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## ASX Announcement 30 July 2024

# **UPDATE ON GOLD EXPLORATION PROGRAMS**

# Work programs continue to demonstrate greenfields potential for other commodities outside the nickel resources

#### Gold rock chip samples at Windarra

- Rock chip samples located within established gold in soil anomalies have returned up to 0.37 g/t Au and 12.9 g/t Ag
- Results support the interpretation that Windarra contains strike extensions to the main mineralised gold trend which controls nearby gold camps

#### Large gold anomaly defined at Lake Johnston

- A large coherent 1.2km by 0.9km gold in soil anomaly (peak value 146 ppb Au) defined at Billy Ray remains open and untested by drilling
- The soil anomaly is located above the intersections of an interpreted 3km intrusive body, NNE trending structures, and dolerite dykes

#### • Potential 6.5km gold corridor identified at Black Swan

- Anomalous gold values returned in drill holes which have intersected the mineralised structure along the corridor with soil anomalies also identified on neighbouring tenure
- Metal detecting program has recovered several small gold nuggets along the corridor with numerous historic shallow workings that are typical of repeated detecting phases
- Prospective corridor is virtually untested by drilling, with only 5% of all previous drill samples at Black Swan assayed for gold

#### • Exploration next steps

- Undertake a major soil sampling program at each project that are complementary to progressing multiple greenfields targets (Ni-Li-Au)
- The proposed programs are comprehensive and a first of their kind over the project portfolio where a full suite of assays will be systematically recorded

**Poseidon Nickel (ASX: POS, the Company)** is pleased to update the progress on its gold exploration programs across Windarra, Lake Johnston and Black Swan.

CEO, Brendan Shalders, commented, "Continuing with our strategy to assess the greenfields potential for multiple commodities (Ni-Li-Au) across our project portfolio, we have identified exciting prospective gold targets at all three of Poseidon's projects.

Given our significant infrastructure assets are strategically located within well-established mining regions any exploration success is highly leveraged for production, either at one of our sites or at proximal processing facilities.



We recently announced gold in soil anomalies at Windarra discovered by soil sampling from a program completed in 2010 for which gold assay results were not reported. Following on from this announcement, rock chip samples from recent site visits have returned results up to 0.37g/t Au and 0.22g/t Au within the reported soil anomalies. Results support the interpretation that Windarra contains the strike extensions along a main mineralised gold trend which controls nearby gold camps.

At Lake Johnston a large coherent gold anomaly at the Billy Ray prospect has also been confirmed. Gold exploration has been sporadic at Lake Johnston in the past, with several gold in soil targets previously identified, however there has been a bias toward nickel exploration historically. The Billy Ray gold anomaly is 1.2km by 0.9km and remains open and untested by drilling.

At Black Swan an assessment of the locations of prior prospector workings and a follow up detecting program has recently recovered a number of gold nuggets with a maximum weight of 0.4g. There has been limited gold exploration activities historically at Black Swan. The gold nuggets have demonstrated a consistent trend along the eastern portion of the Black Swan tenement landholding which requires follow-up to assess the potential of this target.

The Company is excited by the greenfields gold exploration targets at Black Swan, Windarra and Lake Johnston and plans to undertake low-cost surface exploration works in the immediate future."

#### **Rock Chip Samples Confirm Gold Mineralisation at Windarra**

The Company announced a gold in soils anomaly at Windarra earlier this year, refer to ASX announcement *"Gold and Nickel Targets at Windarra"* dated 6 June 2024, with the two best areas being:

- The Western anomaly which occurs to the west and trends sub-parallel to the ultramafic/BIF contact. The anomaly extends over 6km x 0.7km (max Au 460ppb); and
- The Eastern anomaly is a 4km x 0.3km (max Au 16ppb) low order gold anomaly. No drilling for gold has occurred on this anomaly within the Windarra Project and it is open to the north (*see Figure 1*).

