



ASX: GPH



**GOLDPHYRE**  
RESOURCES LTD

# Lake Wells Potash Project

## Addressing Australia's Potash Demand

## Forward-looking statements

This presentation has been prepared by Goldphyre Resources Ltd ("GPH"). This document contains background information about GPH current at the date of this presentation. The presentation is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation.

This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of GPH shares in any jurisdiction. This presentation may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in such jurisdiction. Recipients should inform themselves of the restrictions that apply in their own jurisdiction. A failure to do so may result in a violation of securities laws in such jurisdiction.

This presentation does not constitute investment advice and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments. To the fullest extent permitted by law, GPH, its officers, employees, agents and advisers do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any

information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise is accepted. This presentation may include forward looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of GPH. Actual values, results or events may be materially different to those expressed or implied in this presentation.

## Competent persons statement

The information in this presentation that relates to Exploration results, Mineral Resources or Ore Reserves is based on information compiled by Mr Brenton Siggs who is a member of the Australasian Institute of Geoscientists. Mr Siggs is contracted to the Company through Reefus Geology Services and is a Non-executive Director (Exploration Manager) of Goldphyre Resources Limited. Mr Siggs has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity currently being undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Siggs is a shareholder and director of Goldphyre WA Pty Ltd, a company that holds ordinary shares and options in the capital of Goldphyre Resources Limited (Goldphyre Resources Limited, Annual Report 2014).

Mr Siggs consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

## Directors

### **Matt Shackleton | Executive Chairman**

+20 years experience in corporate management of ASX, TSX, overseas and Australian entities.

Chartered Accountant, MBA (UWA). Canyon, Bannerman, Arunta, Mount Magnet South.

### **Brenton Siggs | Non-executive Director**

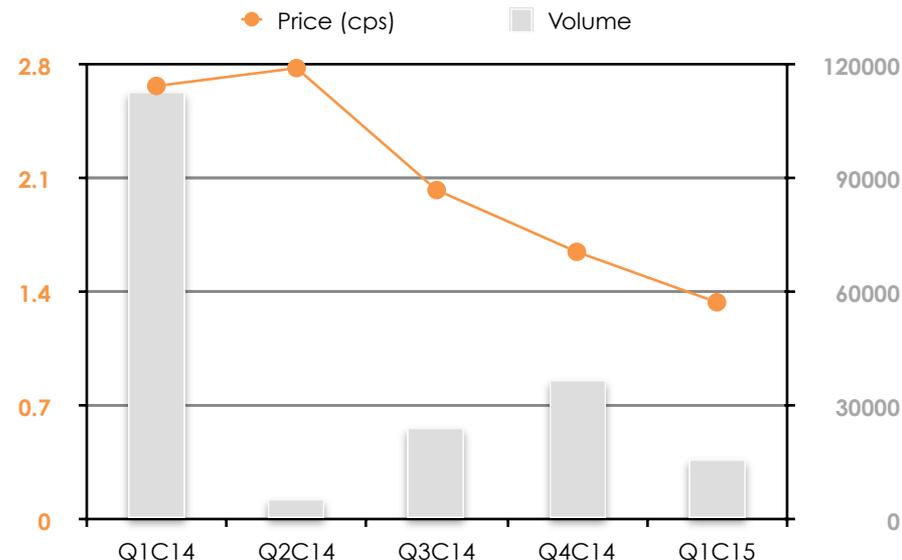
Exploration and mine geologist with +24 years experience in gold, nickel, coal and other minerals.

Newcrest, Inco, Vale, Sons of Gwalia.

### **Dean Goodwin | Non-executive Director**

Geologist with +25 years experience in gold, nickel.

Intrepid, Santa Anna, Redoubtable deposits WMC, LionOre, Focus, Barra Resources, Mt Ridley Mines.

