



22 April 2021

Positive initial testwork results received for Galalar DFS

- Industry specialist Mineral Technologies (MT) reports positive results from first phase of metallurgical testwork for Galalar Silica Project's definitive feasibility study (DFS)
- Results demonstrate raw feed silica sand is highly amenable to removal of contaminants such as heavy minerals and iron by simple screening and use of spirals, improving product's specifications and marketability
- Final process flowsheet to be developed for production of high purity, low iron silica product capable of attracting premium pricing, targeting fast-growing solar PV industry.

Emerging silica sands developer and explorer, Diatreme Resources Limited (ASX:DRX) has further advanced its Galalar Silica Project, receiving positive first phase results from industry specialist Mineral Technologies (MT) from the detailed metallurgical testwork underway for the project's definitive feasibility study (DFS).

Mineral Technologies has completed the first two stages (screening and spirals) of metallurgical testwork on the one tonne bulk sample for the project's DFS. The bulk sample was taken from air core drill holes across the first two years of the planned start-up mine area.

Results to date have exceeded expectations, showing positive results for particle size distribution and the reduction of impurities using only simple screening and spiral separators. These are key factors in developing a high quality product for the solar PV and other high-end glass markets, capable of attracting premium pricing.

Key testing results include:

• 99.6% of the bulk sample is within the 710 micron maximum particle size specification, ideal for glass plant direct feed material.

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• 85% recovery of bulk sample to targeted product, with the 90-110ppm Fe₂O₃ range achieved from the spiral release tests.

The testing program is processing a one tonne bulk sample obtained using air core drilling over an area representing the first two 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.

Details of the locations of the bulk sample drill holes and the depth drilled are shown in the following table. All holes were drilled vertically and the total sample taken from every hole was included in the bulk sample.

Bulk Sample Drill Holes

		Built sumple Brill 110		
Drill Hole ID	East (MGA)	North (MGA)	RL (ASL)	Hole Depth (m)
CB047B	315001	8306972	37	27
CB048B	315134	8306828	35	27
CB071B	315057	8306901	36	27
CB072B	315175	8306782	34	24
CB104B	315205	8306743	34	24
CB117B	314800	8307662	25	15
CB118B	314881	8307546	22	12
CB119B	315034	8307389	21	12
CB120B	315182	8307254	19	11
CB121B	315330	8307121	17	9
CB122B	315442	8307060	13	6
CB123B	315559	8306875	13	6
CB124B	315663	8306699	13	9
CB125B	315812	8306562	9	6

Diatreme's CEO, Neil McIntyre commented: "We are delighted by these initial results, which have exceeded our expectations and boosted confidence in the quality of the Galalar product. Significantly, these first stage results through size screening and spirals show how amenable to simple processing the raw mined silica is to allow removal of any contaminants and produce a highly desired low iron silica product.

"We look forward to further results from the testing, as we work to ensure our product can meet the premium quality requirements of the solar PV and other high-end glass markets."

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.



Diatreme is also continuing to engage with potential offtakers and other partners, with the aim of developing a project that provides significant employment and other economic benefits for the community of Hope Vale/Cooktown and all other stakeholders.

Fig 1. Galalar project bulk sample after homogenising and screening



Sub samples were taken from the screened bulk sample and these samples have been used for spiral processing release testwork. A new MG12 spiral silica test rig was prepared by MT for these processing tests. Test fractions were weighed and split samples were assayed.



Fig 2. Galalar bulk sample release testwork on MG12 spiral



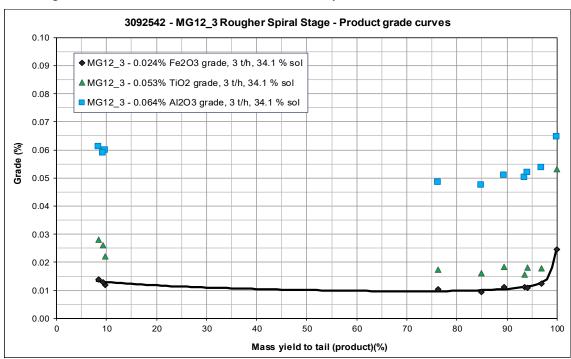
The focus of the DFS testwork is to produce a sub 100ppm Fe_2O_3 silica product from the two-year bulk sample. Previous metallurgical work on bulk samples from Galalar has demonstrated that the SiO_2 grade exceeds the required specification and other impurities are within their specification, provided the iron is reduced to the 100ppm specification.



