

ASX

ANNOUNCEMENT

8 April 2021

Final metallurgical testwork underway for Galalar Silica Project

- **Diatreme engages industry specialist Mineral Technologies (MT) to undertake final metallurgical testwork for Galalar Silica Project's definitive feasibility study (DFS)**
- **Aims to develop process flowsheet to produce high purity, low iron silica product suitable for fast-growing solar PV industry, capable of attracting premium pricing**
- **MT testwork adds to existing testing programs, with planning accelerating for development of new silica sand mine, creating new jobs and investment for benefit of Hope Vale/Cooktown region.**

Emerging silica sands developer and explorer, Diatreme Resources Limited (ASX: DRX) has engaged industry specialist Mineral Technologies (MT) to undertake final metallurgical testwork for the Galalar Silica Project's definitive feasibility study (DFS).

The testing program will use a one tonne bulk sample obtained using air core drilling over an area representing the first five years of the planned mining area at Galalar. Two variability samples from other areas within the first 15 years' mining will also be processed to finalise the process flowsheet.

MT has recognised expertise in silica, with their selection following an extensive engagement process with a number of industry-recognised specialist engineering and process design companies. With global operations, MT has developed substantial expertise in mineral separation technology, having first commenced operations in the 1950s separating heavy minerals from sands on Australia's east coast.

The objective is to develop a process flowsheet using the physical mineral separation processes of screening, gravity, attritioning, classification and magnetic separation to produce a high purity, low iron silica product with a target grade of 99.9% SiO₂ and <100ppm Fe₂O₃. The DFS metallurgical testwork will produce a balanced metallurgical flowsheet suitable for use in DFS level engineering plant design and estimation of process plant capital and operating costs.

AUSTRALIAN SANDS. UNIVERSAL DEMAND.

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Other goals of the testwork include determining high purity, silica final product specifications to be further used for continued marketing of the product, together with obtaining the overall yield of the high purity silica product from the ore that is planned to be mined.

The testwork process will involve screening at 710µm, MG12 spiral separation, high-energy attritioning, fines removal by up-current classifier and magnetic separation of the classifier underflow. The non-magnetic test fraction of the light minerals is the high-purity silica product. Once the testwork is completed, a technical report and product samples will be provided to Diatreme for use in DFS studies and reports. The test results are anticipated to be ready within 6-8 weeks for incorporation into the DFS study expected for release Q3 CY 2021.

Diatreme's CEO, Neil McIntyre commented: *"We welcome MT's engagement in this key phase of our Galalar project, particularly given MT's decades-long experience in east coast silica sands. The Galalar DFS will give potential project partners and debt providers a high level of confidence in our project and we look forward to advancing this as quickly as possible to deliver our project's benefits to the community."*

The latest advance follows Diatreme's recent announcement of a 30% increase in the size of the Galalar project's silica resource, to 61.9 million tonnes (refer ASX announcement 17 March 2021). A draft EIS is underway, with Diatreme aiming to receive the necessary environmental approvals and Mining Lease in the fourth quarter of 2021.



Figure 1: Diatreme Project Manager, Phil McMurtrie (centre, orange vest) with MT specialists, delivering Galalar samples.

This announcement was authorised for release by:

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About Mineral Technologies

Working with customers in mining operations for over 75 years, Mineral Technologies delivers innovative, cost effective process solutions for iron ore, mineral sands, silica sands, coal, chromite, gold, tin, tungsten, tantalum and a wide range of other fine minerals worldwide.

From MT's beginnings in the 1950's separating heavy minerals from the local sands on Australia's east coast, we have expanded and developed our capability. Today we are recognised by customers worldwide as the 'go to' partner for process solutions across the project lifecycle.

For more information, please visit <https://mineraltechnologies.com/>

About Diatreme Resources

Diatreme Resources (ASX: DRX) is an emerging Australian producer of mineral and silica sands based in Brisbane. Our key projects comprise the Galalar Silica Project in Far North Queensland, located next to the world's biggest silica sand mine, together with the Cyclone Zircon Project in Western Australia's Eucla Basin, considered one of a handful of major zircon-rich discoveries of the past decade.

For more information, please visit www.diatreme.com.au

About Galalar Silica Project

Located around 200km north of Cairns and 20km north of the port of Cooktown, the Galalar Silica Project (EPM 17795) lies within the same sand dune system and in close proximity to the world's largest operating silica sand mine at Cape Flattery. The Cape Flattery silica sand product is recognised as a global benchmark for quality silica sand and is widely used for industrial purposes throughout Asia.



The global silica sand market is seen reaching nearly US\$10 billion in annual revenues by 2022, with a compound annual average growth rate of 7.2% (source: IMARC Group), while the global solar PV glass market is estimated to reach US\$48.2 billion by 2025, up from US\$3.3 billion in 2016 (source: Bizwit Research & Consulting).

An independent economic study has shown the Galalar project's potential to deliver a sizeable economic injection into the Hope Vale/Cooktown region, including \$23-\$24 million in the construction phase and up to \$42m in operation, creating up to 110 full-time equivalent jobs and contributing \$1.475m in annual state royalties.

In March 2021, Diatreme announced a total Mineral Resource of 61.9 million tonnes (Mt), with the potential for further expansion (refer ASX release 17 March 2021). Bulk sample testwork has shown the project's ability to produce a premium grade silica product suitable for high-end glass and solar panel manufacturing, with more than 99% silica dioxide and low iron levels of less than 100 parts per million.

Following lodgement of a mining lease application in December 2019 and receipt of final terms of reference for the environmental studies in November 2020, Diatreme is now progressing through various environmental and regulatory approvals towards mining activity.

