ASX
ANNOUNCEMENT

13 August 2018

Maiden Mineral Resource confirms high-grade silica deposit at Cape Bedford, North Qld

- **Maiden Inferred Mineral Resource for the Cape Bedford Silica/Heavy Minerals Project's Nob Point Prospect shows world-class, high-grade silica sand deposit of an estimated 21.6 million tonnes @ > 99% silica (SiO_2)**

- **Resource defined spanning an area of around 1 sq km in a total tenement area of 542 sq. km, with open dune extensions to the immediate north and west of deposit**

- **Commercial and permitting studies underway, amid positive outlook for premium quality silica sand demand**

In a major Company milestone, emerging mineral sands producer Diatreme Resources Limited (ASX:DRX) today announces .a Maiden Inferred Mineral Resource for its Nob Point Prospect at the Cape Bedford Silica/Heavy Minerals Project in North Queensland, confirming the presence of a world-class, high-grade silica sand deposit.

The resource estimate, undertaken by independent experts Ausrocks Pty Ltd for the project's Nob Point Prospect, is estimated at **21.6 million tonnes (at > 99% purity silica)**. This comprises high-grade, high-value silica sand potentially suitable for use in high-end glass manufacturing within the automotive, construction, electronics and other sectors.

The study also found the resource spans an area of around 1 sq km in a total tenement area of 542 sq. km, with open dune extensions to the immediate north and west. This highlights the potential for additional exploration to further expand the silica sand resource and to explore for concentrations of valuable heavy minerals within the tenement.

Diatreme's CEO, Neil McIntyre, said the results showed the potential for an important new silica sand mine that could generate valuable new jobs and investment for Far North Queensland.

+61 7 3397 2222

Unit 8, 55–61 Holdsworth St
Coorparoo, Qld, 4151

diatreme.com.au

“These results substantiate our previous exploration efforts and we are determined to advance this project as quickly as possible, working closely with the traditional owners, Hope Vale Congress, to ensure maximum economic benefits for the local community,” he said.

“Commercial and permitting studies are rapidly progressing and with the support of Hope Vale Congress and other stakeholders, we see a clear pathway towards development, capitalising on the project’s access to fast-growing Asian markets.”

“Within our commercial scoping study, we will be targeting the potential export of 350,000 - 500,000 tonnes per annum of high quality silica sand at a quality specification similar to the nearby Mitsubishi-owned Cape Flattery Silica Mines operation. This operation, which our tenement borders, is the world’s largest silica mining operation and is renowned for its premium quality silica product.”

Cape Bedford is favourably positioned to supply growing Asian industries, being situated 200km north of Cairns. The global silica sand market is seen reaching nearly US$10 billion in revenues by 2022, with a healthy compound annual growth rate of 7.2% (source: IMARC Group).

The resource modelling showed a deposit averaging 16.5m in thickness, 1,800m in length and 600m in width, with an in- situ primary silica sand resource grade of > 99% SiO_2. This easily exceeds the specifications for glass-grade silica sand, which comprises >98.50% SiO_2. The grade of the resource is prior to any beneficiation through removal of heavy mineral by gravity separation.

Results from bulk sample testing on more than 500 kg of product from within the defined resource area are expected to confirm the high quality achievable end product grades, suitable for higher end glass manufacturing, with the product requiring only standard processing. These results are expected by mid-August.

Cape Bedford’s maiden resource follows the successful conclusion of a Conduct and Compensation Agreement and a Cultural Heritage Agreement with the Hope Vale Congress, ensuring the traditional owners share in the project’s potential economic benefits.

Among the project’s advantages are its immediate access to a high-quality workforce available on a drive-in basis; access to existing road infrastructure; a potential shipping/export point located within a short distance to potential mining activity; and strong community support for development, based on a genuine partnership. A new mine could generate up to 30 jobs for the local community during construction, with a smaller number employed during its estimated 20 year-plus operating life.

Diatreme is now examining criteria, including site logistics, exports, product offtake, permitting and commercial studies in an effort to expedite the delivery of a cashflow-generating near-term mining operation.

For further details concerning the Inferred Mineral Resource, please refer to the attached excerpts from the report independently prepared by Ausrocks Pty Ltd – Consulting Mining Engineers.

Mr McIntyre added: "Cape Bedford has excellent potential to become a source of near-term cashflow for Diatreme, capitalising on the growing demand for high-quality silica sand and its low potential capital requirements. In the meantime, we continue to progress a definitive feasibility study for our flagship Cyclone Zircon Project in Western Australia's world-class Eucla Basin, with the final report due in the third quarter 2018.

