May 23, 2016

# High grade assays point to significant maiden Resource at Lake Wells Potash Project in WA

## Results are comfortably in line with Goldphyre's Exploration Target

## Maiden Resource set for release next month

## KEY POINTS

- **First assays from the key basal sands at the Lake Wells Potash Project reveal wide intersections and high grades of the premium-priced Sulphate of Potash (SOP)**
- **Intersections of both upper sands and basal sands indicate potential for potash-bearing aquifers in both sand layers**
- **Average grades are comfortably in line with Goldphyre's publicly-stated Exploration Target**
- **First round results include:**

| Hole ID | Sample interval | | SOP grade | |
|---|---|---|---|---|
| | **Basal sand** | Upper sand | **Basal sand** | Upper sand |
| PLAC020 | **18m** | 12m | **9,046 mg/l** | 5,921 mg/l |
| PLAC019 | **12m** | 18m | **8,363 mg/l** | 6,571 mg/ |
| PLWDD002 | **18m** | * | **9,745 mg/l** | * |
| PLWDD003 | **24m** | * | **9,277 mg/l** | * |
| PLAC018* | **7m** | 18m | **9,585 mg/l** | 10,243 mg/l |
| PLWDD005 | ^ | 4.25m | ^ | 8,496 mg/l |

** Hole cased through the upper sand with no sample taken* REFER TO LONG SECTION 1 BELOW
*^ Hole not sampled in the basal layer* REFER TO LONG SECTION 1 BELOW

- **Results will be combined with those still to come from the remaining seven recently-completed holes to finalise the Maiden Resource**
- **Assays for remaining 7 holes imminent**
- **Test production bores to be installed into the upper and lower aquifers at two sites: test pumping planned for Q3**

Goldphyre Resources (ASX: GPH) is pleased to announce high grade first assays from the key basal and upper sands at its Lake Wells Potash Project, 500km north-east of

Kalgoorlie (*refer Appendix 2 below*). The assays stem from three mud-rotary/diamond holes and three aircore holes. A further seven aircore holes have been drilled with assays expected over coming weeks. These will be followed by the release of the Maiden Resource later next month.

The assays received to date are very important because the grades and widths are well within the range estimated in the Lake Wells Potash Project Exploration Target[i]. Figures 2 – 6 below depict the lithology found in the palaeochannel at the various drill sites reported here. The palaeochannel clays typically have a specific yield of 2% - 3%. However, the upper and basal sands can have a specific yield of 10% - 20%, meaning that up to ten times more brine held in the sand layers can be extracted, compared to the clays. The more high-permeability and high specific yield material present in the palaeochannel, the more brine can be recovered.

Goldphyre remains committed to targeting favorable project economics over simply drilling out the largest resource for size alone. To this end, these Lake Well's basal sand intersections are considered highly significant because it is from this layer of the palaeochannel sediments that Goldphyre is proposing to abstract the largest volumes of the high-grade potash brines confirmed in previous drilling[ii]. The Exploration Target supports Goldphyre's objective of producing 75,000-100,000 tonnes a year of sulphate of potash over 15 years or more at a capital cost of less than $100 million.

Goldphyre Executive Chairman Matt Shackleton said the grades and widths in the basal sands were comfortably in line with those used to calculate the Exploration Target.

"We are making very rapid progress in establishing the technical strength of the Lake Wells Potash Project," Mr Shackleton said.

"These first assay results from the basal sands further strengthen our confidence in the project's ability to be a major producer of sulphate of potash for the Australian market.

"As we can see in the long sections below, the results show that potash concentrations at the surface are repeated to depth, and in some holes get stronger through the basal layer.

"We look forward to receiving assay results for the remaining 7 holes of the drilling program in the coming weeks, which will lead to the announcement of our Maiden JORC Resource for Lake Wells in June.

"We are now planning the installation of test production bores in the September quarter, which will form the next round of testing."

The Exploration Target at the Lake Wells Potash Project is 6 - 37 million tonnes of contained SOP. This estimate is based on specific yield, which Goldphyre considers is the more relevant calculation because it represents the recoverable amount of potash. This in turn is the key figure used to calculate potential production rates and economic returns.

Goldphyre has also estimated total in-situ brine of 79 - 123 million tonnes of sulphate of potash. This figure is disclosed for industry comparison purposes only and does not represent the amount of potash the Company believes it can abstract at the Project.

