ASX
ANNOUNCEMENT

22 January 2021

Galalar EIS study progresses with water monitoring underway

- **Diatreme completes installation of 12 groundwater monitoring bores for Galalar Silica Project's environmental study (EIS)**
- **Bores will allow groundwater monitoring and establishment of baseline studies before commencement of mining activity at North Qld project**
- **Draft EIS continuing to progress, with Diatreme seeking final approvals by fourth quarter 2021 amid strong demand from Asia's solar PV market for premium-quality silica.**

Emerging mineral and silica sands developer and explorer, Diatreme Resources Limited (ASX:DRX) announced today further progress in the regulatory approval process for its Galalar Silica Project, with the successful completion and installation in late December 2020 of 12 groundwater monitoring bores.

The new bores will facilitate the detailed hydrogeological studies and baseline water quality assessments required for the environmental impact assessment (EIS) process, as part of the final permitting and approvals necessary prior to commencement of mining activity at the North Queensland project.

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Drilling Activity and Objectives

The first stage of the groundwater monitoring program was completed using both Diatreme's air-core drill rig and a specialist water bore rig from FNQ Drilling and a registered water bore driller. Leading independent technical services firm Golder Associates Pty Ltd (Golder) supervised the technical component of the monitoring and will monitor groundwater movements following the start of the regional wet season in January/February 2021.

A draft technical study was completed by Golder in early 2020 to provide a preliminary assessment of the surface water and groundwater conditions at the project area. To determine the groundwater regime, a series of groundwater monitoring bores was proposed to provide background information and data.

Golder proposed an initial installation of shallow monitoring bores including across the project area:

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ML 100235 Application

Registered Groundwater Monitoring Bores

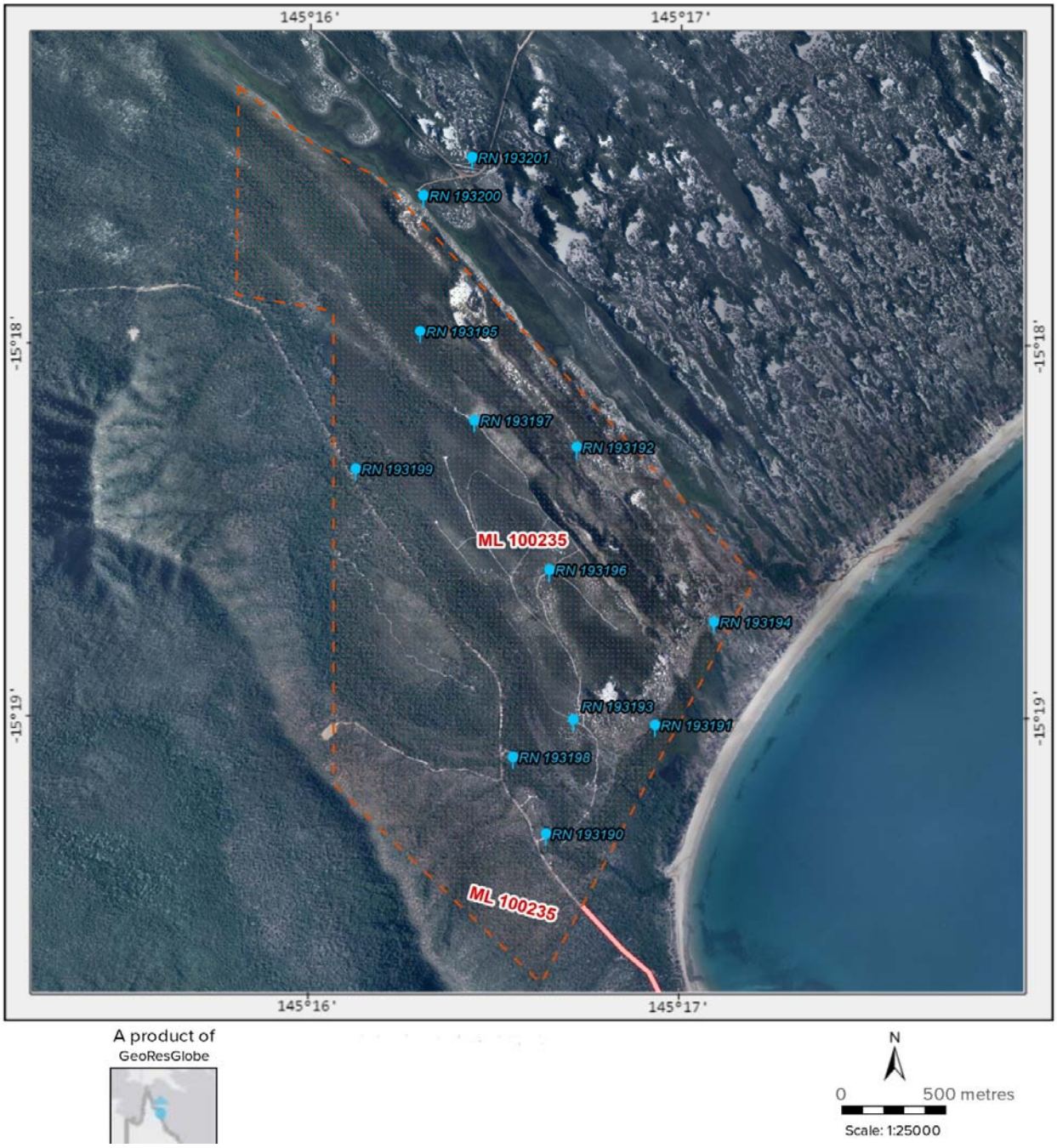

Figure 1: Groundwater Monitoring Bore Locations

Registered Bore Details

- Bores RN 193195, 193200 & 193201: Three monitoring bores in a transect across Deep Creek
- Bore RN 193196: Preliminary monitoring bore used to monitor drawdown during the pumping test, located 30m to the southeast of the proposed pumping bore location. The radial distances of the monitoring bores from the pumping bore were selected using an analytical Theis equation, with estimated literature values for hydraulic properties and a threshold of at least 0.2m of drawdown after 3 days of pumping at 5L/s.
- Bore RN 193197: Single monitoring bore up-gradient of wetland along the north of the site.
- Bore RN's 193191 & 193194: Two monitoring bores located along the coastal frontage and directly up-gradient of wetland.
- Bore RN's 193197, 193192 &193193: Three monitoring bores within various sand dunes to collect spatial and temporal data on dune sand hydrogeological and hydro-chemical characteristics.
- Bore RN's 193190 & 193198: Two monitoring bores associated with Alligator Creek.

Further Test Bore Installation

In addition to the monitoring and baseline water program, Diatreme also plans to install a volume test bore in February/March 2021, following the start of the wet season.

Drillnorth will drill a large diameter bore of 200 to 225mm diameter to allow installation of equipment for a pump test.

This pumping bore will be used to extract groundwater during the multi-rate and three-day constant rate pumping tests. The pumping test will provide information on the transmissivity and storativity of the dune sand aquifer, which will be used to calibrate the impact assessment groundwater model and provide insights on the efficacy of the groundwater supply scheme.

Extracted water from the pump test will be released across the dune and allowed to seep back into the dune.

Expected Timelines and Next Steps

The reports from the EIS studies will form chapters of the draft EIS document, which will be prepared over the next six months prior to lodgement of the draft EIS document with Queensland's Department of Environment and Science (DES) and the Federal Department of Agriculture, Water and the Environment (DAWE) for its adequacy and consistency with the final EIS terms of reference requirements.

Once the draft EIS has been deemed satisfactory by DES and DAWE, another round of public input will commence and if necessary, the draft EIS will be revised or supplementary studies undertaken. At that time, assessment of state and Commonwealth matters will be undertaken under the Queensland/Commonwealth bilateral agreement.

Following approval of the EIS, Diatreme will then proceed to finalise the Environmental Authority (EA) which, together with the mining lease (ML) that was applied for in December 2019 and various operational works approvals, will permit the project to commence.

Diatreme is currently targeting receiving the final environmental approvals and Mining Lease in the fourth quarter of 2021, with potential first production in 2022.

Diatreme's CEO Neil McIntyre commented: "*Establishing a comprehensive groundwater monitoring system is key to understanding the existing groundwater environment and likely project impacts moving forward and will form an important foundation for the project into the future.*

"These are important steps as we work to earn a social licence to operate for Galalar, which has the potential to make a major positive contribution to the affected native title holders and the broad community of the Hopevale/Cooktown region through new jobs, training, investment and other tangible economic benefits."

