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ASX Release
24 September 2024

Mackay Potash Project Process Engineering Update

Highlights

- **Further conversion and flotation testwork has achieved target grades and recovery, determining optimal temperature and reagent mixing conditions**
- **Dewatering tests performed on the float concentrate showed that the slurry thickened readily without the need for any flocculant. These test results will be used to inform the detailed commercial design for the thickener and belt filter plant components**
- **The bulk flotation effort produced a total 95kgs of schoenite concentrate with an average of 94% potassium recovery, to be used for downstream leach and SOP crystallisation testing**

Agrimin Limited (**ASX: AMN**) ("**Agrimin**" or "**the Company**") is pleased to report further successful conversion and flotation results and provide an update in relation to ongoing process testwork for the Mackay Potash Project ("**the Project**"). The results reported in this announcement relate to conversion and flotation testwork that was completed in partnership with FLSmidth Inc. ("**FLSmidth**") and Veolia Water Technologies Inc. (USA) ("**Veolia**").

Flotation testwork was performed at Veolia's facility in Plainfield, USA and utilised FLSmidth's 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.

Debbie Morrow, Managing Director & CEO of Agrimin commented: *"We continue to be impressed with the results from the laboratory testwork as we partner with leading equipment vendors, Veolia and FLSmidth.*

"The repeatability of conversion and flotation under a range of conditions has demonstrated a robustness of key design parameters providing deeper confidence in the flowsheet. We look forward to the next step in our disciplined testing program which is the downstream leach and SOP crystallistion aspects of the flowsheet."

Testwork Discussion

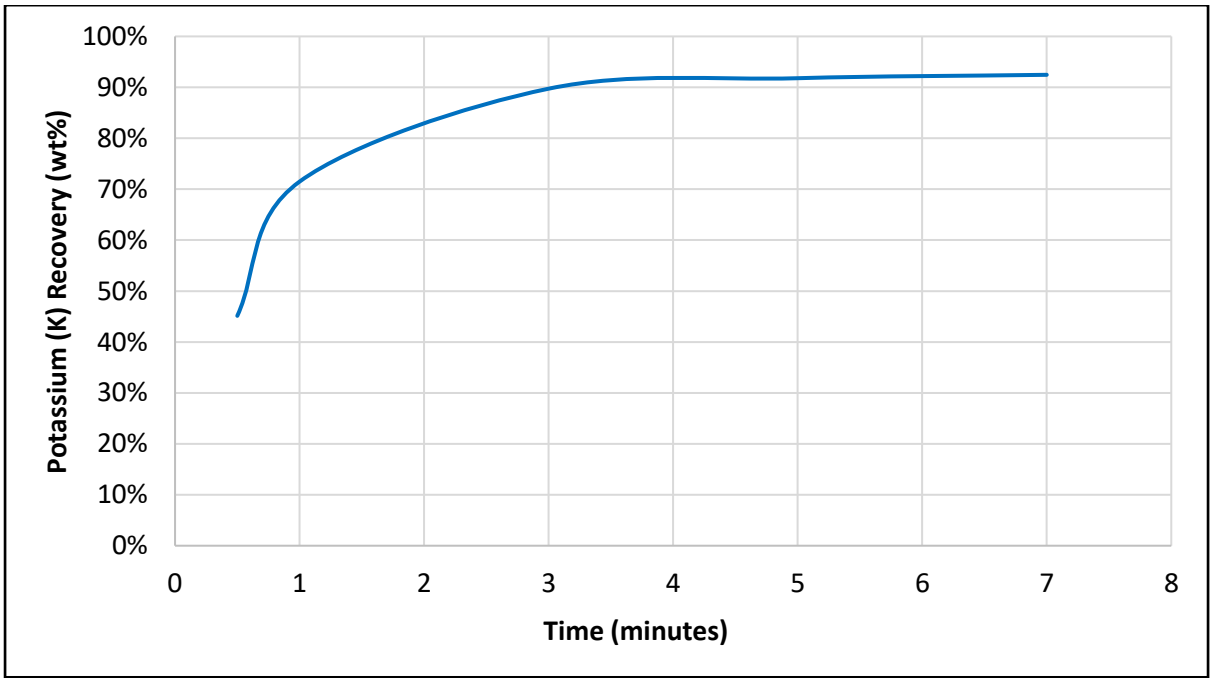
The Company, as part of Front End Engineering Design ("**FEED**"), has been progressing thorough process testwork using samples harvested from the Mackay Potash Project.

In previous flotation testwork (announced to the ASX on 10 July 2024) it was found that potassium recoveries of 90% or greater could be achieved under design conditions. This latest round of testwork confirmed previous results as shown in Figure 1, utilising the same feed salts from the Lake Mackay trench and pond trial. The focus remains on pond start up, utilising lower potassium grades which are expected during the initial ramp-up phase of operations.