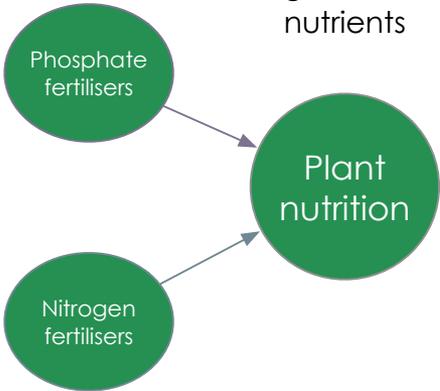


## Capital structure

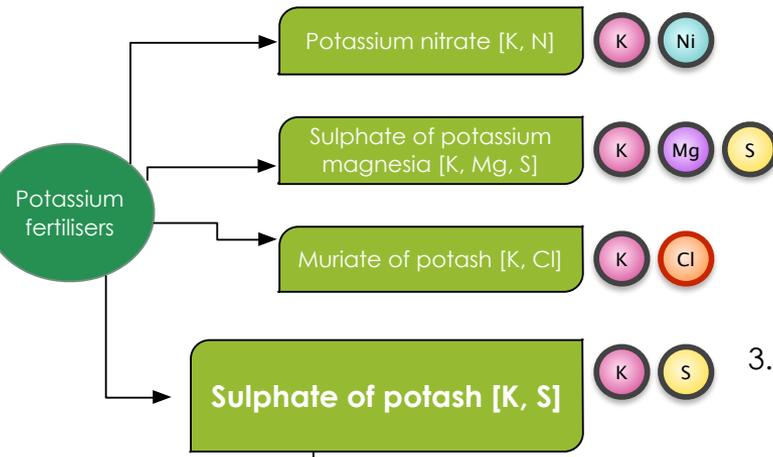
Shares on issue	68.4m
Options on issues <sup>1</sup>	62.9m
Top 40	78%
Board	18%
Share price 17 March	1.2c

