



ASX: GPH



**GOLDPHYRE**  
RESOURCES LTD

# Lake Wells Potash Project Targeting Australia's Potash Demand

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## 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.

# Lake Wells Potash Project

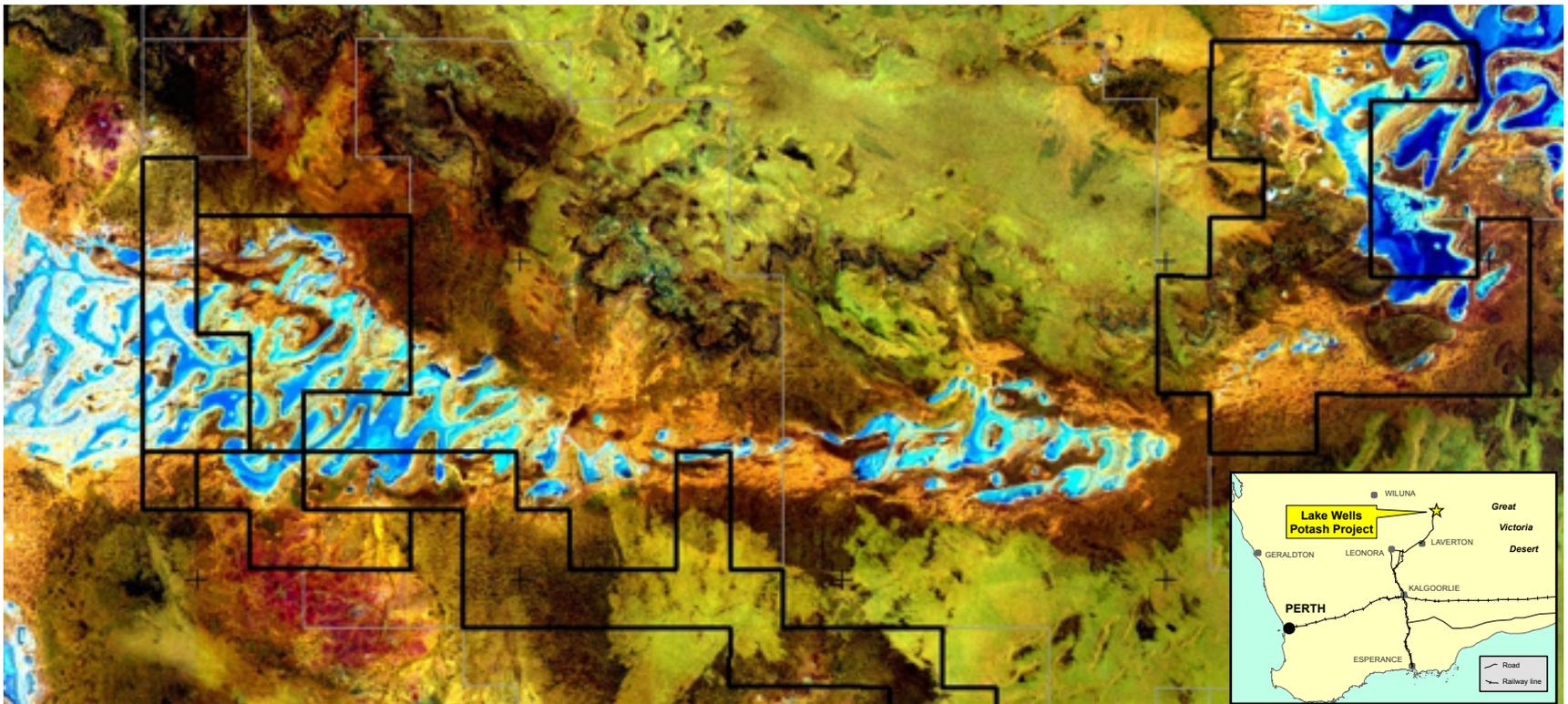


- \* The Lake Wells Potash Project is 100% owned
- \* Lake Wells identified as one of the **highest potash potential** salt lakes in Australia
- \* Very high grades at surface - exploration at depth required to uncover potential
- \* No Native Title claim existing
- \* Low CAPEX brine operation potential
- \* Highly conducive environment for evaporation ponds
- \* Eastern Goldfields location with quality infrastructure, 300kms overland to bulk rail terminal at Leonora
- \* Drilling campaign imminent to determine potential at depth

