
GOLDPHYRE
RESOURCES LIMITED
THE LAKE WELLS
POTASH PROJECT
Australian potash for Australian farmers
"Currently 100% of Australia's potash
is imported. The development of a local source of potash
would be a significant win for Australian farmers"

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JORC RESOURCE

Global Resource*

	Contained SOP (Mt)	Grade (kg/m³)
Total porosity	70	8.05
Drainable porosity	18.4	8.05
Including HIGH GRADE ZONE targeted for immediate assessment	**10.5**	**9.03**

"Logistics, location, potential CAPEX, ability to get the brine … these are vital when considering a brine SOP project"

*Please see Appendix 1 for full Resource Estimate details

Recoverable SOP

Using Drainable porosity, or 'Specific Yield', we can estimate the amount of SOP recoverable from the total, in-situ SOP (which is measured using Total porosity)

Number of ASX listed companies in Australia with a SOP JORC Resource	**5**
Number of these JORC Resources reported using drainable porosity/specific yield	**2**

Company	Total porosity Resource (Mt)	Specific yield Resource (Mt)	Market Capitalisation ($Am, undiluted) 27 June 2016
Goldphyre (GPH)	70	18.4	17
Agrimin (AMN)	123	22	48
Reward (RWD)	564	-	58
Salt Lake Potash (SO4)	85	-	44
Rum Jungle (RUM)	14	-	20

LOGISTICS

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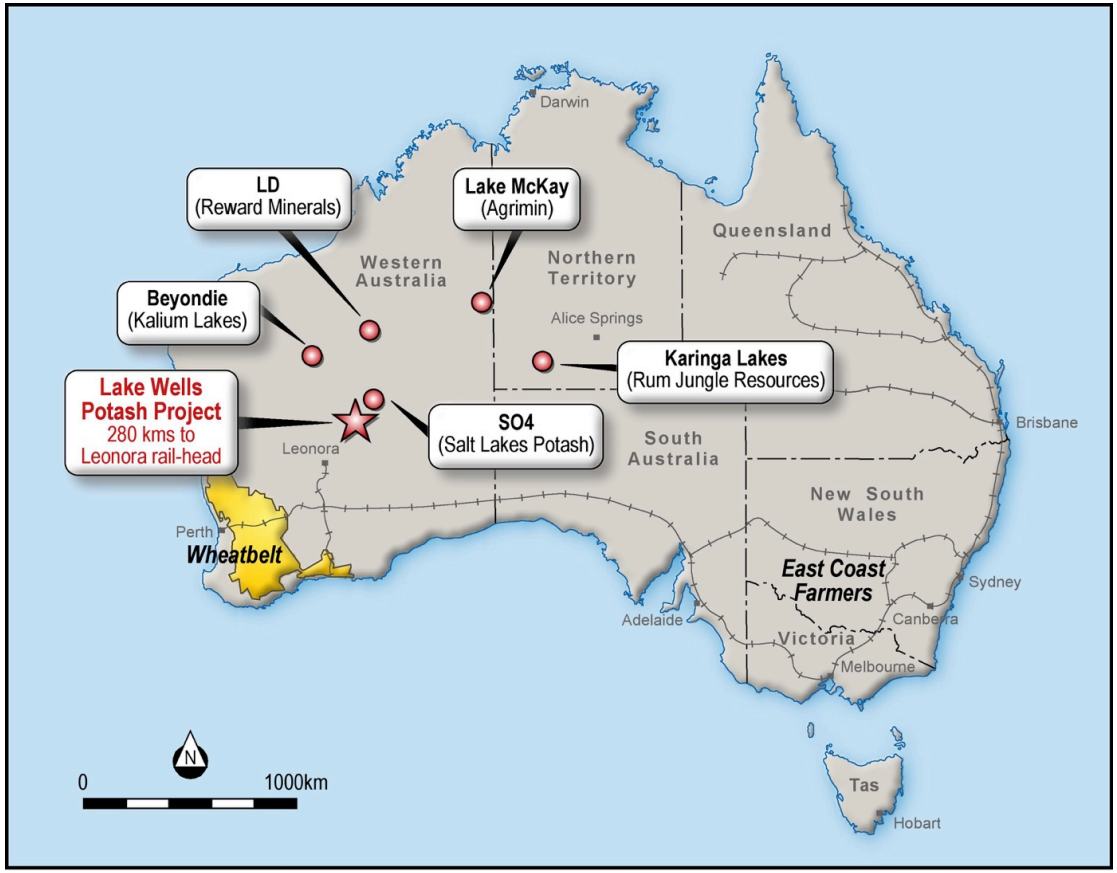
Location, location, location

