



# THE BARROW CREEK 1 PHOSPHATE DISCOVERY BY RUM JUNGLE RESOURCES LTD, AMMAROO, NORTHERN TERRITORY AUSTRALIA

RUM JUNGLE RESOURCES LIMITED

DAVID MULLER – MANAGING DIRECTOR

MINING THE TERRITORY CONFERENCE DARWIN

September 2012

# DISCLAIMER

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*The information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr David Muller, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Resource statements referring to Barrow Creek 1 Phosphate Deposit were prepared by Mr Jonathon Abbott a full time employee with MPR Geological Consultants Pty Ltd. Mr Abbott 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 is Managing Director of Rum Jungle Resources Ltd and a consultant to 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 and Mr Abbott consent 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.*

# ASX CODE: RUM

- x Rum Jungle Resources Ltd is a Darwin based, NT focused diversified explorer.
- x Listed on the ASX in November 2007 after raising \$12 million in the IPO.
- x Raised \$6.6M @ \$0.33 per share April 2012.
- x Significant new institutional shareholder base has emerged in 2012
- x \$12 million cash on deposit end August 2012.
- x Market Capitalisation 207 million shares @ \$0.25 is A\$52 million.
- x Announces JORC inferred resource of 253,000,000 tonnes at 15% P2O5 in Dec 2011
- x Over 2000 RC holes now completed for over 60,000 meters. Resource to be recalculated
- x Initial Potash resource of 540,000 tonnes potassium sulphate announced May 2012
- x Deeper drilling and flow testing of lake brine in July to September 2012 to substantially upgrade potash resource
- x Full scoping study of phosphate commenced in September

## DIRECTORS

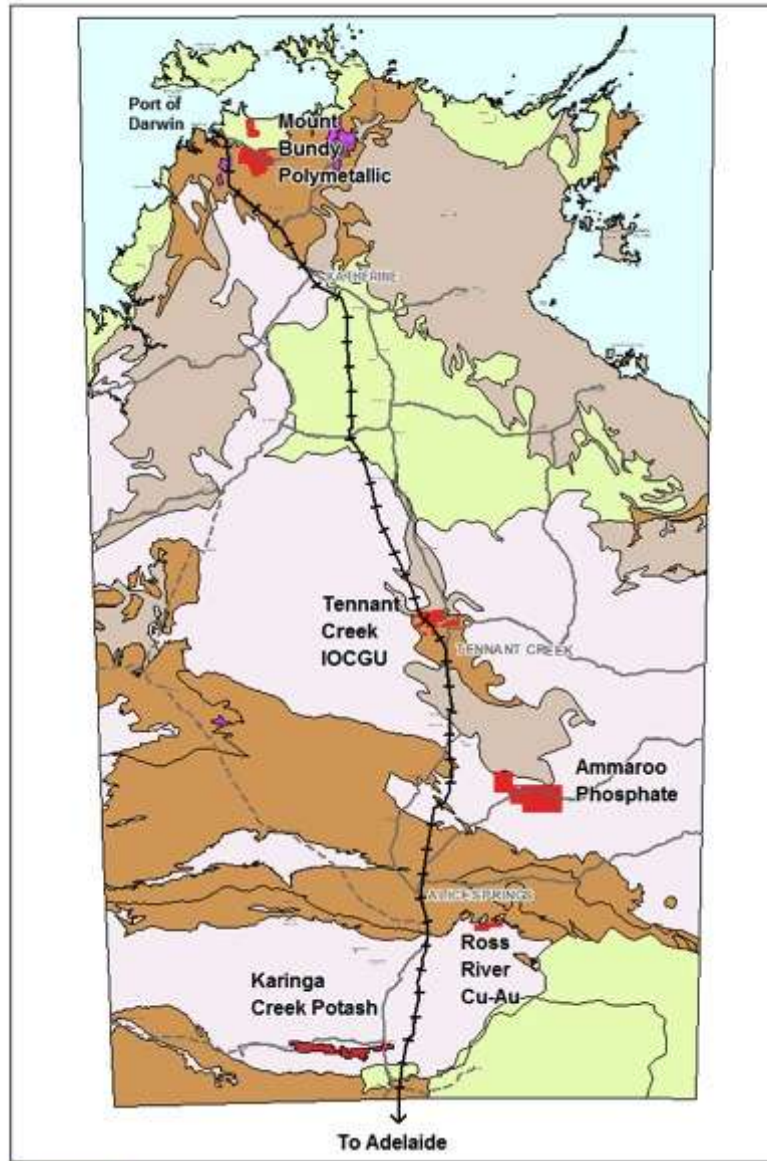
John Roberts (Chairman)  
David Muller (Managing Director)  
Rob Annells

## SENIOR STAFF

Chris Tziolis (Chief Development Officer)  
Chris Moyle (CFO and Company Secretary)  
Nigel Doyle (Exploration Manager)  
John Dunster (Chief Geologist)

## Top Shareholders

Washington H Soul Pattinson	13.5%
Lion Selection	4.9%
Acorn Capital	4.9%
Farjoy Pty Ltd	4.5%
Finching Pty Ltd	4.0%
Merrill Lynch Nominees	4.3%



ASX Code: RUM  
 125 million shares on issue  
 Market Cap @ \$0.07 is \$8.75 million  
[www.rumjungleuranium.com.au](http://www.rumjungleuranium.com.au)

**MAJOR SHAREHOLDERS**

Directors	11%
ANZ Nominees	10.8%
Territory Resources	7.5%
Merrill Lynch Nominees	5.7%

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**WORLD MARKET**

**OCEAN FREIGHT**

# WORLD PRODUCTION PHOSPHATE





# 7 MAIN NORTH AFRICAN & MED PLAYERS



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RUM'S STRATEGY IS TO FOCUS ON MARKETS FOR ROCK  
PHOSPHATE

CLOSE TO DARWIN PORT THAT WILL SAVE  
CUSTOMERS IN THE ASIA REGION CONSIDERABLE  
FREIGHT CHARGES VIS A VIS SUPPLIES FROM  
THE MEDITERRANEAN & NORTH AFRICAN (MENA)  
PRODUCERS



# DARWIN'S PROXIMITY TO ASIA

Jakarta:	1470nm
Singapore:	1807nm
Ho Chi Minh:	2003nm
Hong Kong:	2305nm
Taipei:	2315nm
Bangkok:	2393nm
Shanghai:	2677nm
Yokohama:	2918nm
Seoul:	3010nm
Melbourne:	3755km
Adelaide:	3241km



