



#### ASX ANNOUNCEMENT

ASX CODE: RUM

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ASX Release  
3<sup>rd</sup> July 2014

Listings Officer  
Company Announcements  
ASX Limited, Melbourne

## AMMAROO PHOSPHATE PRE-FEASIBILITY STUDY AND KARINGA LAKES POTASH SCOPING STUDY UPDATES

### *Key Points*

- The Ammaroo Phosphate project pre-feasibility study has entered its completion phase. A draft report is expected by mid August and after a period of internal and peer review a final report is expected to be considered by the Board in early to mid September
- A bulk sample of Ammaroo phosphate rock concentrate was successfully produced at Bureau Veritas labs in Adelaide and sent to Prayon in Belgium for phosphoric acid and downstream phosphate fertiliser production test-work
- Preliminary results from phosphoric acid and downstream phosphate fertiliser production test work are encouraging, particularly the apparent suitability of Ammaroo rock concentrate for wet phosphoric acid production with lower than normal sulphuric acid consumption, high P<sub>2</sub>O<sub>5</sub> yields, acceptable minor element ratios and the apparent reversion of the Lead, that exists in some parts of the resource, to the gypsum waste stream
- The more complete understanding of the chemical nature of the rock, the apparent convertibility of the rock to downstream phosphate fertiliser products and the technical and economic understanding that will come from the completion of the PFS study, if positive, will enable more formal engagement with potential off-take partners and potential joint venture partners over the ensuing months in accordance with the Company's strategy
- Notification has been received from the Northern Territory Environmental Protection Authority that, as expected, the Ammaroo phosphate project requires assessment at the level of an Environmental Impact Statement (EIS). Once the EIS terms of reference are received, the environmental approvals process can be advanced as appropriate.
- The Karinga Lakes Potash Project scoping study continues to progress with a conceptual design of the project expected to be completed by the end of July. It is then intended to engage GHD Australia to review the design and define 'Australianised' capital and operating costs. The target completion date for the scoping study is late September 2014.

### *Ammaroo Phosphate Project Pre-Feasibility Study*

The Ammaroo Phosphate pre-feasibility has moved into the completion phase, its third and final phase. The second phase, labelled the definition phase, has now been sufficiently completed to enable progress to the completion phase. The definition phase primarily focussed on:

- Advancing the metallurgical test work and process flow sheet development program on the phosphate rock and the production of a bulk flotation concentrate sample using representative ore from across the resource;
- Understanding the chemical make up and convertibility of the rock to phosphoric acid and downstream fertiliser products;
- Understanding the global phosphate market and the specification required for traded rock products and downstream phosphate products; and
- Transport and logistics options and costs.

Primary tasks to be completed during the third and final phase include:

- Mine planning, geotechnical management and the conversion of a Resource to a Reserve;
- The final design of the project's mining, processing, waste stream management and supporting power, water, transport and mine site infrastructure;
- Organisational models;
- Articulation of capital and operating costs to a pre-feasibility standard (+/- 25%); and
- Incorporation of market and pricing studies to enable valuations of the project scenarios to be completed.

The key milestone that has enabled the study to progress to its completion phase was the finalisation of a number of critical metallurgical and chemical test work processes. The preliminary results from this work have provided sufficient confidence that the Ammaroo phosphate ore can be converted into rock products that meet existing global market specifications and that the rock can be successfully converted to phosphoric acid which can then be converted to phosphate fertilisers such as Mono-ammonium phosphate (MAP) and Di-ammonium phosphate (DAP), the predominant phosphate fertiliser products that are used by farmers throughout the world.

As announced in Rum Jungle Resources' Quarterly Report released to the ASX on 30 April 2014, a bulk sample of phosphate rock flotation concentrate was being produced at the time and it was to be despatched to Prayon in Belgium for a continuous phosphoric acid production test and MAP/DAP test-work. Prayon is a global leader in the design and construction of phosphoric acid and phosphate fertiliser production plants. The bulk sample arrived at Prayon around mid May 2014 and was assessed to have met standard market specifications in terms of both  $P_2O_5$  content and in terms of other critical elements such as iron, aluminium and magnesium (part of the Minor Element Ratio - MER) which, if too high, can have detrimental effects on the production of downstream fertiliser products.

Continuous phosphoric acid production testing and subsequent MAP and DAP testing has been completed and although the final chemical and qualitative analysis of the products and waste stream materials has not yet been formally received, preliminary results of the rock concentrate analysis and phosphoric acid production analysis have been received and are most encouraging. Specific comments received from Prayon in their preliminary analysis included:

- $P_2O_5$  content is in the usual range for sedimentary phosphate rock that trades on global markets
- There was no particular difficulty in producing phosphoric acid as temperature and other variables were easily controlled. The  $P_2O_5$  recovery was considered high and the unreacted  $P_2O_5$  losses were very low
- The ratio of  $CaO/P_2O_5$  is low for sedimentary rock indicating a low consumption of sulphuric acid
- The Minor Element Ratio is acceptable and should not impede acid viscosity in MAP/DAP production
- The silica content is relatively high but the majority is unreactive and reverts to the gypsum waste stream in phosphoric acid production. There is sufficient reactive silica and aluminium to combine with fluorine to limit corrosion

- Almost all of the lead (Pb) that was present in the rock concentrate reverts to the gypsum waste stream therefore the product phosphoric acid has very low lead content. There doesn't appear to be any other heavy metal issues as problematic metals common in other phosphate ores around the world such as uranium, cadmium and arsenic, are at very low levels.



