

Thursday 28 October 2021

## Investor Presentation - Webinar

Kalium Lakes Limited (ASX: KLL) ("Kalium Lakes" or "the Company") is pleased to announce its participation in the ShareCafe Small Cap "Hidden Gems" Webinar, to be held Friday, 29 October 2021 from 12:30pm AEDT / 9:30am AWST.

Kalium Lakes' Chief Executive Officer, Rudolph van Niekerk, will provide an overview of the Beyondie SOP Project which, this month, became the first ever Australian-based producer of the premium fertiliser Sulphate of Potash.

This webinar can be viewed live via Zoom and will provide viewers the opportunity to hear from and engage with, a range of ASX-listed leading micro/mid cap companies.

To access further details of the event and to register at no cost, please copy and paste the following link into your internet browser:

[https://us02web.zoom.us/webinar/register/5416151767246/WN\\_yeWO-ozdRLqftCfMh9bwtA](https://us02web.zoom.us/webinar/register/5416151767246/WN_yeWO-ozdRLqftCfMh9bwtA)

A recorded copy of the webinar will be made available following the event and a copy of the investor presentation to be delivered during the webinar is attached.

\*\*\* ENDS \*\*\*

This announcement was approved and authorised for release by the Chief Executive Officer of Kalium Lakes Limited.

# BEYONDIE SOP PROJECT

KALIUM  
LAKES



## Investor Presentation

29 October 2021

# DISCLAIMER & COMPLIANCE STATEMENT

## **Not an Offer of Securities**

This document has been independently prepared by Kalium Lakes Limited ("Kalium Lakes", "KLL" or "the Company").

This document is for informational purposes only. This document does not constitute an offer, invitation, solicitation or recommendation with respect to the purchase or sale of any security in Kalium Lakes. This document does not constitute an offer to sell, or a solicitation of an offer to buy, any securities in any jurisdiction, or a securities recommendation. This document is not a prospectus, product disclosure statement or other offering document under Australian law or any other law, and will not be lodged with the Australian Securities and Investments Commission.

The distribution of this document (including an electronic copy) outside Australia may be restricted by law. If you come into possession of this document, you should observe such restrictions. Any non-compliance with these restrictions may contravene applicable securities laws. Refer to 'Foreign Selling Restrictions' section of this document for more information. By accepting this document you represent and warrant that you are entitled to receive such document in accordance with the restrictions and agree to be bound by the limitations contained herein.

In particular, this document may not be released to US wire services or distributed in the United States. This document does not constitute an offer to sell, or the solicitation of an offer to buy, any securities in the United States or any jurisdiction in which such an offer would be illegal. The New Shares have not been, and will not be, registered under the US Securities Act of 1933 or the securities laws of any state or other jurisdiction of the United States. Accordingly, the New Shares may not be offered or sold in the United States except in transactions exempt from, or not subject to, the registration requirements of the US Securities Act and applicable US state securities laws.

## **Summary Information**

This document contains a summary of information about Kalium Lakes and its activities that is current as at the date of this document. The information in this document is general in nature and does not purport to be complete or to contain all the information which a prospective investor or financier may require in evaluating a possible investment in Kalium Lakes or that would be required in a prospectus or a product disclosure statement prepared in accordance with the Corporations Act 2001 (Cth) ("Corporations Act").

## **No Liability**

The information contained in this document has been prepared in good faith by Kalium Lakes, however no guarantee representation or warranty expressed or implied is or will be made by any person (including Kalium Lakes and its affiliates and their directors, officers, employees, associates, advisers and agents) as to the accuracy, reliability, correctness, completeness or adequacy of any statements, estimates, options, conclusions or other information contained in this document.

To the maximum extent permitted by law, Kalium Lakes and its affiliates and their directors, officers employees, associates, advisers and agents each expressly disclaims any and all liability, including, without limitation, any liability arising out of fault or negligence, for any loss arising from the use of or reliance on information contained in this document including representations or warranties or in relation to the accuracy or completeness of the information, statements, opinions, forecasts, reports or other matters, express or implied, contained in, arising out of or derived from, or for omissions from, this document including, without limitation, any financial information, any estimates or projections and any other financial information derived therefrom.

Statements in this document are made only as of the date of this document unless otherwise stated and the information in this document remains subject to change without notice. No responsibility or liability is assumed by Kalium Lakes or any of its affiliates for updating any information in this document or to inform any recipient of any new or more accurate information or any errors or mis-descriptions of which Kalium Lakes and any of its affiliates or advisers may become aware.

## **Forward looking statements**

Certain information in this document refers to the intentions of Kalium Lakes, but these are not intended to be forecasts, forward looking statements or statements about the future matters for the purposes of the Corporations Act or any other applicable law. The occurrence of the events in the future are subject to risk, uncertainties and other actions that may cause Kalium Lakes' actual results, performance or achievements to differ from those referred to in this document. Accordingly Kalium Lakes and its affiliates and their directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of these events referred to in the document will actually occur as contemplated. Statements contained in this document, including but not limited to those regarding the possible or assumed future costs, performance, dividends, returns, revenue, exchange rates, potential growth of Kalium Lakes, industry growth or other projections and any estimated company earnings are or may be forward looking statements. Forward-looking statements can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. These statements relate to future events and expectations and as such involve known and unknown risks and significant uncertainties, many of which are outside the control of Kalium Lakes. Actual results, performance, actions and developments of Kalium Lakes may differ materially from those expressed or implied by the forward-looking statements in this document. Such forward-looking statements speak only as of the date of this document. There can be no assurance that actual outcomes will not differ materially from these statements. To the maximum extent permitted by law, Kalium Lakes and any of its affiliates and their directors, officers, employees, agents, associates and advisers:

- disclaim any obligations or undertaking to release any updates or revisions to the information to reflect any change in expectations or assumption;
- do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and
- disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

# DISCLAIMER & COMPLIANCE STATEMENT

## **Not financial product advice**

This document does not constitute financial product advice or take into account your investment objectives, taxation situation, financial situation or needs. This document consists purely of factual information and does not involve or imply a recommendation of a statement of opinion in respect of whether to buy, sell or hold a financial product. An investment in Kalium Lakes is considered to be speculative in nature. Before making any investment decision in connection with any acquisition of securities, investors should consult their own legal, tax and/or financial advisers in relation to the information in, and action taken on the basis of, this document.

## **Information in this document is confidential**

This document and the information contained within it are strictly confidential and are intended for the exclusive benefit of the persons to whom it is given. It may not be reproduced, disseminated, quoted or referred to, in whole or in part, without the express consent of Kalium Lakes (or as otherwise agreed within the confidentiality agreement). You agree to keep the information confidential, not to disclose any of the information contained in this document to any other person and not to copy, use, publish, record or reproduce the information in this document without the prior written consent of Kalium Lakes, which may be withheld in its absolute discretion.

## **Mineral resources and ore reserves**

It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"). Investors outside Australia should note that while ore reserve and mineral resource estimates of the Company in this document comply with the JORC Code, they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the "Canadian NI 43-101 Standards") or (ii) Industry Guide 7, which governs disclosure of mineral reserves in registration statements filed with the US Securities and Exchange Commission. Information contained in this document describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws. You should not assume that quantities reported as "resources" in this document will be converted to reserves under the JORC Code or any other reporting regime or that the Company will be able to legally and economically extract them.

