

30 August 2018

## Commencement of Drilling at High Grade Abi Rose Nickel Discovery

### *Highlights*

- **Contract to commence drilling at the Lake Johnston Abi Rose discovery has been awarded to Mitchells Drilling Services**
- **Significant nickel sulphide mineralisation previously intersected in drill holes at Abi Rose located 360m to the north of the Emily Ann mine at Lake Johnston**
- **Significant intersections included:**
  - **PLJD0001; 0.19m high grade zone of remobilised nickel sulphide grading 10.20% Ni**
  - **PLJD0002; 10.48m wide zone of nickel mineralisation grading 3.20% Ni, containing 5.72m at 4.66% Ni and 1.29m @ 10.22% Ni**
  - **PLJD0003; 1.13m zone of massive nickel sulphide mineralisation grading 3.35% Ni, including 0.26m at 8.67% Ni**
- **Lake Johnston was host to the Emily Ann deposit which averaged a resource grade of 4.1% nickel and produced 46,000 tonnes nickel**
- **An initial 3 diamond holes for 1,500m contracted with an additional 3 holes for 1,800m planned as immediate follow up if successful**

Poseidon Nickel Limited (ASX:POS or the Company) is pleased to announce that a drilling contract has been awarded for the commencement of diamond drilling to progress the Abi Rose nickel discovery made in January 2016<sup>1</sup>.

CEO Robert Dennis said “The discovery of Abi Rose in 2016 was a significant breakthrough for the Company but was placed on hold due to suppressed nickel pricing and funding constraints. The market has improved and the Company is now well funded with the commencement of drilling at Abi Rose being one of Poseidon’s first priorities. The potential successful development of this deposit would be a major enhancement to the Lake Johnston Project due to its close proximity to the existing Emily Ann mine infrastructure”.

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<sup>1</sup> (ASX: Significant High Grade Nickel Intersection at Emily Ann North; 25<sup>th</sup> January 2016)

As previously announced<sup>2</sup>, the highly successful 2015-2016 Emily Ann North drilling programme resulted in the intersection of significant nickel sulphide mineralisation in all three diamond drill holes (Figure 1 & Table 1 below) spanning a zone of almost 50m wide. This new zone of nickel mineralisation has been named “Abi Rose” to keep in theme with the Maggie Hays & Emily Ann deposits. The diamond drilling programme targeted an area 360m north of the Emily Ann mine (which had a resource grade 4.1% nickel and produced 46,000 tonnes nickel) within the Lake Johnston Project.



Figure 1: Consecutive core trays in drill hole PLJD0002 containing the high-grade nickel sulphides at Abi Rose.

A complete nickel sulphide intersection summary is tabulated below.

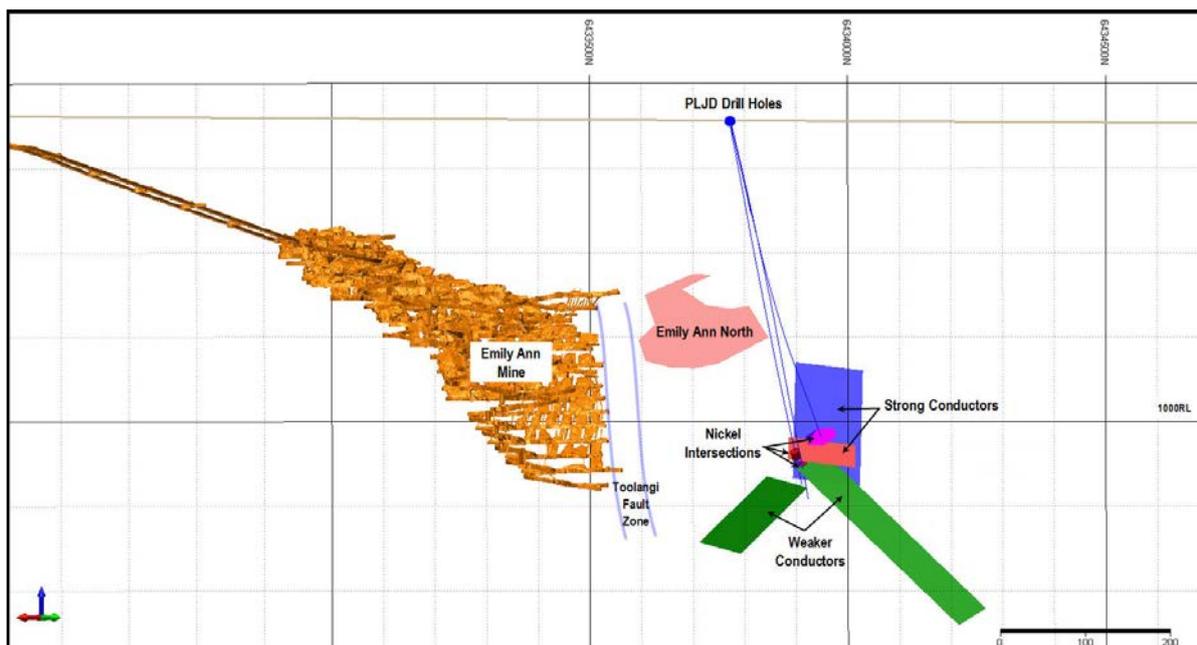
Table 1: Nickel Sulphide Intersection Summary