# Lake Wells Potash Project



A source of SOP for Australian farmers



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

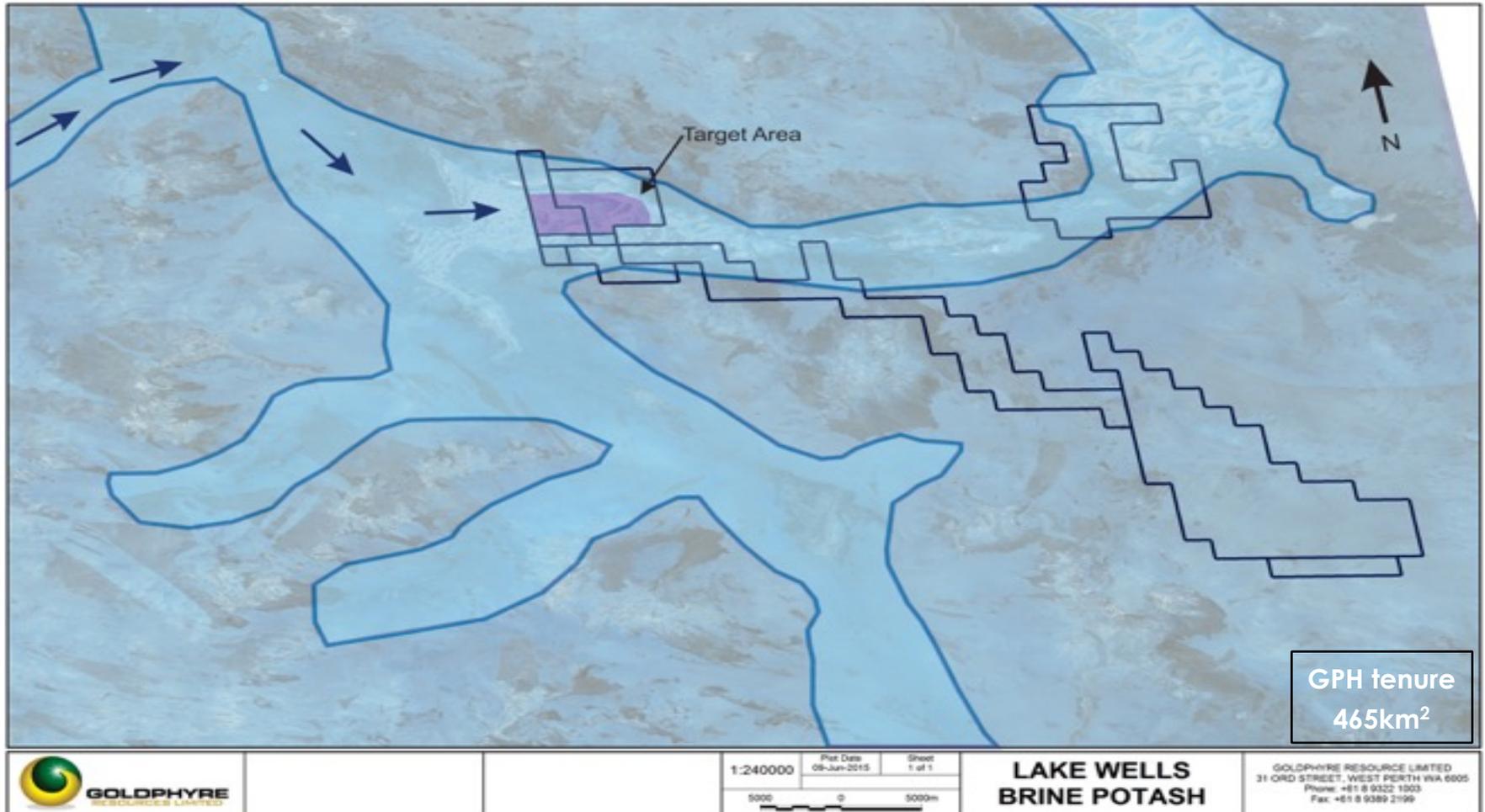
Evaporative operations require sunny, windy conditions: the Lake Wells environment is highly conducive to evaporation

