



GOLDPHYRE
RESOURCES LIMITED

THE LAKE WELLS POTASH PROJECT

INVESTOR PRESENTATION

Digger and Dealers, August 2016

A Leading Australian Sulphate of Potash Project, Best Positioned for Early Entry to Market





The Investment Proposition – ticking all the boxes . . .



WHY **FERTILISER**.....

- Growing global population
- Decreasing arable land per person
- Asian middle class to grow to 3 Billion people by 2030
- Australian agriculture challenge: rising to meet the demand

WHY **SOP**.....

- Supply constrained premium source of essential plant nutrient K
- Import replacement opportunity in Australia (+ chance to displace MOP!)
- Low salinity index = NIL chlorine introduced into soil, + Sulphur
- Overseas experience: brine SOP production has the lowest OPEX

WHY **GOLDPHYRE**.....

- Size, grade and lithology
- Location with logistics close to Australian market
- Simple, proven extraction method
- Value and peer comparisons
- Next steps to unlock value well advanced

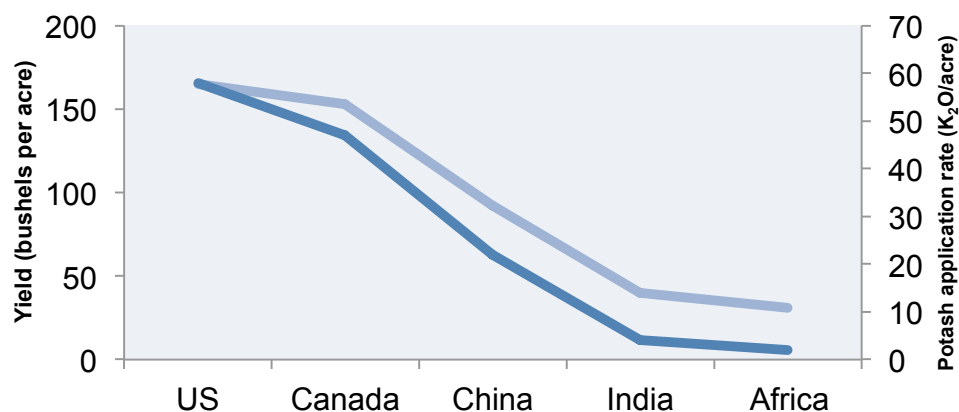


1.0 Growing Global Population & Decreasing Arable Land



	1970	2030	Change
An increasing World Population ...	3.7 billion	8.5 billion	UP BY 4.8 billion <u>or</u> 129%
Coupled with significantly reduced arable land per person...	3,800m ² /person	1,970m ² /person	DOWN BY 1,830m ² /person <u>or</u> 48%
Coupled with burgeoning middle class driving dietary preferences ...	2,435kcal/person	3,050kcal/person	UP BY 650kcal/person <u>or</u> 25%
All are driving forces behind increasing global fertiliser consumption			

Corn - Potash Application Rates & Yield



Potash application rates have a material, immediate and strongly positive impact on crop yields

Sources: United Nations, www.un.org, The World Bank, www.data.worldbank.org, www.fao.org

World Agriculture Towards 2030/2050, The 2012 Revision, Alexandratos, N., and Bruinsma, J., Global Perspective Studies Team, ESA Working Paper No.12-03, June 2012.



2.0 Australian agriculture meets the Asian middle class



	2009	2030	Change
Asian middle class	0.525 billion	3.0 billion	UP BY 2.47 billion or 470%

- The challenge for Australian agriculture is not to become the 'food bowl' of Asia
- The challenge for Australian agriculture is to get more high calorie and nutrient dense food per hectare (+ high value crops).....
- Australia currently imports 100% of its potash demand....