Hole ID	From_m	To_m	Width	Ni Grade	Details
PLJD0001	435.39	435.58	0.19	10.20%	Remobilised massive sulphide in felsics
PLJD0002	432.00	442.48	10.48	3.20%	Felsic, ultramafic and remobilised sulphide in hw & fw
incl	435.69	441.41	5.72	4.66%	Mineralised Ultramafic Interval
incl	439.09	441.41	2.32	7.62%	Lower Massive Zone
incl	440.12	441.41	1.29	10.22%	High Grade base
PLJD0003	446.10	447.23	1.13	3.35%	Massive sulphides in felsics
incl	446.10	446.36	0.26	8.67%	Remobilised massive sulphides
	449.00	449.62	0.62	1.75%	Stringer and disseminated sulphides

<sup>2</sup> (ASX: Successful Drilling Programme Finalised at Emily Ann North; 21<sup>st</sup> March 2016)

The Abi Rose mineralisation is offset from Emily Ann vertically and horizontally to the east by a series of late stage faults (Figure 2). The bases of both the Emily Ann and Emily Ann North deposits are sharply terminated by an early flat lying structure which in turn is offset vertically from the Emily Ann North mineralisation by the later Toolangi Fault. This geological model was developed over several months by internal Poseidon geological team in parallel with the Newexco Services team. Newexco are a Perth based independent specialist consulting and contracting group who worked closely with Poseidon's geologist to manage the geophysical work and played an integral part in this discovery. Newexco have also been credited with targeting numerous sulphide discoveries through geophysical techniques, including most recently the Monty copper sulphide deposit, the Savannah North Ni-Co-Cu deposit and the Nova Ni-Cu-Co deposit, one of the largest new finds of its type in recent years.

Through structural and 3D modelling, geophysical reinterpretation and conceptual geological thinking, Poseidon successfully discovered the "blind" Abi Rose nickel mineralisation. Controlled diamond core drilling aimed at the modelled target zone successfully intersected the nickel sulphide mineralisation and DHEM surveying of these drill holes has produced confirmatory geophysical anomalies consistent with sulphide mineralisation (Figure 2). Poseidon's planned drilling program will target the strike extent of the contact which is supported by the DHEM geophysical anomalies (Figure 3) with the aim of extending the known zone of mineralisation in order to delineate an economically viable deposit utilising modern and already successful industry leading exploration techniques.



**Figure 2: Long-section showing location of new intersection relative to the Emily Ann mine and Emily Ann North mineralisation. Strong conductor locations are shown as red and blue plates. The locations of additional weaker conductors from the DHEM data are shown in green.**

The initial drilling program will comprise 3 diamond core drill holes for ~1,500m with a contingency of another 3 drill holes comprising 1,800m should the first holes be successful. Navi drilling will be utilised and Mitchells Drilling Services have been awarded the contract with drilling scheduled to commence before the end of September following site works which have been approved under a POW by DMIRS.