- LOGISTICS ARE VITALLY IMPORTANT TO BULK MINERAL PROJECTS
- BUILDING ROAD INFRASTRUCTURE AND ESTABLISHING PORT ACCESS IS COSTLY
- GPH'S LAKE WELLS POTASH PROJECT HAS EXISTING ROADS TO IT
- GPH IS LOOKING TO MEET THE DOMESTIC DEMAND FOR SOP

GPH WILL ASSESS THE LOWEST COST, INCREMENTAL CAPEX DEVELOPMENT



THE LAKE WELLS POTASH PROJECT

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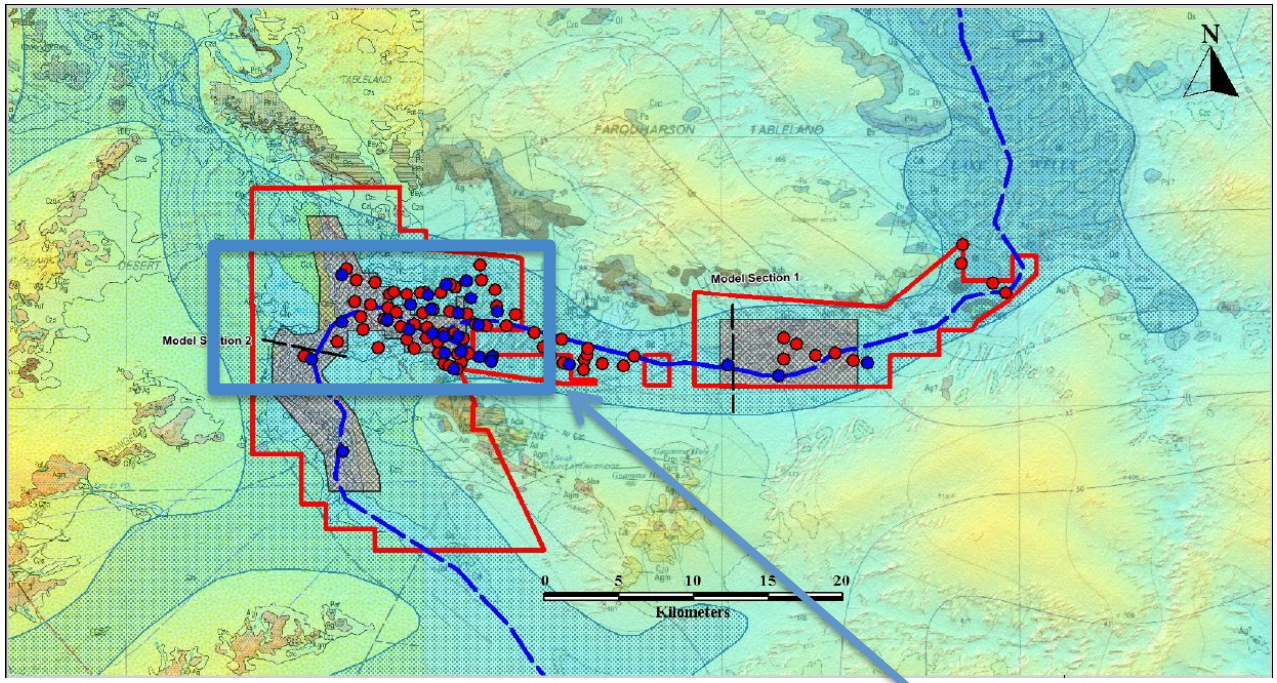

"Goldphyre's strategy is to focus on the high-grade core of the resource, targeting the Australian domestic demand for SOP"

ABSTRACTION METHOD – BRINE RECOVERY IS KEY

Palaeochannel Bore Fields

- EACH YEAR IN WESTERN AUSTRALIA BILLIONS OF LITRES OF WATER IS ABSTRACTED USING PALEOCHANNEL BOREFIELDS
  - FOR EXAMPLE - MURRIN MURRIN: 12GL/YEAR MT KEITH: 12GL/YEAR ST IVES: 12GL/YEAR
- ABSTRACTING WATER FROM BORE FIELDS
  - TRIED, TESTED AND PROVEN METHOD FOR ABSTRACTING LARGE VOLUMES OF BRINE
  - PERMITS CONTROL OF GRADE & VOLUMES – GRADE CONTROL
  - IS MODULAR IN NATURE – ALLOWS SEQUENTIAL CAPITAL EXPENDITURE FOR PROJECT DEVELOPMENT
- DEEP PALAEOCHANNELS (PALAEOCHANNEL = ANCIENT RIVER)
  - PERMIT RESOURCE EXPLOITATION FROM SMALLER SURFACE AREAS
  - RESOURCE CAN BE ACCESSED WITH SIGNIFICANTLY LESS CAPEX COMPARED TO OTHER METHODS
  - THE LAKE WELLS POTASH PROJECT DEEP PALAEOCHANNEL HAS HIGHLY FAVOURABLE SAND LAYERS

