

23 January 2018

## RC DRILLING HAS COMMENCED AT MEDUSA LITHIUM PROJECT

### *Highlights*

- **Core Drilling Services has commenced RC drilling of up to 4,000m at the Medusa Lithium Project-Lake Johnston**
- **Initial wide spaced drilling will be completed to “map out” and test the high priority lithium pegmatite targets**
- **The program will be continued and infill drilling will commence as the system is defined and results are evaluated**
- **Poseidon owns a Bruker pXRF unit calibrated with the Li\_Index algorithm which has been successfully tested during the discovery of the Medusa lithium-bearing pegmatites**
- **The Bruker pXRF will be utilised on drill samples at the rig to immediately evaluate samples so as to record and map lithium distribution prior to sending samples to the laboratory for analysis**

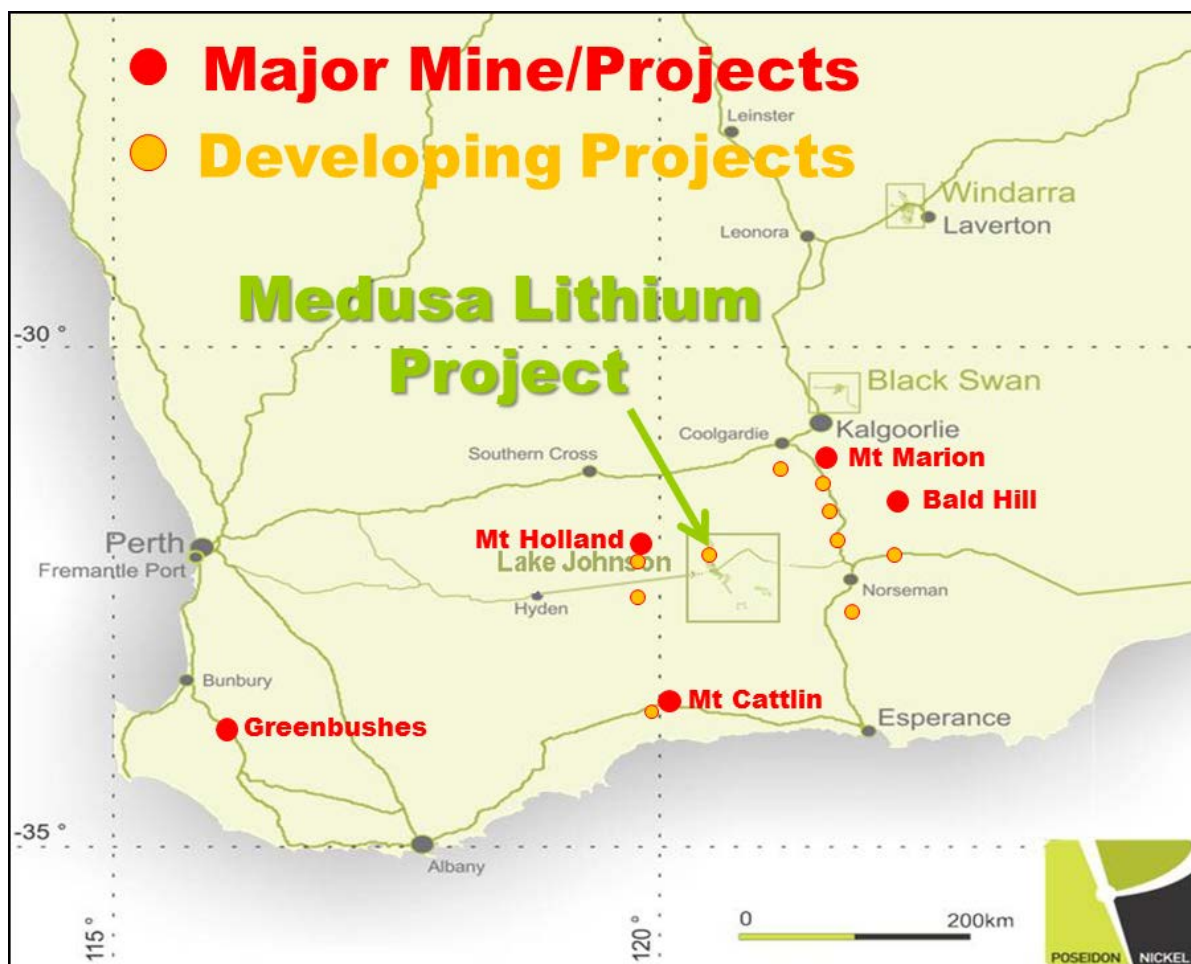
Poseidon Nickel Limited (ASX:POS or the Company) is pleased to update the market that drilling has now commenced at Lake Johnston’s Medusa Lithium Project with Core Drilling Service contracted to complete up to an initial 4,000m of RC drilling. A specialised rubber track mounted RC rig has been engaged to minimise the drill rigs environmental footprint and to navigate the hilly-rocky terrain at Medusa.