Goldphyre's Lake Wells Potash Project aims to produce the premium fertiliser, Sulphate of Potash, for the Australian market



3.0 Sulphate of Potash (SOP) is the Fertiliser to be in



- Potassium is one of the 3 essential macro-nutrients plants require
- Potash is the name given to the variety of potassium fertilisers that provide potassium
- Sulphate of Potash, or SOP, is the premium form of potash (Globally c.6Mt or \$3.5bn/yr)
- Muriate of potash, or MOP, is the most common form of potash (Globally c.55Mt - 60Mt)

	SOP	MOP
Market mechanism	Spot traded, supply constrained	Cartel controlled, annual contract pricing, demand controlled pricing
Quality	Low salinity index (46), almost NIL chlorine (think saline Australian soils), contains sulphur	High salinity index (114), contains chlorine
Premium pricing	c.\$300 - \$400 pricing premium over MOP	-
Cost of production	Brine evaporation operations produce SOP at c.\$200/t	Similar
CAPEX to development	Low CAPEX depending on Project	c. \$Billion++

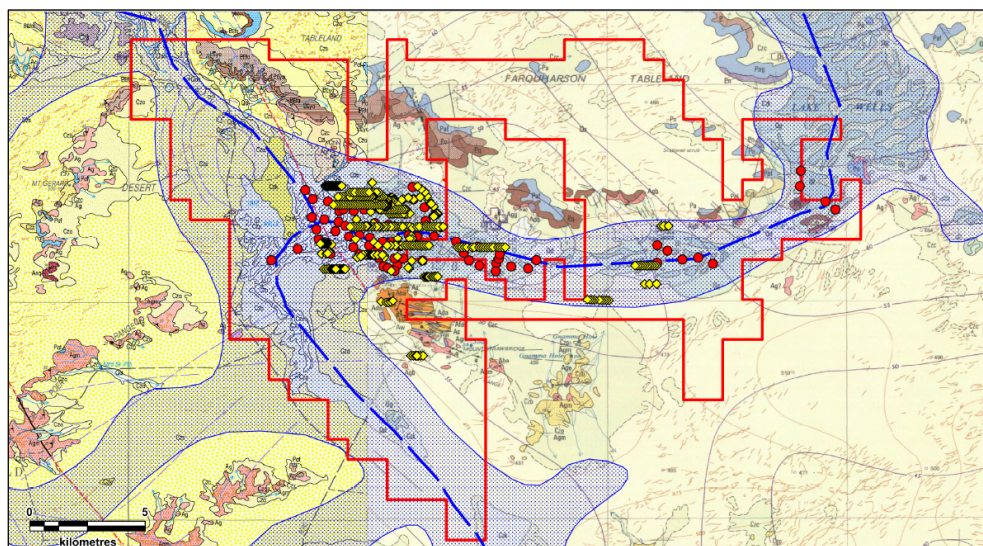
Many Australian farmer's would use SOP over MOP if possible



4.0 Location & Ownership



- **100% ownership rights**
- 10 x Potash exploration licenses¹ covering 1,618km²
- Paleovalley extends for + 55kms to date
- There is currently no native title claim over the project area



