

# ASX Announcement

## 26 August 2024

### FURTHER VALIDATION OF GOLD POTENTIAL AT BLACK SWAN AND LAKE JOHNSTON

- **Gold bearing bedrock confirmed at Black Swan**

- Multiple anomalous gold rock chip samples (grading up to 1.25g/t Au) returned from highly weathered quartz bearing shears exposed at surface
- Soil sampling program completed as well as additional rock chip samples collected across the tenement portfolio
- Assay results expected early next quarter with any defined anomalies to be followed up with high priority drilling programs
- Geological setting shown to be very similar to nearby gold mines including Kanowna Belle and Gordon Sirdar

- **Lake Johnston copper-gold anomaly extended**

- Initial soil results have successfully extended the Billy Ray Cu-Au soil anomaly into the largely untested Mantis tenement and the anomaly remains open to the North-East
- High priority soil sampling program to continue with completion expected this quarter
- Billy Ray Cu-Au soil anomaly and likely link to the mineralised Cu-Au drill intersection nearby supports the prospectivity of a larger Cu-Au system
- Planning for Flora and Heritage Surveys for drill testing at Billy Ray has commenced

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

CEO, Brendan Shalders, commented, “Ongoing exploration works focused on gold prospectivity at Black Swan and Lake Johnston continue to generate positive results.

*Rock chip samples collected on a recent site visit to Black Swan have returned anomalous gold from quartz bearing shear zones that are located in the same area as the recovered gold nuggets.*

*Today’s rock chip assay results are an important step forward given the potential source of the recovered gold nuggets has now been identified and these auriferous shear zones are located well within our tenement package.*

*To progress the gold targeting along these prospective shear corridors, the Company completed a wide spaced reconnaissance soil sampling program last week across the entire landholding at Black Swan which will be assayed for the full suite of elements. We look forward to receiving the assay results early next quarter and will commence planning drilling programs for any defined gold anomalies.*

