



## ASX ANNOUNCEMENT

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**MAJOR PROJECTS**  
Ammaroo Rock Phosphate  
Karinga Lakes Brine Potash  
Ross River: IOCGU  
Top End: Au-Cu

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ASX Announcement by Electronic Lodgement, 29<sup>th</sup> August, 2013

## POTASH EXPLORATION AND DEVELOPMENT UPDATE

### Highlights

- Exploration at Karinga Lakes Potash Project has been in full swing for three months with encouraging results. Karinga Lakes Potash Project is a joint venture between Rum Jungle Resources Ltd (increasing from 85%) and Reward Minerals Ltd (decreasing from 15%)

- An air core drilling program was completed on August 26 with a total of 95 holes drilled for 1,673 metres across 28 lakes. The results from this drilling will increase resource confidence

- A 26 day pump test has been completed at the Pulcura Lake Trench and pumping is now in progress at the Curtin Boundary Lake Trench. Pumping trials have confirmed sustained brine flow and brine geochemistry over time, which is positive

- Trench excavation of Miningere Lake was completed with an 8 tonne excavator on 22 August

- An onsite winter evaporation trial is proceeding as planned with potassium levels increasing as expected.

- Widening, straightening and re-alignment of the main station access track to camp is underway to improve travel safety.

- Sonic drilling is expected to commence on 10 September to collect sediment and fractured rock samples for drainable porosity testing and other geotechnical test work

- Planning is also underway for potash brine drilling at Lake Mackay, WA.

### Potash Exploration and Development Progress Report

#### Karinga Lakes Project Background

The Karinga Lakes Potash Project in southern NT is the most intensively explored brine potash project in Australia. Since 2010, 194 air core holes, 56 sonic core holes and 8 vibracore holes have been drilled and 47 water bores installed. Four backhoe trenches have been dug and pump tested and three excavator trenches up to 100 m in length are in the process of being pump tested for up to 30 days. Ten water bores were subject to 24 hour pump testing in 2012. Approximately 700 brine samples and 360 sediment samples have been assayed since 2010. The joint venture is looking forward to applying for a Mineral Lease over the project in late 2013 or early 2014 once all exploration results have been received and evaluated. An upgraded Indicated JORC resource is expected to be released late in the year.

#### Karinga Lakes

##### 2013 Air Core Drilling

Drilling commenced on 13 June and was completed on 26 August. In total, 95 holes were completed for 1,673 m. The table below lists flow rates and brine assays for all holes which flowed greater than 1 litre/sec. Flow rates were air lift flow rates out of the rig cyclone. Testing with a submersible pump during 2012 showed pump lift rates were on average 1.85 times better than air lift flow rates.



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**Table. Flow rates and assays from selected air core drill holes.**

Hole	Easting	Northing	Lake	Depth	Flow rate	K	Mg	SO <sub>4</sub>	Na	Cl
KLAC105	774386	7209795	Main North Road	21	1.08	2020	2020	16000	29000	43000
KLAC110	777000	7209933	Curtin West	24	2.08	6060	7660	54000	88000	130000
KLAC113	789344	7205041	Curtin North	30	1.6	3444	4690	25400	84000	120000
KLAC120	790242	7202450	Mallee Well East	21	1.19	4900	10214	44857	90000	143000
KLAC132	203217	7202266	Swansons North	30	2.08	3530	9650	24830	87000	144000
KLAC133	204434	7202038	Swansons North	30	1.25	3270	7840	40700	85000	127000
KLAC134	205803	7199138	Island 5	21	1.19	5280	10000	64600	93000	138000
KLAC137	205516	7198658	Island 5	18	1.3	6450	12800	31666	89000	163000
KLAC139	207156	7200980	Island 4	24	1.79	6133	9544	16800	70000	124000
KLAC142	210154	7197583	Island 2	13	1.04	5740	6620	6120	74000	128000
KLAC143	212115	7197023	Island 1	12	1.09	6000	8200	5760	81000	150000
KLAC147	210678	7199845	Curtin Boundary	29	1.32					
KLAC148	210959	7203205	Skinny	30	1.56					
KLAC169	226804	7195226	Miningere West	30	1.8					
KLAC170	227297	7196242	Miningere West	30	2.08					
KLAC171	227704	7197545	Miningere West	30	1.67					
KLAC172	233255	7198455	Miningere	30	1.25					
KLAC173	233297	7198481	Miningere	28	1.25					
KLAC183	261456	7191548	Pulcura	21	1.39					

**Notes:**

Locations are in GDA94 Zone 52 and 53

Depths in metres

Flow rates in l/s

Brine samples generally collected every 3 m down holes in 500 ml sample bottles

Samples assayed by Bureau Veritas Amdel Laboratory in Thebarton, SA.