*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.*

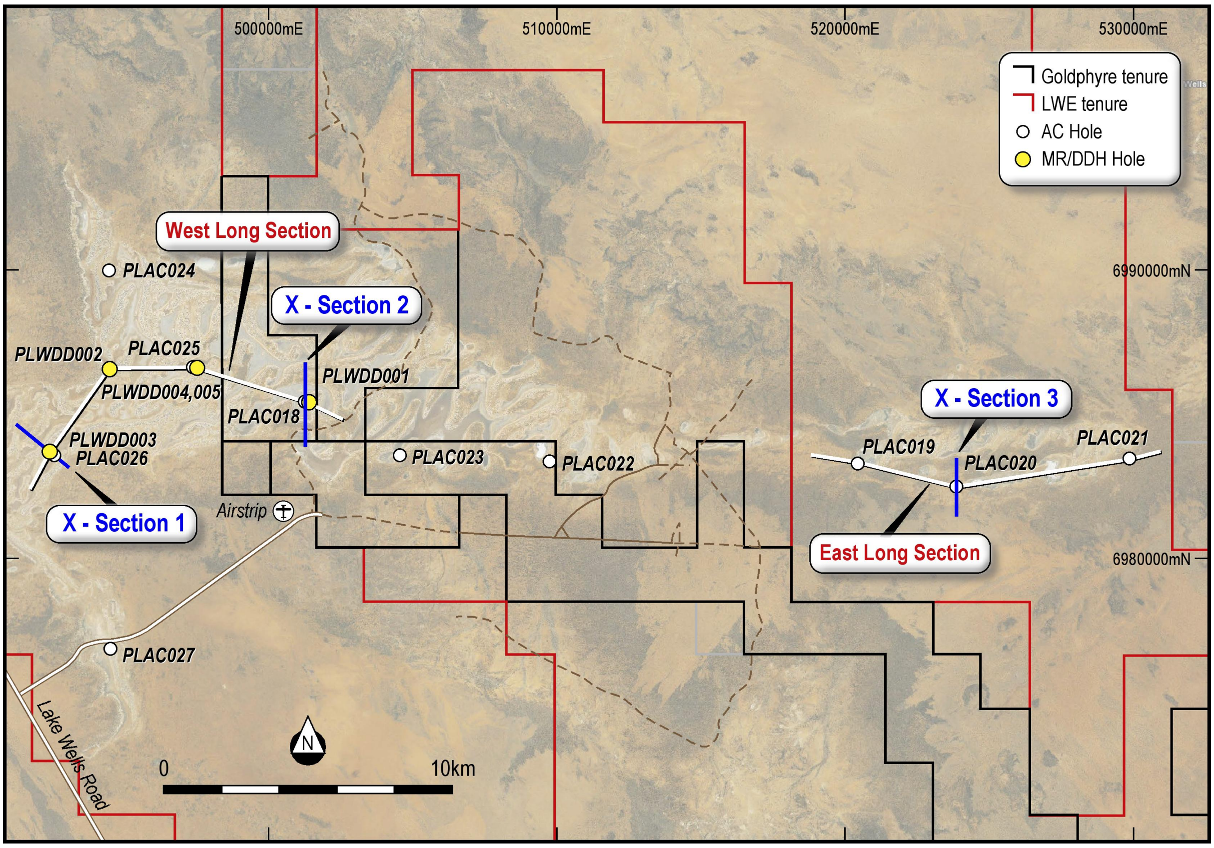


*Figure 1: Drill hole location*

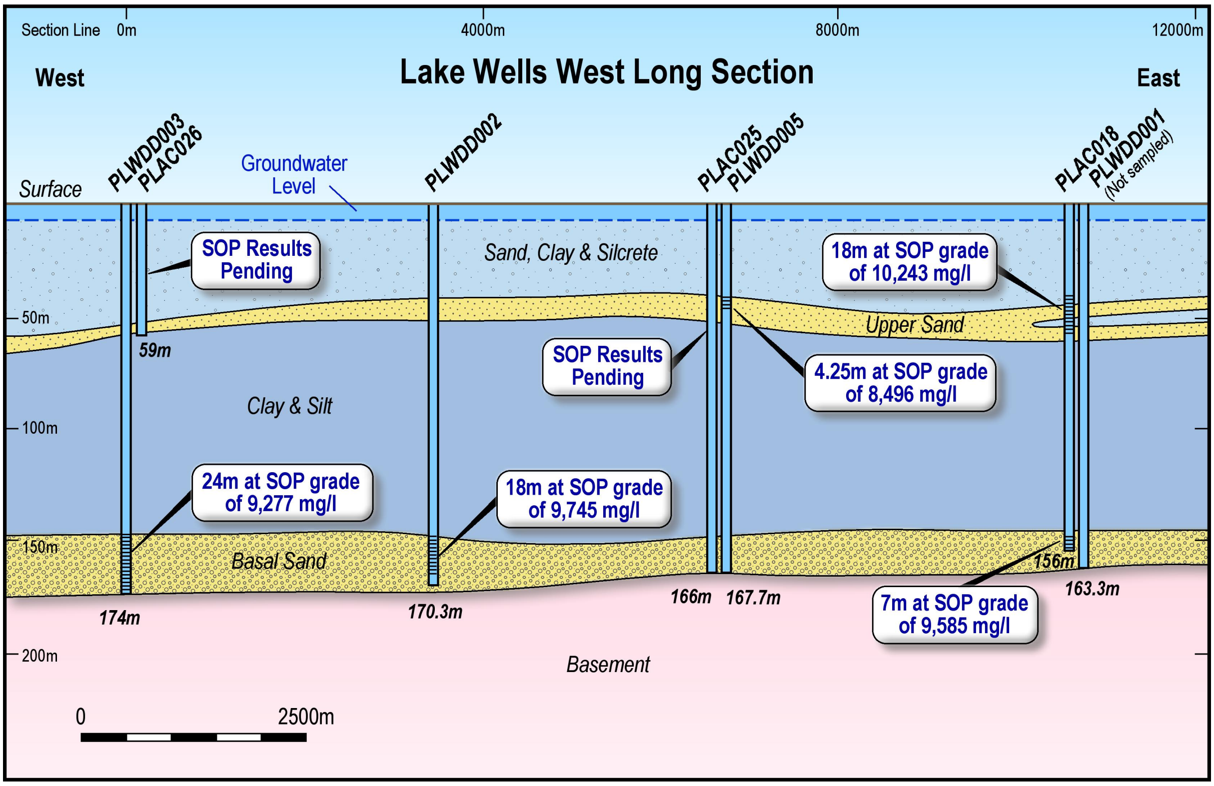


*Figure 2: Long section of the western section of the project, showing basal and upper sand intersections*