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

# Lake Wells Potash Project



Aquifer recharge is vital to brine extraction

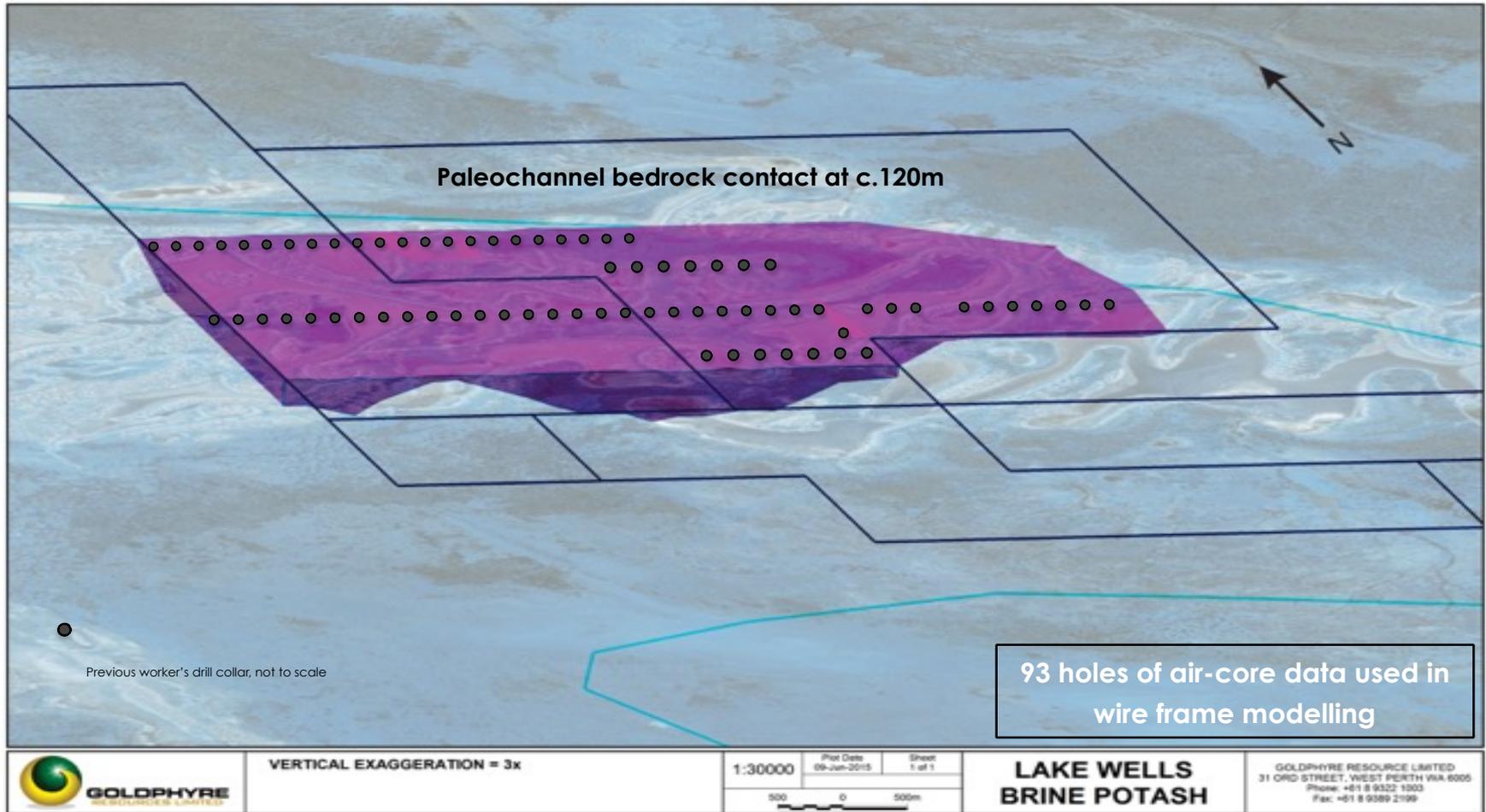


Research indicates the Lake Wells Potash Project's positioning over paleochannel recharge flow is favourable for brine recharge

# Lake Wells Potash Project



Porosity and permeability are also vital to brine extraction



Aquifer modelling indicates volume of approximately 1,600 million m<sup>3</sup>, and drill logs indicate very deep and extensive clay/sand/grit regolith horizon

# Lake Wells Potash Project



Location and logistics are vital to bulk commodity resources

- \* Eastern Goldfields location with entrenched mining culture and infrastructure
- \* 300kms overland to bulk rail terminal at Leonora
- \* 85kms to Great Central Road (link to Kalgoorlie)



Working towards a JORC 2012 resource

Grade, brine composition and volumes are key

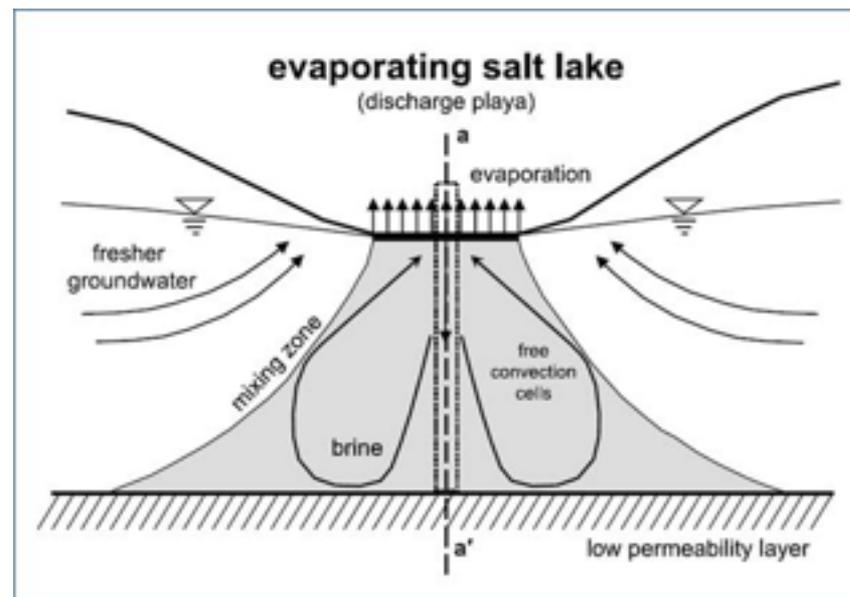
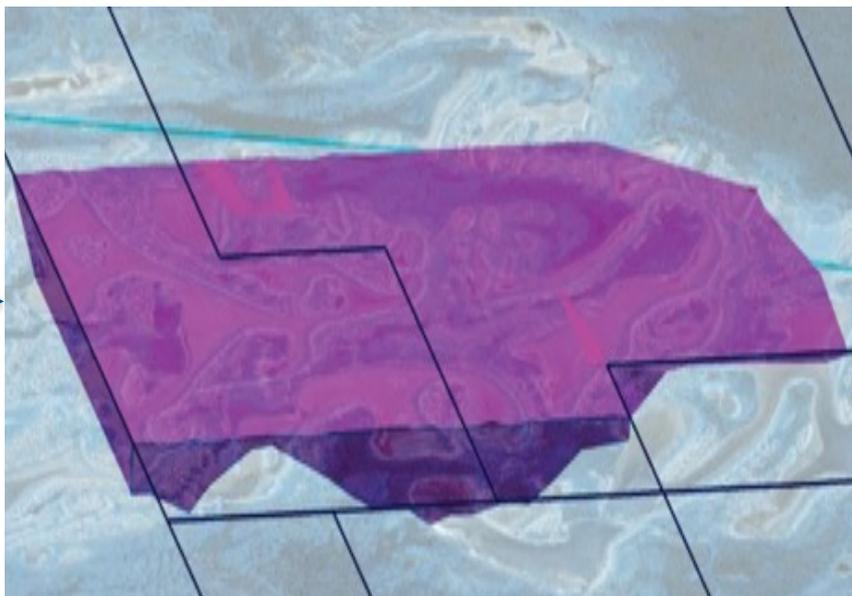
\* Brine pit sampling at Lake Wells has returned very high SOP values: average across 11 pit samples of  $4.83 \text{ kg/m}^3 \text{ K}$  **equivalent to  $10.79 \text{ kg/m}^3 \text{ SOP}$**

