POSEIDONNICKEL

21st July 2016

UPDATE ON LAKE JOHNSTON LITHIUM PROJECT

Highlights

- **Geochemical sampling technicians commenced field work**
- **Chemical analysis applied for "finger printing" of Lake Johnston pegmatites**
- **Two new highly prospective pegmatite exploration licences secured**
- **Dr Bryan Smith geological pegmatite expert secured to support lithium resource definition**
- **Noel O'Brien lithium technical expert engaged to accelerate plant trial**
- **Preliminary engineering for co-processing lithium hosted pegmatites and nickel sulphide ores commenced**
- **Initial discussions with third parties for spodumene concentrate offtake**
- **Lithium carbonate (>99% pure) produced from Lake Johnston concentrate**
- **Progressing patent application for the co-processing of lithium & nickel ores**

Poseidon Nickel Limited (ASX:POS or the Company) is pleased to update the market on the Lake Johnston Lithium Project latest developments. Poseidon Nickel Chairman, Mr Chris Indermaur said, "Our existing plant, substantial infrastructure and technical team give Poseidon an important advantage in potential speed to market. The Company plans to utilise this significant advantage to become the first hard rock lithium producer in the Lake Johnston region establishing a central lithium processing hub."

The Company has contracted Corad Pty Ltd to complete soil sampling, rock sampling and core processing to identify the spodumene corridor at Lake Johnston. Geological technicians have commenced soil sampling on E63/1067 and the first batch of samples have been submitted for analysis. Trenching is planned to define the structural orientation of the pegmatites and recover enough material to facilitate bulk testwork in the laboratory under a research and development programme.

Poseidon is seeking clearing permits from the Department of Mines and Petroleum (DMP) to support the proposed trenching and drilling programme. As Lake Johnston is located in an environmentally sensitive region, these permits require regulatory approval from the Department of Parks and Wildlife (DPaW) and the Environmental Protection Authority (EPA). Completing this work has historically taken several months however, as the Company has previously completed detailed flora and fauna studies, and has existing environmental management plans in place, approvals should be secured in a shorter time frame.

Poseidon and Geochemical Services have collaboratively progressed chemical analysis of the samples previously collected to "finger print" the Lake Johnston pegmatites by applying innovative science to substantially advance the spodumene prospectivity and likely corridors of the lithium hosted pegmatite rocks. Blind geochemical tests on these rock chip samples have returned a strong statistical correlation between predicted lithium assay results when compared to actual laboratory results. This is an exceptional outcome giving Poseidon confidence to apply cost effect and rapid analysis techniques on site, complementing the onsite laboratory.

Figure 1 below demonstrates the results of geochemical modelling that applies innovative science to establish the prospectivity or "fertility" of specific areas for lithium hosted pegmatites. The diagram highlights the granite source rocks in grey with the prospective or "spodumene fertile" corridors around the granites shown in pink. The data points shown in Figure 1 are geochemical sample points that also show the calculated fertility of the source granite based on associated key element ratios. The dark grey "X" areas are outside of the fertile corridor zone and are not favourable for lithium mineralisation.

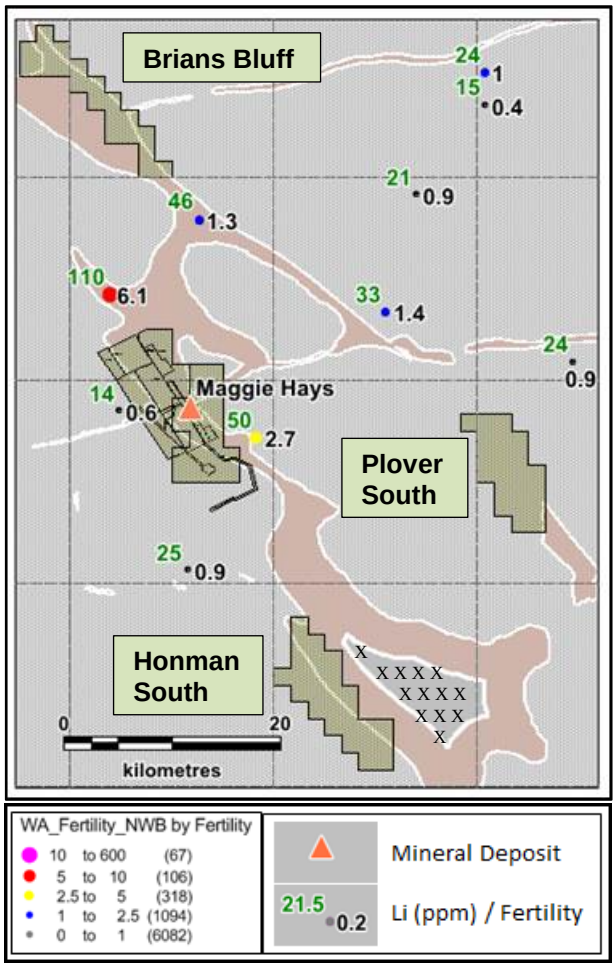

Figure 1: Geochemical modelling improves understanding of the "fertile" spodumene corridors