THE LAKE WELLS POTASH PROJECT

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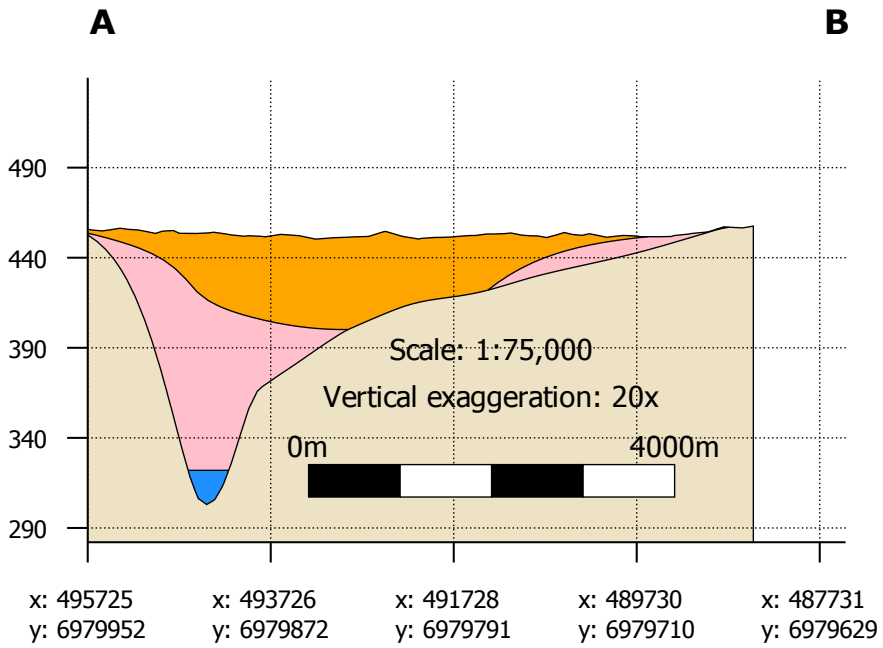
Model Section 2

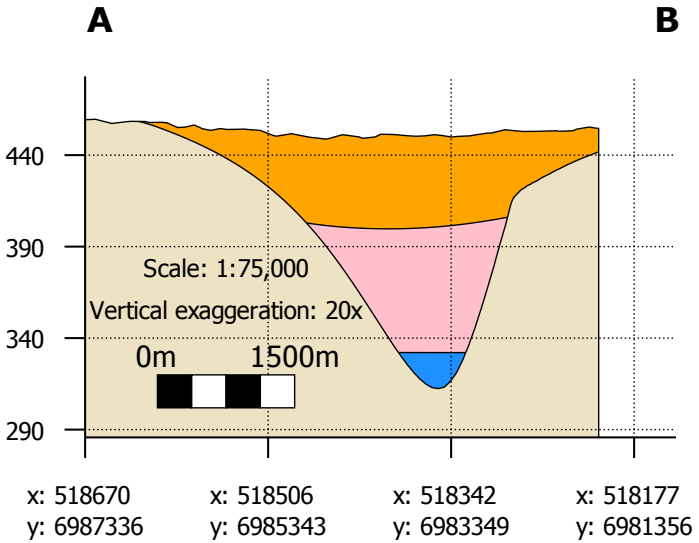


Legend

ET_230616

- Basal Sand
- Confining Clay
- Basement
- Surficial Aquifer

Model Section 1



Legend

ET_230616

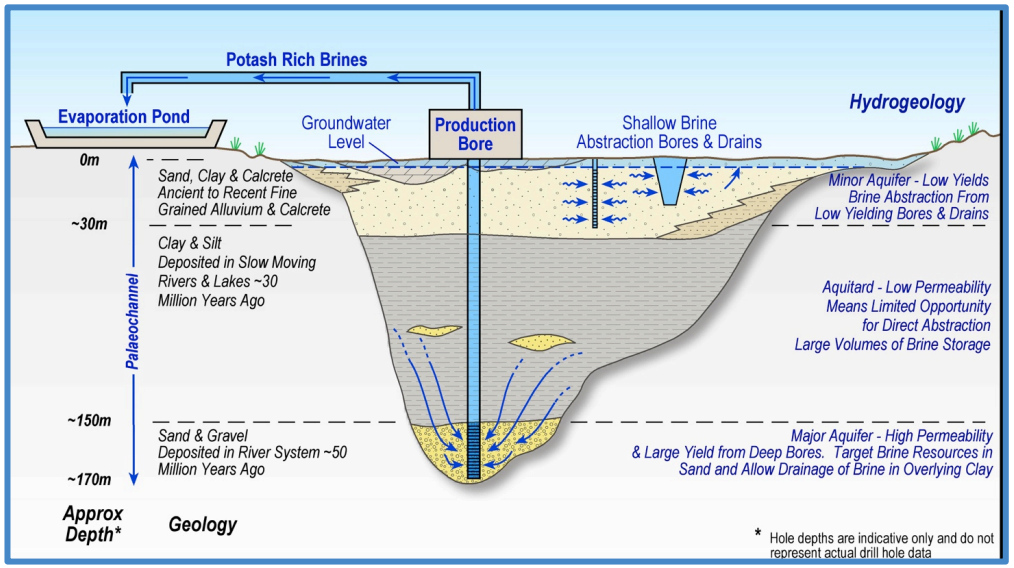
- Basal Sand
- Confining Clay
- Basement
- Surficial Aquifer

