

MARCH 2016 QUARTERLY ACTIVITIES REPORT

# HIGHLY SUCCESSFUL QUARTER PUTS GOLDPHYRE ON TRACK FOR MAIDEN POTASH RESOURCE IN MID-2016

*Maiden Exploration Target released, in line with Goldphyre's plan to produce 75,000-100,000tpa of sulphate of potash*

## HIGHLIGHTS

### Lake Wells Potash Project

- Exploration Target released:
  - 79 – 123 million tonnes total in-situ Sulphate of Potash at a grade range of 11,400 – 13,900 mg/l (*for industry comparison purposes only*)
  - Using SPECIFIC YIELD to model the recoverable amount of SOP in compliance with NI43-101, the exploration target becomes  
6 – 37 million tonnes Sulphate of Potash at a grade range of between 8,900 mg/l – 13,900 mg/l
- Based on Goldphyre's strategic goal of becoming a 75kT – 100kT per year SOP producer, this represents a significant long mine life for the Lake Wells Potash Project
- Second seismic survey conducted across expanded Project area encompassing the neighbouring Mark Creasy-controlled Lake Wells Exploration Pty Ltd ground doubles the size of the deep palaeovalley hosting the brine potash: further survey results pending
- Drilling program at Lake Wells intersects thicker than expected basal and upper sand layers: sand is significant for a palaeochannel pumping operation as it is highly permeable
- Goldphyre fully funded for resource estimation work program after raising \$1.1m in heavily oversubscribed placement

## UPCOMING ACTIVITY

- Air-core drilling program continuing with specialist water bore drill contractor: Test production bores planned and test pumping scheduled
- Assay results expected from mid-May through to June
- Maiden mineral resource estimate for release middle of the year

## LAKE WELLS POTASH PROJECT

Goldphyre Resources' ('Goldphyre' or 'the Company') 100 percent-owned Lake Wells Potash Project is a brine-hosted sulphate of potash (SOP) project located in the Eastern Goldfields region of Western Australia (Figure 1). Goldphyre aims to supply the Australian domestic demand for SOP. Australia currently imports 100 percent of all potash used, estimated at 500,000 – 600,000 tonnes per annum.



Figure 1: The Lake Wells Potash Project is ideally located to end users and distribution centres

### Exploration Target

In March 2016 the Company released an Exploration Target for the Lake Wells Potash Project<sup>1</sup>. The Exploration Target was calculated using both a *total porosity* factor, to allow for the comparison of it against industry peer' resource estimates, and a *drainable porosity* factor (referred to as *specific yield*) to more accurately reflect the potentially recoverable amount of SOP. Total porosity = drainable porosity + un-drainable porosity.

Goldphyre believes it is more relevant to consider the actual potential of the Project to yield SOP, and will report future mineral resource estimates using drainable porosity/specific yield.

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.

Goldphyre is targeting a production operation of 75,000 – 100,000 tonnes per annum of SOP. Figure 2 below shows how the Company proposes to recover brines from the palaeochannel, using a bore field network. This is a tried and proven brine abstraction technique used in Australia, and is prevalent in many eastern goldfields and Pilbara mining operations as a source of process water. The brines are evaporated, leaving a residue of salts that are harvested and processed into the highly sought after, premium potassium fertiliser, sulphate of potash.