This unique geological modelling process supports that the Lake Johnston regional area is fertile for additional lithium hosted pegmatites. Consequently, the Company has secured two new highly prospective exploration licences at Honman South and Plover South in areas that meet the Company's modelling of fertile lithium hosted pegmatite zones. Poseidon's 100% owned Brians Bluff tenement is located north of the Emily Ann concentrator and also sits well within a favourable spodumene corridor within the Lake Johnston Greenstone Belt (Figure 1). Brians Bluff adjoins White Cliff Minerals Lake Percy tenure (Figure 2) which is reported to contain extensive pegmatite bodies (ASX:WCN "White Cliff Joint Ventures Lithium Project", 14 June 2016).

Poseidon maintains a significant portfolio of tenements in the Lake Johnston region which are all highly prospective for lithium hosted pegmatites. The tenements are adjacent to tenure held by other companies exploring for lithium in the area. Recent activity in the rapidly emerging Lake Johnston lithium province confirms the prospective nature for the development of a spodumene bearing corridors similar to Kidman Resources' Mt Holland spodumene discovery (ASX:KDR "Mt Holland emerges as significant Lithium discovery," 15th July 2016) which is located 70km to the west of Lake Johnston.

Poseidon and other company tenement holdings in the Lake Johnston region are shown on Figure 2.