SANDS IN PALAEOCHANNEL LITHOLOGIES INDICATE STRONG BRINE YIELD POTENTIAL

BRINE ABSTRACTION METHODS

PALAEOCHANNELS BORE FIELD BRINE ABSTRACTION

- PERMEABILITY & POROSITY ARE KEY
- NETWORK OF BORES PUMP INTO EVAPORATION PONDS
- SCALEABLE, SIMPLE TO BUILD, COMMON



TRENCHING BRINE ABSTRACTION

- 100'S OF KMS OF TRENCH NETWORKS TYPICALLY REQUIRED
- RECHARGE INTO CHANNELS FROM BENEATH IS KEY TO LONG TERM PRODUCTION
- DAMPIER SALT (RIO) OPERATION

BRINE RECOVERY

The Efficiency of Brine Recovery will Determine Success

- BRINE ABSTRACTION IS A FUNCTION OF THE PERMEABILITY AND SPECIFIC YIELD OF THE MATERIAL FROM WHICH IT IS BEING ABSTRACTED: SANDS HAVE HIGHER SPECIFIC YIELD THAN CLAYS
- BASAL AND UPPER SAND AQUIFERS ARE PRESENT AT GPH'S LAKE WELLS POTASH PROJECT

LOGISTICS

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LAKE WELLS ROAD 85KM

GREAT CENTRAL ROAD 90KM

LAVERTON-LEONORA ROAD 125KM

Bulk projects need quality infrastructure and good access

"Using existing infrastructure enables us to target faster development"

THE LEONORA RAIL HEAD IS 280KM FROM THE LAKE WELLS POTASH PROJECT

UNIQUE INVESTMENT PROPOSITION

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Australian Potash for Australian Farmers

- WA brine hosted Sulphate of Potash (SOP) project
- Aiming to feed the domestic demand for SOP which is currently 100% imported
- Superior mining jurisdiction in the eastern goldfields of WA
- Simple, tried and tested brine extraction method used all over Australia
- Excellent infrastructure already in place
- Emphasis on achieving strong economic returns rather than focusing on big resources, big production profiles and big capex
- Ground floor investment opportunity with GPH capitalised at only $17m

"Goldphyre's strategy is to focus on the high-grade core of the resource, targeting the Australian domestic demand for SOP"

CORPORATE OVERVIEW

GOLDPHYRE RESOURCES LIMITED

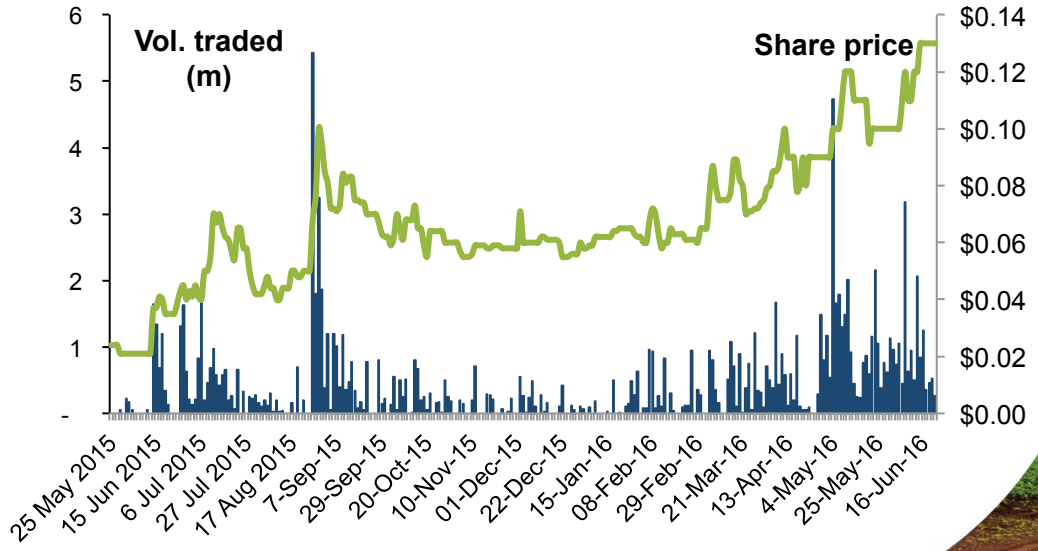
Financial information

Share price 24 June	$0.115
Number of shares	146.9m
Options	95.4m
Market Capitalisation	**$16.8m**
Cash 31 March	$1.1m
Enterprise value	$15.7m