1. ASX: GPHO 44.3m 8c Sep.16 20.4m 20c Jun15 1m 19.5c May16

1. Potassium is one of the three ESSENTIAL primary agricultural nutrients

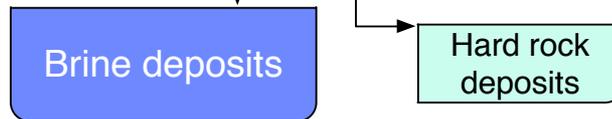


2. There are 4 basic sources of potassium fertilisers



3. Sulphate of Potash (**SOP**) is the PREMIUM potassium fertiliser ingredient

4. **SOP** is sourced from hard rock and **brine** (liquid) deposits



5. Three countries have active **brine SOP** operations



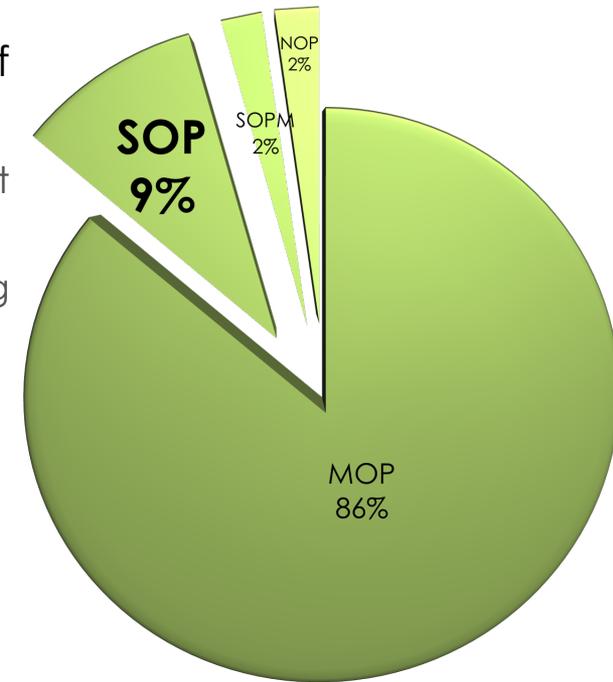
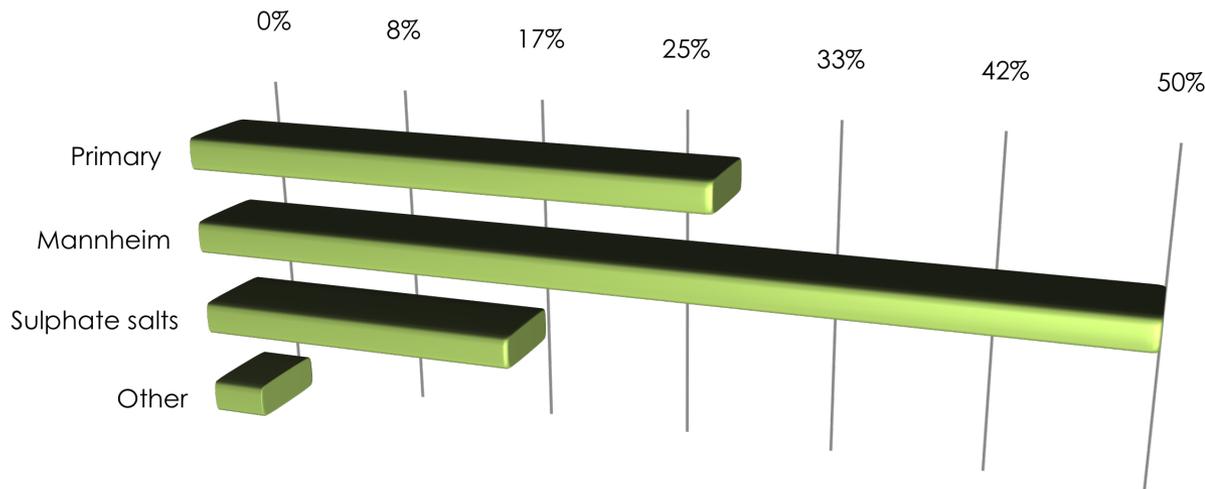
6. Australia will become the fourth country producing **brine SOP**



7. The **Lake Wells Potash Project** is aiming to become the first Australian **brine SOP** operation meeting the domestic market demand

**SOP** is priced at an approximate 30% premium to muriate of potash (MOP)

- Pressure on premium to widen due to instability in the MOP market forcing increased reliance on SOP
- Primary sources of SOP are very rare with secondary processing costs high - supply/demand equation
- Non-substitutable nutrient for high-value crops

