ASX ANNOUNCEMENT

13th March 2023

Major silica resource expansion from 124Mt to 235Mt at Si2 deposit

- **The Northern Silica Project has undergone significant expansion, with the high-grade silica sand resource estimate increasing by 89% from 124.1 million tonnes (Mt) to 235Mt, including an upgraded indicated resource of 103Mt.**
- **Diatreme's FNQ projects' total silica sand resource base now exceeds 310Mt, indicating a substantial increase in the company's resource base.**
- **Si2 remains open to the south and north along the Si2 dune complex, with planned additional drilling to identify further significant extensions to the silica resource base.**
- **Drilling results indicate dunes up to 54.7m thick, averaging 11.7m, covering an area of approximately 1,275 ha.**
- **A Scoping Study is advancing to assess the economic feasibility of establishing mining operations at Si2, amid continued growth in demand from booming solar PV industry.**

Emerging silica sands developer and explorer, Diatreme Resources Limited (ASX:DRX) (the Company) continues to expand its high-grade silica sand resource in Far North Queensland, with the Company's Si2 resource estimate soaring by 89% to 235 million tonnes (Mt), up from 124.1Mt previously. Diatreme's total silica sand resource base now exceeds 310Mt across its high-grade silica projects.

Located within the Northern Silica Project (NSP area) of Diatreme's Cape Bedford (EPM17795) exploration tenement, Si2 now represents the major project within the Company's existing silica sand resources, exceeding the estimated 75.5Mt resource of the Company's Galalar Silica Sand Project (GSSP) (refer ASX release 20 September 2021).

Diatreme's expanding resource base is highly strategic given its location in a stable and ESG compliant jurisdiction and amid increasing demand growth from Asia's booming solar PV industry.

+61 7 3397 2222
Unit 8, 55–61 Holdsworth St
Coorparoo, Qld, 4151
diatreme.com.au

Welcoming the latest upgrade, Diatreme's CEO Neil McIntyre said: "*Our ongoing successful exploration of the Si2 dune complex continues to provide outstanding results. Delivery of the resource expansion is very well timed as we start to finish the inputs into the scoping study for the Northern Silica Project, which is now further underpinned with this significant resource upgrade.*

"We look forward to continuing ongoing exploration of the Si2 dune complex in parallel to further feasibility studies in 2023. Diatreme has an exciting year ahead as we move towards development of a critical minerals project that will advance global decarbonisation."

The expanded Mineral Resource was estimated by independent experts Ausrocks Pty Ltd (refer attached summary excerpt report). The additional resources confirm the target Si2 dune system has the potential to host significant silica sand resources, as incremental exploration has increased the resource size significantly.

Diatreme's intention is to progress to Scoping Studies to determine the potential economics of establishing a silica sand operation at Si2. This will potentially facilitate the "fast tracking" of a second independent major high purity silica operation, with the Northern Silica Project benefitting from its proximity to the existing State-owned Cape Flattery Port, owned by Ports North.