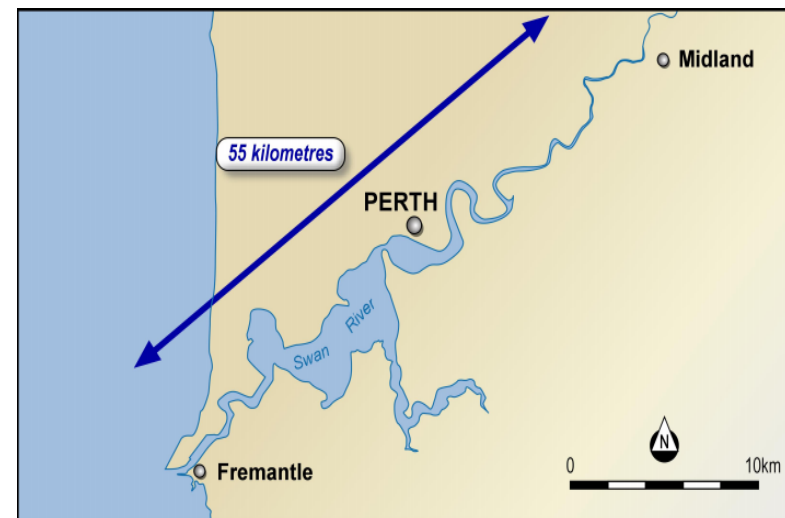
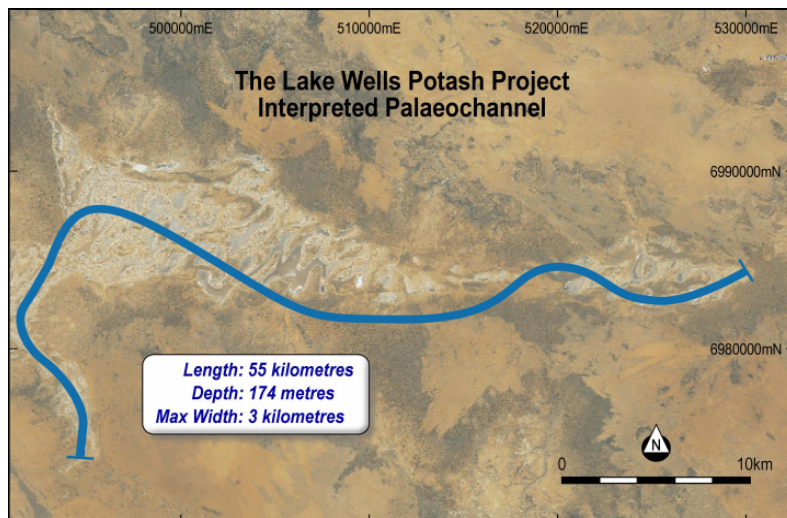
¹. 8 x 100% owned GPH licenses and 2 x Joint Ventured for 100% of potash rights



5.0 Size, Grade & Lithology



The
palaeochannel
length is
substantial -
equivalent to
the distance
from Fremantle
to Midland



Lake Wells lake playa



The Lake Wells Potash Project' palaeochannel
sits beneath the lake playa



Piercing the clay lithologies into the basal
sand aquifer produces high-pressure, hyper-
saline brine flows



5.0 Size, Grade & Lithology



Goldphyre reports Resource Estimates using Specific Yield

Specific Yield measures the Resource Estimate ¹ based on what can be extracted				Total porosity gives an 'in-situ' Resource Estimate without consideration given to extractability	
Specific Yield SOP Mt	Specific Yield SOP kg/m ³	High-grade core SOP Mt	High-grade core SOP kg/m ³	In-situ SOP Mt	In-situ SOP kg/m ³
18.4	8.05	10.5	9.03	70	8.05

- Brine Resource estimates calculated using Specific Yield (or **drainable porosity**):
 - Are compliant with International reporting standards [NI43-101] ✓
 - And reflect the amount of brine (ore) that can be abstracted ✓
- Brine Resource estimates calculated using Total porosity:
 - Are NOT compliant with International reporting standards [NI43-101] ✗
 - And DO NOT reflect the amount of brine (ore) that can be abstracted ✗

