

ASX Release 9 April 2018

# QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 31 MARCH 2018

## Highlights

#### **Mackay SOP Project**

- Pre-Feasibility Study progressed and on track for completion in Q2-2018
- Additional long-term pump testing completed on pilot trenches
- Pilot evaporation pond construction completed

## **Corporate**

• Cash balance was \$7.7 million at 31 March 2018

Agrimin Limited (ASX: AMN) ("Agrimin" or "the Company") is pleased to report its activities for the quarter ending 31 March 2018.

## Mackay SOP Project – Western Australia (100% owned)

The Mackay Sulphate of Potash ("SOP") Project is located in Western Australia and is 100% owned by Agrimin (Figure 1).

Lake Mackay is the largest known SOP-bearing salt lake in Australia and is the low point of an enormous groundwater and surface water catchment area. Lake Mackay covers an area of approximately 3,500km² and measures approximately 80km east-west and north-south. The salt lake is comparable in size to the two major sources of primary SOP production, being the 4,400km² Great Salt Lake in the USA and the 5,500km² Lop Nur (Luobupo operation) in China.

Lake Mackay's hydrogeological setting and significant size provide important attributes that support the development of a globally significant SOP operation. The Project currently has Indicated Mineral Resources of 4.3 million tonnes and Inferred Mineral Resources of 18.9 million tonnes of SOP based on specific yield. Current Mineral Resources are hosted by a single contiguous deposit covering an on-lake area of 2,201km² with brine commencing approximately 40cm below surface across the entire deposit area. The deepest drill hole on Lake Mackay is 30m with the deposit remaining open below this depth.



Tenement Outline Tanami Railway Major road Access Track The Granites Gas Pipeline **MACKAY PROJECT** agrimin Yuendumu Papunya Kiwirrkurra XO Kintore **ALICE SPRINGS** 

Figure 1. Mackay SOP Project Location Map

Agrimin completed a Scoping Study for the Mackay SOP Project in August 2016. The Study indicated SOP production of 370,000 tonnes per year over a 20 year life at an average total cash cost of US\$256/t FOB (inclusive of road, rail and port costs)<sup>1</sup>.

SOP production begins with pumping brine from trenches into a series of solar evaporation ponds. The Scoping Study incorporated brine extraction exclusively from a shallow trench system across the lake. The crystallised Potassium salts from the ponds will be harvested and fed to the process plant. The process route is conventional and will comprise milling, flotation, decomposition, SOP conversion, drying, compaction and sizing. The finished SOP products are planned to be transported to Australian and international customers.

## **Pre-Feasibility Study**

The Pre-Feasibility Study ("**PFS**") advanced during the quarter and is on track for completion in Q2-2018. Advisian is the lead engineer and project manager for the PFS.

#### **Hydrogeological Studies**

Following extensive infill drilling and hydrogeological characterisation works completed in 2015 and 2016, the Company completed the excavation of 14 trenches across Lake Mackay in 2017. Between August and December 2017, four of the trenches were subject to long-term pumping tests with durations ranging from 25 to 125 days. This data was used to calibrate the hydrogeological model and provide an estimation of brine recovery rates for the PFS.

<sup>&</sup>lt;sup>1</sup> Refer to the ASX Release dated 23 August 2016 for full Scoping Study details. All material assumptions underpinning the production target and forecast financial information derived from the production target continue to apply and have not materially changed.



Long-term pumping tests continued during the quarter and were completed at three additional trenches with durations ranging from 14 to 45 days. Further trench excavations and long-term pump testing is planned at other locations throughout 2018 to provide increased confidence in predicted brine recovery rates for the Definitive Feasibility Study ("**DFS**").

During the quarter, the Company also completed an extensive airborne electro-magnetic survey to assist with mapping the broader Lake Mackay area to identify potential freshwater aquifers in close proximity to the proposed process plant site.

#### **Evaporation Trials and Process Studies**

During the quarter, the Company reported positive results of PFS process testwork studies. The Company produced SOP samples ranging from 52% to 54%  $K_2O$ , exceeding the typical grades for SOP products sold in global markets. SOP samples have undergone preliminary analysis by potential off-take parties which has confirmed the SOP produced to date meets customer specifications.