MT used the results of the spiral processing release testwork to produce:

- Product grade charts for Fe₂O₃, TiO₂ and Al₂O₃ at processing rates of 1.8, 2.5 and 3.0 tonnes per hour.
- Reject recovery charts showing the recovery of Fe₂O₃, TiO₂ and Al₂O₃ to the reject stream.
- Tabulated mass flow and assay tables for each test.

Product grade curve for Fe₂O₃, TiO₂ and Al₂O₃ at 3 tonnes per hour



The conclusions from the spiral release testwork are:

- Only a small difference in terms of Fe_2O_3 grade curves for the three feed rates tested. The MG12 spiral is recognised for consistent performance over a wide feed rate range due to its rougher/scavenger configuration.
- Product grades of 90-110ppm (0.009-0.011%) Fe₂O₃, 150-175ppm TiO₂, and ~500ppm Al₂O₃ were achieved with product mass yields up to 85%.
- Product grades in the order of 125ppm (0.0125%) Fe₂O₃ were achieved at mass yields up to 93%.
- The mineral recovery curves show around 65-70% of the Fe₂O₃ and 75-80% of the TiO₂ can be removed by spirals as it is contained within heavy mineral particles.



Next Steps

The objective of this testing 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.

Following this processing through the spirals and noting the highly encouraging results, the next steps in the metallurgical bulk sample study process comprise:

- 1) Bulk sample to be put through an attritioning process to release remnant coatings;
- 2) The sample will be passed through an up-current classifier to remove fine particles and contaminants released during attritioning;
- 3) Bulk sample to be processed through a wet magnetic process.

At each stage sampling and assaying will be undertaken on the bulk sample product stream to ascertain the effects of each process. From this work, final plant design and process equipment can be effectively designed to ensure the best results are achieved from an eventual site-based processing plant and equipment, together with the desired silica product specifications during mine production, with a particular focus on mine start-up.

This announcement was authorised for release by:

Neil McIntyre

Chief Executive Officer

Contact – Mr Neil McIntyre - Ph – 07 33972222

Website - diatreme.com.au

E-mail - manager@diatreme.com.au

For media queries, please contact: Anthony Fensom, Republic PR anthony@republicpr.com.au

Ph: +61 (0)407 112 623

Greg Starr

Chairman



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.

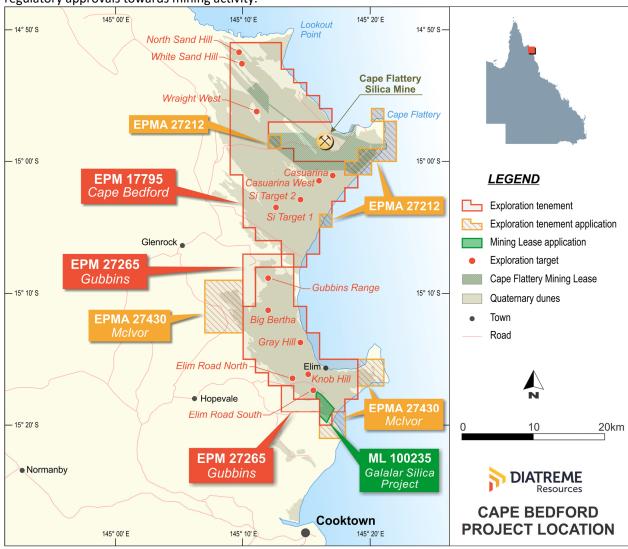


Figure 3: Galalar Silica Project, North Qld



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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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COMPETENT PERSON STATEMENT

The information in this report that relates to processing of samples from the Galalar Silica Project is based on information provided by Mineral Technologies an Australian process testwork, engineering and process equipment manufacturer at Cararra, Queensland. The information has been reviewed by Mr. Phillip McMurtrie, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy.

