



# Stakeholder Update

SEPTEMBER 2022

## Executive Summary

Since the March 2022 Stakeholder Update, Vytas has been actively advancing its mineral projects and technology materials. Preparation for listing on the Australian Securities Exchange (ASX) continues with the Prospectus in an advanced stage and an announcement of the IPO imminent upon favourable market conditions.

**The Company has advanced all projects with significant milestones achieved as follows:**

### Moora Silica Project

Fast track cash flow pathways being investigated.

### Tambellup Kaolin Project

4N HPA successfully produced using a non-hydrochloric acid process. The significance of removing the need for hydrochloric acid results in substantially lower Capex and Opex typically associated with HPA production.

### White Peaks and Ajana Projects

Optimisation of high strength low carbon concrete with industry partners showing strong interest to both partner with Vytas and gain access to our product.

### High Purity Silicon

Test work and assessment has commenced for the potential for an "at-site" and "on-demand" hydrogen production process which could revolutionize this green energy source.

## Moora Silica Project

A drill program and Ground Penetrating Radar (GPR) survey at the Moora Silica Project (10,644ha - Exploration Target\* (272-408Mt)) has been completed, confirming the quality of the ore and vast potential to build a long-life project.

Vytas plans to complete a further drill program at Moora before commissioning the maiden JORC resource, which is targeting 100Mt over the northern part of the tenement area, which would form the basis of a feasibility study. This next round of drilling is proposed to commence as soon as practicable following listing on ASX.

Long lead items for the feasibility study have already commenced, including discussions with key infrastructure groups including rail, port, rolling stock and main roads. Access to the rail has confirmed Vytas are the only users on this section of track, meaning there is no time constraints loading on site.



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## EXPLORATION TARGET

### Moora Silica Project - Exploration Target\*

Tonnes (Mt)	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	TiO <sub>2</sub> (%)	LOI (%)
272 - 408	97.1 – 99.8	0.01 – 1.4	0.02 – 0.5	0.1 – 0.2	0.01 – 0.7

\* The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared in accordance with the 2012 edition of the JORC Code

## HIGH PURITY QUARTZ

Vytas' target for a beneficiated product from the Moora Silica Project was 99.95% silica (SiO<sub>2</sub>). Pleasingly, results from our test work have exceeded that goal, delivering the following results:

Sand Unit	Stage	Al <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	TiO <sub>2</sub> (%)
White Sand (WS1)	Raw Feed	0.16	99.4	0.08	0.17
	Final Product	0.02	99.96	0.016	0.01
White Sand (WS2)	Raw Feed	0.02	99.7	0.04	0.14
	Final Product	<0.01	99.97	0.011	<0.01
White Sand (WS3)	Raw Feed	0.01	99.75	0.03	0.09
	Final Product	<0.01	99.97	<0.01	<0.01

Vytas intends on producing 100kg – 200kg of sample material, being +99.95% SiO<sub>2</sub> and sub 100ppm Fe, for the purposes of securing strategic partners and offtake. Unsolicited offtake interest has been received from China, India, Japan and other SE Asian jurisdictions; including offers to build processing facilities in country. This has great potential to accelerate Vytas' pathway to production and positive cashflow, whilst limiting Vytas' capital requirement and dilution to Vytas shareholders.

Discussions are ongoing with a potential strategic partner who is seeking DSO material ahead of plant construction, which may represent a pathway to cash flow.

### POST LISTING ACTIVITIES FOR THE MOORA SILICA PROJECT

- Complete the third drill program
- Commission maiden JORC resource estimate
- Bulk Production test work (100-200kg) for offtake partners
- Feasibility and early earthworks

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## Tambellup Kaolin Project

The Company acquired the Tambellup Kaolin Project (24,155ha - Exploration Target\* (54-108Mt) in November 2021 and subsequently engaged CSA Global to complete a Mineral Resource estimate. The maiden JORC Inferred Resource was completed in May 2022, as detailed below.

### Tambellup Kaolin Project - JORC-2012 Mineral Resources (Inferred)





Tonnes (Mt)	ISO Brightness (%)	Al <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	LOI (%)
12.48	> 80	36.64	48.42	0.37	12.19

### Tambellup Kaolin Project - Exploration Target\*

Tonnes (Mt)	ISO Brightness (%)	Al <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	LOI (%)
54 – 108	79 - 87	34.2 – 38.1	46.9 – 50.5	0.1 – 0.8	10.9 – 13.4

\* The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared in accordance with the 2012 edition of the JORC Code.