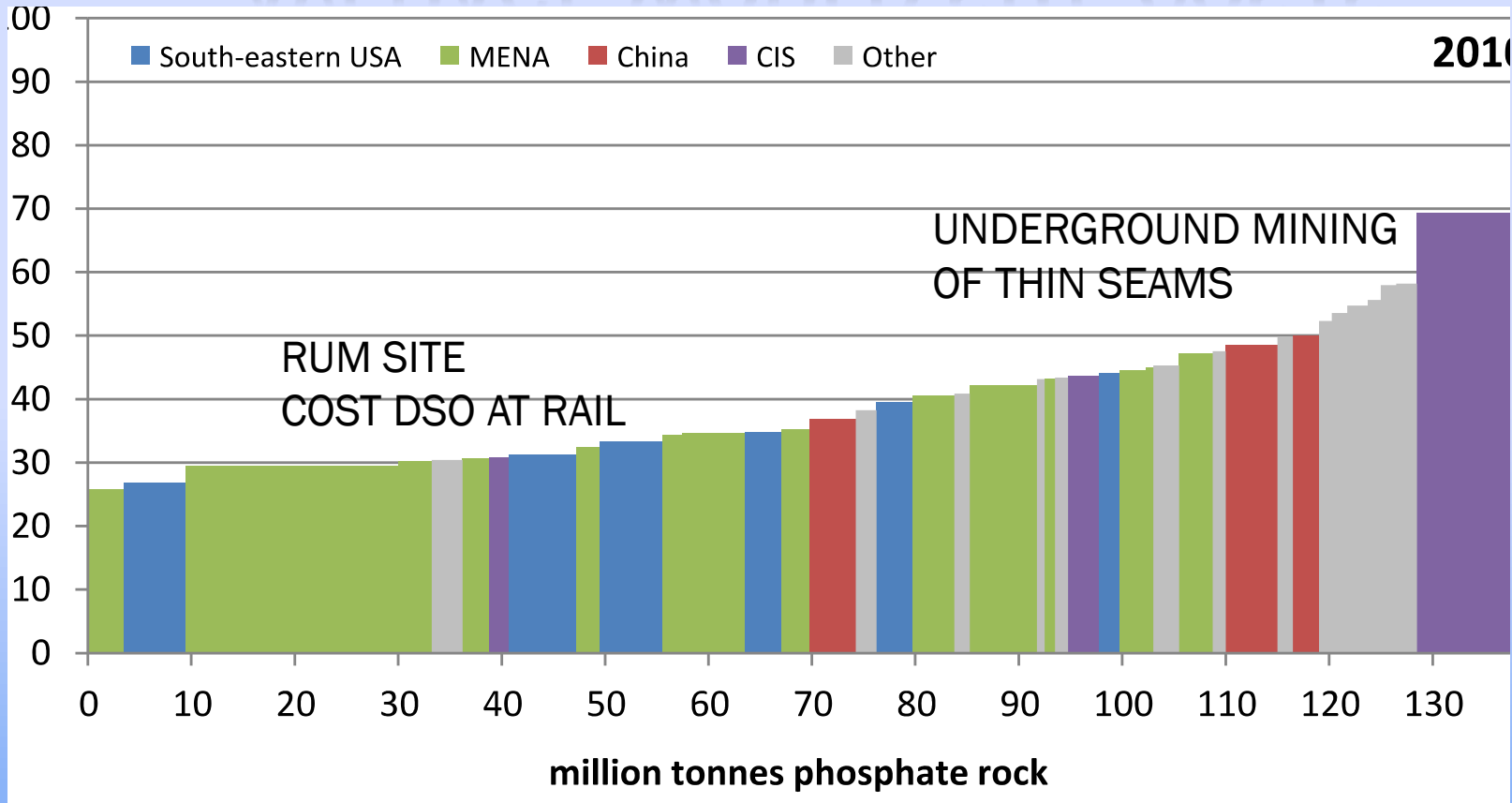
# DELIVERY ORE CONCENTRATES BY RAIL TO DARWIN



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# PROJECT ECONOMICS

# AVERAGE WORLD SITE COSTS



Site costs=

Mining + Administration + Screening + Transport to Plant + Beneficiation

SOURCE CRU

# SCOPING-LEVEL PHOSPHATE ROCK DSO CAPEX ESTIMATES (A\$ MILLIONS)

ITEM	COST ESTIMATE	COMMENT
FEASIBILITY STUDY	1.5	
ENGINEERING & DESIGN	26.0	INCLUDES BENEFICIATION
GEOLOGY & HYDROLOGY	2.0	
MINING EQUIPMENT	5.0	
WATER	1.0	
MINE INFRASTRUCTURE	12.5	
ROADS	24.0	
RAIL CARRIAGES (70)	10.0	
PORT FACILITY	35.0	
RAIL LOOPS AND SIDING	5.0	
TOTAL	<b>121.0</b>	BENEFICIATION 97 TO 130

# PRELIMINARY ESTIMATE OPEX DSO YEARS 1-5

ACTIVITY	COST \$ PER TONNE	ASSUMPTIONS
MINING	7.00	NO DRILL OR BLAST MAX STRIPPING RATIO 4:1
PROCESSING	5.00	CRUSHING AND SCREENING ONLY
POWER & WATER	5.00	
TRANSPORT TO RAIL	16.00	ROAD HAULAGE PRIVATE ROAD 80KM
LOADING RAIL	2.00	
TRANSPORT RAIL TO PORT	25.00	
VESSEL LOADING	3.00	
ADMINISTRATION & INTEREST	10.00	
TOTAL	75.00	