First forward drill program designed test concentration gradient through the aquifer layer

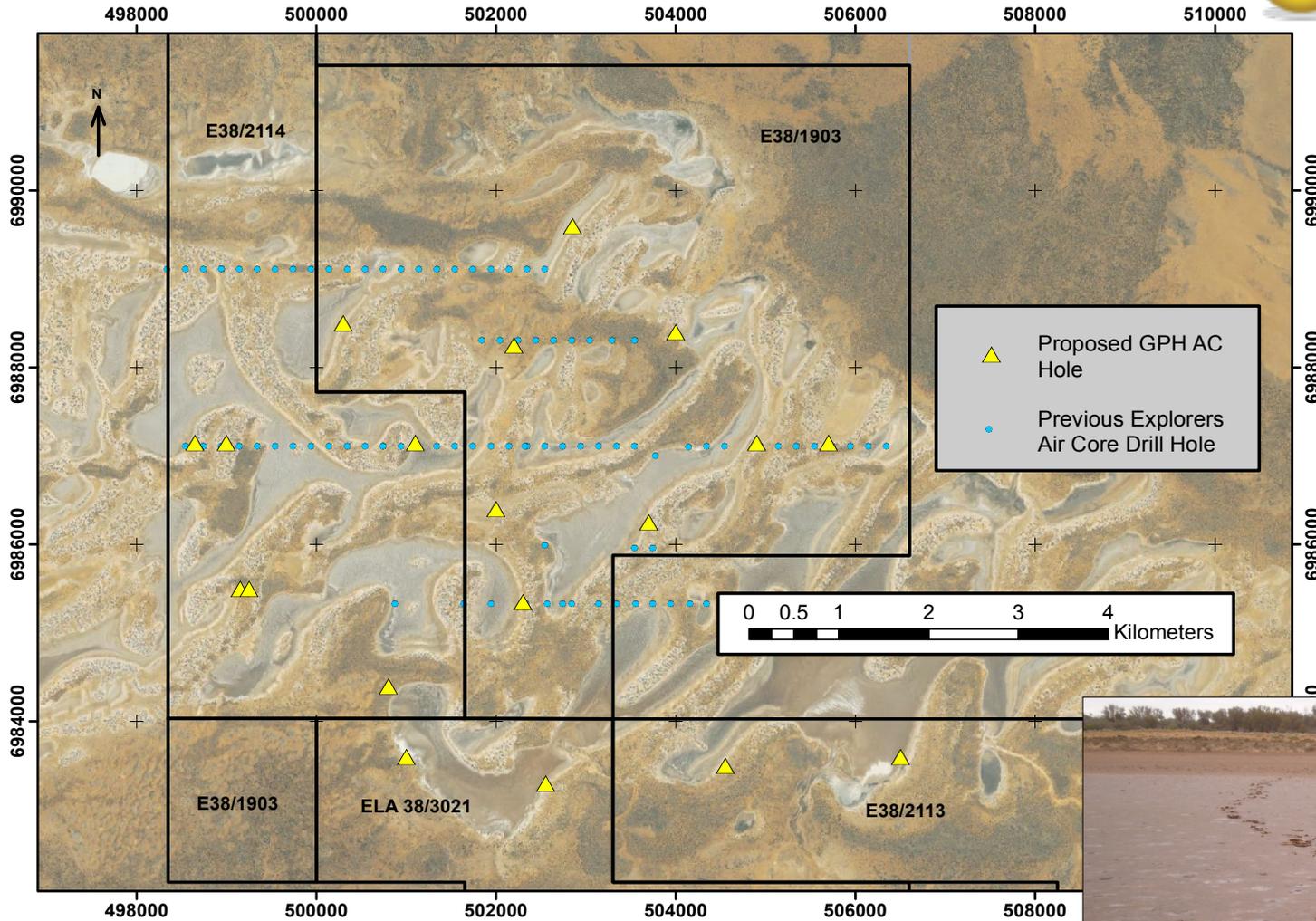
\* Drilling to bedrock to determine brine grade and composition at depth