Recent rock chip sampling and ground checking conducted at Windarra along the gold soil anomalies has returned peak results from the rock chips of 0.37g/t Au and 12.9g/t Ag (PNR52264) and 0.22g/t Au and 2.1g/t Ag (PNR52279). These results are located along the western anomaly (*see Figure 1*) along strike from a shallow RC drill intercept of 1m @ 0.5g/t from 34m in PNRC0278. A program of 25 samples were collected in February 2024 and 36 samples were collected in May 2024 over a 6km strike length.

Mapping has confirmed wide zones of shearing with quartz veining and goethite-silica alteration crosscutting at low angle to the Banded Iron Formation (BIF), mafic, ultramafic and granite lithologies within the zones of anomalous soil samples. The strongest occurrence of the alteration was noted within the core of the eastern anomaly.





FIGURE 1: LOCATION OF ELEVATED GOLD ROCK CHIP SAMPLES AND DRILL HOLE PROXIMAL TO THE DEFINED SOIL ANOMALIES (IN RED) AND INTERPRETED STRUCTURAL TRENDS (IN WHITE) WITHIN THE WINDARRA PROJECT



## Lake Johnston Gold Anomaly

Assessment for other commodities at Lake Johnston has confirmed a large open coherent gold in soil anomaly (greater than 10ppb) measuring 1.2km by 0.9km, with a peak value of 146 ppb at the Billy Ray Prospect (*see Figure 2*). Gold exploration has been sporadic at Lake Johnston, with several gold in soil targets identified in the 1980's and followed up by shallow drilling at the time. Since then, numerous generations of soil programs have been completed with a strong focus and bias towards progressing only nickel targets.



FIGURE 2: GEOCHEMICAL SOIL SAMPLING AT LAKE JOHNSTON SHOWING GOLD ANOMALIES AT BILLY RAY

This anomaly is open eastwards towards the recently acquired Mantis JV tenement, E63/2244. It sits over a layered mafic intrusion substantiated by a gravity high and historic drilling. The area also features a flexure within a NNE trending fault and a cross-cutting dolerite dyke (*see Figure 3*).

Limited historic drilling focused on nickel sulphide mineralisation located on the basal contact along the western margin of the layered intrusion. This is where the best intercept of 0.2m @ 2.26g/t Au and 2.36% Cu from 149.62m in LJPD0032 was intersected, associated with a thin felsic intrusive signalling some gold fertility in the area.







## **Black Swan Gold Nuggets**

A new gold target has been identified at Black Swan in conjunction with several gold nuggets. This target represents a new 6.5km long gold trend previously unrecognised on the tenement package and is consistent with the interpreted regional Mount Monger-Moriarty fault. The fault traverses through the project area, close to the mapped contact between the Black Swan Komatiite and overlying felsic volcanic sequence of the Gindalbie Formation. The gold trend is marked by coincident maximum gold in hole results (*see Figure 4*), and gold in soil anomalies identified on neighbouring tenements to the north.

To date numerous gold nuggets have been located along the NW trending structure at Black Swan that coincide with evidence of modern-day prospector scraping and metal detecting. More recently, 7 nuggets (maximum weight of 0.4g, *see Figure 5*) were recovered on the eastern margin of a hill and adjacent to prospector workings. Typically, the discovery of nuggets can indicate highly prospective areas for gold mineralisation, particularly when aligned to known gold trends (soils and drillholes).