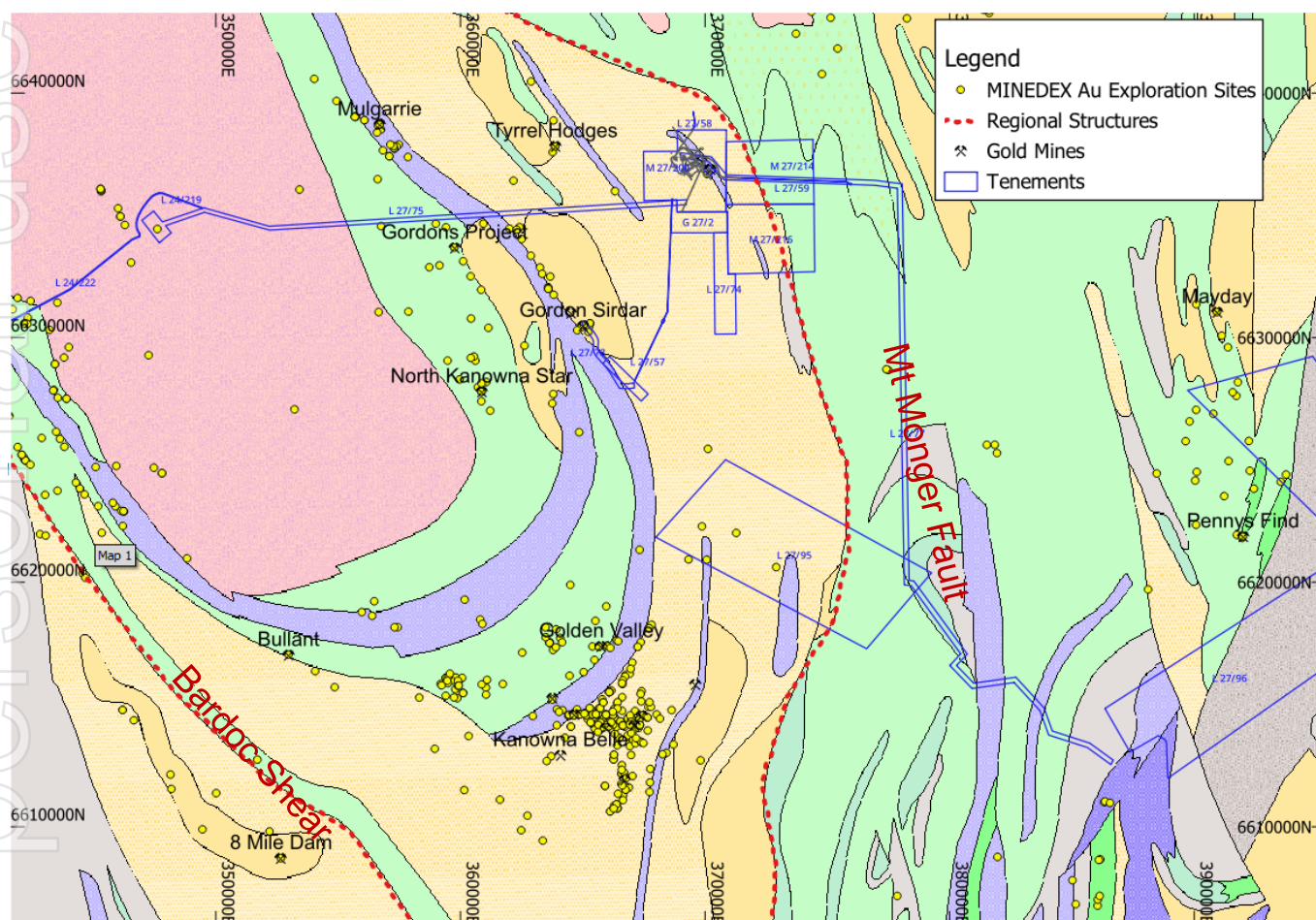
*Recently received soil sample assay results testing the extension of the Billy Ray Prospect at Lake Johnston have confirmed the continuation of the large Cu-Au anomaly. The anomaly remains open to the North-East, with geological structures suggesting the potential for further Cu-Au anomalism over the newly acquired Mantis tenement.*

The Company intends to extend soil sampling across the Mantis tenement and will use the assay results and any Cu-Au anomalies identified to plan drilling programs to test the Billy Ray Prospect.

The Company is pleased with the recent series of exploration results as they continue to enhance the prospectivity for gold at both Black Swan and Lake Johnston. The low-cost exploration programs that are underway are important to defining drill targets to efficiently test the gold potential in these areas.”

## Black Swan - Located in Geological Setting Prospective for Gold

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, refer Figure 1, as recently announced in ASX announcement “Gold Prospectivity Enhanced at Black Swan and Lake Johnston” re-released 16 August 2024.



**FIGURE 1: BLACK SWAN REGIONAL GEOLOGY MAP & TENEMENT LOCATIONS**

## Bedrock Gold Confirmed

Results from 17 rock chip samples recently collected from Black Swan have confirmed gold mineralisation in bedrock units located close to some of the recently announced gold nugget discoveries. The best rock chip returned 1.25g/t Au from a gossanous quartz vein hosted within felsic volcanic, see Figure 2. Additional rock chips with anomalous gold (>0.5g/t Au) were returned from ferrous quartz veining and within felsic volcanics (refer Table 1).



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

<i>Rock Chip Sample</i>	<i>Assay Au Results (ppb)</i>	<i>Geology</i>
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 2: PHOTO OF ROCK CHIP SAMPLE GRADING 1.25G/T AU**

The rock chip assay results confirm gold occurs both in the mineralised quartz veins and the surrounding host rock. These mineralised trends correspond with the interpreted secondary structural corridors emanating NNE off the larger north striking Mt Monger Fault to the east. The secondary structures occur throughout the Black Swan tenements and recent surface reconnaissance has noted quartz veins and other rock units with similar characteristics (ferruginous and silica altered) 5.3km to the south along the same NNE trend in areas not covered by transported cover. Rock chip samples have been collected with results expected late this quarter.