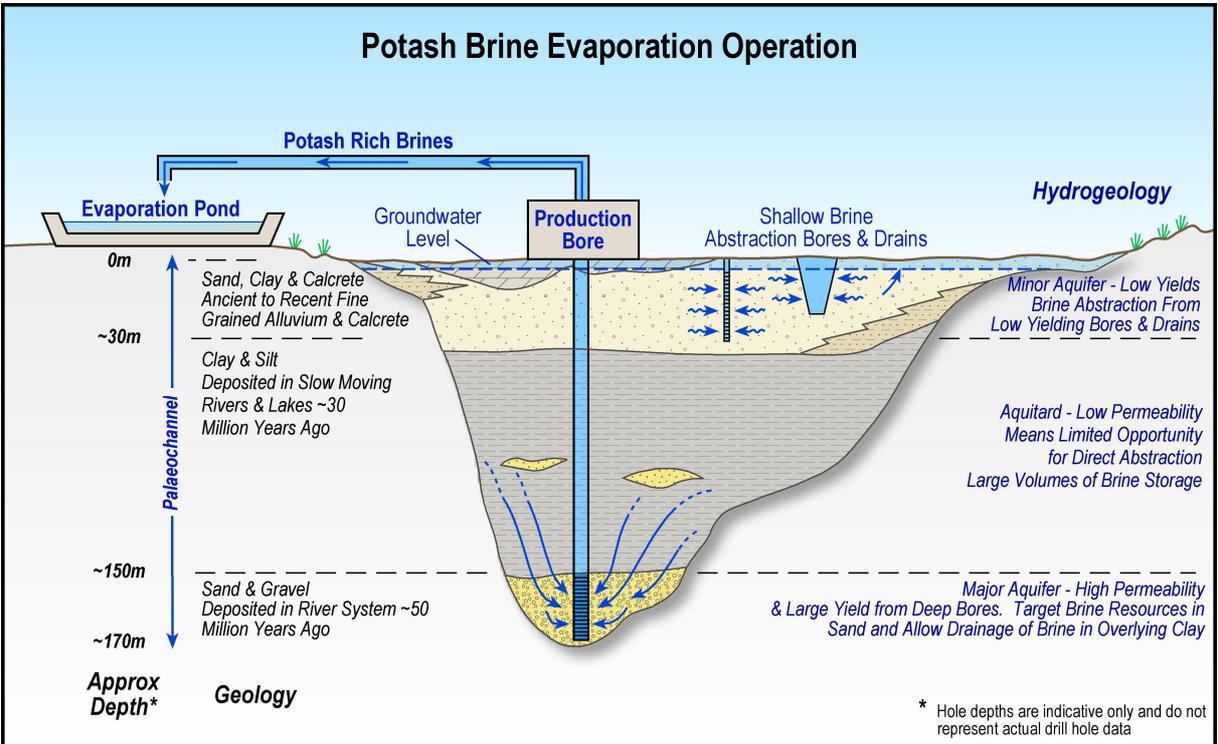


Figure 2: The Lake Wells Potash Project is targeting a 75,000 – 100,000 tpa SOP operation, abstracting potash rich brines from an extensive, deep palaeochannel into evaporation ponds

**Drilling campaign intersects substantial widths of basal sands**

Goldphyre conducted a mud-rotary & diamond drilling program at Lake Wells during the quarter, with the aim of testing for the presence of the basal sand unit in the palaeochannel, and confirming previous brine chemistry<sup>ii</sup>.

Sand units are relevant to a palaeochannel pumping operation, as they typically have a high drainable porosity. This means it is possible to pump out a high percentage of their contained brines.

The drilling campaign comprised five holes, four of which were drilled to depths exceeding 163 metres. Substantial widths of the permeable basal sand layer, of between 20 and 50 metres, were intersected across the palaeochannel, which augurs well for the conversion of the exploration target to a resource estimate. Four of the five holes were

also cased with PVC, meaning they can be pump tested and sampled for potash concentration into the future. The current program of work will see samples submitted for assay from these holes over the next two to three weeks.

### **Next Steps**

The identification of a thick basal sand layer in several deep holes in the latest completed drilling program allows the Company to move to the next stage in its current program of works. This program of works is designed around the progressive measurement of Mineral Resources through to the release of a Measured Resource Estimate in early 2017.

A specialist water bore drilling company has been contracted to complete up to 11 air-core holes to depths of approximately 170m. These holes will be cased with PVC, sampled for brine chemistry analysis, and logged using a down-hole geophysical tool. Data generated from the passive seismic surveys, this pending drill campaign, the drilling recently completed, and drilling completed in July 2015 will underpin the estimate of the Company's maiden Resource Estimate.