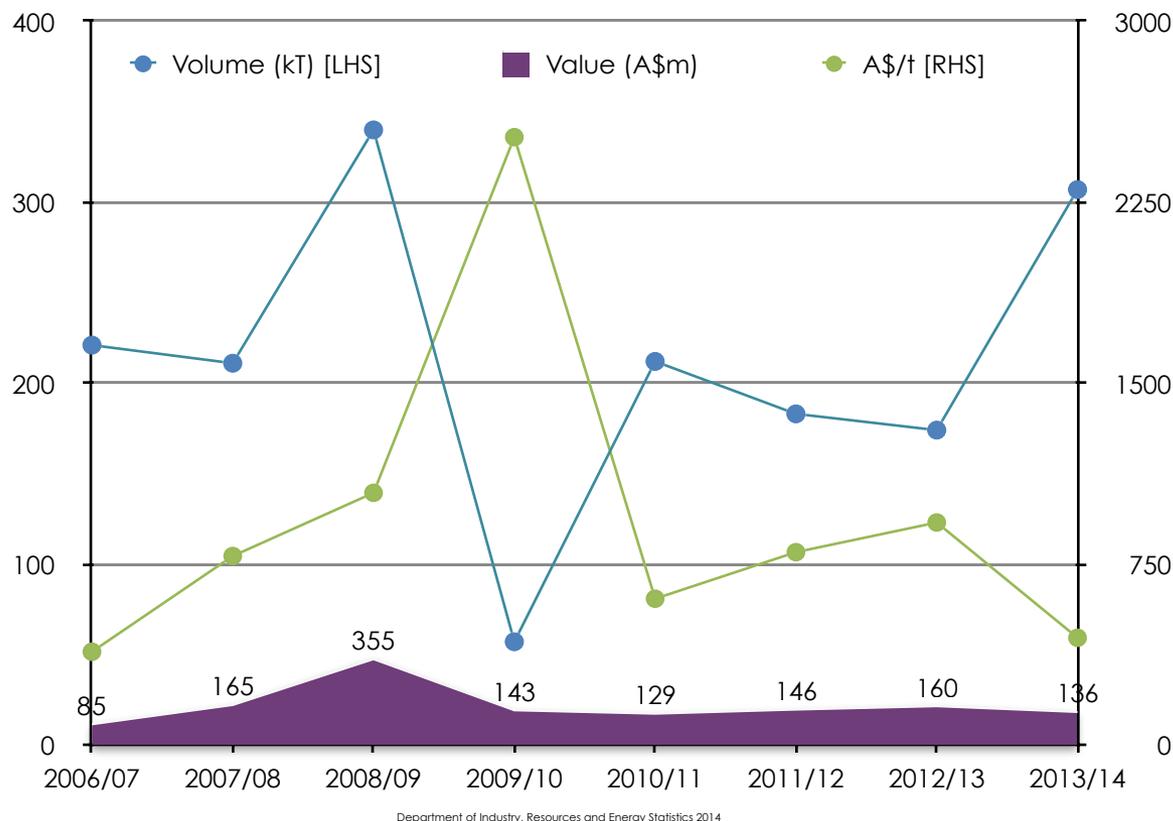


**SOP** market segment globally  
5million tonnes  
**\$US3.5billion**

Primary sources of **SOP** are generally brine deposits

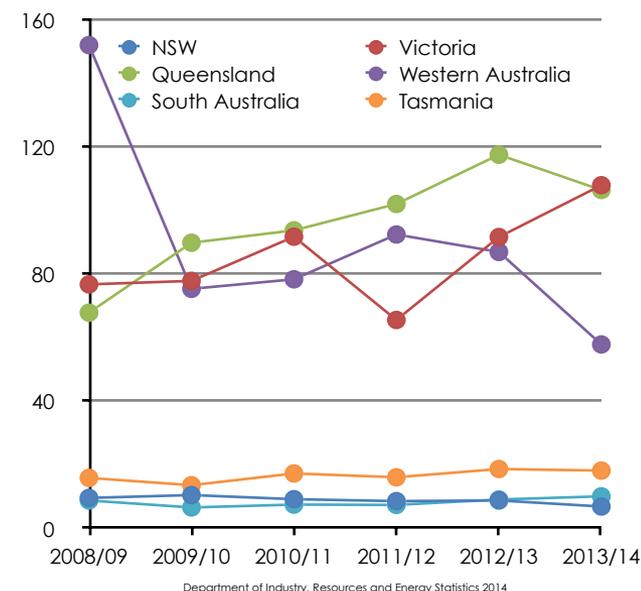
- Cheapest method of production: average cost US\$200 per tonne
- Efficiency of evaporative operations highly contingent on evaporation and rainfall at that site