Mr McMurtrie is a director of Tisana Pty Ltd and is a technical consultant to Diatreme Resources Limited. Mr McMurtrie 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 McMurtrie consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



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).

The information in this report that relates to Exploration Results and Exploration targets from the Cape Bedford 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.



JORC CODE 2012 EDITION – TABLE 1 REPORT GALALAR SILICA SAND PROJECT – NOB POINT DEPOSIT DFS BULK SAMPLE PROCESS TESTWORK UPDATE - APRIL 2021

SECTION 1 SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information. 	 Drilling samples taken at 1 metre down hole intervals. All air-core drill cuttings collected from cyclone mounted rotary splitter for bulk sample. Approximately 4kg of sample collected per meter. Samples taken for 14 drill holes for a total sampled depth of 215 metres. Sub-samples were submitted to a commercial laboratory, ALS, for drying, splitting (if required), pulverization in tungsten carbide bowl, and XRF analysis. Sampling techniques are mineral sands "industry standard" for dry beach sands with low levels of impurities, induration and slime. As the targeted mineralisation is silica sand (quartz/SiO₂), geological logging of the drill material is a primary method for identifying mineralization. Metallurgical testwork bulk samples are composited intervals of white and cream sands logged in drilling.
Drilling techniques	 Drill type (e.g., core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 All samples for bulk sample testwork collected using vertical NQ air-core drilling utilising a blade bit. Holes were terminated in a basement layer (clay/coloured sands) or when the water table was intersected.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the 	 Visual assessment and logging of sample recovery and sample quality. Reaming of hole and clearance of drill string after every 3m rod.



Criteria	JORC Code explanation	Commentary
	 Samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	 Sample chute cleaned between samples and regular cleaning of cyclone to prevent sample contamination. No sample bias occurred between sample recovery and grade.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 Geological logging of the total hole by field geologist, with retention of sample in chip trays to allow subsequent reinterpretation of data if required. The total hole is logged for every metre interval. Logging includes qualitative descriptions of colour, grain size, sorting, induration and estimates of HM, slimes and oversize utilising panning. Logging has been captured through field drill log sheets and transferred through to an excel spreadsheet with daily update of field database and regular update of master database.
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all subsampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 The total recovered sample was retained for compositing into a bulk sample. The one metre bagged samples were provided to the test Laboratory (Mineral Technologies) for compositing to a bulk sample. The bulk sample was homogenised using standard mixing procedures in a sterile environment to avoid contamination of the sample. The bulk sample was split and subsamples taken for quality control.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted 	 Processed samples were submitted to BV Perth for standard silica suite XRF assay. Samples were assayed for SiO₂, including other major oxides (Al₂O₃, BaO, CaO, Cr₂O₃, Fe₂O₃, K₂O, MgO, MnO, Na₂O, P₂O₅, SO₃, and TiO₂). Assay results were subject to internal laboratory QA/QC checks. Analysis undertaken determined by a

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Criteria	JORC Code explanation	Commentary
	(eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	sample code which correlates to drill logs to ensure no sample bias. • A full analysis of sample controls and assay data has been undertaken. The analysis validates the drill assay dataset.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company Personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Significant intersections were validated against geological logging and local geology/ geological model. Thirty nine (39) drill holes were twinned with sampling and logging undertaken to validate the drilling, sampling and assaying techniques.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 All exploration holes are initially located using handheld GPS with an accuracy of 5m for X and Y. UTM coordinates, Zone 55L, GDA94 datum. Contract registered surveyor from Veris Ltd used a differential GPS to pick up drillhole Easting, Northing and Elevation values for holes within the resource area. Topographic surface generated from processing Veris Ltd LiDAR topography and imagery (July 2020), Geoimage imagery and DGPS control points, collar RL's leveled against this surface to ensure consistency in the database.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 Resource drilling has been completed at varying intervals for each section of the resource, three original drill lines at peaks along the dune system at Galalar East were 125m and 250m apart from west to east with a 50-100m spacing perpendicular to the drill lines. Most recent drilling in Galalar East extended one drill line to the south and added another drill line ~300-400m to the east, with holes spaced ~200m apart along the drill lines. Galalar West had one drill line with 50-100m spacing between holes. Hand Auger holes in the north section of Galalar East are spaced at 200 – 400 m apart. Resource drill spacing and distribution

