ASX ANNOUNCEMENT
ASX: APC

2 March 2022

Lake Wells Sulphate of Potash Project

Australian Potash Limited (**ASX: APC** or the **Company**) is pleased to provide a summary comparison of the Lake Wells Sulphate of Potash Project (**LSOP**), 160 kilometres north-east of Laverton in the north-eastern Goldfields of Western Australia. The early works program has focussed on progressively reducing development risk.

Key aspects in this phase are:

- **Lake Wells is a 100% borefield Sulphate of Potash project with zero kilometres of trench abstraction**
  - **Being developed without any recourse to a trenching system to abstract, or mine, the potassium rich brines makes the Lake Wells project unique amongst its peers**
  - **20 bores of the 79 bores required in steady state operations have been drilled**
  - **Brine volume flow rates and grade in test-pumping in line with Hydrogeological (Reserve) model[i]**
- **The Lake Wells' evaporation network comprises on-lake pre-concentration ponds and off-lake, HDPE lined harvest ponds**
  - **460 geotechnical test-sites sampled across the surface of the lake system have identified a consistent layer of clay preventing vertical seepage of brine**
  - **The pre-concentration pond construction methods were trialled and demonstrated the veracity of the LSOP pond construction design**
  - **Evaporation pond development does not rely on long transfer pipelines or trenches of pre-concentrated brine**
- **The Lake Wells' processing design is based on the reliable and proven 'North American' flow sheet with direct schoenite flotation and belt filters**
  - **LSOP flow sheet has been used successfully at the largest ex-China solar SOP producer for over 50 years**
  - **Several contemporary developments using similar flow sheet design have commissioned successfully and transitioned to profitable operations**
- **The Lake Wells' processing plant will be contracted on an EPC basis providing process, time and cost guarantees from a successful Western Australian engineering head contractor**
  - **Preferred engineering contractor GR Engineering Services Limited (ASX: GNG) is a specialist EPC contracting firm with exposure and experience to the SOP sector**
- **Lake Wells SOP Project is shovel ready**

APC Managing Director and CEO, Matt Shackleton, commented: "What is imperative to the success of the LSOP, and it is arguable, all brine operations, is the consistent flow of sufficient brine to the pond network.

"There are no opportunities to short cut the concentration process required to produce these potassium salts. Therefore, any attempt to do so ultimately results in a protracted start up timeline where additional working capital is required, which is what we are seeing now with other emerging producers.

"The extensive work APC has completed to date demonstrates that bores are a reliable and predictable abstraction method and this significantly de-risks the start up sequence.

"In Western Australia, paleochannel borefield abstraction methods are well understood, with the vast majority of mining operation water supply, including in the Goldfields, coming from these sources. The technology to drill, test, develop and equip them is common and inexpensive. After countless thousands of hours of operations, they can rightly be regarded as low-risk.

"We chose strategically in 2015 to proceed with a 100% borefield development as we had not seen, and still have not seen, any evidence that the alternative trench mining system works for SOP."

Progress

Prior to mobilisation of equipment for the first phase production bore drilling program, APC had developed several bores at Lake Wells. Three of these are considered suitable to take forward into operations.

Through the first phase program a further 17 bores have been developed, bringing to 20 the number of brine production bores at Lake Wells that will be utilised during start up and continue through steady state operations.

On a linear basis this represents the development of over 25% of the LSOP's borefield: but on a volume basis the bores developed to date account for approximately 35% of required brine flow for full scale production.

Evaporation network

All of the potash projects being proposed in Western Australia are brine based 'solar salt' projects. The critical step in these operations is allowing sufficient start up time to manage the evaporation and subsequent crystallisation of the various salt species present in the brines: the target salts are the potassium bearing ones.

Failure to manage an appropriate brine flow has knock-on impacts to the evaporation network, as the only way to slow down the evaporation of the brine in the network is to add more brine: weather conditions cannot be changed.

