



# Investor Presentation

December 2016



ASX | AMN

## Nature of Document

This presentation has been prepared as a summary only, and does not contain all information about Agrimin Limited's ("**Agrimin**" or "**the Company**") assets and liabilities, financial position and performance, profits and losses, prospects, and the rights and liabilities attaching to Agrimin's securities. This presentation includes information extracted from the Company's ASX Release entitled Positive Scoping Study for the Mackay SOP Project released on 23 August 2016. The Company's ASX Releases are available at [www.asx.com.au](http://www.asx.com.au). The securities issued by Agrimin are considered speculative and there is no guarantee that they will make a return on the capital invested, that dividends will be paid on the shares or that there will be an increase in the value of the shares in the future. Agrimin does not purport to give financial or investment advice. No account has been taken of the objectives, financial situation or needs of any recipient of this presentation. Recipients of this presentation should carefully consider whether the securities issued by Agrimin are an appropriate investment for them in light of their personal circumstances, including their financial and taxation position.

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The Company does not undertake any obligation to update or revise any forward-looking statements as a result of new information, estimates or opinions, future events or results, except as may be required under applicable securities laws.

## Scoping Study Parameters – Cautionary Statement

The Scoping Study results, production target and forecast financial information referred to in this Presentation are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage. Of the Mineral Resources scheduled for extraction in the Scoping Study's production plan, approximately 95% are Indicated Mineral Resources and 5% are Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or the eventual conversion to Ore Reserves or that the production target itself will be realised.

The consideration of all JORC modifying factors is sufficiently progressed. Hydrogeological studies and process studies support material operating assumptions. Engineering studies support capital and operating cost estimates and are based on standard extraction and processing techniques. Discussions with third party infrastructure providers are underway. Environmental baseline studies and Native Title negotiations are progressing and no social, environmental, legal or regulatory impediments to development have been identified. The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this Presentation and believes it has a reasonable basis to expect it will be able to fund the development of the Project upon successful delivery of key development milestones. The detailed reasons for these conclusions, and material assumptions on which the forecast financial information is based, are disclosed in the Company's ASX Release entitled Positive Scoping Study for the Mackay SOP Project released on 23 August 2016. Additionally, the assumptions for the Mineral Resources are disclosed in the Company's ASX Release entitled Mackay Project Resource Update and Path to Production released on 15 December 2015.

## JORC Code (2012) Compliance Statement

The information in this presentation that relates to Mackay SOP Project is extracted from the ASX Release entitled Positive Scoping Study for the Mackay SOP Project released on 23 August 2016. The information in this presentation that relates to exploration results and Mineral Resources is extracted from the ASX Release entitled Mackay Project Resource Update and Path to Production released on 15 December 2015. The Company's ASX Releases are available at [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the abovementioned ASX Releases, and that all material assumptions and technical parameters underpinning the estimates in the abovementioned ASX Releases continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings that are presented have not been materially modified from the abovementioned ASX Releases.



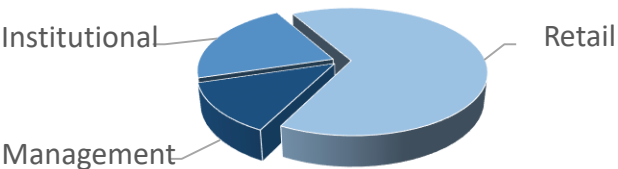
- Leveraged to increasing global food demand and the challenge of achieving food security
- SOP (sulphate of potash) is a specialty fertilizer with a robust market outlook and limited options for global supply growth
- 100% ownership of the Mackay SOP Project, the world's largest undeveloped salt lake SOP deposit and comparable to major SOP producing salt lakes
- Western Australia is an emerging SOP province and Agrimin is leading the way towards establishing this new industry in Australia
- Scoping Study delivered strong project fundamentals and provides a platform to advance discussions with off-takers and strategic partners



## Capital Structure (30 Nov 2016)

Share price	\$0.60
Ordinary shares	123.9m
Options	1.0m
Fully diluted market cap	\$74.9m
Cash at bank	\$2.0m
Debt	\$0.0m

## Shareholder Spread



## Share Price Chart (ASX: AMN)



## Board of Directors

**Brad Sampson, Non-Executive Chairperson** – Mining Engineer with 30 years of management and board experience in the international resources industry. Has led the financing and development of a major greenfields resource project.

**Mark Savich, Chief Executive Officer** – Financial analyst (CFA) with 12 years of experience in the resources industry based in Western Australia. Significant experience in the commercial evaluation and development of resource projects, from exploration through to full-scale production.

**Alec Pismiris, Non-Executive Director & Company Secretary** – Finance professional with over 25 years experience in the resource industry and has participated numerous times in the acquisition and financing of resource ventures. Has served as a director and company secretary for many ASX listed companies.

## Key Personnel

**Tom Lyons, General Manager** – Geologist with broad experience in a range of commodities including industrial minerals, metals and bulks. Significant experience working throughout a number of diverse jurisdictions, including throughout Western Australia.

**Laurie Mann, Study Manager** – Process Engineer with over 40 years of experience in project development, execution and operation. This includes registered manager for the Shark Bay Solar Salt Operation and most recently as project manager responsible for the feasibility study and commissioning of the Deflector Gold Mine in Western Australia.

**Murray Brooker, Consulting Hydrogeologist** – Hydrogeologist with significant experience in hydrogeological assessments of salt lake lithium and potash projects in Argentina and Chile. Extensively involved with the development of Orocobre’s Olaroz Project in Argentina.

**Don Larmour, Consulting Process Engineer** – Chemical Engineer based in Saskatchewan with over 35 years of in-depth potash experience. Has expertise in potash processing, from crushing and desliming to flotation crystallization, drying, compaction, pan granulation, product storage, loading and shipping. His experience ranges from operations to design and engineering.

A line of tracked vehicles, including a green machine with a crane-like arm and a white machine with a flag, moving across a sandy beach under a cloudy sky. The vehicles are leaving tracks in the sand. The text 'Mackay SOP Project' is overlaid in blue on the right side of the image.

# Mackay SOP Project

Western Australia

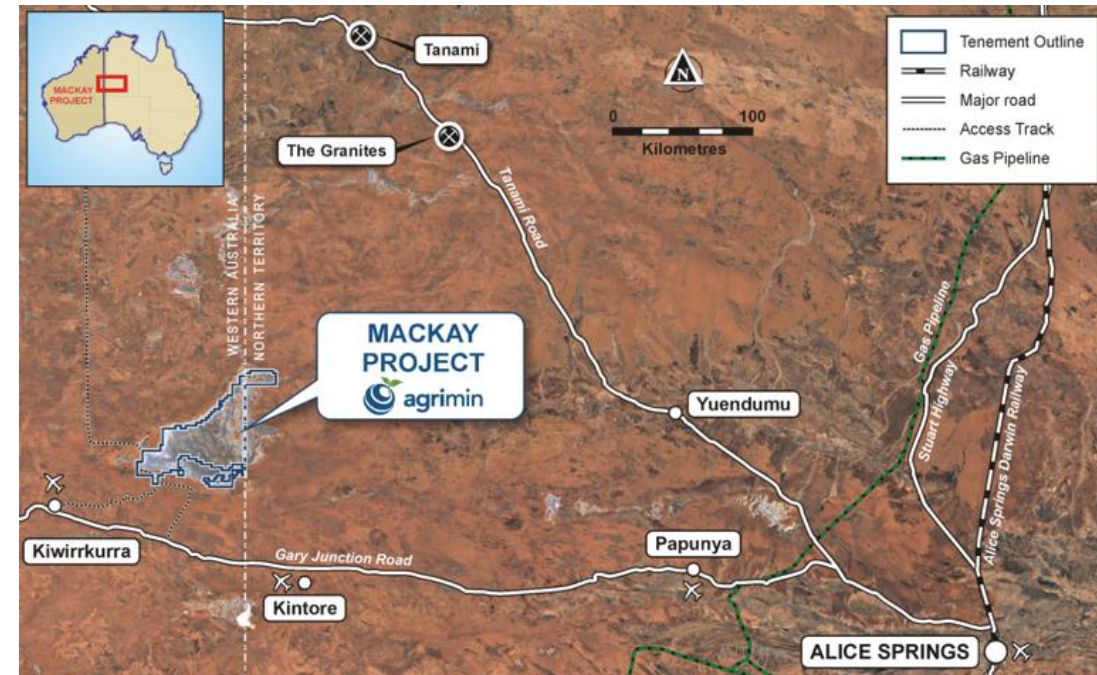


# Project Overview

- Mineral Resources of 23.2 million tonnes of SOP (drainable)
- Extensive tenement package covering 2,784km<sup>2</sup>
- 100% owned and located in low-risk Western Australia
- Supportive local community and Native Title Land Access Agreement in place
- Excellent net evaporation rate of approx. 3,400mm per year
- Transport infrastructure is in place and fit for haulage