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Criteria	JORC Code explanation	Commentary
		is sufficient to allow valid interpretation of geological and grade continuity for an Inferred Mineral Resource, Indicated Mineral Resource and Measured Mineral Resource where determined.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 The dune field has ridges dominantly trending 320° - 330°. The drill access tracks typically run along or sub-parallel to dune ridges which suggest unbiased sampling. Some cross-dune tracks linking the ridges were also drilled. Silica deposition occurs as windblown sand with angle of rest approximately 35° (Galalar East). Drilling orientation is appropriate for the nature of deposition.
Sample security	The measures taken to ensure sample security.	 Sample collection and transport directly from the field was undertaken by company personnel following company procedures. Resource samples are placed into plastic bags, which were labelled and put into canvas sample bags, sealed and palletized, then directly truck transported to ALS Townsville. Received samples were checked against the sample dispatch documents and a reconciliation report provided by the laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	



SECTION 2 REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The Galalar Silica Sand Project's (near Nob Point) Deposit occurs within the southern part of EPM 17795 in Far North Queensland and is held by Diatreme Resources Ltd. It should be noted that previously this project has been referred to as Cape Bedford Silica Project. The name of the project was changed to reflect the landowner agreement with the Hopevale Congress Aboriginal Corporation in 2018. The tenement was granted 22 June 2016 for five (5) years and is in good standing. A compensation and conduct agreement along with a cultural heritage agreement is in place with the landholder and native title party (Hopevale Congress). A Mining Lease Application (MLA 100235) has been lodged for the Galalar Silica Sand Project (ASX announcement 23/12/19), encompassing 523 hectares and covering the vast majority of this Updated Resources Estimate. Note a small proportion (~5%) of the Resource is located outside the Mining Lease Application due to approval timeframes for the adjacent EPM's. Additionally, three further neighbouring EPM's related to the project have been taken up by Diatreme, EPMA 27212, EPM 27265 (granted 30th January 2020), and, application EPMA 27430. EPM 17795 tenement is large, elongate north-south and covers the bulk of the Cape Flattery/Cape Bedford dune field complex. Additionally, Diatreme has also identified Exploration Targets totaling 210 million to 2.1 billion tonnes of silica (ASX announcement DRX 25/3/19, 11/4/19, 20/6/19) within the wider EPM 17795. Exploration Targets were further prioritized, and drilling planned for 2021 (ASX announcement 25/01/2021).



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 Previous exploration has been carried out in the area during the 1970's by Ocean Mining and 1980's by Breen Industrial Silica Qld Pty Ltd, primarily at reconnaissance level. The historical exploration data is of limited use for resource estimation since it comprises shallow hand auger drilling and is typically not accurately located.
Geology	Deposit type, geological setting and style of mineralisation.	 The geology comprises variably reworked aeolian sand (silica) dune deposits associated with Quaternary age sand-dune complex. The mineralisation is high grade quartz (silica) and it occurs as sand deposits within an aeolian dune complex. The Galalar Silica Sand Project's Galalar Deposit is located at the southern end of the Cape Flattery/Cape Bedford dune field complex, located approx. 20km north of Cooktown. The dune field fringes the coastline as a part of a large Quaternary (Pleistocene to Holocene) silica sand mass, extending along the coastline for approx. 50km and up to 10km inland, and, averaging 25-30m in thickness, with some dunes extending over 90m high. Cape Flattery Silica Mines, which lies at the northern end of the dune field, has been in operation since 1967 and is Queensland's largest producer of world class silica and the highest production of silica sand of any mine in the world. The linear sand dunes developed predominantly during the dry Pleistocene glacial and interglacial periods when the sea-level receded and fluctuated approx. 100m below present. Prior to sea level rises in the Holocene (10,000 years before present) sand was blown inland by the prevailing south-easterly winds to form linear dunes. The land sand masses form mainly as high transgressive or parabolic dunes. Multiple episodes of dune building are evident. Most dunes are stabilised by vegetation, but some active dune fronts occur. The high dunes



