

30 July 2021

## QUARTERLY ACTIVITIES REPORT Quarter Ended 30 June 2021

Emerging mineral processing technology company, Zeotech Limited (ASX: ZEO, "Zeotech" or "the Company") provides the following quarterly update and commentary for the June 2021 quarter.

#### **HIGHLIGHTS**

- Lithium Refinery Cleantech forms part of dual-feed pilot program; and
- Successful capital raising of \$3.7 million.

#### SYNTHETIC ZEOLITE MINERAL PROCESSING TECHNOLOGY

#### Lithium Refinery Cleantech forms part of dual-feed Pilot Program

On the 26 May 2021, the Company advised after early commercial interest in the potential to apply the Company's proprietary mineral processing technology as a cleantech solution for the lithium refinery industry, the decision was made to expand the current pilot plant program to include leached spodumene residue ("Li Process Residue") as an additional feed type for the synthesis of zeolites.

Zeotech is pleased to advise that the Li Process Residue component of the dual-feed pilot plant program will be undertaking bench-scale optimisation of two separated leached spodumene samples from large lithium refinery players and this testing is currently underway.

#### Highlights

- Zeotech commits to the development and construction of a dual-feed pilot plant, capable of using kaolin and Li Process Residue, as feed types to produce commercial grade synthetic zeolite.
- The decision to include Li Process Residue into the current program is driven by the
  potential to validate promising process economics delivered during lab-scale studies
  undertaken in the second half of 2020. The objective is to accelerate potential licencing
  opportunities within the growing lithium refinery sector.
- The dual-feed pilot plant research program will be supported by researchers from The University of Queensland's School of Chemical Engineering ("UQ"), which have synthesised commercial grade 4A and 3A molecular sieve zeolite under ZEO's patentpending conditions, with lab-scale results delivering promising process economics utilising Li Process Residue as feed (refer image overleaf).
- The Company's dual-feed pilot plant program is fully funded, with capital on hand ensuring the ability to meet a range of initiatives planned for 2021/22, including expansion of synthetic zeolite carbon capture and conversion program.



 The program will further optimise the flowsheet of the Company's low-cost synthetic zeolite manufacturing technology to de-risk future commercial investment, attract offtake partners and support potential licensing opportunities.

The process of converting spodumene concentrates to lithium hydroxide requires about 7 tonnes of concentrate feed to produce 1 tonne of lithium hydroxide i.e. a nominal operation annually producing around 10,000 tonnes of lithium hydroxide, about 60,000 tonnes of the 70,000 tonnes of starting feed material reports to residue tailings stream.



Zeotech's objective is to deliver a commercially viable solution to optimise lithium refineries Li Process Residue streams by converting these tailings into high value molecular sieve grade synthetic zeolites. The aim is to offer lithium hydroxide refineries an integrated approach that can potentially improve project margins by adding downstream revenues via implementing Zeotech's patent-pending technology.

The opportunity to develop a commercial cleantech solution for lithium refinery industry is compelling. The growing demand from electric vehicle (EV) batteries is driving the expansion of lithium hydroxide production globally, which will produce material volumes of Li Process Residue.

#### **Dual-Feed Pilot Program**

Core objectives of Zeotech's dual-feed pilot plant program and associated data modelling are:

- 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;
- Attract technology licencing opportunities and 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 ABERCORN PROJECT

The Abercorn Project is a large-scale kaolin prospect, located in central Queensland and has demonstrated it contains a resource of significant scale, and a very consistent, high quality grade of kaolinite mineralisation.

The resource remains open in all directions with less than circa 10% of the Project area being drilled, leaving potential for substantial future upgrade.

The total number of holes drilled into the project is now 86 for a total of 3,172m.

- Large scale mineralised system from surface;
- 86 RC holes drilled kaolinite intersected in every hole;
- Resource remains open in all directions;
- Low-cost operation straight forward open cut mining;
- Little to no overburden;
- Low impurities;
- Mains power on site / major power transmission line within 5km of site; and
- Large water supply nearby and within EPM.

The Abercorn Project is situated approximately 135km south of the deep-water port of Gladstone and 125km west of the deep-water port of Bundaberg in central Queensland. Both major ports are connected to the Abercorn Project by sealed roads. The Burnett highway bisects the tenements.

No on-groundwork was undertaken during the quarter.

#### KRAAIPAN PROJECT, BOTSWANA

#### Kraaipan Gold-Nickel-Copper-PGM Project

Zeotech's 100% owned Kraaipan Gold-Nickel-Copper-PGM Project comprises Prospecting Licence, PL232/2016 and covers approximately 50-kilometre strike extent of the Kraaipan Greenstone Belt in southern Botswana. The Kraaipan Project is part of the larger NNW trending Amalia-Kraaipan-Greenstone-Terrane ('AKGT') of the Kaapvaal Craton. The AKGT in Botswana is directly along strike from significant gold deposits, as well as adjacent to significant PGM deposits, across the border in South Africa.

No on-groundwork was undertaken during the quarter. The Company will not be seeking renewal of Prospecting Licence, PL232/2016 which expires 30 September 2021.

#### **CORPORATE**

• On the 24 May 2021, the Company completed a \$3.7 million placement at \$0.07 per share to sophisticated and professional investors. The placement was strongly supported by existing major shareholders and investors.

