

#### **Annual General Meeting Presentation**

Peter Zardo - Managing Director

2 December 2021

ASX: ZEO

www.zeotech.com.au

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#### **Competent person's statement**

Information in this presentation relating to resource work for the Toondoon Kaolinite Project is based on information provided by Mr Graham Rolfe (BSc, MSc, FAIG, RPGeo), who has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". The exploration results such as drill logging and geochemical analyses used in the mineral resource estimate were compiled by Mr Rolfe. Mr Rolfe consents to the disclosure of information in the form and context in which it appears.

## Corporate snapshot



\$147M

(fully diluted)
Market capitalisation



1,497M

Shares on issue



\$4.55M

Cash at bank



\$0

Debt



\$0.090

Current share price

#### **Board & Management**

Sylvia Tulloch - Non-Executive Chair

Peter Zardo - Managing Director

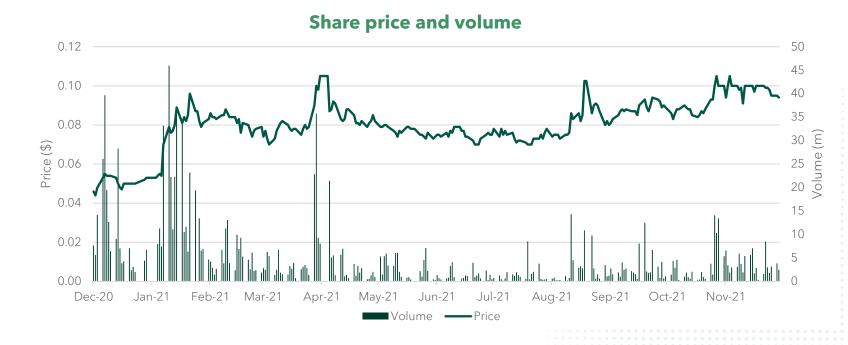
Rob Downey - Non-Executive Director

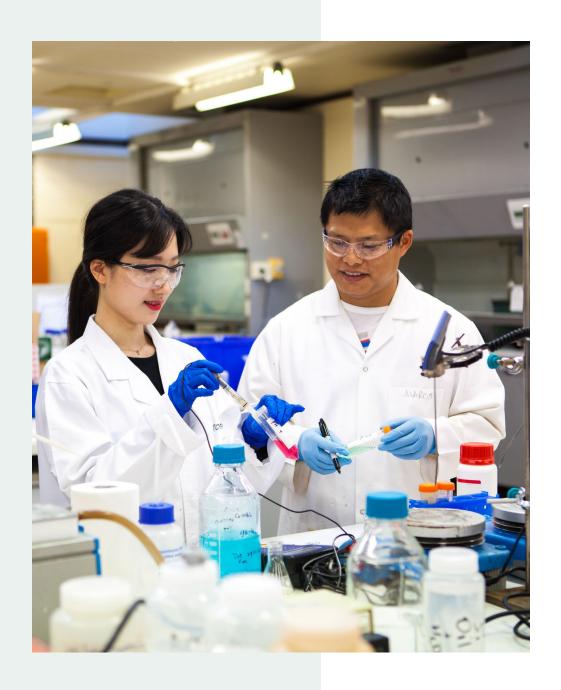
Dr. John Vogrin - Project Manager

Scott Burkhart - CCO

#### **Technical partners**

The University of Queensland Griffith University





### Company overview



#### **Strong growth prospects**

An emerging mineral processing technology company, offering exposure to advanced materials 'synthetic zeolites' with IP delivering low production cost advantage.



#### **Proprietary process**

Maximising green & sustainable processes for the manufacture of synthetic zeolites = low energy use, reduced production time, high reagent recycling.



#### **Patent-pending technology**

International Preliminary Examination Authority examiner, expressed a view that all 26 claims in the PCT application are novel and inventive.



#### **Global applications**

Production of low-cost high-grade adsorbents with unique properties for diversified global markets and emerging opportunities.

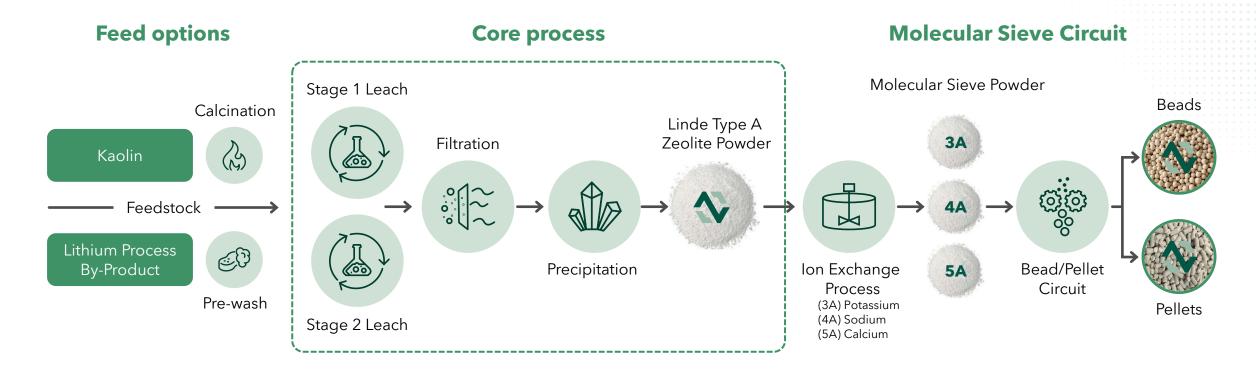


#### **Near-term cashflow**

Approved Mining Lease exceptionally high-grade raw ore kaolin offering fast-track DSO revenue opportunity.

