EM has failed to produce any distinct conductive responses as the BIF response has swamped the data. Consequently, the basal contact of the WUU is considered a high priority target for potential economic nickel sulphide mineralisation.

A drill program of up to 15,000 metres to test the basal contact position of the WUU at Lake Johnston commenced in April 2023. This drilling program will assist in mapping the basal contact and delineate geochemical vectors towards nickel sulphide mineralisation.

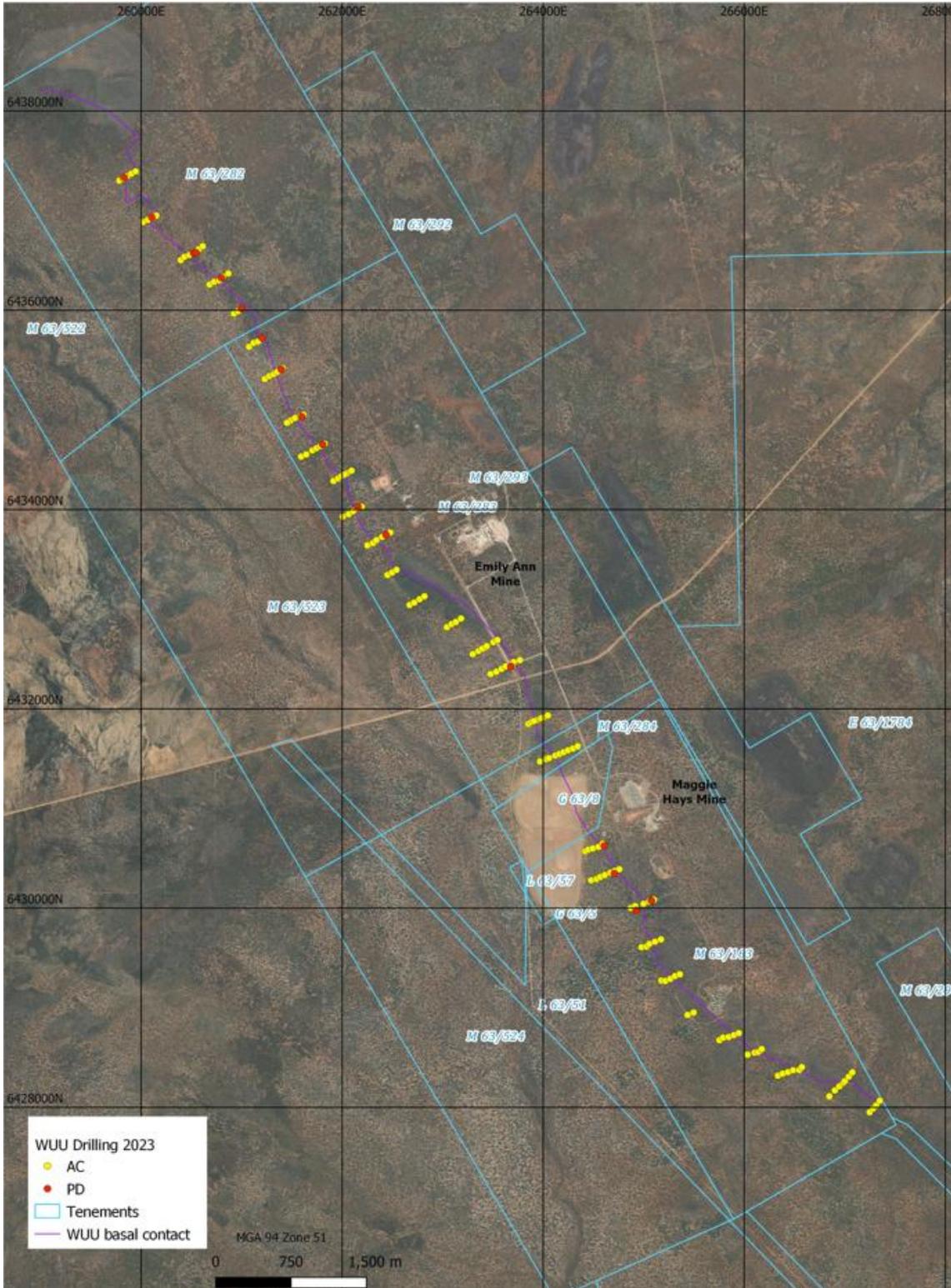


**FIGURE 1: INTERPRETED BASAL CONTACT POSITION OF THE WESTERN ULTRAMAFIC OVERLAYING MAGNETICS WITH HIGHLIGHTED AREAS OF POTENTIAL NICKEL SULPHIDE FERTILITY IDENTIFIED FROM HISTORIC DRILLING CONDUCTED BY PREVIOUS OWNERS, AND NOT PUBLICLY REPORTED. BASAL CONTACT TO BE TESTED IN UPCOMING DRILL PROGRAM.**

*\* REFER TO ASX ANNOUNCEMENT “NEW MINERALISED ZONE IDENTIFIED AT LAKE JOHNSTON” DATED 18 FEBRUARY 2015*

**First stage drill program**

The drilling contractor mobilised to site mid-April 2023 and has completed Stage 1 of the Western Ultramafic drill program, see Figure 2. A total of 157 air core (AC) holes for 5,081 metres were drilled covering the WUU on a 400-metre line grid. The WUU has weathered to silica cap in various locations creating a hard layer which can be difficult to penetrate with AC. Selected lines were identified for additional reverse circulation (RC) drilling to gain critical geochemical information beneath with a total of 18 RC holes for 1,106 metres drilled.



**FIGURE 2: DRILL HOLE LOCATION PLAN FOR LAKE JOHNSTON SHOWING AC HOLES IN YELLOW AND RC IN RED**

The next round of drilling will be undertaken following the receipt of assay results from Stage 1. The first batches of samples have been sent to the assay laboratory with results anticipated in late June 2023.

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

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



**Peter Harold**  
**Managing Director & CEO**

**26 May 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 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 and the Abi Rose mineralisation at Lake Johnston.*

*The Company recently completed a Bankable Feasibility Study on Black Swan which will be the first project to restart. This will 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.*

*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:

- “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
- “Gold Tailings Resource at Windarra updated to JORC 2012 Indicated” 22 Jun 2020
- “Positive Black Swan Feasibility Stuff” released 21 November 2022.

which are available to view on [www.poseidon-nickel.com.au](http://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 Reserve 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.

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.**

- **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)
- **Black Swan Surface Stockpiles** as at 4 August 2014 (see announcement “Poseidon Announces Black Swan Mineral Resource” including surface stockpiles released 4 August 2014)

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.

Nickel Sulphide Reserves	JORC Compliance	BLACK SWAN PROJECT							
		Proved/Probable	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co % Grade	Co Metal (t)	Cu % Grade	Cu Metal (t)
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)

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