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.

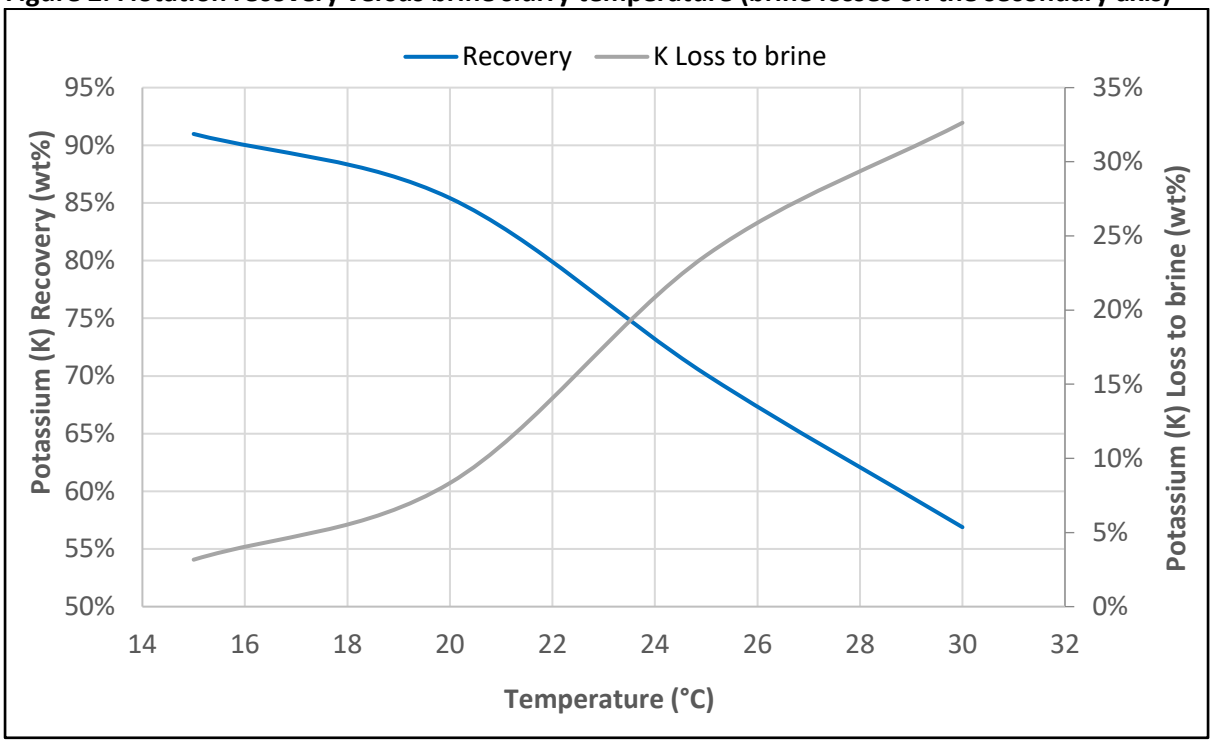
Comparable flotation tests were performed in FLSmidth's Denver D12 float cell assessing the repeatability of the design basis. Figure 1 shows the results of coupled conversion into flotation kinetic tests, with the recovery target achieved after five minutes, and grade from both tests of 96% schoenite. Repeatable results were achieved under the design conditions, consistent with historical testing values of greater than 90%.

Figure 1. Typical float kinetics, coupled conversion and flotation



A summary of the temperature testing is shown in Figure 2, with significant losses to the brine observed as temperature increases, validating expected outcomes from Agrimin's previous testwork and mature process model. Agrimin continues to work with FLSmidth to incorporate the laboratory results into the commercial design and overall heat balance for the process plant.

Figure 2. Flotation recovery versus brine slurry temperature (brine losses on the secondary axis)



The bulk float effort was performed using a 35 litre NextSTEP mechanical flotation cell. Feed material was generated with a bulk conversion effort under the optimised design conditions from previous testwork programs. 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% k recovery and grade on specification for testing the design range of the schoenite leach and SOP crystallisation units downstream.

ENDS

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

About Agrimin

Based in Perth, Agrimin Limited is the leading fertiliser development 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[1].

Competent Persons Statement

The information in this announcement that relates to Exploration Results for the Mackay Potash Project is based on and fairly represents information compiled or reviewed by Mr Michael Hartley, who is a member of AusIMM and the Australian Institute of Geoscience (AIG). Mr Hartley is a full-time employee of Agrimin Limited. Mr Hartley 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 Hartley consents to the inclusion of such information in this announcement in the form and context in which it appears.