"Goldphyre's shareholder register is built around long-term investors who understand we are focussed on stakeholder return"

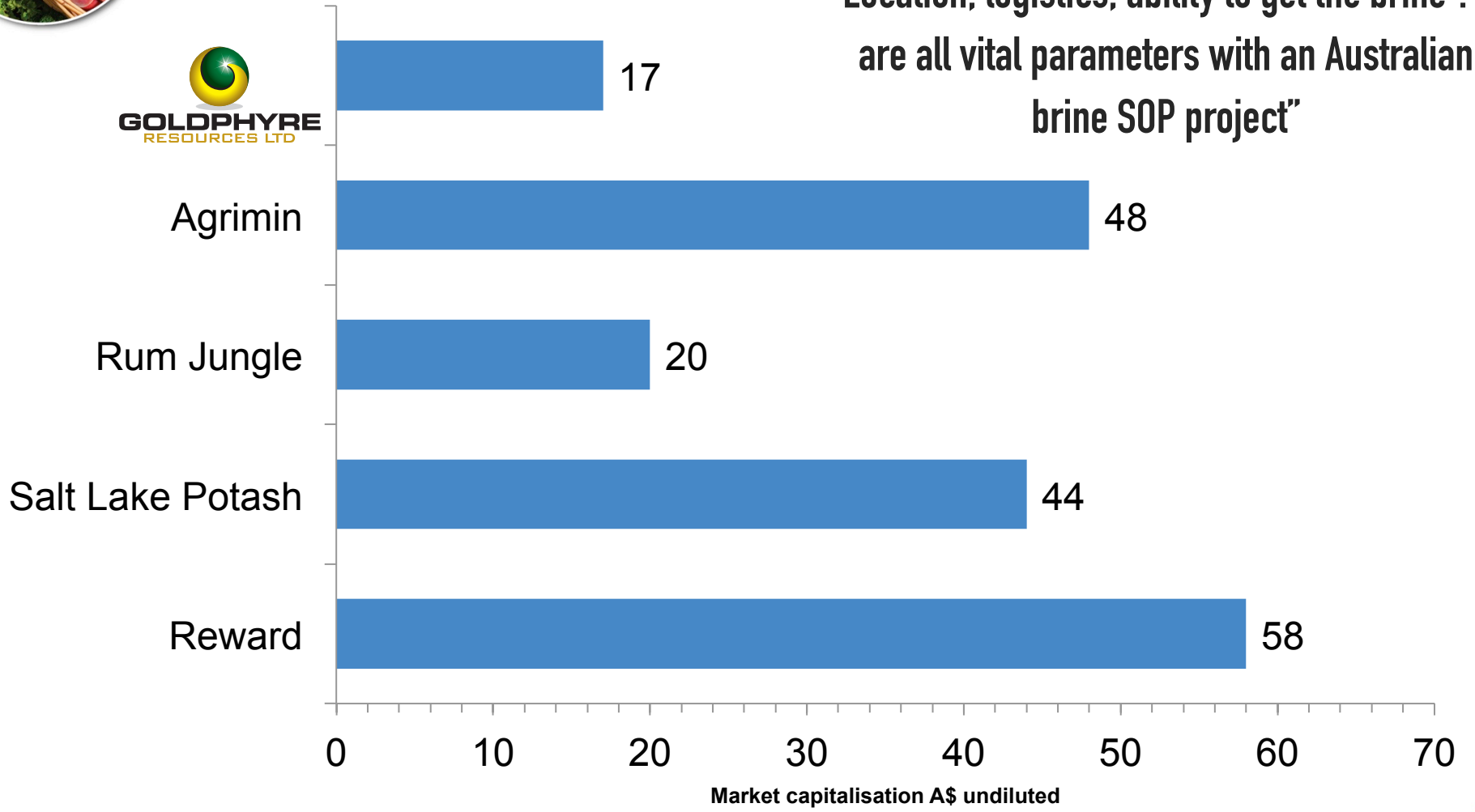
Shareholders

Yandal Investments Pty Ltd (Mark Creasy)	19.9%
Board & management	8.6%
Top 20	54.7%



EMERGING POTASH PLAYER

"Location, logistics, ability to get the brine … are all vital parameters with an Australian brine SOP project"



WHAT IS POTASH?