## **Acceptance**

By attending an investor presentation or briefing, or accepting, accessing or reviewing this document you acknowledge and agree to the "Disclaimer" as set out above.

## **Competent Persons Statements**

The information in this document that relates to the Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target is based upon information compiled by Mr Adam Lloyd, a competent person who is an employee of Kalium Lakes. Mr Lloyd is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity which is being undertaken to qualify as a Competent Person for reporting of Exploration Results, Mineral Resources, Ore Reserves and Exploration Targets as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Certain information in this document is extracted from the ASX announcement titled "BSOPP Feasibility Study Complete – New 120ktpa Base Case" dated 18 August 2021 that relates to Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target and is based upon information compiled by Mr Adam Lloyd. Kalium Lakes confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement and, in the case of Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Kalium Lakes confirms that the form and context in which the Competent Person's findings are presented have not materially been modified from the original market announcement. Mr Lloyd consents to the inclusion in this document of the matters based upon his information in the form and context in which it appears.



# BEYONDIE SOP PROJECT OVERVIEW

- ✓ The Beyondie SOP Project is a two hour flight North West of Perth, on the border of the Little Sandy Desert, with natural high evaporation rates all year.
- ✓ SOP production at Beyondie a liquid brine operation, a well-known process, that uses the sun and wind to naturally evaporate fresh water from the brine, causing the production of potassium mixed salts which is then processed to premium SOP fertiliser.
- ✓ Brine is sourced from underground aquifers, using pumps stations at trenches and production bores.
- ✓ Construction is substantially complete and commissioning is underway with first SOP produced in October 2021 - the total project cost of ~\$280m to 90ktpa included construction of trenches, pumping stations, ponds, processing plant, gas power station, camp, airstrip, access road and an 80km gas pipeline.
- ✓ The SOP process plant design is based on a proven technology from SOP process experts, Ebtec, complete with process and throughput guarantees.
- ✓ Low resource intensity on site – ~30 people on site are required to run operations for steady state SOP production at 90 and 120ktpa production levels.
- ✓ SOP Product is trucked to Perth for collection by end users on the West Coast, or taken to port for distribution to the east coast of Australia and New Zealand. Excess product will be shipped to South East Asian markets.
- ✓ Project expansion to 120ktpa – to take advantage of strong SOP pricing, project team on site and expansion of 100% take or pay offtake.



# KLL BY THE NUMBERS

1<sup>st</sup>

The first SOP producer in Australia/NZ

50<sub>yr</sub>

Mine life<sup>1</sup>

100%

Of SOP currently imported into Australia

7 Mtpa

Global SOP Market Size - supply constrained

5 Mt

Of Sulphate of Potash Beyondie Ore Reserve

\$280<sub>m</sub>

(A\$) Cost of initial Processing Plant & Resource Development

98%

Project complete to produce Standard Grade SOP

100%

Binding offtake with K+S for 10 years<sup>2</sup>

3.2%

Low cost debt with NAIF and KfW 10 year term – principal repayments commence March 2024

120<sub>kt</sub>

Annual Production Target

\$484<sub>m</sub>

(A\$) NPV<sub>8</sub> unlevered pre-tax on 120ktpa expansion LOM plan<sup>3</sup>

US\$617<sub>t</sub>

Forecast 2022 average standard grade SOP price CFR Aust<sup>3</sup>

\$375<sub>t</sub>

(A\$) AISC (real cashflows) – Low Cost Quartile producer at 120ktpa

\$70<sub>m</sub>

(A\$) Annual LOM EBITDA<sup>4</sup> at 120ktpa production rate

41%

LOM EBITDA Margin<sup>4</sup> at 120ktpa production rate

1. The 120ktpa mine plan comprises Ore Reserves (77%) and Indicated Mineral Resources (13%), it is partly based on Inferred Mineral Resources (10%).

2. K+S offtake in place for all 120ktpa production.

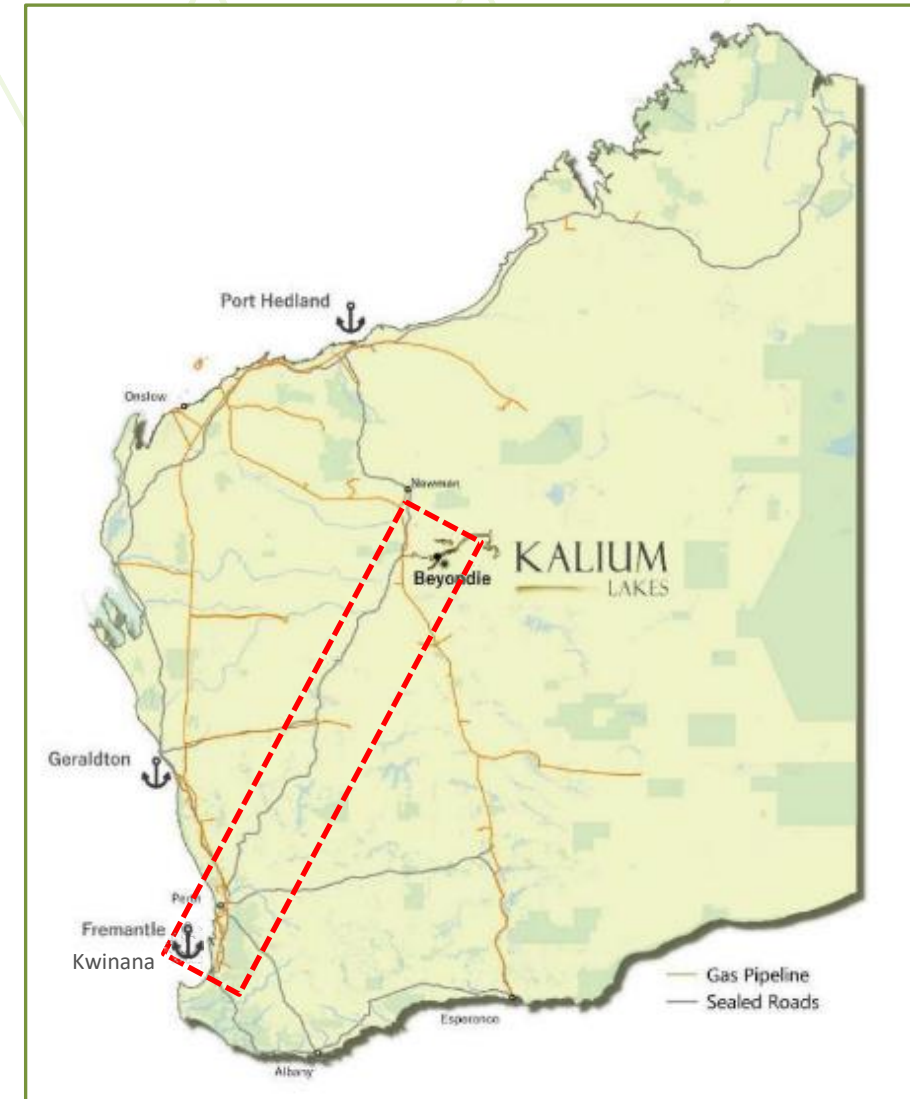
3. Based on forecasts provided to KLL by CRU/Argus in July 2021.

4. Nominal cashflows – based on ASX announcement – New 120ktpa Base Case for BSOPP dated 18 August 2021. Refer to page 22 in this presentation for further information.



