

# ASX Announcement

## 24 September 2024

### GOLD POTENTIAL BUILDS AT BLACK SWAN

- **Reconnaissance soils sampling has identified several gold anomalies**
  - Anomalies extend over multiple soil traverses (between 400m to 800m) along the interpreted gold bearing structures
- **Wilson's Prospect – several positive coincident attributes established**
  - A coherent gold anomaly defined (up to 54ppb Au) that is 1.4km by 1km in size and remains open to the south
  - The gold anomaly extents capture the locations of the previously announced gold nuggets and anomalous rock chip samples that graded up to 1.25g/t Au in gossanous quartz veins<sup>1,2</sup>
  - Several historical gold drill intersections with assay results >1g/t Au, including 0.4m @ 6.41 g/t Au<sup>2</sup>, are also located within the anomaly area, despite only 5% of all historical drillhole samples being assayed for gold
  - **The layered indicators for gold potential at Wilson's Prospect point to a highly prospective exploration target as evaluation programs continue**
- **Gold exploration programs underway**
  - High priority infill soil and further grab sampling programs are underway to better define soil trends at Black Swan. Infill results will be used to optimise drill targets
  - At Lake Johnston, maiden reconnaissance soil surveys have been completed across the newly acquired Mantis tenement and submitted for analysis - results awaiting

<sup>1</sup> Refer to ASX Announcement "Further Validation of Gold Potential at Black Swan and Lake Johnston", dated 26 August 2024

<sup>2</sup> Refer to ASX Announcement "Update on Gold Exploration Programs", dated 30 July 2024

**Poseidon Nickel (ASX: POS, the Company)** is pleased to provide an update on the gold exploration programs at Black Swan.

CEO, Brendan Shalders, commented, *"During August 2024 the Company completed a wide spaced reconnaissance soil sampling program across the entire landholding at Black Swan which was assayed for the full suite of elements."*

*Soil sample assay results have noted four promising gold in soil anomalies. The extents of the anomalies and morphology appear to be tracing the prospective gold bearing structures throughout the geological sequence at Black Swan which have never been systematically tested for gold.*

*There is little outcrop at Black Swan thus reconnaissance surface geochemical surveys are considered a cost-effective exploration technique to quickly identify areas of gold anomalism. Due to the significant dilution of the soil profile as it is mainly comprised of sands and clays, the gold values recorded are usually only at low levels (ppb). The importance of a gold in soil anomaly is it often presents a vector to a prospective gold system below, and in its original undiluted setting, maybe at much higher grades, hence drilling is required to effectively test the target.*

We are particularly excited about the gold targets that are presenting at the Wilson’s Prospect. Results of the separate work programs to date are showing several positive coincident attributes underpinning the prospectivity for the targets. These include the establishment of a large coherent gold in soil anomaly with a footprint that captures the locations of the previously reported gold nuggets, anomalous rock chip samples and historical drilling intersections grading up to 6.41g/t Au.

Despite the historical gold intersections, only 5% of all drillhole samples at Black Swan were assayed for gold. Given the lack of gold assays and the historical focus on nickel, the gold potential at Black Swan has been somewhat overlooked.

High priority infill soil sampling programs are underway to better define drill targets and progress the planning for low-cost shallow drilling programs.

We are also awaiting the results from the Lake Johnston soil programs completed in early September 2024. Once received and interpreted the company plans to continue to undertake additional programs to progress and established any newly identified gold targets within the portfolio.”

### Gold in Soil Anomalies at Black Swan

During August 2024 the Company collected 362 soil samples from a wide spaced reconnaissance soil sampling program over the entire Black Swan tenement package on 800m and 400m space traverses with sampling intervals of between 80m and 160m. The soil samples were tested using the UltraFine+ technique identifying four coherent anomalies across the program (refer Figure 1).