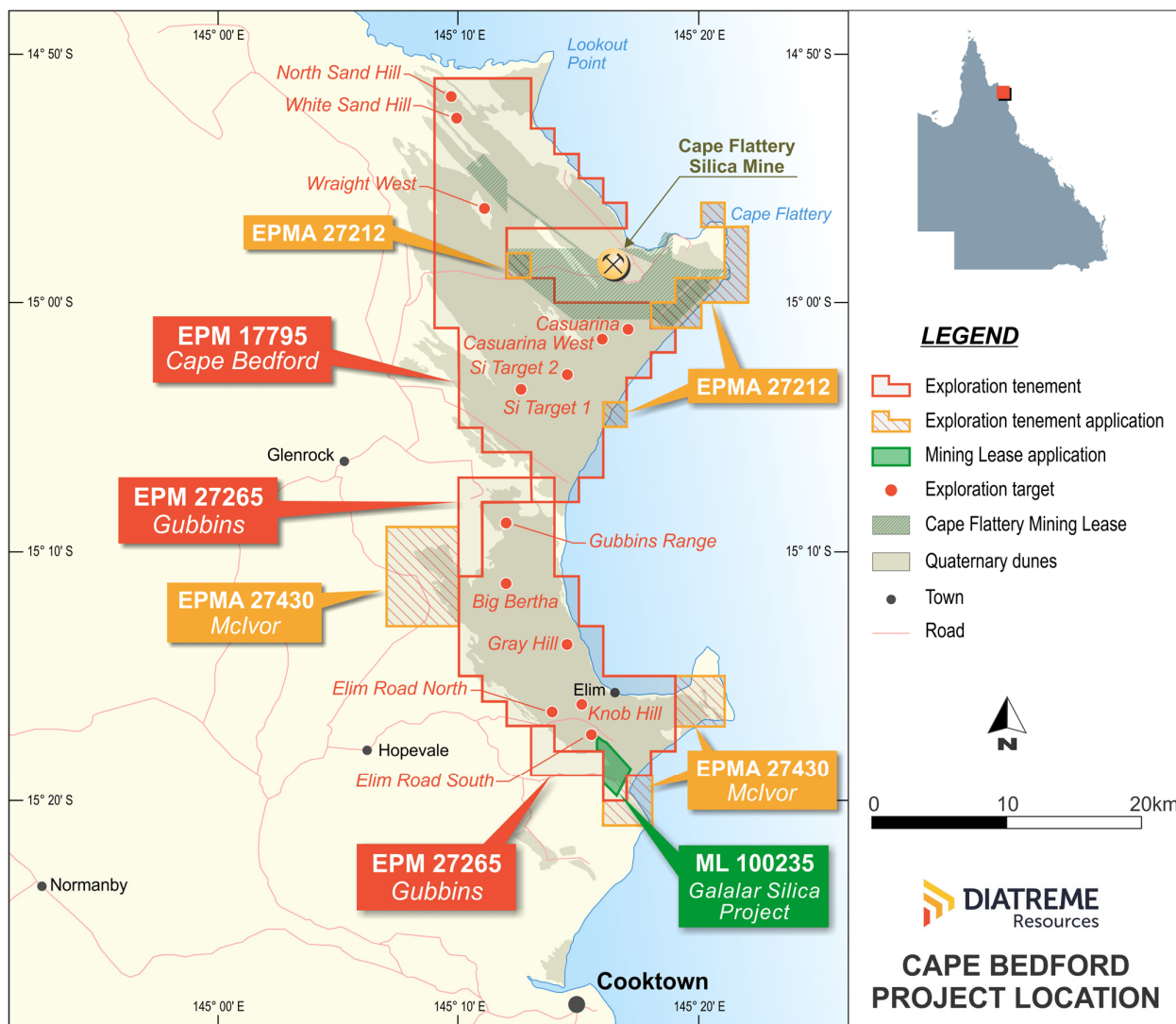


Figure 2: Galalar Silica Project, North Qld

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The forward-looking statements in this presentation are based on current interpretations, expectations, estimates, assumptions, forecasts and projections about Diatreme, Diatreme's projects and assets and the industry in which it operates as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made.

The forward-looking statements are subject to technical, business, economic, competitive, political and social uncertainties and contingencies and may involve known and unknown risks and uncertainties. The forward-looking statements may prove to be incorrect.

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MINERAL SANDS AND SILICA - COMPETENT PERSON STATEMENTS

The information in this report that relates to Mineral Resources at the Galalar Silica Project is based on information and modelling carried out by Dale Brown, Mining Engineer and Chris Ainslie, Geotechnical Engineer who are employed by Ausrocks Pty Ltd and are Members of the Australasian Institute of Mining & Metallurgy. The work was supervised by Mr Carl Morandy, Mining Engineer who is Managing Director of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy and by Mr Brice Mutton who is a Senior Associate Geologist for Ausrocks Pty Ltd.

Mr Mutton is a Fellow of the Australasian Institute of Mining & Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Brown, Mr Morandy, Mr Ainslie and Mutton are employed by Ausrocks Pty Ltd who have been engaged by Diatreme Resources Limited to prepare this independent report. This is no conflict of interest between the parties. Mr Brown, Mr Morandy, Mr Ainslie and Mr Mutton consent to the disclosure of information in the form and context in which it appears in this release/report.

Brice Mutton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the 2012



edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code).

Brice Mutton consents to the inclusion in the report on the matters based on their information in the form and context in which it appears.

The information in this report that relates to Exploration Results and Exploration targets from the Galalar Silica Project is based on information reviewed and compiled by Mr. Neil Mackenzie-Forbes, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Mackenzie-Forbes is a director of Sebrof Projects Pty Ltd (a consultant geologist to Diatreme Resources Limited).

Mr. Mackenzie-Forbes has sufficient experience which 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Mackenzie-Forbes consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.