ASX Release



Tuesday 17 December 2019

Extensive Increase in Aquifer Thickness at Lake Sunshine

Highlights

- Significant increase in brine aquifer thickness (up to 145%) recorded at Lake Sunshine.
- Drilling reveals thickness of Lake Sunshine brine aquifer to a depth 196 metres.
- Previous work was limited to the palaeovalley sequence from surface to 80 metre depth.
- Drill results are contiguous with the current Mineral Resources and Ore Reserves.
- Results show the highest SOP Concentrations recorded at Lake Sunshine up to 20,872 mg/L (9,360 mg/L potassium) from more than100 metre depth.
- BMR logs confirm an average of 8% drainable porosity of the bedrock sandstone sequence.
- The current Stage 1 BSOPP production bore program can be optimised to include the deeper, higher-grade brine.
- Work has commenced to update / increase the Current Mineral Resource Statement.

Kalium Lakes Limited (KLL) is pleased to report brine analysis results for recent drilling activities completed at Lake Sunshine as part of the Beyondie Sulphate of Potash Project (BSOPP). The brine assay results are presented in Table 1 with drill hole data shown in Table 2, drill hole locations are shown in Figure 1.

Lake Sunshine has existing Indicated and Measured Mineral Resources and Ore Reserves for the lake surface and shallow sediments associated with the palaeovalley and weathered bedrock. The drilling results have tested the Jilyili Sandstone Formation below the palaeovalley for brine grade and drainable porosity with the sandstone being contiguous with the current Mineral Resources and Ore Reserves.

Results show the sandstone extends down to a depth of up to 196 m with interbedded friable and cemented sandstone bands and minor siltstone. Brine samples were obtained at regular intervals throughout the profile with airlifts rates typically only restricted by the anulus of the drilling system. Borehole magnetic resonance (BMR) logs have been run in the open holes to measure drainable porosity.

It is notable that some of the grades are the highest ever recorded at Lake Sunshine with potassium grades up to 9,360 mg/L, equivalent to a SOP grade of 20,872 mg/L. The drill holes have been completed in the location of the Stage 1 production borefield at Lake Sunshine. These results mean that the production bore designs can be optimised to include the deeper higher-grade brine.

Managing Director, Brett Hazelden, commented: "We are delighted with the extension in thickness, grade and depth of the Lake Sunshine brine aquifer.

"These results will allow our current production bore installation program to take advantage of the higher grades and increased thickness of brine available as part of the initial 90ktpa SOP Stage 1 of the Beyondie SOP Project. We anticipate a significant Mineral Resource increase to be finalised early next year," he said.

Drill Program Summary

The 23 new drill holes have been completed for a total of 2066 m to test the Jilyili Sandstone Formation for brine grade and drainable porosity. The drilling program comprised of nine aircore drill holes and 14 deep reverse circulation (RC) hammer drill holes to test the bedrock sandstone for its aquifer potential and brine content.

The aircore drilling was able to penetrate the weathered zones of the sandstone sequence, but not the more cemented siliceous bands that are present. RC hammer drilling was used to drill to depth or at such point that drilling penetration rates slowed due to the volume of brine bring unable to be lifted with the compressor. An auxiliary compressor was mobilised to drill the five deeper holes at the end of the program (SSAC095 to 99). The drill hole locations and depths are presented in Table 2.

All drill holes encountered fine to coarse grained sandstone with minor siltstone and shale bands of the Jiliyili Formation, which outcrops extensively in the Sunshine area. The sandstone was variably weathered with friable and highly siliceous bands. Brine in flows correlate with weakly cemented fine to medium grained red sandstone bands that are between 0.5 and 5 m thick throughout the sequence. SSAC099 encountered fractured vesicular basalt from 40 to 127 m, coinciding with magnetic anomalies in the publicly available aeromagnetic data, which have been encountered previously at Sunshine West.

