

ASX Release

Tuesday 27 February 2018

Purification Plant Recovery Optimisation

Kalium Lakes Limited (KLL) is pleased to provide an update in relation to testwork optimisation for the Purification Plant. The recent work has utilised harvested salts from the pilot evaporation ponds at its 100% owned Beyondie Sulphate of Potash Project (BSOPP).

- Duplicated laboratory trials at both K-UTEC in Germany and Saskatchewan Research Council (SRC) in Canada have continued to optimise process flow sheet design. The testwork program has continued to build on the previous work completed in the Prefeasibility Study (PFS).
- Optimisation works for batch recovery trials within the processing plant utilising more than one tonne of harvested salts from the pilot evaporation ponds have achieved individual recoveries of between 90% to 98%.
- **Overall SOP recoveries have the potential to increase to more than 80%**, including evaporation pond losses associated with both leakage and recovery.
- SOP product quality has been enhanced to a **premium 51-52% K₂O product** with minimal chloride (<0.5%) and insoluble material.
- Further optimisation and equipment vendor testwork is ongoing utilising eight(8) tonnes of recently harvested salts from the pilot evaporation ponds.
- Final product specifications aim to produce a Kalium Lakes Premium SOP, Granular SOP and horticulture grade Soluble SOP suite of products.

Managing Director, Brett Hazelden, commented: "Kalium Lakes is continuing to reduce process risk by duplicating work in both Germany and Canada so as to independently verify and optimise the repeatability of the proposed flowsheet.

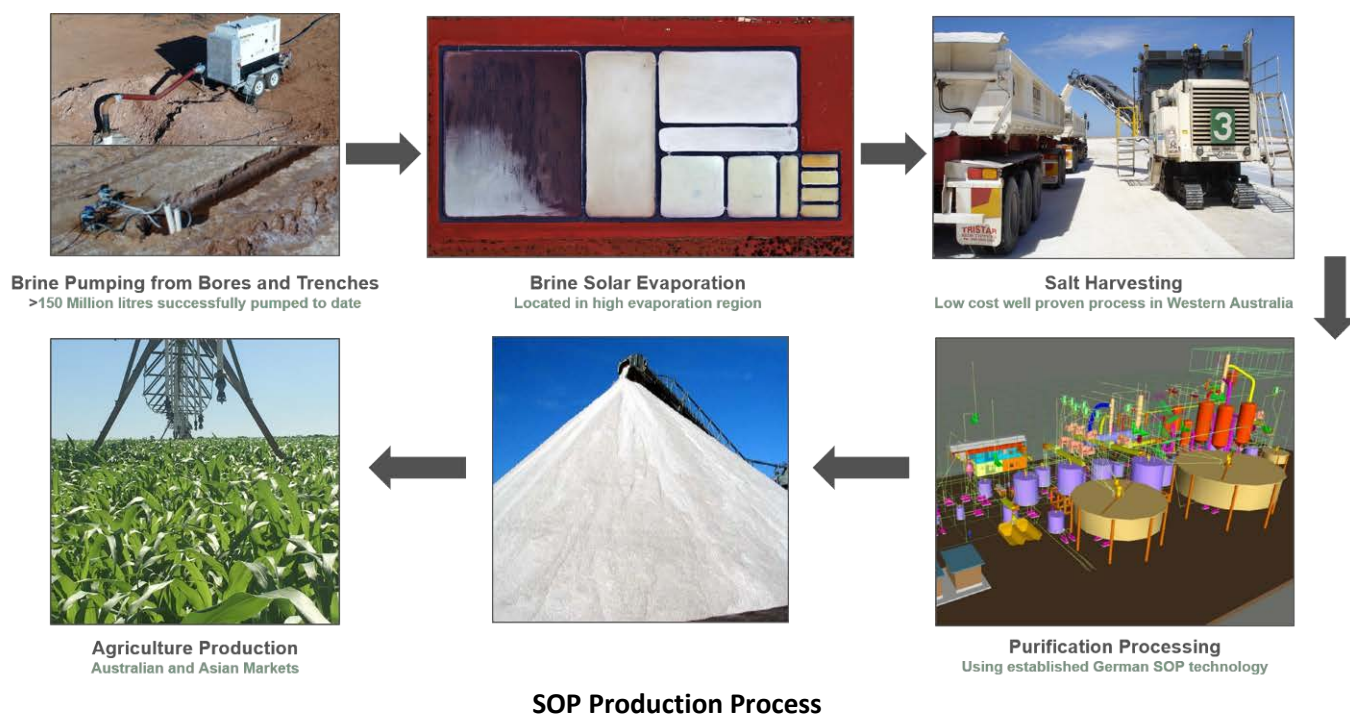
"Utilising salts from our large scale pilot evaporation ponds has allowed us to produce representative mixed potassium salt samples which have then been utilised to optimise the process. The results to date have been considerably better than our Pre-Feasibility assumptions and we have continued to improve the final SOP product quality.

