

ASX Release 28 October 2024 Agrimin Limited | ABN 15 122 162 396 ASX Code: AMN 2C Loch Street Nedlands, Western Australia 6009 T: +61 8 9389 5363 E: admin@agrimin.com.au | W: www.agrimin.com.au

# QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 30 SEPTEMBER 2024

# Highlights

### Mackay Potash Project

- Successful process testwork flotation results were announced during the quarter which achieved greater than 90% potassium recovery at greater than 90% Schoenite grade
- Further successful conversion and flotation testwork results were reported from a followup program which achieved target grades and recovery, and determined optimal temperature reagent mixing conditions
- Both programs were in partnership with leading equipment vendors FLSmidth and Veolia
- Mackay Potash Project is now in stage three assessment with the Western Australian Environmental Protection Authority ("EPA")
- During the quarter, the Company incorporated regulator and EPA Board comments into Environmental Impact Assessment documentation and resubmitted

### **Corporate**

- Cash balance of \$2.3 million as at 30 September 2024
- Carrying value of Agrimin's 40% interest in Tali Resources Pty Ltd of \$46 million as at 30 June 2024, as reported in the Company's 2024 Annual Report (announced to the ASX on 30 September 2024)
- Mr Richard Seville and Mr Brad Sampson resigned as non-executive chair and nonexecutive director respectively on 25 September 2024. Mr Alec Pismiris was appointed interim chair
- Subsequent to the quarter end, Mr Lee Bowers was appointed as a non-executive director on 14 October 2024

Agrimin Limited (**ASX: AMN**) ("**Agrimin**" or "**the Company**") is pleased to report its activities for the quarter ending 30 September 2024.



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

Agrimin's vision is sustainable food security for future generations by establishing the Mackay Potash Project ("**the Project**") as the world's leading seaborne supplier of Sulphate of Potash ("**SOP**") fertiliser which will provide the nutrition the world needs. The Project is situated on Lake Mackay in Western Australia, the largest undeveloped potash-bearing salt lake in the world. Lake Mackay hosts significant volumes of brine (hypersaline groundwater) containing dissolved potassium and sulphur which can produce high-grade, water-soluble SOP fertiliser.

Agrimin's production of SOP from Lake Mackay has strong environmental credentials, and is expected to displace SOP currently produced from the highly polluting Mannheim process. The Mannheim process involves mixing Muriate of Potash ("**MOP**") with sulphuric acid and heating to over 600 degrees Celsius to produce SOP. The process consumes significantly more energy as a result of the heating required, and produces a hydrochloric acid waste by-product.

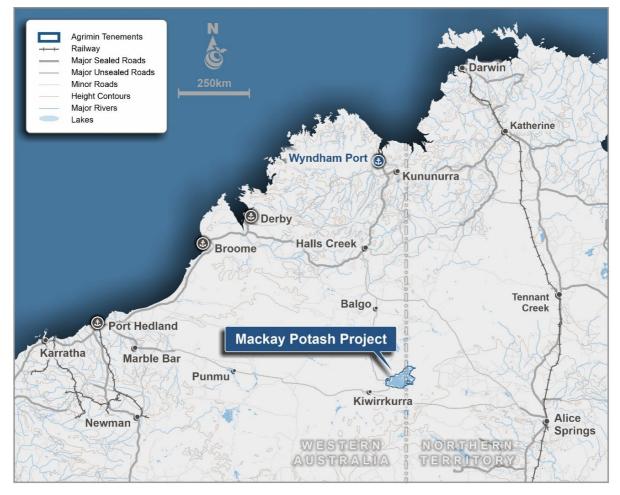
The Food and Agriculture Organization of the United Nations predicts global food demand will increase by 50% by 2050<sup>1</sup>. SOP has a critical role to play in global food security by providing high quality fertiliser essential for generating crops in less and more arid conditions. Domestic SOP production also has a significant role to play for Australian farmers as Australia currently imports 100% of its potash requirements. SOP has a low salt index and is virtually chloride-free, making it ideal for use on high value crops such as fruits and vegetables. Agrimin's SOP is certified as an allowable input for use in organic production systems and will be produced with lowest quartile greenhouse gas emissions.