Brine samples obtained in the drilling program were sampled from the cyclone after prolonged airlifts following the change of drill rods and at end of hole. Brine grades typically increase with depth at drill locations on the edge of the salt lake and away from the lake, with grade gradually reducing away from the lake. The highest brine SOP grades of between 17,000 and 20,000 mg/L SOP occurred on the western end of Lake Sunshine at depths greater than 60 m near the lake edge. The brine analysis results are presented in Table 1.

All open holes were geophysically logged open hole with a suite of tools, including borehole magnetic resonance (BMR). Six of the drill holes were found to be open and logged for a total of 475m of logging, representing 23% of the 2019 drilling. Drainable porosity derived from the BMR sandstone calibrated logs ranged from 6 to 11% with an average of 8%. An example BMR log is presented in Figure 2.

| Hole Number | Sample Depth | к | Na | Mg | CI | SO4 | SOP* | Na:K Patio | |
|-------------|-----------------|-------|--------|-------|---------|--------|--------|---------------|--|
| | (m) | mg/L | | | | | | | |
| SSAC077 | 11 | 1,860 | 23,800 | 3,410 | 43,450 | 10,100 | 4,145 | 13 | |
| SSAC077 | 59 | 6,500 | 73,300 | 7,460 | 126,650 | 20,300 | 14,485 | 11 | |
| SSAC077 | 65 | 7,010 | 76,600 | 7,820 | 134,550 | 20,900 | 15,622 | 11 | |
| SSAC077 | 70 | 6,920 | 77,000 | 7,830 | 132,450 | 21,100 | 15,421 | 11 | |
| SSAC078 | 17 | 3,020 | 36,000 | 4,010 | 61,300 | 11,200 | 6,730 | 12 | |
| SSAC078 | 24 | 3,310 | 39,800 | 4,410 | 66,400 | 12,500 | 7,376 | 12 | |
| SSAC079 | 16 | 5,170 | 48,800 | 5,670 | 83,900 | 15,100 | 11,521 | 9 | |
| SSAC080 | 11 | 1,460 | 19,200 | 2,510 | 31,550 | 7,920 | 3,254 | 13 | |
| SSAC080 | 35 | 1,120 | 15,000 | 1,930 | 24,350 | 6,090 | 2,496 | 13 | |
| SSAC080 | 53 | 2,550 | 30,500 | 3,290 | 50,300 | 9,690 | 5,683 | 12 | |
| SSAC080 | 58 | 3,760 | 40,700 | 4,430 | 68,150 | 12,900 | 8,379 | 11 | |
| SSAC083 | 16 | 7,850 | 80,700 | 8,810 | 137,900 | 22,800 | 17,494 | 10 | |
| SSAC083 | 47 | 8,450 | 86,200 | 8,980 | 145,400 | 24,100 | 18,831 | 10 | |
| SSAC084 | 47 | 7,220 | 70,800 | 7,460 | 119,500 | 20,100 | 16,090 | 10 | |
| SSAC086 | 17 | 6,580 | 64,600 | 6,870 | 110,750 | 18,500 | 14,663 | 10 | |
| SSAC086 | 18 | 6,060 | 55,000 | 6,400 | 98,100 | 18,000 | 13,505 | 9 | |
| SSAC086 | 36 | 6,270 | 57,900 | 6,460 | 98,100 | 19,100 | 13,973 | 9 | |
| SSAC086 | 48 | 6,740 | 69,900 | 6,730 | 117,900 | 20,000 | 15,020 | 10 | |