*Note: Mineral Resources comprise Indicated Mineral Resources of 4.3 million tonnes and Inferred Mineral Resources of 18.9 million tonnes*

## Location Map

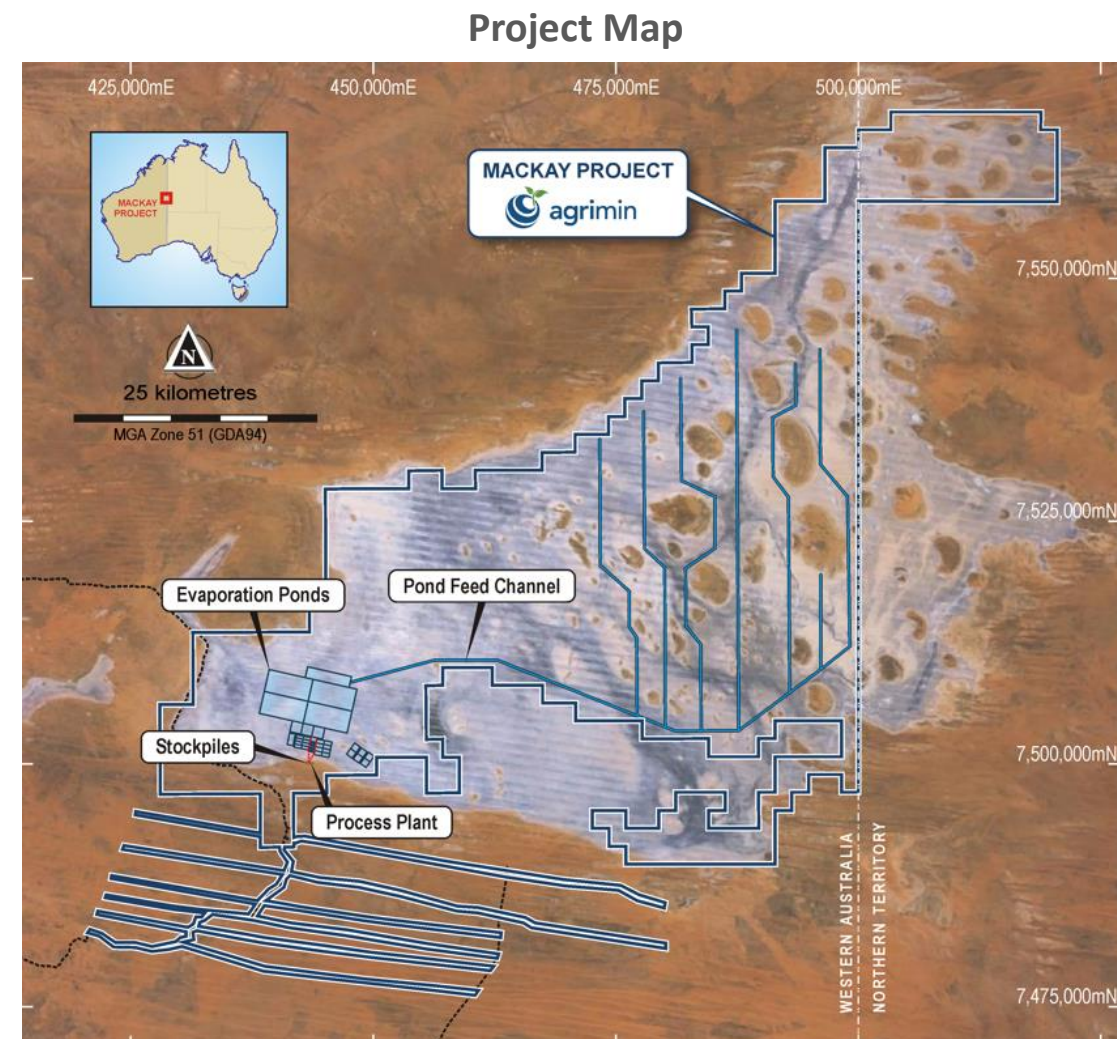


## Road from Alice Springs to Kiwirrkurra



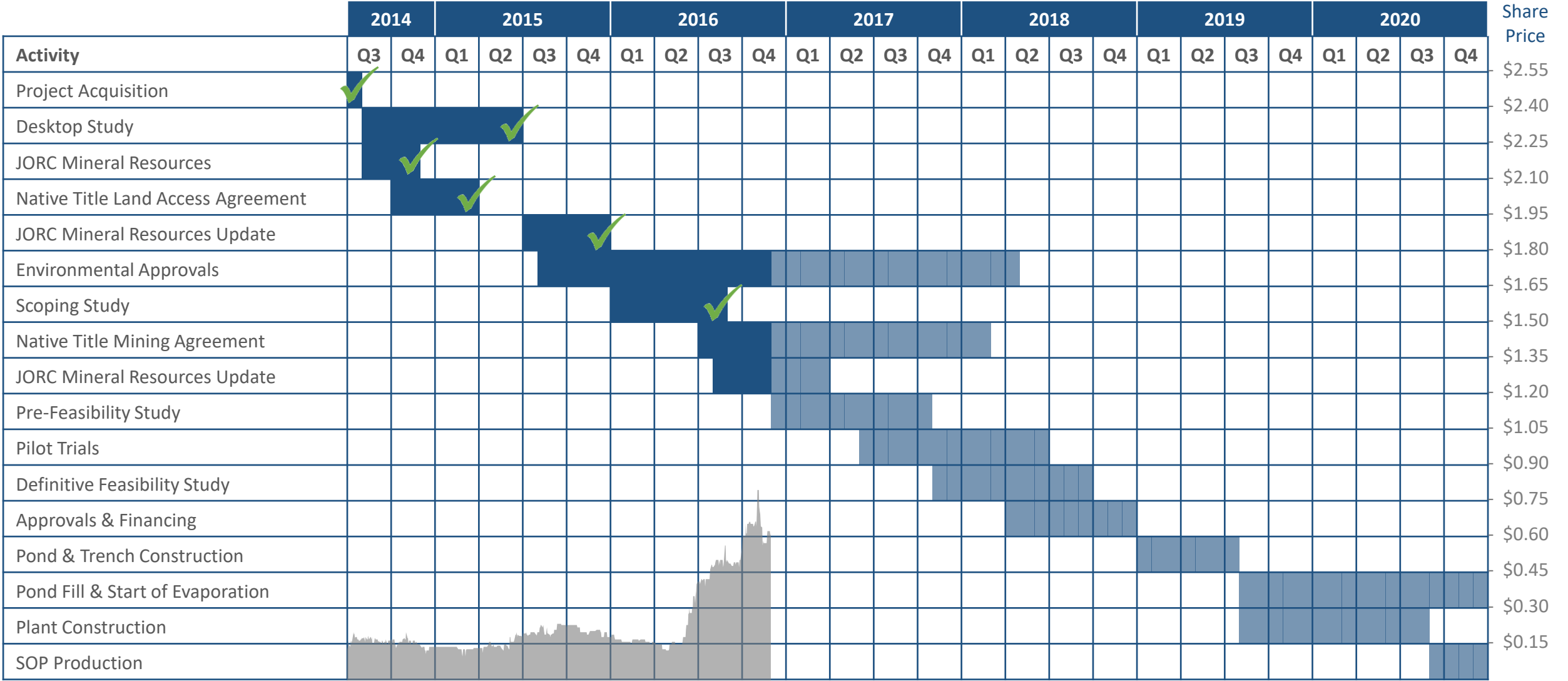
# Project Highlights

- A world-class salt lake asset with internationally significant scale and compelling financial metrics
- Scoping Study indicates production of 370,000tpa of SOP over a 20 year life, with potential to increase both operational capacity and life
- Development cost is estimated to have an industry low capital intensity
- Operating cost is estimated to be in the bottom quartile of the industry mine gate cost curve
- Path to production is understood and Pre-Feasibility Study is underway





