31 October 2016

SEPTEMBER 2016 QUARTERLY ACTIVITIES REPORT

Key production tests about to start at Lake Wells Potash Project in WA

Three test-production bores successfully installed; test-pumping crew mobilised to site with initial results expected within weeks

Highlights

- **Test-production bore installation program commenced**
  - 3 test production bores installed, flow test program commenced
  - Test-pumping program comprises a series of step and flow tests on each bore for between 7-10 days to firmly establish flow rate models
- **Successful fund raising completed, following conversion of in excess of 67.4% of listed options series by end of quarter expiry date**
  - Options were underwritten, current cash balance circa $5.5 million
  - Company is well financed to continue the scoping studies into the Lake Wells Potash Project
- **Geo-technical studies progressing on the clays surrounding the lake surface to progress development of proposed site for trial evaporation ponds**
- **Heritage survey completed**
  - No culturally important or sensitive sites identified within the proposed development areas

Post Quarter Highlights

- **Exceptional airlift development flow rates from first test-production bores**
  - Bore # 3 at site B yielded 35 litres per second[i]
  - Bore # 2 at site A yielded 22 litres per second
- **Highly experienced group NovoPro to lead the scoping study into the Lake Wells Potash Project. NovoPro's past clients include among others the Sevier Playa Potash Project (USA), Intercontinental Potash (USA), Encanto Potash (Canada), and Western Potash (Canada)**
- **Permanent weather station** installed at site
- **Class A Evaporation Pan** field trials commenced, following laboratory based evaporation trials conducted earlier in the year

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Test-production bore installation program

Figure 1: Airlift development has been completed on bores at Site A and Site B

During the quarter, Goldphyre's field team commenced the test-production bore installation program, planning bores, or wells, across the high-grade zone (10.5Mt of SOP at 9.03 kg/m^3) of the Project area (see Figure 5).

Figure 2: Following airlift development, a rigorous and formal test-pumping program will be conducted on the bores