Table 1 – Drill Hole Brine Assay Results

| Hole Number | Sample Depth | к | Na | Mg | CI | SO4 | SOP* | Na:K Ratio |
|-------------|-----------------|-------|--------|---------|----------|--------|--------|---------------|
| | (m) | | | | mg/L | | | |
| SSAC086 | 66 | 7,560 | 61,200 | 7,090 | 103,000 | 21,900 | 16,847 | 8 |
| SSAC086 | 84 | 7,540 | 68,800 | 7,120 | 116,000 | 22,200 | 16,803 | 9 |
| SSAC086 | 102 | 7,720 | 68,200 | 7,170 | 115,100 | 22,200 | 17,204 | 9 |
| SSAC087 | 30 | 8,770 | 81,200 | 8,150 | 140,500 | 24,500 | 19,544 | 9 |
| SSAC087 | 66 | 8,200 | 76,500 | 7,520 | 129,850 | 22,400 | 18,273 | 9 |
| SSAC087 | 90 | 8,970 | 81,000 | 8,080 | 140,500 | 24,300 | 19,989 | 9 |
| SSAC087 | 108 | 9,360 | 85,700 | 8,330 | 145,250 | 25,400 | 20,859 | 9 |
| SSAC088 | 37 | 7,910 | 78,300 | 7,930 | 137,700 | 21,900 | 17,627 | 10 |
| SSAC088 | 49 | 7,770 | 76,500 | 7,880 | 138,400 | 22,400 | 17,315 | 10 |
| SSAC088 | 60 | 7,290 | 72,500 | 7,490 | 140,350 | 21,300 | 16,246 | 10 |
| SSAC088 | 72 | 7,800 | 76,900 | 7,980 | 140,350 | 22,200 | 17,382 | 10 |
| SSAC088 | 84 | 7,380 | 72,400 | 7,380 | 131,750 | 20,400 | 16,446 | 10 |
| SSAC088 | 96 | 7,700 | 76,000 | 7,820 | 134,550 | 21,300 | 17,159 | 10 |
| SSAC088 | 125 | 7,190 | 71,100 | 7,230 | 131,250 | 19,900 | 16,023 | 10 |
| SSAC090 | 24 | 7,720 | 75,900 | 8,800 | 141,050 | 19,500 | 17,204 | 10 |
| SSAC090 | 48 | 7,720 | 76,500 | 8,840 | 146,800 | 19,400 | 17,204 | 10 |
| SSAC090 | 60 | 7,770 | 77,000 | 8,920 | 144,200 | 19,700 | 17,315 | 10 |
| SSAC090 | 72 | 7,740 | 76,800 | 8,830 | 147,000 | 19,900 | 17,248 | 10 |
| SSAC090 | 84 | 7,520 | 75,300 | 8,790 | 144,200 | 19,100 | 16,758 | 10 |
| SSAC090 | 102 | 7,920 | 78,200 | 9,070 | 144,550 | 19,900 | 17,650 | 10 |
| SSAC090 | 120 | 7,870 | 77,600 | 9,020 | 145,050 | 19,900 | 17,538 | 10 |
