16 February 2021

SYNTHETIC ZEOLITE PILOT PLANT PROGRAM COMMENCES

Zeotech Limited (ASX:ZEO, "Zeotech" or "the Company") an emerging industrial kaolin and mineral processing technology Company is pleased to announce that it has committed to the development and construction of a pilot plant and is undertaking an extensive test-work-program to further optimise the flowsheet of the Company's low-cost synthetic zeolite manufacturing technology to de-risk future commercial investment.

Highlights

- The pilot plant will allow ZEO to produce customer-scale samples of suitable quantities of synthetic zeolite product for potential end users for:
  - product application testing to assist negotiating off-take agreements; and
  - to support commercial plant project financing;
- The pilot plant research program is fully funded, and expenditure is eligible for the R&D tax rebate; and
- The pilot plant research program will be supported by researchers from The University of Queensland's School of Chemical Engineering ("UQ") and commissioning of the pilot plant is expected in the fourth quarter of 2021;
- The pilot plant will increase confidence and certainty for the technology's flowsheet design and operational performance of the circuit before committing to full scale commercial production;
- The pilot plant will incorporate artificial intelligence (machine learning) to enhance understanding and application of piloting results, by building a comprehensive dataset and predictive capabilities.

Following the positive outcomes of extensive lab-scale work undertaken by researchers from UQ, since lodging a core provisional patent application in June 2019, for the manufacture (synthesis) of synthetic zeolites from kaolin or clay-based materials i.e., mine tailings or process residues, Zeotech has committed to undertake a comprehensive pilot plant program. The program will incorporate an artificial intelligence (machine learning) component to enhance understanding and application of piloting results, by building a comprehensive dataset and predictive capabilities.

The pilot plant will provide Zeotech with increased confidence and certainty on the engineered flowsheet design and operational performance of the process circuit before committing to commercial zeolite production facilities.

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Zeotech's decision to proceed with the pilot plant is supported by continued positive lab-scale results delivered by research funded at UQ and based on the understanding that a well designed and constructed pilot plant is an integral component in the decision-making process required to determine critical economics and underpin future commercial plant strategy and financing.

The University of Queensland's School of Chemical Engineering, Associated Professor James Vaughan commented:

"We are extremely pleased with the outcomes of our laboratory scale research over the past 18 months and look forward to supporting Zeotech to transitioning to continuous piloting and customer-scale sample generation.

We look forward to delivering positive outcomes as the program achieves its milestones."

Zeotech, Managing Director Peter Zardo commented:

"We are excited to be commencing our pilot plant program, which we believe will clearly validate the potential of the Company's patent-pending zeolite mineral processing technology.

The results of the pilot plant will underpin the economics of our low-cost of production proposition and provide the required confidence in the process and its ability to support future commercial plant financing.

We value the ongoing contribution of our partners at The University of Queensland and look forward to keeping our shareholders updated on the progress of the program."

Pilot Plant Program

The pilot plant program and associated data modelling should:

- Validate the patent-pending technology;
- Lower commercial plant project risk / verify process efficiency, yields and target grades;
- Support the findings and data generated throughout UQ bench-scale research;
- Finalise mass and energy balances;
- Test variability of feed;
- Further optimise system design and capacity;
- Assist METSIM modelling to verify future production CapEx and OpEx requirements;
- Determine system limitations and optimise process design for continuous production;
- Reduce commercial financing risk;
- Develop standard operating procedures;
- Produce a range of synthetic zeolite products for test applications and verification; and
- Support commencement of a Pre-Feasibility Study (PFS).

The pilot plant should also demonstrate the efficiency of Zeotech's novel and proprietary mineral processing technology and proficiency of the process design by producing very high-grade material on a continuous, customer sample scale, basis.

The program's aim is to commission pilot plant in the December Quarter 2021.

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The University of Queensland's Associate Professor James Vaughan and Dr. Hong (Marco) Peng from the School of Chemical Engineering will provide technical support for the pilot plant program's studies.

Pilot Plant Funding

As announced on 5 January 2021[1], the Company raised $1.7m to support funding of the pilot plant program. It is important to note that as the pilot plant research program revolves around validating Zeotech's patent-pending technology, it is classified as Research and Development and accordingly it will be eligible for the Australian Government's R&D tax incentive scheme.

Zeotech targeting Type A zeolites

The Company's novel and proprietary mineral processing technology provides potential access to the A$2.6 billion global Type A zeolite market[2], with a focus on high value molecular sieve zeolites, which achieve prices in excess of A$2,850 per tonne.

Type A molecular sieves are used in the following industries:

- Steel Industries;
- Petrochemical Industries;
- Refineries;
- Agricultural Industries (Soil amendment and Animal Feed);
- Cryogenic Air Separation Units;
- Pharmaceutical (Bulk Drug);
- Paint Processing;
- Insulating Glass Industries;
- Polyurethane Process; and
- Waste-Water Treatment.

This Announcement has been approved by the Board.

- End -

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About Zeotech

Zeotech is an emerging industrial kaolin and mineral processing technology Company.

We are working with the University of Queensland to commercialise novel and proprietary zeolite mineral processing technology, whilst continuing to explore the development our Queensland based Abercorn Project, acquired in August 2019.

[1] Refer to ASX announcement 05/01/2021 "Placement Secures $1.7m to Advance Company's Zeolite Project"
[2] Aranca: Global Analysis 4A detergent grade and 3A, 4A and 5A molecular sieves grade Nov 2020

Zeotech novel and proprietary mineral processing technology provides potential access to the A$2.6 billion global Type A zeolite market.[3]

Zeotech aspires to improve environmental outcomes by building on the potential of its zeolite mineral processing technology to be applied as a commercial remediation solution by using suitable mine waste and process residues streams as zero-cost feed for low-cost production of high value zeolites.

About Zeolites

Zeolites play an important role in a cleaner and safer environment.

- zeolites are an effective substitute for harmful phosphates in powder detergent, now banned in many parts of the world because of blue green algae toxicity in waterways;
- as catalysts, zeolites increase process efficiencies = decrease in energy consumption;
- zeolites can act as solid acids and reduce the need for more corrosive liquid acids;
- zeolites adsorbent capabilities see them widely used in water treatment i.e. heavy metal removal including those produced by nuclear fission; and
- as redox catalysts sorbents zeolites can help remove exhaust gases and CFC's.

Forward-looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of Zeotech and certain of the plans and objectives of Zeotech with respect to these items.

These forward-looking statements are not historical facts but rather are based on Zeotech current expectations, estimates and projections about the industry in which Zeotech operates, and its beliefs and assumptions.

Words such as "anticipates," “considers,” "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the endeavour of building a business around such products and services.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of Zeotech, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements.

Zeotech cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Zeotech only as of the date of this release.
The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

[3] Aranca: Global Analysis 4A detergent grade and 3A, 4A and 5A molecular sieves grade Nov 2020

Zeotech will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

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