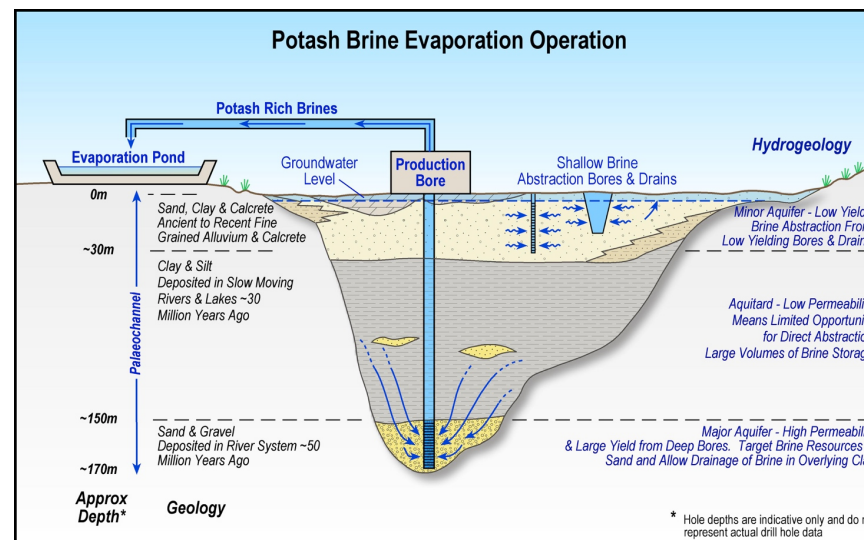
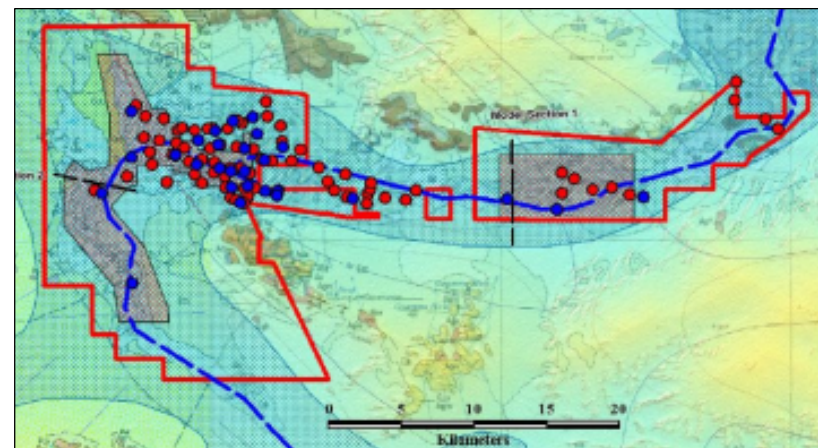


5.0 Size, Grade & Lithology



The Lake Wells Potash Project has a central, high-grade core of **10.5Mt @ 9.03kg/m³** located close to potential evaporation pond sites

- The composition of the lake or palaeochannel (river) sediments is vital to the brine yield of an aquifer
- Porous and permeable material within the sediments dictates the yield of an aquifer
- Sands are porous and permeable, clays are porous but much less permeable
- Sands in the aquifer = brine yield