- Potash is a fertiliser that provides plants with the essential, non-substitutable macro-nutrient, potassium which all plants need to grow
- Potassium is the 'quality element' in plant growth, improving appearance, feel, texture and yield*
- Potassium is mined from the soil through plant growth, and **POTASH** replaces that potassium

Sulphate of Potash ('SOP') is the Premium Potash type

- SOP provides chloride free potassium, many soils can't tolerate additional chlorine
- SOP is premium priced over other potash types
- SOP is produced in several ways, with the cheapest cost of production being brine evaporation

"A brine SOP project can capture the lowest cost of production of this essential premium priced fertiliser"

* International Potash Institute

HOW USEFUL IS POTASH?

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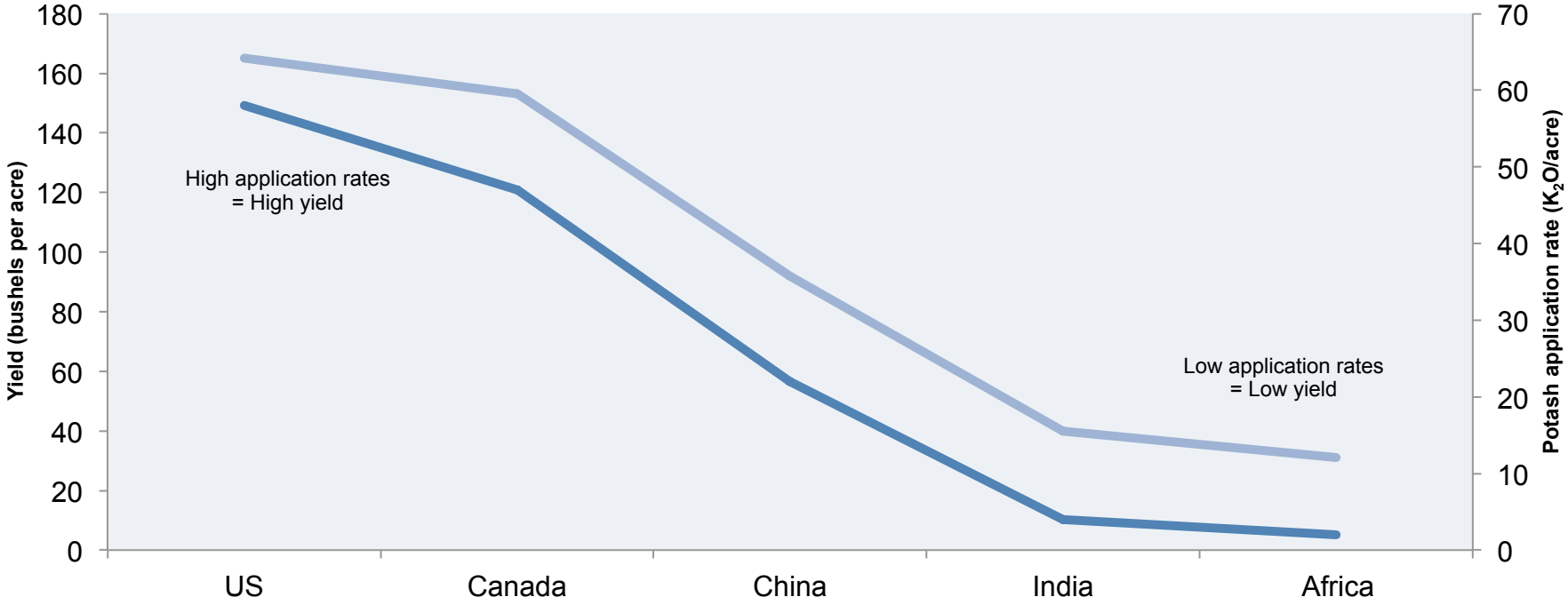
Corn Potash Application Rates & Yield

