



Encouraging metallurgy testing results for V_2O_5 and HPA received as Lindfield Project Scoping Study nears completion

Key Highlights

- Preliminary testing of the upper seam yields 1.5% V_2O_5 leach feed grade and 85% leach extraction of vanadium with potential for further improvement.
- Potential for profitable secondary product material – **HPA** (High Purity Alumina) product grading 4N (99.99% Al_2O_3) produced from first tests on material from the Lindfield Project mineralised samples.
- Lindfield Project Scoping Study on track for completion by end of Q3 2023.

Critical Minerals Group Limited (**ASX: CMG, Critical Minerals Group** or the **Company**) is pleased to announce encouraging results from early stage metallurgical test work for the flagship **Lindfield Project** (EPM 27872) located 30km from Julia Creek in North-West Queensland.

The Company's Managing Director Scott Winter commented on the early-stage results:

"The early stage process testing of the vanadium material from each of the mineralised seams is such an important step in the overall process and ultimately in the manufacture of V_2O_5 and electrolyte products. To see such encouraging results in such a short period of time for a seam that is currently not included in the resource is very exciting for the team and the project. Similarly, from the first test on the alumina mineralised samples we have produced our target 4N (99.99% Al_2O_3) HPA product. To be able to refine to a valuable product grade of HPA via a simple refinement stage is also extremely pleasing in terms of potential future production.

These results confirm the high standard of resource at the Lindfield Project and gives real promise for further upgrading of the mineral resource material as the process is refined and provides greater confidence as we plan for the pilot scale testing. The results in the upper seam have allowed us to review and refine the modelling of the resource which is signifying an upside potential from our recently announced resource. The results are also being included in the Scoping Study currently underway and on track for completion by the end of Q3 2023."

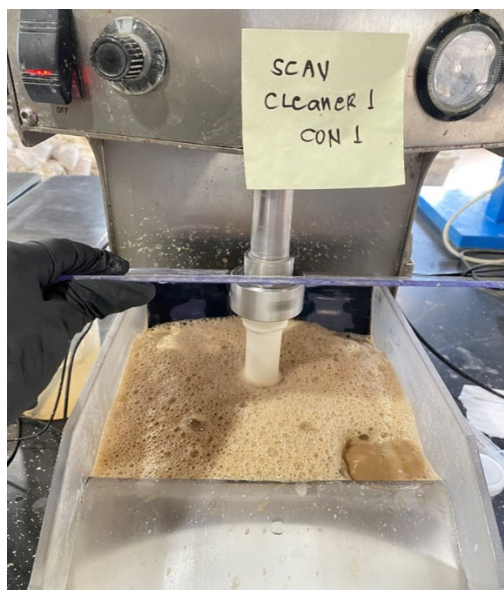


Image 1: Flotation of upper seam material



Image 2: HPA product from Lindfield Project mineralised material

TLB_A Vanadium Metallurgy

The lower grade upper seam (TLB_A seam) sits immediately above the mid seam (TLB_B seam) which is currently included in the Lindfield Project resource¹. Evaluation of the upper seam material yielded a 1.5% V₂O₅ leach feed grade (beneficiation product) on just the fourth test and 85% vanadium extraction on the first leach test with potential for further improvement to both grade and recovery through ongoing process optimisation test-work.

The results show potential for additional material from the upper seam to be added to the Lindfield Project resource at shallow depth. Further confirmatory test work and economic modelling will be carried out in order to fully evaluate the benefits of upper seam. The seam

¹ Please refer to the Company's ASX announcement dated 16 May 2023.



being located at the top of the sequence brings the benefits of being in the fully oxidised zone and with less waste to remove to recover.

HPA Production

Mineralised samples from the Lindfield Project resource were sent to QUT for bench-scale evaluation of the amenability of the material to production of HPA using the Lava Blue Limited HPA production process. Of the two samples evaluated, HPA grades of 3N and 4N were produced on the first attempt, with potential for further upgrading with minor optimisation.²

The battery revolution is creating new and growing markets with HPA joining the more widely known lithium and cobalt as a key ingredient. Recent market research is projecting a greater than 20% growth rate over the period 2023 – 2028 in the HPA market, with key drivers being increasing demand for electric vehicles, LED lighting, and sapphire glass along with semiconductors and medical applications.³

Lindfield Project Scoping Study

The Lindfield Project Scoping Study remains on track for completion in Q3 of 2023 with the planning for pre-feasibility and pilot scale processing studies well underway.

Approved for release by the board of the Company.

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Competent Person Statements

The information above that relates to metallurgy and metallurgical test work is based on, and fairly represents, information compiled by Adrian Buck, a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Adrian Buck is the Principal Geologist – Australia for John T Boyd Company. Adrian Buck has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012

² Please refer to the Company's ASX announcement dated 16 May 2023.

³ Source: <https://www.mordorintelligence.com/industry-reports/high-purity-alumina-hpa-market>.



Edition of the 'Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves'. Adrian Buck consents to the inclusion of the matters based on their information in the form and context in which it appears.

The information in this announcement that relates to the exploration results, exploration targets and mineral resources for the Company's Lindfield Project was first reported by the Company in the Company's prospectus dated 25 May 2022 and ASX announcements dated 22 February 2023, 13 March 2023 and 16 May 2023.

The Company confirms that it is not aware of any new information or data that materially affects the exploration results, exploration targets and mineral resources, and that all material assumptions and technical parameters underpinning these continue to apply and have not materially changed.

Where the Company refers to exploration results or mineral resources in this announcement (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the exploration results or mineral resources estimate in that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

Forward-Looking Statement

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Although the Company believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

About Critical Minerals Group Limited

The Company is building its position in the vanadium market, holding a tenement in north-west Queensland near the town of Julia Creek which is its flagship project known as the "Lindfield Project". In addition, the Company holds a tenement for the "Whinmoor Project" and has applied for tenements for the "Lara Downs Project" and "Lindfield North Project" all within close proximity to the Lindfield Project. The Company further holds tenements for the "Figtree Creek Project" and "Lorena Surrounds Project", both exciting greenfield copper-gold projects near the Queensland town of Cloncurry that support the Company's focus on critical mineral opportunities.

The Company aims to develop and produce mineral deposits that will enhance the global energy transition that is currently underway. The rising standard of living of a growing global



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population is likely to continue to drive demand for critical minerals for years to come, particularly during the phase of decarbonisation and electrification. The world will need to find a way to meet this growing demand for such minerals, and the Company is well-positioned to meet this new economy mineral demand as the world turns towards a more renewable future.