6.0 Simple Logistics: VITAL for low cost, early entry to Market



BULK BAGS



STATION ROAD 85KM



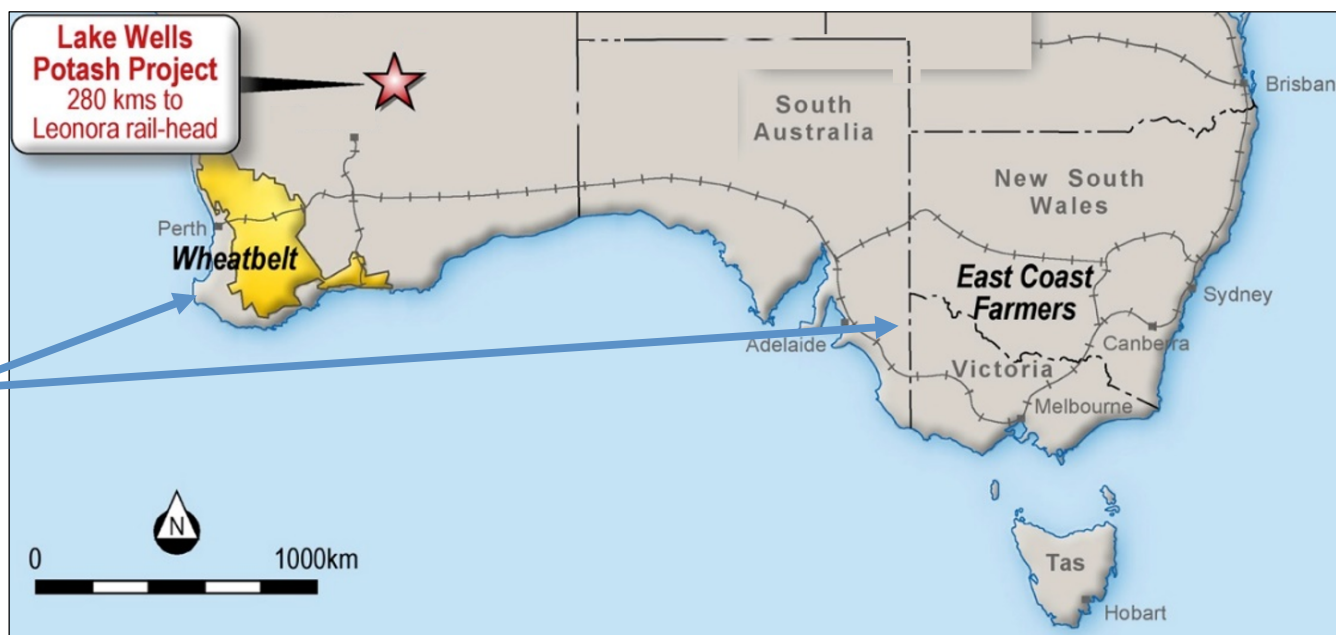
ROADS TO LEONORA 215KM



LEONORA RAIL HEAD



**ACCESS TO MULTIPLE
MARKETS AND MINIMAL
TRANSPORT
INFRASTRUCTURE CAPITAL
SPEND REQUIRED**





7.0 Simple Abstraction Method



Pumping v Trenching

The stratigraphy at the Lake Wells Project suits bore pumping, a proven abstraction methodology with lower CAPEX than trenching

1. Crystal Peak Minerals Inc. estimate US\$49million for playa/trench infrastructure at its proposed 300ktpa SOP evaporation operation in the US
2. GPH is installing test-production bores for c.\$125,000 each which become production bores after testing – a full production bore field is significantly cheaper and simpler than a trench network

Most major brine producers (inc. lithium), worldwide, utilise bore abstraction methods:

- Orocobre's Olaroz Lithium Facility in Argentina extracts its brine using bores
- SQM's Salar de Atacama in Chile extracts its brine using bores
- Rockwood Lithium in Chile extracts its brine using bores

In the eastern Goldfields of Western Australia, brine abstraction from bore fields is common and high-yielding:

- Murrin Murrin 12Gl per year
- Mt Keith 12Gl per year
- St Ives 12Gl per year



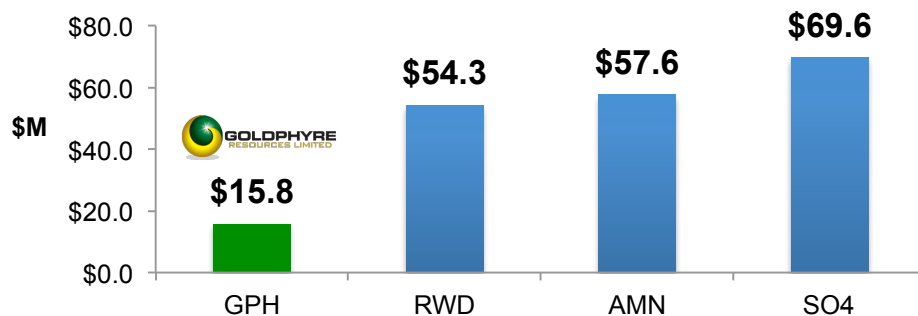
8.0 Value & Peer Comparisons



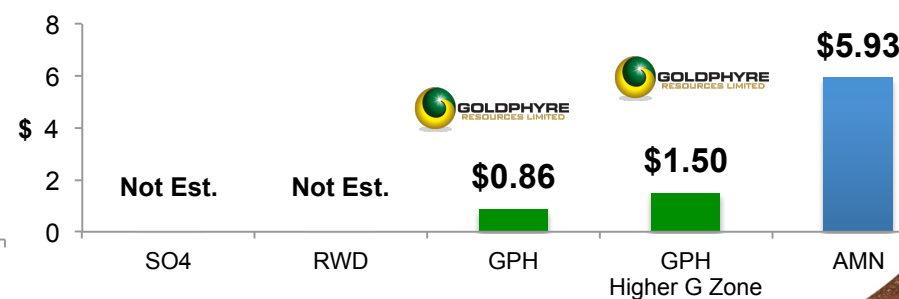
GPH's current JORC Resource Inventory is 18.4Mt SOP
SOP price in Australia circa A\$1,000/t

