

JULY 10<sup>th</sup> 2024

CORPORATE RELEASE

## UPDATE ON THE PRE-FEASIBILITY STUDY AT THE LAKE HOPE HIGH PURITY ALUMINA PROJECT WA

The Pre-Feasibility Study (PFS) for the Lake Hope Project continues on schedule to be completed in Q4 this year, with significant progress made on the three main pillars of the Study: the mine, the process plant and product development, marketing and offtake.

- The Mine at Lake Hope:
  - A negotiation protocol for Land Access and Cultural Heritage agreements with the Ngadju peoples is under review.
  - Applications for a Mining Lease and associated Miscellaneous Lease will be lodged shortly.
  - Infill drilling to define a maiden Measured Resource and Proven Reserve completed with resource calculations and economic studies in progress.
  - Further flora fauna and heritage surveys are being planned for the mine haul road.
- The Process Plant:
  - Kwinana selected as the location for a benchmark production of 10,000 tonnes per annum of HPA due to access to providers of the required input chemical reagents, buyers of the fertiliser and acid by-products and access to suitable land. Combined, these provide substantial strategic advantages for the project with savings on capex and opex.
  - The Low-Temperature Leach process selected as the most straightforward processing method to produce HPA at scale.
  - CPC Engineering selected to provide a design and engineering study for the full-scale plant that is underway.
- Product development, offtake and marketing
  - Significant test work on HPA and fertiliser by-products completed with assays due in August. Quotes received and discussions in progress for designing and constructing a pilot plant to provide bulk samples to customers.
  - Experimental work has produced a hydrated alumina product that may have major applications in the catalyst and flame retardant industries.
  - Early-stage discussions are underway for potential synergies with existing alumina businesses in Europe and the USA.
  - A marketing and product development team is being assembled.



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Impact Minerals Limited (ASX:IPT) is pleased to provide an update on the progress of the Pre-Feasibility Study (PFS) underway on the Lake Hope High Purity Alumina (HPA) project located 500 km east of Perth in Western Australia and on schedule to be finished by the end of 2024 (Figure 1). Impact can take an 80% interest in Playa One Pty Limited, which owns the Lake Hope Project and associated intellectual property, by completing the PFS (ASX Releases March 21<sup>st</sup> 2023).

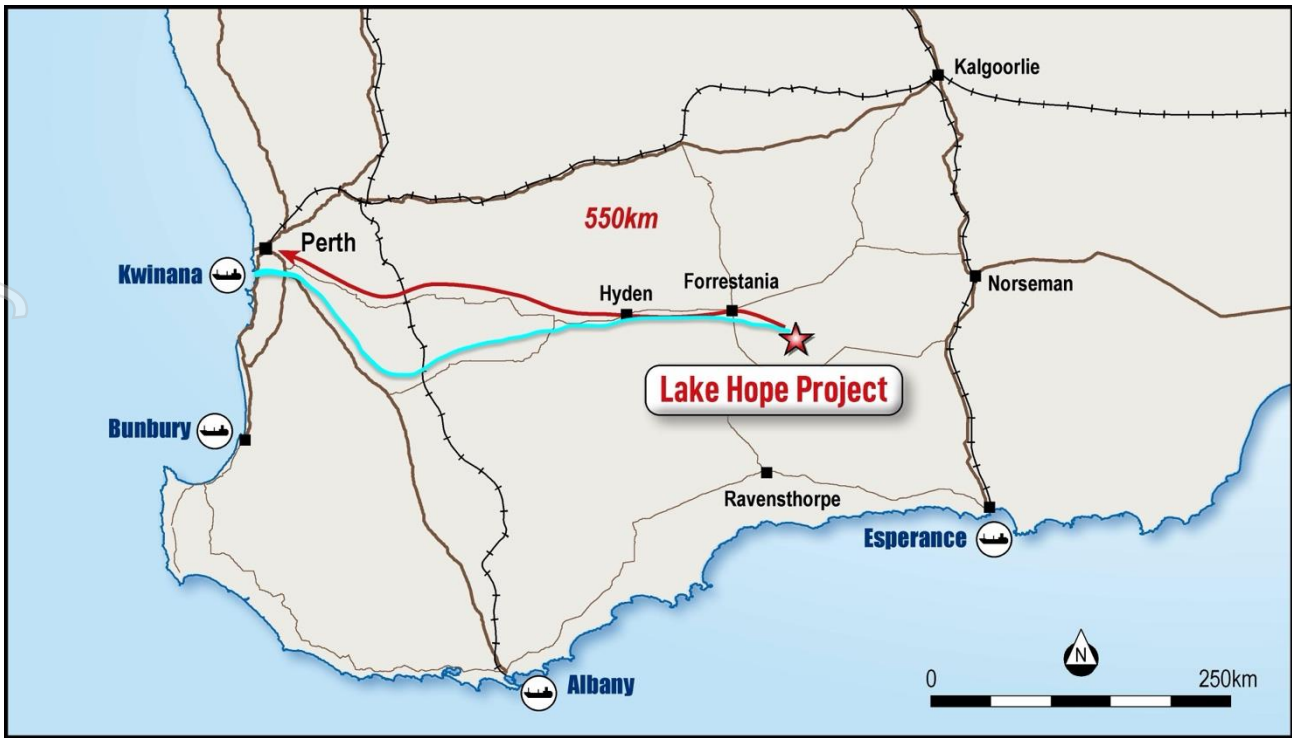
The PFS followed on from a positive Scoping Study, which showed that for a benchmark production of 10,000 tonnes per annum of HPA, the Project has an estimated post-tax Net Present Value (NPV<sub>8</sub>) of about A\$1.3 billion and would potentially be one of the lowest-cost producers of HPA globally by a significant margin (ASX Release November 9<sup>th</sup> 2023).