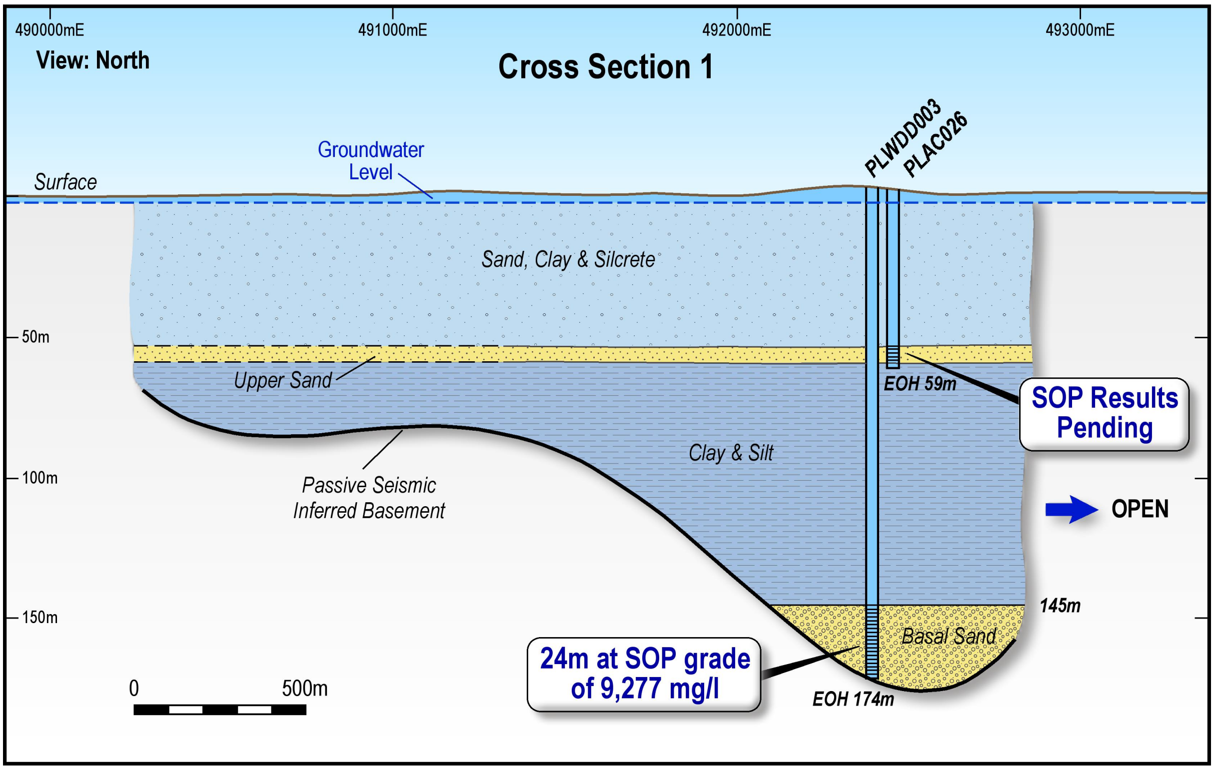


*Figure 3: Cross section 1 showing drill holes PLWDD003 and PLAC026, western end of the Project*

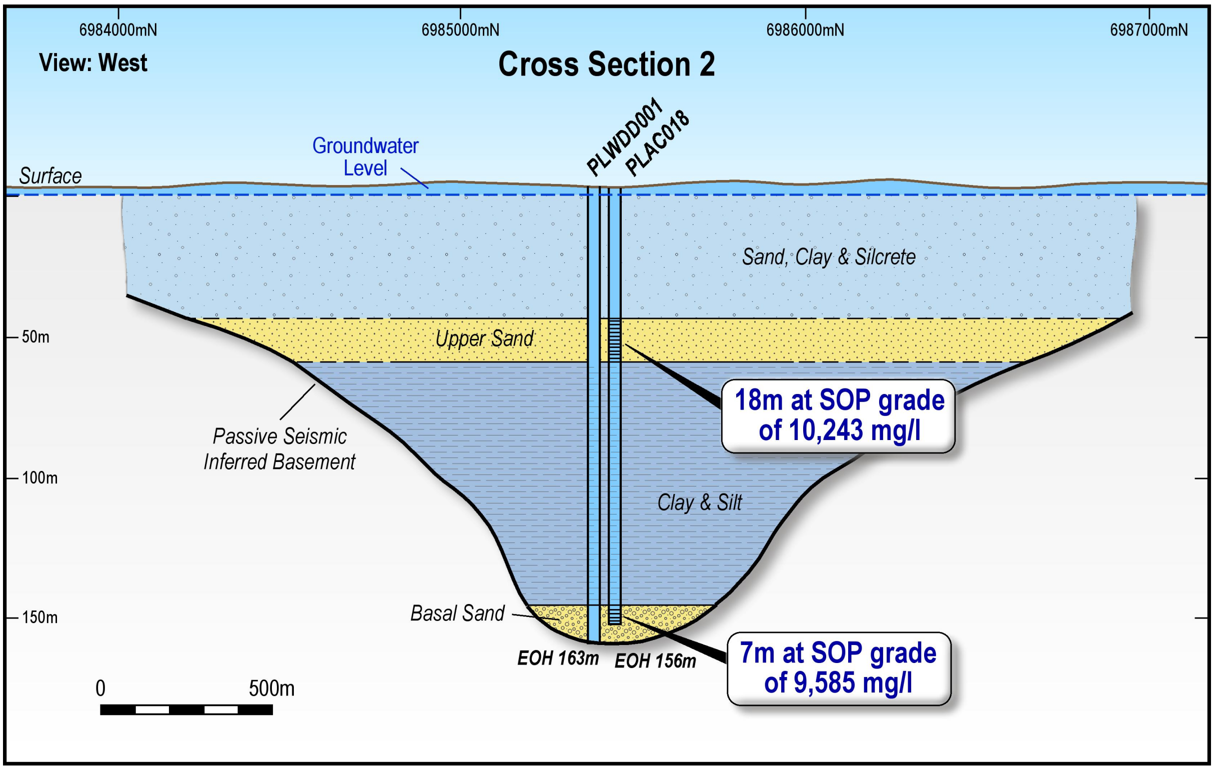


*Figure 4: Cross section 2 showing drill holes PLWDD001 and PLAC018, western end of the Project*