## Imports of Potash to Australia [as K<sub>2</sub>O]



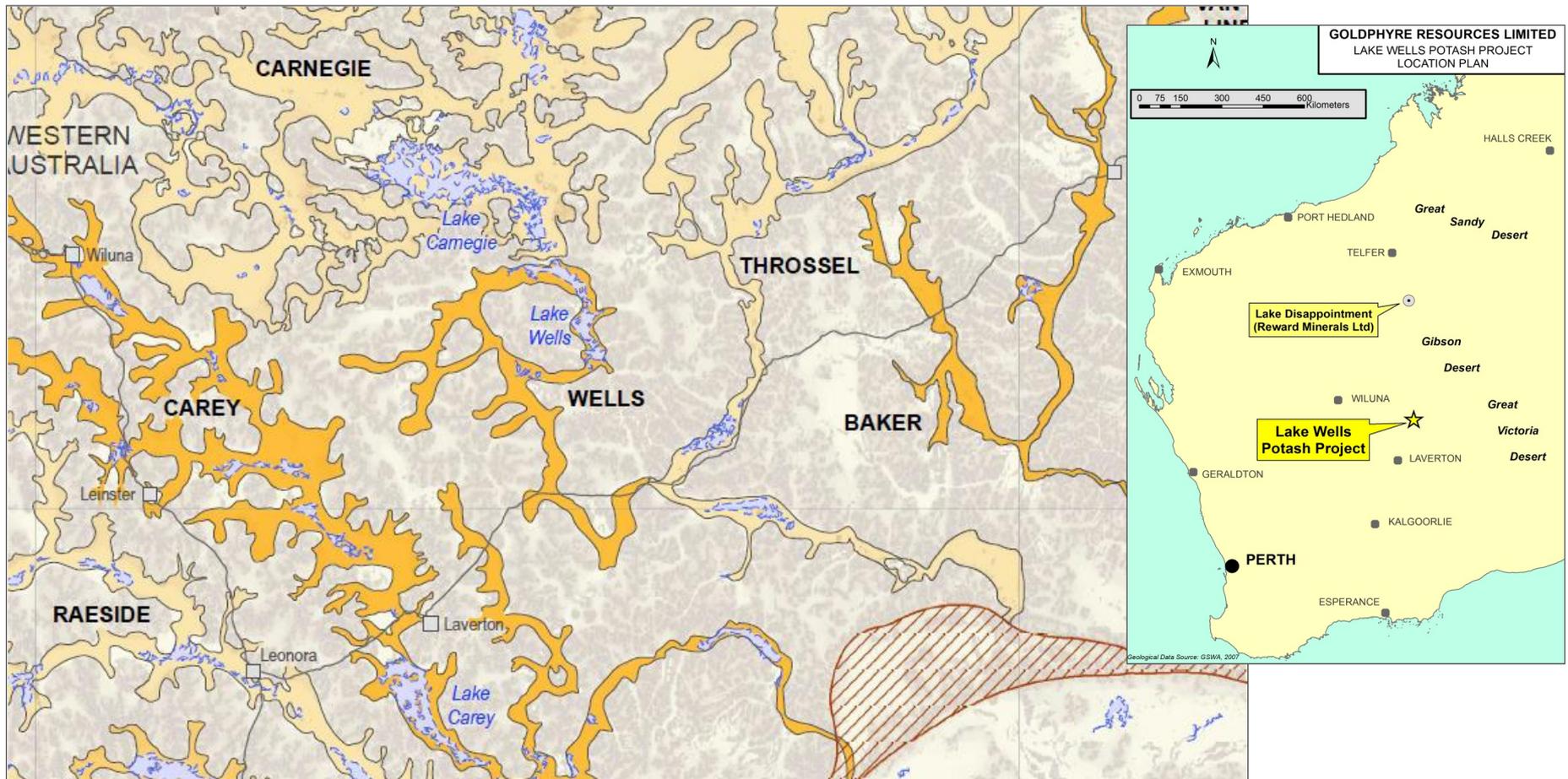
**The demand for potash is price elastic**

## Imports of Potash by state [as K<sub>2</sub>O]



Australia imports 100% of its potash requirements

- Australian farmers face massive swings in the farm-gate price of potash
- Overall value of imports remains relatively constant: there is some substitution between MOP and SOP use