This announcement was authorised for release by:

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Figure 2: Groundwater bore drilling on site

Figure 3: New monitoring bore development

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

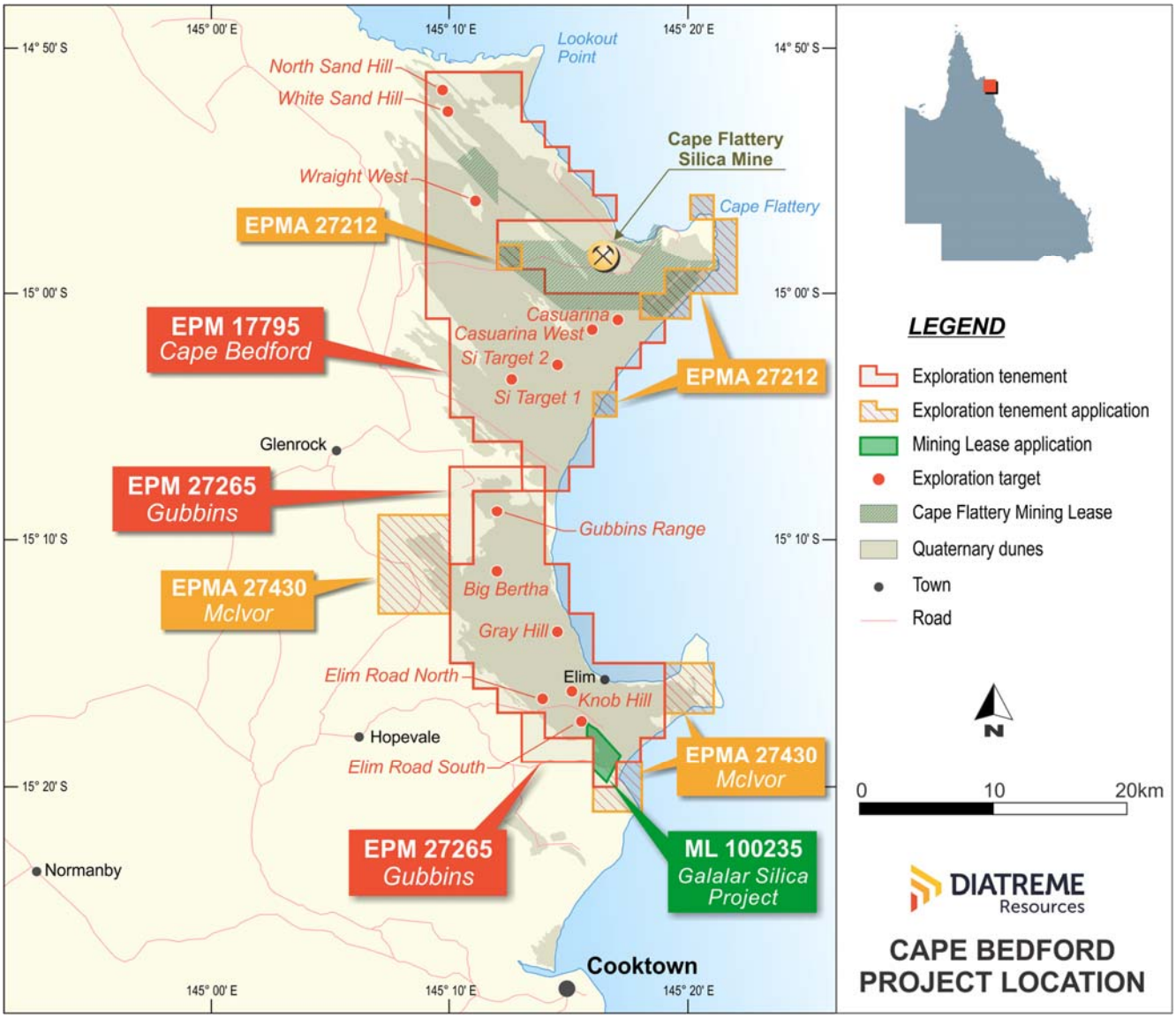
Located around 200km north of Cairns and 20km north of the port of Cooktown, the Galalar Silica Project (EPM 17795) lies within the same sand dune system and in close proximity to the world's largest operating silica sand mine at Cape Flattery. The Cape Flattery silica sand product is recognised as a 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 Hopevale/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 May 2020, Diatreme announced a total Mineral Resource of 47.5 million tonnes (Mt), with the potential for further expansion (refer ASX release 12 May 2020). 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, Diatreme is now progressing through various environmental and regulatory approvals towards mining activity.



Diatreme's Galalar Silica Project, North Qld