All material assumptions underpinning the production target and the forecast financial information derived from the production target in the Scoping Study continue to apply and have not materially changed within the +/-30% parameters (ASX November 9<sup>th</sup> 2023).

Impact Minerals' Managing Director, Dr Mike Jones, said, *"The Lake Hope Pre-Feasibility Study is like a large jigsaw puzzle where we know what the final picture looks like and are now starting to see many of the individual pieces falling into place at a great pace. We have been focused on the puzzle's edges with progress made at the proposed mine at Lake Hope itself, the process plant, which will be in Kwinana and increasingly, product offtake and marketing.*

*We are filling the puzzle with discussions with the Ngadju peoples, preparing a Mining Lease Application and completing drilling to help define a maiden Reserve. We have selected Kwinana as the site for the processing plant and our proprietary Low-Temperature Leach as the best method to scale up HPA production to the planned 10,000 tonnes per annum because of substantial strategic advantages. These include ready providers for all the reagents we need, ready buyers for our by-products and a site possibly suitable for the plant. As a result, we recently commissioned CPC Engineering to provide design engineering and capital and operating costs for the LTL process plant on that site.*

*Our test work is progressing well, and as part of that, we recently discovered a product that may have various industrial uses with further research being done. We are looking at ways of accelerating a pilot plant development that will provide HPA in quantity to potential customers and are starting to assemble a marketing team to continue our outreach to them. Recent developments with Alpha HPA Limited, which has shown very strong global demand for HPA and related products, clearly demonstrate to me that "if we build it, they will come". We continue on schedule to complete the PFS by the end of the year and set ourselves up for significant strides towards production in 2025".*



**Figure 1.** Location of the Lake Hope Project and proposed haul route to Kwinana.

Significant progress is being made on the three main pillars of the PFS for Lake Hope: the proposed mine at the lake itself, the metallurgical process and associated planned 10,000 tonnes per annum process plant, and product development and marketing of final HPA products. The progress outlined underpins the expected news flow as specific milestones are met in the lead-up to the completion of the PFS.

### The Mine

The following work has been completed or is in progress.