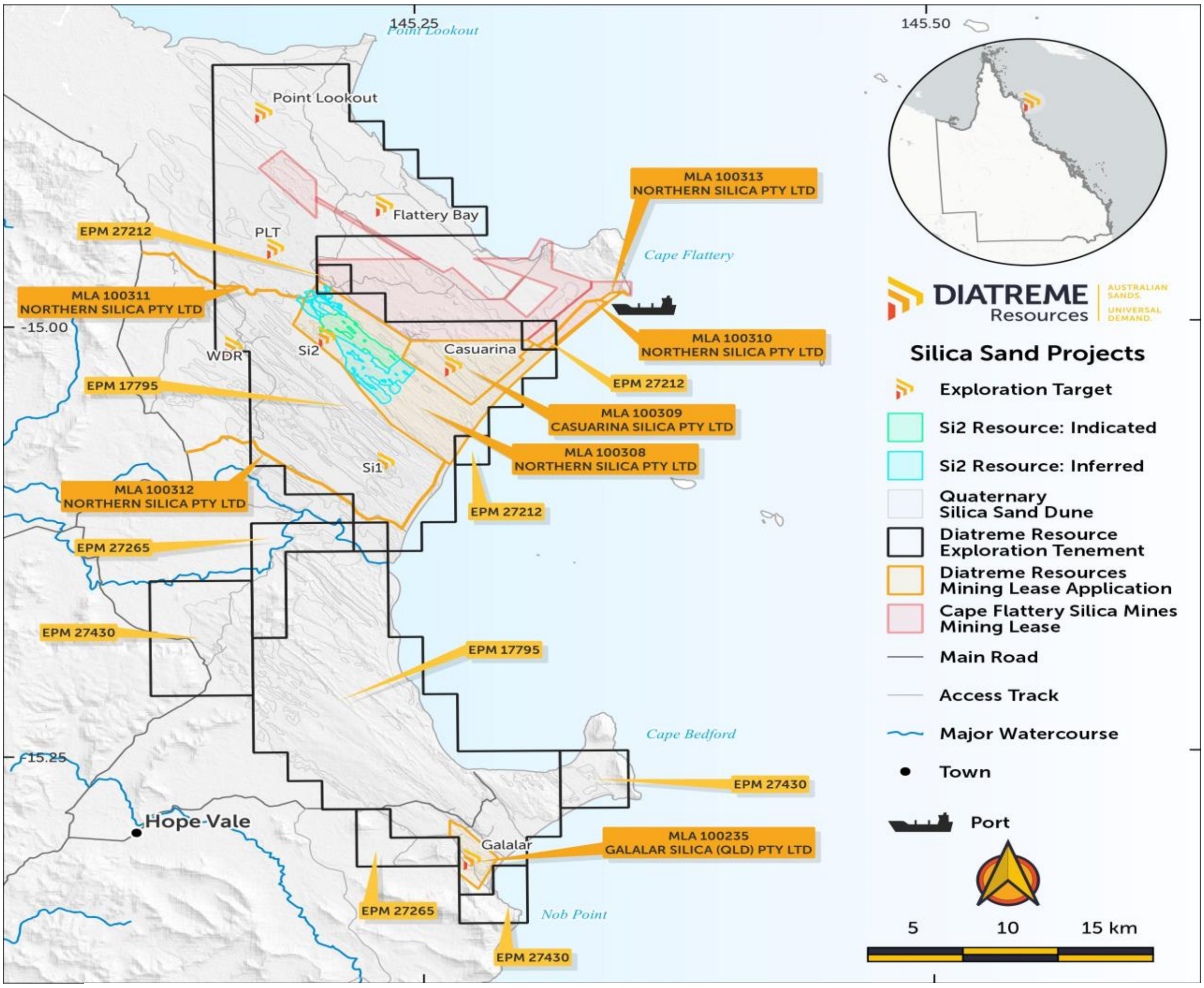


Figure 1: Project Overview

Inferred & Indicated Resources

A third drilling program was undertaken in late 2022, with a total of 1,848.7m comprising 76 aircore drill holes, 12 hand auger holes, and 19 vacuum holes (from 2021 exploration in PLT). These were utilised to upgrade the existing Si2 resource, in accordance with the JORC Code (2012). The mineral resource estimate is built upon 3,783.3m of various drilling methods across 188 drill holes.