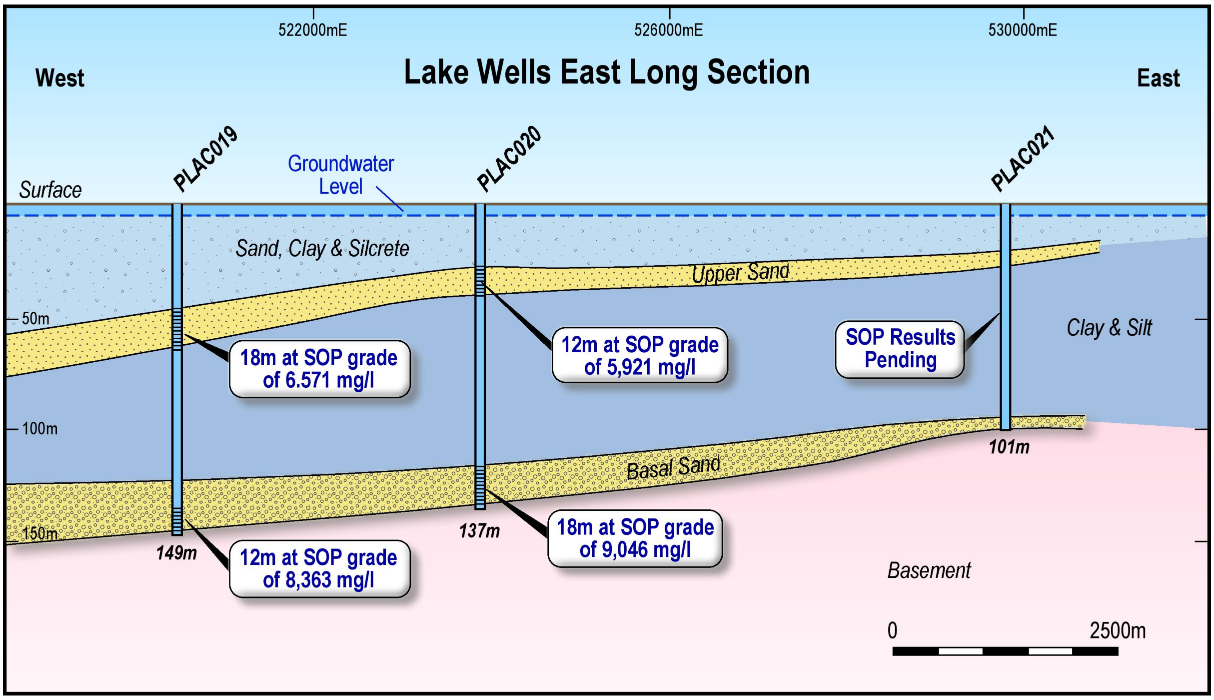


*Figure 5: Long section of the eastern section of the project, showing basal and upper sand intersections*

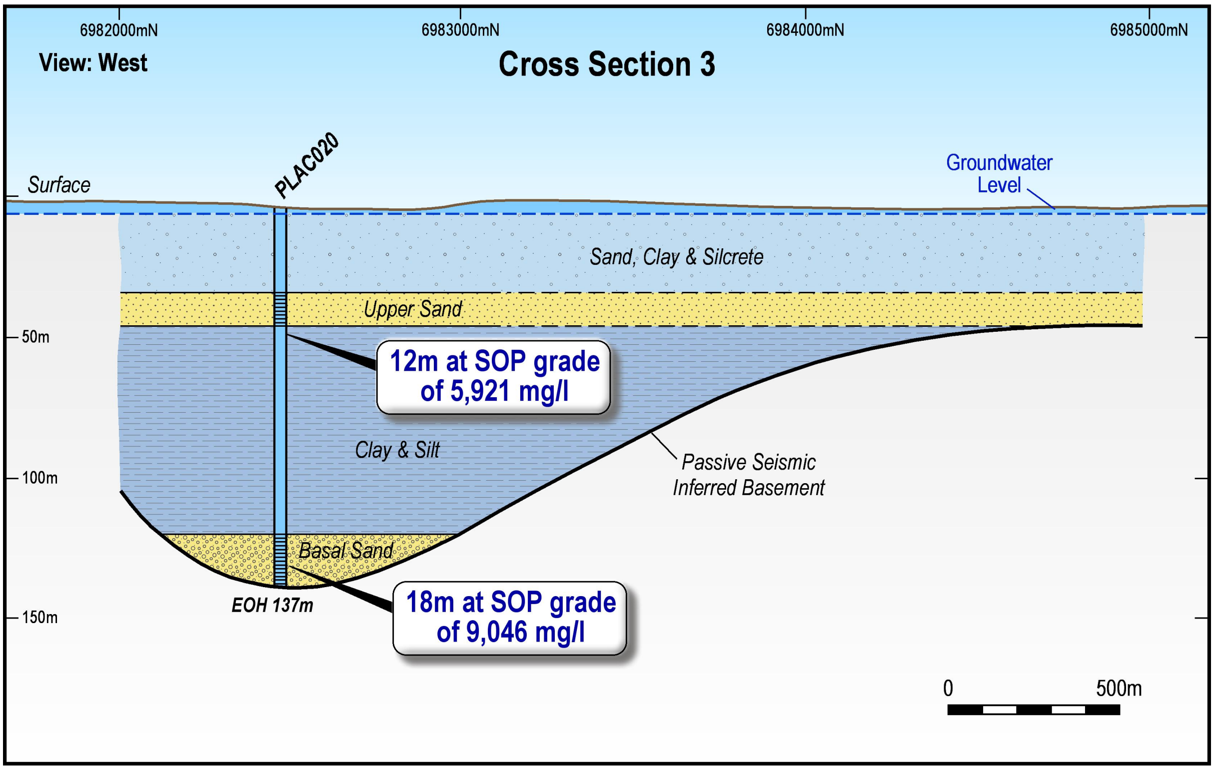


*Figure 6: Cross section 3 showing drill hole PLAC020, eastern end of the Project*

Following the successful mud-rotary program in March[iii], where thick intersections of the high-yielding basal sand layer were recorded, the purpose of the aircore program was to sample the basal layer to determine if the brine chemistry continued from surface to the basement of the palaeochannel.

In addition to confirming the high-grade potash grades at depth, this recent aircore campaign again intersected significant widths of the upper sand unit, previously not considered in the Exploration Target the Company published in March[i]. Returning grades consistent with the brine chemistry in all samples, this upper aquifer has the very strong potential to improve the potential yield of the palaeochannel, as these upper sands have a greater specific yield than the intermediate clays (as utilised in the Exploration Target assessment).

# The Lake Wells Potash Project

A drilling program conducted at Lake Wells in July 2015[iv] identified high-grade potash mineralisation both beneath the lake and the low dune areas surrounding the lake. That drilling program generated wide intercepts of high-grade potash from surface to depths of 135m (down-hole), which was the depth capacity of the drill rig used.