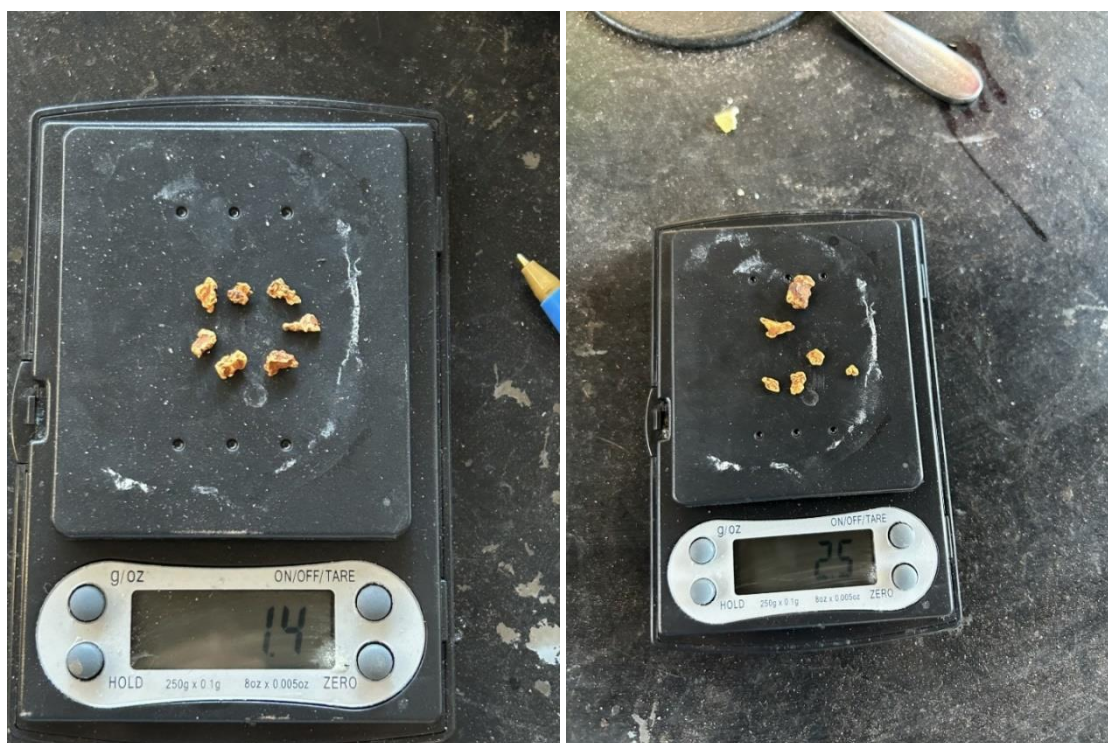
## Further Gold Nuggets discovered at Black Swan

In addition to the previously announced 52 gold nuggets discovered at Black Swan (see ASX announcement “*Gold prospectivity enhanced at Black Swan and Lake Johnston*” re-released 16 August 2024, further prospecting has recovered an additional 15 gold nuggets for a combined weight of 4.7 grams, refer Figure 3. The additional nuggets were discovered proximal to those previously found and provide further confirmation on the prospectivity for gold at Black Swan.

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.

The gold nugget mineralisation reported in this announcement is in a nuggety form. Minerals visually observed is native gold, however the nuggets have not been assayed to confirm the gold’s purity and other trace elements may be present. The Company notes gold nuggets showing this colour typically have a high gold purity.

The abundance of gold is constrained to the 67 nuggets reported to date. The nuggets range in size from less than 0.1 gram to approximately 1 gram, and have an angular habit. The nuggets were discovered near surface on tenement M27/200 to a maximum depth of 0.2m using metal detecting equipment (see Appendix 2 for further details on prospecting method).