### Proprietary process

SIMPLE AND SUSTAINABLE



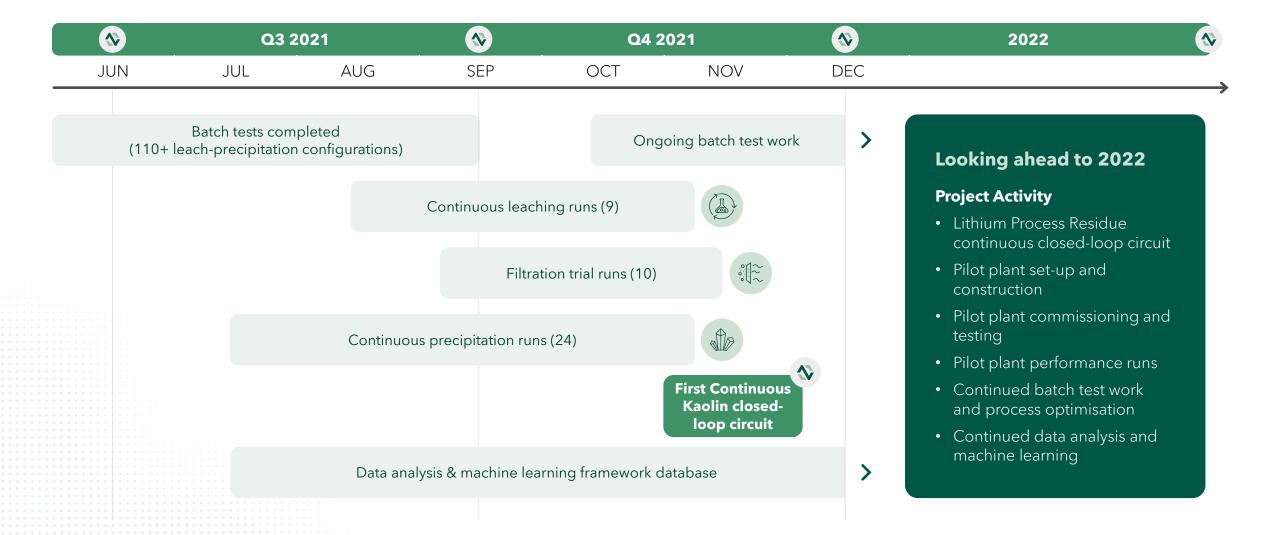


- Lower energy consumption
- Reduced production time
- High reagent recycling



- Reduced environmental footprint
- Low OpEx / CapEx (primary P&E conventional)
- Flexible product options

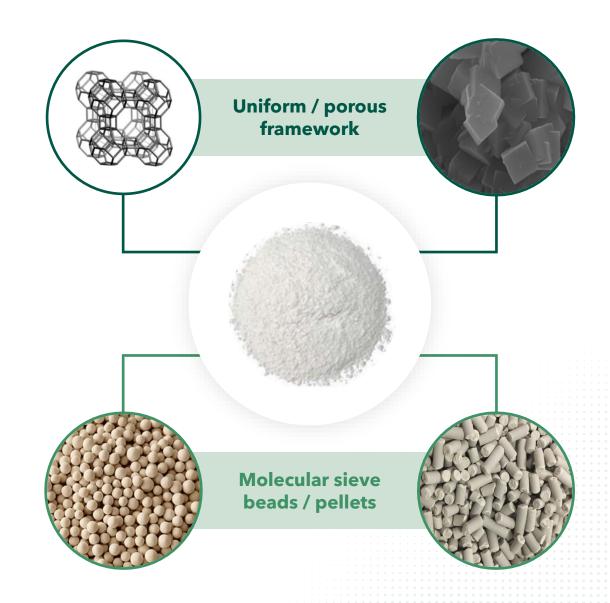
## Dual-feed pilot advances



## Synthetic Zeolites

## Zeolites are high-value adsorbents / catalysts with broad applicability

- Synthetic zeolites are manufactured aluminosilicate minerals with a sponge-like structure (frameworks)
- Zeolites are made up of tiny pores that make them useful as adsorbents, catalysts and ultrafine filters
- Type A zeolites are commonly known as molecular sieves
- Can be designed to selectively adsorb molecules or ions dependent on their unique construction and can be regenerated repeatedly for re-use
- Synthetic zeolites act like a magnet that can hold cations, including heavy metals, ammonia, low level radioactive elements, toxins, petrochemicals, many different types of gases and a multitude of various solutions, offering diverse applications