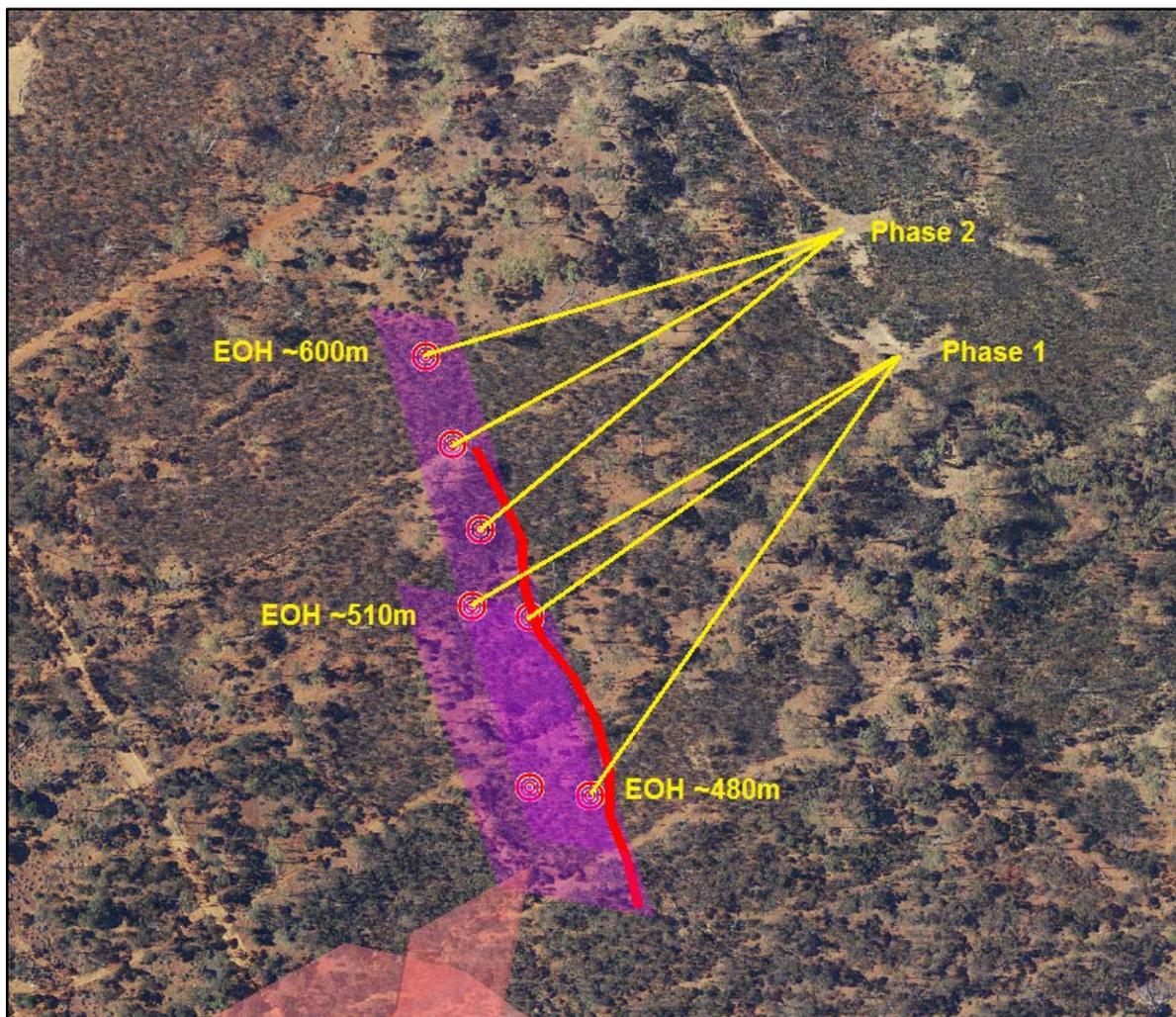


Figure 3: Planned drill holes with modelled target horizon (red) and DHEM plates (purple).