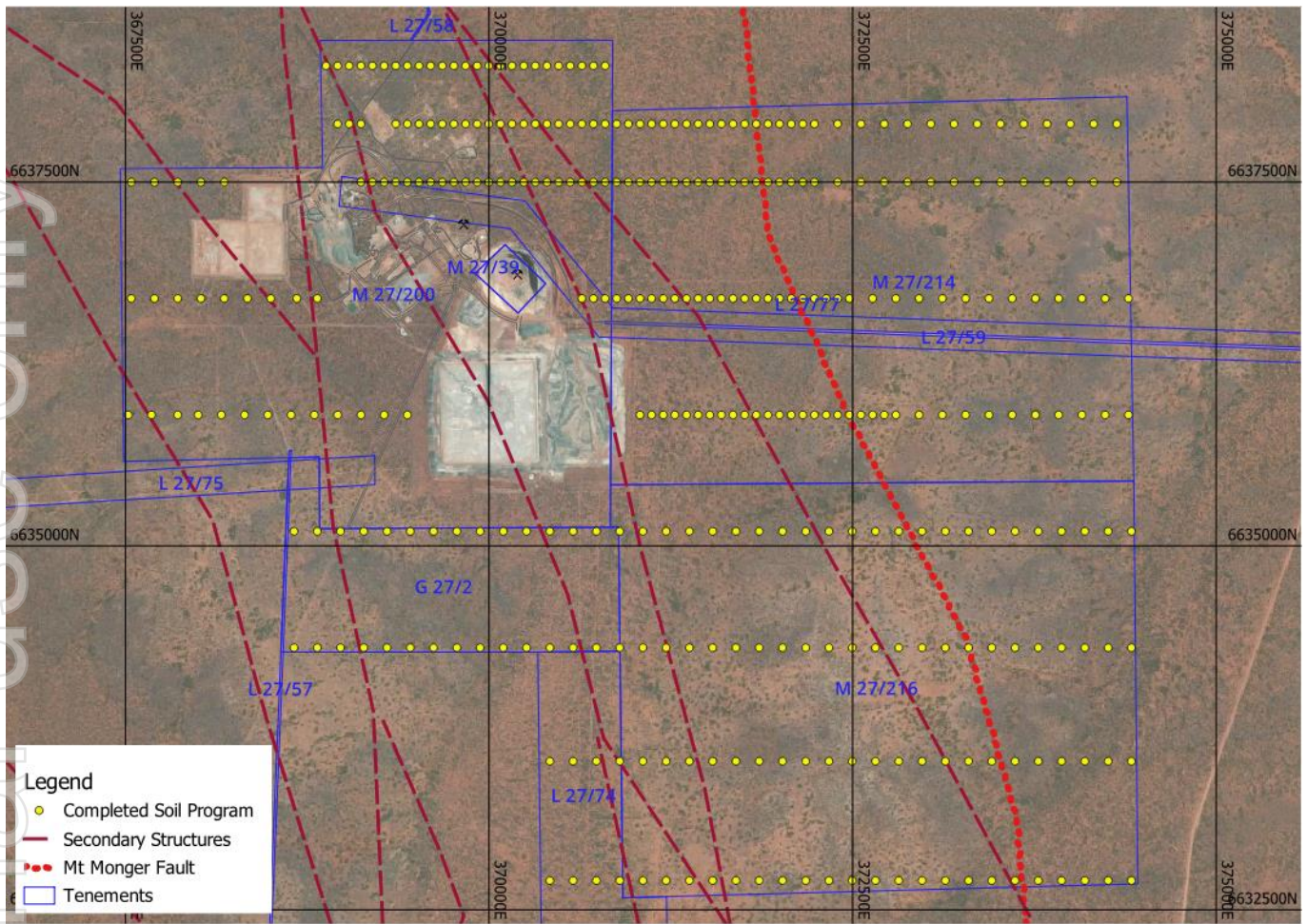
**FIGURE 3: EXAMPLES OF GOLD NUGGETS RECENTLY DISCOVERED AT BLACK SWAN**

## Soil Sample Program Completed

The Company has recently completed a wide spaced reconnaissance UltraFine+ soil sampling program over the entire Black Swan tenement package on 800m and 400m space lines with sampling intervals of between 80m and 160m, refer Figure 4. The program has a tighter sampling spacing (400m x 80m) in the area where the gold nuggets and best rock chip results are located. Over the remainder of the tenement package the spacing has been widened to 400m x 160m and 800m x 160m to identify additional areas of potential gold mineralisation along the interpreted structural trends.