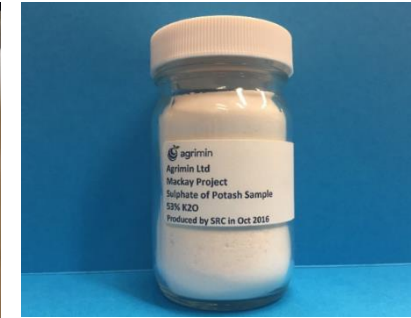
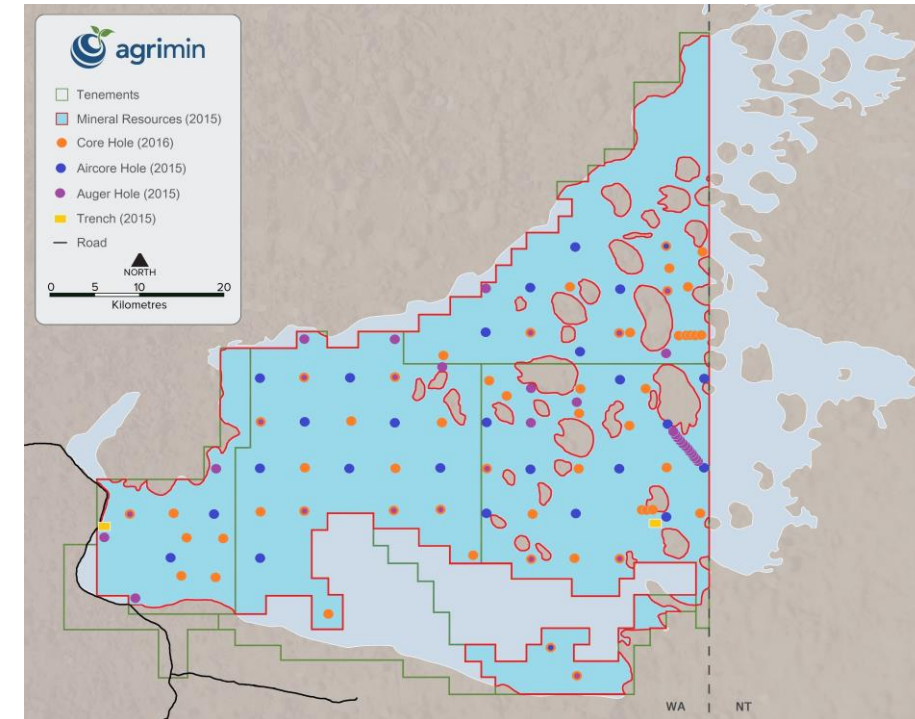
Scoping Study Indicative Development Timeline and Historical Share Price



# An Industry Leader in Australia

- ✓ Large and near-surface SOP Mineral Resources defined (drainable)
- ✓ Trial trenches and pump testing supports large-scale brine extraction
- ✓ Geotechnical testwork indicates excellent conditions for un-lined ponds
- ✓ Evaporation trial confirms suitable brine chemistry for targeted Potassium salts
- ✓ Process testwork demonstrates the production of high quality SOP (>52% K<sub>2</sub>O)
- ✓ Scoping Study delivers low capital and operating cost estimates
- ✓ Infill core drilling completed

## Drill Hole Locations

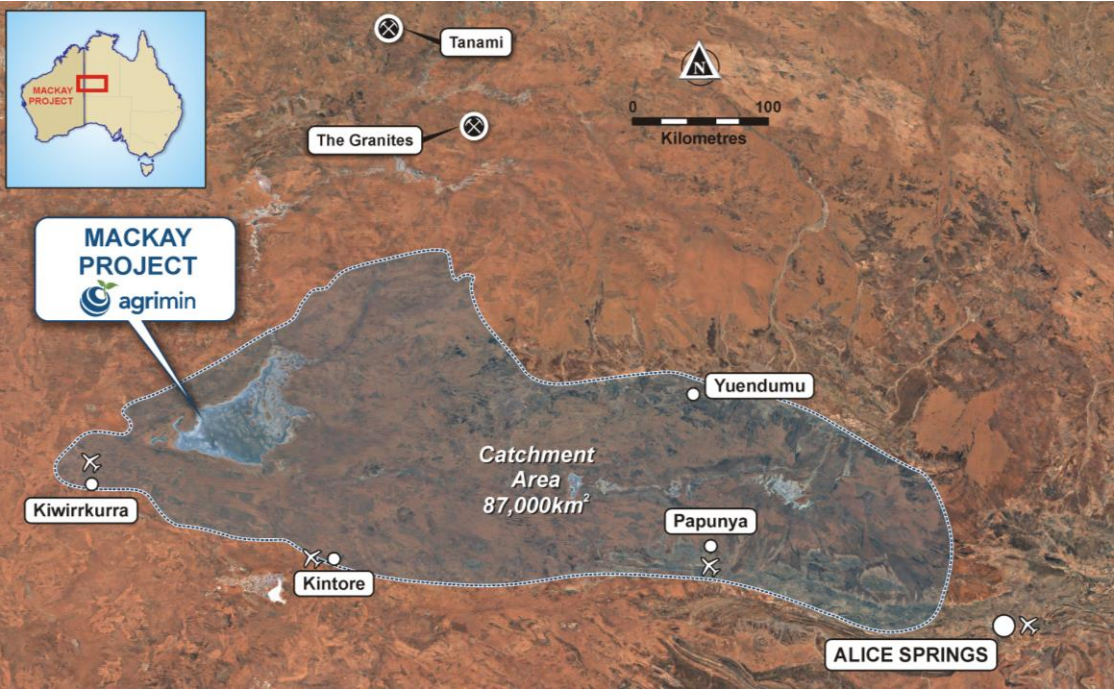




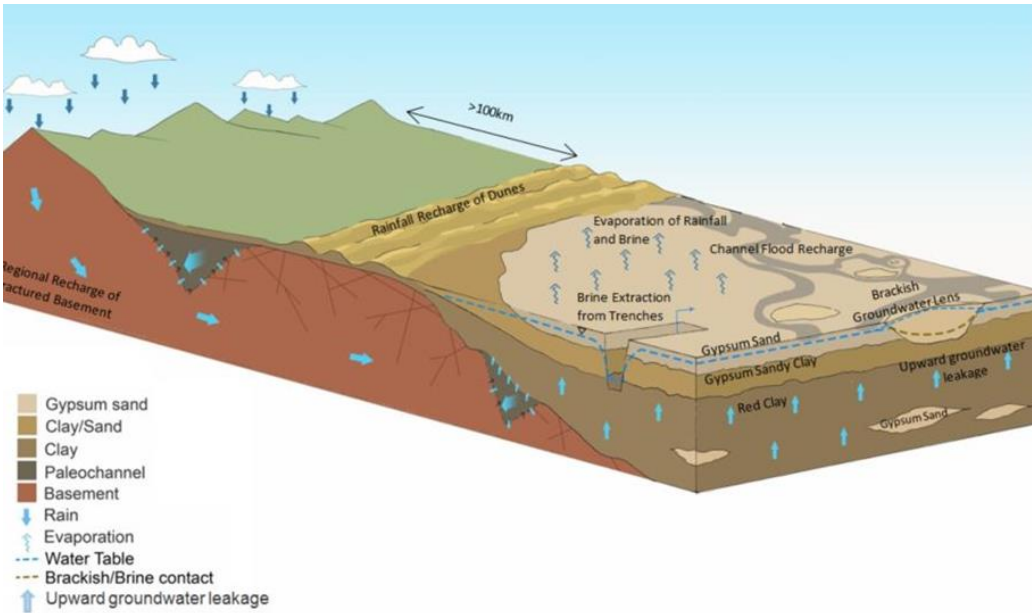
# Hydrogeology

- Hydrogeological model supports brine flow of 66.5GL (gigalitres) per year over a 20 year life, exclusively from trenches
- Lake Mackay is the end point of an enormous groundwater catchment area of approx. 87,000km<sup>2</sup> (i.e. the size of Portugal)

Lake Mackay Catchment Area



Hydrogeological Model of Lake Mackay



Trial Trench on Lake Mackay (2015)