1. Discussions have been held with the Prescribed Body Corporate (PBC) for the Ngadju Aboriginal people to inform them of Impact’s intention to develop the Project and to lodge a Mining Lease Application. A Negotiation Protocol has been received from the PBC for Impact’s review, and this will set the framework for negotiations to achieve a Land Access Agreement and a Cultural Heritage Management Plan for the mine and the potential benefits to the Ngadju community from the development of the Lake Hope mine.
2. A mineralisation report, a Mining Lease layout, and a Miscellaneous Licence for haul road access and site logistics are being finalised for an application for a Mining Lease (MLA). Areas of gravel and construction materials for the haul road have been identified and mapped as part of this work. The haul road location offers considerable savings in the capital expenditure required for road construction compared to upgrading existing tracks.
3. Infill drilling on the West Lake has been completed to convert a significant portion of the previously defined Indicated Resource to a Measured Resource and is sufficient to provide a minimum 15-year mine life. This will allow a maiden Proven Reserve to be declared with further mining and economic studies. Assays for the drilling have been received and sent to H and S Resource Consultants for interpretation and resource calculation.

4. Quotes are being sought for follow-up seasonal flora and fauna surveys that will be required along the haul road and proposed gravel pits. In addition, further Heritage Surveys will be needed along the same infrastructure and will likely occur next year as discussions with the Ngadju peoples and the statutory approvals process progress.

### The Process Plant

1. Kwinana has been selected as the best location for the processing plant following a rigorous study of the available options. This is a key outcome of the PFS, and the decision was driven by the ready availability of the various chemical reagents needed for the process plant compared to the transport cost to get reagents to Kalgoorlie, which was the basis of the Scoping Study (ASX Release November 9<sup>th</sup> 2023). The savings in operating costs far outweigh the marginal extra cost of transporting ore to Kwinana rather than Kalgoorlie.
2. Another key outcome of the PFS is selecting the Low-Temperature Leach (LTL) process as the most effective process for producing HPA at scale (ASX Release February 27<sup>th</sup> 2024). This follows ongoing test work and financial modelling for the LTL and Sulphate Processes. Further details will be provided upon receipt of the assays due in August.
3. Discussions are underway with potential suppliers of the input reagents required for the LTL process and potential buyers of the associated fertiliser and acid by-products. Indications are that both the required inputs and by-product outputs can be provided “at the gate” in Kwinana. This is a significant strategic advantage for the project, minimises the requirement for many minor capital items, and leads to savings in operating costs.
4. A block of land has been identified as suitable for the plant, and discussions are underway to secure it when appropriate.
5. CPC Engineering has been commissioned to undertake design engineering studies and provide estimates of the capital and operating costs for a process plant to produce 10,000 tonnes per annum of HPA. These costs will be used in the PFS. CPC’s work will build on extensive Process Flow Design and Mass Flow Balance calculations recently completed by Strategic Metallurgy.

### Marketing and Offtake

1. Metallurgical test work is progressing well, and production of HPA samples is underway. This will provide samples for initial sighter testing by offtake partners. In addition, further test work has been completed on the fertiliser by-product to help determine likely demand and pricing.
2. Quotes have been received, and discussions are in progress regarding the design and construction of a pilot plant that will produce HPA of consistent quality for potential offtake partners.
3. Initial experimental work on end products has produced a hydrated alumina product that may have significant uses in the catalyst and flame-retardant industries. Further experimental work and discussions with potential end users are in progress.
4. Early-stage discussions have been held with existing ceramic and alumina producers in Europe and the USA with a view to potential synergies.
5. Impact is assembling a marketing team to engage with potential customers further and provide feedback on the specifications required for end-user products.

Recent ASX releases by Alpha HPA Limited (ASX:A4N), a leader in the HPA industry, have shown there is significant global demand for a wide range of HPA products of much more than the 10,000 tonnes per annum Alpha plans to produce from their full-scale plant to be built over the next two years. Alpha recently received significant funding of \$400 million of a total capex of \$500 million, towards building this plant from the Australian government. The funding comprises low-interest loans and demonstrates the ongoing federal (and state) support for critical minerals and downstream processing, in which Impact intends to participate. The Lake Hope Scoping study had an estimated capital cost of \$250 million (+/- 30%) (ASX Release November 9<sup>th</sup> 2023).

#### **COMPLIANCE STATEMENT**

This report contains no new Exploration Results.

Dr Michael G Jones

Managing Director

Authorised by the Board of Impact Minerals Limited