Geoscience Australia<sup>1</sup> identified Lake Wells as one of the **highest potassium potential** salt lake systems in Australia

- Potential brine re-charge from ring paleochannel feature at Lake Wells
- Highly conducive evaporative environment (hot & windy)

1. Mernagh et al, 2013. Record 2013/039

Grade, brine composition and volumes are key

- Brine pit sampling at Lake Wells returns very high SOP values
  - 7.36 kg/m<sup>3</sup> K equivalent to 16.41 kg/m<sup>3</sup> SOP
  - 6.10 kg/m<sup>3</sup> K equivalent to 13.60 kg/m<sup>3</sup> SOP
  - Average across all pit samples of 4.93 kg/m<sup>3</sup> K **equivalent to 11.00 kg/m<sup>3</sup> SOP**

Brine composition	LD (ASX: RWD) <sup>1</sup>	Lake Wells
Ca (kg/m <sup>3</sup> )	0.46	<b>0.63</b>
K (kg/m <sup>3</sup> )	5.54	<b>4.93</b>
SOP (Kx2.23)	12.37	<b>11.00</b>
Mg (kg/m <sup>3</sup> )	5.92	<b>8.73</b>
Na (kg/m <sup>3</sup> )	93.58	<b>74.10</b>
Cl (kg/m <sup>3</sup> )	151.20	<b>127.10</b>
SO <sub>4</sub> (kg/m <sup>3</sup> )	25.95	<b>18.67</b>
TDS (g/l)	237	<b>243</b>

Preliminary brine chemical analysis further indicates high grade SOP potential

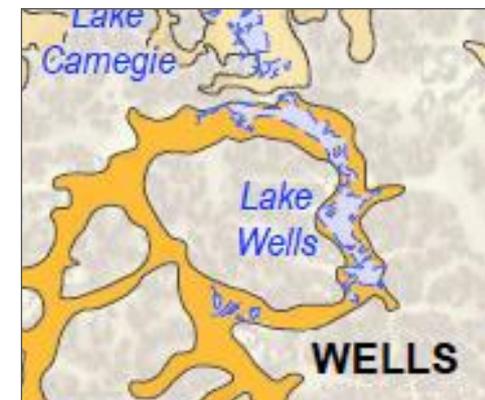
- Forward work program includes full suite of hydro-chem. analysis



1. Reward Minerals Limited, Melbourne Mining Club Presentation, May 2014

Geoscience Australia identified potential brine recharge from ring paleochannel feature at Lake Wells

- Historic and GPH drilling records show **strong groundwater inflow** and the presence of a deep (+60m) paleochannel in the central part of the project area



*Lake Wells*



Location and logistics are vital to bulk commodity resources

- Eastern Goldfields location with entrenched mining culture and infrastructure
- Significant road and rail infrastructure already in place
- 275kms overland to bulk rail terminal at Malcolm, Leonora