| SSAC091 | 24 | 900 | 9,910 | 1,150 | 16,100 | 3,270 | 2,006 | 11 |
| SSAC091 | 42 | 5,050 | 53,800 | 5,880 | 95,550 | 18,900 | 11,254 | 11 |
| SSAC091 | 52 | 3,530 | 37,200 | 4,110 | 63,850 | 12,800 | 7,867 | 11 |
| SSAC091 | 61 | 2,870 | 30,700 | 3,360 | 50,750 | 10,600 | 6,396 | 11 |
| SSAC091 | 73 | 5,640 | 57,100 | 6,160 | 91,150 | 19,100 | 12,569 | 10 |
| SSAC091 | 85 | 7,080 | 69,000 | 7,190 | 120,550 | 21,700 | 15,778 | 10 |
| SSAC091 | 97 | 7,020 | 67,700 | 6,990 | 127,050 | 20,700 | 15,644 | 10 |
| SSAC091 | 109 | 7,880 | 75,100 | 7,830 | 133,150 | 22,800 | 17,560 | 10 |
| SSAC091 | 121 | 7,740 | 74,900 | 7,890 | 136,850 | 23,100 | 17,248 | 10 |
| SSAC091 | 133 | 7,770 | 75,800 | 8,000 | 136,850 | 23,400 | 17,315 | 10 |
| SSAC092 | 37 | 1,960 | 20,100 | 2,990 | 37,450 | 8,550 | 4,368 | 10 |
| SSAC092 | 55 | 2,980 | 31,500 | 4,500 | 55,100 | 14,800 | 6,641 | 11 |
| SSAC092 | 67 | 3,100 | 33,700 | 4,770 | 57,900 | 16,100 | 6,908 | 11 |
| SSAC092 | 79 | 3,020 | 33,800 | 4,770 | 58,950 | 16,700 | 6,730 | 11 |
| SSAC092 | 97 | 2.830 | 30.900 | 4.360 | 53.000 | 14.100 | 6.307 | 11 |
| SSAC093 | 24 | 7.170 | 69.000 | 8.140 | 130.700 | 21.300 | 15.978 | 10 |
| SSAC093 | 42 | 7.390 | 73.900 | 8.510 | 136.300 | 21.600 | 16.468 | 10 |
| SSAC093 | 61 | 7,900 | 77.900 | 8.920 | 144.550 | 23.100 | 17.605 | 10 |
| SSAC093 | 73 | 8.090 | 79.200 | 9.030 | 146.100 | 23.500 | 18.028 | 10 |
| SSAC093 | 85 | 8,010 | 79,000 | 9,060 | 146,800 | 23,000 | 17,850 | 10 |
| 55, (0055 | 97 | 8 520 | 82 900 | 9,500 | 146 200 | 25,000 | 19 120 | 10 |
| SSACODJ | 51 | 8 400 | 70 400 | 7 100 | 117 050 | 23,300 | 18 710 | 2 |
| 554004 | 24 2/ | 8 000 | 67 200 | 6 600 | 113 / 00 | 22,100 | 17 828 | 2 2 |
| 5540094 | 100 | 7 210 | 62 100 | 6 1 7 0 | 107 050 | 10 /00 | 16 200 | ں لا |
| 33AC094 | 100 | 1,510 | 02,100 | 0,170 | 101,930 | 19,400 | 10,290 | 0 |