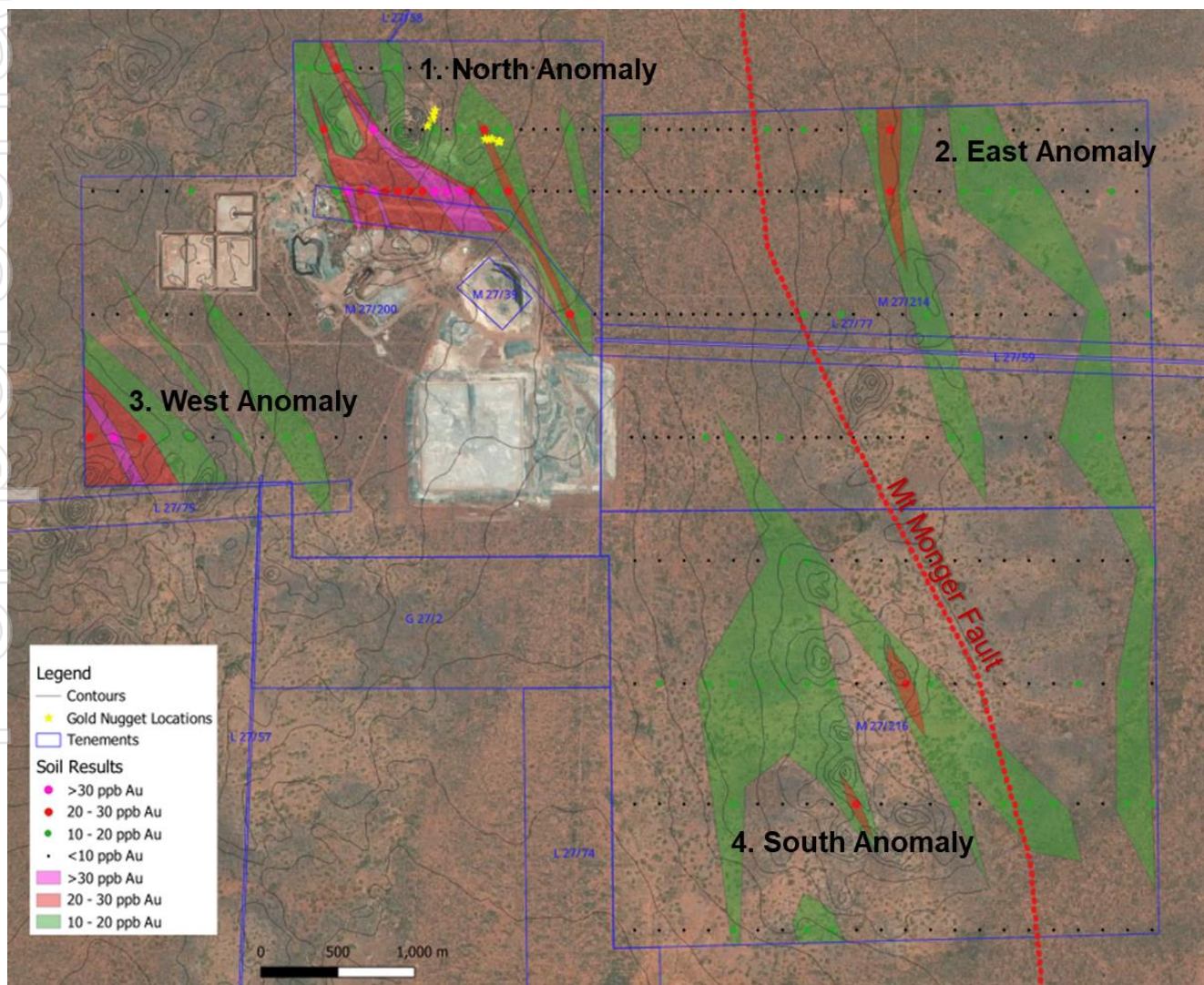