Passive seismic survey programs have been conducted at the Project[v] [vi]. This data permits the clear targeting of drill holes into the deepest parts of the palaeovalley. The coarse, unconsolidated sand/grit material found in the basal layer often has a high permeability, which facilitates drainage of the overlying hydrogeological units.

Goldphyre has finalised a mud rotary/diamond and aircore drilling program aimed at understanding the basal sand layer and to confirm deep brine chemistry. The Company plans to release a Maiden JORC Resource Estimate in H1 2016.

*Figure 7: Drilling into the basal sand layer at the Lake Wells Potash Project*

# Contact


Matt Shackleton

Executive Chairman

**e:** m.shackleton@goldphyre.com.au

**m:** +61 (0)438 319 841

**Media:**

Paul Armstrong/Nicholas Read

Read Corporate

**t:** +61 (8) 9388 1474

**Competent Person's Statement**

*The Hydrogeological information in this report has been prepared by Carsten Kraut, who is a member of the Australasian Institute of Geoscientists. Carsten Kraut is contracted to the Company through Flux Groundwater Pty Ltd. Carsten Kraut 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".*

*Carsten Kraut 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, 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". 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).*

*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.*

**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.*

# Appendix 1 Collar table

| Hole | Hole Type | Northing (m) | Easting (m) | RL | Dip | Azimuth | Hole Depth (m) |
|---|---|---|---|---|---|---|---|
| PLWDD001 | MR/DDH | 6985400 | 501330 | 449 | -90 | 0 | 163.3 |
| PLWDD002 | MR | 6986505 | 494440 | 453 | -90 | 0 | 170.3 |
| PLWDD003 | MR | 6983715 | 492410 | 449 | -90 | 0 | 174 |
| PLWDD004 | MR | 6986592 | 497518 | 452 | -90 | 0 | 59.1 |
| PLWDD005 | MR | 6986645 | 497517 | 451 | -90 | 0 | 167.7 |
| PLAC018 | AC | 6985429 | 501345 | 449 | -90 | 0 | 156 |
| PLAC019 | AC | 6983282 | 520417 | 452 | -90 | 0 | 149 |
| PLAC020 | AC | 6982466 | 523824 | 446 | -90 | 0 | 137 |
| PLAC021 | AC | 6983435 | 529841 | 450 | -90 | 0 | 101 |
| PLAC022 | AC | 6983325 | 509759 | 456 | -90 | 0 | 29 |
| PLAC023 | AC | 6983556 | 504517 | 452 | -90 | 0 | 131 |
| PLAC024 | AC | 6989993 | 494462 | 449 | -90 | 0 | 10 |
| PLAC025 | AC | 6986621 | 497503 | 455 | -90 | 0 | 166 |
| PLAC026 | AC | 6983714 | 492431 | 449 | -90 | 0 | 59 |
| PLAC027 | AC | 6976879 | 494504 | 448 | -90 | 0 | 101.9 |

# Appendix 2 Results table

| | | | | Mg | Na | Cl | TDS | $HCO_3$ Alk | K | SO4 | SOP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | mg/L | mg/L | mg/L | g/kg | mg/L | mg/L | mg/L | mg/L |
| SampleID | HoleID | From | To | | | | | | | | |
| LPD7001 | PLWDD005 | 42 | 46.25 | 9900 | 67900 | 118550 | 206 | 60 | 3810 | 27900 | 8496.3 |
| LPD7003 | PLWDD002 | 146 | 164 | 11900 | 76200 | 124550 | 235 | 70 | 4370 | 31200 | 9745.1 |
| LPD7004 | PLWDD003 | 147.5 | 171.5 | 11100 | 70400 | 124550 | 217 | 100 | 4160 | 29000 | 9276.8 |
| LPD7007 | PLAC018 | 5 | 11 | 10700 | 75000 | 132600 | 227 | 30 | 4480 | 28800 | 9990.4 |
| LPD7008 | PLAC018 | 11 | 17 | 11100 | 78300 | 137200 | 234 | 30 | 4730 | 29100 | 10547.9 |
| LPD7009 | PLAC018 | 17 | 23 | 11000 | 77900 | 139300 | 236 | 30 | 4740 | 28600 | 10570.2 |
| LPD7010 | PLAC018 | 23 | 29 | 11100 | 79700 | 139650 | 237 | 30 | 4810 | 29300 | 10726.3 |
| LPD7011 | PLAC018 | 29 | 35 | 11200 | 80500 | 139300 | 238 | 30 | 4800 | 29000 | 10704 |
| LPD7012 | PLAC018 | 35 | 41 | 11100 | 80000 | 140000 | 236 | 30 | 4780 | 28500 | 10659.4 |
| LPD7013 | PLAC018 | 41 | 47 | 10900 | 79200 | 138750 | 237 | 30 | 4710 | 28700 | 10503.3 |
| LPD7014 | PLAC018 | 47 | 53 | 10800 | 77700 | 138600 | 235 | 30 | 4620 | 28700 | 10302.6 |
| LPD7015 | PLAC018 | 53 | 59 | 10700 | 78000 | 138250 | 236 | 20 | 4450 | 29300 | 9923.5 |
| LPD7016 | PLAC018 | 143 | 149 | 5580 | 43300 | 72700 | 134 | 820 | 3350 | 15300 | 7470.5 |
| LPD7017 | PLAC018 | 149 | 155 | 11000 | 81900 | 141200 | 239 | 40 | 4470 | 30000 | 9968.1 |
| LPD7021* | PLAC018 | 155 | 156 | 5350 | 40500 | 69550 | 127 | 860 | 3270 | 14900 | 7292.1 |
| LPD7023 | PLAC019 | 5 | 11 | 5720 | 42800 | 71150 | 130 | 100 | 1800 | 17500 | 4014 |
| LPD7024 | PLAC019 | 11 | 17 | 6090 | 47800 | 79200 | 145 | 90 | 2040 | 18300 | 4549.2 |
| LPD7025 | PLAC019 | 17 | 23 | 6600 | 53600 | 90100 | 159 | 70 | 2310 | 19600 | 5151.3 |
| LPD7026 | PLAC019 | 23 | 29 | 7920 | 64600 | 110500 | IS | 50 | 2910 | 22700 | 6489.3 |
| LPD7027 | PLAC019 | 35 | 41 | 6710 | 60300 | 104850 | 178 | 30 | 2770 | 19000 | 6177.1 |
| LPD7028 | PLAC019 | 41 | 47 | 6620 | 59000 | 102400 | 176 | 40 | 2700 | 19200 | 6021 |
| LPD7029 | PLAC019 | 47 | 53 | 6750 | 64000 | 108550 | 187 | 30 | 2890 | 19100 | 6444.7 |
| LPD7030 | PLAC019 | 53 | 59 | 6760 | 63900 | 108200 | 186 | 40 | 2890 | 19400 | 6444.7 |
| LPD7031 | PLAC019 | 59 | 65 | 7040 | 67700 | 114000 | 195 | 20 | 3060 | 19700 | 6823.8 |
| LPD7032 | PLAC019 | 65 | 71 | 6960 | 65400 | 112400 | 192 | 30 | 3020 | 19600 | 6734.6 |
| LPD7034 | PLAC019 | 71 | 77 | 6780 | 64100 | 106950 | 186 | 40 | 2880 | 19500 | 6422.4 |