FIGURE 4: MAXIMUM DOWNHOLE AU AND INTERPRETED FAULT LOCATION THROUGH THE BLACK SWAN PROJECT

Limited gold focused exploration has occurred on the Black Swan tenements since the discovery of the Silver Swan nickel sulphide deposit in 1995. Consequently, only 5% of the sampling intervals from drilling have assay results for gold. Most of the shallow drilling focused on the basal contact of the Black Swan Komatilite, west of the identified target zone or were not assayed for gold. Gold intersections include:

- BSD033C: 0.4m @ 6.41 g/t Au from 421.6m, (above Silver Swan)
- 08NBSD0041: 0.57m @ 2.03g/t Au from 120.15m including 0.2m @ 5.12g/t from 120.5m
- 08NBSD0055: 1m @ 0.7g/t from 171.2m
- 08NBSD0038: 1m @ 0.39 g./t from 295.9m
- LBSD0021: 0.1m @ 0.35g/t from 186.5m
- BSAC403: 3m @ 0.62g/t from 46m
- BSAC417: 4m @ 0.3 g/t from 38m

Black Swan is located within a well-endowed gold province that includes the Kanowna Belle, Gordon Sidar, Mulgarrie and Gindalbie gold mining camps, all within 30km radius of the project. Some nearby gold resources are highly refractory with gold enclosed within sulphide grains not allowing access to cyanide to dissolve in a conventional CIL/CIP plant (*see Figure 6*). The nearest previously operated gold mine is Rocktivity's Lindsays deposit located 8km to the northeast.





FIGURE 5: NUGGETS DISCOVERED RECENTLY AT THE BLACK SWAN PROJECT

Black Swan is well-positioned given its 2.2Mtpa nickel concentrator that could potentially pivot to gold by processing and concentrating refractory gold through the flotation circuit. This has previously been considered when the Company entered into a MOU with Aphrodite Gold Limited during 2017 (see ASX announcement "*Poseidon & Aphrodite Move Closer to Gold Production*" dated 10 July 2017).



FIGURE 6: BLACK SWAN LOCATION IN KALGOORLIE GOLDFIELDS REGION



#### **Next Steps**

The gold occurrences at Windarra, Lake Johnston and Black Swan warrant follow up exploration to further define these targets. The Company plans to undertake soil sampling programs at each of its projects that are complementary to progressing multiple greenfields targets across a number of commodities (Ni-Li-Au). For example, proposed soil sampling programs at Windarra and Lake Johnston are proximal to nickel and lithium targets respectively.

Given limited gold exploration across all three projects the proposed programs are a first of a kind. The Company plans to assay for a full suite of elements.

Once results from the soil sampling program have been assessed, the Company intends to progress planning for aircore and/or reverse circulation drilling programs to test exploration targets identified. Planning for heritage and regulatory approvals will commence to expedite preparation for any future exploration drilling programs.

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

Brendan Shalders CEO 30 July 2024

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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 over 420,000 tonnes of nickel and 180,000 ounces of gold<sup>1</sup>.

Poseidon's strategy is focused on targeted exploration and business development to grow reserves and resources for the eventual restart of its established processing operations in Western Australia with the aim of being a profitable and sustainable producer.

Poseidon owns the Black Swan, Windarra Nickel and Lake Johnston Projects. The mines and infrastructure across all projects, including concentrators at Black Swan and Lake Johnston, present near term development options for Poseidon and peer companies that have mineral resources without established processing infrastructure.

In addition to processing capabilities, the Company has significant nickel exploration opportunities demonstrated by the discovery of the Golden Swan Resource at Black Swan, Maggie Hays West prospect at Lake Johnston and more recently the NW05 and NW04 targets at Windarra. Assessment of other commodities across Poseidon's project portfolio has noted strong lithium prospectivity at Lake Johnston and gold anomalies at all three projects.

The Company completed a Bankable Feasibility Study on Black Swan in November 2022 which is planned to be the first project to restart, subject to appropriate project financing structures being achieved, the outlook for the nickel price improving and all necessary approvals being obtained.

A Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield was completed in mid-2022. In December 2023 Mt Morgans entered into a trial processing agreement with Poseidon on the Lancefield gold tailings and accessing the water in the South Windarra pit.

<sup>1</sup> Refer to the Company website, <u>www.poseidon-nickel.com.au</u>, for Resource and Reserves tables



#### **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 their information in the form and context in which it appears.