*Prenti Downs Road 85km*



No Native Title claim exists over GPH's Lake Wells tenure

*Great Central Road 90km*



*Laverton-Leonora Road 100km*



**Malcolm Rail Head, Leonora**  
275kms from Lake Wells

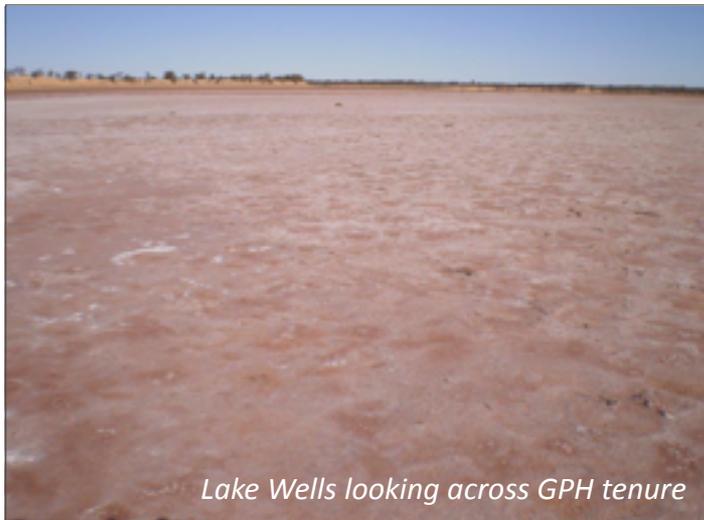


## JORC 2012 compliant resource the next step

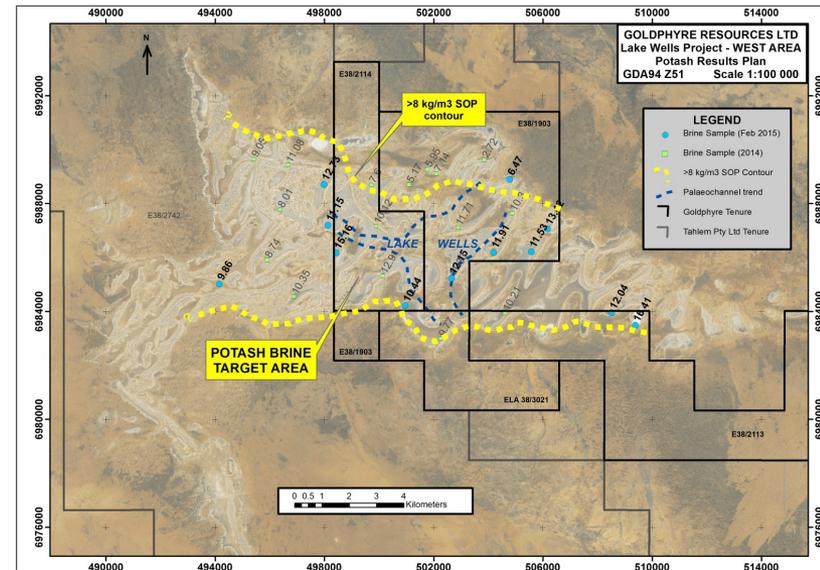
- Wide spaced (c. 2km - 5km grid) RC/sonic or geoprobe drilling
- 20 - 30 holes (c. 600m - 900m) proposed
- trench sampling, flow testing and hydrochemical studies to follow resource definition
- Circa. \$500,000 exploration spend to JORC 2012 compliant resource

## Preliminary road and rail studies to commence

- Engage with road and rail consultants to understand the transport solution utilising existing road and rail infrastructure



Lake Wells looking across GPH tenure



Best 2014 sample: **5.79 kg/m<sup>3</sup> K: 12.91 kg/m<sup>3</sup> SOP**

Best 2015 sample: **7.36 kg/m<sup>3</sup> K: 16.41 kg/m<sup>3</sup> SOP**

## Australia imports 100% of its potash requirements and has done so since 1952

- A domestic supply of potash will remove the exchange rate and supply risk Australian farmers currently face
- Average domestic demand c. 500kT - 600kT SOP per annum