| | Hole Number | Sample Depth | к | Na | Mg | CI | SO4 | SOP* | Na:K |
|---|-------------|-----------------|-------|-----------------|-------|---------|--------|--------|-------|
| | | (m) | | | | mg/L | | | Ralio |
| | SSAC094 | 111 | 6,900 | 59,400 | 5,930 | 105,000 | 18,600 | 15,376 | 9 |
| | SSAC095 | 30 | 4,410 | 51,100 | 5,650 | 96,950 | 14,700 | 9,828 | 12 |
| | SSAC095 | 54 | 4,140 | 47,400 | 5,110 | 86,250 | 13,100 | 9,226 | 11 |
| | SSAC095 | 66 | 5,650 | 65 <i>,</i> 500 | 7,120 | 117,050 | 21,100 | 12,591 | 12 |
| | SSAC095 | 90 | 6,500 | 74,200 | 7,990 | 120,550 | 24,000 | 14,485 | 11 |
| | SSAC095 | 108 | 6,470 | 74,000 | 7,980 | 121,250 | 23,200 | 14,418 | 11 |
| D | SSAC095 | 133 | 6,360 | 70,900 | 7,560 | 125,300 | 21,800 | 14,173 | 11 |
| | SSAC095 | 151 | 6,520 | 72,800 | 7,800 | 128,100 | 22,100 | 14,530 | 11 |
| | SSAC096 | 43 | 6,090 | 61,200 | 6,940 | 116,200 | 15,300 | 13,571 | 10 |
| | SSAC096 | 61 | 6,320 | 63,600 | 7,210 | 113,900 | 16,000 | 14,084 | 10 |
| | SSAC096 | 79 | 6,210 | 62,600 | 6,960 | 114,100 | 16,000 | 13,839 | 10 |
| | SSAC096 | 97 | 6,580 | 69,100 | 7,420 | 122,850 | 18,900 | 14,663 | 11 |
| | SSAC096 | 115 | 6,780 | 69,200 | 7,740 | 119,150 | 18,700 | 15,109 | 10 |
| | SSAC096 | 133 | 6,810 | 71,200 | 7,580 | 125,650 | 20,000 | 15,176 | 10 |
| | SSAC096 | 151 | 7,120 | 74,400 | 7,880 | 132,800 | 21,300 | 15,867 | 10 |
| | SSAC097 | 30 | 7,520 | 75,100 | 8,350 | 138,950 | 20,400 | 16,758 | 10 |
| | SSAC097 | 59 | 6,360 | 64,900 | 7,210 | 122,150 | 17,400 | 14,173 | 10 |
| | SSAC097 | 85 | 6,730 | 67,200 | 7,480 | 128,450 | 18,800 | 14,998 | 10 |
| | SSAC097 | 108 | 6,490 | 65,500 | 7,260 | 126,350 | 17,900 | 14,463 | 10 |
| | SSAC097 | 124 | 6,910 | 69,800 | 7,790 | 130,200 | 18,800 | 15,399 | 10 |
| | SSAC097 | 145 | 6,980 | 71,300 | 8,010 | 119,000 | 20,600 | 15,555 | 10 |
| | SSAC097 | 169 | 7,600 | 76,200 | 8,550 | 131,600 | 21,800 | 16,936 | 10 |
| | SSAC097 | 193 | 6,250 | 64,800 | 7,280 | 105,850 | 18,400 | 13,928 | 10 |
| | SSAC098 | 25 | 1,130 | 13,000 | 1,670 | 23,550 | 4,860 | 2,518 | 12 |
| | SSAC098 | 58 | 8,640 | 82,200 | 8,780 | 145,950 | 22,900 | 19,254 | 10 |
| | SSAC098 | 73 | 8,930 | 85,500 | 9,140 | 148,900 | 23,800 | 19,900 | 10 |
| | SSAC098 | 91 | 8,580 | 83,000 | 8,850 | 147,350 | 24,600 | 19,120 | 10 |
| | SSAC098 | 109 | 8,770 | 83,600 | 8,990 | 146,850 | 23,900 | 19,544 | 10 |
| | SSAC098 | 127 | 6,780 | 67,400 | 7,150 | 115,500 | 18,800 | 15,109 | 10 |
| | SSAC099 | 30 | 540 | 4,610 | 540 | 8,850 | 1,740 | 1,203 | 9 |
| | SSAC099 | 49 | 6,230 | 60,900 | 6,670 | 100,450 | 21,100 | 13,883 | 10 |
| | SSAC099 | 73 | 7,020 | 70,500 | 7,120 | 112,400 | 24,800 | 15,644 | 10 |
| | SSAC099 | 91 | 6,980 | 67,300 | 7,040 | 111,500 | 24,100 | 15,555 | 10 |
| | SSAC099 | 109 | 6,950 | 68,100 | 7,050 | 110,650 | 24,300 | 15,488 | 10 |
| | SSAC099 | 127 | 6,770 | 65,300 | 6,890 | 111,700 | 23,200 | 15,087 | 10 |
| | SSAC099 | 151 | 7,250 | 72,000 | 7,550 | 119,800 | 24,600 | 16,156 | 10 |