| | | | | Mg | Na | Cl | TDS | $HCO_3$ Alk | K | SO4 | SOP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | mg/L | mg/L | mg/L | g/kg | mg/L | mg/L | mg/L | mg/L |
| LPD7035 | PLAC019 | 77 | 83 | 6770 | 63800 | 108550 | 186 | 40 | 2910 | 19200 | 6489.3 |
| LPD7036 | PLAC019 | 83 | 89 | 6690 | 64500 | 108200 | 186 | 40 | 2920 | 19100 | 6511.6 |
| LPD7038 | PLAC019 | 89 | 95 | 6780 | 64400 | 109250 | 188 | 30 | 2940 | 19200 | 6556.2 |
| LPD7039 | PLAC019 | 95 | 101 | 6790 | 65400 | 109950 | 189 | 30 | 2970 | 19400 | 6623.1 |
| LPD7040 | PLAC019 | 101 | 107 | 6800 | 65800 | 111000 | 189 | 20 | 2970 | 19800 | 6623.1 |
| LPD7041 | PLAC019 | 107 | 113 | 350 | 3420 | 5600 | 12 | 370 | 340 | 1050 | 758.2 |
| LPD7042 | PLAC019 | 113 | 119 | 1260 | 12900 | 21450 | 42 | 360 | 770 | 3570 | 1717.1 |
| LPD7043 | PLAC019 | 119 | 125 | 575 | 5730 | 10100 | 19 | 330 | 450 | 1590 | 1003.5 |
| LPD7045 | PLAC019 | 125 | 131 | 2390 | 24300 | 37300 | 76 | 210 | 1300 | 6510 | 2899 |
| LPD7046 | PLAC019 | 131 | 137 | 1810 | 17900 | 28800 | 59 | 270 | 1030 | 4980 | 2296.9 |
| LPD7047 | PLAC019 | 137 | 143 | 7250 | 73800 | 126700 | 212 | 30 | 3590 | 20100 | 8005.7 |
| LPD7048 | PLAC019 | 143 | 149 | 7850 | 77800 | 135750 | 226 | 30 | 3910 | 21300 | 8719.3 |
| LPD7050 | PLAC020 | 0 | 5 | 3480 | 33900 | 57800 | 106 | 100 | 1710 | 10100 | 3813.3 |
| LPD7051 | PLAC020 | 5 | 11 | 3410 | 33300 | 57550 | 104 | 90 | 1670 | 10100 | 3724.1 |
| LPD7052 | PLAC020 | 11 | 17 | 3460 | 33300 | 57550 | 106 | 90 | 1680 | 10800 | 3746.4 |
| LPD7053 | PLAC020 | 17 | 23 | 4940 | 43800 | 74550 | 136 | 70 | 2130 | 15500 | 4749.9 |
| LPD7054 | PLAC020 | 23 | 29 | 4740 | 44300 | 73400 | 133 | 70 | 2090 | 14900 | 4660.7 |
| LPD7055 | PLAC020 | 29 | 35 | 6320 | 58300 | 95500 | 170 | 60 | 2620 | 19100 | 5842.6 |
| LPD7057 | PLAC020 | 35 | 41 | 6430 | 59000 | 96450 | 170 | 60 | 2690 | 19500 | 5998.7 |
| LPD7058 | PLAC020 | 41 | 47 | 5960 | 55800 | 91200 | 162 | 70 | 2540 | 18200 | 5664.2 |
| LPD7059 | PLAC020 | 47 | 53 | 5660 | 53100 | 88550 | 158 | 50 | 2410 | 17300 | 5374.3 |
| LPD7060 | PLAC020 | 53 | 59 | 5720 | 51900 | 87550 | 157 | 60 | 2400 | 17100 | 5352 |
| LPD7061 | PLAC020 | 59 | 65 | 5670 | 51900 | 85850 | 154 | 60 | 2410 | 17100 | 5374.3 |
| LPD7062 | PLAC020 | 65 | 71 | 6050 | 55400 | 92650 | 164 | 50 | 2540 | 18200 | 5664.2 |
| LPD7063 | PLAC020 | 71 | 77 | 6060 | 54900 | 91900 | 163 | 50 | 2560 | 17900 | 5708.8 |
| LPD7064 | PLAC020 | 77 | 83 | 5940 | 54000 | 91600 | 163 | 50 | 2500 | 17600 | 5575 |
| LPD7065 | PLAC020 | 83 | 89 | 6070 | 55600 | 93750 | 166 | 40 | 2560 | 18300 | 5708.8 |
| LPD7066 | PLAC020 | 89 | 95 | 6080 | 55600 | 95600 | 170 | 40 | 2580 | 18200 | 5753.4 |
| LPD7067 | PLAC020 | 95 | 101 | 6030 | 56100 | 93500 | 167 | 40 | 2580 | 17800 | 5753.4 |
| LPD7068 | PLAC020 | 101 | 107 | 6340 | 59000 | 98200 | 174 | 30 | 2670 | 19100 | 5954.1 |
| LPD7069 | PLAC020 | 107 | 113 | 7620 | 73200 | 127300 | 211 | 40 | 3680 | 20200 | 8206.4 |
| LPD7070 | PLAC020 | 113 | 119 | 7720 | 74800 | 124550 | 211 | 40 | 3720 | 20600 | 8295.6 |
| LPD7072 | PLAC020 | 119 | 125 | 8220 | 79400 | 132450 | 222 | 10 | 3970 | 22100 | 8853.1 |
| LPD7073 | PLAC020 | 125 | 131 | 8270 | 80800 | 134550 | 226 | 20 | 3970 | 22100 | 8853.1 |
| LPD7074 | PLAC020 | 131 | 137 | 8800 | 84500 | 143450 | 239 | <10 | 4230 | 23600 | 9432.9 |