The Company collected 362 soil samples and expects results to be released early next quarter.





**FIGURE 4: COMPLETED SOIL SAMPLE LOCATIONS AT BLACK SWAN**

## Next Steps

Completed soil sample spacing is broad and infill soil sampling may be required. Based on assay results and any gold anomalies identified, the Company will commence planning drilling programs to test areas prospective for gold mineralisation.

## Lake Johnston - Soil Anomaly Extends

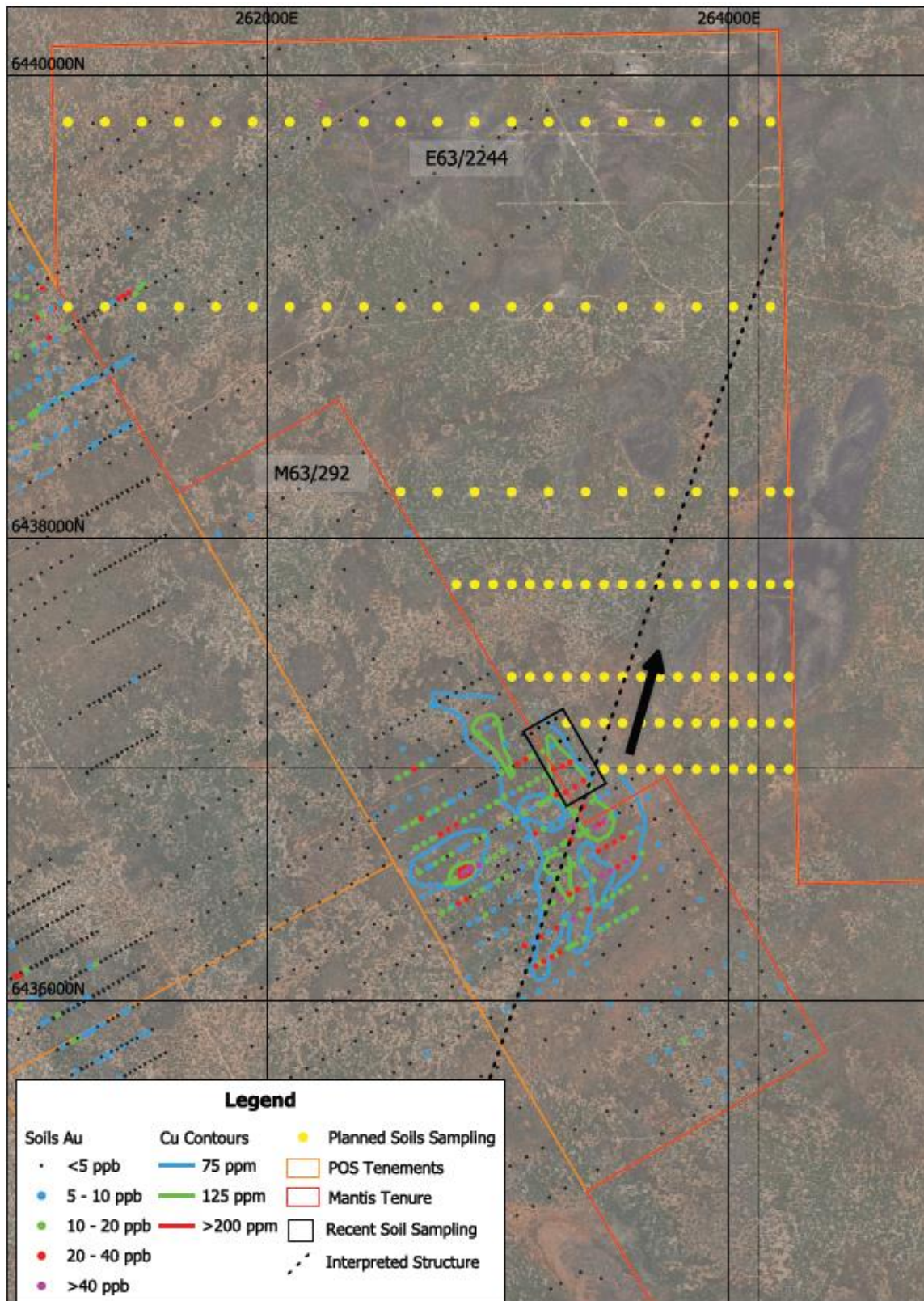
### Billy Ray Cu-Au Anomaly Extends onto Mantis Tenement