"Major producers are showing increasing confidence in the outlook for silica and mineral sands and we are determined to capitalise quickly for the benefit of our shareholders and all other stakeholders."

Neil McIntyre
Chief Executive Officer

Greg Starr
Chairman

Contact – Mr Neil McIntyre - Ph – 07 33972222

Website - diatreme.com.au

E-mail - manager@diatreme.com.au

Forward looking statements: *This document may contain forward looking statements. Forward looking statements are often, but not always, identified by the use of words such as "seek", "indicate", "target", "anticipate", "forecast", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions. Indications of, and interpretations on, future expected exploration results or technical outcomes, production, earnings, financial position and performance are also forward-looking statements. 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. Many known and unknown factors could cause actual events or results to differ materially from the estimated or anticipated events or results expressed or implied by any forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements.*

Disclaimer: *Diatreme and its related bodies corporate, any of their directors, officers, employees, agents or contractors do not make any representation or warranty (either express or implied) as to the accuracy, correctness, completeness, adequacy, reliability or likelihood of fulfilment of any forward-looking statement, or any events or results expressed or implied in any forward looking statement, except to the extent required by law. Diatreme and its related bodies corporate and each of their respective directors, officers, employees, agents and contractors disclaims, to the maximum extent permitted by law, all liability and responsibility for any direct or indirect loss or damage which may be suffered by any person (including because of fault or negligence or otherwise) through use or reliance on anything contained in or omitted from this presentation. Other than as required by law and the ASX Listing Rules, Diatreme disclaims any duty to update forward looking statements to reflect new developments.*

About Cape Bedford

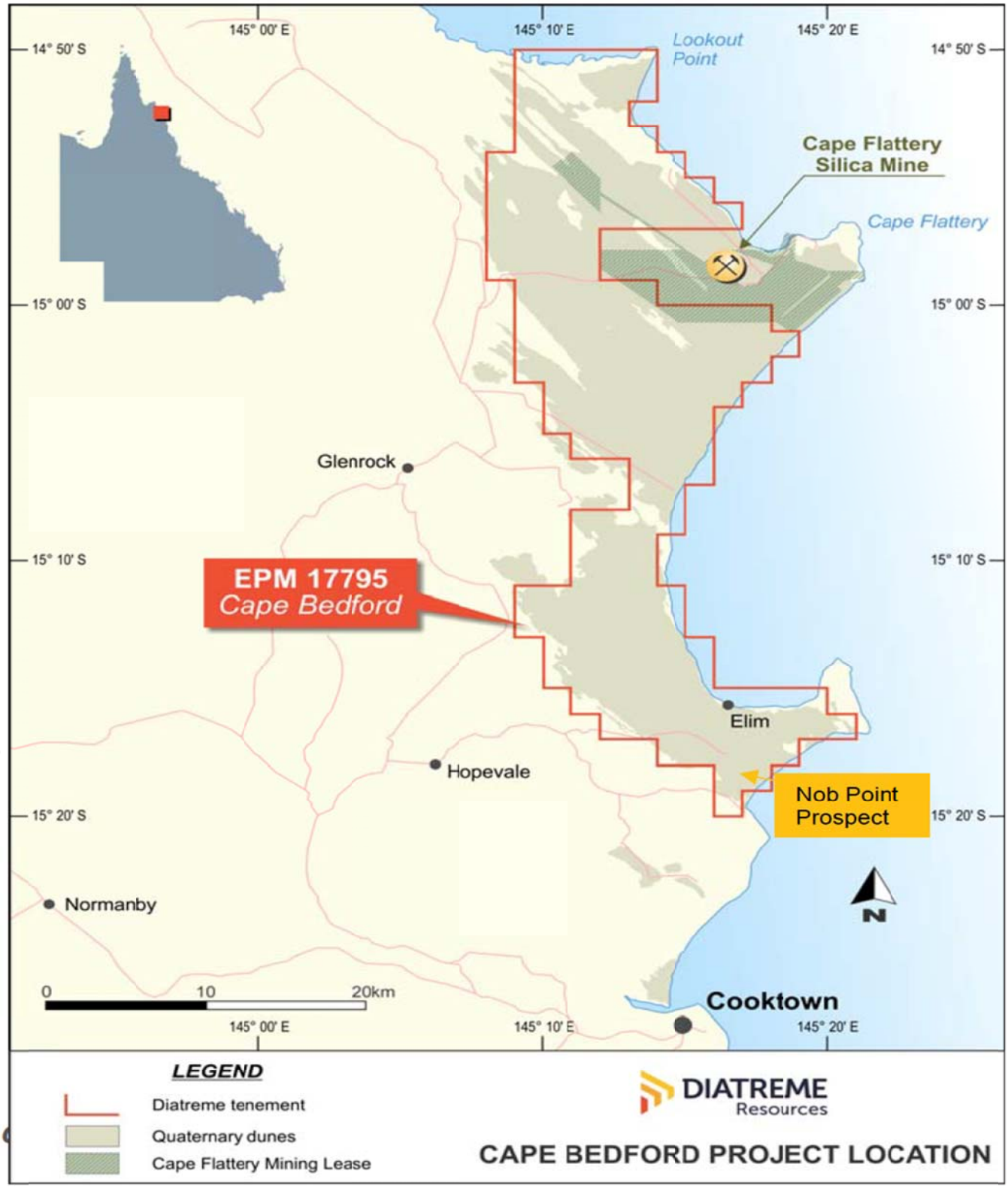
The Cape Bedford EPM17795 is located approximately 200km north of Cairns in North Queensland, and covers the extent of a large Quaternary sand dune field, part of which is currently being mined by Cape Flattery Silica Mines Pty Ltd (CFSM), a wholly owned subsidiary of Mitsubishi Corporation. Cape Flattery has operated since 1967 and is the world's largest silica sand mining operation.