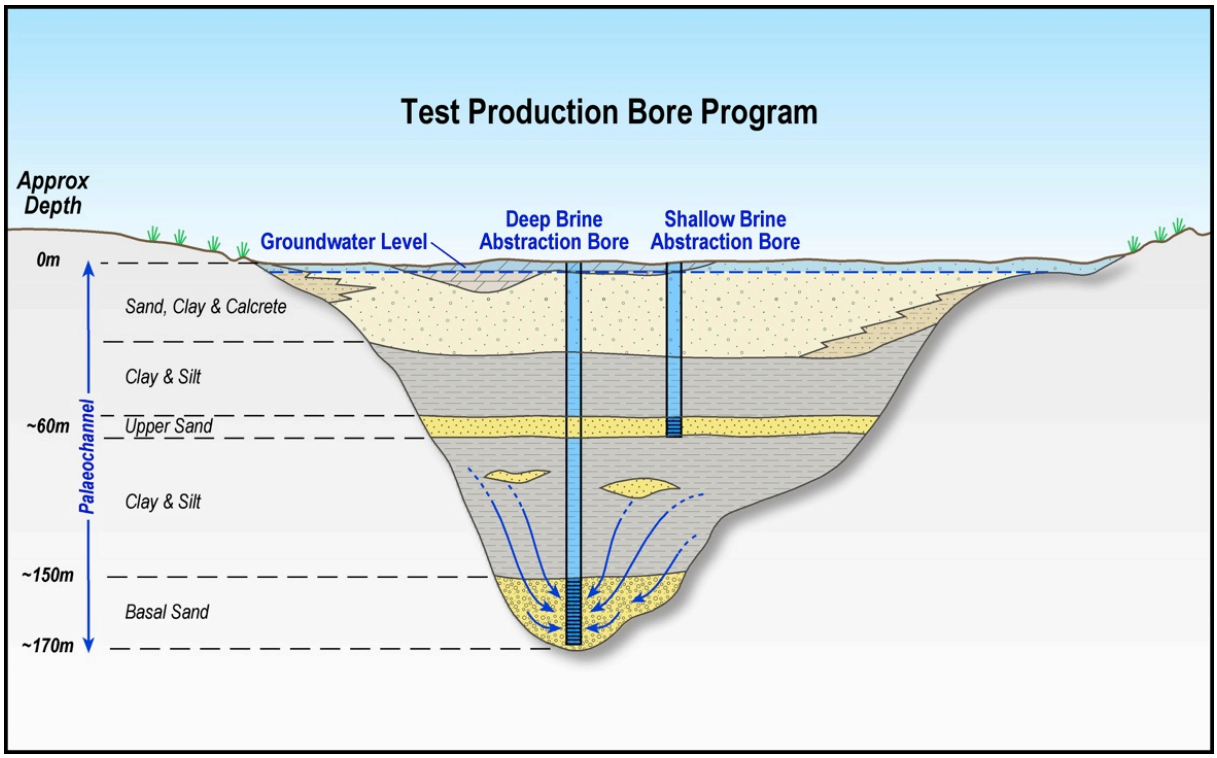

Figure 3: A shallow test-production bore into the upper aquifer and a deep test-production bore into the basal aquifer will allow Goldphyre's to develop a comprehensive hydrogeological model of how the aquifer performs under an operational scenario

The bores were planned to various depths, with the intention of testing the yield potential of the high yielding basal, or lower, aquifer, and the secondary target, the upper aquifer (Figure 3).

Following the end of the quarter and at the date of writing, three test-production bores had been successfully installed, with airlift development completed on all three. A specialist test-pumping contractor has been mobilised to site to continue the next step in the test-production program, which is to test pump the completed wells.

Goldphyre's Executive Chairman Matt Shackleton said, "We've been able to demonstrate exceptional airlift development yields beyond our expectations, which are at the upper range for palaeochannel bores in the Eastern Goldfields. These bores are installed in the core, high-grade zone of the brine sulphate of potash Resource[ii], nearby the proposed evaporation pond site.

It is important to note that airlift yields are strongly indicative but also typically lower than production yields. Production yields will be measured as part of the impending test-pumping program, and in light of these outstanding results, we have made the decision to expedite that program. The test-pumping contractor crew will mobilise to Lake Wells immediately, and we very much look forward to updating shareholders through November with these test-pumping flow rates.

These airlift development yields again reinforce the quality of the Lake Wells Resource and its potential to support an SOP operation. Goldphyre has previously identified the size and grade of the brine aquifers, the project location puts it in a very advantageous logistical position and now with these airlift development yields, we have further confidence in the exceptional production flows that can be achieved."

The basal or lower aquifer is the primary target for development studies on the Lake Wells Potash Project. Pumping from this aquifer will be the main focus for potential production and facilitate the drainage, or downward leakage, of brines contained in the upper strata. Developing a bore field brine abstraction operation allows Goldphyre to avoid the more costly trenching method for brine recovery. Establishing a network of bores is significantly cheaper than developing trenches to produce the equivalent volume of brine. Production trenches being modelled by peer companies in Australia extend for between 100 and 250 kilometres.

To test for additional production potential, Goldphyre constructed a test production bore into the secondary target, the upper aquifer. The upper aquifer at site A yielded airlift development rates of 8 litres per second, and test pumping will identify the additional production potential of this secondary target.

Options conversion and underwriting

By quarter end, in excess of 67.4% of the Company's listed $0.08 options were exercised by option holders in advance of the 30 September 2016 expiration date.

A total of 50,908,667 Options were exercised by option holders resulting in proceeds amounting to $4,072,693.36 being received by the Company.

Pursuant to the Option Underwriting Agreement announced on 25 August 2016, the underwriter Hartleys Limited or its sub-underwriters, took up 24,662,270 shares in the Company comprising the shortfall, or options that were not exercised.

The high proportion of Options exercised is an outstanding result for Goldphyre and ensures the Company is well funded to advance studies into the development of the Lake Wells Potash Project.

Heritage

Goldphyre has established an extremely good working relationship with local Indigenous leaders. During the quarter, with the assistance of several local elders and an anthropologist experienced in the region, the Company facilitated a survey of the proposed development areas at Lake Wells, with the intention of identifying culturally important or sensitive sites. The survey was conducted over a 4-day period, and did not identify any sites or artifacts that have cultural relevance.

People

The Company is very pleased to announce the appointment of Alan Rubio to the position of Project Manager. Alan is a highly experienced Study Manager, with over 20 years' experience working in design, study management and project engineering roles within the resources industry. He has an extensive background in project development strategies, coordinating owner's teams and managing third party consultants.

Alan was most recently engaged as the Study Manager for the Browns Range project by Northern Minerals Ltd, and prior to that with Independence Group as the senior project engineer on the Stockman Project BFS.