The broad Cu-Au soil anomaly defined at Billy Ray combined with the presence of mineralised Cu-Au drill intersection nearby supports the prospectivity for a larger Cu-Au system in the area, refer to ASX announcement “*Gold Prospectivity Enhanced at Black Swan and Lake Johnston*” re-released 16 August 2024.

Additional soil assay results using the Ultrafine+ process have been returned from a small soil program completed to the North-East of the Billy Ray anomaly. The results have confirmed an extension of Billy Ray anomalism by 200m into the Mantis tenement E63/2244, see Figure 5.

Sixteen samples were collected on a 100m x 40m grid earlier in August 2024 during a reconnaissance visit. Among the soil samples, seven have returned coincident anomalous levels of copper (>138ppm Cu) and gold (> 20ppb Au), with the highest recorded value being 232ppm Cu and 25ppb Au, refer Appendix 1. Additionally, the recent soil data reveals a correlation with tellurium and bismuth, reinforcing the strong Cu-Au association linked to the interpreted felsic intrusive source for the gold mineralisation. The most prominent part of the Billy Ray anomaly appears open, extending onto the Mantis ground and remains untested with drilling.



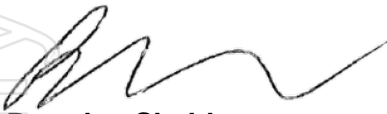


**FIGURE 5: LOCATION OF RECENT SOIL SAMPLES AT BILLY RAY COLOURED BY Au, WITH COPPER CONTOURS AND PLANNED SOILS PROGRAM**

## Next Steps

Further exploration programs have been planned with wide-spread soils to occur imminently on E63/2244 and selected core samples testing the western side of the soil anomaly at Billy Ray have been resubmitted for multi-element analysis. Timing of completion of these soils is subject to weather, with rain slowing progress due to road closures to/from Lake Johnston. First pass shallow drilling is also being planned, to allow for approvals to be sort and expedite exploration at Billy Ray.

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



**Brendan Shalders**  
**CEO**

**26 August 2024**

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## About Poseidon Nickel Limited

Poseidon Nickel Limited (ASX Code: POS) is an 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 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, [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:

- "Gold Prospectivity Enhanced at Black Swan and Lake Johnston" re-released 16 August 2024
- "Strategic Farm-In Agreement Over Lithium Bearing Pegmatites" dated 21 December 2023