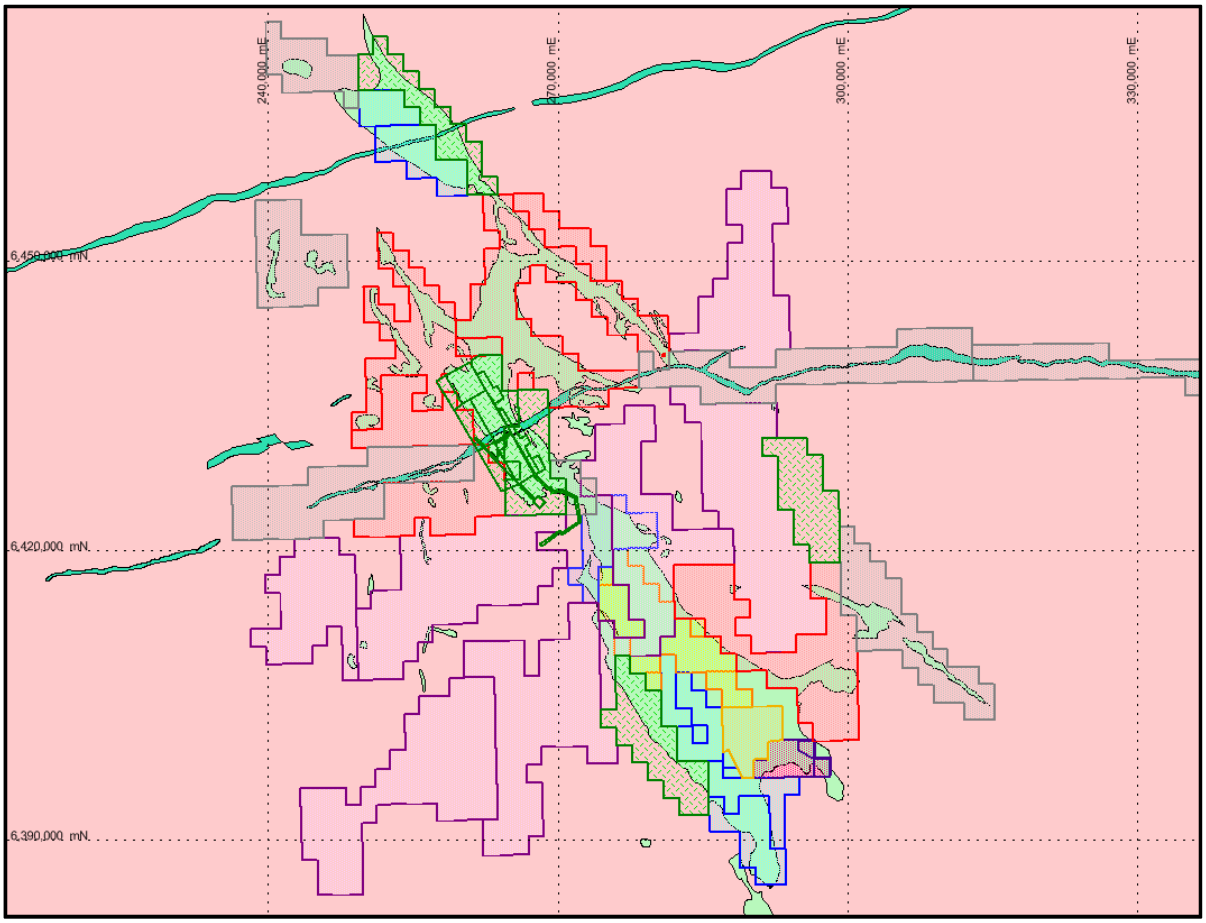

Figure 2: Lake Johnston tenure holdings over granite and greenstone contacts (refer to Figure 1 for Poseidon tenement locations)

Poseidon has secured the services of Dr Bryan Smith, a well-known geological expert to accelerate the lithium resource definition. Dr Smith has a long history within the mining industry and is well known for his contribution to the industry. In 1974 he worked on the Mt Marion lithium pegmatites for Western Mining Corporation.

Since 2009, Dr Smith has been instrumental in the development of the Mt Marion Lithium Project for Neo Metals, leading the initial geological mapping, magnetic and radiometric interpretation, petrological studies and established the structural geological models resulting in the execution of a very successful definitive drilling program. Mt Marion is currently commissioning a spodumene processing plant expected to deliver a 6% spodumene concentrate to market.

The Company has also secured the services of Noel O'Brien, a processing technical expert secured to accelerate work to complete a plant trial at the Lake Johnston concentrator. He is familiar with the production of spodumene concentrate both from Greenbushes and more recently in the development of the Bikita Minerals Lithium Project in Zimbabwe.

A research and development programme will be progressed based on bulk metallurgical samples recovered from pegmatite trenching. The testwork will include uniaxial compressive strength of typical rocks, Bond impact crushing and abrasion tests, some heavy media separation research using spirals, flotation optimisation, thickening and filtration testwork as well as tantalite recovery. Following the initial laboratory testwork, Poseidon plans to move to a plant trial to investigate the production of a spodumene concentrate at the Lake Johnston concentrator (Figure 3).

Figure 3: Lake Johnston 1.5MTPA Concentrator

The Primero Group Engineering subcontractors have been commissioned to progress preliminary engineering design for the processing of lithium hosted pegmatites at its Lake Johnston 1.5 million tonne per annum concentrator to support the co-processing of both nickel and lithium ores. An initial review of the concentrator will be focussed on a plant trial to process lithium ores to produce a 6% spodumene concentrate.

Primero Group has expertise in the design and construction of gravity separation plants, mineral processing and flotation circuits. Key staff were directly involved in the design and construction of the Greenbushes heavy media separation plant and spodumene concentrator. The operation included an open pit and underground mine to feed the plant. The process plant includes a heavy media separation plant, crushing and milling circuit, flotation circuit, thickening and filtration plant. The operation was delivered on budget and ahead of schedule.

Figure 4: Spare Milling and Flotation Capacity at Lake Johnston

Preliminary discussions with possible third party offtake providers for a 5 to 6% spodumene concentrate and tantalite concentrate have progressed to explore the likely terms offered. The offtake providers are interested in forecast quality and volume to establish an offtake framework. The forecast quality and deleterious elements will be investigated from testwork completed from ores recovered from trenching at Lake Johnston. The volume to be delivered to market will depend on the successful resource definition of a spodumene corridor at Lake Johnston and the existing concentrator secondary circuit capability as determined by Primero Group Engineers.

The Company has successfully produced a >99% pure lithium carbonate product (see Figure 5 below) from concentrate recovered by flotation of lithium hosted pegmatite rocks obtained from its tenements as previously advised on the 9th June 2016. The overall recovery was greater than 98% lithium from the lithium concentrate. Further testwork is planned to investigate the reduction of impurities contained within the lithium carbonate product. Figure 6 below shows the testwork apparatus applied for the leaching research on pegmatites.

Poseidon plans to progress its own patent applications for the co-processing of pegmatite and nickel ores at Lake Johnston and continue to investigate downstream processing of a spodumene and other concentrates from its 100% owned Lake Johnston 1.5MTPA concentrator.

Figure 5: Lithium Carbonate Produced

Figure 6: Lithium Hosted Pegmatite Leaching Research Equipment

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.

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Director / Senior Management

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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