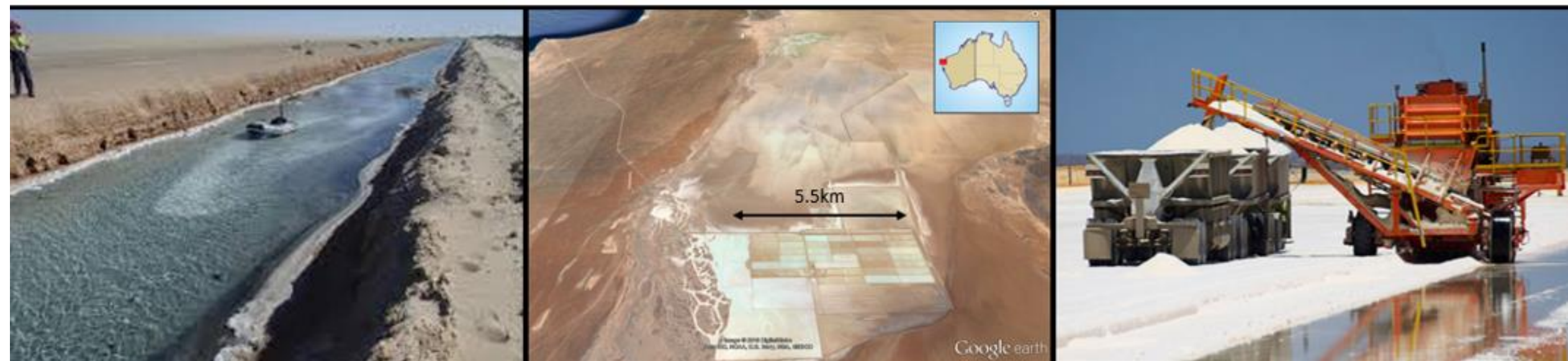


# Example: Lake MacLeod Salt Mine, WA

- Trenches and solar evaporation ponds are currently used throughout Western Australia
- Rio Tinto extracts 29GL per year of brine from trenches and transfers the brine to evaporation ponds via an 8.5km feed channel
- The operation uses evaporation ponds which cover an area of 16.5km<sup>2</sup>

**RioTinto**

Lake MacLeod Operation, Australia



Source: Rio Tinto (this is not Agrimin's operation)



# Example: Qarhan Salt Lake, China

- Qinghai Salt Lake extracts brine via 130km of trenching which is approx. 16m deep and has been operating for 50 years
- The pumping station shown below is used to pump approx. 60GL per year of brine to the evaporation ponds
- The entire operation extracts a total of 300GL per year of brine which is pumped into evaporation ponds that cover an area of 170km<sup>2</sup>



Qarhan Salt Lake MOP Operation, China

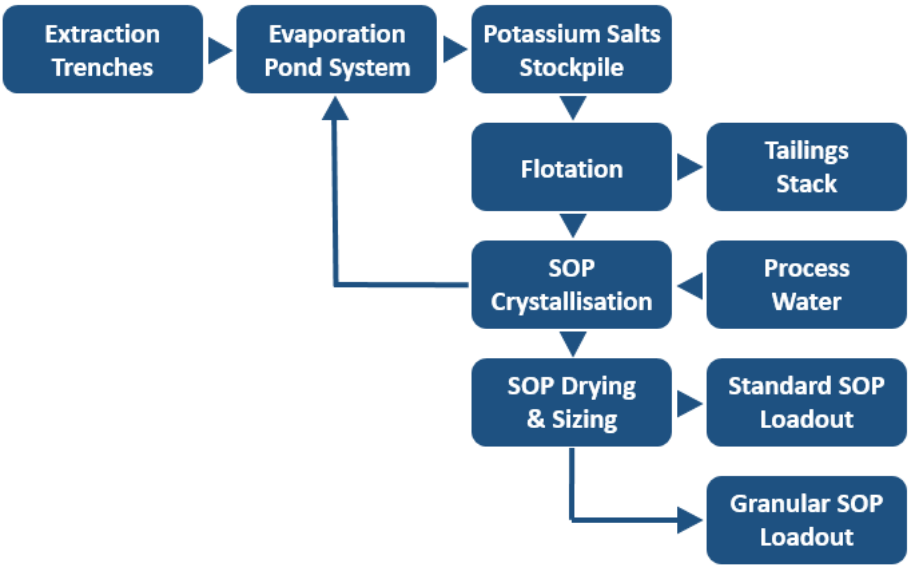


Note: This is not Agrimin's operation

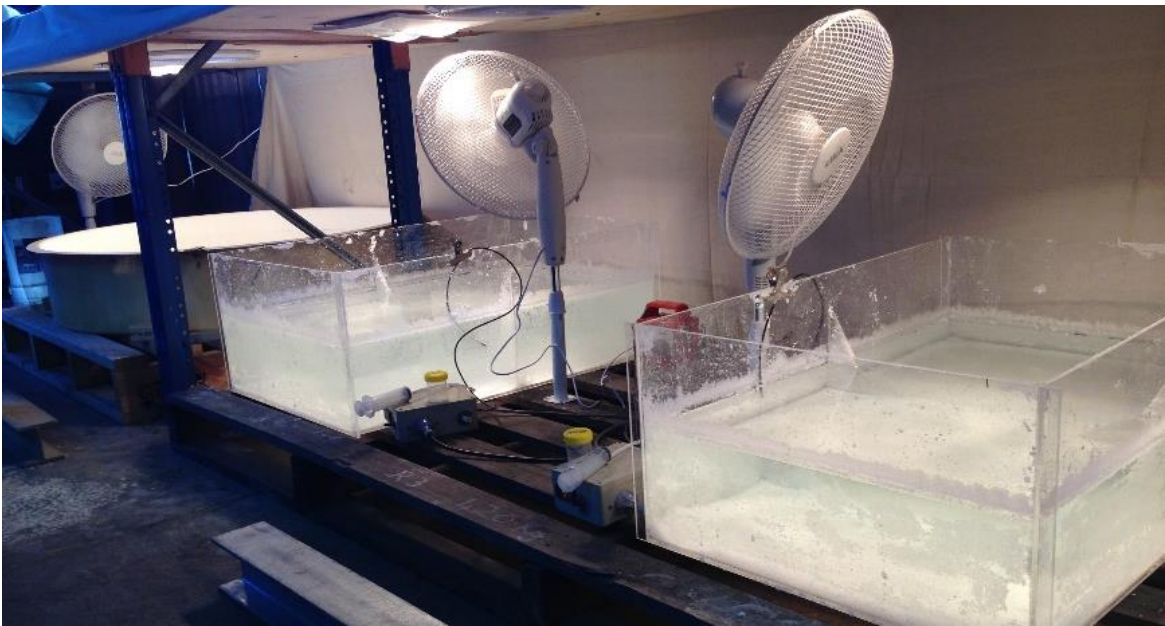
# Conventional Production Process

- Extraction of brine is designed exclusively from trenches in the top 5.5m of the deposit
- Huge lakebed surface area provides the ideal geotechnical setting for large-scale solar evaporation ponds
- Process plant will use standard types of plant and equipment

Simplified Process Flow Diagram



Evaporation Trial in Perth (2016)



Mackay SOP Product Samples (2016)





# Scoping Study Highlights

- Study delivered strong technical and economic fundamentals
- Average production rate of 370,000tpa of SOP over a 20 year life
- Operating cost is estimated to be in the bottom quartile of the industry mine gate cost curve
- Development cost is estimated to have an industry low capital intensity
- Estimated to take 24 months to reach full production after final investment decision and securing financing
- Pre-Feasibility Study underway