The information in this report that references previously reported results is extracted from the Company's previous ASX market announcements released on the date noted in the body of the text where that reference appears. The previous market announcements are available to view on the Company's website (www.poseidon-nickel.com.au) or on the ASX website (www.asx.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 market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

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

- "Gold and Nickel Targets at Windarra" dated 6 June 2024
- "Poseidon & Aphrodite Move Closer to Gold Production" dated 10 July 2017

#### FORWARD LOOKING STATEMENTS

Some of the statements contained in this report are forward looking statements. Forward looking statements include, but are not limited to, statements concerning estimates of tonnages, expected costs, statements relating to the continued advancement of Poseidon's project and other statements that are not historical facts. When used in this report, and on other published information of Poseidon, the words such as 'aim', 'could', 'estimate', 'expect', 'intend', 'may', 'potential', 'should' and similar expressions are forward looking statements.

Although Poseidon believes that the expectations reflected in the forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that the actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements including the potential that the Project may experience technical, geological, metallurgical and mechanical problems, changes in gold and nickel price and other risks not anticipated by Poseidon. Poseidon considers that this summary of the study is presented in a fair and balanced way and believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors, production targets and operating cost estimates. This announcement has been compiled by Poseidon from the information provided by the various contributors to the announcement.



## **Appendix 1 - Location and Assay Data**

TABLE 1: WINDARRA ROCK CHIP LOCATION AND ASSAY DATA REPORTED IN GDA 94 MGA ZONE 51

Sample No	Easting	Northing	Au ppb	Ag ppm	As ppm	Си ррт	Мо ррт	Ni ppm	Pb ppm	Sb ppm	Zn ppm
PNR52264	426217	6843930	366	12.9	107	9	20	7	26	24	4
PNR52279	426590	6843253	220	2.1	486	16	58	106	69	25	11
PNR52278	426571	6843278	55	3.3	425	21	102	75	110	11	30

# TABLE 2: LAKE JOHNSTON HOLE COLLAR DATA FOR HISTORICAL GOLD INTERSECTIONS (0.5G/T CUTOFF), GDA 94 MGA ZONE 51

	Collar Co-Ordinates				MGA	From	<b>-</b>	Downhole	
HOLE ID	MGA EAST	MGA North	RL	DIP	Azı	М	Том	INTERVAL M	AUG/T
LJPD0032	263023.96	6436643.9	1365	-60	240	149.620	149.820	0.20	2.26

# TABLE 3: BLACK SWAN DRILL HOLE COLLAR DATA FOR HISTORICAL GOLD INTERSECTIONS (0.3 G/T AU CUTOFF), GDA 94MGA ZONE 51

	COLLAR CO-ORDINATES				MGA	From		Downhole	
HOLE ID	MGA EAST	MGA North	RL	DIP	Azı	М	ТОМ	INTERVAL M	AU G/T
BSD033C	370065	6637341	366	-63	232	421.60	422.0	0.40	6.41
08NBSD0038	370886	6636923	362	-72	232	295.95	296.95	1.0	0.39
08NBSD0041	370898	6636684	362	-66	228	120.15	120.72	0.57	2.03
08NBSD0055	369947	6637912	373	-70	232	171.16	172.16	1.00	0.708
LBSD0021	370757	6636798	362	-60	232	186.47	186.57	0.10	0.35
BSAC403	370323	6637316	364	-60	232	46	49	3	0.62
BSAC417	370561	6637241	365	-60	232	38	42	4	0.31