### THE PROJECT WAS ACQUIRED FOR THE FOLLOWING REASONS:

- 
 Strong synergies exist between kaolin and silica. When kaolin is produced, a waste stream is High Purity Quartz where we are targeting a 4N – 5N product which is synergistic with our Moora Silica strategy;
- 
 The Vytas team has significant experience in Kaolin and High Purity Alumina (HPA), with more than 30 years' experience in R&D, and mineral and product development;
- 
 Tambellup Kaolin is high quality and recognised by the Geological Survey WA as the benchmark for high quality kaolin in Western Australia (including very high Al<sub>2</sub>O<sub>3</sub>: 34 -38% (median 37%); and
- 
 The Tambellup Project is advanced, with the acquisition including Vytas gaining the rights and intellectual property associated with the Griffin Process to produce HPA.

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## HIGH PURITY ALUMINA

Included with the acquisition of the Tambellup Project was the rights and intellectual property associated with the Griffin Process to produce HPA.

Vytas has modified the Griffin Process to successfully produce HPA achieving 4N purity in our laboratory. The Vytas team will continue to optimise the process leading up to the feasibility study with this achievement providing confidence of delivering a 4N and possibly a 5N product, without the need for hydrochloric acid. The significance of removing the need for hydrochloric acid results in substantially lower Capex and Opex associated with this process pathway.

The global HPA market size was valued at US\$1.3 Billion in 2019 and is projected to reach US\$4.8 Billion by 2026, growing at a CAGR of 20.7% from 2020 to 2026. Major factors driving the growth of HPA market size are, increasing applications and demand for semiconductors, sapphire glass for iPhones, rising adoption of LED bulbs, and increase in use in electric vehicles.

The 4N HPA product is a high value commodity, selling in a broad range from US\$15,000 to US\$40,000/tonne.

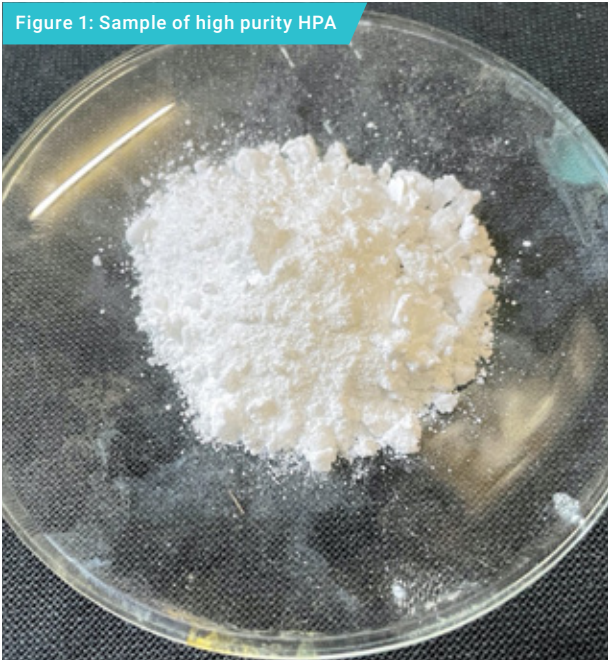


Figure 1: Sample of high purity HPA

## HIGH PURITY QUARTZ

The primary by-product from the production of HPA is silica, which Vytas intends to upgrade to form HPQ. 4N and 5N HPQ are high value products with current market prices of circa US\$600/tonne and US\$12,000/tonne respectively.

### POST LISTING ACTIVITIES FOR TAMBELLUP KAOLIN PROJECT

- Optimisation of the HPA and HPQ processes
- Complete an infill drill program for the purpose of establishing an Ore Reserve
- Progress with strategic partners, offtake agreements and processing facility options

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## White Peaks and Ajana Projects

The White Peaks (19,554ha) and Ajana (9,398ha) projects are the source feed for Vytas' Technology Materials.

### HIGH PURITY SILICON (HPS)

Vytas has produced a high purity silicon, using a process developed in-house which retains the important structure of the feedstock (Figure 2).

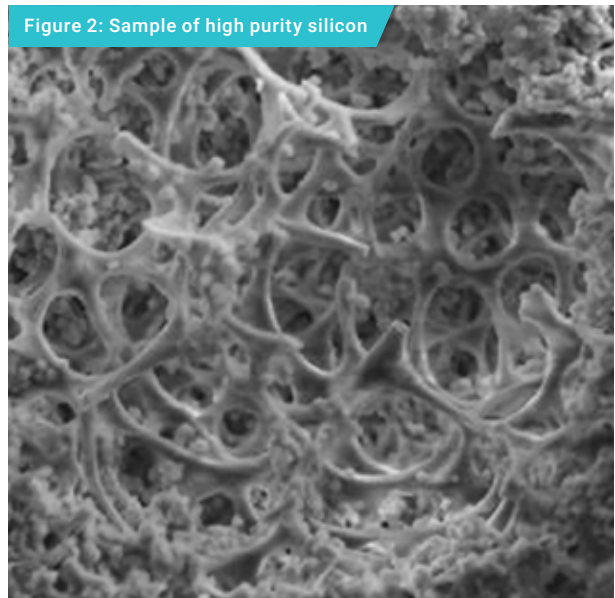
Vytas has commissioned the production of HPS for the purposes of engaging with industry partners for anodes for lithium batteries, anodes for the production of green hydrogen and the production of hydrogen at source and on demand.