## Scoping Study Material Assumptions and Outcomes

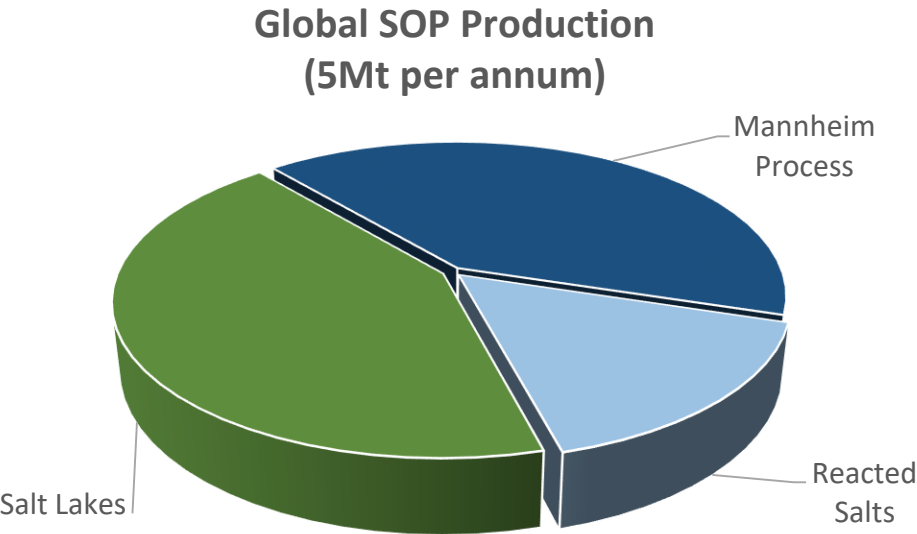
Parameter	Unit	Value
Development Period	months	24
Operating Life	years	20
Brine Extracted Over Operational Life	GL	1,330
Annual Brine Extraction Rate	GL	66.5
Potassium Concentration	mg/L	3,603
Potassium Recovery	%	69.3
SOP Production Rate	tpa	370,000
Average Total Cash Cost	US\$/t FOB	256
<b>Average All-In Sustaining Cash Cost (Exc. Royalties)</b>	<b>US\$/t FOB</b>	<b>277</b>
<b>Development Capital Cost (Inc. Contingency of US\$52m)</b>	<b>US\$m</b>	<b>259</b>

### Notes:

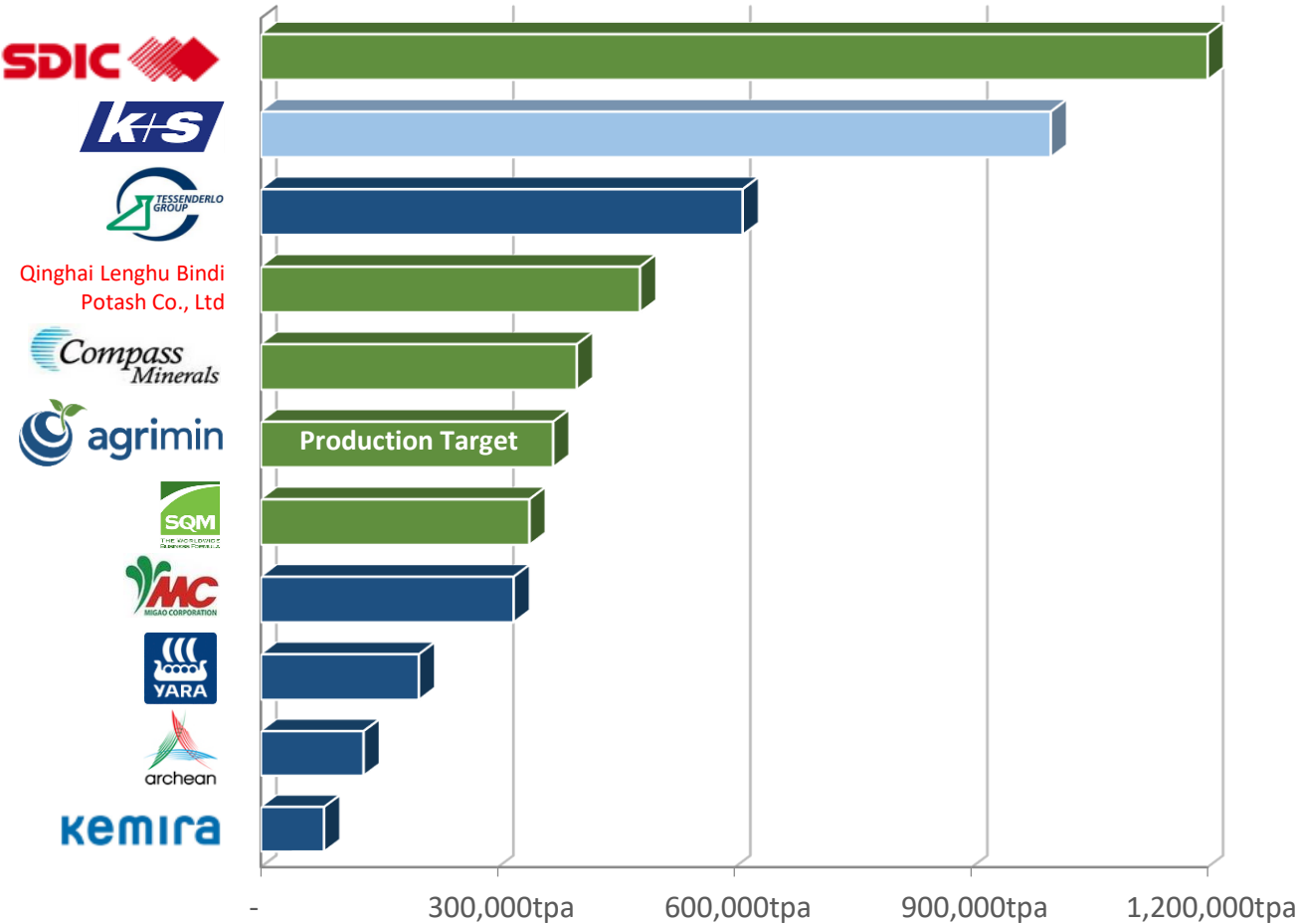
1. Development capital cost includes working capital, EPCM, owner's costs and a 25% contingency applied to all line items
2. Average total cash cost is on a free-on-board (FOB) basis, including mine gate costs, transportation and ship loading costs
3. Average total cash cost is based on drying, compacting and glazing all SOP production
4. Average all-in sustaining cash cost does not include royalties as no income projections have been disclosed
5. Potassium recovery is the estimated overall recovery rate achieved through the ponds and process plant
6. USD/AUD exchange rate of 0.75 has been used to convert Australian dollar amounts to US dollars
7. Potassium content can be converted to SOP using a conversion factor of 2.23 (i.e. SOP contains 44.87% Potassium)
8. Cost estimates have a ±35% level of accuracy
9. Information that relates to the Scoping Study has been extracted from the Company's ASX Release entitled Positive Scoping Study for the Mackay SOP Project released on 23 August 2016

# Industry Comparison – Production

- SOP market turnover is approx. US\$4 billion per year
- The last decade has seen a shift towards environmentally friendly SOP production from salt lakes
- Five salt lakes currently account for approx. 2.3Mtpa or 40% of global SOP production



**Installed SOP Production Capacity (Top 10 Producers)**

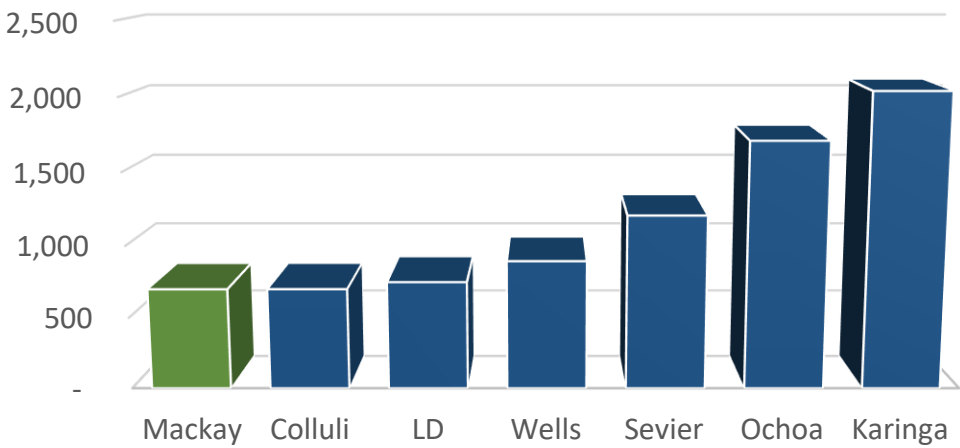


Note:  
1. Graph compiled from information sourced from company reports and research undertaken by Agrimin

# Industry Comparison – Costs

- An industry low capital intensity of US\$700/t, making the Project an attractive development proposition
- Total development capital cost of US\$259 million

