

23 November 2021

## Lake Wells SOP Project Update

### Consolidating the Development Strategy

- **Bores developed to date of writing: 17 out of the 79 planned at operational start-up**
- **Bore performance verification program commenced in October 2021**
- **Initial short-term pumping testing indicating flow rates consistent with hydro-model**
- **Recruitment of experienced SOP plant operating personnel to prepare for operational readiness through construction**
- **Commercial lenders provided with Independent Technical Expert's (ITE) report and are progressing credit approvals**

Australian Potash Limited (**ASX: APC** or the **Company**) is pleased to provide the following update on the Lake Wells SOP Project (**LSOP**).

**Managing Director and CEO, Matt Shackleton, commented:** “The LSOP carries Australia’s largest JORC compliant Measured Resource of SOP<sup>#</sup> precisely because it is data rich. The current focus of our approach to developing this Resource, in addition to continued bore development, is the bore performance verification program.

“Lake Wells will be a 100% borefield brine extraction project. We will not rely on trenching for brine supply. The pre-production pumping program will confirm the metrics at each bore, primarily grade and flow rates. These are key measures of our ‘mining’ method.

“Flow rates observed in initial testing are consistent with the LSOP’s FEED hydrogeological model<sup>1</sup>. This is a very encouraging start and reflects the level of understanding our team have of the 18.1 million tonne Resource<sup>#</sup>.

“We are pleased to report that the bore development program is now well ahead of the Project schedule’s critical path. In line with that schedule, the field team will now revert to single shift drilling until March 2022. This allows the allocation of resources to other critical path items, detailed vessel design, additional verification programs on feed salts composition and so on, to maintain schedule.

“In anticipation of an easing in travel restrictions through 2022, we have also turned our attention to recruiting skilled and experienced solar-salt potash operations managers and personnel. Potash production is an emerging industry in Australia, so we are taking a global approach to sourcing the required operational expertise, just as we have successfully done throughout the evaluation and planning phases of the project. We believe placing the right people into vital positions early in the development program will help ensure the LSOP achieves its operational goals.

“The commercial lenders assessing the credit opportunity for the development of the LSOP, and who will form part of the syndicated debt facility with NAFI and EFA, have received the additional ITE’s report requested in mid-2021. Those banks are now progressing those credit applications and we look forward to providing shareholders with an update on those processes presently.”

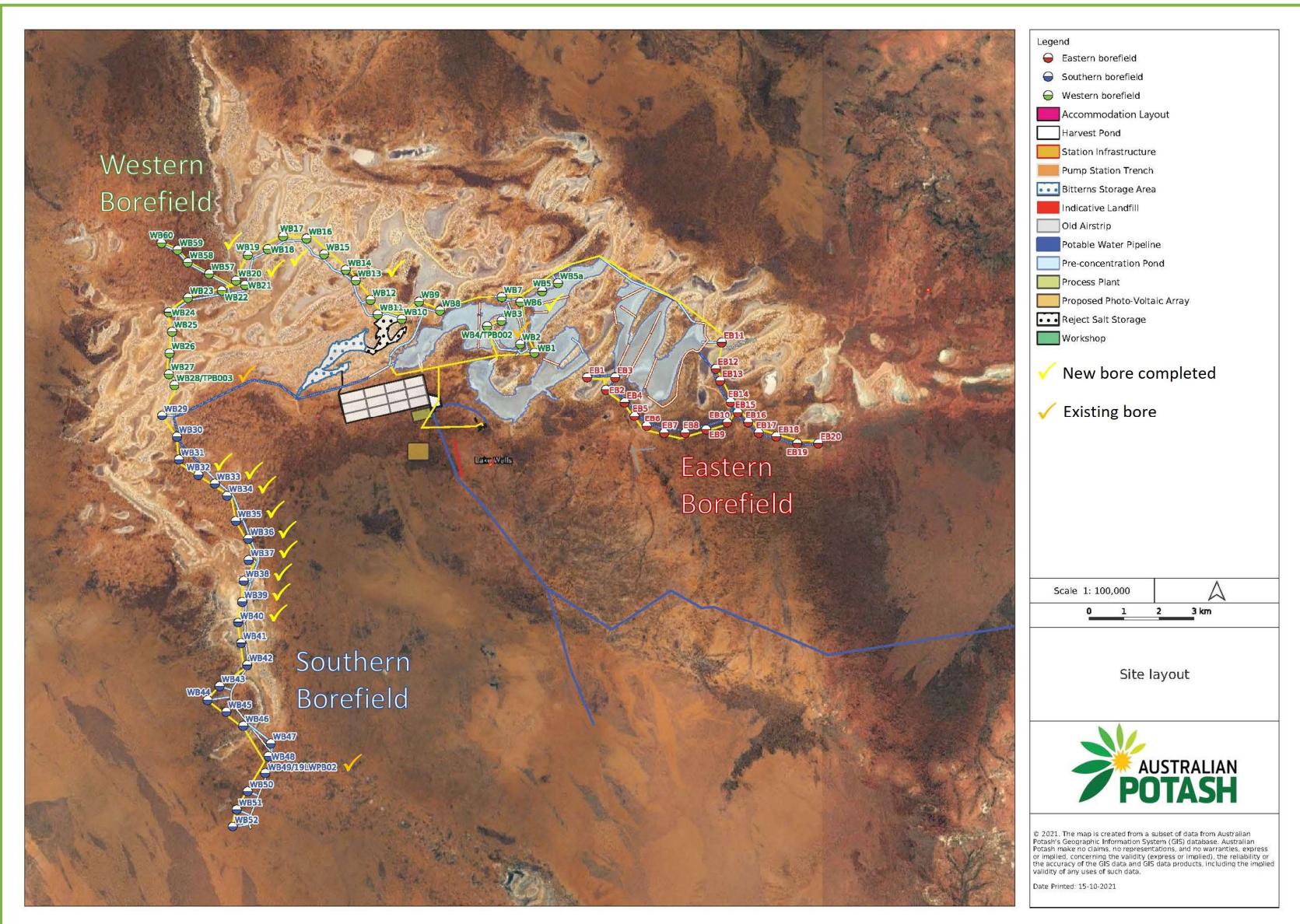


Figure 1: 17 of the planned 79 production bores have successfully been developed into the Lake Wells SOP Project's borefield