# SUCCESSFUL ACHIEVEMENT OF FIRST SOP PRODUCT BEYONDIE PROJECT TO BE FIRST HIGH GRADE SOP PRODUCER

- ✓ Kalium Lakes has successfully achieved first production at the Beyondie SOP Project on 4 October 2021
- ✓ First producer of SOP in Australia – premium high-grade product
- ✓ Project completion schedule and cost remain in line with revised May 2020 capital expenditure budget<sup>1</sup> of \$280million<sup>2</sup>
- ✓ First sales to K+S via 100% Take or Pay Offtake scheduled for Q4 CY21 with achieved pricing in line with financial model<sup>3</sup>
- ✓ First sales into a buoyant SOP market – average year-on-year price increase forecast
- ✓ Long life operation – 50 year mine life with first 30 years based on 88% reserves only, with significant additional expansion opportunity
- ✓ Project expansion to 120ktpa<sup>4</sup> – take advantage of strong pricing, project team on site and expansion of 100% take or pay offtake



1. Refer to the revised capital expenditure budget set out in ASX Announcement dated 21 May 2020 – “Investor Presentation – Project Update & Equity Raising”.  
2. \$280m is the final forecast cost once all construction, commissioning and punch list work for the project is complete. These remaining activities are not essential for commencement of production ramp-up.  
3. Refer pricing at page 7.  
4. Initial target production target of 90ktpa by March 2022.

# SOP – THE PREMIUM POTASH FERTILISER

## Key Highlights









- ✓ The two most common types of potassium fertiliser are Muriate of Potassium (**MOP**) and Sulphate of Potash (**SOP**)
- ✓ SOP is a premium fertiliser essential for high value crops and historically trades at a substantial premium to MOP of ~US\$200/t<sup>1</sup>
- ✓ Global use of SOP is supply constrained, with Australia a 100% net importer prior to imminent production by KLL
- ✓ Predominantly 2 types of SOP production:
  - 1. Primary SOP Production** – SOP is produced as the primary product through evaporation of potassium containing brines, resulting in the crystallisation of potassium mixed salts, which are then purified to SOP fertiliser in a process plant.
  - 2. Mannheim process** – MOP is converted to SOP and accounts for ~50% of all SOP production<sup>2</sup>. The cost of MOP typically accounts for 60-70% of the total cost of the Mannheim process to produce SOP<sup>2</sup>, which means that MOP prices have a direct impact on SOP prices.
- ✓ Uncertainty surrounding Belarusian supply has been the cornerstone of global MOP markets over recent weeks, with MOP spot prices increasing as a result.<sup>3</sup>
- ✓ SOP prices have recently been rising steeply on the back of higher MOP prices and increased shipping costs, consistent with KLL's forecasts for Q4 CY21.

1. Based on Industry consultant and third party market advice to KLL

2. Argus Potash Analytics – May 2021

3. CRU Weekly Report – 9 September

4. <https://investingnews.com/daily/resource-investing/agriculture-investing/potash-investing/types-of-potash-sop-mop/>

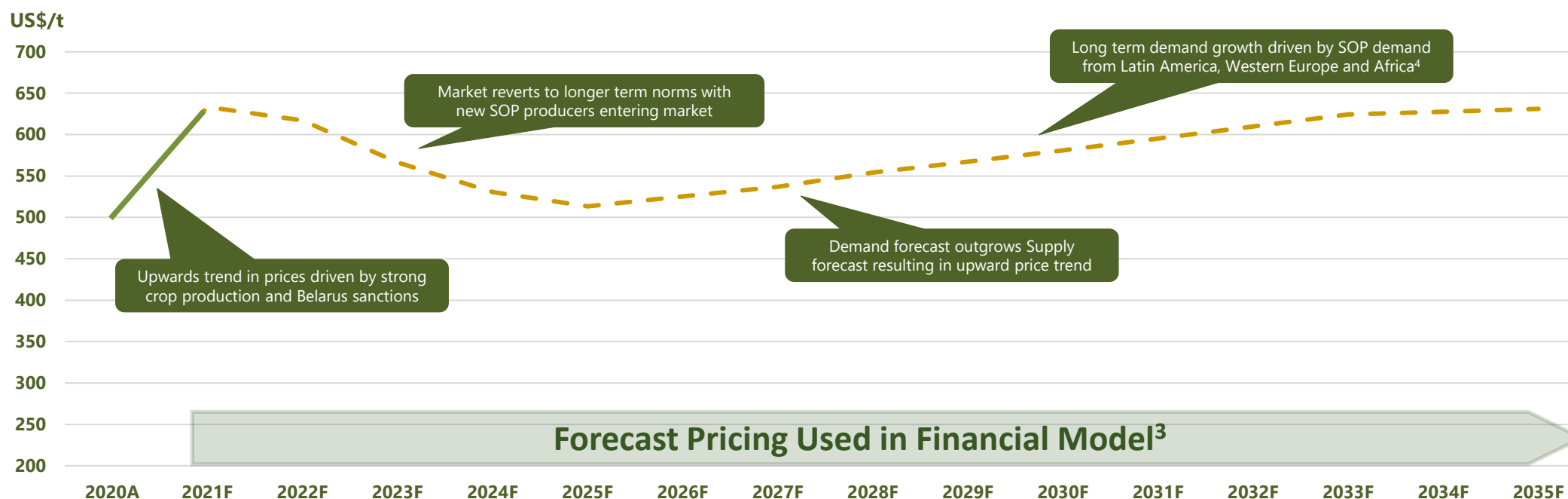
MOP	SOP
Example crops <sup>4</sup>	Example crops
   	   
<ul style="list-style-type: none"><li>✓ Most common potash fertilizer</li><li>✓ Contains high level of chlorides</li><li>✓ Suited to high chloride crops such as rice, maize and wheat</li><li>✗ Not suited to soils with high levels of chloride</li><li>✗ High levels of chloride can be toxic to fruit and vegetables</li></ul>	<ul style="list-style-type: none"><li>✓ Purer form of potash</li><li>✓ Chloride free source of potassium and sulphur</li><li>✓ Improves crop yield and resilience</li><li>✓ Preferred for high value crops like fruits, vegetables and nuts</li><li>✓ Historically priced at a premium to MOP</li></ul>



# ATTRACTIVE SOP PRICE OUTLOOK

- Strong SOP price outlook driven by:
  - ✓ Strong demand from farmers – crop prices are at eight-year highs and are anticipated to remain elevated until H1 2022<sup>1</sup>
  - ✓ Coordinated global sanctions against Belarus - ~ 20% of global potash supply affected<sup>2</sup>
  - ✓ Strong positive trend in SOP price forecast supports immediate expansion to 120ktpa

## CFR Australia SOP Price Forecast (Standard Grade, Real<sup>3</sup>)



1. CRU Weekly report – 24 May 2021

2. CRU Reference in Stockhead interview – 5 July 2021

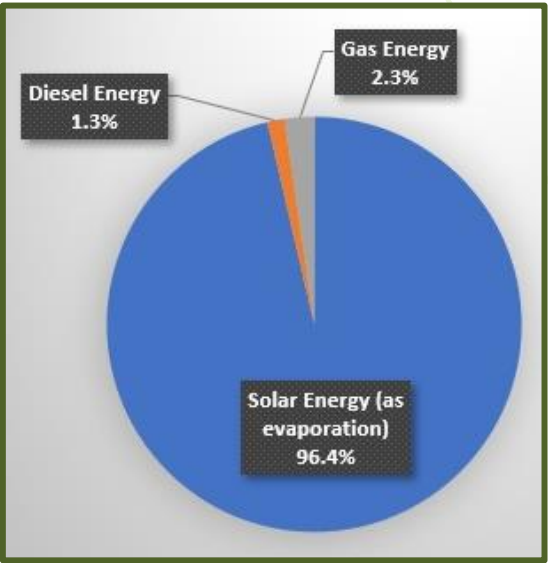
3. SOP price forecasts are KLL's forecast prices for standard grade SOP on a CFR Australia basis in real terms. SOP pricing forecasts are calculated as the mid-point of price forecasts derived from data prepared by CRU and Argus. Comparative to standard grade product prices, granular and soluble grade SOP products are expected to achieve a price premium.