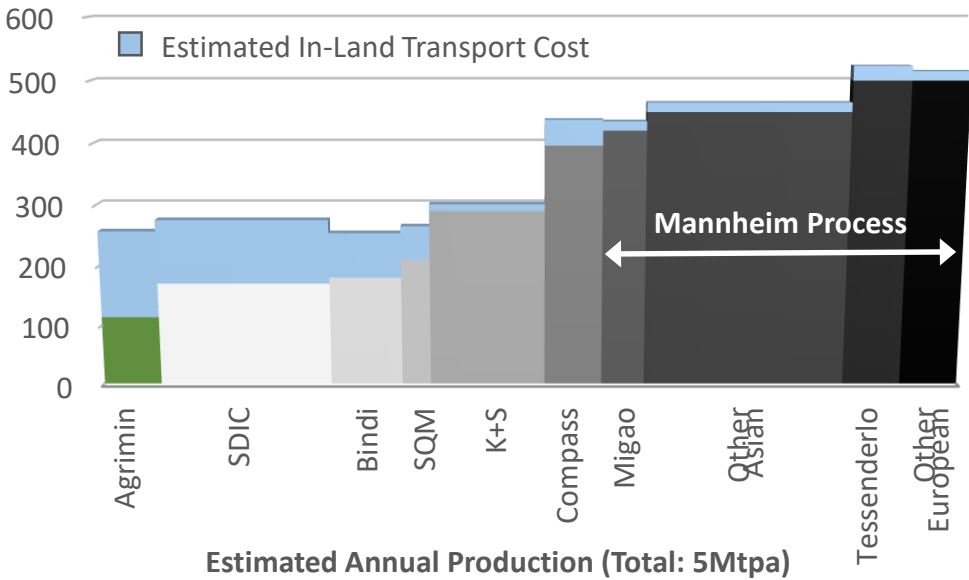
Capital Intensity for Undeveloped SOP Projects (US\$/t)



- Notes:
1. Graph compiled from capital cost information sourced from company scoping and feasibility studies
  2. Included 25% contingency to the capital costs reported in the LD Scoping Study of April 2015 and Wells Scoping Study of August 2016
  3. Colluli and Wells capital intensities relate to Phase 1 only
  4. USD/AUD exchange rate of 0.75 has been used to convert Australian dollar amounts to US dollars

- An estimated bottom quartile mine gate cost, providing an opportunity to displace high-cost production from the Mannheim Process
- Average total cash cost of US\$256/t FOB

SOP Industry Mine Gate Cost Curve (US\$/t)



- Note:
1. Graph compiled from information sourced from company reports and research undertaken by Agrimin



# Benchmarking to Existing SOP Operations

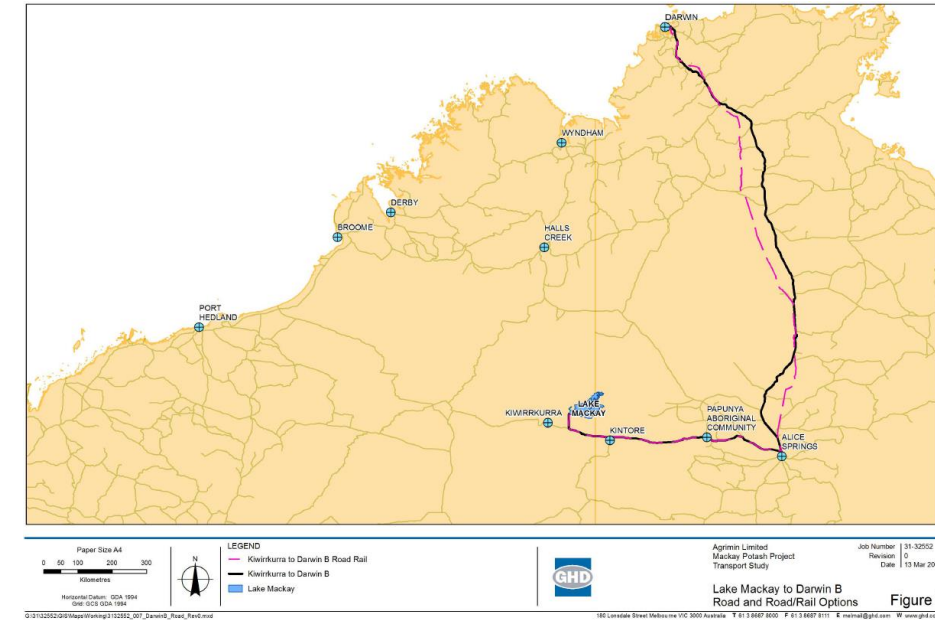
	Mackay, Australia	Luobupo, China	Great Salt Lake, USA
Extraction Method	Trenching of Near Surface Brines	Trenching of Near Surface Brines	Pumping of Near Surface Brines
Potassium Concentration	3,603 mg/L	10,413 mg/L	4,600 mg/L
Lake Surface Area	3,500 km <sup>2</sup>	5,500 km <sup>2</sup>	4,400 km <sup>2</sup>
Net Evaporation	3,400 mm/year	3,500 mm/year	1,300 mm/year
Harvesting Method	Dry Harvest	Wet Harvest	Dry Harvest
Process Flowsheet	Flotation & Crystallisation	Proprietary	Flotation & Crystallisation
Distance to Port	590 km road & 1,410 km rail	3,220 km rail	1,165 km rail



# Transport Infrastructure in Place

- **Road:** Project is connected to Alice Springs via well-maintained sealed and unsealed roads which are used to transport fuel and supplies to communities
- **Rail:** Alice Springs is connected to shipping terminals via the Adelaide-to-Darwin railway. Bulk trains currently run between various mines and ports
- **Port:** Ports in Northern Territory and South Australia with bulk loading berths provide optionality

Map of Transport Corridor



Gary Junction Road at WA-NT Border



Adelaide-to-Darwin Railway



Port of Darwin





# Community Relationships

- Agrimin has a strong working relationship with the local community and has a Land Access Agreement in place
- Agrimin and the Kiwirrkurra people have agreed to negotiate in good faith with a view to entering into a Mining Agreement
- The timeline for negotiations is aligned with the overall indicative development timeline
- The Mackay SOP Project has an exciting potential to greatly improve employment opportunities for local people
- Agrimin is committed to working with the Kiwirrkurra people to preserve their country and culture alongside a sustainable SOP operation







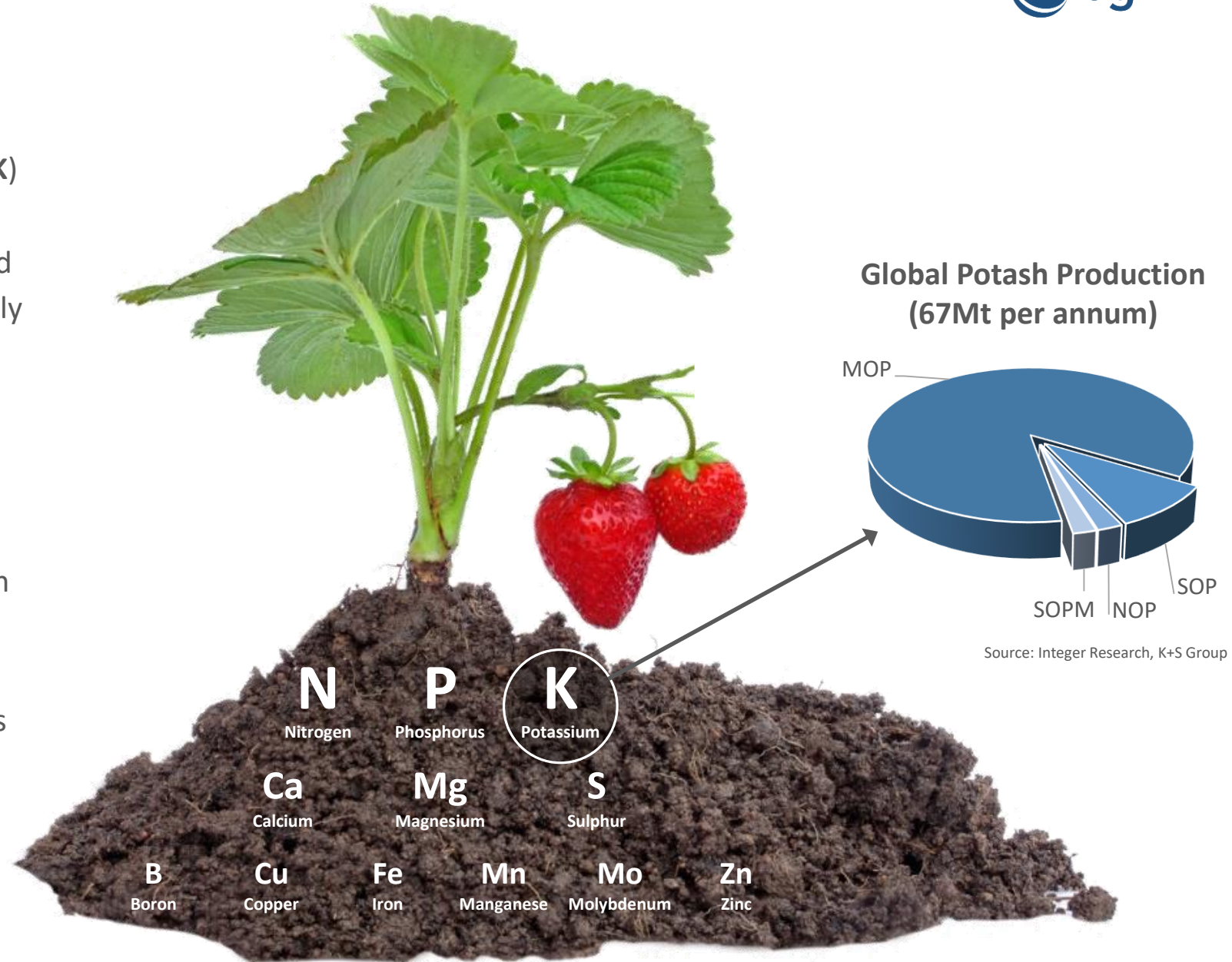
# Sulphate of Potash (SOP)