The Lake Wells' operating model includes a 'buffer' pond at the start of the network, which will be fed year round from the borefield. The purpose of the buffer pond is to enable the storage of brine supply during the low evaporation periods (winter), that can then be discharged at a greater rate than is possible from the borefield directly, in the peak evaporation periods (summer) to better manage the pre-concentration ponds, to ensure they do not dry out and that the correct chemistry is maintained. The buffer pond fluctuates between 0.5m - 3.5m of brine depth and will hold, at peak capacity, up to 25% of the total annual LSOP brine demand.

APC Managing Director and CEO, Matt Shackleton, commented: "We have seen mistakes made in the initial control of the pre-concentration and harvest ponds that have resulted in salts precipitating that cannot be efficiently processed.

"APC places a critical level of importance on testing, planning and designing how to achieve a consistent plant feed grade and tonnage. Without the ability to match brine feed to variable evaporation rates, feed salts at other emerging SOP operations have been too high in sodium and too low in potassium. This has hindered plant commissioning and pushed back first SOP production and revenue.

"A controlled supply of brine to the buffer pond, through a reliable bore network, enables the management of brine chemistry through the ponds thereby allowing appropriate feed salts to be precipitated in the harvest ponds for recovery and downstream processing."

Progress

Thorough testwork across select aspects of the evaporation model is continuous and ongoing with the next sequence of work, currently underway in Australia and the US, comprising:

- Additional evaporation trials to map the ionic chemistry as the brine evaporates, which testwork is informed by additional data from the bores completed in the first phase program;
- Analysing and reviewing the expected solid salts composition from the harvest ponds;
- Translating harvest pond salt composition to the Veolia package to complete confirmatory testwork on the flow sheet, based on design values provided by Novopro; and
- Completing crushing testwork to size equipment.

Processing Plant

In line with adopting a 'risk-reduction' approach to the LSOP development, a strategic decision was made early in 2015 to pursue and adopt an accepted processing methodology with ample evidence of success.

To that end, through our consulting processing engineers Novopro, who are based in Quebec and who consult extensively across North America and the Middle-East, the LSOP will be developed using a tried and tested flow sheet similar to those currently in operation in the US at three potash operations, in Egypt, Jordan and Israel.

In addition, as APC is not reliant on debt or equity funding through any other sovereign export financing body, but instead has credit approved facilities with Australian institutions, the LSOP is not beholden to purchasing either technology or equipment that does not suit its purposes completely and without compromise.

APC Managing Director and CEO, Matt Shackleton, commented: "We are in the fortunate position of not having to compromise our choices of technology as we are not beholden to purchasing any proportion of our plant development from any particular country or supplier. This allows us to make decisions on the best technology and plant for our purposes.

"And of course, we did what any considered minerals project developer would do and that is to go with what has been proven to work, time and time again. The flowsheet we will build at the LSOP can be seen in operation at many sites across the western hemisphere.

"We have chosen a **low-risk borefield development** because we can see ample evidence of success pumping brine using borefields elsewhere.

"We have chosen a **conservative pond model** that allows us to control as best we can the rate of evaporation, impacting directly on how we control the volume and quality of plant feed stock.

"We have gone with a **successful, profitable and available flow sheet** for our plant design. And we consider being in control of our options on technology and equipment gives us the ability to drive our own success without having to compromise.

"In addition to the low-risk strategic choices we have made, we have the advantage of not being the 'first out of the blocks' in developing this style of project, in this commodity, in WA. We have the opportunity to understand lessons learned across the peer space. Importantly, with the benefit of the time we have taken and the patience we have exercised, we are confident we will avoid costly mis-steps."

This release was authorised by the Managing Director & CEO.