Lake Mackay is located 940km by road south of the Wyndham Port in Western Australia (**Figure 1**). It comprises nine granted Exploration Licences covering over 3,000km<sup>2</sup> in Western Australia. The closest community to the Project is Kiwirrkurra which is located approximately 60km south-west. A Native Title Agreement is in place and provides the necessary consents for the Project's development and operation within the Kiwirrkurra determination area, additionally all Native Title Agreements required for the proposed transport corridor from Lake Mackay to Wyndham are in place.

SOP prices remained strong during the quarter at approximately US\$630 per tonne<sup>2</sup>, supported by limited market supply and firm demand.



### Figure 1. Project Location Map



The Project's development plan is based on the sustainable extraction of brine from Lake Mackay using a network of shallow trenches. Brine will be transferred along trenches into a series of solar evaporation ponds located on the salt lake's surface. Raw potash salts will crystallise on the floor of the ponds and be collected by wet harvesters and pumped as a slurry to the processing plant located off the edge of the salt lake. The plant will refine harvested salts into high quality finished SOP fertiliser ready for direct use by customers. SOP will be hauled by a dedicated fleet of road trains to a purpose-built storage facility at Wyndham Port. At the port, SOP will be loaded via an integrated barge loading facility for shipment to customers.

The Definitive Feasibility Study ("**DFS**") for the Mackay Potash Project was completed in July 2020. The DFS demonstrated the Project's globally significant scale and that once in operation it could be the world's lowest cost source of seaborne SOP. The Project also offers excellent potential to expand over time to meet the expected growth in demand for SOP.

The Independent Technical Review ("**ITR**") of the DFS and Project was completed in April 2021 by Worley Consulting Pty Ltd, a subsidiary of the Worley Limited group of companies. The ITR report concluded that, based upon the data described in the report, the identified project risks are not expected to impact the technical and financial viability of the Project, particularly when considering



the FEED work programs and mitigations that are planned to occur prior to the Company making a Final Investment Decision ("**FID**").

Agrimin is committed to a sustainable and ESG-friendly development of the Project to deliver on a number of metrics, including:

- Strong engagement with Indigenous people and Traditional Owners, as well as support for land management and community programs;
- Significant commitment to training and employment opportunities for Indigenous people, including in relation to the road haulage operation;
- High renewable energy penetration to deliver very low greenhouse gas emissions along with one of the lowest carbon footprints associated with any macro-nutrient fertiliser product; and
- Creation of critical new seaborne SOP supply to support global food security, especially with respect to increasing demand for high value crops such as fruits, vegetables, tree nuts and grape-vines.

The Mackay Potash Project is now advancing toward a FID. Current activities include:

- Permitting primary environmental approval and granting of mining tenure;
- Engineering advanced process testwork and preparation for contractor involvement;
- Execution Planning critical path analysis and mitigation including earliest possible environmental surveys and baseline monitoring; and
- Funding strategic partnerships and funding pathways.

### Product Marketing and Project Funding

The Company has signed three Binding Offtake Agreements with Sinochem Fertilizer Macao Limited, Nitron Group and MacroSource (formerly Gavilon Fertilizer) for the supply of 150,000tpa, 115,000tpa and 50,000tpa of SOP, respectively. Discussions with potential project partners and financiers continue.

### Front End Engineering Design

Since completion of the DFS, the Company's integrated owner's team has been progressing several FEED work streams. The outcomes of the FEED phase will provide a greater degree of accuracy for operating and capital costs, as well as minimise the risk of material changes during the execution phase of the Project.

The Company completed site-based testwork for the salt harvesters in 2020, and geotechnical sampling and testwork for the sealed haul road in 2022. Additionally, the Company has worked with its proposed power contractor to refine the Project's site power station design which has resulted in a hybrid diesel, solar, wind and battery solution with a modelled renewable energy penetration of +80%. In 2023, the Company completed a civil construction trial to increase the understanding of the on-lake construction and operation of the Project's brine extraction trenches and solar evaporation



ponds. The trial results will be used to build on the Company's geotechnical data for the lake, confirm key equipment selections and validate remaining assumptions of the construction methodology.