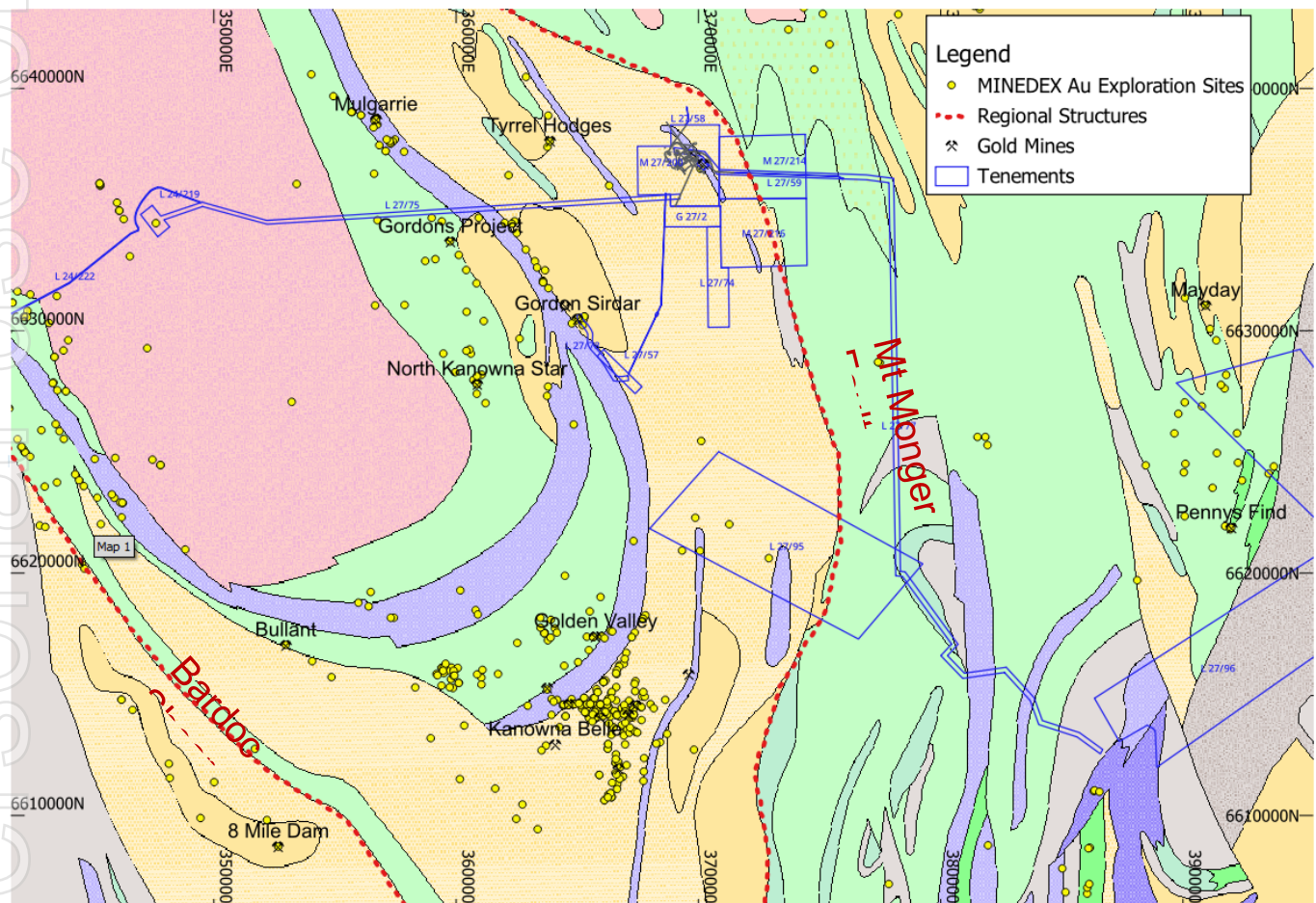