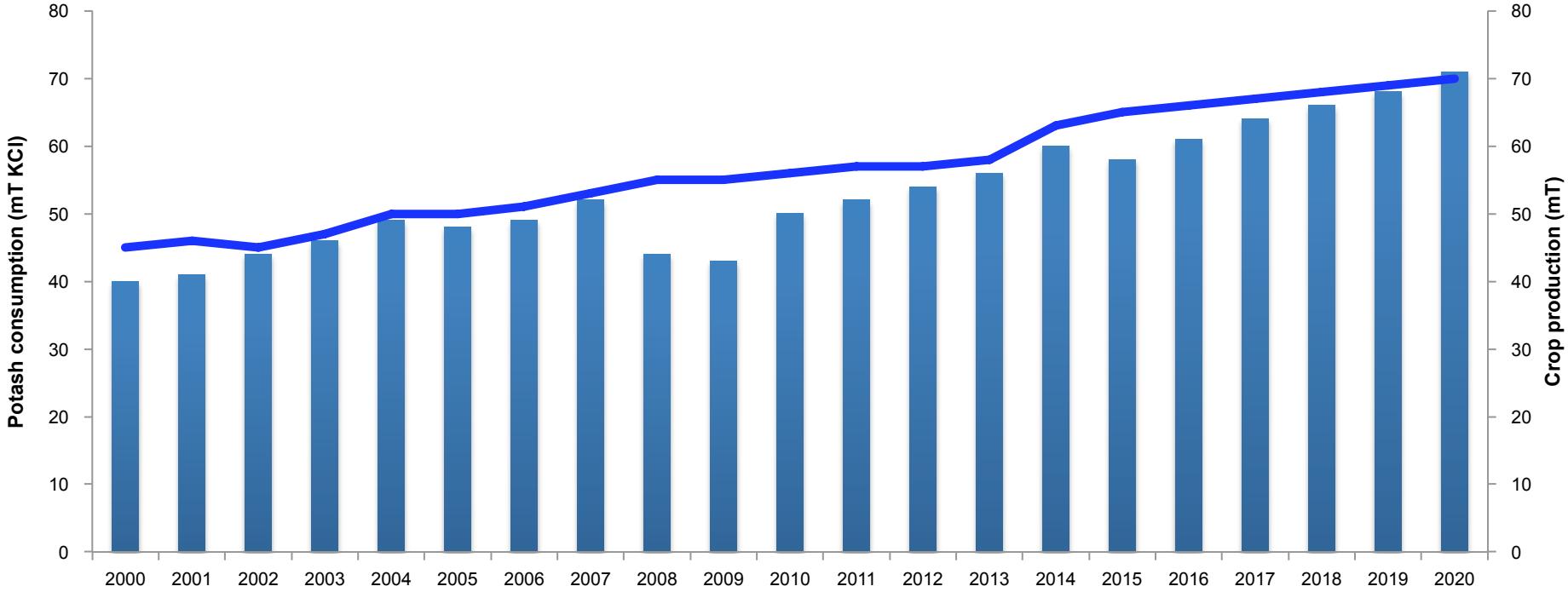


The effect of increasing potash application rates on crop yield is compelling

PotashCorp, Goldman Sachs Basic Materials Conference May 2016

POTASH DEMAND

Global crop production and potash consumption



More people means more food production means more potash consumption

PotashCorp, Goldman Sachs Basic Materials Conference May 2016

SOP ECONOMICS

SOP can be produced in several ways

MOST EXPENSIVE → LEAST EXPENSIVE

Manheim process	Reacted salts	Hard-rock mining	Brine evaporation

AVERAGE COST OF PRODUCTION	A$275/TONNE
FARM-GATE PRICE OF SOP IN WESTERN AUSTRALIA	A$1,100/TONNE

"A domestic SOP brine operation can provide Australian farmers with certainty of supply and reduced exchange rate risks"

- 100% OF ALL POTASH USED IN AUSTRALIA IS IMPORTED
- THERE WILL BE SUBSTITUTION TO SOP IF IT IS PRICED RIGHT

SOURCE: INDUSTRY PRESENTATIONS, COMPANY WEBSITES, PUBLIC ANNOUNCEMENTS

SOP PRODUCTION

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

"Using existing road infrastructure, Goldphyre will test the feasibility of distributing its SOP product through a centrally located, wheatbelt location"

BRIEF HISTORY RAPID PROGRESS

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GOING FORWARD ....

- Q3/Q4 Test bore pumping trials
- Q3 Bench scale evaporation trials
- Q3/Q4 JORC Resource upgrade
- Q4 Test field evaporation ponds
- Q1 2017 JORC Measured Resource

MARCH 2016

Exploration Target* of 6Mt – 37Mt (specific yield)

FEBRUARY 2016

Seismic surveys double the length of the palaeochannel

DECEMBER 2015

Project area tripled in deal with Mark Creasy controlled entity

AUGUST 2015

High grade potash drill assays from surface to + 135m

APRIL 2015

High-grade potash brine sample assays reported to market

*The potential quantity and grade of the Exploration Target is conceptual in nature. There has not yet been sufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

EXPERIENCED INCENTIVISED

The Board

MATT SHACKLETON, EXECUTIVE CHAIRMAN

BCOMM., MBA, FCA, MAICD

OVER 20 YEARS EXPERIENCE IN CORPORATE & RESOURCE COMPANY MANAGEMENT

BRENTON SIGGS, NON-EXECUTIVE DIRECTOR

BAPPSC., MAIG

OVER 25 YEARS EXPERIENCE IN MINERAL EXPLORATION AND DEVELOPMENT

DEAN GOODWIN, NON-EXECUTIVE DIRECTOR

BAPPSC., MAIG

OVER 25 YEARS EXPERIENCE IN MINERAL EXPLORATION, DEVELOPMENT, AND MANAGEMENT

JOHN RIBBONS, COMPANY SECRETARY

Management

MATT SHACKLETON, EXECUTIVE CHAIRMAN

BRENTON SIGGS, EXPLORATION MANAGER

CARSTEN KRAUT, PRINCIPAL HYDROGEOLOGIST

Consultants

AQ2, HYDROGEOLOGICAL CONSULTANTS

PERITAS GROUP, ENGINEERING CONSULTANTS

CCC, BRINE CHEMISTRY CONSULTANTS

LISA CHANDLER, ENVIRONMENTAL ADVISOR

BOB THIRD, ENGINEERING ADVISOR

"We are continually building on our competencies through working with the best people we can find"