**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 – Rock Chip and Soil Data

**TABLE 2: BLACK SWAN ROCK CHIP LOCATION AND ASSAY DATA REPORTED IN GDA94 / MGA ZONE 51**

Sample_ID	Easting	Northing	Lithology	Au ppb	La ppm	Ce ppm	P ppm	Te ppm	Pb ppm	Bi ppm	Sb ppm	Cu ppm	Ag ppm
P2751A	369645	6637898	Fv	4	13.35	26.62	200	<0.2	4.9	0.03	0.34	9.1	<0.05
P2752A	369604	6637874	Fv	<1	13.23	26.45	150	<0.2	5.5	0.02	0.32	5.9	<0.05
P2753A	369684	6637930	Um	6	1.01	3.32	108	<0.2	1.5	0.05	0.52	101.3	<0.05
P2754A	370162	6637806	Fv	<1	16.06	32.82	105	<0.2	8.4	0.16	0.34	11.3	<0.05
P2755A	370138	6637810	Fv	43	40.03	97.99	288	<0.2	8	0.26	0.49	26.1	<0.05
P2756A	370121	6637807	Qv	151	0.24	0.57	25	<0.2	0.7	0.04	0.27	5.2	<0.05
P2757A	370115	6637820	Fv	135	1.76	3.83	1699	<0.2	7.2	0.1	1.26	62.9	0.13
P2758A	370108	6637793	Fv	647	27.77	79.39	906	0.8	11.1	1.24	1.1	58.7	0.06
P2759A	370049	6637795	Qv	48	0.23	0.56	106	<0.2	0.7	0.03	0.31	12.5	<0.05
P2760A	370046	6637796	Qv	1254	77.25	130.83	1413	0.6	9.7	1.35	1.03	89.8	0.09
P2761A	370032	6637728	Qv	1	0.47	0.86	25	0.4	3.1	2.65	0.26	4.2	0.11
P2763A	369984	6637709	Fv	3	22.36	50.66	221	<0.2	8.7	0.18	0.3	46.9	0.3
P2762A*	370034	6637794	Qv	680	16.09	29.96	1872	2.6	6.9	1.59	2.73	30	0.08
P2764A*	370034	6637794	Qv	50	7.33	16.59	1002	0.4	3.9	0.24	1.53	19.7	0.08
P2765A*	370034	6637794	Qv	588	32.22	62.92	1572	2.4	9.8	1.8	3.16	35.3	0.11
P2766A*	370034	6637794	Qv	493	35.39	63.83	1114	2.1	9.7	1.94	2.61	27.6	0.17
P2767A*	370034	6637794	Qv	294	30.87	57.03	1452	1.6	6.4	0.86	2.95	28.5	0.08

\*Duplicate of a single sample

**TABLE 3: LAKE JOHNSTON ULTRAFINE+ SOIL SAMPLING COLLECTED FROM BILLY RAY LOCATION AND ASSAY DATA, REPORTED IN GDA94 / MGA ZONE 51**

Sample	Easting	Northing	Au ppb	As ppm	Bi ppm	Cu ppm	Mo ppm	Sb ppm	Te ppm	W ppm
UF00643	263145	6437155	4.3	2.1	0.39	88.1	0.52	0.15	0.03	0.51
UF00644	263195	6437078	16.9	2.6	0.18	100.0	0.36	0.09	0.03	0.13
UF00645	263243	6437000	28.7	2.2	0.31	139.0	0.40	0.16	0.06	0.22
UF00646	263294	6436902	21.1	2.4	0.22	172.0	0.36	0.14	0.05	0.12
UF00647	263334	6436923	26.3	2.1	0.25	138.0	0.44	0.14	0.06	0.10
UF00648	263281	6437012	20.3	1.6	0.33	178.0	0.42	0.12	0.06	0.20
UF00649	263235	6437099	6.9	1.8	0.35	136.0	0.55	0.14	0.06	0.79
UF00650	263177	6437180	1.7	2.5	0.32	77.3	0.64	0.15	0.03	0.32
UF00651	263219	6437200	1.3	2.0	0.23	61.9	0.36	0.13	0.03	0.92
UF00652	263270	6437121	3.6	1.1	0.22	79.5	0.45	0.09	0.02	0.32
UF00653	263313	6437029	24.1	2.1	0.29	183.0	0.44	0.10	0.04	0.21
UF00654	263372	6436951	25.5	2.7	0.30	232.0	0.48	0.13	0.06	0.17
UF00655	263397	6436963	7.1	1.8	0.25	116.0	0.48	0.12	0.04	0.29
UF00656	263355	6437043	1.9	1.6	0.31	61.3	0.38	0.12	0.04	0.18
UF00657	263304	6437131	1.4	1.7	0.22	60.3	0.44	0.10	0.03	0.25
UF00658	263251	6437218	1.2	1.7	0.25	55.6	0.37	0.12	0.03	0.24