FIGURE 1: BLACK SWAN GOLD IN SOIL ANOMALIES

Gold assay results from the soil sampling, tabled in Appendix 1, grade up to 54ppb and present four distinct gold in soil anomalies spread across the Black Swan tenements. Importantly these anomalies correlate to the interpreted secondary structural corridors emanating NNE off the larger north striking Mt Monger Fault (see Figure 2 for interpreted location of Mt Monger Fault).

The Black Swan project is situated within the Boorara Geological Domain which hosts a number of gold mines including the nearby Kanowna Belle, Mungarra and Gordon Sirdar projects, as recently announced in ASX announcement “*Gold Prospectivity Enhanced at Black Swan and Lake Johnston*” re-released 16 August 2024.

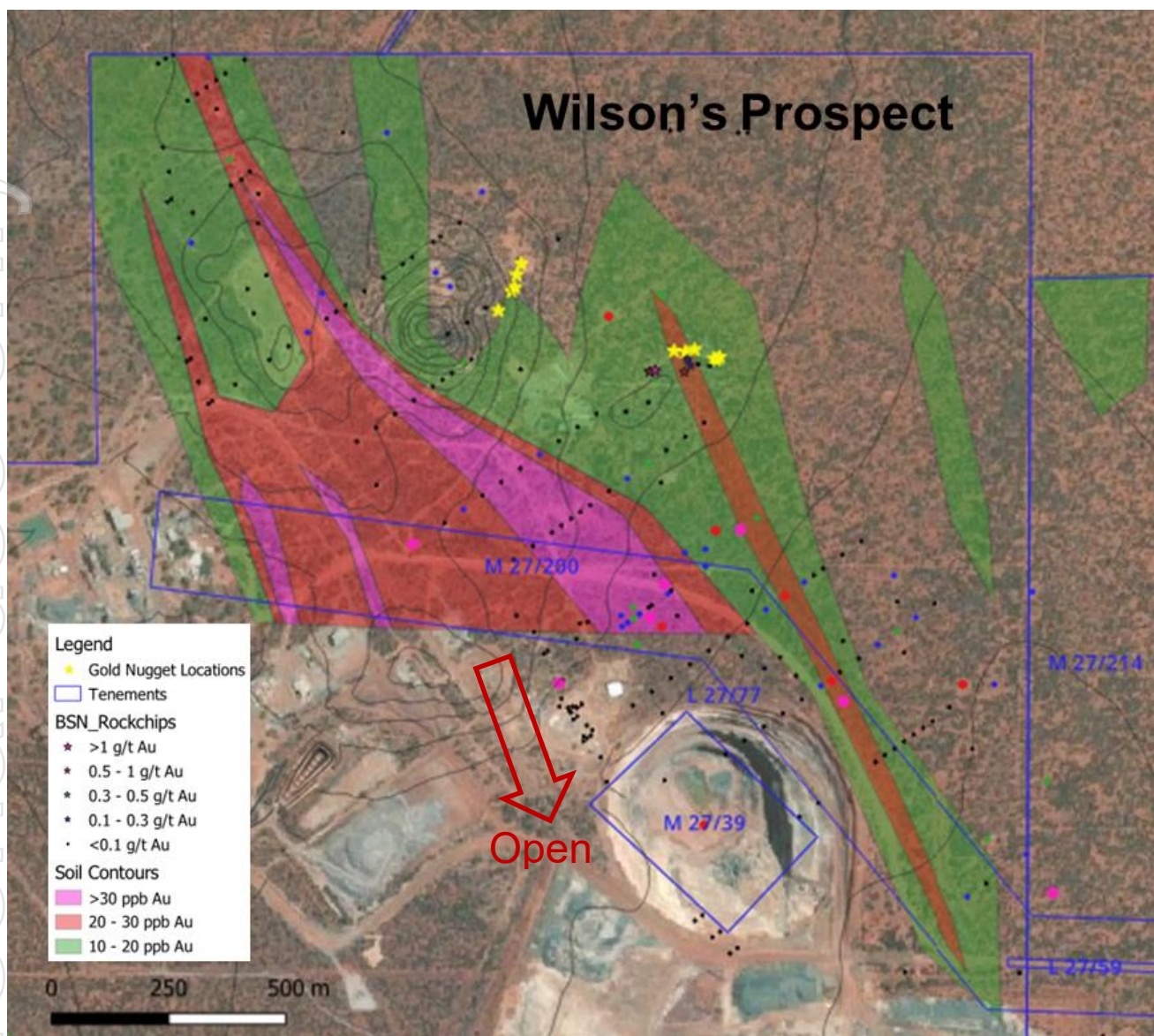


**FIGURE 2: BLACK SWAN REGIONAL GEOLOGY MAP & TENEMENT LOCATIONS**

## Wilson’s Prospect Correlates to Previously Reported Gold Occurrences

The most coherent anomaly, located at Wilson’s Prospect, is 1.4km by 1km in size and located just north of the existing Black Swan nickel mines and associated infrastructure, see Figure 3. This anomaly, with assays up to 54ppb Au, covers an area adjacent to the previously reported gold bearing rock chip samples grading up to 1.25g/t Au and the previously announced gold nugget discoveries (refer to ASX Announcement “*Further Validation of Gold Potential at Black Swan and Lake Johnston*”, dated 26 August 2024). The anomaly is open to the south where it trends onto the existing mine area and cannot be fully tested due to surface disturbance.

The correlation of the elevated gold in soil anomaly in this area, confirmed gold in bedrock and the discovery of gold nuggets, define a compelling gold exploration target at Black Swan. This exciting prospect, named Wilson’s Prospect, will be a focus of Poseidon’s exploration efforts at Black Swan in the immediate future.



**FIGURE 3: WILSON'S PROSPECT DEFINED BY THE NORTHERN MOST ANOMALY GOLD IN SOIL CONTOURS, ROCK CHIPS AND GOLD NUGGET LOCATIONS**

### Rock Chip Samples Grading up to 1.25g/t Au

Poseidon recently reported the assay results for rock chip samples collected from the Wilson's Prospect which confirmed gold mineralisation in the bedrock units. The best rock chip returned 1.25g/t Au from a gossanous quartz vein hosted within felsic volcanic (refer Figure 4). Rock chips with anomalous gold (>0.5g/t Au) and collected from areas proximal to the gold in soil anomaly are presented in Table 1 below.

**TABLE 1: BEST ROCK CHIP AU RESULTS COLLECTED RECENTLY FROM BLACK SWAN**

Rock Chip Sample	Assay Au Results (ppb)	Geology
P2756A	151	Quartz Vein
P2757A	135	Felsic Volcanic
P2758A	647	Felsic Volcanic
P2760A	1254	Quartz Vein
P2762A*	680	Quartz Vein
P2764A*	50	Quartz Vein
P2765A*	588	Quartz Vein
P2766A*	493	Quartz Vein
P2767A*	294	Quartz Vein

\* Duplicate of a single large sample



**FIGURE 4: PHOTO OF ROCK CHIP SAMPLE GRADING 1.25G/T AU, LOCATED AT WILSON'S PROSPECT**

### Gold Nuggets Reported at Wilson's Prospect

Poseidon has recently reported the discovery of 67 gold nuggets discovered at Wilson's Prospect with a combined weight of 22.6 grams (refer to ASX Announcement "*Further Validation of Gold Potential at Black Swan and Lake Johnston*", dated 26 August 2024). The nuggets range in size from less than 0.1 gram to approximately 1 gram and have an angular habit.