Criteria	JORC Code explanation	Commentary
		occupy a low interdune sandplain that is 5-10m above sea level and interspersed with numerous lakes and swamps. Periods of water level table fluctuations, erosion and depositional phases have occurred. Mesozoic Dalrymple Sandstone forms numerous headlands along the coast and acts as a bounding escarpment along the western margin of the dune field. • The Galalar Silica Sand Project's Galalar Deposit is located 12km south-west of Cape Bedford and immediately west of Nob Point. The Galalar Deposit is divided into two adjoining dune sand areas known as Galalar East and Galalar West. Both consist of pure white, sharp featured, transgressive, elongate-parabolic active dunes, stabilised by vegetation. The pure white sands are high grade, consistently averaging over 99% silica. Whilst some coloured cream, yellow and brown sands have been returned in drill samples, no obvious zonation or domaining has been recognised across the project area. Petrographics identifies the sand as free single or as composite crystalline aggregates of quartz, that is clean and rounded. • There is some potential for occurrence of heavy minerals within the greater dune system.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent 	A tabulation of the material drill holes has been included in the report.

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Criteria	JORC Code explanation	Commentary
	Person should clearly explain why this is the case.	
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Resource estimation used a cut-off grade of 98.5% silica for all three Resource classifications. No minimum or maximum grade truncations have been used. Drillhole samples were normalized to 1m intervals to determine continuity between 3m samples and 1m samples.
Relationship between mineralisatio n widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known'). 	
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 This drilling is for metallurgical testwork purposes and does not relate to a discovery. The drilling is within the existing mineral resource area. Maps of the deposit area, drill hole locations and drill and other data have been previous tabled and are available in Diatreme Resources Ltd ASX public releases and company website.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All relevant exploration assay results have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or	

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Criteria	JORC Code explanation	Commentary
Criteria		
	contaminating substances.	 drilling determining the base of holes. Air-core drilling at Galalar ceased at the water table or just below to prevent potential sample contamination from wet sand. Drilling in Galalar West also ceased at the water table or just below to prevent potential sample contamination from wet sand. However not all the samples at depth were sampled for SiO₂, only samples that were assayed were included in the model. There are no known deleterious substances. Iron (Fe₂O₃) in various forms potentially may act as a contaminant for very high-quality "processed" end products. The raw assay data has been investigated to provide guidance. Heavy mineral elements (Titanium & Chrome) have also been investigated but are sub-marginal/negligible to the silica sand grades. IHC Robins completed a bulk (1.8t) laboratory sample to determine viability of product through a one stage of Mineral Technologies MG12 spiral, which yielded 99.9% SiO₂ at 88% recovery. (CNBM) Bengbu Design & Research Institute for Glass Industry Co., Ltd December 2018 completed bulk (0.35t) laboratory sample to determine the viability of the product as high value glass product which resulted in 78% recovery of a >99% SiO₂ raw sample to 99.9% SiO₂. Qinfeng Mining Co Ltd (QMCL) have conducted initial small-scale evaluations that demonstrated the suitability of some of the raw sand to be processed by
		additional chemical treatment to produce an upgrade, low iron high value product.
Further work	 The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of 	
	possible extensions, including the main geological interpretations and future drilling	which is constrained based on drilling data.



Criteria	JORC Code explanation	Commentary
	areas, provided this information is not commercially sensitive.	 Further assaying checks and protocols need to be examined (use of standards, blanks, duplicates and external laboratory checks). Further representative metallurgical testing utilising information and data from this resource block modelling is planned. These results along with a prefeasibility or feasibility study will contribute to upgrading the resource and status, potentially to "Probable
		Reserves".