## 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>Poseidon soil sampling utilized the UltraFine+ technique and was conducted on a 100 x 40m grid.</li> <li>Black Swan soil sampling used the UltraFine+ technique and was on variable sample spaced lines of 800m and 400m with sample spacings of 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>Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <li>Rock chip samples were collected with hammer based on lithological control and for mineralisation. Samples were logged and recorded using an Avenza Maps on a smart device and coordinates confirmed using a handheld GPS.</li> </ul> <p><b>Prospecting and Gold Nuggets</b></p> <ul style="list-style-type: none"> <li>Detecting method involves a number of methods including targeted, meandering or gridding depending on the area</li> <li>Detectors used included Minelabs GXP6000 &amp; SDC2300 using 14x9" coils operated by experienced prospectors</li> <li>Recovered nuggets were located using Smart Phone Trilobite and Avenza Apps with spot checks for accuracy using Garmin handheld GPS</li> <li>Recovered nuggets were weighed using digital scales to 0.1g accuracy</li> <li>Nuggets were confirmed as gold by visual inspection and weight to volume comparison by experienced prospectors and Company geologists.</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>No previously unreported drill results have been reported in this release.</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> </ul>	<ul style="list-style-type: none"> <li>No previously unreported drill results have been reported in this release.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	
<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 according to regolith type.</li> </ul> <p><b>Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <li>Rock Chips were logged according to rock type on collection.</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</li> </ul> <p><b>Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <li>Rock chip samples were collected in situ from outcrop or subcrop</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</li> </ul> <p><b>Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <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 elements).</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>
<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> </ul>	<p><b>Soil + Rock Chip 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 in-house database manager.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	<b>Historical data</b> <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 locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<b>Soil + Rock Chip Samples</b> <ul style="list-style-type: none"> <li>Samples were located using smart device using Avenza Maps and coordinates confirmed using handheld GPS, using GDA94 / MGA zone 51</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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>	<b>Soils Sampling</b> <ul style="list-style-type: none"> <li>Soils sampling at Lake Johnston was based on 100 x 40m grid.</li> </ul> <b>Rock Chip Sampling</b> <ul style="list-style-type: none"> <li>Distance between rock samples varied and was dictated by available outcrop, and is reconnaissance 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>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>	<b>Soil Sampling</b> <ul style="list-style-type: none"> <li>Soil sampling is explorative in nature and collected perpendicular to the general stratigraphic trend. Structural trends were not taken into account.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<b>Rock Chip + Soil Samples</b> <ul style="list-style-type: none"> <li>Poseidon samples were delivered directly to the laboratory by Poseidon staff.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</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 Atlantis Operations Pty Ltd, a wholly owned subsidiary of Poseidon Nickel Ltd, following the purchase of the assets.</li> </ul> <b>Lake Johnston</b> <ul style="list-style-type: none"> <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</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>Poseidon Nickel (80%) and Essential Metals Limited (20%), Essential Metals has been acquired by Develop Global Limited</p> <ul style="list-style-type: none"> <li>E63/2244 + E63/2256 is a farm in between Poseidon Nickel and Mantis Minerals</li> </ul> <p><b>Black Swan</b></p> <ul style="list-style-type: none"> <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> </ul> <p><b>Lake Johnston</b></p> <ul style="list-style-type: none"> <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>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p><b>Black Swan</b></p> <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> </ul> <p><b>Lake Johnston</b></p> <ul style="list-style-type: none"> <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 hosted within the Lake Johnston Greenstone belt. The Western Ultramafic Unit, however, is considered to be a Kambalda-Style Komatiite.</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 rock chip and soil samples pertaining to this release are depicted in the main body of the release, with results tabled in Appendix 1.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Single point rock chip and soil results have been plotted in this release.</li> <li>No metal equivalents were reported.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>No previously unreported drill results have been reported in this release.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></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><i>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.</i></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> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>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.</i></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><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further work is currently being planned and will be reported if and when it occurs in the future.</li> </ul>