# Appendix 3 Reporting of Exploration Results – JORC (2012) Requirements

Section 1: Sampling Techniques and Data

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | • *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | • Brine sampling was completed via Mud Rotary-Diamond (MR-DDH) cased with PVC and Air core (AC) drilling technique.<br>• AC Drilling - Groundwater (brine) and selective mineral (lithological) samples collected. Brine sample recovery procedure included collecting brine sample through the cyclone in a clean 9l bucket at the start of drilling each 6m rod. Where possible, flow rate data was logged via air lifting using a stop watch and 9l bucket beneath the cyclone. Not every rod may produce a brine sample depending upon formation characteristics. Flow rate information collected using compressed air drill technique is considered indicative. Regolith samples from AC drilling were collected from the cyclone and laid out in rows of 10 or 20 for geological logging and (where applicable) mineral sampling. Particle size distribution (PSD) samples (weight 1-2 kg) were collected over representative sample intervals in the majority of drill holes. Results for the PSD samples are pending. Mud Rotary Drilling - 50mm PVC cased Mud Rotary drill holes were airlifted for 1-2 hours using an 180cfm trailer-mounted compressor to remove remnant drilling fluids introduced at time of drilling. A Vibrating Wire pressure transducer was then placed in the borehole while a small 40mm submersible pump pumped brine to the surface. After 30 minutes, the brine was sampled and the transducer data downloaded to allow estimation of hydraulic parameters.<br>• Selective triple tube PQ core was logged on site, sealed in plastic and transported in plastic trays to Perth office for further processing. |
| ***Drilling techniques*** | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | • Mud Rotary-Diamond Drilling (MR-DDH) (5 holes, Appendix 1) was completed by Terra Drilling, Kalgoorlie, using a Hanjin Powerstar 7000 track-mounted diamond rig. Selective PQ Triple tube Core (diameter 85mm, no orientation) used to penetrate hard regolith zones and basement was |

| Criteria | JORC Code Explanation | Commentary |
| --- | --- | --- |
| | | collected with core recovery generally over 90%.<br>• Air core (AC) drilling using Schramm 685 with 125mm vacuum blade bit (10 holes, Appendix 1) was completed by Austral Drilling, Perth.<br>• All holes vertical. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | • See Sampling Techniques.<br>• AC Drilling - Drilling with care (eg. clearing hole at start of rod, regular cyclone cleaning) but majority of lithological samples moist/wet due to primary aim of targeting brine samples. Mud Rotary Drilling – Lithological sample recovery and quality was generally low due to poor development of wall cake and mixing with drill cuttings from entire hole column.<br>• Sample recovery/grade relationship not applicable to groundwater brine sampling. All brine samples collected in 80ml bottles. |
| ***Logging*** | • *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • AC Drilling - Qualitative lithological logging completed by inspection of washed Air–core drill cuttings at time of drilling with end-of-hole (EOH) samples and 1m chip samples collected in plastic chip trays for future reference. Flow rate data was collected where possible along with Magnetic Susceptibility data (Fugro RT-1 unit). Mud Rotary-Diamond Core drilling - Triple tube PQ core lithologically logged. Logging is qualitative in nature. |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • PQ Triple tube core awaiting core cutting for processing.<br><br>• AC Drilling - Brine water samples were collected with a clean bucket from the rig cyclone. 80ml plastic sterile sample bottles were used to collect sample. At the end of each rod, air turned on and brine (if present) flows through cyclone and sample collected after initial discharge flow of brine. Mud Rotary Drilling – Brine samples collected from small submersible pump in 50mm PVC cased holes after sufficient airlifting to remove traces of drilling fluids.<br>• Reference brine solution provided by independent laboratory used for QA/QC analysis with a sample ratio of approx. 1:10. Duplicate samples (approx. 1:20) were also collected for QA/QC analysis and despatched to laboratory for brine analysis. Archive brine sample collected for each laboratory sample. A small sample batch (~10%) despatched to umpire lab for |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | | comparison purposes and these results pending.<br>• Once collected, brine samples were kept in cool, dark storage and delivered to laboratory within 7 days of field collection. Major cations were analysed using either ICP-AES or ICP-MS techniques. Analysis of Cations in brine solution by Mohr Titration. Sulphate was calculated from ICP-AES Determination. Specific Gravity (SG) calculated using Pycnometric method. Total Dissolved Solids (TDS) calculated by Gravimetric method.<br>• Sample size (80 ml bottle) appropriate for brine being sampled. |
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | • The samples were collected for major cation (Ca, K, Na, Mg) and anions (Cl, sulphate), alkalinity, Specific Gravity, Total Dissolved Solids (TDS) and selective multi-element (dissolved metals) analysis. This work was completed at Bureau Veritas Laboratory, Perth. Samples were analysed with Lab Codes GC006, GC026, GC033, GC004, SO101and SO102. methods. Reference brine solution samples dispatched to laboratory reported an average error of <10%. Umpire samples were sent to ALS Metallurgy Laboratory in Perth and results are pending.<br>• Potash brine results calculated with primary potassium (K) values and $K_2SO_4$ equivalent. No upper and lower cuts applied. For multi-element suite - (Lab Code SO101 and SO102) elements included (but not limited to): Al, As, Cr, Co, Fe, Pb, Ni, U, Th, Zn, V). No anomalous or significant multi-element results recorded in brine samples.<br>• Quality control process and internal laboratory checks demonstrate acceptable levels of accuracy.<br>• Further Data QA/QC checks undertaken include:<br>  ○ Database QA/QC reporting including box and whisker plots<br>  ○ Duplicate comparison<br>• These checks demonstrate acceptable levels of accuracy and consistency in the dataset. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • QA/QC procedures included reference solution and duplicate samples collected and analysed at both the primary and independent umpire laboratory to evaluate analytical consistency The Ratio of Duplicates in the program is 1 in approximately every 20 field samples. The Ratio of Reference solution samples in the program is 1 in approximately every 100 field samples. Internal laboratory standards and instrument calibration are completed as a matter of course.<br>• Sample data was captured in the field and digital data entry completed both in the field and in the Company's Perth office. All drill and sample data was then loaded into the Company's DATASHED database and validation checks completed to ensure data accuracy. Analytical results as csv and pdf files were received from the laboratory. |
| ***Location of data points*** | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • Drill collars were surveyed by handheld Garmin 60 GPS with horizontal accuracy (Easting and Northing values) of +-5m.<br>• Grid System – MGA94 Zone 51.<br>• Topographic elevation using published GSWA geological maps and hand held GPS with Z range +-15m suitable for relatively flat salt lake/dune terrain. |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | • Hole spacing on approximate 3-6 km drill pattern targeted upper and basal sand paleochannel zones with 6m sample intervals (where possible) across the targeted salt lake system and meets SEG and Bench mark standards for Inferred Brine Resource classification (Houston, Butcher, Ehren, Evans, Godfrey (2012) The Evaluation of Brine Prospects and the Requirement for Modification to Filing Standards. Economic Geology v106, pp1225-1239. The data spacing is considered sufficient to establish the degree of geological and grade continuity appropriate for mineral resource estimation procedures.<br>• Samples taken from intervals downhole are considered indicative due to groundwater seepage below the static water table level (SWL) and it is difficult to estimate the degree of down-hole brine 'mixing' using the Aircore drilling technique. Brine samples collected every 6m where possible, are to some extent, naturally composited due to the nature of the sample medium and compressed air drill technique. |
| ***Orientation of data in relation to*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the* | • Vertical drill holes targeted the deepest sections of the palaeovalley system within |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| ***geological structure*** | *extent to which this is known, considering the deposit type.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | interpreted flat lying transported sedimentary profile and weathered-transitional basement rocks. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Samples collected from the field airfreighted to Perth laboratory with sealed eskies or delivered by Company personnel to laboratory direct. |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • Data reviews are summarised under QA/QC of data above. |