4. Argus Potash Analytics – May 2021

# STRONG ESG CREDENTIALS

## Low Energy Footprint

- Increased SOP usage drives improved crop yields and reduces deforestation (less than 1% chloride)
- Low carbon consumption footprint – Kalium Lakes’ process predominantly relies on natural evaporation and wind
  - ✓ Energy requirements, predominantly renewable energy with opportunities to replace all diesel power generation with renewable power supply for bore fields over time
  - ✓ Lower-production emissions relative to average potash fertiliser production (0.26 kgCO<sub>2</sub>e/kg SOP)<sup>1</sup>
  - ✓ High nutrient content minimises relative transport emission



GHG emission factors for fertilizers, seeds and pesticides <sup>1</sup>	
Agricultural Input	GHG Emissions (kg CO <sub>2</sub> e/kg)
Nitrogen fertilizer (as N)	6.69
Phosphate fertilizer (as P)	0.71
Potash fertilizer (as K)	0.46
Pesticides (as active ingredient)	5.41
Seed material	0.87

## Strong Indigenous Engagement



- Active engagement with traditional owners and land access agreements signed with both traditional owner groups:
  - ✓ Marputu Aboriginal Corporation RNTBC representing the Gingerana People, and
  - ✓ Mungarlu Ngurrarankatja Rirraunkaja Aboriginal Corporation representing the Birriliburu People
- Impeccable safety record with declining trends for Total Recordable Injury Frequency Rates (TRIFR)<sup>2</sup> and Lost Time Injury Frequency Rates (LTIFR)<sup>2</sup> for the project development to date, with ongoing measures to improve and optimise

1. Source: Woods, Jeremy & Brown, Gareth & Estrin, Alexander. (2005). Bioethanol greenhouse gas calculator.  
2. LTIFR / TRIFR Formula: Number of injuries in the accounting period / Total hours worked in accounting period x 1,000,000

# The Beyondie SOP Project and Expansion to 120 ktpa





# PROCESS TO 90KTPA COMPLETION AND 120KTPA EXPANSION



## Bores and Trenches Brine Pumping



90KTPA	120KTPA ADDITIONS
<ul style="list-style-type: none"><li>✓ Construction</li><li>✓ Commissioning</li><li>✓ Operations Ramp up</li></ul>	<ul style="list-style-type: none"><li>• 15 x Production Bores at Sunshine</li><li>• 10 x Production Bores at Ten Mile</li><li>• Ten Mile West Bores &amp; Trenches in 2024</li></ul>

## Solar Evaporation & Salt Crystallisation



90KTPA	120KTPA ADDITIONS
<ul style="list-style-type: none"><li>✓ Construction</li><li>✓ Commissioning<sup>1</sup></li><li>✓ Operations Ramp up<sup>1</sup></li></ul>	<ul style="list-style-type: none"><li>• One New Primary Evaporation Train</li><li>• One New Recycle Evaporation Train</li></ul>

## Plant Feed Salt Stockpiles



90KTPA	120KTPA
<ul style="list-style-type: none"><li>✓ Harvesting Commenced</li><li>✓ Plant Feed Salt Haulage Commenced</li><li>✓ Plant Feed Salt Stockpile Ready</li></ul>	<ul style="list-style-type: none"><li>✓ No changes</li></ul>

Kalium Lakes' SOP process flow sheet with low risk expansion given delivered milestones to date

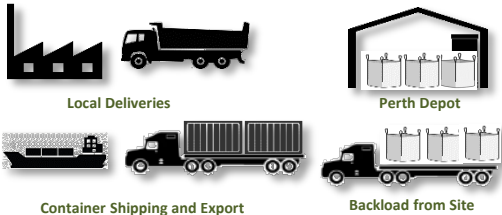
## Marketing & Sales

- ✓ 100% Offtake to 120ktpa
- ✓ Existing K+S Market Share
- ✓ SOP Sales Plan
- ✓ Buoyant SOP Market
- ✓ Improved payment terms for the first 3 years



## Product Haulage, Storage & Dispatch

- ✓ Backloading Agreements
- ✓ Depot & Dispatch Solutions



## SOP Purification Plant

90KTPA
<ul style="list-style-type: none"><li>✓ Gas, Water and Power Supply</li><li>✓ SSOP<sup>2</sup> Plant Construction</li><li>✓ First SOP Produced</li></ul>
<ul style="list-style-type: none"><li>★ SSOP Production Oct '21</li><li>★ GSOP<sup>3</sup> Production Dec '21</li></ul>
120KTPA
<ul style="list-style-type: none"><li>• One Additional Generator</li><li>• Small Water Supply Upgrade</li><li>• Plant Upgrade and Optimisation by SOP Process Experts - Ebtec</li></ul>



1. Other than recycle ponds that will be commissioned when recycle feed is available from the SOP plant; 2. SSOP = Standard Grade Sulphate of Potash; 3. GSOP = Granular Sulphate of Potash

# BRINE PRODUCTION BORES & TRENCHES

## 90ktpa

- ✓ All trenches complete
- ✓ All production bores complete
- ✓ All pump stations and brine transfer piping installed
- ✓ Remote pre-concentrator ponds complete



**Ten Mile Lake Trenches**



**Typical Trench Pump Station**



**Typical Bore Pump Station**

## 120ktpa Additions

- ✓ 10 additional production bores at Ten Mile and 15 additional production bores at Sunshine
- ✓ Brine extraction and transfer infrastructure installation complete, with only minor upgrades required
- ✓ Remote pre-concentrator ponds complete and operational, with no upgrade required
- ✓ Future design allowance (contingency / further expansion) for 5 additional production bores and 24km of trenches at Ten Mile West



# EVAPORATION PONDS PRODUCING SALTS

## Evaporation Ponds Design and Operation

- ✓ Primary ponds receive brine from bore & trenches
- ✓ Recycle ponds receive recirculating brine from the SOP plant
- ✓ All ponds are constructed off-lake, lined and with control gates to produce on spec potassium and NaCl salts
- ✓ 118,412 tonnes of SOP equivalent in brine pumped into ponds to date\*
- ✓ Harvesting activities underway



Crystalliser Ponds

## 90ktpa

- ✓ All primary evaporation ponds complete – 5 trains
- ✓ All recycle evaporation ponds complete – 3 trains

## 120ktpa

- One new primary train to be constructed
- One new recycle train to be constructed