Company	Project	Market Cap 1 August 2016	Proposed abstraction method	Recoverable SOP (specific yield)	Mkt Cap/t Recoverable SOP	In-situ Resource estimate SOP
	Lake Wells	\$15.8M	Pumping	18.4 Mt	\$0.86	70Mt
	Lake Wells Higher Grade Zone	\$15.8M	Pumping	10.5Mt	\$1.50	40Mt
AMN	Mackay	\$57.57M	Trenching	9.7 Mt*	\$5.93	164Mt
RWD	LD	\$54.30M	Trenching	Not estimated	Unknown	564Mt
SO4	Lake Wells	\$69.56M	Unknown	Not estimated	Unknown	85Mt

Market Capitalisation of Australian brine SOP peer companies



Market capitalisation per tonne of Recoverable SOP of Australian brine SOP peer companies



*Agrimin Ltd, ASX Release, 15 December 2015 – “portion of the [total Resource] which is predicted to be extracted using low-risk and low-cost trenching methods”

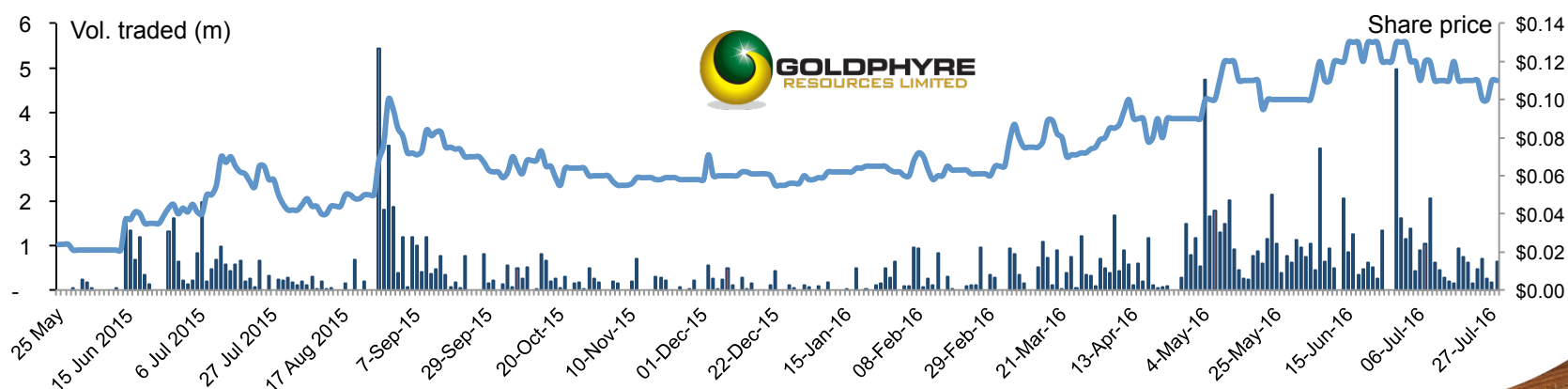


9.0 Capital Structure, Board & Mgmt, Shareholder Base



Capital Structure	Number	Price A\$
Ordinary shares (ASX: GPH)	151.2m	\$0.11
Listed options (ASX: GPHO) 8 cents, expiry 30 September 2016	70.3m	\$0.022
Unlisted options (various)	20.6m	
Market capitalisation		\$16m
Directors	9%	
Yandal Investments	19.9%	
Top 20	55%	

Board & Management	
Matt Shackleton, FCA, MBA, MAICD	Executive Chairman
Brenton Siggs, BAppSc., MAIG	Non-executive Director Exploration Manager
Dean Goodwin, BAppSc., MAIG	Non-executive Director
Carsten Kraut, MSc., MAIG, MIAH	Principal Hydrogeologist