\* 20 holes (c. 2,000m) drilling proposed

\* trench sampling, flow testing and hydrochemical studies, resource definition to follow



# Proposed forward drill program

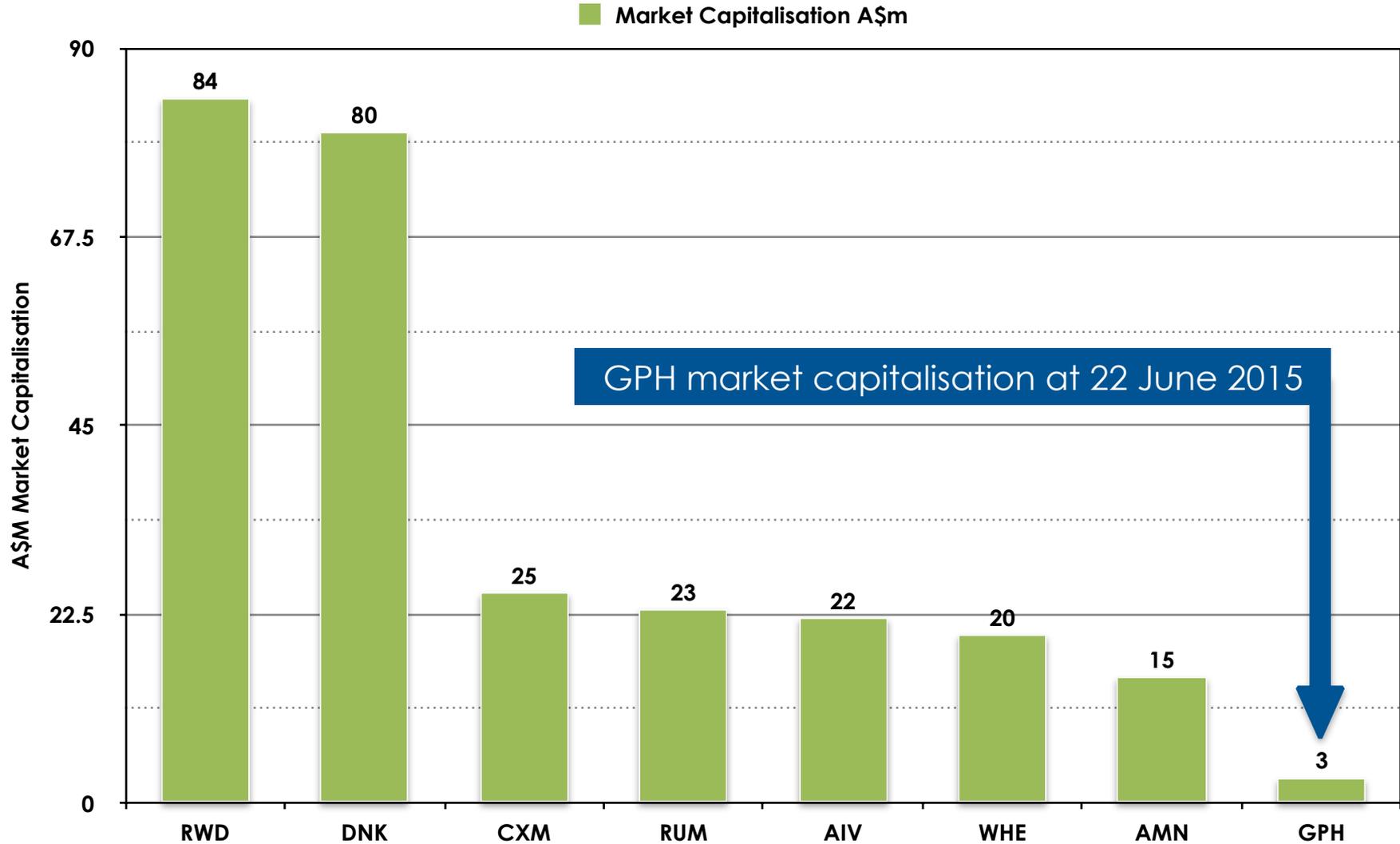


 20 holes of air-core drilling for c.2,000m to start June/July 2015

# Upcoming activity



Activity	JUL	AUG	SEP	OCT	NOV	DEC
Site preparation, shallow auger/pit sampling	█					
Weather station installation and commencement of weather monitoring program	█					
Air-core drilling on lake margins and and lake pan	█	█				
Flow testing, water level logger installation	█	█				
Brine and multi-element analysis		█	█			
Hydrochemistry and hydrogeology studies			█	█		
Resource modelling and interpretation				█	█	
Follow up resource extension program finalised						█