# SERGING FOOD DEMAND FOR EVER?



# DISTRIBUTION OF PHOSPHATE IN GEORGINA BASIN





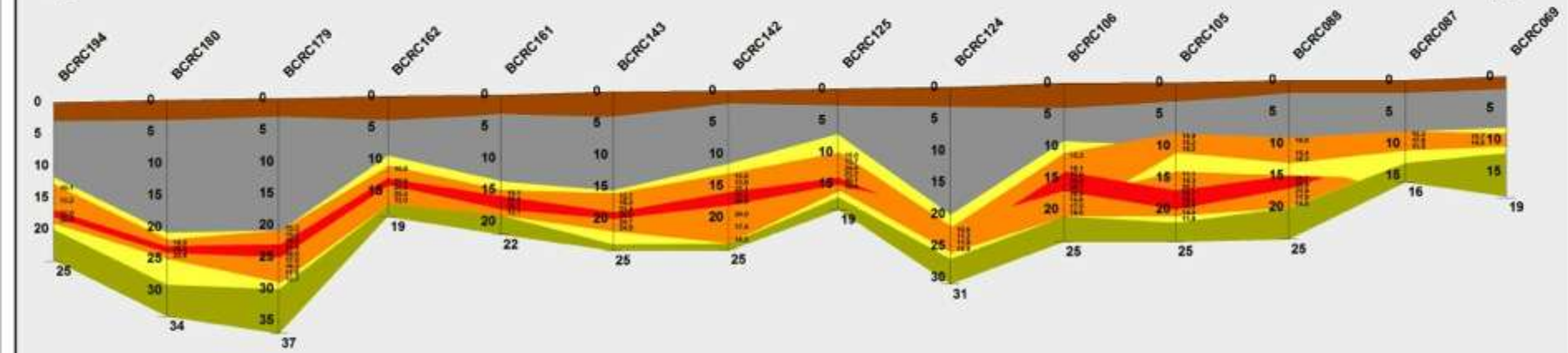
# COSTEAN 2



# COARSE SCREENINGS UPGRADE DSO MATERIAL

## COSTEAN 2

Fraction	Weight		Assay						Distribution					
	kg	%	Al2O3	CaO	Fe2O3	MgO	P2O5	SiO2	Al2O3	CaO	Fe2O3	MgO	P2O5	SiO2
			%	%	%	%	%	%	%	%	%	%	%	%
-75+50mm	323.12	15.4	2.5	42.3	2.43	0.29	29.5	17.5	6.1	21.0	14.6	7.0	21.4	8.5
-50+38mm	312.48	14.9	2.2	43.7	2.33	0.27	31.1	15.0	5.3	21.0	13.5	6.3	21.8	7.0
-38+25mm	169.07	8.1	3.2	39.3	2.37	0.35	27.5	21.8	4.2	10.2	7.4	4.4	10.4	5.5
-25+19mm	148.05	7.1	4.3	35.7	2.36	0.47	24.6	27.0	4.9	8.1	6.5	5.2	8.2	6.0
-19+13.2mm	174.73	8.3	5.2	32.5	2.40	0.55	22.2	31.6	7.0	8.7	7.8	7.2	8.7	8.3
-13.2+9.5mm	127.88	6.1	5.9	29.8	2.31	0.62	20.4	35.0	5.8	5.9	5.5	5.9	5.9	6.7
-9.5+6.7mm	152.85	7.3	6.9	27.3	2.40	0.70	18.3	38.4	8.1	6.4	6.8	8.0	6.3	8.8
-6.7+3.35mm	194.39	9.3	8.7	23.1	2.59	0.87	15.3	41.8	13.0	6.9	9.3	12.6	6.7	12.2
-3.35+1.7mm	130.75	6.2	10.3	19.8	2.71	0.99	12.7	45.5	10.3	4.0	6.6	9.6	3.7	8.9
-1.7+0.85mm	111.25	5.3	11.7	16.8	2.94	1.14	10.7	48.4	10.0	2.9	6.1	9.4	2.7	8.1
-850+600um	39.01	1.9	12.6	15.0	3.18	1.23	9.1	50.0	3.8	0.9	2.3	3.6	0.8	2.9
-600+300um	63.04	3.0	13.0	13.6	3.29	1.27	8.3	51.5	6.3	1.3	3.8	6.0	1.2	4.9
-300+150um	41.70	2.0	13.2	12.7	3.46	1.30	7.3	53.6	4.2	0.8	2.7	4.0	0.7	3.4
-150+75um	33.70	1.6	12.2	11.4	3.40	1.20	6.3	57.7	3.2	0.6	2.1	3.0	0.5	2.9
-75+38um	23.91	1.1	10.6	9.2	2.96	1.04	5.0	64.4	1.9	0.3	1.3	1.9	0.3	2.3
minus 38um	48.53	2.3	16.0	12.2	4.10	1.66	7.6	47.6	6.0	0.9	3.7	6.0	0.8	3.5
Calculated Head	2094.46	100.0	6.2	31.0	2.57	0.64	21.3	31.8	100.0	100.0	100.0	100.0	100.0	100.0
Assay Head			6.4	30.5	2.53	0.65	20.9	32.9						
Cumulative Fractions														
Fraction	Weight		Assay						Distribution					
	kg	%	Al2O3	CaO	Fe2O3	MgO	P2O5	SiO2	Al2O3	CaO	Fe2O3	MgO	P2O5	SiO2
			%	%	%	%	%	%	%	%	%	%	%	%
Total plus 50mm	323.12	15.4	2.5	42.3	2.43	0.29	29.5	17.5	6.1	21.0	14.6	7.0	21.4	8.5
Total Plus 38mm	635.60	30.3	2.3	43.0	2.38	0.28	30.3	16.3	11.4	42.0	28.1	13.3	43.2	15.5
Total Plus 25mm	804.67	38.4	2.5	42.2	2.38	0.29	29.7	17.4	15.6	52.2	35.5	17.7	53.7	21.1
Total Plus 19mm	952.73	45.5	2.8	41.2	2.38	0.32	28.9	18.9	20.4	60.4	42.0	22.9	61.8	27.1
Total Plus 13.2mm	1127.45	53.8	3.2	39.9	2.38	0.36	27.9	20.9	27.4	69.1	49.8	30.0	70.6	35.4
Total Plus 9.5mm	1255.33	59.9	3.4	38.8	2.37	0.38	27.1	22.3	33.2	75.0	55.3	35.9	76.4	42.1
Total Plus 6.7mm	1408.18	67.2	3.8	37.6	2.38	0.42	26.2	24.1	41.3	81.4	62.1	43.9	82.7	50.9
Total Plus 3.35mm	1602.57	76.5	4.4	35.8	2.40	0.47	24.8	26.2	54.3	88.3	71.4	56.5	89.4	63.1
Total Plus 1.70mm	1733.32	82.8	4.9	34.6	2.42	0.51	23.9	27.7	64.7	92.3	78.0	66.1	93.1	72.0
Total Plus 850um	1844.57	88.1	5.3	33.5	2.46	0.55	23.1	28.9	74.7	95.1	84.0	75.6	95.8	80.1
Total Plus 600um	1883.58	89.9	5.4	33.2	2.47	0.56	22.8	29.4	78.4	96.0	86.3	79.1	96.6	83.1
Total Plus 300um	1946.62	92.9	5.7	32.5	2.50	0.59	22.4	30.1	84.7	97.3	90.2	85.1	97.7	87.9
Total Plus 150um	1988.32	94.9	5.8	32.1	2.52	0.60	22.0	30.6	88.9	98.2	92.9	89.1	98.4	91.3
Total Plus 75um	2022.02	96.5	5.9	31.8	2.53	0.61	21.8	31.0	92.1	98.8	95.0	92.1	98.9	94.2
Total Plus 38um	2045.93	97.7	6.0	31.5	2.54	0.62	21.6	31.4	94.0	99.1	96.3	94.0	99.2	96.5

**B****A**

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; margin-right: 5px;"></span> Soil, Sand &amp; Gravel</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #A9A9A9; margin-right: 5px;"></span> Oxidised &amp; Weathered Siltstone</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #D3D3D3; margin-right: 5px;"></span> Arkose Sandstone</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #8FBC8F; margin-right: 5px;"></span> Dolomitic Limestone</li> </ul>	<p style="text-align: center;"><i>Phosphate Ore Zone</i></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FF0000; margin-right: 5px;"></span> Phosphatic Siltstone &gt; 25% P<sub>2</sub>O<sub>5</sub></li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FF8C00; margin-right: 5px;"></span> Phosphatic Siltstone &gt; 10% P<sub>2</sub>O<sub>5</sub></li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; margin-right: 5px;"></span> Phosphatic Siltstone &lt; 10% P<sub>2</sub>O<sub>5</sub></li> </ul>	<p>Vertical Exaggeration 4:1</p> <p>Horizontal Scale:</p> <div style="display: flex; align-items: center;"> <div style="width: 100px; border-bottom: 1px solid black; margin-right: 5px;"></div> <div style="margin-right: 5px;">100.0</div> </div> <p style="text-align: center; font-size: small;">meters</p>	<p style="text-align: center;"><b>Barrow Creek 1 DSO Drilling Area Section looking SW</b></p>
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**D**