An extensive technical review of the process flowsheet and associated testwork database, together with the reported learnings from globally successful operations and the early mover SOP projects in Western Australia, led to the requirement for additional process testwork to be completed. This additional testwork's objective was to de-risk the Project's start-up stage by demonstrating the targeted potash-bearing salt mineral can be consistently produced from the expected harvest salt feed.

Having discovered Leonite, which does not float, instead of Schoenite in the flotation feed, testwork focussed on the conversion stage and has repeatably demonstrated that the Schoenite can be produced instead of Leonite through temperature control and sufficient residence time in a cooling crystalliser (as announced to the ASX on 1 March 2024). A cooling crystalliser was incorporated into the DFS design and remains the preferred equipment as it provides uniform temperature control throughout the vessel ensuring conversion to Schoenite. The optimal temperature required in the conversion stage to resolve Leonite is approximately 15 degrees Celsius, which is lower than the 28 degrees Celsius assumed during the DFS.

This conversion testwork was conducted in collaboration with Veolia Water Technologies Inc. (USA) ("**Veolia**"), a leading crystallisation vendor. The conversion testwork was successful in understanding the process conditions for converting startup harvest salts (containing Leonite) into Schoenite for further refinement into SOP, via flotation, leaching and SOP crystallisation.

During the quarter, further testwork was carried out to finalise the conversion and flotation steps of the flowsheet. The flotation testwork was again performed at Veolia's facility in Plainfield, USA and utilised FLSmidth Inc.'s ("**FLSmidth**") flotation metallurgist and test equipment. The testwork aimed to evaluate collector preparation and mixing intensity, process temperature range, thickening and filtration and a bulk flotation effort to produce sufficient Schoenite concentrate to enable downstream leach and SOP crystallisation validation (as announced to the ASX on 24 September 2024).

A total of 42 batch tests were conducted in this program with about half of the tests assessing a range of process variables, and the remaining focussed on bulk concentrate generation for downstream flowsheet testing.

The bulk flotation effort focussed on producing sufficient cumulative mass of Schoenite concentrate at the optimised float conditions to enable testing of the downstream Schoenite leach and SOP crystalliser packages. The bulk flotation effort produced a total 95kgs of Schoenite concentrate with an average 94% potassium recovery. The Schoenite concentrate will be used for future testing of the downstream Schoenite leach and SOP crystallisation units.

Further testwork is being scoped for the crushing and downstream Schoenite leach and SOP crystallisation stages of the flowsheet.



### **Northern Territory Tenure**

Following an initial meeting held with Traditional Owners and their representative body, the Central Land Council, and following feedback received during the quarter, Agrimin withdrew its tenement applications over the Northern Territory portion of Lake Mackay subsequent to the end of the quarter. These include: EL24861, EL30651, EL31780 and EL31781. There was no carrying value associated with these tenements as they were not granted.

### Project Approvals

The Mackay Potash Project is being assessed by the EPA. The EPA's assessment is an accredited process under a bilateral agreement with the Commonwealth Government, and therefore the Project will not require a separate assessment by the Commonwealth Department of Climate Change, Energy, the Environment and Water ("**DCCEEW**").

During the quarter, the Company re-submitted the Environmental Impact Assessment response incorporating comments from the EPA and the DCCEEW. The resubmission included revised Environmental Management and Monitoring Plans and Offset Strategy. The Company adopted a thorough engagement approach regarding the resubmission with the EPA and the DCCEEW to ensure the resubmission meets the regulators' expectations and could proceed to the assessment phase. The Company sought the input and review of the Management and Monitoring Plans and Offset Strategy Plans by external subject matter experts and representatives of the Traditional Owners and Ranger groups. Incorporating traditional knowledge and experience will lead to shared value with environmental, economic and social co-benefits and capacity building.

The Project is now in 'Stage Three Assessment' with the EPA. The Project's Offset Strategy was presented to the EPA Board in July 2024, with further amendments and re-submission of the Offset Strategy in August and early October 2024. Subsequent to the quarter end, feedback was received from the EPA that the submission is now under consideration by the EPA Board.