## Capital structure

Shares on issue\* 68.4m

Options on issue\* 62.9m

Share price 22 June 2015 3.5c

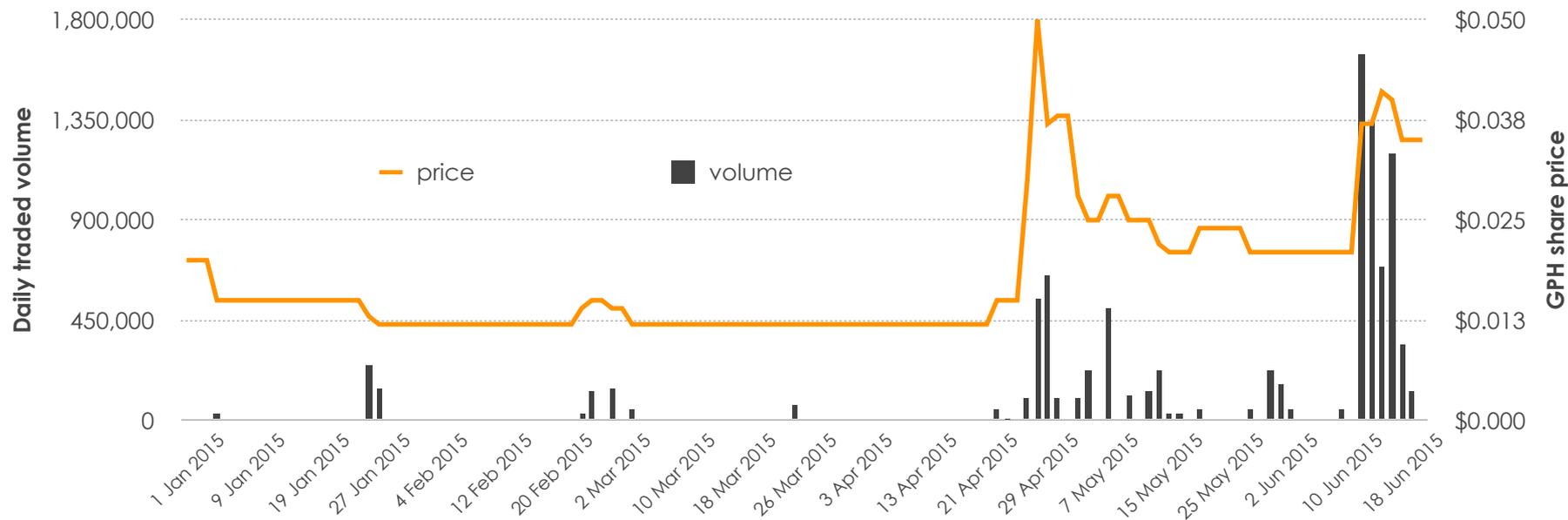
Market capitalisation\* \$2.4m

Cash (31 March 2015) \$0.3m

Top 40 78%

Board shareholding\* 18%

\*Pre June 2015 placement



## Board & management

**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

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# Targeting Australia's Potash Demand

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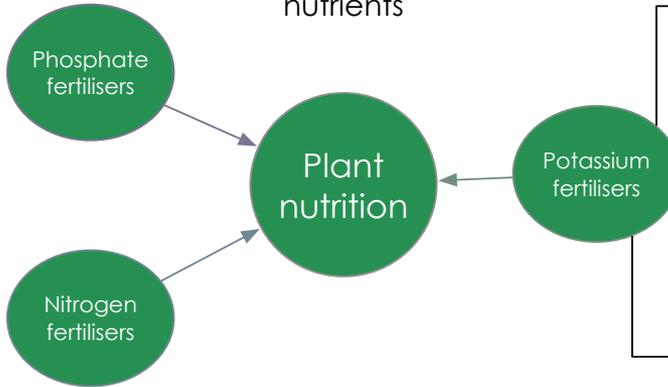
31 Ord Street, West Perth

Western Australia 6005

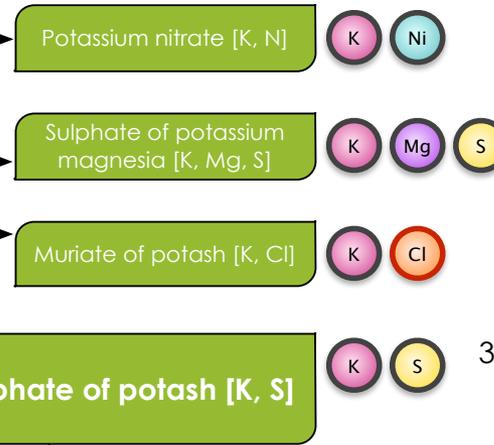
[www.goldphyre.com.au](http://www.goldphyre.com.au)