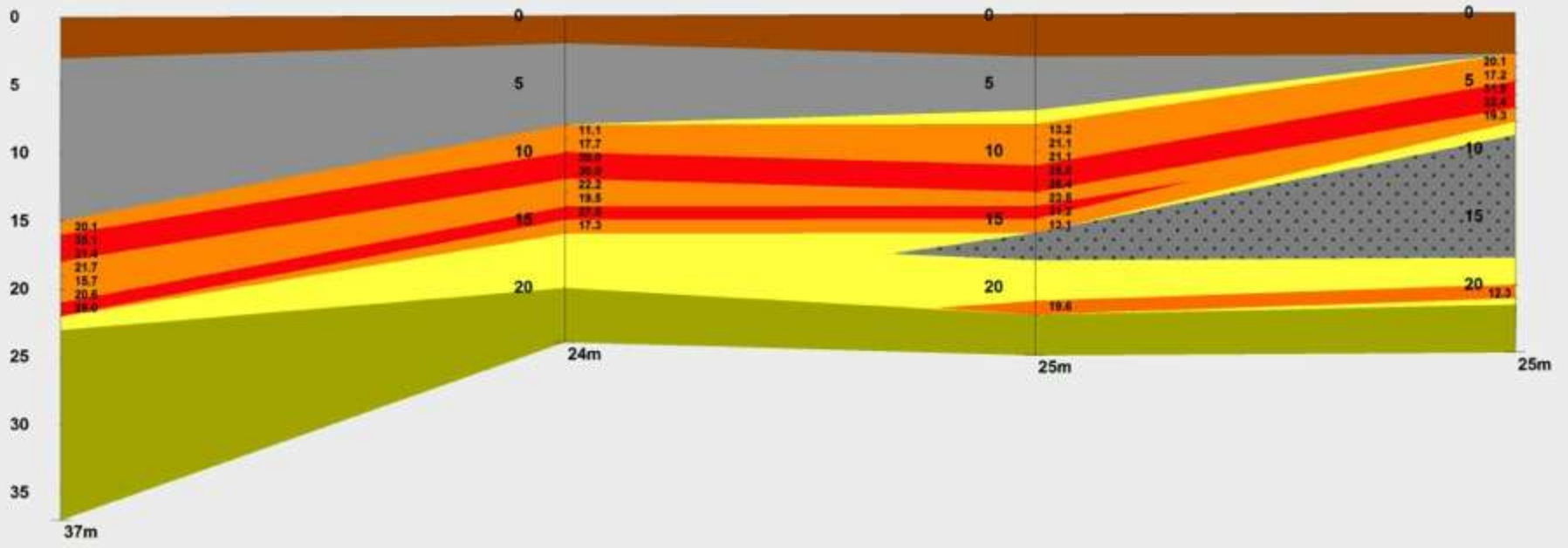
BCRC094

BCRC077

BCRC061

**C**

BCRC047



- Soil, Sand & Gravel
- Oxidised & Weathered Siltstone
- Arkose Sandstone
- Dolomitic Limestone

**Phosphate Ore Zone**

- Phosphatic Siltstone > 25% P2O5
- Phosphatic Siltstone > 10% P2O5
- Phosphatic Siltstone < 10% P2O5

Vertical Exaggeration 4:1

Horizontal Scale:



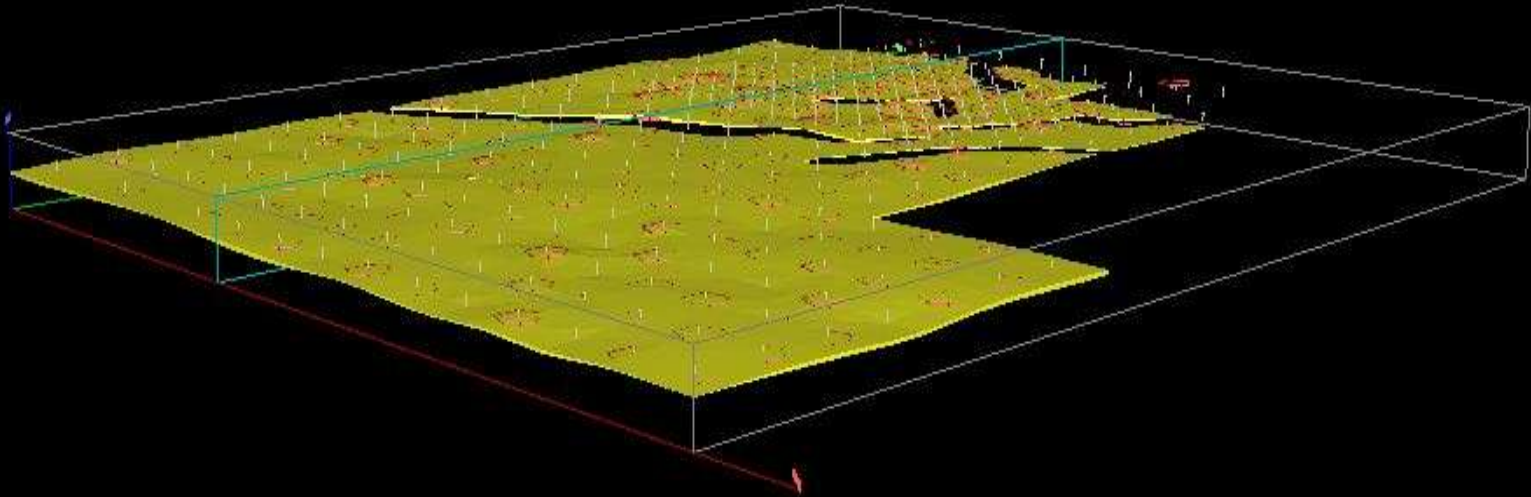
**Barrow Creek 1  
DSO Drilling Area  
Section looking NW**



Thickness (m)	Grade % P <sub>2</sub> O <sub>5</sub>	From Depth (m)	Drillhole (BCRC)
8	30.8	15	704
3	35.7	14	106
4	31.1	12	126
3	30.2	12	105
6	27.4	5	653
9	26.6	8	697
5	28.3	3	065
3	30.0	5	047
4	27.6	8	037
4	27.2	2	024
3	26.8	3	011
5	25.5	5	032
6	29.2	9	1892
2	34.0	15	1889
3	33.7	14	1908
4	30.7	11	1911
4	30.6	10	1912
3	31.0	8	1364
2	30.6	8	1361
2	32.0	16	1356
3	29.6	11	1360
8	35.1	36	1900
7	30.8	10	1294
6	29.8	19	1788
5	34.1	31	1871
2	30.6	14	1354

# Model Barrow Creek 1 Looking NW

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## COSTEAN 4 FROM SURFACE TO 7 METERS DEPTH





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# WHAT THE OPERATION MAY LOOK LIKE

RECENT AERIAL PHOTOS DUCHESS MINE ,  
GEORGINA BASIN QUEENSLAND



# DUCHESS PHOSPHATE OPERATION QUEENSLAND JULY 2012





MINING HORIZONTAL PHOSPHATE BEDS IN EASTERN GEORGINA BASIN AT DUCHESS MINE  
QUEENSLAND, JULY 2012



# BC 1 LOW COST MINING COMPARISONS

MOROCCAN MAJOR MINES MULTI SEAMS WITH DRILL AND BLAST

IDAHO AND CHINA NEW MINES BEING DEVELOPED ARE THIN SEAMS WITH UNDERGROUND DEVELOPMENT TO 900M DEPTH

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RESOURCE DEFINITION COMPLETE AT BARROW  
CREEK 1

SUBSTANTIAL RESOURCE ALSO LIKELY AT  
AMMAROO 1, 80KM EAST OF BC 1.