# Appendix 2 - 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	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Rock Chip Samples</li> <li>Selected rock chip samples were collected on geological determination from outcrop or sub crop by consultant geologist (Muller Geological Services Consultancy) using a geo-pick.</li> <li>Historical Drilling</li> <li>Historically, RAB, Aircore, reverse circulation and diamond drilling have all been used to obtain samples at Black Swan. Sampling is therefore dependant of drill type.</li> <li>Diamond core is a mixture of half core, quarter core selected on geological boundaries or no greater than 1m in length in exploration drilling and 2m intervals within grade control.</li> <li>Sampling protocols from drilling between 1968 and 1991 have not been well documented.</li> <li>Diamond drilling sampling protocol since 1995 has followed accepted industry practice for the time, with core sampled and intervals selected by geologists to ensure samples did not cross geological or lithological contacts.</li> <li>Exploration RC, RAB and Aircore sampling has been conducted on 4m composite intervals.</li> <li>Historical Soil Sampling</li> <li>Soil sampling collected on a 200x 80m grid closed down to 100 x 80m grid. Samples collect from 30cm below surface and were sieved to -2mm fraction.</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>The majority of historical diamond core is NQ, the rest being HQ size. Core orientation was carried out using either spear marks or the Ezimark system.</li> <li>Exploration drilling away for the mine includes RC, RAB and Aircore drilling.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Historically, RC and core recovery and presentation has been documented as being good to excellent.</li> </ul>



Criteria	JORC Code explanation	Commentary
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Verification of the accuracy of historical logging was limited to relogging several historical core holes stored on-site. All checks revealed the historical logging is of a high standard.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Historical core was generally sampled as half core, unless duplicate were taken which required samples to be quarter core.</li> <li>Surface RC samples were collected by use of a cone splitter when dry and grab samples when wet.</li> <li>Soil samples sieved to -2mm fraction.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Rock Chip Samples</li> <li>Rock chip samples have been analysed by Intertek Genalysis laboratories in Perth.</li> <li>The laboratory process for samples involves crushing to nominal 2mm, then pulverised to 85% passing 75µm.</li> <li>Multi- element analysis used a multi-acid digest including Hydrofluoric, Nitric, Perchloric and Hydrochloric acids in Teflon Tubes. Analysed by Inductively Coupled Plasma Mass Spectrometry (up to 49 element)</li> <li>Gold, Platinum and Palladium assays were determined via a 25g Lead collection fire assay in new pots. Analysed by Inductively Coupled Plasma Mass Spectrometry.</li> <li>Laboratory QAQC was undertaken.</li> </ul> Historical Drill Samples <ul> <li>RAB, Aircore and RC samples were sent to ALS where they were oven dried, pulverized to -70 microns and split. An aqua regia digest was used for Au determination.</li> <li>Diamond core samples were sent to Kal Assay. Lead collection fire assay with a MS finish was used for Au determination</li> <li>Laboratory QAQC was undertaken.</li> </ul> Historical Soils Samples <ul> <li>Two generations of soil samples were collected. In 2002 Soils were sent to Ultratrace using a perchloric aqua regia digest followed by ICP (detection limit to 1ppb).</li></ul>



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Rock Chip Samples</li> <li>Data was captured in the field and reported by Consulting Geologist (Muller Geological Services Consultancy).</li> <li>Data has been validated whilst uploaded to the inhouse geological database.</li> <li>Historical drill and soil samples</li> <li>Data was validated and cross referenced to GSWA data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Rock Chip Samples + Soil Samples</li> <li>Rock samples were located using a Garmin handheld GPS, using GDA 94 / MGA zone 51.</li> <li>Historical Drill Core <ul> <li>All Black Swan drill hole collars within the mine environment have typically been surveyed to an accuracy of ±10mm and recorded in both AMG51 and Black Swan local grid coordinates. The local grid is based on known MGA references. The Department of Land Information (formerly the Department of Land Administration) benchmark UO51 on the Yarri Road opposite 14 Mile Dam was used to tie the survey control stations to the Australian Height Datum (AHD). A height datum of AHD + 10,000m was adopted for the Black Swan project.</li> <li>Regional holes were located using a local grid established in 1998.</li> </ul> </li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>All historical drilling reported was purely exploration in nature.</li> <li>No results reported will be used for the estimation of Mineral Resources or Ore Reserves.</li> <li>Distance between rock samples varied and was dictated by available outcrop, and is reconnaissance in nature.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Drilling was purely explorative in nature and drilled perpendicular to the general stratigraphic trend.
Sample security	The measures taken to ensure sample security.	<ul> <li>Rock Chip Samples</li> <li>Samples were delivered by Poseidon staff directly to the laboratory in Kalgoorlie.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits or reviews were completed

