

# Mineral Resource Statement

## MINERAL RESOURCE STATEMENT AS AT 30 JUNE 2021

Australian Potash Limited (**APC**) presents its Mineral Resource Statement as at 30 June 2021 for the Lake Wells Sulphate of Potash Project (**LSOP**). There has been no change to the statement since previously disclosed.

A Probable Ore Reserve for the LSOP was announced in conjunction with a Definitive Feasibility Study (**DFS**) on 28 August 2019 of 3.6Mt sulphate of potash (**SOP**). Recovering 81.5% of the Probable Reserve (pond and process losses) is sufficient to supply the LSOP with 95% of the brine required to produce 100,000tpa premium SOP for the proposed 30 year mine life.

Supporting the Probable Ore Reserve is a Measured Mineral Resource Estimate (**MRE**) that was reported on 5 August 2019. In accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition (the **JORC Code 2012**), the results of the MRE are reported in terms of potassium (**K**), and SOP.

### Lake Wells Sulphate of Potash Project - Mineral Resource Estimate

In compliance with Australian and internationally recognised reporting standards, APC has reported a MRE using **specific yield**<sup>1</sup>, or **drainable porosity** that contains 8.1Mt of potassium. The Company believes this is an accurate estimate of the amount of potassium that can be abstracted from the measured aquifers and used in the production of SOP.

An MRE has been calculated on the LSOP's potassium deposit under the guidelines of both JORC Code 2012 and the recently adopted Guidelines for Resource and Reserve Estimation for Brines 2019. Under these internationally recognised guidelines the Mineral Resource is reported in terms of gravity recoverable brine as measured by the Specific Yield (**Sy**) of the host lithology.

The Measured Resource is a static estimate; it represents the volume of potentially recoverable brine that is contained within the defined aquifer. It takes no account of modifying factors such as the design of a borefield (or other pumping scheme), which will affect both the proportion of the Resource that is ultimately recovered and changes in grade associated with mixing between each aquifer unit and the surrounding geology, which will occur once pumping starts. The MRE also takes no account of recharge to the uppermost aquifer which is a modifying factor that may increase brine-recovery from this unit.

With combined Resources of 8.1Mt K, that results in 18.1Mt SOP, APC has delineated a substantial Resource on which to base its planned operation for a sustained period.

The MRE covers the four key parameters as outlined in the brine resource guidelines:

- Determination of the Sy of the brine-aquifer;
- Definition of the brine-aquifer geometry;
- Determination of the concentration of the elements of interest; and
- Determination of appropriate boundaries for the MRE.

<sup>1</sup> Refer to ASX announcement 5 August 2019 'Major Resource Estimate Upgrade'. That announcement contains the relevant statements, data and consents referred to in this Statement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 5 August 2019 announcement; and 2. State that all the material assumptions and technical parameters underpinning the production target and the forecast financial information derived from a production target in the 5 August 2019 announcement continue to apply and have not materially changed.

## Measured Resource for APC Lake Wells Sulphate of Potash Project (JORC Code 2012-Compliant)

	Volume of Aquifer	Specific Yield	Drainable Brine Volume	K Conc (mg/L)	K	SOP <sup>1</sup>
Hydrogeological unit	MCM	Mean	MCM	Wgt Mean Ave	Mt	Mt
Loam	5,180	10%	518	4,009	2.08	4.6
Upper Aquitard	10,772	7%	754	3,020	2.28	5.1
Crete	479	5%	24	2,386	0.06	0.1
Upper Sand	801	17%	136	3,435	0.47	1.0
Lower Aquitard	9,502	8%	760	3,367	2.56	5.7
Mixed Aquifer	440	17%	75	3,645	0.27	0.6
Basal Sand	503	23%	116	3,415	0.40	0.9
<b>Total</b>	<b>27,677</b>	<b>9%</b>	<b>2,383</b>	<b>3,402</b>	<b>8.11</b>	<b>18.1</b>

### Lake Wells Sulphate of Potash Project - Probable Ore Reserve

As part of the LSOP DFS report<sup>2</sup> APC reported a Probable Ore Reserve estimate of 3.6Mt SOP. Where the Measured Resource is a static estimate of the volume of potentially recoverable brine, an Ore Reserve is the portion of the Mineral Resource that can be economically recovered and is calculated from a combination of groundwater flow modelling to simulate brine abstraction and the evaluation of associated engineering design, capital and operating costs and likely revenue.

The model predictions indicate that for the first 20 years of abstraction the target SOP production of 100,000tpa can be achieved from a borefield comprising 78 bores, located along the thalweg of the paleochannel at approximately 800m spacing. Modelled bore yields, drawing from both the upper and basal sand aquifers, range between 4L/s to 17L/s per bore, based on the variable

aquifer parameters and sand intervals. Target production can be sustained for a further 10 years (ie. 30 years in total) with the progressive addition of 30 additional bores pumping only from the upper sand aquifer. The potassium concentrations are predicted to range between 3,570mg/L to 3,255mg/L over the 30 year life of mine.