Based on statutory guidelines the indicative timeline for EPA approval remains the second half of 2024 with supplementary Commonwealth approval expected to follow in the first half of 2025.

The Company is also progressing other secondary approvals, licences and agreements, which include:

- Department of Energy, Mines, Industry Regulation and Safety Miscellaneous Licences, Mining Lease, Mining Proposal and Mine Closure Plan approvals; and
- Department of Water and Environmental Regulation Works Approval and Licence.

### **Government and Community Engagement**

The Company continues its active engagement in local communities and across all levels of Federal, State and Local Government. Aligned with the Project's progress significant advocacy was undertaken during the quarter with State Government Ministers and Departments and Federal Government Ministers and Commonwealth Departments.



The Project enjoys strong support in local communities, particularly given the employment opportunities and economic infrastructure that it will create. The Project is expected to create approximately 200 direct full-time jobs and support over 600 jobs through the regional supply chain over its multi-decade mine life, generating valuable long-term opportunities for Indigenous people living in Central Desert communities, as well as people living throughout the broader Kimberley region. Contemporary letters of support from multiple Native Title Holder representative bodies supported re-submission to the EPA in the quarter.

During the quarter, Tjamu Tjamu (Aboriginal Corporation) RNTBC ("**Tjamu Tjamu**") community engagement took place by commencing training in Kiwirrkurra with over 30 community members attaining their construction safety white card. This training was undertaken in partnership with Central Regional TAFE. An Indigenous Employment Strategy was drafted and submitted to Tjamu Tjamu for feedback during the quarter.

In addition, the inaugural Relationship Committee Meeting was undertaken with Parna Ngururrpa (Aboriginal Corporation) RNTBC ("**Parna Ngururrpa**") in Balgo and the first stage of an Indigenous Employment Strategy was drafted and submitted to Parna Ngururrpa for feedback during the quarter.

Preparation is underway for a comprehensive planning workshop with the Kiwirrkurra Rangers related to the environmental baseline monitoring surveys to commence in 2025. A similar meeting is subsequently planned to be held with the Ngururrpa Rangers.

# Exploration

Agrimin's Mackay West Arunta Project ("**MWA Project**") covers untested strike extent in the West Arunta region, along trend from both WA1 Resources Ltd's (**ASX: WA1**) Luni and P2 carbonatites and from Encounter Resources Ltd's (**ASX: ENR**) Emily, Crean and Hurley carbonatites, where significant niobium and rare earth element mineralisation has been found.

The MWA Project has to date had no systematic exploration for iron oxide copper-gold ("**IOCG**") or carbonatite style deposits, with all prior exploration solely focussed on potash at Lake Mackay. The MWA Project consists of semi-coincident gravity high anomalies, some with coincident magnetic anomalies, which have been identified from broad-spaced, regional geophysical datasets. These anomalies are considered highly prospective for both IOCG and carbonatite mineralisation.

Agrimin will continue engagement with Traditional Owners towards exploration agreements to support exploration on the MWA Project.



# Lake Auld Potash Project – Western Australia

During the quarter, the Company continued its consultations with Jamukurnu-Yapalikurnu Aboriginal Corporation (Western Desert Lands) RNTBC ("**JYAC**"), the Native Title representative body for the Martu people.

Following the Annual General Meeting of JYAC, the Company received feedback that the Board of JYAC was not supportive of mining activity on the Lake Auld Lake System.

As a result, Agrimin surrendered its existing tenement E45/4925 during the quarter and withdrew tenement applications E45/5417, E45/5419, E45/5420 and E45/5579 subsequent to the quarter end. As disclosed in the 2024 Annual Report, the Company has also written off the carrying value capitalised with regards to the Lake Auld Potash Project as at 30 June 2024.

# **Corporate Activities**

### **Board Changes**

Mr Richard Seville and Mr Brad Sampson resigned as non-executive chair and non-executive director respectively on 25 September 2024. Mr Alec Pismiris was appointed interim chair.

Subsequent to the quarter end, Mr Lee Bowers was appointed as a non-executive director on 14 October 2024.