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Proceeds from the Placement will primarily be applied to:

- Upgrade of the current single-feed (kaolin) pilot plant program to a dual-feed pilot, by including leached spodumene residue (lithium process residue) as an additional feed type for the synthesis of synthetic zeolites;
- Advance the existing carbon capture research program; and
- Further expand research opportunities to enhance and develop diverse commercial applications of synthetic zeolites.

#### APPENDIX 5B - QUARTERLY CASH FLOW REPORT

The cash position of the Company on 30 June 2021 was \$5.854 million.

#### Details of mining exploration activities

Details of exploration activities during the guarter are set out above.

Exploration and evaluation expenditure for the quarter comprised Abercorn resource evaluation work \$9,000 and rents, rates, tenement management and miscellaneous expenses \$11,000. Other associated R&D project costs were \$362,000.

#### Details of mining production and development activities

No production and development activities were undertaken during the quarter.

#### Details of related party payments

The aggregate amount of payments to related parties and their associates included in the current quarter Cash flows from operating activities were \$92,000, comprising director salaries (inclusive of superannuation), directors fees and consulting fees.

This Announcement has been approved by the Board.

- End -

For further information please contact:

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#### **About Zeotech**

Zeotech Limited (ASX: ZEO) holds proprietary mineral processing technology developed by The University of Queensland, for the low-cost production of advanced materials 'synthetic zeolites' and aims to utilise their unique properties for a sustainable future.

The strategy focuses on the manufacture of low-cost molecular sieve synthetic zeolites for global markets. The Company is developing innovative environmental management solutions, which include cleantech for lithium refineries to commercially manage by-product residue and developing economically viable carbon capture and conversion solutions, underpinned by low-cost 'adsorbents and catalysts' manufactured using Zeotech's patent-pending technology.

#### www.zeotech.com.au

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#### **About Zeolites**

Synthetic zeolites are manufactured aluminosilicate minerals with a sponge-like structure, made up of tiny pores (frameworks) that make them useful as catalysts or ultrafine filters. They are commonly known as molecular sieves and can be designed to selectively adsorb molecules or ions dependant on their unique construction.

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 catalyst 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 certainty 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," "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. 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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#### Tenement Information as required by Listing Rule 5.3.3

The following is a table setting out the information as required by ASX Listing Rule 5.3.3, namely:

- 1. Mining tenements held at the end of the Quarter and their location;
- 2. Mining tenements disposed during the Quarter and location;
- 3. Beneficial percentage interests held in farm-in or farm-out agreements at end of Quarter; and
- 4. Beneficial percentage interests held in farm-in or farm-out agreements acquired or disposed of during the Quarter.

Location	Tenement	Interest at beginning of quarter (%)	Interests relinquished, reduced or lapsed (%)	Interests acquired or increased (%)	Interest at end of quarter (%)
Australia	EPM 19081	100%	Nil	Nil	100%
Australia	EPM 26837	100%	Nil	Nil	100%
Australia	EPM 26903	100%	Nil	Nil	100%
Australia	EPM 27427	100%	Nil	Nil	100%
Botswana	PL232/2016	100%	Nil	Nil	100%

### Appendix 5B

# Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

ZEOTECH LIMITED			
ABN	Quarter ended ("current quarter")		
29 137 984 297	30 JUNE 2021		

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(20)	(164)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(135)	(463)
	(e) administration and corporate costs	(101)	(418)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	1	4
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	137	174
1.8	Other (Technology expenses)	(362)	(1,314)
1.9	Net cash from / (used in) operating activities	(480)	(2,181)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	(3)	(4)-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	(9)	(546)

ASX Listing Rules Appendix 5B (17/07/20)

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(12)	(550)

<b></b>			
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	3,700	7,058
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(12)	(36)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	3,688	7,022

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,659	1,566
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(480)	(2,181)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(12)	(550)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	3,688	7,022

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(1)	(3)
4.6	Cash and cash equivalents at end of period	5,854	5,854

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	2,854	1,059
5.2	Call deposits	3,000	1,600
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	5,854	2,659

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	92
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
Note: i	associates included in item 2  if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include	de a description of and an

Note: if any amounts are shown explanation for, such payments.

7.	Financing facilities  Note: the term "facility' includes all forms of financing arrangements available to the entity.  Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at qu	arter end	-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
	N/A		

Estimated cash available for future operating activities	\$A'000
Net cash from / (used in) operating activities (item 1.9)	(480)
(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
Total relevant outgoings (item 8.1 + item 8.2)	(480)
Cash and cash equivalents at quarter end (item 4.6)	5,854
Unused finance facilities available at quarter end (item 7.5)	-
Total available funding (item 8.4 + item 8.5)	5,854
Estimated quarters of funding available (item 8.6 divided by item 8.3)	12.19
	Net cash from / (used in) operating activities (item 1.9)  (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))  Total relevant outgoings (item 8.1 + item 8.2)  Cash and cash equivalents at quarter end (item 4.6)  Unused finance facilities available at quarter end (item 7.5)  Total available funding (item 8.4 + item 8.5)  Estimated quarters of funding available (item 8.6 divided by

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

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8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

Note: where item 8.7 is less than 2 guarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

#### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 30 July 2021

Authorised by: By the Board

(Name of body or officer authorising release – see note 4)

#### Notes

- This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.