The Company is also very pleased to announce the appointment of Canadian consulting firm NovoPro Project Development & Management to lead the scoping study into the Lake Wells Potash Project.

NovoPro have extensive experience in the development of potash projects world wide, from inception to commissioning. With skills and expertise across conceptual design, test-work, feasibility studies, engineering and design and capital & operating cost estimation, NovoPro will provide Goldphyre with a deep, expert knowledge base of the development of brine SOP projects. Past clients include the Sevier Playa Potash Project (USA), Yara Dallol Potash Project (Ethiopia), Intercontinental Potash (USA), Encanto Potash (Canada), Western Potash (Canada) and Kouilou Potash (DRC, Africa).

Class A Evaporation Pan Field Trials

Post quarter end, the Company commenced the development of a field based evaporation trial, with the intention of generating multi-seasonal evaporation rate data. This data will enable Goldphyre's process consultants to model various evaporation pond designs, as it will give a clear understanding of the evaporation rates of brines of varying concentrations over time and season. NB: the image below is NOT an image of Goldphyre's Class A Evaporation Pan installation, but a typical installation.

In order to better understand the data generated by the Class A Evaporation Pan field trial, a permanent weather station has been installed at the Lake Wells Potash Project.

This weather station constantly monitors and records 14 different climatic variables, including among others air temperature, relative humidity, solar radiation, evaporation rate and wind velocity and direction.

The weather station is equipped with a satellite telemetry system, enabling the Company's off-field personnel and consultants remote access to the data.

Figure 4: Goldphyre has installed a permanent weather station that constantly monitors, records and transmits up to 14 climatic variables

The Lake Wells Potash Project

Figure 4: The Lake Wells Potash Project is ideally located proximate to end-users, and established transport infrastructure

Located 500kms north-east of Kalgoorlie in the eastern goldfields, the Lake Wells Potash Project:

- Is ideally located closest to logistics solution, which is vital for a bulk project
- Proposes a simple, tried and common bore field brine abstraction method, without the need for the more expensive, larger footprint trenching brine extraction method

- Comprises a high-grade core to the Resource located close to proposed evaporation pond sites
- Consists of highly conducive sediment lithologies, with test-production bore pumping trial to commence (see above)
- Presents the high demand, high value premium fertiliser product sulphate of potash (SOP), with a strong incentive to capture the import replacement and first to market opportunity currently existing in Australia

Mineral Resource Estimate[ii]

- Using *total* porosity[1] (*for industry comparison purposes only*), total in-situ Inferred Mineral Resource Estimate of

70 million tonnes of SOP at 8.05 kg/m^3 including

High-grade zone: 40 Mt of SOP at 9.03 kg/m^3

- Using specific yield[2] (*drainable* porosity), Inferred Mineral Resource Estimate of

18.4 million tonnes of SOP at 8.05 kg/m^3 including

High-grade zone: 10.5 Mt of SOP at 9.03 kg/m^3

In compliance with internationally recognised reporting standards that include a brine standard, Goldphyre has reported its Resource estimate using **specific yield,** or **drainable porosity**. The Company believes this is an accurate estimate of the amount of brine that can be abstracted from the aquifers.

Goldphyre has also reported its Resource estimate using total porosity, which estimates the total amount of in-situ brine in the aquifer. This allows investors to more easily make a comparison between Goldphyre's Resource estimate and estimates made by companies that choose not to disclose their resource estimates using specific yield.

The Mineral Resource (JORC 2012 Code compliant), which has been measured taking into account potential future economic abstraction, has been classified as Inferred) and is estimated at 18.4 Mt at 8050 mg/L (8.050 kg/m^3) Sulphate of Potash (SOP). A high-grade zone occupying the western part of the Lake Wells Potash Project has an Inferred estimate of 10.5 Mt at 9028 mg/L (9.028 kg/m^3) SOP.