The Cape Bedford/Cape Flattery region of north Queensland is dominated by an extensive Quaternary sand mass and dune field that stretches inland from the present coast for approximately 10km and extends 50km from north to south.

Historical exploration has focused on the Cape Flattery area, within the Mining Leases of CFSM, but reconnaissance exploration has been carried out over the entire dune field in the late 1960's and again in the early 1980's. This exploration confirmed the presence of both silica sand and heavy mineral sands, and Diatreme intends to build on the existing data and initially target those areas (e.g. Nob Point) where prospective silica sand dunes have been identified and access is readily available.

Following the signing in 2017 of a Conduct and Compensation Agreement and a Cultural Heritage Agreement with the traditional owners, Hope Vale Congress, Diatreme has worked closely with the Congress to maximise the economic benefits for the local community.

In August 2018, (refer ASX release 13/08/18) Diatreme defined a Maiden Inferred Mineral Resource for the project's Nob Point (Silica Sand) Prospect located in the southern area of the tenement (see map below).


145° 00' E
145° 10' E
145° 20' E
14° 50' S
15° 00' S
15° 10' S
15° 20' S
Lookout Point
Cape Flattery Silica Mine
Cape Flattery
Glenrock
EPM 17795
Cape Bedford
Elim
Hopevale
Nob Point Prospect
Normanby
N
0
10
20km
Cooktown
LEGEND
Diatreme tenement
Quaternary dunes
Cape Flattery Mining Lease
DIATREME Resources
CAPE BEDFORD PROJECT LOCATION

CAPE BEDFORD SILICA SANDS – INFERRED RESOURCE ASSESSMENT 7/8/18 (EXCERPTS)

Prepared for Diatreme Resources Limited by Ausrocks Pty Ltd

RESOURCE MODELLING

This resource assessment was based on the various drilling, logging and assaying campaigns completed by Diatreme Resources with the resource boundary defined by the distance from the edge of the drillholes and modelled outcrops. These boundaries were drawn as a 2D string file and used to constrain the Resource.

The Resource was modelled using Surpac Software version 6.6.1. Information from the drill logs including Easting, Northing, elevation of the upper and lower resource surface and sand thickness were input to the software. From this information a Surpac surface terrain model was generated for both the upper and lower boundaries of the resource. A calculation was then performed to estimate the volume between the two surfaces constrained by the Resource Boundary.

Geological work and interpretation for this assessment ascribes a deposit averaging 16.5m in thickness, 1,800 m in length and 600m width with an undulating floor.

RESOURCE ESTIMATION

Based on the above assumptions, a Surpac terrain model was generated for the surface and the base of the resource layers, the surface and base of the resource was modelled from the drilling that has been previously conducted with interpretation and interpolation. Based on previous bulk sampling testing completed by Diatreme it was determined that the cut-off grade for the Inferred Resource estimate would be by definition "material that could be blended in bulk to represent an overall grade >99%SiO_2, according to the ALS assay results. The resource boundary was then used to constrain the lower surface of the resource.