Mr Alec Pismiris will remain as non-executive chair until the upcoming Annual General Meeting, following which he intends to step down from the Board. Mr Bowers will assume the role of non-executive chair following the Annual General Meeting.

### Tali Resources Pty Ltd

Tali is a private company which is 40% owned by Agrimin and is focused on exploration in the West Arunta region of Western Australia. Tali holds one of the largest and most prospective tenement packages in the West Arunta. Tali also owns 13% of WA1 Resources Ltd (**ASX: WA1**). The carrying value of Agrimin's 40% interest in Tali Resources Pty Ltd was \$46 million as at 30 June 2024, as reported in 2024 Annual Report (as announced to the ASX on 30 September 2024).

### **Summary of Expenditure Incurred on Activities**

The Company incurred expenditure of \$1,148,000 which for accounting purposes has been allocated to exploration and evaluation activities during the quarter. No expenditure was allocated to development or production activities during the quarter. Exploration and evaluation expenditure during the quarter primarily related to FEED works, environmental approvals and project financing.



## Payments to Related Parties of the Entity

A description of and explanation for payments to related parties and their associates per Section 6.1 of the Appendix 5B for the quarter ending 30 September 2024 is set out below (**Table 1**).

### Table 1. Payments to Related Parties of the Entity and their Associates

Item	Current Quarter (A\$)	Previous Quarter (A\$)
Directors' Remuneration		
CEO Salary and Superannuation	111,500	111,000
Non-Executive Director Fees	70,833	72,750
Total payments to related parties of the entity and their associates	182,333	183,750



# **Tenement Interests**

Tenement	Project	Holder	State	Status	Interest	Nature of Change			
Exploration Licences									
E80/4887	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/4888	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/4889	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/4890	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/4893	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/4995	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/5055	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/5124	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
E80/5172	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
EL24861	Mackay Potash	Agrimin Potash Pty Ltd	N.T.	Application	100%	*			
EL30651	Mackay Potash	Agrimin Potash Pty Ltd	N.T.	Application	100%	*			
EL31780	Mackay Potash	Agrimin Potash Pty Ltd	N.T.	Application	100%	*			
EL31781	Mackay Potash	Agrimin Potash Pty Ltd	N.T.	Application	100%	*			
E45/4925	Lake Auld Potash	Agrimin Potash Pty Ltd	W.A.	Surrendered	100%	Surrender			
E45/5417	Lake Auld Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%	*			
E45/5419	Lake Auld Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%	*			
E45/5420	Lake Auld Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%	*			
E45/5579	Lake Auld Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%	*			
		Other Licences							
L80/87	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
L80/88	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Granted	100%				
L80/98	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%				
L80/99	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Application	100%				
L80/100	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Granted	100%				
L80/101	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Granted	100%	Grant			
L80/102	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Granted	100%	Grant			
L80/103	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Application	100%				
L80/104	Mackay Potash	Northern Infrastructure Pty Ltd	W.A.	Application	100%				
L80/105	Mackay Potash	Agrimin Potash Pty Ltd	W.A.	Application	100%				

# Table 2. Schedule of Tenement Interests as at 30 September 2024

\*Tenement application withdrawn subsequent to the end of the quarter.



### ENDS

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

This ASX Release is authorised for market release by Agrimin's Board.

### About Agrimin

Based in Perth, Agrimin Limited is the leading fertiliser company on the ASX (**ASX: AMN**) focused on development of its 100% owned Mackay Potash Project. The Project is situated on Lake Mackay in Western Australia, the largest undeveloped potash-bearing salt lake in the world. Agrimin's vision is sustainable food security for future generations by providing nutrition the world needs. The demand for SOP is underpinned by population growth, which the Food and Agriculture Organization of the United Nations predicts will drive an increase in global food demand by 50% by 2050<sup>1</sup>.

## **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.

<sup>&</sup>lt;sup>1</sup> Food and Agriculture Organization of the United Nations, The future of food and agriculture trends and challenges, accessed 24 October 2023, page 136: https://www.fao.org/3/i6583e/i6583e.pdf

<sup>&</sup>lt;sup>2</sup> Argus Media Group as at 20 September 2024