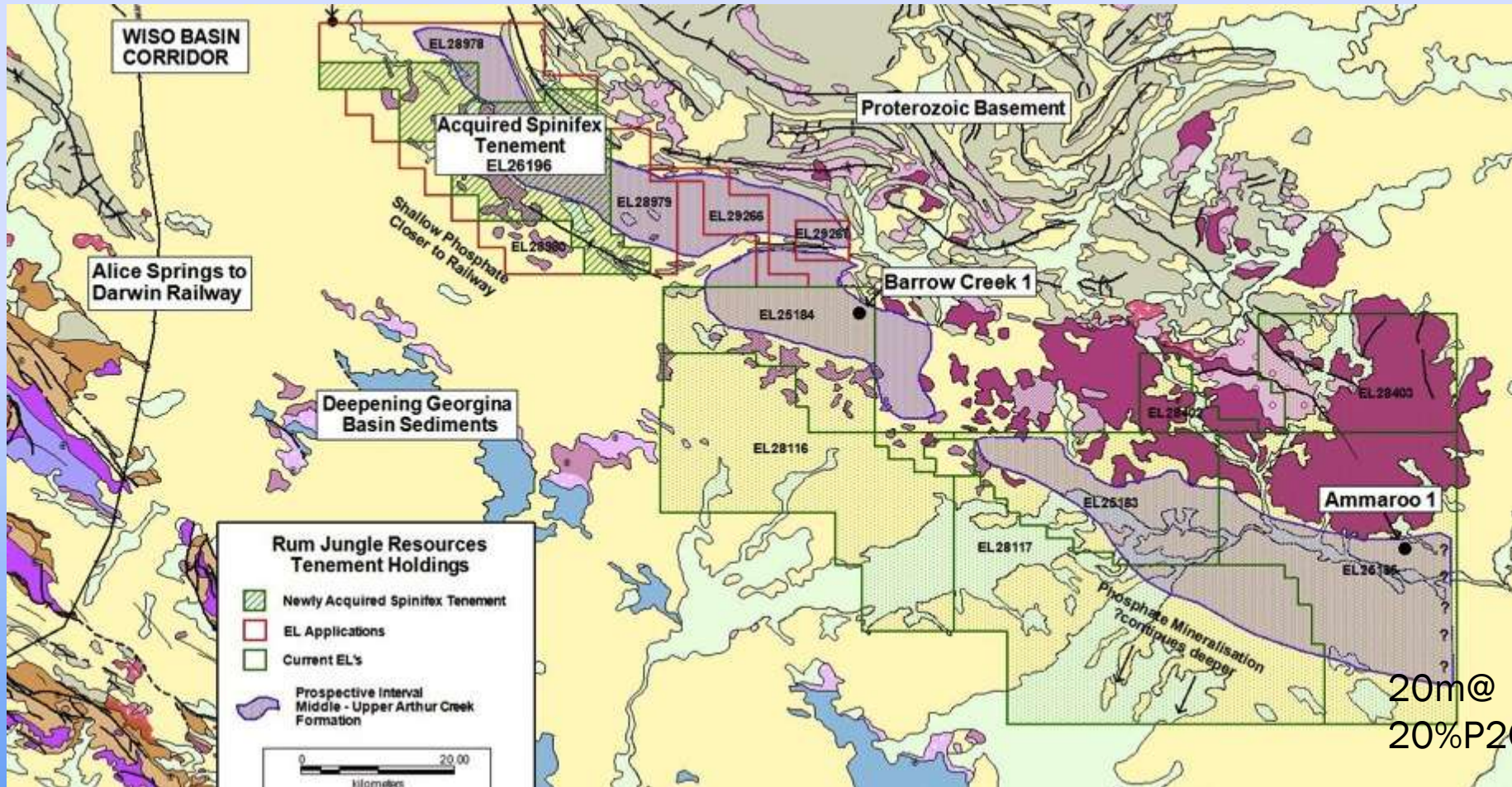


RESOURCE ESTIMATE DRILLING COMPLETED SEPTEMBER 2012. TOTAL 2082 RC HOLES FOR 61,221 METERS. TOTAL 32 DIAMOND DRILL CORE INTERSECTIONS. INITIAL INFERRED RESOURCE OF 253,000 TONNES AT 15% P2O5 LIKELY TO BE UPGRADED OCTOBER 2012