The generated surfaces were used to estimate the volume of materials between surfaces and within Resource boundary string as shown in **Figure 4.1** below.

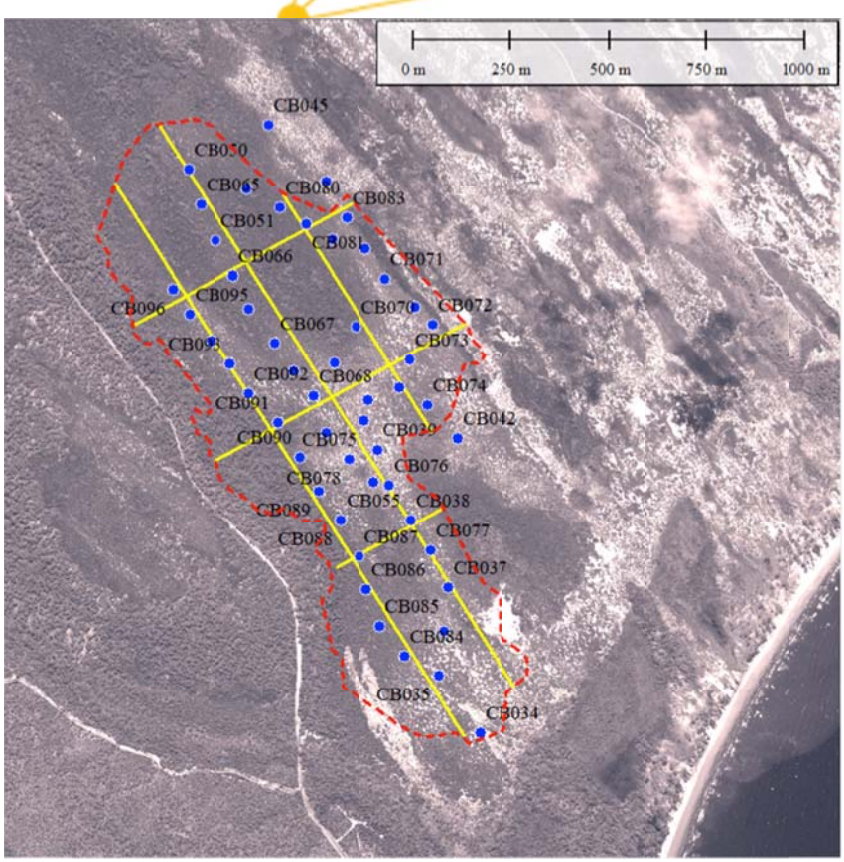


Figure 4.1 Cross-section location plan

Due to there being no density testing material with a similar silica content, particle size distribution, age and colour was used for the estimate. The total in situ Resource was estimated as shown in **Table 4.1**.

Table 4.1 - Estimated In Situ Volumes of Resource ***@99%Sio^2***

	Silica Sand (Mm^3)	Resource Area (Mm^2)	Average Thickness (m)	Density (t/m^3)	Silica Sand (Mt)
Total	**13.5**	**0.83**	**16.3**	**1.6**	**21.6**

It is anticipated that due to the nature of the assessment all of the 99% silica sand volume will be used as product and therefore will be included in the Resource assessment. As such, the estimated in situ volumes are equivalent to "Mineral Resources" as defined by the JORC Code (2012).

In accordance with the JORC Code (2012) the classification of mineral resources is a function of the level of geological knowledge and confidence. With increasing level of geological knowledge and confidence the mineral resources are classified as "Inferred", "Indicated" and "Measured Mineral Resources". Both the geological knowledge and the level of confidence are a function of the complexity of the mineral resource and the amount of exploration/investigation carried out.

Available exploration data for the Cape Bedford Silica Sand Project indicates that the sand mass has a relatively uniform lithological composition and its extent and volume can be relatively easily estimated using readily available topographic data sets. Based on available subsurface information and the reliability of the geological model, the calculated mineral resources, as shown in **Table 4.1** above, are considered as an in situ **"Inferred Mineral Resource".**

COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled by John Siemon from Ausrocks Pty Ltd who has significant experience in Industrial Minerals and Quarry Resource assessments.

John Siemon 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)****.*

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

The corresponding JORC 2012 Table 1 is attached to this report.