# Appendix 1: Table of sample assay results<sup>1</sup>



SampleID	Easting	Northing	RL	Ca	K	K	SOP	SO4	Na	Cl	Mg	TDS
	m	m	m	mg/l	mg/l	kg/m3	kg/m3	mg/l	mg/l	mg/l	mg/l	mg/l
LGW005	6987170	499890	447	579	4540	4.54	10.12	22700	68700	101000	9840	NA
LGW006	6987109	502892	446	712	5250	5.25	11.71	17400	73200	115000	7540	237000
LGW007	6987643	504878	444	922	4620	4.62	10.30	14800	65700	101000	6270	NA
LGW008	6985230	502650	449	573	5080	5.08	11.33	16200	76100	122000	8530	NA
LGW009	6985320	500131	449	463	5790	5.79	12.91	23000	79700	135000	12600	287000
LGW011	6989270	501770	447	1090	2670	2.67	5.95	12200	42500	68600	4680	NA
LGW013	6989439	496680	447	858	4970	4.97	11.08	19200	60400	98000	8780	
LGW014	6989653	495402	446	851	4060	4.06	9.05	19300	54500	90800	8930	175000
LGW015	6987778	496371	446	970	3590	3.59	8.01	17000	47300	81400	7890	150000
LGW016	6985919	495900	447	987	3920	3.92	8.74	18000	51500	84800	8560	
LGW017	6984554	496886	445	816	4640	4.64	10.35	18200	64100	106000	9930	199000
LGW019	6983940	504612	447	814	4580	4.58	10.21	21200	68300	99700	9370	190000
LGW020	6982994	502261	450	510	4380	4.38	9.77	19900	67700	119000	10300	
LGW027	528854	6983607	440	880	4230	4.23	9.43	15200	69800	126000	6760	220000
LGW028	527636	6984176	444	788	2720	2.72	6.07	17100	50400	97400	5450	178000
LGW029	526288	6984010	443	480	6100	6.10	13.60	21400	111000	166000	9140	296000
LGW030	525044	6984810	447	932	3470	3.47	7.74	15600	65300	102000	5900	192000
LGW031	524176	6983712	444	550	4390	4.39	9.79	17900	78800	146000	9600	275000
LGW032	524196	6985312	440	385	5290	5.29	11.80	19800	84400	161000	8890	291000
LGW040	508511	6983949	447	488	5400	5.40	12.04	19600	91800	146000	9360	283000
LGW041	509378	6983480	448	479	7360	7.36	16.41	21200	97600	171000	9530	318000
LGW043	505573	6986212	448	650	5170	5.17	11.53	16600	74600	131000	8610	236000
LGW044	506164	6987064	445	552	6020	6.02	13.42	18900	90200	161000	7730	298000
LGW045	497981	6988711	448	416	5710	5.71	12.73	24600	73700	142000	10700	276000
LGW046	498131	6987191	450	510	5000	5.00	11.15	23600	66500	127000	11000	262000
LGW047	498426	6986168	449	436	6800	6.80	15.16	21200	84400	156000	15500	134000
LGW048	504776	6988893	447	1070	2900	2.90	6.47	15300	43200	67500	4170	151000
LGW049	504185	6986188	452	443	5340	5.34	11.91	23300	79400	142000	7720	279000
LGW050	502645	6985228	449	542	5450	5.45	12.15	5030	85400	135000	9740	230000
LGW051	500949	6984208	451	535	4680	4.68	10.44	26600	70000	124000	10900	210000
LGW054	494145	6985011	453	833	4420	4.42	9.86	18800	56800	107000	9550	209000
AVERAGE				<b>638</b>	<b>4933</b>	<b>4.93</b>	<b>11.00</b>	<b>18668</b>	<b>74133</b>	<b>127104</b>	<b>8738</b>	<b>243100</b>

1. Includes final analysis results for February 2015 sampling LGW044-050, All pit samples within the 8kg/m<sup>3</sup> contour. JORC 2012 Tables per ASX announcement 10 March 2015.

## Contact Details

Matt Shackleton, Executive Chairman

m: +61 (0)438 319 841

f: +61 8 9322 1003

e: [m.shackleton@goldphyre.com.au](mailto:m.shackleton@goldphyre.com.au)

Brenton Siggs, Technical Director

m: +61 (0)427 075 225

f: +61 8 9322 1003

e: [b.siggs@goldphyre.com.au](mailto:b.siggs@goldphyre.com.au)



**GOLDPHYRE**  
RESOURCES LTD

ABN 68 192 345 678

31 Ord Street, West Perth

Western Australia 6005

[www.goldphyre.com.au](http://www.goldphyre.com.au)

Lake Wells Potash Project  
Addressing Australia's Potash Demand