**FIGURE 5: EXAMPLES OF PREVIOUSLY REPORTED GOLD NUGGETS DISCOVERED AT WILSON'S PROSPECT**

Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.

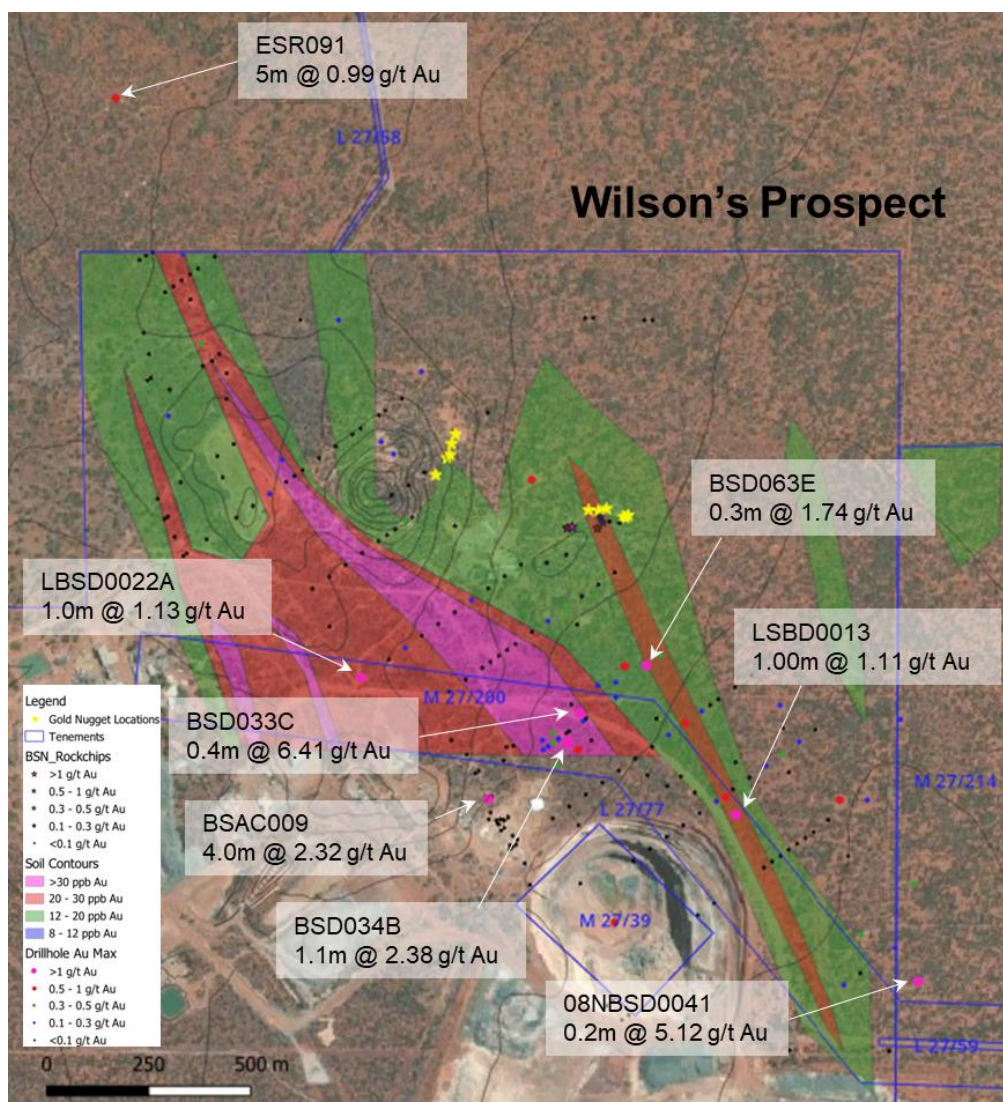
## Wilson’s Prospect Coincident to Historic Gold Drill Intersections

Limited focus on gold exploration has occurred at Black Swan since the discovery of the Silver Swan nickel sulphide deposit in 1995. Due to the historic focus on nickel only 5% of the drill hole samples have been assayed for gold.