**CORPORATE DIRECTORY**

**Director / Senior Management**

Chris Indermaur	Non-Executive Chairman
David Singleton	Non-Executive Director
Geoff Brayshaw	Non-Executive Director
Robert Dennis	Managing Director & CEO
Eryn Kestel	Company Secretary

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**Home Exchange**

The Company's shares are listed on the Australian Securities Exchange and the home exchange is Perth.  
 ASX code : POS

## MINERAL RESOURCE STATEMENT

Table 1: Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY												
			INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
<b>BLACK SWAN PROJECT</b>															
Black Swan	2012	0.40%	9,600	0.68	65,000	21,100	0.54	114,000	30,700	0.58	179,000	0.01	4,200	NA	-
Silver Swan	2012	4.50%	52	9.19	4,800	84	9.01	7,600	136	9.08	12,400	0.17	250	0.45	600
<b>LAKE JOHNSTON PROJECT</b>															
Maggie Hays	2012	0.80%	2,600	1.60	41,900	900	1.17	10,100	3,500	1.49	52,000	0.05	1,800	0.10	3,400
<b>WINDARRA PROJECT</b>															
Mt Windarra	2012	0.90%	922	1.56	14,000	3,436	1.66	57,500	4,358	1.64	71,500	0.03	1,200	0.13	5,700
South Windarra	2004	0.80%	772	0.98	8,000	-	-	-	772	0.98	8,000	NA	-	NA	-
Cerberus	2004	0.75%	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000	NA	-	0.08	3,600
<b>TOTAL</b>															
Total Ni, Co, Cu Resources	2004 & 2012		16,720	1.01	168,700	27,300	0.82	223,200	44,020	0.89	391,900	0.05	7,450	0.10	13,300

Note: totals may not sum exactly due to rounding. NA = information Not Available from reported resource model.

The Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

Black Swan Resource as at 22 July 2014, Silver Swan Resource as at 3 June 2016, Maggie Hays Resource as at 17 March 2015, Mt Windarra, South Windarra and Cerberus Resource as at 30 April 2013

Table 2: Gold Tailings Project Mineral Resource Statement

Gold Tailings Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY				
			TOTAL INDICATED				
			Tonnes (Kt)	Au Grade (g/t)	Au (oz)	Ag Grade (g/t)	Ag (oz)
<b>WINDARRA GOLD TAILINGS PROJECT</b>							
Gold Tailings	2004	NA	11,000	0.52	183,000	1.9	670,000
<b>TOTAL</b>							
Total Au Resources	2004		11,000	0.52	183,000	1.9	670,000

Note: totals may not sum exactly due to rounding.

Windarra Gold Tailings Resource as at 30 April 2013.

## ORE RESERVE STATEMENT

Table 3: Nickel Projects Ore Reserve Statement

Nickel Sulphide Reserves	JORC Compliance	ORE RESERVE CATEGORY						
		PROBABLE						
		Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
<b>SILVER SWAN PROJECT</b>								
Silver Swan Underground	2012	57	5.79	3,300	0.11	60	0.26	150
Black Swan Open pit	2012	3,370	0.63	21,500	NA	NA	NA	NA
<b>TOTAL</b>								
Total Ni Reserves	2012	3,427	0.72	24,800	0.11	60	0.26	150

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

Co & Cu grades and metal content for Black Swan require additional modelling prior to estimation.

Silver Swan Underground Reserve as at 26 May 2017, Black Swan Open Pit Reserve as at 5 November 2014.

The Company is not aware of any new information or data that materially affects the information in this report and the Resource/Reserve tables above. Such information is based on the information compiled by the Company's Geologists and the Competent Persons as listed below in the Competent Person Statements.

**COMPETENT PERSON STATEMENTS:**

*The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled and reviewed by Mr N Hutchison, General Manager of Geology who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists.*

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

*The information in this report which relates to the Silver Swan Mineral Resource is based on, and fairly represents, information compiled by Neil Hutchison, General Manager of Geology at Poseidon Nickel, who is a Member of The Australian Institute of Geoscientists and Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Silver Swan Ore Reserve is based on, and fairly represents, information compiled by Matthew Keenan who is a full-time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.*

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

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

*Mr Hutchison, Mr Glacken, Mr Weeks, and Mr Keenan all have sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012). Mr Hutchison, Mr Glacken, Mr Weeks, and Mr Keenan have consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

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

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

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

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

**FORWARD LOOKING STATEMENTS:**

*This release contains certain forward looking statements including nickel production targets. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "except", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position and performance are also forward looking statements*

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

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