Harvesting Activities Underway

\*As at end August 2021



# MAXIMISING VALUE-IN-USE OF WORLD CLASS SOP

## 90ktpa

- ✓ Purification Plant Designed and manufactured by K-UTEC and Ebner (Ebtec), world renowned and experienced German engineering
- ✓ Construction complete and commissioning near completion, within capital expenditure budget and on schedule
- ✓ Commercial SOP production to commence in CYQ421, and 90ktpa nameplate expected to be achieved by March '22
- ✓ Operations team in place and salt harvesting operations ongoing, with 107kt KTMS feed (equivalent of 10,700 tons of SOP) delivered to ROM stockpile as at mid September 2021



**Salt ROM Pad and SOP Purification Plant**

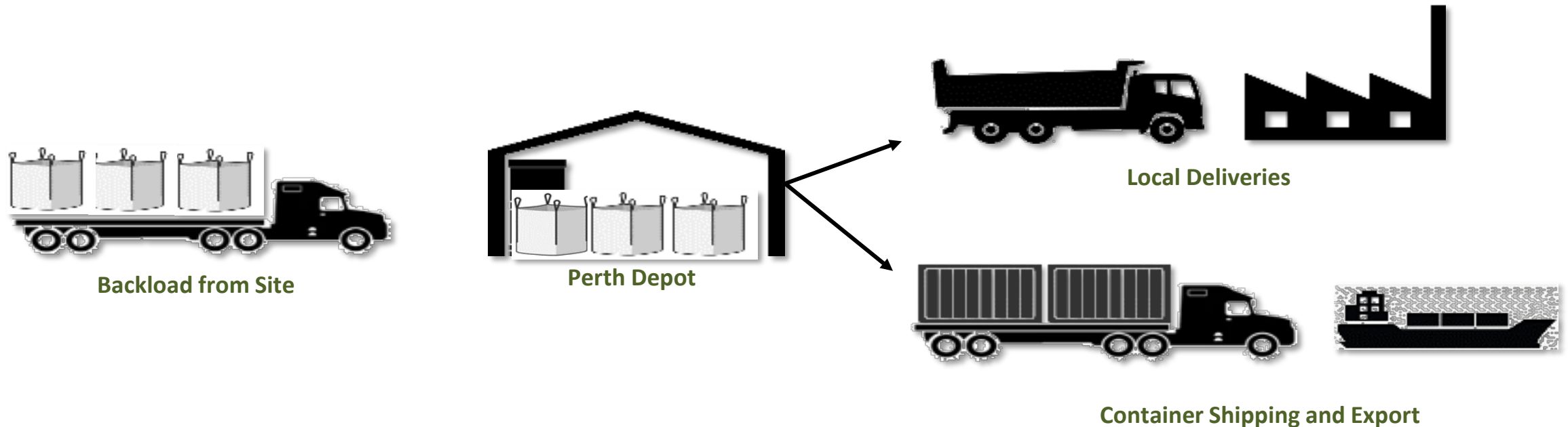


## 120ktpa

- Five steps to be implemented by Ebtec:
  - 1) Maximise production within design factors / allowances
  - 2) Debottlenecking & small equipment upgrades
  - 3) Optimise operation & operating hours
  - 4) Optimise process chemistry & efficiency
  - 5) Increase potassium grade in KTMS salts (improving pond operations)

# PRODUCT HAULAGE

- On 27 July 2021, the Company reported that it was assessing additional backloading arrangements and depot services following Toll Mining Services' notice that it was presently unable to provide services under its 2019 agreement with Kalium Lakes.
- While Kalium Lakes continues to address the notice with Toll, it has awarded additional contracts for SOP product haulage services.
- These arrangements will enable Kalium Lakes to achieve a suitable product delivery logistics solution when production commences.



# ATTRACTIVE EXPANSION ECONOMICS – 120KTPA

Description	Base Case - 120ktpa Assumptions and Results <sup>1</sup>	Upside Case - 120ktpa Assumptions and Results <sup>1</sup>	Upside Case Comments
<b>Production Target</b>	120ktpa by Q4 2022	120ktpa by Q4 2022	<b>The 120ktpa Base Case includes conservative allowances with potential upside as follows:</b> <ul style="list-style-type: none"> <li>Mineral Royalty reduced from 5% to 2.5%<sup>8</sup></li> <li>Inflationary pressures reduce All-in Sustaining Cost by 5% once COVID-19 impacts normalise<sup>9</sup></li> </ul>
<b>Life of Mine (LOM)</b>	50 years (from 2019) <sup>2</sup>	50 years (from 2019) <sup>2</sup>	
<b>Capital Cost for the expansion from 90ktpa to 120ktpa</b>	A\$45.3m <sup>3</sup>	A\$45.3m <sup>3</sup>	
<b>LOM Operating Cost FOB (real)<sup>4</sup></b> (All-in Sustaining Cost)	A\$375/t FOB (US\$270/t FOB @ AUD:USD 0.72 )	A\$356/t FOB (US\$256/t FOB @ AUD:USD 0.72 )	
<b>LOM Average Net SOP Price (real)<sup>5</sup></b>	US\$585/t	US\$585/t	
<b>AUD:USD foreign exchange rate</b>	0.75 to June 2025, 0.72 thereafter	0.75 to June 2025, 0.72 thereafter	
<b>LOM Revenue (nominal)</b>	A\$8,409m	A\$8,409m	
<b>LOM EBITDA (nominal)</b>	A\$3,465m	A\$4,075m	
<b>LOM Average EBITDA p.a. (nominal)</b>	A\$70.7m	A\$83.2m	
<b>LOM EBITDA Margin (nominal)</b>	41%	48%	
<b>LOM Cash Conversion Ratio (nominal)<sup>6</sup></b>	114%	111%	
<b>Project unlevered pre-tax NPV (8%, nominal)<sup>7</sup></b> (Valuation date: 30 June 2021)	A\$484m	A\$566m	

1. Except for the incremental capital cost presented in the table which relates to the cost of expansion from 90ktpa to 120ktpa, all figures in the table are for the project in relation to the 120ktpa production target.

2. Refer to Cautionary Statement in ASX announcement titled "BSOPP Feasibility Study Complete – New 120ktpa Base Case" dated 18 August 2021 - the 120ktpa mine plan comprises Ore Reserves (77%) and Measured and Indicated Mineral Resources (13%) and is partly based on Inferred Mineral Resources (10%). No Exploration Target brine has been included in the assumed life of mine or economic evaluation of the project. Refer to the disclaimer and compliance statement in pages 2-3 of this announcement.

3. Capital cost estimate is based on actual data from current project and updated where required to Q2 2021 prices. The majority of the deliverables constituting the basis for the capital cost estimate at an AACE Class 3 level. The capital cost includes a contingency of A\$4.2m.

4. Life of Mine Operating Cost FOB includes all mining, processing, site administration, product haulage to port, port costs, head office corporate costs, sustaining costs, but excludes royalties and taxes.

5. SOP market studies by CRU and Argus have been used as the basis for the commodity price. Long term SOP price forecasts were obtained in July 2021 for the period to 2040 which the Company has adopted in its forecasts. The Company has assumed that SOP prices remain stable for the period after 2040 for the remainder of the life of mine. The average net SOP price is calculated as the average CFR price less agent fee and CPT costs but before marketing fees.