There is inherent uncertainty in the modelling of groundwater systems for long periods into the future. This uncertainty limits the Reserve categorisation to Probable and is addressed with sensitivity and risk analysis, using a plausible range of more conservative aquifer parameters. Over 30 years, the base case SOP abstraction is 3.8Mt (which represents 21% of the in-situ Measured Mineral Resource). For all sensitivity scenarios, brine production remains within 5% of the base-case estimate. The Reserve has been conservatively limited to the lower end of the sensitivity analysis which provides 3.6Mt SOP for a 30 year mine life.

<sup>2</sup> Refer to ASX announcement 28 August 2019 'Australian Potash Ltd Announces Definitive Feasibility Study'. That announcement contains the relevant statements, data and consents referred to in this Statement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 28 August 2019 announcement; and 2. State that all the material assumptions and technical parameters underpinning the production target and the forecast financial information derived from a production target in the 28 August 2019 announcement continue to apply and have not materially changed.

# Mineral Resource Statement



Figure 13: Trial evaporation pond at LSOP

## Annual Statement of Mineral Resources

The Annual Statement of Mineral Resources as at 30 June 2021 presented in this Report has been prepared in accordance with the JORC Code 2012 and the ASX Listing Rules.

On 5 August 2019, APC announced an upgrade to the MRE<sup>3</sup>. Ore Reserves were declared as part of the DFS released on 28 August 2019<sup>4</sup>. APC is not aware of any other new information or data that materially affects the information included in this Annual Statement and confirms that all the material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

<sup>3</sup> Refer to ASX announcement 5 August 2019 'Major Resource Estimate Upgrade'. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 5 August 2019 announcement; and 2. State that all the material assumptions and technical parameters underpinning the production target and the forecast financial information derived from a production target in the 5 August 2019 announcement continue to apply and have not materially changed.

<sup>4</sup> Refer to ASX announcement 28 August 2019 'Australian Potash Ltd Announces Definitive Feasibility Study'. That announcement contains the relevant statements, data and consents referred to in this Statement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 28 August 2019 announcement; and 2. State that all the material assumptions and technical parameters underpinning the production target and the forecast financial information derived from a production target in the 28 August 2019 announcement continue to apply and have not materially changed.

## Mineral Resources' Corporate Governance

Due to the nature, stage and size of APC's existing operations, the Board believes there would be no efficiencies gained by establishing a separate mineral reserves and resources committee responsible for reviewing and monitoring APC's processes for estimating Mineral Resources and Ore Reserves and for ensuring that the appropriate internal controls are applied to such estimates. However, APC ensures that any Mineral Resource and Ore Reserve estimations are prepared by competent geologists and hydrogeologists and are reviewed independently and verified including estimation methodology, sampling, analytical and test data. APC reports Mineral Resource estimates in accordance with the JORC Code 2012.

## Competent Persons' Statements

The information in this Report that relates to Mineral Resources and Ore Reserves is based on information that was compiled by Mr Duncan Gareth Storey. Mr Storey is a Director and Consulting Hydrogeologist with AQ2, a firm that provides consulting services to the Company. Neither Mr Storey nor AQ2 own either directly or indirectly any securities in the issued capital of the Company. Mr Storey has 30 years of international experience. He is a Chartered Geologist with, and Fellow of, the Geological Society of London (a Recognised Professional Organisation under the JORC Code 2012). Mr Storey has experience in the assessment and development of palaeochannel aquifers, including the development of hypersaline brines in Western Australia. His experience and expertise are 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'. Mr Storey consents to the inclusion in this report of the matters based on this information in the form and context as it appears.

The information in this Report that relates to Exploration Results is based on information compiled by Christopher Shaw who is a member of the Australian Institute of Geoscientists. Mr Shaw is an employee of Australian Potash Ltd. Mr Shaw 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 Shaw consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this Report that relates to mineral processing is based on information compiled by Mr Antoine Lefavre, P.Eng, a Competent Person who is a Member of the Ordre des Ingénieurs du Québec (Order of Engineers of Quebec) and an employee of Novopro, a firm that provides consulting services to the Company. Neither Mr Lefavre nor Novopro own either

directly or indirectly any securities in the issued capital of the Company. Mr Lefavre is a Chemical Engineer employed by Novopro Projects Inc. and has 11 years of experience, with 8 years of potash processing that is relevant to the type of minerals recovered from deposits similar to the one under consideration and to the activity 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 Lefavre consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Forward Looking Statements

*This Report 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.*