The information in this announcement that relates to the interpretation of process testwork data and mineral processing for the Mackay Potash Project was first reported in the ASX Release titled "Agrimin to be the World's Lowest Cost SOP Producer" announced on 21 July 2020, and subsequently in the announcements titled "Mackay Potash Project Process Engineering Update - Flotation" and "Mackay Potash Project Process Engineering Update – Amended" dated 10 July 2024 and 1 March 2024 respectively. The Company confirms that, other than as set out in this announcement, it is not aware of any new information or data that materially affects the information in the previous announcement and that, other than as set out in this announcement, all the material assumptions underpinning the interpretation in the previous announcement continue to apply and have not materially changed.

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.

[1] 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

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	Results reported in this announcement relate to chemical testwork conducted by Agrimin Limited ("**Agrimin**") to advance its DFS flowsheet for recovery of Potassium Sulphate ("**SOP**") from resource brines containing Potassium and Sulphate ions.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The testwork was developed and scoped collaboratively with Veolia Water Technologies Inc. (USA) ("**Veolia**") and FLSmidth Inc ("**FLSmidth**") conducted at facility in Plainfield Il, USA, overseen by local Veolia and FLSmidth metallurgical experts with over 30 years crystallisation and flotation experience using Veolia standard and FLSmidth standard methods and experience for testwork execution and assay determination. Elemental assay was determined via Atomic Absorption Spectroscopy (AAS) for the positive ions (K, Na, Mg), Ion Chromatography for the negative ions (SO_4 and Cl) per the Veolia standard procedures and practice. Mineral analysis was performed via X-ray Diffraction ("**XRD**") at an independent laboratory at North Western University ("**NWU**") at the J.B. Cohen X-ray Diffraction Facility. XRD sample preparation and analysis completed via a jointly developed method for schoenite/leonite hydrated salt analysis between Agrimin, NWU and Microanalysis Australia. XRD Quality Control leonite reference material provided by Agrimin, certified by Microanalysis Australia.
	Aspects of the determination of mineralisation that are Material to the public Report.	Not applicable.

Criteria	JORC Code explanation	Commentary
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Not applicable.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Not applicable.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	Not applicable.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	Not applicable.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in situ material collected,*	Refer to 'Sampling techniques' above.

Criteria	JORC Code explanation	Commentary
	including for instance results for field duplicate/second-half sampling. *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Flotation tests were executed by FLSmidth metallurgists with extensive experience in froth flotation. Analytical methods determined to be appropriate with adequate oversight and considered total.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Standard Veolia analytical procedure for the chemical assay, with blanks and duplicates as per the Veolia standards. Leonite reference material used in the XRD analysis (refer to summary included in 'Sampling techniques' above). Reference material certificate of analysis was provided by Microanalysis Australia.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	The results presented were not verified by any alternative analytical entity. However, XRD results were reviewed by Veolia, Graeme Ditri (Process Manager at Agrimin) for consistency and ionic balance when received.
	The use of twinned holes.	Not applicable.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data stored at Veolia premises and duplicated in Agrimin office in Perth as native data and PDF reports.
	Discuss any adjustment to assay data.	Not applicable.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	Not applicable.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	Not applicable.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Not applicable.
Sample security	*The measures taken to ensure sample security.*	Samples for analyses were hand delivered to the assay laboratory from the flotation laboratory staff within the same building. Samples are discarded immediately upon advice from the Company that the data has been received. Reserve samples are held at the Company's laboratory for an adequate back-up period. Samples for XRD were shipped via secure tracked courier, with chain of custody documentation and sign off procedures.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No external audits of sampling techniques or analytical data have been undertaken to date. A metallurgical balance model (SysCAD) has been undertaken by Agrimin and Veolia to examine the Company's conceptual flowsheet/mass balance based on analytical results obtained and presented by Agrimin. A third-party review has been completed by Mineralis. Results are preliminary and being subjected to further laboratory testwork for consistency.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Not applicable.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Not applicable.
Geology	*Deposit type, geological setting and style of mineralisation.*	Not applicable.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Not applicable.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Not applicable.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	Not applicable.

Criteria	JORC Code explanation	Commentary
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Refer to Figure 1 and Figure 2 in the text
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Not applicable.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Agrimin, as part of its front-end engineering design ("**FEED**"), has been progressing through process testwork using samples harvested from the Mackay Potash Project trial ponds. Testwork has shown flotation can be achieved for schoenite at the conditions highlighted in this ASX release.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Agrimin is continuing its testwork and development of its DFS flowsheet for SOP recovery. Additional data will be reported as it comes to hand and in accordance with Agrimin's continuous disclosure obligations under the ASX Listing Rules.