*Appendices following*

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



2. There are 4 basic sources of potassium fertilisers

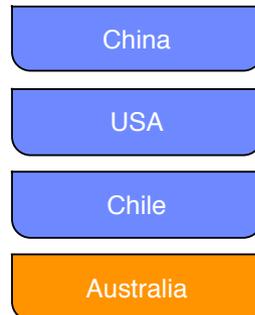


3. Sulphate of Potash (**SOP**) is the **PREMIUM** potassium fertiliser ingredient

4. Primary **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

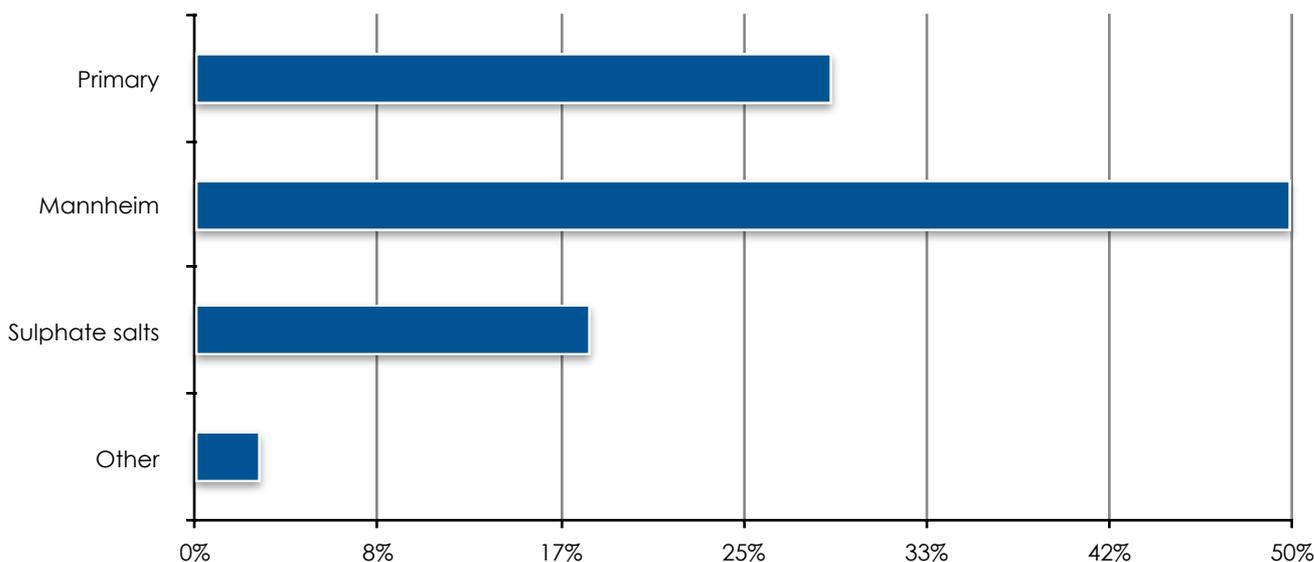
# Sulphate of potash is a premium source of potassium



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

- Pressure on premium predicted 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

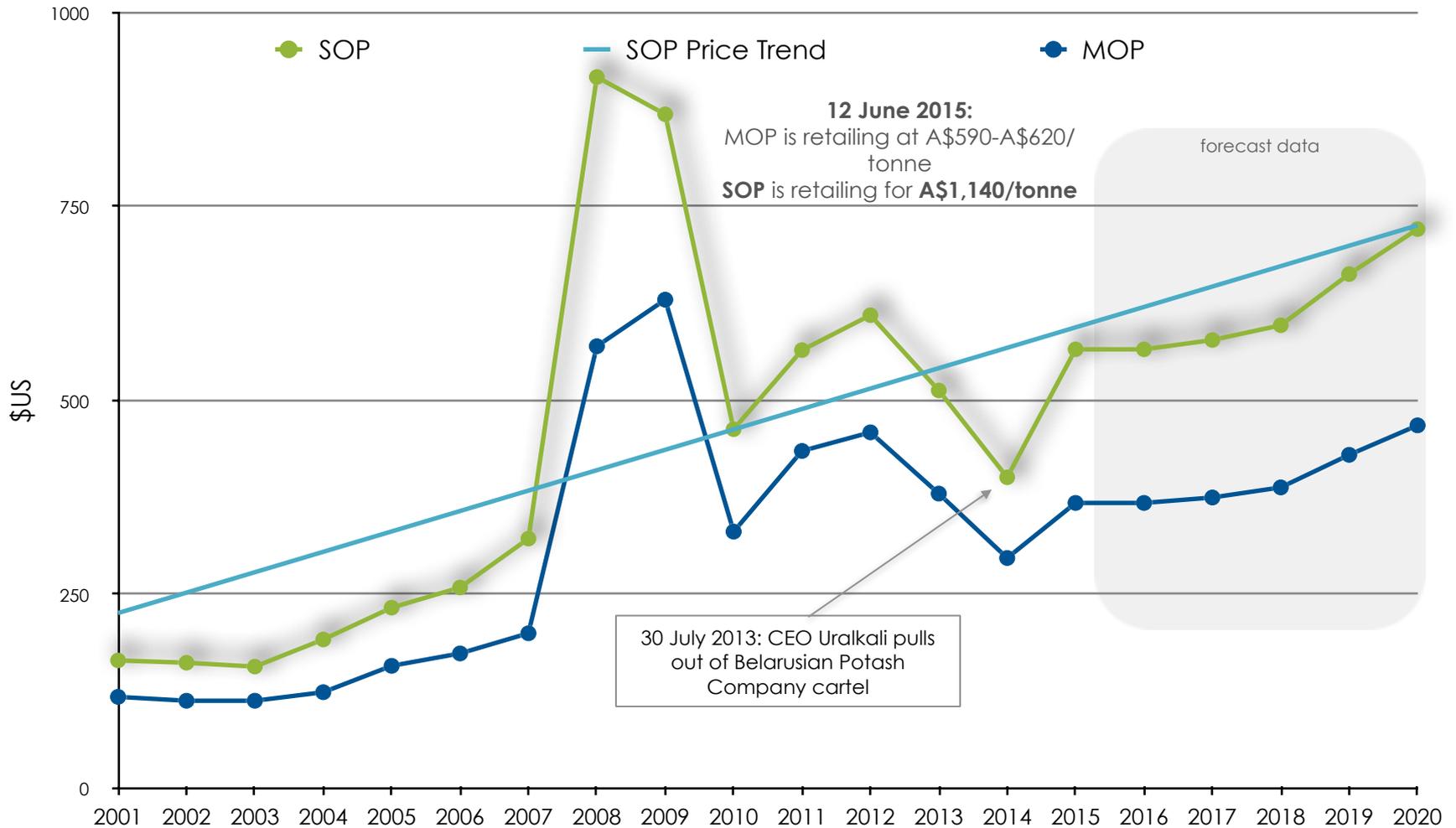
**SOP** market segment globally  
5million tonnes  
**\$US3.5billion**



