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# QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 30 SEPTEMBER 2015

# Highlights

## Mackay SOP Project

- Drilling has indicated the potential for an increase to the current Mineral Resource, in terms of both grade and volume
- Drilling has confirmed the deposit starts near surface (from an average depth of 0.4m), remains open at depth and SOP grades are highly homogenous across the Project area of 2,457 km<sup>2</sup>
- Drilling program was completed within budget with a total of 27 aircore holes, 39 auger holes and 3 direct push holes
- Constant rate pump tests were completed on cased wells and trenches with promising flow rates identified in shallow sandy material
- 5,000L bulk brine sample is undergoing detailed mass balance modelling prior to the commencement of process testwork
- 100kg of geotechnical samples are undergoing laboratory testwork to establish evaporation pond and trench design parameters
- Brine reanalysis and physical properties testwork in progress with an updated Mineral Resource estimation to follow

Agrimin Limited (ASX: AMN) ("Agrimin" or "the Company") is pleased to report its activities for the quarter ending 30 September 2015.

During the quarter, Agrimin conducted a comprehensive exploration program at its Mackay Sulphate of Potash ("**SOP**") Project. The program was completed within budget and the results have exceeded expectations. The Company continues to progress numerous laboratory tests and development studies to allow for the completion of a Scoping Study in Q1 2016.



# Mackay Project – Western Australia (100% owned)

### **Drilling Program**

During the quarter, the Company completed a drilling program which included a total of 27 aircore holes on an approximate 7.5 km staggered grid (**Figure 1**). In addition, 34 power auger holes, five hand auger holes and three direct push drill holes were completed (**Figure 2**).

Fourteen of the aircore drill holes had 50mm piezometers installed for water monitoring and sampling purposes. Furthermore, three aircore drill holes have been converted into 100mm cased wells and the Company successfully completed two 24 hour pump tests, with sustainable yields achieved over the duration of both tests. Three hydrological data loggers were installed at locations across the lake for long term water monitoring.

Agrimin had two hydrogeologists on-site during the entire exploration program to undertake all pump testing activities and geological logging of drill intersections.

#### Figure 1. Aircore Drilling in Progress



A key observation from the drilling program was the distinct difference in zoning between the western and eastern sides of Lake Mackay. The western side of the lake appears to host a lower energy zone, with predominantly higher clay content. In contrast, the eastern side of the lake contains higher sand and grit content. This is possibly the effect of different depositional environments. Generally higher brine flows are encountered in the eastern side which is reflective of the higher sand content, and crystalline gypsum zones. Higher brine flows are also encountered throughout the Project area where the lakebed sequence has interbedded sand and crystalline gypsum zones.

This observation is significant for two reasons. Firstly, the lakebed sediments observed near surface on the south west corner of the Project could potentially represent an area suitable for the application of un-lined solar evaporation ponds. Secondly, the high brine flows encountered in the eastern side of the Project area appear highly favourable for recovering brines via shallow trenches. The potential to employ trenching methods is further enhanced by the immense lateral extent of the Mackay Project area spanning 2,457km<sup>2</sup>.

During the quarter, Agrimin's hydrogeological consultants commenced work on a hydrogeological model and an updated Mineral Resource Estimate. Laboratory testwork is underway on core samples collected from direct push drill holes, which will be used to determine key physical property parameters including porosity, density and moisture content.



Figure 2. Drill Collar and Trench Locations



Subsequent to the quarter end, Agrimin reported the results of brine analyses for all drill holes recently completed.

As previously advised, Agrimin was informed by ALS Laboratory Group ("**ASL**") that brine analyses reported by ALS could potentially overstate the potassium grades for the Mackay Project (ASX Release, 24 September 2015). As a result Agrimin submitted those brine samples to two independent laboratories for reanalysis.

A total of 137 brine samples were submitted to Intertek and Bureau Veritas, both of which are independent, NATA accredited, minerals laboratories in Perth. Analyses have been conducted with internal laboratory QA/QC procedures, and in addition Agrimin has used certified standard samples, trip blanks and field duplicates to assess laboratory performance.

The major disrepancy in cation analysis is believed to be due to differences in configuration and calibration of the ICP-AES setup used in the ALS laboratory.



## Trenching Program

During the quarter, as part of the broader exploration program, the Company completed two trenches.

Agrimin excavated trench MT1 which was approximately 110m long and 2.5m deep (**Figure 3**). MT1 was constructed near the western edge of the lake given its proximity to existing access tracks. The trench was dug into clays with interbedded sand and crystalline gypsum zones. A pump test was completed over 19 consecutive days and a sustainable yield was achieved over the duration of the test. The Company's on-site hydrogeological consultants supervised the pump test and undertook daily monitoring of flow rates and water levels in the trench.