Table 1: Indicated and Inferred Resource Estimate – Si2 Resource, March 2023

JORC Resource Category	Silica Sand (Mt)	SiO_2 (%)	Fe_2O_3 (%)	TiO_2 (%)	Al_2O_3 (%)	LOI (%)	Total (%)	Silica Sand (Mm^3)	Density (t/m^3)	Cut-off Grade SiO_2 (%)
Indicated	103	99.31	0.10	0.14	0.09	0.13	99.83	65.0	1.6	98.5
Inferred	132	99.27	0.11	0.15	0.12	0.17	99.90	82.0	1.6	98.5
Total	235	99.29	0.11	0.15	0.11	0.15	99.87	147.0	1.6	98.5

***Note**: Under the JORC Code, 2012 Edition an Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to support mine planning and evaluation of the deposit's economic viability. An Inferred Mineral Resource has a lower level of confidence than an Indicated or Measured Mineral Resource.*

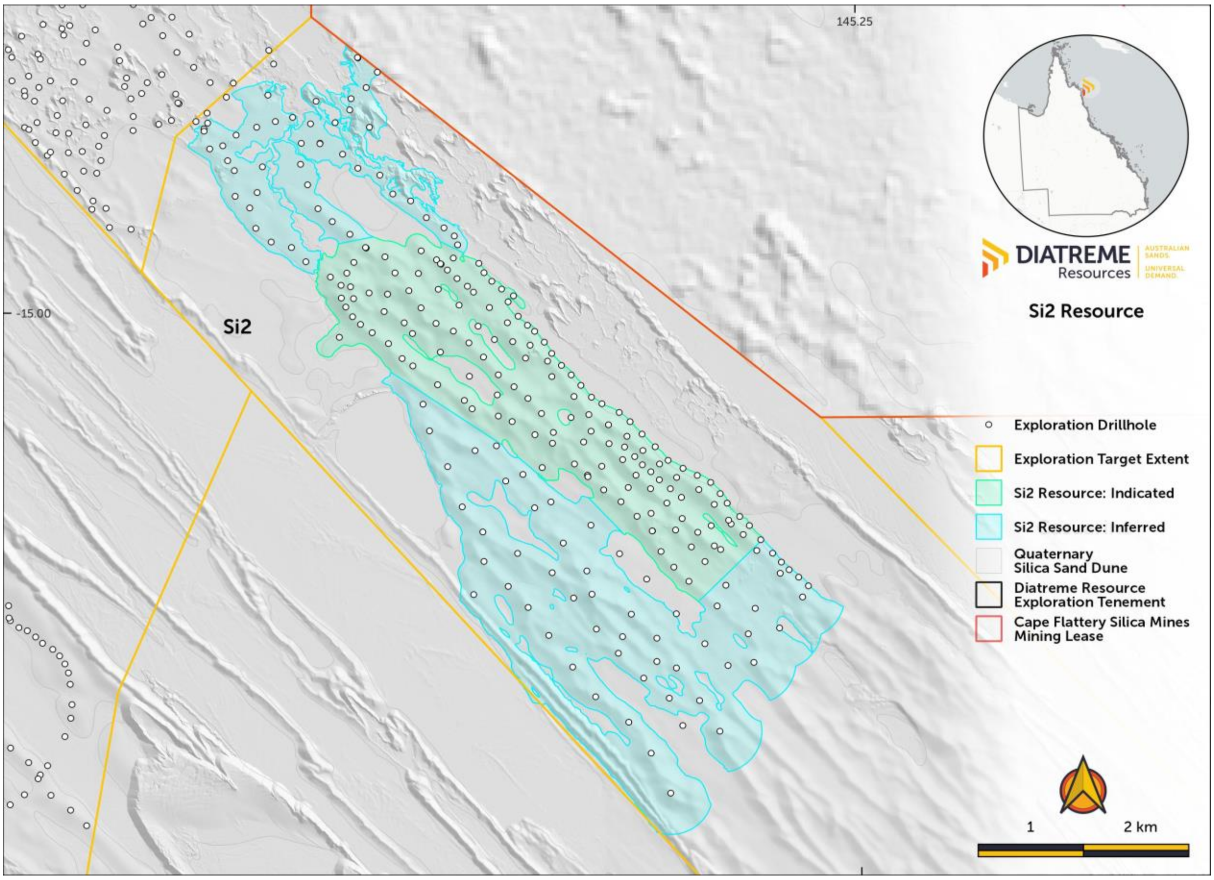