# TENEMENT HOLDINGS MARCH 2012



20m@  
20%P2O5



# **THE KARINGA CREEK POTASH DISCOVERY BY RUM JUNGLE RESOURCES LTD, LASSITER HIGHWAY, NORTHERN TERRITORY, AUSTRALIA**



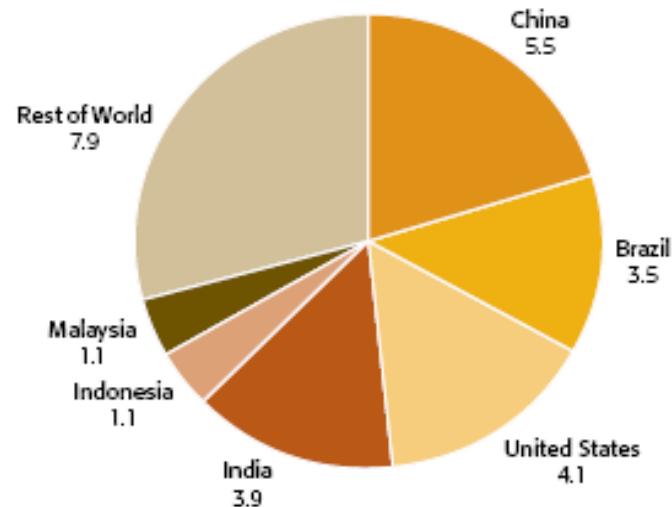
# Potash Demand Outlook



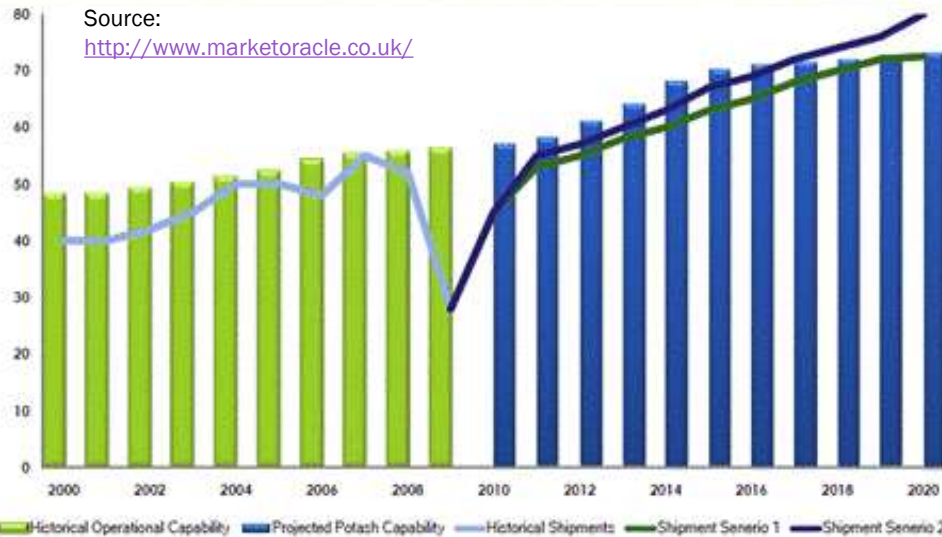
# WORLD POTASH USE BY COUNTRY

MILLION TONNES K<sub>2</sub>O

SOURCE: IFA JUNE 2010



Forecasted 2010/2011 Fertilizer Year

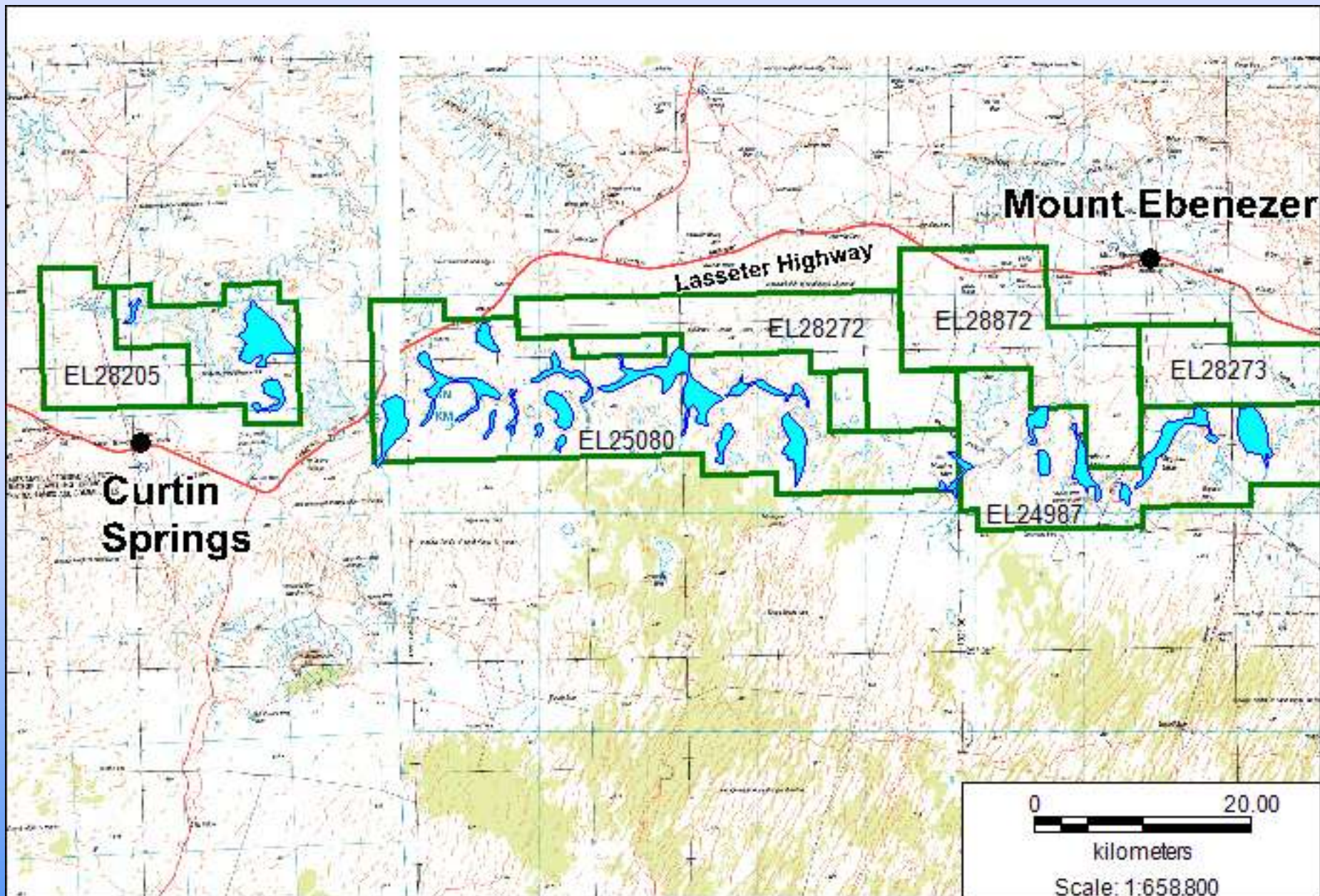


Source: Potash Corp Estimates, 2010

## Benchmark Prices: Potash



- Increasing demand, particularly from India, China, US
- Price tripled since 2007





# Karinga Creek Potash Project

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- × Joint Venture with Reward Minerals (Lake Disappointment, WA)
- × RUM increasing from 71%, RWD diluting from 29%
- × First pass environmental surveys completed
- × Extensive brine sampling in 2010 and 2011 produced encouraging results
- × Bench-scale tests confirm schoenite can be produced by two-stage evaporation
- × More drilling, sampling and flow testing completed
- × New resource calculation and hydro-geological study underway to commence scoping study

# The Devonian "Basement"



Outcrop of weathered biotitic and evaporitic Horseshoe Bend Shale around and under the lakes