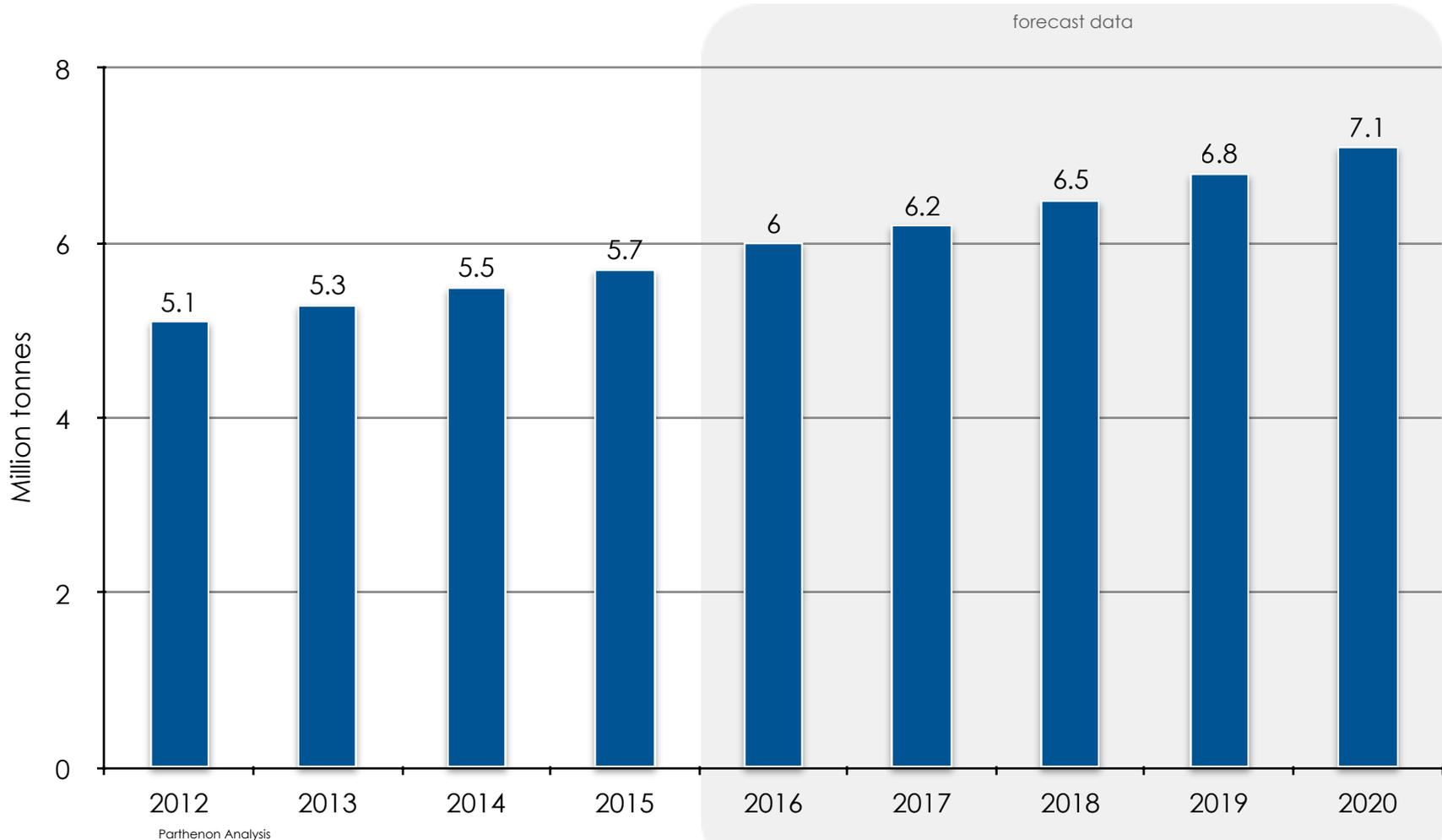
Primary sources of **SOP** are generally brine deposits

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

# Potash price trend and SOP premium



CAGR forecast at 4% per annum to 2020



Australian farmers face massive swings in the farm gate price of potash (both MOP and SOP) due to the:

- USD/AUD exchange rate
- macro-economic factors within the potash industry
- isolation/logistics/shipping