### HIGH STRENGTH, LOW CARBON CONCRETE

Vytas has successfully produced concrete using HPS as a constituent ingredient that displaces some traditional inputs, as well as a geopolymer concrete which completely displaces traditional ingredients. A geopolymer concrete is made by reacting aluminate and silicate bearing materials, completely replacing the need for high CO<sub>2</sub>-emitting cement and lime.

Vytas' strategy is to produce a concrete, in partnership with existing industry majors, with 90% less CO<sub>2</sub>. For perspective, the cement industry is aiming to reduce CO<sub>2</sub> to below 500kg/t and by using our product this value may drop below 100kg/t.

Figure 2: Sample of high purity silicon



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## Annual General Meetings and Annual Report

Vytas is finalising the audit of the Financial Statements for the year ended 30 June 2022. An AGM will be convened in Q4 2022.

## IPO Process

The Company has made strong progress on all aspects of its IPO, with prospectus drafting advanced (as well as ancillary documents to support the prospectus). With many positive developments happening across the Vytas portfolio, the Company looks forward to launching its IPO in the near term, subject to market conditions being conducive to a successful listing.

Regards



**David Cornell**

Managing Director

### Competent Persons' Statements

The information in this Stakeholder Update that relates to the technical assessment of the Mineral Resources, Exploration Results and Exploration Targets is based on, and fairly represents, information and supporting documentation prepared by Dr Andrew Scogings and Mr Serik Urbisinov, both who are employees of CSA Global and are Competent Persons who are member of the Australian Institute of Geoscientists. Both Dr Scogings and Mr Urbisinov have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

As at the date of this Stakeholder Update, neither Dr Scogings nor Mr Urbisinov have a relevant interest in any Securities.

### Forward Looking Statement

Any statements, estimates, forecasts or projections with respect to the future performance of Vytas Resources and/or its subsidiaries contained in this announcement are based on subjective assumptions made by Vytas Resources management and about circumstances and events that have not yet taken place. Such statements, estimates, forecasts and projections involve significant elements of subjective judgement and analysis which, whilst reasonably formulated, cannot be guaranteed to occur. Accordingly, no representations are made by Vytas Resources or its affiliates, subsidiaries, directors, officers, agents, advisers or employees as to the accuracy of such information; such statements, estimates, forecasts and projections should not be relied upon as indicative of future value or as a guarantee of value or future results; and there can be no assurance that the projected results will be achieved.



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## About Vytas Resources

Vytas is an emerging producer and supplier of High Purity Quartz (HPQ), High Purity Alumina (HPA) and High Purity Silicon (HPS) and silica-based Technology Materials to provide solutions to global challenges to transition to a renewable economy.

Vytas' flagship projects consist of the Moora Silica Sand Project, the Tambellup Kaolin Project, White Peaks and Ajana Projects. Preliminary metallurgical test work confirms that High Purity Quartz (HPQ) and High Purity Alumina (HPA) can be cost effectively produced. In addition, preliminary metallurgical test work at the White Peaks and Ajana Projects confirms that the feedstock is amenable to conversion to silicon that has potential application as an anode material in lithium batteries.



## Vytas High Purity Aluminium (HPA) and High Purity Quartz (HPQ) Strategy

CSIRO's (2021) Critical Energy Minerals Roadmap includes both aluminium (HPA) and silicon (HPQ) as critical minerals needed to transition to a renewable economy. Both materials are in high demand due to their manufacturing benefits and use in Solar PV, Wind Turbines, Concentrated Solar Power (CSP), Hydrogen Production and Batteries.

This new technology material venture will place Vytas at the forefront of the renewable technology industry.

The Global HPA market was valued at US\$1.3 billion in 2019 and is projected to reach US\$4.8 billion by 2026, growing at a CAGR of 20.7 % from 2020 to 2026 (Allied Market Research, 2020).

Similarly, the Global HPQ market had a value of US\$672 million in 2019 and is expected to reach US\$1,234 million by 2027 growing at a CAGR of 7.9 per cent during the forecast period (Research and Markets, 2021).



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## Appendix - JORC 2012 Exploration Targets and Mineral Resource

### Moora Silica Project - Exploration Target\*

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