* SOP grade calculated by multiplying Potassium (K) by a conversion factor of 2.228475



Figure1: Sunshine Drill Hole Locations

Table 2 – Drill Hole Data

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|-------|---|
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| | |
| | |
| | |

| Hole Number | Easting | Northing | Dip | Azimuth | Hole Depth (m) | Comments |
|-------------|---------|----------|-----|---------|-------------------|---|
| SSAC077 | 255419 | 7269294 | 90 | 0 | 70 | Aircore drilling into fresh sandstone |
| SSAC078 | 255402 | 7268337 | 90 | 0 | 24 | Early refusal with aircore drilling |
| SSAC079 | 255117 | 7268349 | 90 | 0 | 16 | Early refusal with aircore drilling |
| SSAC080 | 255425 | 7269569 | 90 | 0 | 58 | Aircore drilling into basalt – strong airlift flow rates |
| SSAC081 | 251748 | 7269959 | 90 | 0 | 4 | Early refusal with aircore drilling |
| SSAC082 | 251641 | 7269746 | 90 | 0 | 3 | Early refusal with aircore drilling |
| SSAC083 | 251238 | 7269588 | 90 | 0 | 47 | Aircore drilling into fresh sandstone |
| SSAC084 | 250489 | 7269535 | 90 | 0 | 55 | Aircore drilling into fresh sandstone |
| SSAC085 | 249839 | 7270787 | 90 | 0 | 9 | Early refusal with aircore drilling |
| SSAC086 | 249591 | 7270195 | 90 | 0 | 102 | RC hammer drilled into sandstone – strong airlift flow rates |
| SSAC087 | 249891 | 7269764 | 90 | 0 | 108 | RC hammer drilled into sandstone – strong airlift flow rates |
| SSAC088 | 255102 | 7272809 | 90 | 0 | 125 | RC hammer drilled into sandstone– strong airlift flow rates |
| SSAC089 | 253795 | 7273641 | 90 | 0 | 114 | RC hammer drilled into sandstone, |
| SSAC090 | 251922 | 7273372 | 90 | 0 | 120 | RC hammer drilled into sandstone |
| SSAC091 | 250250 | 7274225 | 90 | 0 | 133 | RC hammer drilled in to sandstone |
| SSAC092 | 248348 | 7271532 | 90 | 0 | 97 | RC hammer drilled into sandstone |
| SSAC093 | 251781 | 7269954 | 90 | 0 | 97 | RC hammer drilled into sandstone |
| SSAC094 | 249912 | 7271157 | 90 | 0 | 111 | RC hammer drilled – strong airlift flow rates |
| SSAC095 | 256575 | 7269492 | 90 | 0 | 151 | RC hammer drilled |
| SSAC096 | 255034 | 7268402 | 90 | 0 | 151 | RC hammer drilled – strong airlift flow rates |
| SSAC097 | 253627 | 7269630 | 90 | 0 | 193 | RC hammer drilled – strong airlift flow rates |
| SSAC098 | 250891 | 7269087 | 90 | 0 | 127 | RC hammer drilled in to basalt – strong airlift flow rates |
| SSAC099 | 248983 | 7269336 | 90 | 0 | 151 | RC hammer drilled |

WATER VOLUMES



Movable water is the specific yield volume (Blue) in percent.

Water volumes in clay bound and capillary bound pores are the specific retention volumes (Greens).



Figure 2: BMR Log from SSAC091

Table 3 – JORC Table One

Section 1 – Sampling Techniques and Data

| Criteria | a | JORC Code explanation | Commentary | | | |
|---------------------------------------|---------------------------------|---|--|--|--|--|
| Sampli technic | ing ques | 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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. | The sampling program involved the collection of brine samples and samples of the aquifer material. Brine samples were obtained during drilling from prolonged airlift yields and collected at the cyclone. These samples are interpreted to come from the zone above the drilling depth, although the possibility of downhole flow outside of the drill rods from shallower zones cannot be excluded. The degree of these effects are concluded to be minimal after comparison of forecasted production bore grades and actual grades. | | | |
| Drilling technic | g ques | Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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). | Reverse circulation (140mm diameter) drilling has been utilised for all exploration holes drilled during this report. All holes were drilled vertically. | | | |
| Drill sa recove | ample ry | Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. | Geological sample recovery was high, in all lithologies Brine recoveries were high for Reverse Circulation drilling in the productive aquifer zones (Surficial sediments, palaeochannel sand and bedrock). The low transmissivity clay yielded very low volumes with more sporadic sampling resulting. Brine samples have been collected during drilling, by sampling direct from the cyclone discharge. Airlifts were generally of prolonged duration to obtain representative samples. | | | |
| Geolog Loggin | gic ng | 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. | All drill holes were geologically logged by a qualified geologist. All geological samples collected during all forms of drilling are qualitatively logged at 1 m intervals, to gain an understanding of the variability in aquifer materials hosting the brine. Geological logging and other hydrogeological parameter data is recorded within a database. Solid samples are collected and washed and stored in chip trays for future reference. Downhole geophysical methods (Resistivity, spectral gamma Caliper and BMR) were used to assist with lithological logging. | | | |
| Subsai technic and sa prepar | mpling ques mple ation | If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. | All samples collected are kept cool, until delivery to the laboratory in Perth. Brine samples were collected in 500 ml bottles with little to no air. Laboratory standards and laboroatory repeats were completed at approximately 1 in 10 intervals. No erroneous analysis were noted. Airlifting with low pressure air aims to collect a brine sample that is representative of the interval immediately above the bit face. However, this | | | |