APPENDIX - JORC CODE, 2012 EDITION

TABLE 1 REPORT TEMPLATE

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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Drilling samples are 3m down hole intervals of air-core drill cuttings collected from cyclone mounted rotary splitter, approximately 3-4kg (representing approximately 20% of drill material returned via the cyclone is sampled). • Sample was submitted to commercial laboratory 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 induration and slime. • As the targeted mineralization is silica sand, geological logging of the drill material is a primary method for identifying mineralization • Metallurgical samples are composited intervals of white and cream sands logged in drilling with collection of the entire volume of air-core drill cuttings from the cyclone in to large plastic samples bags.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• Vertical NQ air-core drilling utlising blade bit, 3m drill runs

Criteria	JORC Code explanation	Commentary
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 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.*	• Visual assessment and logging of sample recovery and sample quality • Reaming of hole and clearance of drill string after every 3m rod • Sample chute cleaned between samples and regular cleaning of cyclone to prevent sample contamination • No relationship is evident 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 re-interpretation of data if required. • The total hole is logged; logging includes colour, grain size, sorting, induration and estimates of HM, slimes and oversize utlising panning. • Logging is captured in Micromine data tables, with daily update of field database and regular update of master database. This is also kept in Microsoft Excel for interpretation in other programs in the form of csv files.
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 sub-sampling 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.*	• Drilling samples rotary split on site (Approximately 20% recovery), resulting in approximately 3 – 4kg of dry sample • Sample was coned and quartered to generate a 1-2kg sample for submission to the laboratory, with surplus retained as a reference sample. • Sample size is considered appropriate for the material sampled.
Quality of assay data and laboratory	• *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*	• Drilling samples were submitted to ALS Townsville, where they were dried, weighed and split. • Analysis was undertaken by ALS Brisbane utilising a Tungsten Carbide pulverization, ME-XRF26 (whole rock by Fusion/XRF) and ME-GRA05 (H_2O/LOI by TGA furnace)

Criteria	JORC Code explanation	Commentary
tests	*make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Metallurgical samples were submitted to IHC Robbins for characterization testwork (screening, de-sliming, sizing, HLS and XRF analysis) and wet-tabling (two stage) to generate products for sizing and XRF analysis.
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 validated against geological logging and local geology/ geological model. • Twinned holes were completed to generate material for bulk sampling and metallurgical testwork. Geological logging is comparable, no direct assay comparison has been made at this time. • All data captured and stored in both hard copy and electronic format.
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 holes initially located using handheld GPS with an accuracy of 5m for X, Y. • UTM coordinates, Zone 55L, GDA94 datum. • Topographic surface generated from processing Stereo WorldView -3 satellite 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.*	• Drill lines were completed at approximately 100m spacing along the prepared access tracks. • Drill spacing, and distribution is not sufficient to allow valid interpretation of geological and grade continuity for Mineral Resource estimation. • (Down hole) has been undertaken for XRF analysis of drill samples. Down hole sample compositing was undertaken to generate a single bulk sample for holes CB037, CB038, CBO047, CB048, CB053 and CB054 was completed as part of the exploration target with infill drilling and samples on downhole composites completed for the Inferred Resource.
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 320º - 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. • Mineralisation occurs in wind blown with angle of rest approximately 35º. However dimensions of deposit make this angle irrelevant in calculations.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• Sample collection and transport from the field was undertaken by company personnel following company procedures. • Samples were delivered direct to ALS in Townsville.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The data was originally compiled by Ian Reudavey (former Diatreme Employee) and Neil MacKenzie-Forbes (Diatreme consultant) and were subsequently reviewed by the competent person.

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 Cape Bedford Project occurs within EPM17795 in Queensland and is held by Diatreme Resources. • The tenement 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)
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 Organisation. • The historical exploration data is of limited use 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 re-worked aeolian sand dune deposits associated with Quaternary age sand-dune complex. • Mineralisation occurs within aeolian dune sands.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	• A tabulation of the material drill holes is presented in the main body of this report.