Specialty Fertilizer for  
Modern Agriculture



# Fertilizers and SOP

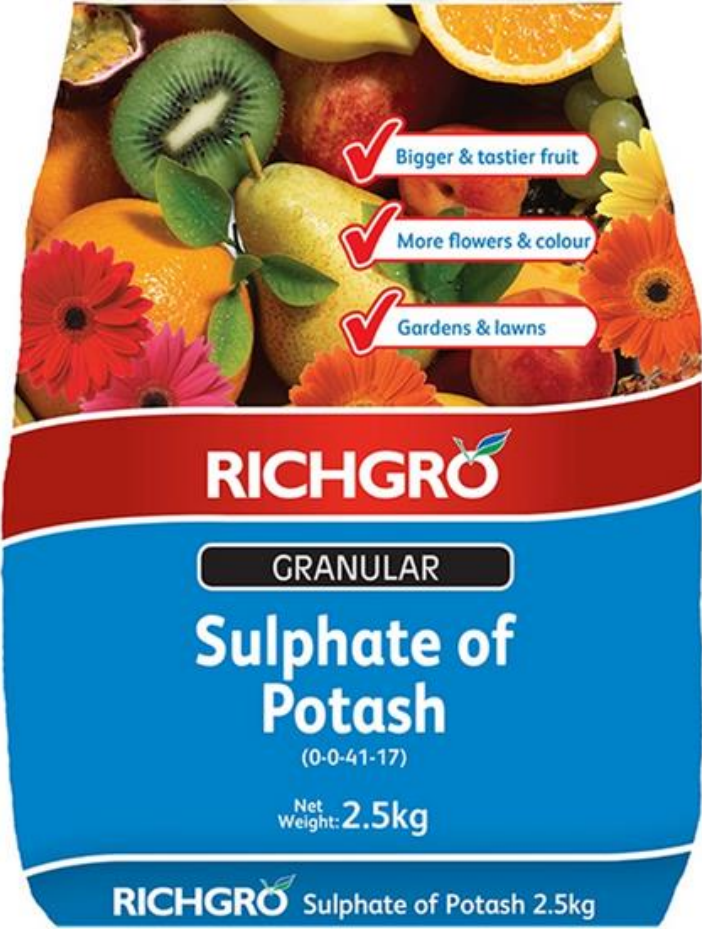
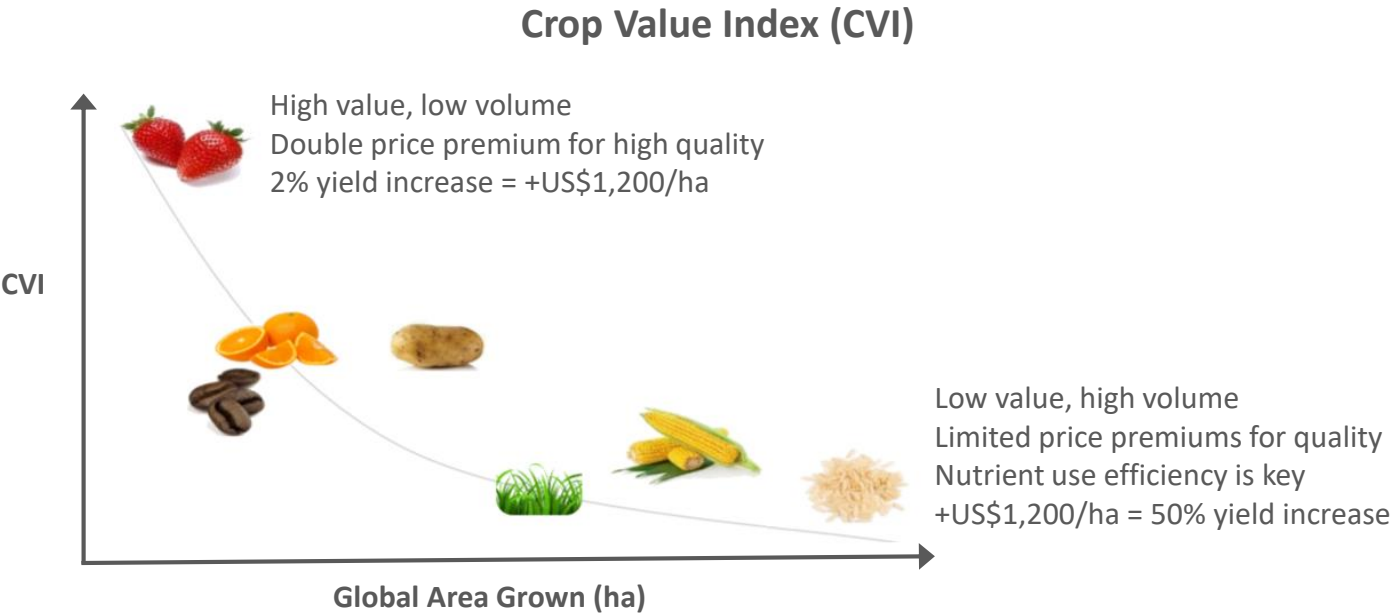
- Fertilizers include three macronutrients – **Nitrogen (N)**, **Phosphorus (P)** and **Potassium (K)**
- Compound fertilizers or NPKs are manufactured by combining the three macronutrients, possibly with secondary nutrients (**Ca**, **Mg**, **S**) and micronutrients (**B**, **Cu**, **Fe**, **Mn**, **Mo**, **Zn**) – every nutrient is in each particle
- Bulk blends are produced by mixing single nutrient fertilizers together – each nutrient is in separate particles
- Approx. 80% of all granular and standard SOP is sold to NPK compounders and blenders, and international fertilizer companies are seeking to structurally secure SOP supply





# Sulphate of Potash (SOP)

- SOP is chloride free, compared to muriate of potash (MOP) which contains 46% chloride
- SOP is essential for chloride-sensitive crops (i.e. fruits, vegetables and tree nuts) and saline soils
- SOP improves the nutritional value, taste, appearance and shelf life of crops
- Demand is from high-value crops for which fertilizer costs have less impact on crop profitability



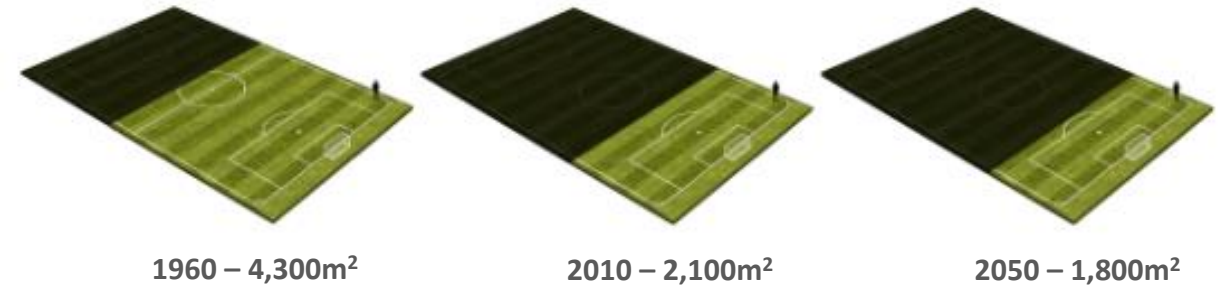
Source: Bunnings Warehouse

Source: Yara – IR Presentation, May 2016;  $CVI = \frac{\text{Crop Revenue}}{\text{Fertilizer Costs}}$