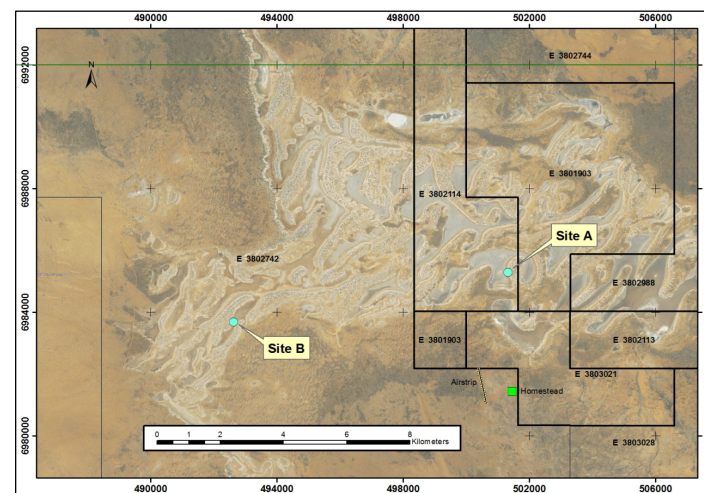




10.0 The Next 6 Months



- **Test-production bore installation program commencing August 2016**
 - Installing 4 test-production bores at 2 sites (A & B)
 - Installing 1 bore into the shallow aquifer, and 1 deep bore into the basal aquifer at each site
- **Test-pumping of bores to commence on completion of installation**
 - Contractor proposals being considered now
 - **Test-pumping results Q4 2016**
- Laboratory based evaporation trials currently underway
 - Salt crystallisation phase sequencing
- Geo-technical studies currently underway into the soils at potential trial evaporation pond sites





11.0 The Opportunity – The Lake Wells Potash Project



- Management's strategy to exploit all options in ensuring the Lake Wells Potash Project is developed quickly (first to market) and at the most efficient CAPEX spend
- Ideally located closest to logistics solution, which is vital for a bulk project
- Simple, tried and common bore field brine abstraction method proposed, without the need for the more expensive, larger footprint trenching requirement
- High-grade core to the Resource located close to proposed evaporation pond sites
- Highly conducive sediment lithologies, with test-production bore pumping trial to commence (see below)
- High demand, high value premium fertiliser product (SOP), with strong incentive to capture the import replacement and first to market opportunity currently existing in Australia
- Strong, supportive and highly experienced shareholder base in alignment with management's strategy
- Several potential share price accretive catalysts to unroll over the next 6 months



Appendix 1



SOP held in brine is produced through evaporation



1. Pumping

The palaeochannel bore-field pumps brine into evaporation ponds



2. Evaporating

Brines pass through evaporation ponds, dropping out salts along the way



3. Harvesting

Salts are harvested and transported to plant for conversion

4. Conversion

Schoenite is converted, or crystallised, into SOP



5. Processing

SOP is washed, dried, screened and chipped ready for distribution to end user





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COMPETENT PERSONS STATEMENTS



The information in the announcement that relates to Exploration Targets and Mineral Resources is based on information that was compiled by Mr Jeffery Lennox Jolly. Mr Jolly is a principal hydrogeologist with AQ2, a firm that provides consulting services to the Company. Neither Mr Jolly nor AQ2 own either directly or indirectly any securities in the issued capital of the Company. Mr Jolly has over 30 years of international experience. He is a member of the AusIMM and the International Association of Hydrogeologists. Mr Jolly has experience in the assessment and development of palaeochannel groundwater resources, including the development of water supplies in hypersaline palaeochannels in Western Australia. His experience and expertise is such that he qualifies 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 Jolly consents to the inclusion in this report on the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration results is based on information compiled by Mr Brenton Siggs. Mr Siggs is the principal geologist of Reefus Geology Services, a firm that provides geological consulting services to the Company. Mr Siggs is a director and shareholder 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 2015). Mr Siggs is a Non-Executive Director of Goldphyre Resources Limited. He is a member of the Australasian Institute of Geoscientists. 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 “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. 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.

1. Refer to ASX announcement 29 June 2016 ‘Maiden SOP Resource Estimate’. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, Goldphyre Resources Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 29 June 2016 announcement, and 2. State that the material assumptions and technical parameters underpinning the estimates in the 29 June 2016 announcement continue to apply and have not materially changed.



THE LAKE WELLS POTASH PROJECT



Thankyou

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