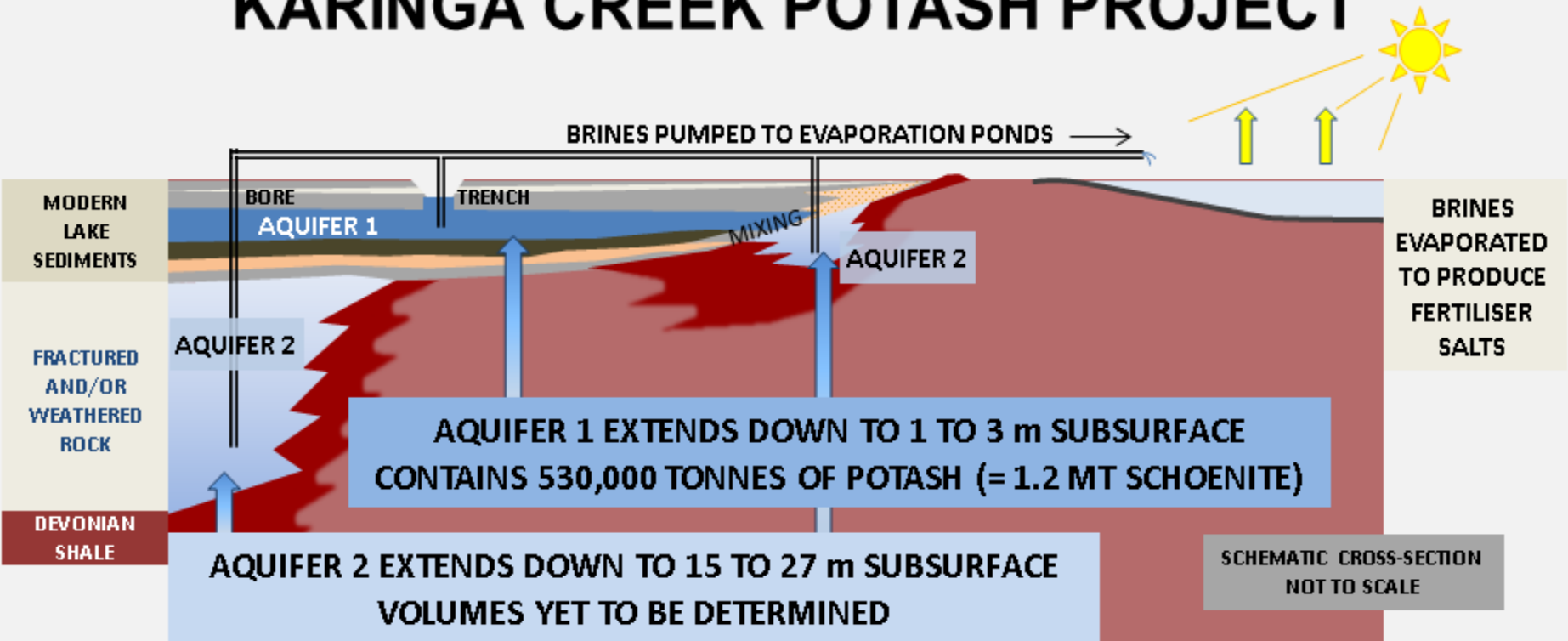
Brine inflow in shallow siltstone pits





# AQUIFER 2 PROVIDES MAJOR NEW POTENTIAL

## KARINGA CREEK POTASH PROJECT



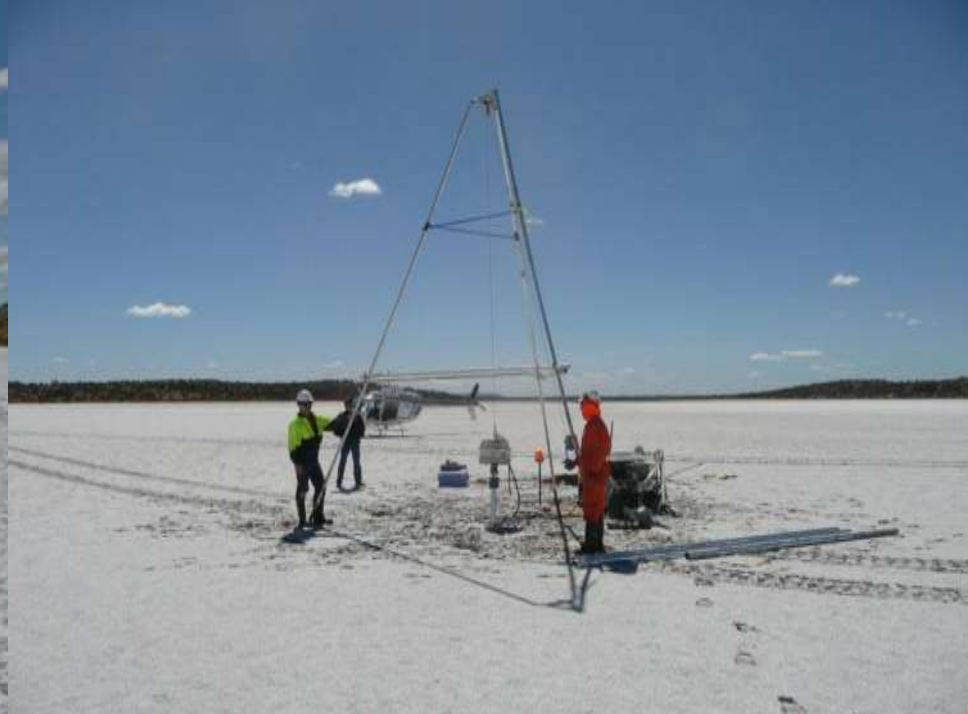
# RUMs 2010 Sampling

- hand-dug holes to geochemically sample brines
- brine chemistry varies considerably within and between lakes
- bench scale tests confirmed that two-stage evaporation can produce schoenite from at least some of the lake brines
- small test pits for pump tests to check recharge rates
- encouraging over short time frame, need much longer duration tests to account for seasonal fluctuations



Rum Jungle test pit 2010

**Vibracore drilling September 2011**



**Sonic drilling October 2011  
a dozen piezometers installed**



## JORC Resource

- 1.2 Mt schoenite = 530,000 t potash
- based on limited work to 2011
- more lakes yet to be included
- only to 3 m depth
- should increase substantially with deeper drilling

	Number of Lakes	Kg / m <sup>3</sup> brine	K <sub>2</sub> SO <sub>4</sub> (tonnes)
Inferred	9	3.90	52,000
Indicated	7	4.23	477,000
Total	16		530,000