## Pump Test Program

The efficiency of a solar salt brine operation is a function of many variables, including primarily grade of contained mineral of interest, and flow rate of abstraction. A critical concentration of potassium is required to make a sulphate of potash (**SOP**) product, below which level the costs of abstraction render the operation unviable in most pricing environments.

In a bore pumping operation, upon completion of the construction of each bore it is critical that the bore is pump tested to assess the efficiency, to determine the maximum flow rate from the bore, and provide critical input in the flow model that ultimately determines the long-term pumping rate.

Table 1, below, highlights the short term pumping testing results for the four bores that have been tested of the recently completed bores at LSOP.

*Table 1: Summary of results from short term pumping testing program to date*

Bore #	Modelled flow rate (litres/sec)	Maximum flow rate* (litres/sec)	Bore diameter (inch)
<b>WB33</b>	10	<b>39</b>	8
<b>WB38</b>	18	<b>21</b>	10
<b>WB39</b>	18	<b>32</b>	8
<b>WB40</b>	18	<b>&gt;46^</b>	10

Notes: \*Based on single bore rate of operations

<sup>^</sup>Due to undersized test pumping equipment, a maximum flow rate was not able to be determined for bore WB40

Initial pumping test analysis only provides a maximum rate that the bore can be pumped under prevailing conditions. The long-term maximum pumping rate will be lower due to drawdown interference from other pumped bores and boundary effects due to the size of the aquifer. The maximum flow rates (in Table 1 above) are not used to determine pump sizes for permanent installation, rather the maximum rate provided by an initial test pumping analysis provides an upper limit on the size of the pump.

### *Reconciliation to the hydro model*

During the Front End Engineering Design (**FEED**) level of optimisation, external consultants AQ2 developed a hydrogeological model for the proposed development of the LSOP<sup>1</sup>. This model is constantly updated with additional data as that data is generated in the field. Short term pumping testing allows the reconciliation of the modelled early-time flow rate at each bore to the actual early-time flow rate likely to be recorded in operations. It is very encouraging to see evidence from short term testing consistent with the currently modelled flow rates.

### **3-Month Outlook**

- Commercial banks' credit approvals process finalisation; documentary close on syndicated debt facility
- Bore drilling and development to continue with a target of between 30% and 50% of the borefield by volume developed through Q1 2022
- Short term pumping testing to continue, with a transition to extended testing towards the end of Q4 2021/beginning of Q1 2022

- Processing test-work program to be accelerated to facilitate detailed vessel sizing and design
- Capital estimates being optimised ahead of final investment decision.

This release was authorised by the Board of the Company.

**Matt Shackleton**

Managing Director & CEO

[m.shackleton@australianpotash.com.au](mailto:m.shackleton@australianpotash.com.au)

+61 (0) 438 319 841

**Michelle Blandford**

Company Secretary

[m.blandford@australianpotash.com.au](mailto:m.blandford@australianpotash.com.au)

+61 (0) 408 088 295

**#Mineral Resource Estimate**

The information in this report that relates to the Mineral Resource is based on information announced to the ASX on 8 August 2019. APC confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the Estimate in the relevant market announcement continue to apply.

Hydrogeological Unit	Volume of aquifer (MCM)	Specific Yield (mean)	Drainable Brine Volume (MCM)	K Concent <sup>n</sup> (mg/L, weighted mean value)	SOP Grade (mg/L, weighted mean value)	SOP Resource (MT)
Loam	5,180	10%	518	4,009	8,941	4.6
Upper aquitard	10,772	7%	754	3,020	6,735	5.1
Crete	479	5%	24	2,386	5,320	0.1
Upper sand	801	17%	136	3,435	7,660	1.0
Lower aquitard	9,502	8%	760	3,367	7,509	5.7
Mixed aquifer	440	17%	75	3,645	8,129	0.6
Basal sand	503	23%	116	3,415	7,616	0.9
<b>Total (MCM/MT)</b>	<b>27,678</b>		<b>2,383</b>	<b>3,343</b>	<b>7,455</b>	<b>18.1</b>

*Measured JORC Mineral Resource Estimate for Lake Wells Sulphate of Potash Project based on modelled aquifer volume, specific yield and weighted mean K concentrations (derived from modelling)*

**Forward Looking Statements**

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 forward-looking 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 or any other referenced announcement. No obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

<sup>1</sup> Refer ASX Announcement 20 April 2021

## 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.<sup>i</sup>

APC holds a 30% free-carried interest in the **Lake Wells Gold Project**, located 500kms northeast of Kalgoorlie, in Western Australia's Eastern Goldfields.<sup>ii</sup>

Please visit  
[www.australianpotash.com.au](http://www.australianpotash.com.au)  
 for more information.

<sup>i</sup> Refer ASX Announcement 9 April 2021

<sup>ii</sup> Refer ASX Announcement 8 April 2021