Review of the Black Swan drillhole database and GSWA data has identified seven holes within the Companies tenements and one along strike on neighbouring ground, all containing gold intersections grading 1 g/t Au or higher. These drill holes are located within or near the soil anomaly identified at Wilson’s, refer Figure 6. The gold intersections include:

- BSD033C: 0.4m @ 6.41 g/t Au from 421.6m
- 08NBSD0041: 0.2m @ 5.12g/t Au from 120.5m
- BSD034B: 0.3m @ 2.38g/t Au from 356m
- BSAC009: 4m @ 2.32g/t Au from 76m
- BSD063E: 0.3m @ 1.74 g/t Au from 677.9m
- LBSD0022A: 1m 1.13g/t Au from 1047m
- LBSD0013: 1m @1.11g/t Au from 348m
- ESR091\*: 5m @ 0.99g/t Au from 5m (located less than 500m north of the Black Swan tenements)

\* GSWA data.



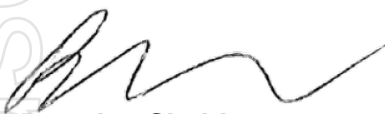
**FIGURE 6: NICKEL DRILLHOLE COLLAR LOCATIONS WITH GOLD DRILL INTERSECTIONS >1 G/T AU OVER GOLD IN SOIL ANOMALY AT WILSON’S PROSPECT**

The historic drilling focused on the basal contact of the Black Swan Komatiite, mostly on the western extent of the identified gold in soil anomaly or were not assayed for gold. Wilson's Prospect remains untested by drilling into the Felsic Volcanic footwall and hangingwall, away from the Black Swan Ultramafic and Silver Swan Nickel ore body.

## Next Steps

The Poseidon exploration team has commenced infill soil sampling at Black Swan. Results from this program are expected to be received late October 2024 and will be useful to planning future shallow aircore or reverse circulation drill programs.

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



**Brendan Shalders**

**CEO**

**24 September 2024**

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## About Poseidon Nickel Limited

*Poseidon Nickel Limited (ASX Code: POS) is a multi-commodity 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 developing gold exploration targets 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. During July 2024, Encore Minerals entered into an agreement with Poseidon to develop the Windarra tailings project.*

<sup>1</sup> Refer to the Company website, [www.poseidon-nickel.com.au](http://www.poseidon-nickel.com.au), 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 and Mr Mark Muller. Ms Parker is an employee of Poseidon Nickel and is a Member of The Australian Institute of Geoscientists. Mr Muller is a Member of The Australasian Institute of Mining and Metallurgy and is a full-time employee of Muller Geological Services Consultancy Pty Ltd, an independent industry consultancy providing geological services to Poseidon Nickel. Both Ms Parker and Mr Muller 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). Ms Parker and Mr Muller 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](http://www.poseidon-nickel.com.au)) or on the ASX website ([www.asx.com.au](http://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:

- "Further Validation of Gold Potential at Black Swan and Lake Johnston", dated 26 August 2024
- "Gold Prospectivity Enhanced at Black Swan and Lake Johnston" re-released 16 August 2024
- "Update on Gold Exploration Programs", dated 30 July 2024

**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 – Soil Data

**TABLE 2: BLACK SWAN DRILL HOLE COLLAR DATA FOR HISTORICAL INTERSECTIONS (1G/T AU CUTOFF), REPORTED IN GDA94 / MGA ZONE 51**

Hole ID	Collar Co-Ordinates			Dip	MGA Azi	From (m)	To (m)	Interval	Au g/t	Source
	East	North	RL							
<b>BSD033C</b>	370066	6637341	366	-63	232.5	421.60	422.00	0.40	6.41	Inhouse DB
08NBSD0041	370898	6636684	362	-66	228	120.53	120.72	0.19	5.12	Inhouse DB
BSD034B	370036	6637270	366	-60	232	356.00	357.10	1.10	2.38	Inhouse DB
BSAC009	369841	6637130	366	-090	000	76.00	80.00	4.00	2.32	Inhouse DB
BSD063E	370228	6637457	365	-62	232	677.87	678.16	0.29	1.74	Inhouse DB
LBSD0022A	369530	6637427	360	-72	052	1047.00	1048.00	1.00	1.13	Inhouse DB
LBSD0013	370447	6637092	363	-55	234	348.00	349.00	1.00	1.11	Inhouse DB
<b>ESR091</b>	368928	6638850	366	-60	232	5.00	10.00	5.00	0.99	GSWA

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**TABLE 3: BLACK SWAN ANOMALOUS GOLD SOIL LOCATION AND ASSAY DATA REPORTED IN GDA94 / MGA ZONE 51**