Figure 2: Si2 Resource

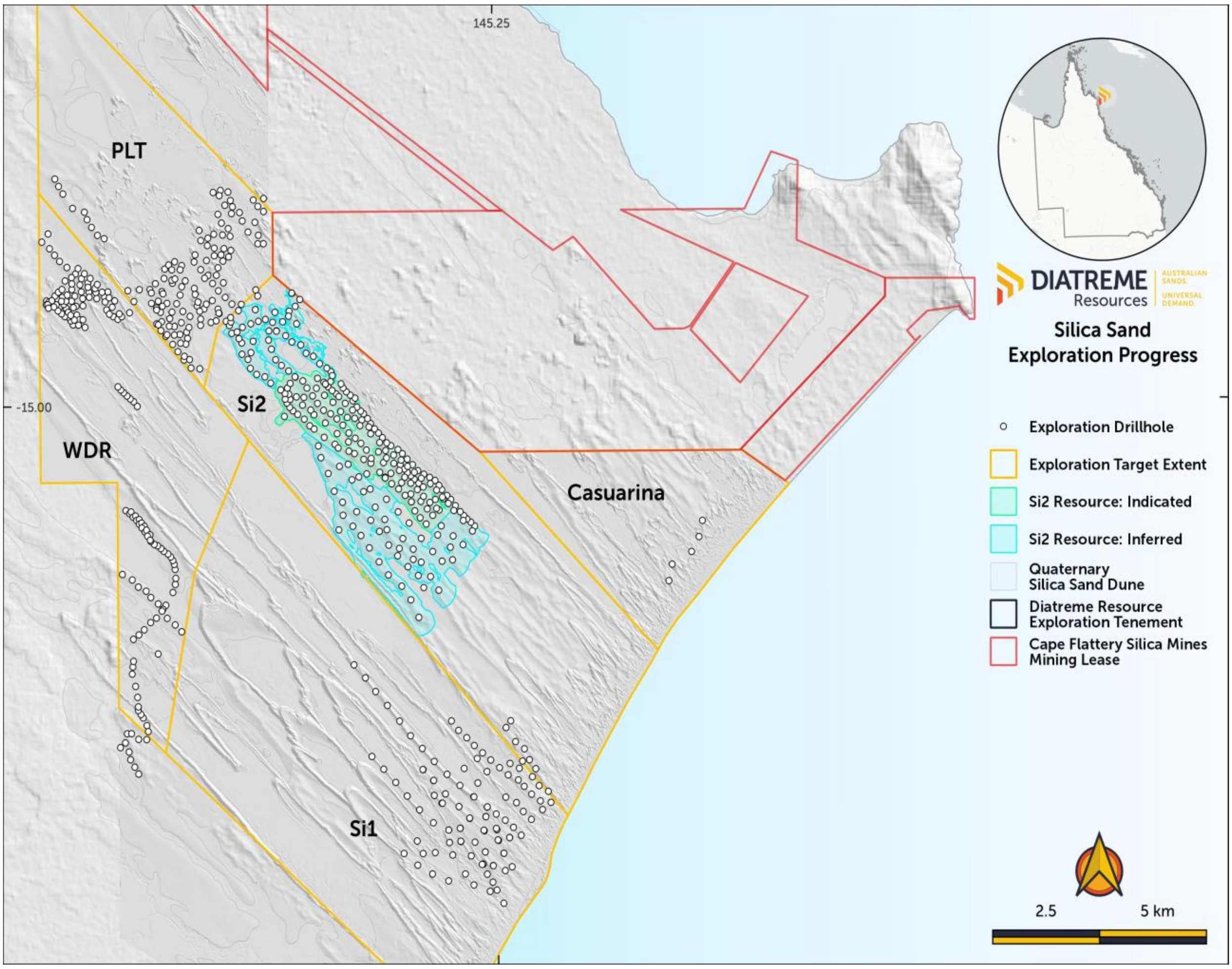


Figure 3: Exploration Progress

2023 Project Development

Diatreme is targeting the following next steps for the NSP, including the Si2 resource:

- Continued exploration and project development throughout 2023, focussed on the Si2 dune complex located within and around the Northern Silica Project, adjacent to the CFSM operations.
- Finalising a Scoping Study to determine the economics and potential development of the area. This will be focused on the Si2 resource and include additional investigation of solutions on infrastructure and export leveraged to the Cape Flattery Port.