Section 2: Reporting of Exploration Results

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| ***Mineral tenement and land tenure status*** | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The LAKE WELLS POTASH PROJECT, located 140 km northeast of Laverton, Western Australia consists of tenements: E38/1903, E38/2113, E38/2114, E38/3021, E38/3039, E38/2742 and E38/2744. All tenements held 100% by Goldphyre Resources Limited (GPH) except E38/2742 and E38/2744 held by Lake Wells Exploration Pty. Ltd (LWE). GPH has entered into a Sale and Split Commodity Agreement (dated on or about 11th December, 2015) with LWE. All tenements are in good standing. There is no Native Title Claim registered in respect of the project tenure. Accordingly, there is no requirement for a Regional Standard Heritage Agreement to be signed.<br>• At time of writing, the tenements have expiry dates ranging between 1/5/2017 and 9/8/2020. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Previous reconnaissance AC and Goldphyre AC/RC drilling has been completed in the Lake Wells – WEST Area. Companies that have completed previous exploration in the region include WMC Ltd, Gold Partners Ltd, Kilkenny Gold NL, Anglogold Ashanti Australia Ltd, Croesus Mining NL and Terra Gold Mining Ltd. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • Targets include: Brine hosted potash mineralisation associated with the Lake Wells playa lake system. |
| ***Drill hole Information*** | • *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>*•easting and northing of the drill hole collar*<br>*•elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>*•dip and azimuth of the hole*<br>*•down hole length and interception depth*<br>*•hole length.* | • Aircore drilling and Mud Rotary-Diamond drill data completed by Goldphyre Resources Limited included in report and collar information for drill holes is included in Appendix 1. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | |
| ***Data aggregation methods*** | • *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Composite significant intercepts are reported as down-hole length and no minimum and maximum cut-off grades have been applied.<br>• Average Sulphate of Potash (SOP) values reported in the table(s) above from brine samples collected in a particular interval although several drill holes returned sample intervals in which groundwater was present but insufficient brine sample was available for sampling and analysis. No metal equivalent values or formulas used. |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').* | • The brine deposit is understood to be essentially a flat resource hosted within a sedimentary aquifer and the underlying weathered basement. Vertical drill hole intercepts are interpreted to represent the true thickness of the deposit. |
| ***Diagrams*** | • *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | • Appropriate summary diagrams with Scale and North Point shown along with cross and long section figures are included in the accompanying report. |
| ***Balanced reporting*** | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • All K, SO4, and Mg results for the samples collected are displayed in tables and/or appendices in the accompanying report above. |
| ***Other substantive exploration data*** | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • AC drilling in 2015 provided encouragement for further potash brine exploration. Geophysical data (TMI, FVD, Gravity) processing along with extensive previous explorers' drill data has contributed further to the understanding of the salt lake system and palaeotopography on the project area. |
| ***Further work*** | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Based on results returned **and *Other Substantive Exploration data*** summarised above, the design of follow up drilling program(s) (including test bore drilling) are under preparation.<br>• Extension and infill areas around current drilling as shown in diagram(s) included in the accompanying report will be assessed. |

[i] *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.*

*ii 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.*

*iii Refer to ASX announcement 7 April 2016 'Drilling intersects substantial widths of key basal sands'. 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 7 April 2016 announcement.*

*iv 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.*

*v Refer to ASX announcement 15 December 2015 'Seismic Survey Defines Extensive, Deep Palaeovalley'. 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 15 December 2015 announcement.*

*vi Refer to ASX announcement 8 February 2016 'Second Seismic Survey Doubles Size of Deep Palaeovalley'. 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 February 2016 announcement.*