Sample_ID	Northing	Easting	RL	Au_ppb
BSS0001	6638302	368881	373	10.1
BSS0002	6638299	368958	373	11.1
BSS0003	6638298	369037	373	19.8
BSS0004	6638299	369123	373	24.6
BSS0005	6638299	369196	373	14.4
BSS0008	6638298	369439	373	11.2
BSS0009	6638302	369517	373	11.9
BSS0028	6637901	370641	373	10.6
BSS0033	6637900	370241	373	10.7
BSS0034	6637900	370161	373	19.4
BSS0035	6637900	370082	373	26.5
BSS0036	6637902	370001	373	15.3
BSS0037	6637902	369921	373	15.6
BSS0039	6637902	369762	373	12.9
BSS0042	6637898	369521	385	10.8
BSS0044	6637901	369362	373	30.1
BSS0045	6637902	369120	373	15.5
BSS0046	6637901	369040	373	21.4
BSS0047	6637900	368959	373	14.8
BSS0048	6637500	370238	373	20.3
BSS0049	6637501	370320	373	15.1
BSS0054	6637500	370719	373	11.1
BSS0070	6637899	371920	373	12.8
BSS0081	6637901	371040	373	15.6
BSS0082	6637901	370961	373	11.4
BSS0095	6635100	374420	376	12.3
BSS0097	6634300	374260	373	13.9
BSS0099	6634300	373941	373	10.2
BSS0105	6634300	372980	373	10.4
BSS0106	6634300	372820	374	22.4
BSS0109	6634300	372340	373	11.8
BSS0110	6634300	372180	370	14.3
BSS0111	6634300	372020	366	10.8
BSS0112	6634300	371869	365	12.2
BSS0113	6634301	371701	366	13.6
BSS0114	6634300	371540	365	10.4
BSS0116	6634300	371221	362	10.2
BSS0127	6635100	372020	369	17.6
BSS0128	6635100	372180	371	16.8
BSS0137	6635900	371520	366	10.3
BSS0139	6635900	371680	368	10.8
BSS0143	6635899	372000	370	10.6
BSS0155	6636700	372401	373	11.5
BSS0158	6636700	372160	373	11.6

Sample_ID	Northing	Easting	RL	Au_ppb
BSS0176	6637500	370160	373	17.7
BSS0177	6637500	370080	373	18.3
BSS0178	6637500	370000	373	22.3
BSS0179	6637500	369920	373	48.4
BSS0180	6637501	369840	373	43.1
BSS0181	6637500	369760	373	44
BSS0182	6637500	369680	373	22.5
BSS0183	6637500	369600	373	22.4
BSS0184	6637500	369521	373	20.5
BSS0185	6637500	369440	376	27.3
BSS0186	6637500	369368	378	43.7
BSS0187	6637500	369280	377	27.8
BSS0188	6637500	369200	373	53.7
BSS0189	6637500	369120	373	19.8
BSS0190	6637500	368180	373	12.2
BSS0196	6632700	372180	373	11.4
BSS0197	6632700	372340	373	12.4
BSS0219	6632699	371699	364	11
BSS0224	6633518	370899	373	12
BSS0229	6633518	371699	365	11.8
BSS0234	6633518	372499	374	22
BSS0238	6633519	373141	373	15.6
BSS0240	6633518	373459	368	12.4
BSS0241	6636700	370640	373	24.4
BSS0245	6637899	372159	373	11.1
BSS0248	6637899	372559	373	13
BSS0249	6637899	372719	373	23.3
BSS0250	6637898	372879	373	16.7
BSS0252	6637899	373199	373	13.1
BSS0253	6637899	373359	381	12.8
BSS0261	6637498	374159	373	15
BSS0264	6637499	373678	373	11.9
BSS0265	6637498	373519	373	19.1
BSS0266	6637498	373359	373	12.1
BSS0267	6637498	373199	373	10.9
BSS0276	6637498	372719	373	25.2
BSS0279	6636698	372959	373	10.4
BSS0286	6636699	374079	373	12.3
BSS0291	6635898	374079	373	12.2
BSS0292	6635898	373919	373	13.9
BSS0296	6635900	373280	373	14.4
BSS0299	6633520	373620	373	16
BSS0300	6633520	373780	368	12.5
BSS0303	6633520	374260	373	10.4

Sample_ID	Northing	Easting	RL	Au_ppb
<b>BSS0304</b>	6633520	374421	373	10.7
<b>BSS0305</b>	6635101	370740	373	13
<b>BSS0312</b>	6635100	369620	373	11.8
<b>BSS0314</b>	6635100	369300	373	13.7
<b>BSS0315</b>	6635100	369140	373	12.4
<b>BSS0319</b>	6634300	368660	365	12.7
<b>BSS0320</b>	6634300	368820	373	14.5
<b>BSS0323</b>	6634300	369300	373	15.5
<b>BSS0324</b>	6634300	369460	373	11.4
<b>BSS0325</b>	6634300	369620	373	22.9
<b>BSS0326</b>	6634300	369780	373	18