## IP unlocks mature global markets



Cryogenic air separation



PVC heat stabiliser



Oil & gas



Insulating glass units



Paint processing

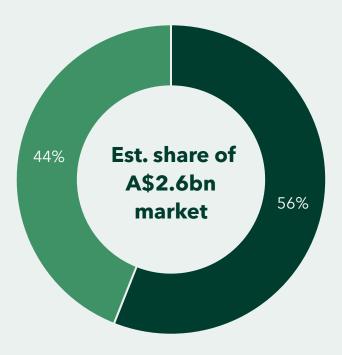


Water treatment



Detergent builder

## Global Type A Synthetic Zeolite market by grade



- Molecular Sieves (3A, 4A, 5A)
- Zeolite 4A Detergent Grade

Aranca - Global Analysis 4A Detergent and 3A, 4A & 5A molecular sieves grade Report Nov 2020 (AUD = 70c USD)

## Collaboration drives emerging opportunities





#### Lithium refinery cleantech

- Developing a lithium process tailings management solution
- Proprietary IP to convert lithium process by-product into high value molecular sieve zeolites -PCT lodged



Carbon capture & utilisation

- Evaluate properties of ZEO synthetic zeolite products for carbon capture
- Explore improve efficiencies of proven Carbon Capture and Utilisation (CCU) technologies





#### Carbon markets nutrient management

- Develop ZEO products, to improve on-farm economics & offer carbon market opportunity:
  - Improved nutrient mgmt. and soil moisture levels
  - Decrease soil acidification
  - Enhance soil carbon
  - Pesticide Destruction

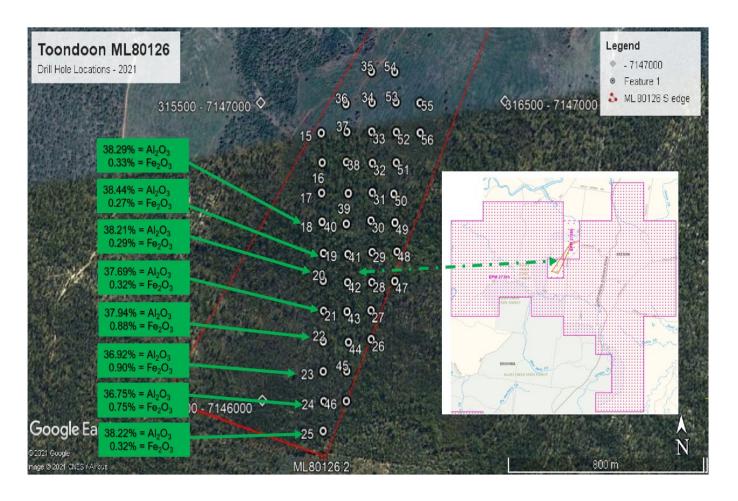




#### **Mycotoxin** adsorbents

- Climate change increasing moulds that create mycotoxins, impacting global protein production
- Bioproton undertaking preliminary assessment
- \$1bn+global market\*

## Optimal Zeolite feedstock with near-term cashflow potential



## Toondoon Project approved ML + EPM's over 280 km<sup>2</sup>

- Synthetic zeolite OpEx materially improved UQ has produced molecular sieve grade zeolite from Toondoon raw ore kaolin
- Exceptionally high-grade raw ore kaolin high alumina, low iron and scale brightness
- Further drilling was undertaken in November to further define mine pit and obtain environmental samples
- Immediate DSO opportunity highway access to major ports, shallow low impact mining operation
- One of highest-grade raw ore kaolin resources held under approved Mining Lease in Australia and high-grade ore open in all directions
- Elutriated ISO Brightness results 82.5 to 84.5 "This is among the best, unbleached, kaolin's reported in Australia."

## Looking ahead



Share bench-scale optimisation results with 2 x lithium refinery participants

Complete lithium process by-product continuous closed-loop circuit and commence construction of pilot



Complete UQ CO<sub>2</sub> capture research program Dec 2021

ZEO / UQ to continue exploring zeolite CO<sub>2</sub> Capture & Utilisation opportunity

Commence Griffith CO<sub>2</sub> sequestration trials and wider emission mitigation program



Griffith dual-stream research program commenced

Developing ZEO products:

- Agricultural Nutrient Management (interception, removal and recycle)
- Carbon markets (improved fertilizer delivery, with soil carbon enhancement benefits)



Accelerate DSO marketing strategy, samples in China & India

Engaged Ardent Group to assist management of planning and approvals process towards mining plan submission, environmental and logistic requirements



Bioproton to continue mycotoxin assessment

Review results to potentially progress to formalising Bioproton collaboration



# zeotech

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