The Company has completed the construction of a pilot-scale version of the PFS evaporation pond design on Lake Mackay. This will facilitate the long-term evaporation trial to support a DFS. The pilot evaporation pond program is primarily designed to test the following key parameters:

- Confirm the evaporation and crystallisation pathway of the lake brines under site conditions with daily and seasonal variation;
- Provide further supporting evaporation data for pond sizing and configuration purposes;
- Confirm applicable geotechnical parameters to feed into scaled-up pond designs;
- Address other specific technical parameters including pond operating depth, brine entrainment, pond start-up and timing, and other operating requirements; and
- Produce Potassium salt samples that are representative of those anticipated at full-scale to support a range of product development and marketing activities.

## **Native Title**

The proposed development area for the Mackay SOP Project, being the area subject of the PFS, is based solely on Agrimin's existing tenements within the Kiwirrkurra native title determination area in Western Australia.

Agrimin and Tjamu (Aboriginal Corporation) RNTBC, the native title registered body corporate for the Kiwirrkurra people, have signed a Native Title Agreement to provide the necessary consents for the Project's development and operations.

## **Environmental Studies**

During the quarter, the Company completed further environmental studies to assist an environmental assessment of the Project. The Company continues to consult with key authorities and stakeholders.



## **Corporate Activities**

## **Share Issues**

During the quarter, the Company issued 500,000 performance rights to an employee. No ordinary shares or other securities were issued by the Company during the quarter.

## **Business Development**

Various business development opportunities are continually under consideration, with all opportunities being assessed in context of the Company's current strategic goals and risk profile. During the quarter, the Company lodged four Exploration Licence applications within the broader Kiwirrkurra native title determination area.

## **Tenement Interests**

Table 1. Schedule of Tenement Interests as at 31 March 2018

Tenement Ref.	Project	Holder	State	Status	Interest
		Exploration Licence	s		
E80/4887	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/4888	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/4889	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/4890	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/4893	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/4995	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/5055	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
E80/5124	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Application	100%
E80/5172	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Application	100%
E80/5173	Mackay Metals	Agrimin Metals Pty Ltd	W.A.	Application	100%
E80/5174	Mackay Metals	Agrimin Metals Pty Ltd	W.A.	Application	100%
E80/5175	Mackay Metals	Agrimin Metals Pty Ltd	W.A.	Application	100%
EL30651	Mackay SOP	Agrimin Limited	N.T.	Application	100%
EL31780	Mackay SOP	Agrimin Limited	N.T.	Application	100%
EL31781	Mackay SOP	Agrimin Limited	N.T.	Application	100%
		Miscellaneous Licenc	ces		•
L80/87	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
L80/88	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Granted	100%
L80/89	Mackay SOP	Agrimin Potash Pty Ltd	W.A.	Application	100%

**ENDS** 



#### **Contacts**

**Investor Relations:** 

Mark Savich Chief Executive Officer T: +61 402 746 757

E: msavich@agrimin.com.au

Media:

Michael Vaughan Fivemark Partners T: +61 422 602 720

E: michael.vaughan@fivemark.com.au

Or visit our website at www.agrimin.com.au

#### **About Agrimin**

Based in Perth, Agrimin Limited is a leading fertilizer development company focused on the development of its 100% owned Mackay SOP Project. The Project is situated on Lake Mackay in Western Australia, the largest undeveloped SOP-bearing salt lake in the world. Agrimin is aiming to be a global supplier of high quality SOP fertilizer to both traditional and emerging value-added markets. Agrimin Limited's shares are traded on the Australian Stock Exchange (ASX: AMN).

#### **Forward-Looking Statements**

This ASX Release may contain certain "forward-looking statements" which may be based on forward-looking information that are subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. Forward-looking information includes exchange rates; the proposed production plan; projected brine concentrations and recovery rates; uncertainties and risks regarding the estimated capital and operating costs; uncertainties and risks regarding the development timeline, including the need to obtain the necessary approvals. For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other ASX Releases. Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this ASX Release, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

#### **Competent Person's Statements**

The information in this ASX Release that relates to exploration results, Mineral Resources Estimates and Scoping Study results are extracted from the relevant ASX Releases and are available on www.asx.com.au and Company's website on www.agrimin.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous ASX Releases and, in the case of the Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the ASX Release on 15 December 2015 continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the previous ASX Releases.