COMPELLING OPPORTUNITY

Ideally positioned for Rapid Project Growth and Development

- STRONG GRADES AND SCALE IN A HIGHLY CONDUCIVE ENVIRONMENT FOR EVAPORATION
- WELL FUNDED FOR NEXT PROGRAM OF WORKS: TEST PUMPING & EVAPORATION POND TRIALS Q3/Q4 2016
- STRONG AND SUPPORTIVE SHAREHOLDER BASE
- TRIED AND TESTED ABSTRACTION PROCESS: NOT REINVENTING THE WHEEL
- SIGNIFICANT INFRASTRUCTURE ALREADY IN PLACE
- EMPHASIS ON ACHIEVING STRONG ECONOMIC RETURNS RATHER THAN FOCUSING ON BIG RESOURCES AND BIG PRODUCTION PROFILES

DERISKING LAKE WELLS

	Q1 2016	Q2 2016	Q4 2016	Q1 2017
Exploration target	• Incorporate LWE data into exploration target data area • ***COMPLETE***	• n/a	• n/a	• n/a
Inferred resource	• Collect samples for porosity and specific yield analysis • ***COMPLETE***	• Brine sampling across horizons, geophysics • PUBLISH Resource • ***COMPLETE***	• n/a	• n/a
Indicated resource	• Porosity/Specific yield • More brine chemistry • Installation of piezometers	• Test bore drilling • Downhole geophysics • Numerical modelling	• Water abstraction environmental analysis • PUBLISH Resource	• n/a
Measured resource	• n/a	• Numerical modelling • Inter-bore continuity test-work	• Final aquifer test-work including permeability, specific yield, water chemistry variability	• PUBLISH Resource

DERISKING LAKE WELLS

	Exploration target	Inferred resource	Indicated resource	Measured resource
Desktop studies	✔	n/a	n/a	n/a
Auger sampling	✔	✔	✔	n/a
Core drilling	n/a	✔	✔	✔
Exploration drilling	✔	✔	✔	✔
Geophysics	✔	✔	✔	✔
Test bores	n/a	n/a	✔	✔
Modelling	✔	n/a	✔	✔
Environmental	n/a	n/a	✔	✔
Reporting	✔	✔	✔	✔
Not started				Complete

APPENDIX 1

The Lake Wells Potash Project JORC Compliant Inferred Mineral Resource Estimate measured using Specific Yield

Inferred Resource for GPH Lake Wells Potash Brine (JORC compliant, taking account of Potential Future Economic Abstraction)

Hydrogeological Unit	Volume of Aquifer	Specific Yield	Drainable Brine Volume	K Concentration (mg/L)	SOP Grade (mg/L) (K * 2.23)	SOP Resource
	Mm^3	Mean	Mm^3	Weighted Mean Value	Weighted Mean Value	Mt
Western High Grade Zone						
Surficial Aquifer	5,207	16%	833	3842	8568	7.1
Clay Aquitard	4,947	6%	297	4,244	9464	2.8
Basal Sand Aquifer	222	23%	51	4,539	10121	0.5
Sub Total (Mm^3/Mt)	***10,376***		***1181***	***4049***	***9028***	***10.5***
Eastern Zone						
Surficial Aquifer	3,435	16%	550	3428	7644	4.2
Clay Aquitard	2,833	6%	170	3,329	7423	1.3
Basal Sand Aquifer	231	23%	53	3,330	7426	0.4
Sub Total (Mm^3/Mt)	***6,499***		***773***	***3381***	***7540***	***5.9***
Southern Zone						
Surficial Aquifer	1,296	16%	207	2742	6115	1.3
Clay Aquitard	1,901	6%	114	2,620	5842	0.7
Basal Sand Aquifer	82	23%	19	2,871	6401	0.1
Sub Total (Mm^3/Mt)	***3,279***		***340***	***2674***	***5963***	***2.1***
Total						
Surficial Aquifer	9,937	16%	1383	3555	7929	12.6
Clay Aquitard	9,682	6%	467	3657	8155	4.7
Basal Sand Aquifer	535	23%	123	3761	8387	1.0
Total *(Mm^3/Mt)*	**20,154**		**1972**	**3610**	**8050**	**18.4**

Inferred Resource based on modelled aquifer volume, mean specific yield and weighted mean K concentrations (derived from modelling)

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.

Thankyou

www.goldphyre.com.au