All assay values are in mg/L (1 mg/L equals 1 ppm – 10,000mg/L equals 1 %)

Assay results have not yet been received for blank boxes



**Sampling brine from air core drill hole.**

### **Pump Testing**

Pump testing began at the Pulcura Lake trench on 18 July and after 27 days approximately 5.685 million litres of brine had been pumped to an adjoining lake. Groundwater Science Hydrogeological Consultants are setting up and supervising the pump tests initially before handing over to RUM staff for daily sampling, monitoring of flow rates, water levels in the trench and surrounding piezometers. The average flow rate over the duration of the test was roughly 2.5 litres per second. Samples for the first 13 days were submitted to the lab and confirmed a slight increase in potassium and magnesium grade. The potassium grade was 3,800 mg/l on day one and 3,846 mg/l averaged over 13 days. The magnesium was 3,500 mg/l on day one and 3,538 mg/l averaged over 13 days. Full results are expected in two weeks.



**Pump test in progress and discharge pipe at Pulcura Lake Trench.**



**Curtin Boundary Trench 2m deep dug into fractured siltstone prior to pumping.**



**Curtin Boundary Trench with pump testing in progress.**

A 3 m deep trench, 80 m in length was completed at Mingere Lake on 22 August. Digging was completed by a Bobcat 8 tonne excavator supported on aluminium bog mats. This will be the third and deepest trench used for pump testing.



**Miningere Trench digging in progress.**

### **Evaporation Trial**

An onsite winter evaporation trial of 12,000 litres of brine in three tanks has been underway since 30 May. At the time of writing, approximately 30% volume reduction had taken place due to evaporation. Water temperatures are ranging from 14-20 degrees Celsius and air temperatures have generally ranged between 1 and 30 degrees Celsius. RUM is supervising the trial at this stage with guidance from MWH Global. Once about 80-90% halite precipitation has occurred, the enriched potash brine will be transferred from the three large tanks to two smaller tanks for final crystallisation of mixed potash salts (including schoenite).

These salts will then undergo flotation tests to fine tune process routes and flotation reagent doses and provide samples of schoenite and SOP for marketing purposes. Laboratory tests in 2012 have already proven that commercial grade potash can be produced from Karinga Lakes brine.



**Evaporation trial at commencement on 30 May.**



**Tank 3 Evaporation trial on August 21 with salt crystals visible around the rim.**

**Table. Evaporation trial assays over time**

Date	Sample	K	Mg	SO <sub>4</sub>	Na	Cl	Density
30/05/2013	T1	5400	5400	40000	80000	120000	1.165
30/05/2013	T2	5300	5300	39000	79000	120000	1.165
30/05/2013	T3	5400	5300	40000	80000	120000	1.165
2/07/2013	T1	5500	5300	42000	83000	120000	1.176
2/07/2013	T2	5300	5100	42000	78000	130000	1.177
2/07/2013	T3	5300	5200	43000	76000	120000	1.177
30/07/2013	T1	6700	6200	45000	93000	140000	1.193
30/07/2013	T2	6600	6200	45000	93000	140000	1.193
30/07/2013	T3	6600	6200	46000	92000	140000	1.193

**Notes:**

All assays are in mg/l

T1=tank 1

T2=tank 2

T3 =tank 3

Sodium chloride levels will continue to increase before halite begins to precipitate and fall out of solution. At this stage sodium chloride levels will drop rapidly and potassium levels will increase.

### **Lake Mackay Potash (RUM to earn 51% from Toro Energy)**

The Potash Joint Venture with Toro Energy over four tenements (440 sq km) on the southern part of Lake Mackay in WA near the NT border will shortly be finalised and signed by both parties. Rum Jungle Resource's Exploration Manager conducted a logistical reconnaissance trip to Kiwirrkurra and Lake Mackay along with Toro Energy staff in mid August. He also attended a cultural awareness course run by the Central Desert Native Title Service in conjunction with the Kiwirrkurra Traditional Owners (Tjamu-Tjamu people). Toro Energy has been operating in the area since 2009 and has a good working relationship with the local people. Rum Jungle will maintain and build on that relationship.

Efforts are currently being made to organise a helicopter supported air core drilling program in October 2013 to define a brine potash resource on the joint venture tenements. This will be dependant on permitting, weather, drill rig and helicopter availability.



**Toro Energy Exploration Manager David Rawlings and the Rum Jungle Muddox ATV on Lake Mackay.**



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*The information in this report that relates to exploration results and economic potential is based on information compiled by Mr David Muller, who is a Fellow of the Australasian Institute of Mining and Metallurgy.*

*Mr Muller is Managing Director of Rum Jungle Resources Ltd and an employee of the Company. Mr Muller has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking to qualify as a Competent Person as defined in the 2004 edition of the "Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves".*

*Mr Muller consents to the inclusion in this report on the matters based on their information in the form and context in which it appears.*

*This document may contain forward-looking statements. Certain material factors or assumptions were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information. Actual values, results or events may be materially different to those expressed or implied.*