#### Figure 3. Trench at MT1



Agrimin also completed test pit MP1 which was approximately 23m long and 0.5m deep (**Figure 4**). The test pit was dug into porous gypsiferous sands which occur over vast areas of the Project, extending from surface. A pump test was completed over a 24 hour period by the Company's on-site hydrogeological consultants and very promising yields were achieved over the duration of the test.

### Figure 4. Test Pit at MP1





# **Planned Activities**

Agrimin is extremely pleased by the results of the exploration program conducted during the quarter. The data collected will provide a strong foundation for the key technical parameters to be incorporated into the Scoping Study.

The Company is currently focussed on the following activities:

- Resource estimation and hydrogeological evaluation;
- Geotechnical testwork; and
- Evaporation trials and process testwork.

The Mineral Resource estimation and hydrogeological evaluation is already underway. Recent field work included four constant rate pump tests in order to assess potential flow rates from trenches and cased wells. The results of these tests will be incorporated into the hydrogeological model.

Geotechnical samples were collected from three locations on the lake. Laboratory testing is in progress to gain an understanding of the geotechnical properties of the proposed sites for evaporation ponds and trenches. This will assist in determining the likely construction approach for on-lake infrastructure, thus increasing the level of confidence in the cost estimates applied within the Scoping Study.

Brine analyses have been received for the bulk sample and these are being used for detailed mass balance and process simulation prior to the comencement of evaporation trials and process testwork. This will define details of the process flow sheet, mass balance and design parameters for a SOP process plant. This work has the longest lead time with an estimated three month schedule. The Company is targeting the completion of a Scoping Study in Q1 2016 (**Figure 5**).

Agrimin looks forward to updating shareholders in respect to these ongoing activities which have the potential to significantly de-risk the Mackay Project and validate it as a world class SOP asset.



#### Figure 5. Indicative Timetable



# **Corporate Activities**

### Share Issues

During the quarter, the Company issued 271,036 ordinary shares due to the exercise of listed options with an exercise price of \$0.05 per share. These options generated proceeds of \$13,552.

Also during the quarter, the Company received proceeds of \$13,889 due to the exercise of an additional 277,778 listed options with an exercise price of \$0.05 per share. The Company has issued 277,778 ordinary shares subsequent to the quarter end.

#### **Business Development**

Agrimin has a strategic focus on SOP due to market fundamentals which remain very supportive of new production. The Company continues to actively assess business development opportunities which would be complementary to its existing project portfolio. As and when acquisitions are completed the Company will make announcements to the market at appropriate times.

# **Tenement Interests**

#### Table 1. Schedule of Tenement Interests as at 30 September 2015

Tenement Ref.	Project	Holder	State	Blocks	Status	Interest
E80/4887	Mackay	Agrimin Limited	W.A.	195	Granted	100%
E80/4888	Mackay	Agrimin Limited	W.A.	200	Granted	100%
E80/4889	Mackay	Agrimin Limited	W.A.	86	Granted	100%
E80/4890	Mackay	Agrimin Limited	W.A.	200	Granted	100%
E80/4893	Mackay	Agrimin Limited	W.A.	36	Granted	100%
EL30651	Mackay	Agrimin Limited	N.T.	57	Application	100%
EPM 18616	1	Agrimin Limited	QLD	30	Granted	6%

Notes:

1 Agrimin retains a 1% net smelter royalty on any and all minerals produced from this tenement.

ENDS

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

The information in this statement that relates to Exploration Results for the Mackay Project is based on information compiled or reviewed by Mr Murray Brooker who is a full-time employee of Hydrominex Geoscience Pty Ltd. Mr Brooker is a geologist and hydrogeologist and is an independent consultant to Agrimin. Mr Brooker is a Member of the Australian Institute of Geoscientists and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition). Mr Brooker consents to the inclusion of such information in this statement in the form and context in which it appears.

The information in this statement that relates to the Mineral Resource Estimate of November 2014 for the Mackay Project is based on information compiled or reviewed by Mr Simon Coxhell who is a full-time employee of CoxsRocks Pty Ltd and an independent geological consultant to Agrimin. Mr Coxhell takes overall responsibility for the Statement. Mr Coxhell is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition). Mr Coxhell consents to the inclusion of such information in this statement in the form and context in which it appears. Refer to the ASX Release of 10 November 2014 titled "Mineral Resource Estimate for Mackay Project".