## **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral	• Type, reference name/number, location	Mt Windarra



Cuitouio	IODC Code evaluation	Commonton
tenement and	and ownership including agreements or	Mt Windarra is situated on M261SA (AM70
tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Mt Windarra is situated on M261SA (AM70 261). There is a 1% revenue royalty due to BHPB if the nickel product is not sold to/treated by BHPB. There are no material issues at Mt Windarra.</li> <li>Poseidon owns 100% of M261SA which is in good standing and has no overriding encumbrances.</li> <li>Black Swan</li> <li>The Black Swan open pit is centred on M27/39 and extends into M27/200. Silver Swan is wholly located on M27/200 with two other mining leases M27/214 + M27/216 abutting the mining operations. They are located 42.5km NE of Kalgoorlie and registered to Poseidon Nickel Atlantis Operations Pty Ltd, a wholly owned subsidiary of Poseidon Nickel Ltd, following the purchase of the assets.</li> <li>Lake Johnston</li> <li>Mining tenements M63/282, M63/283, M63/284 and M63/163 are all 100% owned by Poseidon Nickel Limited.</li> <li>E63/1784 is a joint venture between Poseidon Nickel (80%) and Essential Metals Limited (20%), Essential Metals has been acquired by Develop Global Limited</li> <li>E63/2244 + E63/2256 is a joint Venture between Poseidon Nickel and Mantis</li> </ul>
Exploration	Acknowledgment and appraisal of	Mt Windarra
done by other parties	exploration by other parties.	<ul> <li>Mt Windarra Nickel Project (WNP) was initially discovered by Poseidon NL in 1969 and was then acquired by Western Mining Corporation (WMC) in 1972. Poseidon Nickel Limited (Poseidon) acquired the project in 2005 and recommenced drilling in 2006. No activity took place between the period 1992 to 2006.</li> <li>Black Swan</li> <li>The Silver Swan Mine was discovered by MPI Mines Ltd, then was acquired by Lion Ore in 2004. Much of the exploration drilling and development was completed by these two companies. In turn Lion Ore was taken over by Norilsk in 2007 who continued mining and developing the underground mine at Silver Swan until 2010. Poseidon Nickel purchased the operation from Norilsk in late 2014.</li> <li>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.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul><li>Mt Windarra</li><li>The Windarra region is part of the Mt</li></ul>
	-	Margret Goldfield and comprises the



Criteria	JORC Code explanation	Commentary
		Windarra Greenstone that wraps around the Mt Margret anticline. Black Swan
		<ul> <li>The Silver Swan and Black Swan deposits are Kambalda style komatiite hosted nickel deposits.</li> </ul>
		<ul> <li>Lake Johnston</li> <li>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.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>The latest drill hole information pertaining to this announcement that has not been previously reported is listed as Tables in Appendix 1 of this document.</li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>Where aggregate intercepts incorporate 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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Single rock chip assay results have been reported in this release.</li> <li>When reporting gold intervals in drilling a cut-off grade of 0.3 g/t Au has been used.</li> <li>No metal equivalents were reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>All intervals are reported as down hole lengths.</li> </ul>



Criteria	JORC Code explanation	Commentary
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Appropriate maps related to this release are included in the main body of the release.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Significant intercepts within the area of interest have been tabulated in Appendix 1.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>No further substantive exploration data is necessary to support this announcement.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step- out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	• Further work is currently being planned and will be reported if and when it occurs in the future.