**Di Ammonium Phosphate fertiliser produced from Ammaroo Phosphate Rock at Prayon's laboratory in Belgium**

Previous announcements have indicated a pre-feasibility study completion date of around the middle of 2014 dependent on the progress of the above mentioned test work program. Although the test work has taken longer than initially forecast, it was deemed prudent not to push ahead with the final phase of the study and commit scarce shareholders funds, until there was some confidence around the results of this critical test work and the convertibility of the rock into saleable downstream products that meet global specifications. Accordingly, it is expected that a draft pre-feasibility report will be completed by Worley Parsons by mid August 2014. Once the draft is available, it is intended that a period of internal and peer review and value engineering will be conducted with final results available in early to mid September for consideration by the Rum Jungle Resources Board.

Other key activities currently underway in support of the project include the following:

- Environmental approvals - As a result of the Notice of Intent submitted in April 2014, as expected, notification has been received from the Northern Territory EPA that the project requires assessment at the level of an Environmental Impact Statement (EIS). It is expected that the EIS terms of reference will be received within the next two months which will enable the EIS to be progressed an appropriate time
- Discussions regarding a Native Title Agreement, a pre-cursor to the approval of a mineral lease continue and it is hoped to finalise this negotiation before year end
- Commercial discussions with potential gas suppliers, the Darwin Ports Corporation and rail transport providers are continuing

*Newly appointed Managing Director Chris Tziolis commented that the completion of the chemical processing test work is a key milestone in the progression of the phosphate project and has created sufficient confidence to justify the expenditure of funding on the completion phase of the study. The quality of phosphate rock and its convertibility*

*to downstream products is critical regardless of the ultimate nature of the project at the Ammaroo site itself as all mined phosphate rock is converted to saleable phosphate fertiliser products somewhere along the value chain, somewhere in the global market.*

*What is particularly encouraging is the preliminary results received from Prayon outlining the apparent ability to convert Ammaroo ore into market standard rock concentrate, the apparent convertibility of the rock concentrate to a quality phosphoric acid, the apparent lower than average sulphuric acid consumption, the achievement of the minor element ratio parameters and importantly the confirmation that the lead that exists in some areas of the resource, reverts to the gypsum waste stream in phosphoric acid production and not the fertiliser products. The understanding of the chemical make up of the rock and resultant products and ultimately the more complete understanding of the technical and economic aspects of a potential project once the study is completed, if positive, will provide a basis for more formal discussions with potential off take and/or joint venture partners over the ensuing months. As identified in the investor presentation released to the market on 30 April 2014, the next focus for the company is a formal process, informed by the studies, of engaging the global fertiliser industry and other agri-business investors to potentially attract offtake and/or investment to underpin a bankable feasibility study and subsequent project development.*

### **Karinga Lakes Potash Project Scoping Study**

The Karinga Lakes Potash project scoping study began in earnest in March 2014 with a site visit to the Lakes project conducted by the China International Chemical Consulting Corporation (CICCC). CICCC was engaged to provide technical oversight of the study because of their experience in establishing salt lake potash operations in China. CICCC's main task was to review the resource and its chemical and physical properties and the regional topography in order to develop a conceptual design of the project to incorporate, brine harvesting and brine transport, evaporation stages of production and downstream flotation and fractional recrystallization requirements to produce a market quality sulphate of potash product and to define a theoretical production scale. In parallel, a number of evaporation and downstream production trials have been conducted to provide input into the CICCC study and a sulphate of potash marketing study has been completed focusing on potential markets in the Asia Pacific region.

A preliminary conceptual design of the project has been developed by CICCC but the completion of this phase of the study is contingent on the pending analysis of recent flotation tests on the sample material to more completely understand the downstream processing requirements of the conceptual production facility. This is expected to be completed by the end of July.

Once the CICCC design phase has been completed, it is intended to engage GHD Australia to review the design and to develop an 'Australianised' operating model to determine the conceptual capital and operating costs and resultant valuation of what potentially could be the first project of this nature in Australia. The target completion date for the scoping study is late September 2014 and will form the basis of defining further development requirements and potentially underpin more formal discussions with potential JV partners.

*Managing Director Chris Tziolis commented that the Karinga Lakes project scoping study is very much a first stage study and represents a significant learning curve for all involved, largely due to the limited level of expertise available globally in this type of operation. However, there is potential that the Karinga Lakes project, subject to further technical and economic assessment and future development approvals, could be the first potash project of this nature developed in Australia due to its proximity to existing transport infrastructure to provide access to markets and sources of gas that are required for the final processing step in the production of Sulphate of Potash. Moreover the Karinga Lakes project could serve as a smaller scale start-up operation to enable the evolution of regional and Australian markets and importantly facilitate future access to the potentially significant potassium brine resources of the broader Central Australian Groundwater Discharge Zone, over which Rum Jungle Resources, has significant existing exploration tenure and exploration applications. Access to these other areas will be subject to future agreement of traditional owners.*

*This announcement contains forward looking statements. Forward looking statements are not based on historical facts, but are based on current expectations of future results or events. These forward looking statements are subject to risks, uncertainties and assumptions which could cause actual results or events to differ materially from the expectations described in such forward looking statements. Although Rum Jungle Resources believes that the expectations reflected in the forward looking statements in this presentation are reasonable, no assurance can be given (and Rum Jungle Resources does not give any assurance) that such expectations will prove to be correct. Undue reliance should not be placed on any forward looking statements in this announcement, particularly given that Rum Jungle Resources has not yet made a decision to proceed to develop the Ammaroo Phosphate Project, Karinga Lakes project or any other project, and Rum Jungle Resources does not yet know whether it will be able to finance either project.*

A handwritten signature in black ink, appearing to read 'C. Tziolis', with a large, stylized flourish extending from the end of the signature.

**Chris Tziolis**  
**Managing Director**