Waterbore Drilling May 2012, dozens of piezometers to be installed



Supa-mats





# FLOW TESTING OF BORES



# FLOW TESTING OF BORES





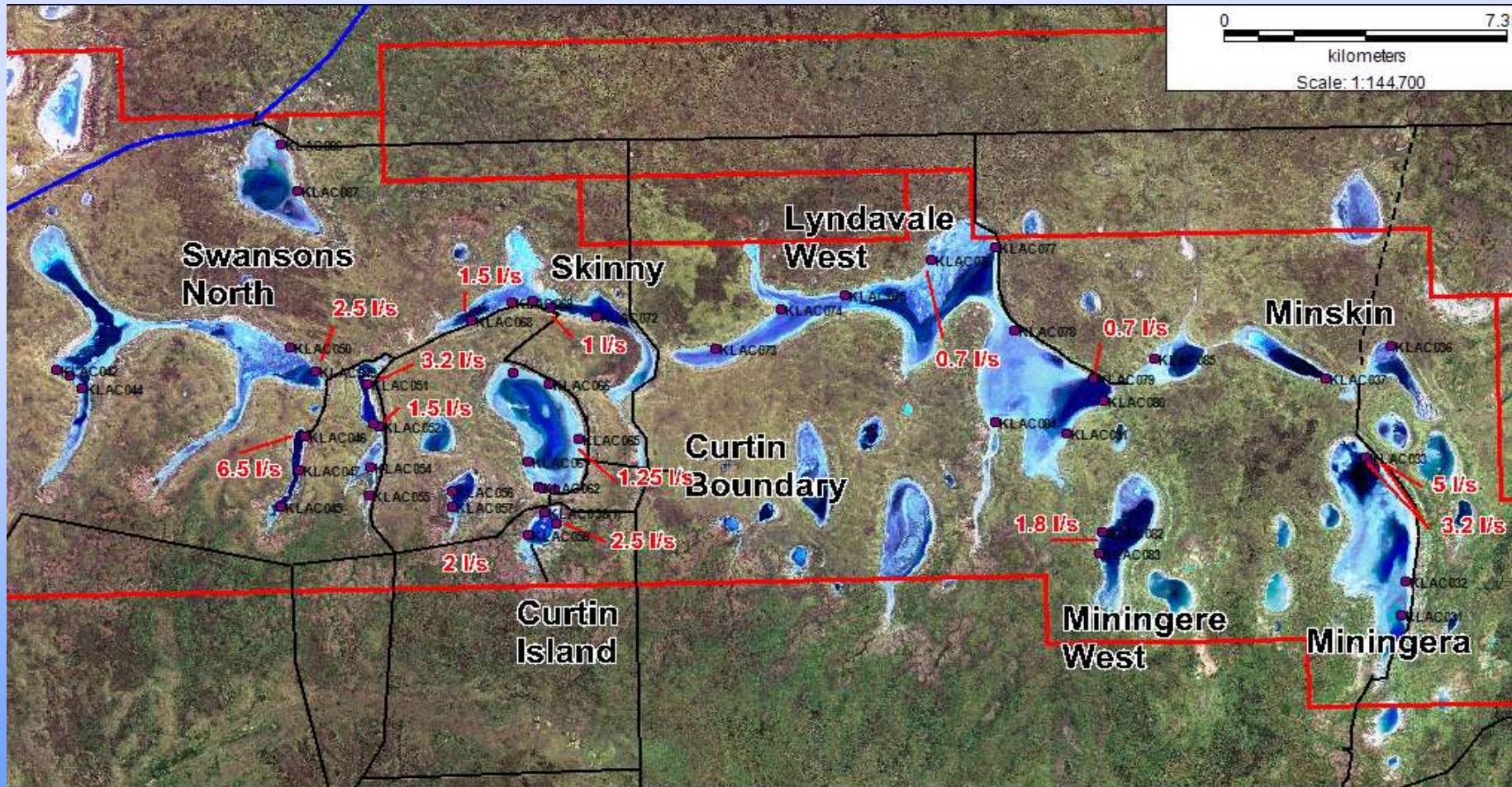




# Flow Rates

Hole	Easting	Northing	Lake	Interval (m)	Flow (litres/sec)	Aquifer	K (mg/L)	Mg (mg/L)	SO4 (mg/L)
KLAC010	261456	7191535	Pulcura	0-6	3.2	1 and 2	4033	4100	26666
KLAC024	250178	7194218	Murphys	0-4.1	2.8	1	3550	5250	29500
KLAC029	247544	7192398	Murphys	0-3	1.25	1	5333	11333	54000
KLAC033	233115	7198556	Miningere	0-15	3.2	2	8533	3450	45833
KLAC035	233227	7198419	Miningere	0-24	5	2	8688	3344	44888
KLAC048	205797	7199139	Island 5	0-15	6.5	2	NYR	NYR	NYR
KLAC049	206081	7200875	Swansons North	0-13	2.5	2	NYR	NYR	NYR
KLAC051	207419	7200549	Island 4	0-13	3.2	2	NYR	NYR	NYR
KLAC052	207700	7199413	Island 4	0-13	1.25	2	NYR	NYR	NYR
KLAC056	209596	7197647	Island 2	0-12	2	2	NYR	NYR	NYR
KLAC060	212289	7196745	Island 1	0-9	2.5	2	NYR	NYR	NYR
KLAC062	211804	7197743	Curtin Boundary	0-15.7	1	2	NYR	NYR	NYR
KLAC065	212837	7199033	Curtin Boundary	0-10	1.25	2	NYR	NYR	NYR
KLAC068	210070	7202262	Skinny	0-12	1.5	2	NYR	NYR	NYR
KLAC070	211663	7202791	Skinny	0-22	1	2	NYR	NYR	NYR

# CENTRAL LAKES FLOW RATES FROM DRILL HOLES



# HOW MUCH BRINE DO WE NEED?

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- × To produce 100 000 tonnes/year Schoenite
- × At around 8000 mg/l potassium
- × We need to pump 6 megalitres per day
- × Equal to around 70 litres per second
- × We currently have about 40 litres per second in 4 inch holes
- × Increase the holes sizes to 8 or 12 inch
- × Pump testing will show us if this is possible



# AREA REQUIRED

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- × Stage 1 Ponds – 165ha with 5m high pond walls
- × Stage 2 Ponds – 35ha with 2m high pond walls with access to heavy equipment for harvesting
- × Plant site and accommodation village extra

# ADDITION OF LAKE HOPKINS COULD ADD ANOTHER MAJOR RESOURCE

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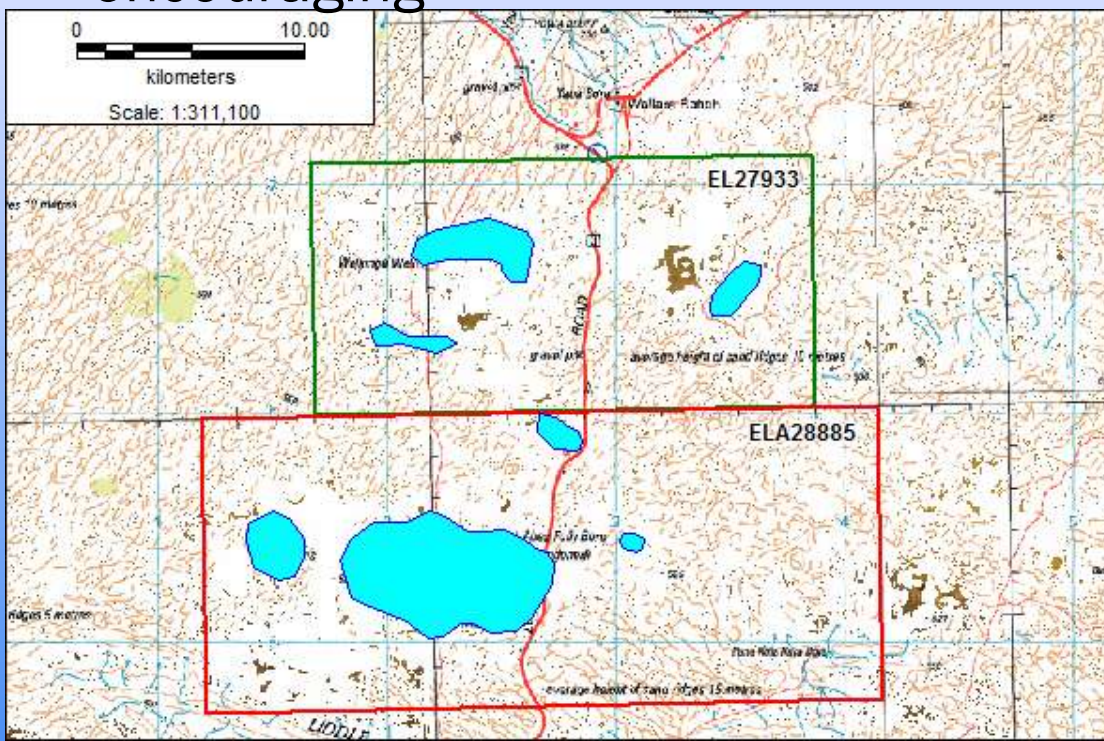


# ANGAS DOWNS PROJECT

- palaeo-lakes, north of Karinga Lakes
- targeting rock potash, gypsum, possible deep aquifer brines
- assays of existing waterbores are encouraging



Gypsum crust at Wollunga Well



Outcropping gypsum on old salt lake



# Chinese Schoenite Operation



# LINED PONDS ATACAMA CHILE





# ATACAMA EVAPORATION PONDS





# THE WAY FORWARD

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- × Completed Drilling Program
- × Completed pump testing of 10 best bores
- × Received all assay data and collating . Have engaged experienced hydrologist as consultant
- × Get approval for trenching and then flow test trenches for 5 days
- × Resource upgrade
- × Geotechnical testing of soils for evaporation pond lining (either lake sites or flat lying areas)
- × Process route testing to prove up final products and by-products

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Thank You