"We are now moving to the final phase of testing and optimisation with a further eight tonnes of material harvested and sent to the two international facilities. This material will provide bulk samples for equipment vendor testing to enable process guarantees to be put in place, as well as producing marketing samples for potential offtake customers," Mr Hazelden said.

Beyondie Sulphate Of Potash Project Production Process

SOP can be produced by extracting brine (hypersaline water) from underground aquifers, then evaporating the water to precipitate mixed potassium salts which are, in turn, purified to produce the SOP fertiliser, as illustrated in the production process flow chart below:

- (a) **Brine Pumping:** brine is extracted from basal sands (or the lower aquifer) using submersible bores, as well as pumping of trenches from the upper aquifer;
- (b) **Brine Solar Evaporation:** brine is pumped to solar evaporation ponds where it sequentially precipitates calcium, sodium, potassium and magnesium mixed salts in separate ponds;
- (c) **Salt Harvesting:** the mixed potassium salts that have crystallized from the solar evaporation ponds are mechanically harvested and stockpiled;
- (d) **Purification Processing:** the mixed potassium salts are fed into a purification plant facility where the potassium salts are converted into schoenite and separated from halite through a conversion and recycling process. The resultant schoenite slurry then undergoes thermal decomposition and crystallisation into SOP; and
- (e) **Premium SOP Fertiliser:** after drying and compaction in a purification plant, the SOP is ready to be used and sold as a final product.



Compliance Statement

The information in this document that relates to Exploration Targets, Exploration Results, Mineral Resources, Ore Reserves and Production Targets have been extracted from the report(s) listed below.

- 3 October 2017:

Pre-Feasibility Study with Maiden Ore Reserve Confirms Low Cost, Long Life and High Margin Beyondie SOP Project. (Including the attachment, JORC (2012) and NI 43-101 Technical Report, compiled by German Potash Experts and Competent Persons, K-UTEC AG Salt Technologies (K-UTEC)).

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.

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 on 3 October 2017, including any production targets, based on the information contained in the announcement and in particular the JORC 2012 and NI 43-101 Technical Report.

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 statements. *** ENDS ***

Corporate Profile (as at 26 February 2018)

Kalium Lakes Limited is an exploration and development company, focused on developing the Beyondie Sulphate Of Potash Project in Western Australia with the aim of producing Sulphate of Potash (SOP) for the domestic and international markets.

The Beyondie SOP Project comprises 15 granted exploration licences and a miscellaneous licence covering an area of approximately 2,400 square kilometres. This sub-surface brine deposit will supply an evaporation and processing operation located 160 kilometres south east of Newman.

The results of the Pre-Feasibility Study (PFS), announced on 3 October 2017, confirmed that the Project, is technically and financially robust. The key outcomes of the PFS are:

- Indicated Resource of 4.37 Mt @ 14,000 mg/l SOP at a cut-off grade of 3,500mg/l K and an Inferred Resource of 13.74 Mt @ 12,788 mg/l SOP at a cut-off grade of 3,500mg/l K.
- Maiden Probable Reserve of 2.66 Mt @ 14,210 mg/l SOP at a cut-off grade of 3,500mg/l K based solely within the Stage 1 Approval Footprint, which represents ~21% of total lake surface area within the tenement package.
- Development base case of 150 ktpa SOP, with the option to incrementally phase the project, through a ramp up from 75 ktpa to 150 ktpa SOP, to minimise operational and financial risks.
- Development base case pre-tax NPV10 of A\$388M, IRR of 28.7%, average EBITDA of A\$83 Mpa, EBITDA margin of 62%, a payback period of 3.7 years and Life of Mine (LOM) free cash flows of more than +A\$1B, based on an initial 21 year LOM and a USA\$500/t SOP sales price @ A\$/A\$US exchange rate of 0.75.
- Estimated LOM Operating Cash Cost of A\$244-253/t SOP FOB Geraldton or Fremantle Port. This places the BSOPP in the lowest quartile cost of global SOP production.
- Pre-production Capital Cost of A\$220 million including a 78 kilometre gas pipeline for the base case or A\$124 million for the phased ramp-up scenario.
- Potential additional revenue associated with recovery of magnesium by-products which have not been included in the current financial outcomes.

The Company is also a Joint Venture partner with BCI Minerals Limited (BCI) in the Carnegie Potash Project, a potash exploration project located approximately 220 kilometres north-east of Wiluna. Carnegie comprises one granted exploration licence and two exploration licence applications covering a total area of approximately 1,700 square kilometres.

Kalium Lakes Limited

ABN: 98 613 656 643

ASX: KLL

Ordinary Shares on Issue: 169,793,465

Board of Directors:

Mal Randall	Non-Executive Chairman
Brett Hazelden	Managing Director
Rudolph van Niekerk	Executive Director
Brendan O'Hara	Non-Executive Director

Chief Financial Officer and Company Secretary:

Frederick Kotzee

Company Secretary:

Gareth Widger

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