6. LOM Cash Conversion Ratio is calculated as LOM Net Profit after Tax divided by LOM net cashflow (excluding senior debt principal movements).

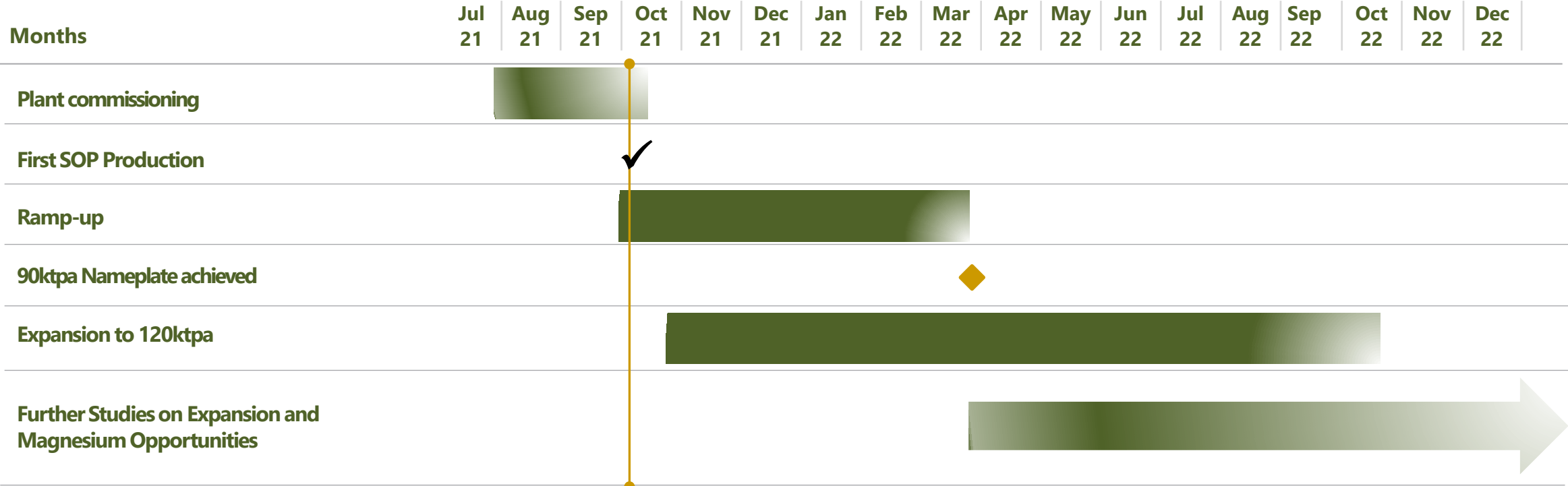
7. NPV based on nominal cashflows assuming a 2.4% inflation factor used; WACC calculation = 8% discount rate.

8. The Mineral royalty payable in Western Australia on final products is 2.5%.

9. Increased costs driven by COVID-19 and WA border closures are expected to reduce once vaccination rates meets national targets, allowing international and WA state borders to reopen.



# EXPECTED TIMETABLE



# ATTRACTIVE INVESTMENT PROPOSITION

1

Project Substantially De-risked

2

120ktpa Expansion

3

World Class Partners

4

Long Mine Life

5

Attractive Economics with Strong Cash Flows

6

Further Growth &  
Value Creation Opportunities



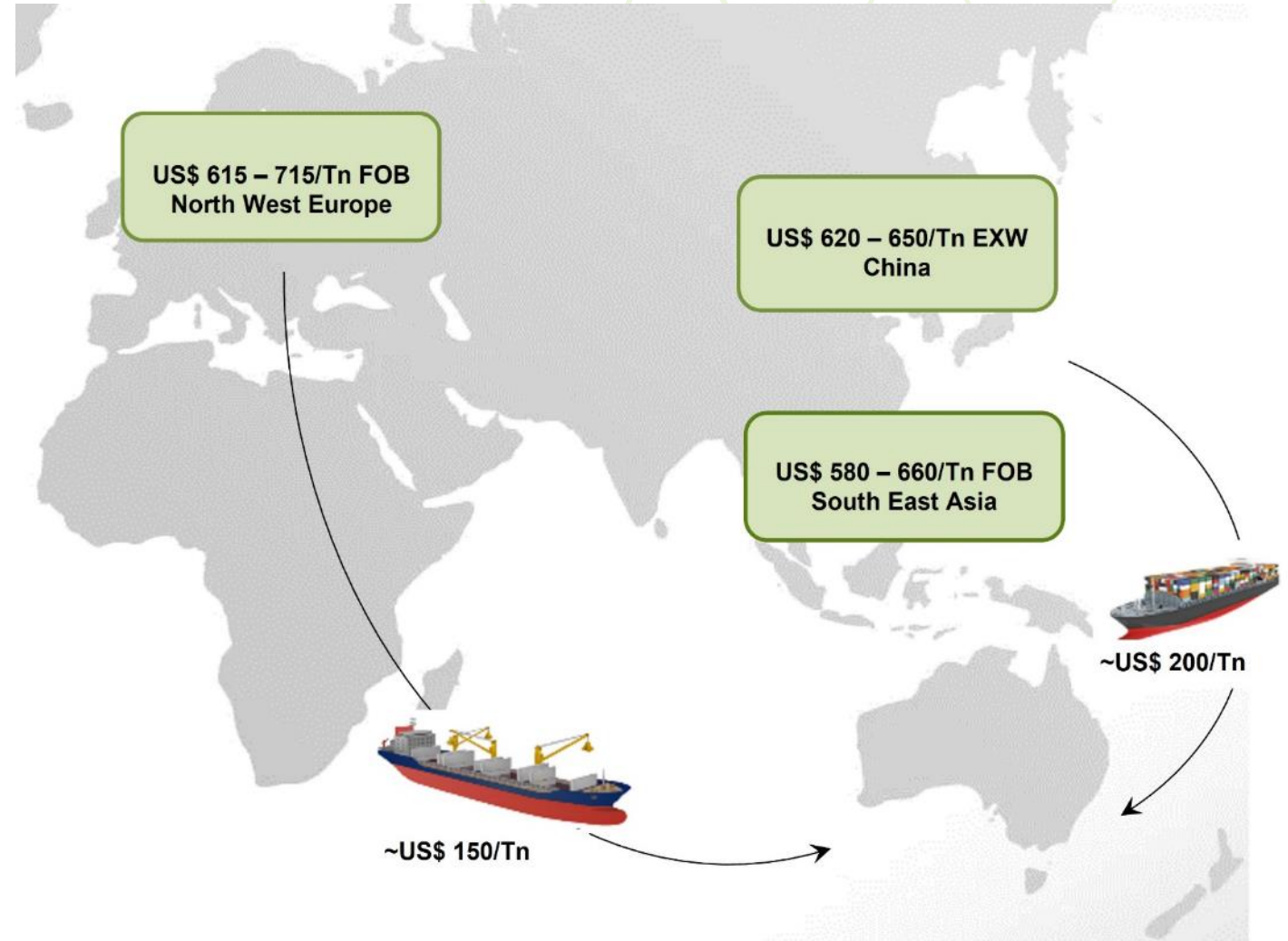
# Additional Information





# SOP PRICING UPDATE – OCTOBER 2021

- SOP prices increased rapidly over the last 4 months
- Chinese Mannheim SOP production has reduced by 5% due to high MOP prices & environmental regulation, resulting in lower SOP export volumes from China and potential further price increases
- The COVID-19 pandemic continues to put pressure on shipping costs, pushing up the CFR delivery cost of SOP into Australia (currently ~US\$150-200/t). This offers significant opportunities to Kalium Lakes for SOP supply to the local market