Poseidon Nickel Chief Operating Officer, Mr Michael Rodriguez said, “The Lake Johnston Medusa Lithium Project lies in a highly prospective area with several ASX listed companies already exploring for and developing lithium mines in the region. The commencement of 4,000m of RC drilling at Medusa is a key milestone for the Company following significant works completed to date, leading up to this maiden lithium drilling program. With the Lake Johnston concentrator and mill located only 6km from Medusa, Poseidon will be able to fast-track production should an economic lithium deposit be defined.”

### **Medusa Lithium Project**

The Medusa Lithium Project is located 190km south-west of Kalgoorlie (Figure 1) and 6km north of the Company’s 100% owned Lake Johnston process plant and infrastructure. Previous rock chip sampling of outcropping pegmatites returned results of up to 3.85% Li<sub>2</sub>O and evidence of Ta<sub>2</sub>O<sub>5</sub>. The Company has completed extensive exploration work to date in order to define the drill targets (ASX: Lithium Exploration Drilling at Lake Johnston, 12/1/17) and is now progressing to test these pegmatites for lithium-caesium-tantalum bearing minerals.

Poseidon maintains a significant portfolio of tenements in the Lake Johnston region which are highly prospective for lithium hosted pegmatites. The Lake Johnston Medusa Lithium Project lies in a highly prospective area with several ASX listed companies already exploring for and developing lithium mines in the region (Figure 1). The Company aims to confirm the prospective nature of the Medusa Project by drill testing for spodumene bearing pegmatites similar to Kidman Resources' Mt Holland spodumene discovery (ASX:KDR "Mt Holland emerges as significant Lithium discovery," 15<sup>th</sup> July 2016) which is located 70km to the west of Lake Johnston.



**Figure 1:** Location of Lake Johnston Operation and Medusa Lithium Project which is surrounded by numerous advancing lithium projects

Core Drilling Service has been contracted to complete up to 4,000m of RC drilling at the Medusa Lithium Project. A specialised rubber-tracked Morrooka mounted RC rig has been engaged to minimise the drill rigs environmental footprint and to navigate the hilly-rocky terrain at Medusa. Core Drilling Service are familiar with drilling lithium bearing pegmatites as they are currently drilling at Kidman Resources Mt Holland site and therefore can provide nearby mechanical/operational support as required.



**Figure 2:** Drill Rig operating a Medusa Lithium Project

During the exploration phase the Company trialled and purchased a Bruker pXRF unit which has been calibrated with the Li\_Index algorithm which predicts lithium oxide ( $\text{Li}_2\text{O}_5$ ) grades using elemental ratios associated with LCT bearing pegmatites. This proved successful during the trial phase as well as subsequent testing on samples from numerous lithium bearing deposits. The Bruker pXRF calculates lithium grades within acceptable ranges for mapping and initial sampling prior therefore the Company will utilise the pXRF tool during the drilling campaign to analyse the drill samples prior to submitting them to the laboratory for accurate analysis. This will fast-track geological understanding and infill drill hole planning as laboratory results which can take 4-6 weeks to process.

Following the Kidman Option period, Poseidon confirmed that a saleable spodumene concentrate can be produced via the Lake Johnston Operation. Furthermore Poseidon developed know-how and intellectual property on processing lithium through an existing nickel sulphide concentrator, resulting in the application of several co-processing patent applications lodged by the Company.

Kidman completed detailed engineering in support of a restart at Lake Johnston. All confidential information generated by Kidman and its contractors for the restart of Lake Johnston was transferred to Poseidon.





**Figure 3: Field Geologist reviewing rock chips from drill core**

**Notes**

The information in this report that relates to Exploration Results is based on 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. Mr Hutchison has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is 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 has 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.

**CORPORATE DIRECTORY**

**Director / Senior Management**

Chris Indermaur	Non-Executive Chairman
David Singleton	Non-Executive Director
Geoff Brayshaw	Non-Executive Director
Robert Dennis	Non-Executive Director
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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