Sample_ID	Northing	Easting	RL	Au_ppb
<b>BSS0335</b>	6635900	368960	373	17.3
<b>BSS0336</b>	6635900	368800	373	14.4
<b>BSS0338</b>	6635900	368480	373	10.5
<b>BSS0340</b>	6635900	368160	379	17
<b>BSS0341</b>	6635900	368000	379	17.6
<b>BSS0342</b>	6635900	367860	373	23.1
<b>BSS0343</b>	6635900	367680	382	34.3
<b>BSS0344</b>	6635900	367520	383	26.6
<b>BSS0347</b>	6636700	367860	378	11.1
<b>BSS0350</b>	6636700	368340	373	10.3

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## 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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>Black Swan soil sampling used the UltraFine+ technique and was on variable sample spaced lines of 800m and 400m with sample spacings between 80m and 160m.</li> <li>The UltraFine + samples were collected between 5-10cm depth or to the B horizon if shallower. Samples were recorded and logged on smart device using Avenza Maps and coordinates confirmed using handheld GPS.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <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> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 diamond core, RC, RAB and Aircore drilling.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Historically, RC and core recovery and presentation has been documented as being good to excellent</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <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>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>Soils samples were logged on collection according to regolith type.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <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>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>Soil samples were sieved to - 2mm when excessive rock fragments or other debris was present and minimum 200g sample collected.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <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> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>Samples were sent to LabWest utilising the UltraFine+ method, UFF-PE that uses a Aqua Regia microwave digest with Gold and multielement analysis by ICP-MS/OES providing 54 elements in total.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <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>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>Data was captured in the field by Poseidon staff and consultants</li> <li>Data has been validated whilst uploaded to the geological database by the geologist and then the in-house database manager.</li> </ul> <p><b>Historical data</b></p> <ul style="list-style-type: none"> <li>Data was validated and cross referenced to GSWA data.</li> <li>Inconsistencies are present in the data with respect to detection limits and sensitivity.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other</li> </ul>	<p><b>Soil Samples</b></p> <ul style="list-style-type: none"> <li>Samples were located using smart device using Avenza Maps and coordinates</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>locations used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<p>confirmed using handheld GPS, using GDA94 / MGA zone 51.</p> <p><b>Historical Drill Core</b></p> <ul style="list-style-type: none"> <li>• All Black Swan drill hole collars within the mine environment have typically been surveyed to an accuracy of <math>\pm 10</math>mm 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>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p><b>Soils Sampling</b></p> <ul style="list-style-type: none"> <li>• Soils sampling was reconnaissance in nature and collected on a wide 400 or 800m spaced grid with sample locations 80 to 160m apart.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• All historic drilling reported is purely exploration in nature.</li> <li>• No results reported will be used for the estimation of Mineral Resources or Ore Reserves.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<p><b>Soil Sampling</b></p> <ul style="list-style-type: none"> <li>• Soil sampling is explorative in nature and collected along an east- west grid.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• Drilling is generally perpendicular to the stratigraphic trend.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p><b>Soil Samples</b></p> <ul style="list-style-type: none"> <li>• Samples were securely stored within numbered paper geochemical bags and then boxed.</li> <li>• Poseidon samples were wrapped and delivered directly to the transport company in Kalgoorlie by Poseidon staff, and delivered to Labwest in Perth.</li> <li>• A chain for custody was maintained throughout the process.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews were completed</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</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>	<b>Black Swan</b> <ul style="list-style-type: none"> <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 Ltd, following the purchase of the assets.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<b>Black Swan</b> <ul style="list-style-type: none"> <li>The Silver Swan Nickel 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> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<b>Black Swan</b> <ul style="list-style-type: none"> <li>The Silver Swan and Black Swan deposits are Kambalda style komatiite hosted nickel deposits hosted within the Boorara Domain.</li> <li>Gold is interpreted to be related to orogenic hydrothermal mineralisation typical of deposits found throughout Western Australia</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>The soil samples pertaining to this release are depicted in the main body of the release, with anomalous results tabled in Appendix 1.</li> <li>Historical drillhole information pertaining to this announcement that has not previously reported is listed as Tables in Appendix 1 of this document.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Single point soil results have been plotted in this release.</li> <li>Anomalous soil sample results greater than 8ppb are tabulated in Appendix 1</li> <li>No metal equivalents were reported.</li> <li>A cut off of 1g/t Au was used for reported</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	drill hole intersections.
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All intervals are reported as downhole lengths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Appropriate maps related to this release are included in the main body of the release.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All soil sample results are depicted on maps within the main body of the release.</li> <li>All drill holes that have intervals assays for gold are depicted on maps within the main body of text.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No further substantive exploration data is necessary to support this announcement.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Further infill soil sampling is planned in the near future to future delineate the anomalies.</li> </ul>