[1] Total porosity does not give any consideration to the recoverability of the brine containing the Sulphate of Potash minerals

[2] Specific yield reflects the amount of recoverable Sulphate of Potash, in compliance with NI43-101, the only CRIRSCO reporting code to include a brine standard

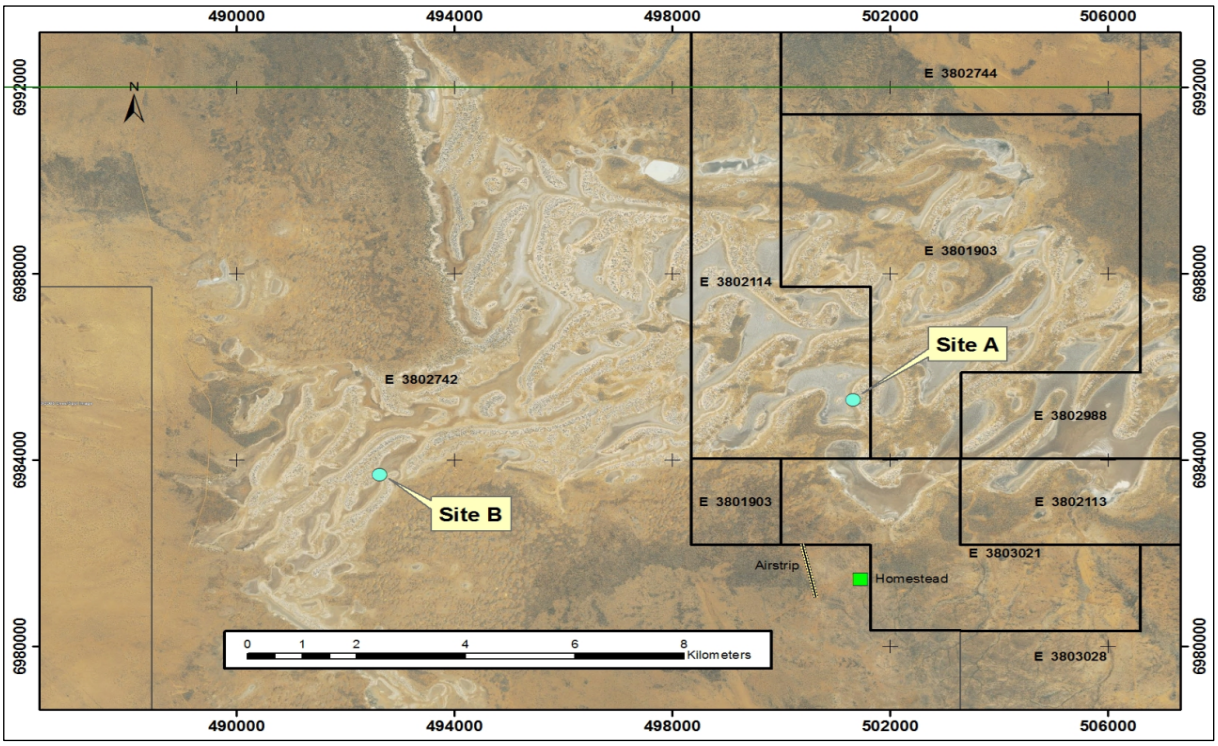

Figure 5: Test-production bore location plan

The installation of the simple, low-cost test production bores will be followed by test pumping, with the aim of confirming Lake Wells' status as WA's leading potash project, building on its superior high-grade Resource and close proximity to infrastructure.

Corporate

Equity

At the end of the quarter, the Company had ordinary shares on issue of 196,791,943. During the quarter the Company issued 49.2m ordinary shares on the exercise of 8 cent options, and subsequent to the end of the quarter, a further 24,662,279 shares were issued under the terms of the options underwriting agreement[iii].

Cash

At the end of the quarter, the Company had cash balances of $2.42m. During the quarter, the Company received $3.9m through the exercise of options, and subsequent to the end of the quarter, a further $1.9m through share subscriptions under the terms of the options underwriting agreement.[iii]

Tenement schedule

Project	Tenement	Interest at 1 April 2016	Action	Interest at 30 June 2016
Lake Wells Potash Project	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[3]	100%		100%
	E38/2742[4]	100%		100%
	E38/3109	0%	Granted	100%
Laverton Downs	E38/2724	100%	-	100%
	E38/3014	100%	-	100%
Mailman Hill	E37/990	100%	Relinquished	0%
Hack Well	E38/2945	100%	-	100%

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Competent Person's Statement

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

[3] *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.*

[4] *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.*

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.

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.

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i Airlift development yields were recorded over 4 consecutive day shifts (bore 1: 2 consecutive day shifts) for up to 6 hours per shift.

[ii] 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.

[iii] Refer to ASX announcement 25 August 2016 'Option Underwriting Oversubscribed'.