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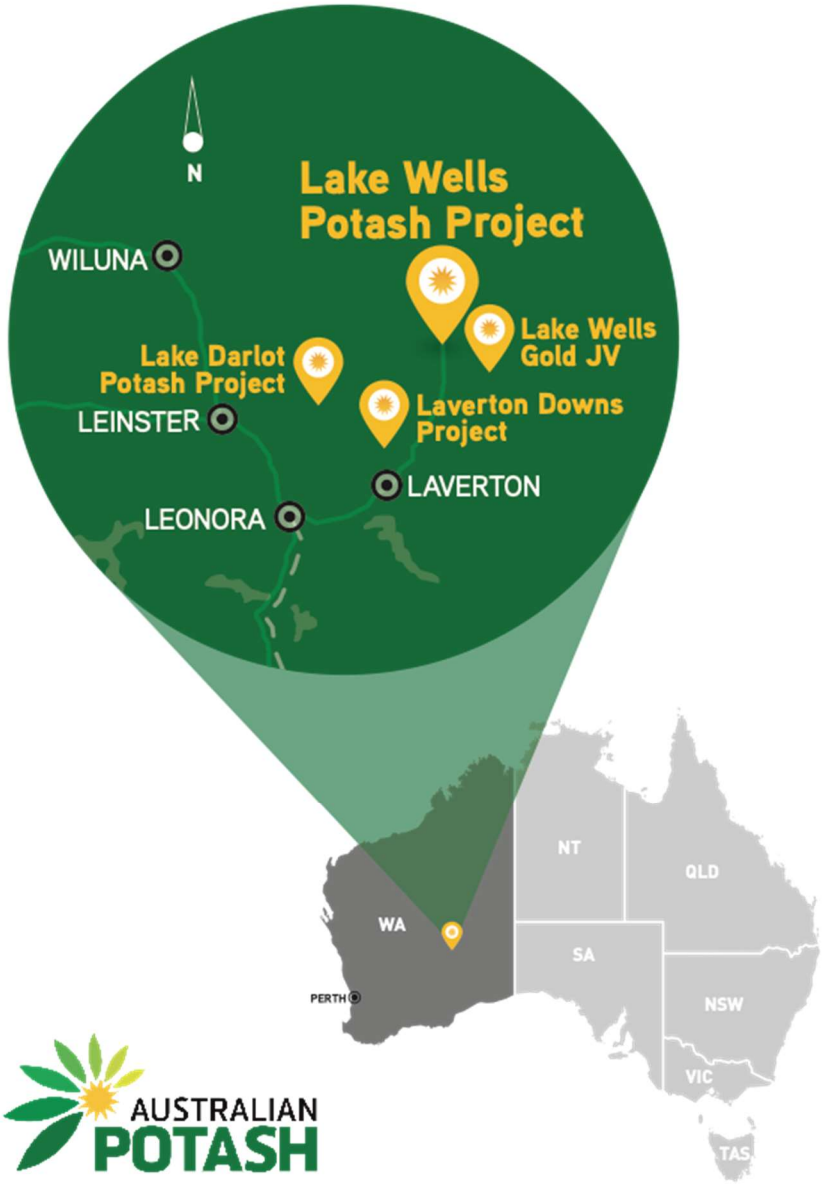
[i] Refer to ASX Announcements 23 November 2021 & 31 January 2022

About Australian Potash Limited



APC holds a 100% interest in the **Lake Wells Sulphate of Potash (LSOP),** located approximately 500km northeast of Kalgoorlie, in Western Australia's Eastern Goldfields. The Company is finalising pre-development plans for commencement of construction. First production from the LSOP is scheduled for 24 to 27 months from a Final Investment Decision.

K-Brite™ is a registered trademark brand of Australian Potash Limited and the brand under which the suite of high quality, premium SOP products from the LSOP will be marketed.

APC holds a 100% interest in the **Laverton Downs Project,** located 5kms north of Laverton, in Western Australia's Eastern Goldfields.[ii]

APC holds a 30% free-carried interest in the **Lake Wells Gold Project,** located 500km northeast of Kalgoorlie, in Western Australia's Eastern Goldfields.[iii]

Please visit www.australianpotash.com.au for more information.

[ii] Refer to ASX Announcement 9 April 2021
[iii] Refer to ASX Announcement 8 April 2021