The Company has also planned up to four test-production bores using this water bore drilling company. The progression to drilling and commissioning these bores is contingent upon the confirmation of brine chemistry.

Goldphyre is aiming to release its maiden Mineral Resource Estimate for the Lake Wells Potash Project in Q2 2016.

## **CORPORATE**

Goldphyre successfully completed a Placement of shares to professional and sophisticated investors in two tranches at 6.4 cents per share<sup>iii</sup>. The first tranche comprised 15.5m shares, raising \$992,000. The second tranche was approved by shareholders on 22 April 2016, and comprised 1, 687,500 shares at 6.4c raising \$108,000.

A General Meeting of shareholders was held Friday 22 April 2016 at 10:00am at Ground Floor, 20 Kings Park Road, West Perth WA 6005 to consider among other matters the above Placement of shares, and the issue of 29m consideration shares to an entity controlled by Mark Creasy. The issue of these consideration shares settles the transaction through which Goldphyre tripled the size of the Lake Wells project area, and was granted rights to explore and exploit potash on two tenement areas adjoining the existing 100% owned Goldphyre tenure.

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## Tenement Schedule at 31 March 2016

Project	Tenement	Interest at 1 Jan.2016	Action	Interest at 31 Mar. 2016
<b>Lake Wells Potash Project</b>	E38/1903	100%	-	100%
	E38/2901	100%	-	100%
	E38/2505	100%	-	100%
	E38/3021	100%	-	100%
	E38/3039	100%	-	100%
	E38/2113	100%	-	100%
	E38/2114	100%	-	100%
	E38/2744 <sup>1</sup>	0%	Grant of right	100%
	E38/2742 <sup>2</sup>	0%	Grant of right	100%
	ELA38/3109	0%	Application	0%
<b>Laverton Downs</b>	E38/2724	100%	-	100%
	E38/3014	100%	-	100%
<b>Mailman Hill</b>	E37/990	100%	-	100%
<b>Hack Well</b>	E38/2945	100%	-	100%

### **Competent Person's Statement**

The information in this report that relates to Exploration results, Mineral Resources or Ore Reserves is based on information compiled by Brenton Siggs who is a member of the Australasian Institute of Geoscientists. Brenton Siggs is contracted to the Company through Reefus Geology Services and is a Non-Executive Director (Exploration Manager) of Goldphyre Resources Limited. Brenton 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". Brenton Siggs consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. 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 2015).

The information in this release that relates to Geophysical Results is based on information compiled by Dr Jayson Meyers who is a Fellow of the Australian Institute of Geoscientists. Dr Meyers is a consultant to Goldphyre Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian

<sup>1</sup> Goldphyre holds the rights to explore for and extract all potash minerals contained within brine from the tenement. Lake Wells Exploration Pty Ltd remains the holder of the tenement.

<sup>2</sup> Goldphyre holds the rights to explore for and extract all potash minerals contained within brine from the tenement. Lake Wells Exploration Pty Ltd remains the holder of the tenement.

Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Meyers consents to the inclusion in this report of the matters based on information provided by him and in the form and context in which it appears.

#### **Forward Looking Statements Disclaimer**

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

In accordance with Listing Rule 5.23.2, the Company confirms in the subsequent public report that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

Please note with regard to exploration targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

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<sup>i</sup> Refer to ASX announcement 8 March 2016 'Major Sulphate of Potash Exploration Target at Lake Wells'. 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, are not aware of any new information that materially affects the information contained in the 8 March 2016 announcement.

<sup>ii</sup> Refer to ASX announcement 26 August 2015 'Lake Wells Potash Drilling Results'. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, and in the ASX announcement 15 October 2015 'Quarterly Activities Report', Goldphyre Resources Limited, its directors, officers and agents, are not aware of any new information that materially affects the information contained in the 26 August 2015 announcement.

<sup>iii</sup> Refer to ASX announcement 14 March 2016 'Goldphyre to Raise \$1.1m for Lake Wells Potash Project'. 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, are not aware of any new information that materially affects the information contained in the 14 March 2016 announcement.