| Criteria | JORC Code explanation | Commentary | | | |
|---|--|---|--|--|--|
| | Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. | method does not exclude the potential for downhole mixing of brine. | | | |
| 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. 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. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. | Elemental analysis of brine samples are performed by a reputable Perth laboratory, the Bureau-Veritas (BV) mineral processing laboratories. BV is certified to the Quality Management Systems standard ISO 9001. Additionally they have internal standards and procedures for the regular calibration of equipment and quality control methods. Laboratory equipment are calibrated with standard solutions Analysis methods for the brine samples used are inductively coupled plasma optical emission spectrometry (ICP OES), Ion Selective Electrode (ISE), Inductive coupled plasma mass spectroscopy (ICP-MS), volumetrically and colourimetrically. Duplicate samples and laboratory repeats have been completed and reviewed against the assay results. | | | |
| Verification of sampling and assaying | The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. | Field parameters of SG and salinity have been taken and compared against the laboratory data. Data concerning sample location was obtained out in the field, data entry then performed back in the Perth office to an electronic database and verified by Advisian. Assay data remains unadjusted. | | | |
| 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. Specification of the grid system used. Quality and adequacy of topographic control. | Hole location coordinates obtained by handheld GPS. Reduced levels are to be determined from the existing aerial topography survey. The grid system used was MGA94, Zone 51. | | | |
| Data spacing and distribution | Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. | Drilling has resulted in drill hole spacing of between 0.2 km and 4 km. No drilling beneath the lake surface has been completed at Lake Sunshine. Mineral Resources and Ore Reserves exist for Lake Sunshine. The Exploration results will be used to update the Mineral Resource Estimate. | | | |
| Orientation of data in relation to geological structure | Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. | Not applicable, considering the deposit type. All drill holes are vertical given the flat lying structure of a salt lake | | | |
| Sample security | The measures taken to ensure sample security. | Samples are labelled and transported by KLL or Advisian personnel to Perth. They are then delivered to BV laboratories. | | | |
| Audits or reviews | The results of any audits or reviews of sampling techniques and data. | | | | |

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. 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 BSOPP is 100% owned by Kalium Lakes Limited (KLL or Kalium Lakes) with project tenure held under granted exploration licences: E69/3306, E69/3309, E69/3339, E69/3340, E69/3341, E69/3342, E69/3343, E69/3344, E69/3345, E69/3346, E69/3347, E69/3348, E69/3349, E69/3351, E69/3352, E69/3594. KLL also has granted Mining Licences: M69/145 and M69/146. KLL has a land access and mineral exploration agreement, and a Mining Land Access Agreement with the Mungarlu Ngurrarankatja Rirraunkaja (MNR) Aboriginal Corporation over tenures E69/3399, E69/3340, E69/3342, E69/3343, E69/3344, E69/3345, E69/3348, E69/3349 and E69/3351. KLL has an exploration and prospecting deed of | | | |
| | | agreement, and a Mining Land Access Agreement with the Gingirana Native Title Claim Group over tenures E69/3306, E69/3309, E69/3341, E69/3346, E69/3347, E69/3348, E69/335, E69/3352, E69/3594. | | | |
| Exploration done by other parties | Acknowledgment and appraisal of exploration by other parties. | There has been no 3rd party previous exploration at Lake Sunshine | | | |
| Geology | Deposit type, geological setting and style of mineralisation. | The deposit is a brine containing potassium and sulphate ions that form a potassium sulphate salt. The brine is contained within saturated sediments below the lake surface and in sediments adjacent to the lake. The lake sits within a broader palaeochannel system that extends over hundreds of kilometres. Brine hosted drilling targets include the palaeochannel and porous and fractured bedrock. | | | |
| 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 drillholes: easting and northing of the drillhole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar dip and azimuth of the hole downhole length and interception depth hole length. 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. | Information has been included in drill collar tables All holes are vertical. | | | |
| 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. | Not applicable due to exploration results being applicable to a brine and not a solid. No low or high grade cut-off grade has been implemented. | | | |
| Relationship between mineralisation widths and intercept lengths | These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. | Not applicable due to exploration results being applicable to a brine and not a solid. The brine samples are reported as a depth sample. In low permeability zones (for example clay) it is considered that downhole flow is likley to be contributing the larger proportion of the sample. | | | |