*Sources:*

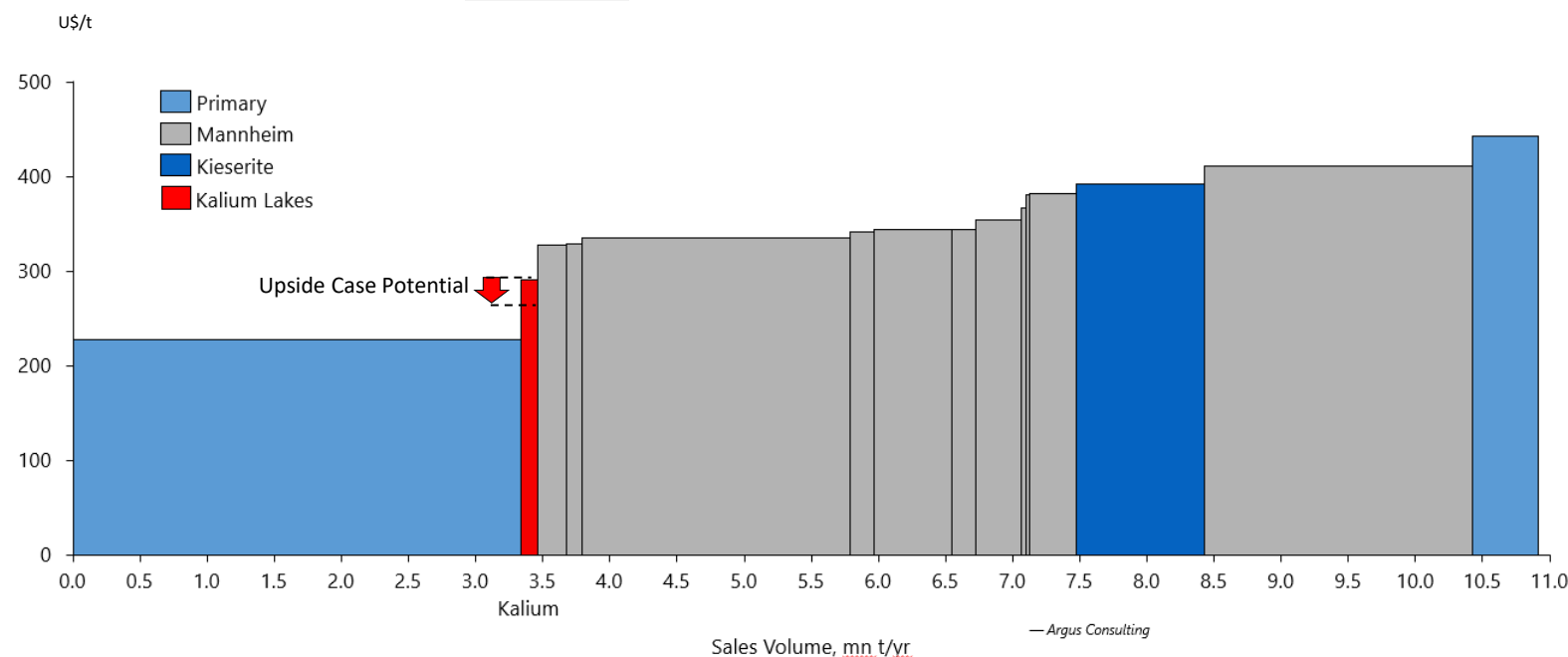
- Argus & CRU Weekly Reports – Week Ending 24 September 2021
- Argus & CRU Weekly Reports – Week Ending 10 September 2021
- Based on Industry consultant and third party market advice to KLL

# KALIUM LAKES WELL PLACED TO BENEFIT FROM HIGHER PRICES



K+S is the largest SOP producer in the world outside of China, planning to distribute SOP from the Beyondie SOP Project into their existing, significant SOP market share in Australia, New Zealand and South East Asia