# Fundamental Demand Drivers

- Approx. 71 million new people to feed each year (i.e. the population of Germany), while arable land is declining around the world
- Approx. 80% of future growth in crop production is expected to come from higher yields and cropping intensity
- Demographic shift from rural to urbanised populations will increase demand for high-quality crops
- Lower environmental pollution will require the use of more advanced and balanced fertilization
- Installation of new compound NPK fertilizer plants is occurring internationally and provides excellent demand prospects for SOP

## Arable Land Per Person



## Household Spend on Fruits and Vegetables

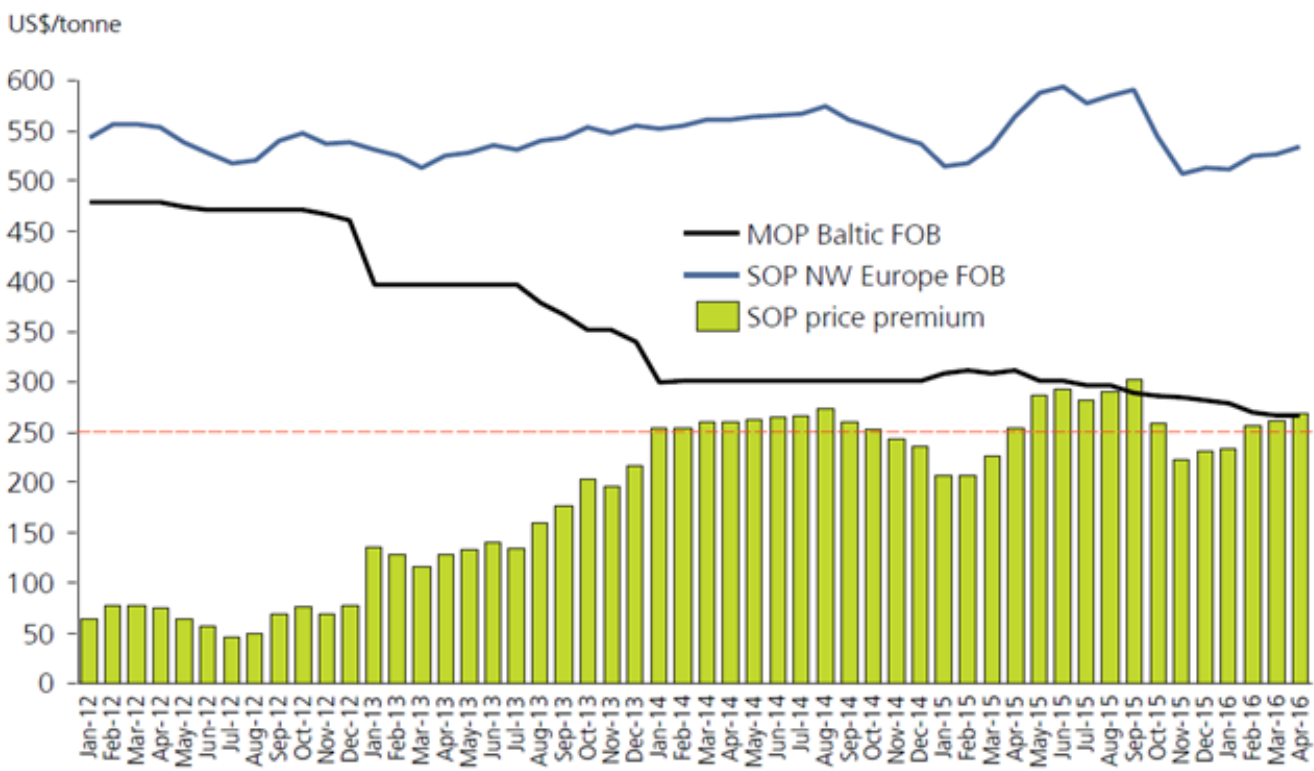


Source: UN, FAO, U.S. Bureau of Labor

# Potash Prices

- Prices for standard SOP products are currently trading at approx. US\$540/t (NW Europe FOB)
- Current weakness in MOP prices has had limited impact on SOP prices
- Key supply and demand fundamentals support the current SOP price:
  - **Price inelasticity:** SOP demand is driven by high-value crops for which the cost of fertilizer has less impact on crop profitability
  - **High marginal cost:** SOP supply is reliant on secondary production (Mannheim Process) which has a high production cost and a problematic hydrochloric acid by-product

Potash Prices – January 2012 to April 2016



Source: Integer Research



- Agrimin is well placed to take advantage of the robust market outlook and demand for specialty fertilizers
- The trend towards low-cost and environmentally friendly SOP production from salt lakes will continue
- Western Australia is an emerging SOP province and Agrimin is leading the way towards establishing this new industry
- Scoping Study delivered strong technical and financial metrics and provides a platform to advance discussions with off-takers and strategic partners
- Path to production is understood and Agrimin is rapidly advancing key critical path items





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### **Further Information**

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# Appendix 1. Mineral Resources (JORC Code 2012)



Mineral Resources – December 2015 (*Total Porosity*)

Category	Zone	Depth (m)	Volume (M m³)	Average Total Porosity	SOP Grade (kg/m³)	Contained SOP (Mt)
Indicated	Upper	0.4 – 2.7	4,036	45.0%	8.41	15.0
Inferred	Upper	0.4 – 6.0	7,047	45.0%	8.25	26.0
Inferred	Lower	6.0 – 24.7	33,004	45.0%	8.23	122.0
<b>Total</b>	<b>Upper &amp; Lower</b>	<b>0.4 – 24.7</b>	<b>44,088</b>	<b>45.0%</b>	<b>8.25</b>	<b>164.0</b>

Mineral Resources – December 2015 (*Specific Yield*)

Category	Zone	Depth (m)	Volume (M m³)	Average Specific Yield	SOP Grade (kg/m³)	Contained SOP (Mt)
Indicated	Upper	0.4 – 2.7	4,036	12.5%	8.41	4.3
Inferred	Upper	0.4 – 6.0	7,047	9.4%	8.25	5.5
<b>Total</b>	<b>Upper</b>	<b>0.4 – 6.0</b>	<b>11,083</b>	<b>10.5%</b>	<b>8.31</b>	<b>9.7</b>
Inferred	Lower	6.0 – 24.7	33,004	5.0%	8.23	13.6
<b>Total</b>	<b>Upper &amp; Lower</b>	<b>0.4 – 24.7</b>	<b>44,088</b>	<b>6.0%</b>	<b>8.25</b>	<b>23.2</b>

Notes:

1. Average depth of drilling was 24.7m, however the estimation extends to 30.0m where drilling reached that depth
2. Water table averages 0.4m below surface
3. Potassium content can be converted to SOP using a conversion factor of 2.23 (i.e. SOP contains 44.87% Potassium)
4. Mineral Resources to a 2.7m depth are 89% Indicated Mineral Resources and 11% Inferred Mineral Resources
5. Mineral Resources below a depth of 2.7m are all Inferred Mineral Resources
6. Errors are due to rounding
7. Information that relates to Mineral Resources has been extracted from the Company’s ASX Release entitled Mackay Project Resource Update and Path to Production released on 15 December 2015



# Appendix 2. Scoping Study Information

- The Study is based on data collected and generated by Agrimin over the past two years
- Mineral Resources and hydrogeological modelling used field and laboratory data collected during 2015, including 66 drill holes, 17 well installations and two trenches
- The Study’s Process Design incorporates the results of a 92 day evaporation trial completed in April 2016
- A team of experienced consultants was used to ensure high-quality and credible outcomes

Scoping Study Team

Discipline	Consultant
Lead Engineer	Lycopodium Minerals
Mineral Resources	Hydrominex Geoscience Consulting
Geotechnical Evaluation	GHD
Hydrogeological Modelling	Groundwater Exploration Services
Process Water Evaluation	Hydrominex Geoscience Consulting
Trench & Pond Design	Knight Piesold
Mass Balance & Flowsheet	Global Potash Solutions
Evaporation Testwork	PEC & Independent Metallurgical Operations
Environmental	Ecologia