Criteria	JORC Code explanation	Commentary
	• *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 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 (eg 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.*	• The assay data presented for the silica sand is an arithmetic average of the 3m individual samples results. • No minimum or maximum grade truncations have been used. • The grade is relatively consistent, and the aggregate intercepts use a simple arithmetic average.
Relationship between mineralisation 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 (eg 'down hole length, true width not known').*	• As the mineralisation is associated with aeolian dune sands the majority will be essentially horizontal, some variability will be apparent on dune edges and faces.
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.*	• A map of the drill collar locations is incorporated with the main body of the report. Representative cross-sections have been attached with the main body of this report.
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 exploration assay results have been reported at this time. A bulk sample supplied to IHC Robbins has been submitted however the results are not available at the date of this report.
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 contaminating substances.*	• Geological observations are consistent with aeolian dune mineralisation. • No bulk density measurements have been undertaken • Abundant groundwater was intersected during drilling, as expected given the dune complex is an aquifer and drilling was undertaken to considerable depth. • The mineralisation is unconsolidated sand. • There are no known deleterious substances at this time • As part of the exploration target metallurgical test results from 6 bulk

Criteria	JORC Code explanation	Commentary
		samples from 6 individual drill holes demonstrate that a high-quality glass grade silica sand product could be produced from the material using conventional wet separation techniques (i.e washing and gravity separation). Prior to the Inferred Resource Estimate an additional 427 $\%SiO_2$ assays were completed on downhole composites.
Further work	• *The nature and scale of planned further work (eg 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 areas, provided this information is not commercially sensitive.*	• Additional drilling to test for lateral extensions of mineralisation are planned. • The areas of possible extensions are considered to be potentially politically and culturally sensitive, and not appropriate for publishing at this time.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The database was originally constructed within Diatreme Resources and provided to Ausrocks in various file formats. Ausrocks reformatted these databases into appropriate file formats checking that assay results matched the documents provided from the respective laboratories and the logs aligned with the chip tray samples.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No site visits have been undertaken by the Competent Person, each drillhole was logged, sampled, photographed and kept in chip trays by either former Diatreme employee Ian Reudavey or consultant Neil MacKenzie-Forbes. The photographs and chip trays were investigated by the competent person to verify the previous logs.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.*	• The Inferred Resource was calculated for a bulk mining operation where all material between two surfaces will be extracted and processed. The current drill hole spacing with the currently available analytical testing is sufficient to identify a large volume of sand which could be processed to produce a high grade silica sand product. As no product specifications have been supplied, no bulk density or moisture determinations it was not considered necessary to

Criteria	JORC Code explanation	Commentary
	• *The factors affecting continuity both of grade and geology.*	undertake a detailed assessment of the modelling methodology.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The resource boundary that has been formed is approximately 1.8km in length and 700m at it's widest point. Predominantly following the topography, the top of the resource at it's highest point is 45.3 mRL, continuing through to 6.8mRL. The average thickness of the resource within the boundary is 19.2m. Depths to the resource depth range from 0.3m to 12m with an average depth of 1.2m.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg Sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The model was compared to various drillholes within the region to check for accuracy. • The resource boundary was determined with consideration to the distance from data points (drillholes), topography and the interpreted extent of the • No deleterious elements were detected during the testing which was compiled. • The base and the top of the resource we determined by the silica assays completed on the 3m composites. The maximum amount of material was classified as product that could be blended to ensure the grade was in excess of 99% silica. These heights were loaded into SURPAC 6.6.1 and modelled using an inverse distance interpellation technique. This was also checked by using kriging which came up with a similar volume number.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• There has been no moisture content testing completed on the sand, only indications in the logs.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 99% silica was used to classify the Inferred Resource Estimate.
Mining	• *Assumptions made regarding possible mining methods, minimum*	• It is expected that a truck/shovel or dozer push to conveyor mining

Criteria	JORC Code explanation	Commentary
factors or assumptions	*mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	method would be selected subject to additional reviews which the deposit size does not constrain either of these methods. The resource was also limited to above the water table to make both of these mining methods plausible. • Dilution was no considered in the resource estimate. In some holes there was additional resource below the >99% silica floor which is slightly lower grade material and would only marginally dilute the product.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• It is assumed that the feed material for the proposed processing plant be in excess to 99% SiO_2. There has not been enough sizing data completed on the resource to adequately assess parameters outside of Silica content and colour.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Due to the high-grade nature of the deposit it is expected that there will be minimal tailings produced through processing and thus minimal disposal.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* •	• There have been no bulk density tests that have been completed as of yet. A density of 1.6 t/m^3 in-situ density was used for converting the resource volume into tonnages, based on density tests that were completed on similar materials (colour, silica content and grading). This remains consistent with the assumed density for the exploration target.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The deposit has been classified solely as an Inferred Resource. • The result accurately reflects the competent person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The Inferred Resource Estimate was completed by the competent person and reviewed by Ausrocks Pty Ltd.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• No production data is available at present as this is a Greenfields project.