## SOP fob Cash Cost (incl. Royalties), 2020<sup>2</sup> Operating companies + Kalium Lakes

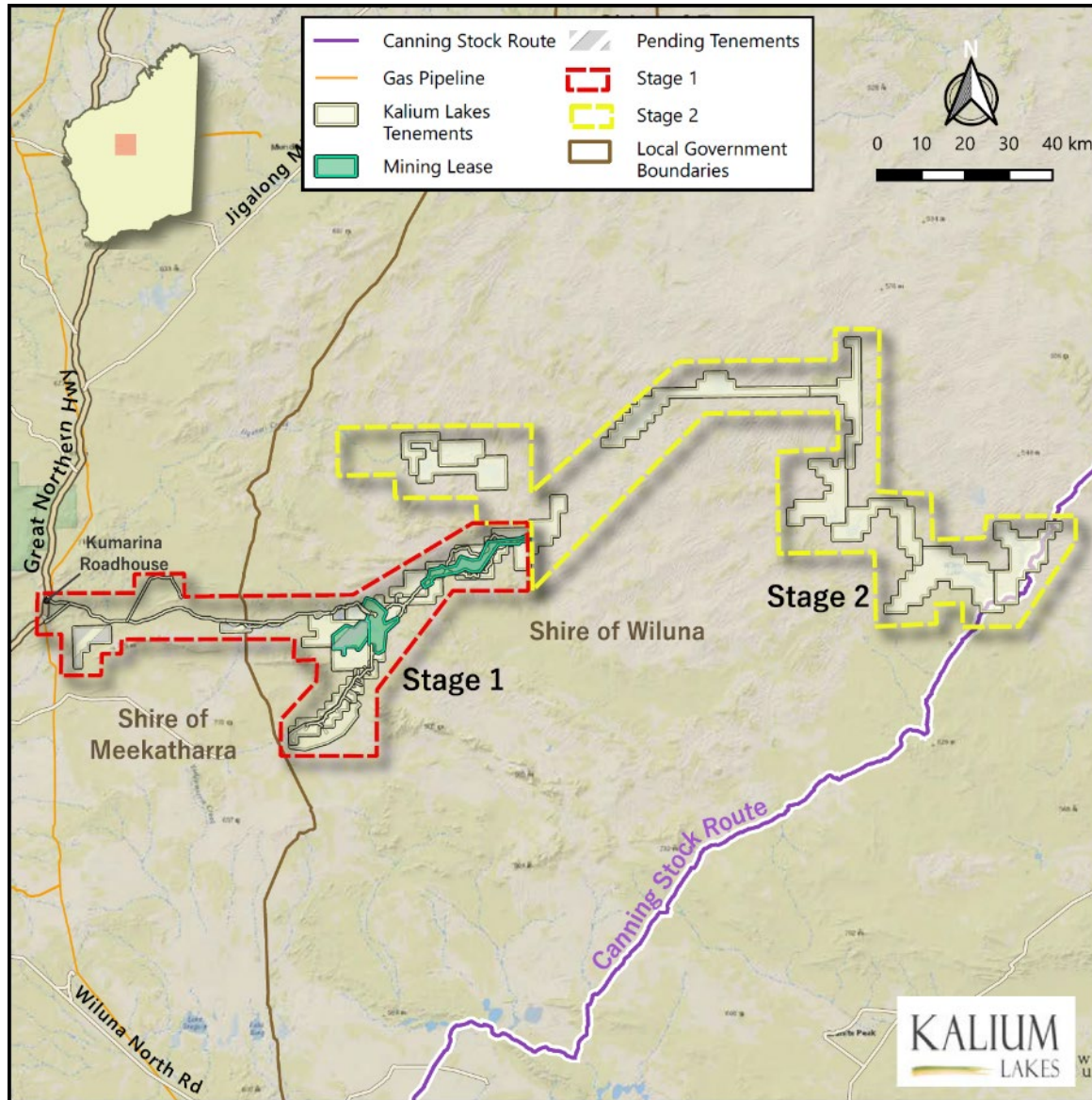


- ✓ **First mover advantage with** Beyondie SOP production about to commence
- ✓ **Take-or-pay offtake Agreement** with German fertiliser producer K+S and distributor for 10 years at 120ktpa<sup>1</sup>
- ✓ **Net realised sales price** model agreed with K+S
- ✓ **K+S to deliver Beyondie SOP into their existing market share** in Asia and Oceania
- ✓ **Very attractive payment terms** negotiated for the first 3 years of the agreement

1. Refer to Kalium Lakes Concludes Historic Binding Offtake agreement with global potash Producer K+S ASX Announcement dated 26 March 2019 [https://www.kaliumlakes.com.au/site/wp-content/uploads/austocks/kll/2019\\_03\\_26\\_KLL\\_1553549280.pdf](https://www.kaliumlakes.com.au/site/wp-content/uploads/austocks/kll/2019_03_26_KLL_1553549280.pdf) and ASX Announcement titled "BSOPP Feasibility Study Complete – New 120ktpa Base Case" dated 18 August 2021

2. While this chart reflects SOP FOB cash costs for operating companies in 2020, the red bar represents KLL's forecast AISC (plus royalties) as per the ASX announcement titled "BSOPP Feasibility Study Complete – New 120ktpa Base Case" dated 18 August 2021

# SIGNIFICANT FURTHER GROWTH POTENTIAL



## INCREASED PRODUCTION

- Potential for future expansion exists with studies commenced on expansion opportunities
- Project has been built with further expansion in mind which would likely require a lower capital intensity than the 90ktpa project and take advantage of key infrastructure in place including, camp, power station, Airport, roads etc
- A review of resources and reserves, combined with the updated resources / reserves currently being completed to maximise SOP production and economics.
- Further increased SOP production scenario will not only maximise resource potential and returns for stakeholders, but also provide other benefits including:
  - ✓ Establish Kalium Lakes as one of the largest SOP producers in Australia, competitive in the global market
  - ✓ Further reduce operating costs due to economies of scale



# KEY ATTRIBUTES FOR KALIUM LAKES' SUCCESSFUL PROJECT DELIVERY

Understanding the Key Risks Specific to SOP	How Kalium Lakes Manages Key Risks specific to SOP
<b>Mineral Resources, Ore Reserves and Mine Plan</b> <ul style="list-style-type: none"> <li>• <i>Brine quantity and quality</i></li> <li>• <i>Grade variability</i></li> <li>• <i>Sustainable brine extraction flow rates</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mineral Resources based on “drainable brine volumes only”</li> <li>• Ore Reserves compliant to JORC guidelines for brine resources and the Canadian Standard NI43-101</li> <li>• Mine plan developed using a solute transport model</li> <li>• Standard operating procedures to ensure quality control and quality assurance is in place to verify actual performance against design</li> </ul>
<b>Evaporation Ponds</b> <ul style="list-style-type: none"> <li>• <i>Sufficient potassium salt crystallisation to meet SOP production targets</i></li> <li>• <i>Managing the impact on variable weather patterns on evaporation pond performance</i></li> <li>• <i>Management of seepage into the ground</i></li> <li>• <i>Implementation of efficient harvesting solutions</i></li> </ul>	<ul style="list-style-type: none"> <li>• Pond design based on knowledge and experience from David Butts<sup>1</sup></li> <li>• 10 ha trial ponds that were build and operated for 12 months during the BFS stage of the project to produce representative salt samples for process design requirements and develop standard operating procedures for pond operations and doing harvesting trials</li> <li>• Ongoing support from Corey Milne, a chemical engineer trained by David Butts with more than 28 years practical experience working for Compass Minerals</li> </ul>
<b>SOP Production</b> <ul style="list-style-type: none"> <li>• <i>Limited experience globally in SOP process design</i></li> <li>• <i>SOP &amp; MOP are NOT the same (lots of MOP production experience globally)</i></li> </ul>	<ul style="list-style-type: none"> <li>• Process design done by K-UTEC<sup>2</sup> Salt Technologies, using representative salt samples produced from our 10 ha trial pond operation during the BFS</li> <li>• Key process equipment and performance guarantee for standard grade SOP provided by Ebtec (partnership between German companies K-UTEC and Ebner<sup>3</sup>)</li> <li>• Ebtec representatives on site to verify completion of construction and to lead commissioning activities until performance testing of the SOP purification plant is complete</li> <li>• Ongoing partnership negotiated with Ebtec to assist the Kalium Lakes operations team for the first year of production to operate and maintain the SOP purification plant, whilst completing the expansion to 120ktpa of SOP production.</li> </ul>
<b>Marketing and Sales</b> <ul style="list-style-type: none"> <li>• <i>SOP sales are market driven and seasonal based</i></li> <li>• <i>Australia historically 100% importer of SOP</i></li> <li>• <i>Product quality is extremely important to end users</i></li> </ul>	<ul style="list-style-type: none"> <li>• Kalium Lakes have secured and off-take agreement with K+S<sup>4</sup> for 100% of all SOP produced up to 120ktpa.</li> <li>• The performance guarantee in the Ebtec agreement is aligned with the K+S standard grade SOP product specification, allowing for SOP produced from the Beyondie SOP Project to be sold by K+S under their own branding</li> <li>• K+S holds a significant share of the Australian SOP market (estimated Australian SOP market size of ~70,000Mt pa<sup>5</sup>) and will service this market with SOP produced from the Beyondie SOP Project – this way Kalium Lakes ensures that it manages its market entry risk whilst looking after Australia’s local farmers first</li> </ul>

1. David Butts is a chemical engineer and a salt and solar pond expert with over 50 years of experience primarily devoted to the extraction of minerals and salts from lakes, oceans, salars and underground deposits

2. K-UTEC comprises an internationally recognised team of experts, with over 70 years of salt processing experience. (<https://www.k-utec.de/en/home>)

3. Ebner GmbH is an engineering & manufacturing company based in Germany, experienced in the design and fabrication of cooling crystallisers used in the SOP production industry. (<https://ebner-co.de/en/home-2/>)

4. K+S is the largest SOP producer in the world outside of China

5. Represents 100% of the Australian market based on ABS import statistics for Potassium sulphate (excl. tablets and similar forms).

# THANK YOU

Email:

[info@kaliumlakes.com.au](mailto:info@kaliumlakes.com.au)

Phone: +61 (0)8 9240 3200

[www.kaliumlakes.com.au](http://www.kaliumlakes.com.au)