| Criter | 'ia | JORC Code explanation | Commentary |
|-------------------------|------------------------|--|---|
| | | If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known'). | |
| Diagr | ams | 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. | Refer to figures/tables in this announcement. |
| Balan repor | iced ting | 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 pertinent results have been reported. Resource estimation needs to be completed to determine the grade of the deposit as a whole. |
| Other subst explo | tantive ration 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. | BMR tool T_{2 cut off}Calibration was completed by Qtec the developers of the BMR tool utilised (BMR-60). The sandstone logs were calibrated to an industry standard sandstone. The diameter of investigations was 260mm, the signal to noise ratio at this depth of investigation was deemed acceptable. BMR logging was completed in open exploration holes, approximatly 23% of the drilled metres have been logged. Gravity geophysical surveys have been completed at approximatly 1.5 km grid spacing across the tenement. Publically available aerial magnetic data has been processed, and in combination with residual gravity modelling has been used for drill targeting. In addition to brine grade, qualitative information on brine flows from airlift data is an important indicator of the prospectivity of a brine deposit."striong brine flows" are indicative of flow rates that are only constrained by the drilling method. |
| Furth | er work | The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | Production bore drilling and test pumping to confirm aquifer hydrualic conductivity and sustainable yields; Updated Mineral Resource and Reserve Modelling. |

Compliance Statement

The information in this document that relates Production Targets has been extracted from the ASX announcement(s) listed below.

- 17 September 2018: Bankable Feasibility Study Completed With Exceptional Financial Outcomes
 - 4 March 2019: Lower Operating Cost and Increased Production For BSOPP (Front-End Engineering and Design (FEED) works)

The report(s) are available to be viewed on the website at: www.kaliumlakes.com.au

Kalium Lakes confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Ore Reserve Estimates, Exploration Targets or Production Targets, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Competent Person Statement

The information in this ASX Announcement that relates to Exploration Results for The Beyondie Sulphate of Potash Project is based on, and fair represents, information compiled by Mr Adam Lloyd, who is a member of the Australian Institute of Geoscientists and International Association of Hydrogeologists. Mr Lloyd has verified and approved the data disclosed in the release, including the sampling, analytical and test data underlying the information.

Mr Lloyd is employed by Advisian, an independent consulting company. Mr Lloyd 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 JORC "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Lloyd consents to the inclusion in this ASX Announcement of the matters based on his information in the form and context in which it appears.

Cautionary Statement Regarding Forward-Looking Information

Statements regarding plans with respect to the Company's mineral properties may contain forward looking statements. Statements in relation to future matters can only be made where the Company has a reasonable basis for making those statements. This announcement has been prepared in compliance with the current JORC Code 2012 Edition and the current ASX Listing Rules. The Company believes it has a reasonable basis for making the forward-looking statements, including any production targets, based on the information contained in the announcement and in particular the JORC 2012 and NI 43-101 Technical Report - Bankable Feasibility Study.

All statements, trend analysis and other information contained in this document relative to markets for Kalium Lakes, trends in resources, recoveries, production and anticipated expense levels, as well as other statements about anticipated future events or results constitute forward-looking statements. Forward-looking statements, are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions. Forward-looking statements are subject to business and economic risks and uncertainties and other factors that could cause actual results of operations to differ materially from those contained in the forward-looking statements. Forward-looking statements are based on estimates and opinions of management at the date the statements are made. Kalium Lakes does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Investors should not place undue reliance on forward-looking statement

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Kalium Lakes Limited

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Non-Executive Chairman Managing Director Executive Director Non-Executive Director

Chief Financial Officer and Company Secretary:

Company Secretary:

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