+61 7 3397 2222
Unit 8, 55–61 Holdsworth St
Coorparoo, Qld, 4151
diatreme.com.au

- Bulk sample metallurgical test work to continue on the Si2 project, to determine its amenability to processing utilising Diatreme's Galalar optimised silica product processing criteria. This targets assessment and delivery of a high value low iron, high purity silica product.
- Environmental monitoring and studies within the framework of the EIAS studies for the ML100308 Northern Silica Application process.
- Diatreme continues to advance discussions and negotiations regarding establishment of a mining project agreement for the northern silica project with Hopevale Congress Aboriginal Corporation (RNTBC), Walmbaar Aboriginal Corporation (RNTBC) affected native title holders and the broader Hopevale community.

This announcement has been authorised by the Board of Diatreme.

Neil McIntyre
Chief Executive Officer
Contact – Mr Neil McIntyre - Ph – 07 33972222
Website - diatreme.com.au
E-mail - manager@diatreme.com.au

Wayne Swan
Chairman

For investor/media queries, please contact:
Anthony Fensom, Republic PR
anthony@republicpr.com.au
Ph: +61 (0)407 112 623

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 and Northern Silica Project in Far North Queensland, located next to the world's biggest silica sand mine at Cape Flattery. In Western Australia's Eucla Basin, Diatreme's 'shovel-ready' Cyclone Zircon Project is considered one of a handful of major zircon-rich discoveries of the past decade.

Diatreme has an experienced Board and management, with expertise across all stages of project exploration, mine development and project financing together with strong community engagement skills.

Diatreme's silica sand resources will contribute to global decarbonisation by providing the necessary high-grade silica for use in the solar PV industry. The Company has a strong focus on ESG, working closely with Traditional Owners and all other key stakeholders to ensure the long-term sustainability of our operations, including health, safety and environmental stewardship.

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

ASX releases referenced in this release

- Quarterly Activities Report – 31 January 2023
- Drilling results increase potential for significant resource expansion at Northern Silica Project – 11 January 2023
- Galalar silica resource expands by 22% to 75.5 Mt – 20 September 2021

Table 2 – Total Resource Estimate Galalar Silica Project & Si2

	JORC Resource Category	Silica sand (Mt)	Silica sand (Mm^3)	Cut-off SiO_2 (%)	SiO_2 %	Fe_2O_3 %	TiO_2 %	LOI %	Al_2O_3 %	Total %	Density (t/m^3)
Galalar	Measured*	43.12	26.95	98.5	99.21	0.09	0.11	0.16	0.13		1.60
Galalar	Indicated*	23.12	14.45	98.5	99.16	0.09	0.13	0.24	0.10		1.60
Galalar	Inferred*	9.22	5.76	98.5	99.10	0.11	0.16	0.27	0.11		1.60
Galalar	**Sub Total****	**75.46**	47.16	98.5	99.18	0.09	0.12	0.20	0.12		1.60
Si2	**Inferred**	**103**	65.0	98.5	99.31	0.10	0.14	0.13	0.09	99.83	1.60
Si2	**Indicated**	**132**	82.0	98.5	99.27	0.11	0.15	0.13	0.12	99.90	1.60
Si2	**Sub Total**	**235**	147.0	98.5	99.29	0.11	0.15	0.13	0.11	99.87	1.60
Combined	Total	**310**		98.5							

** Resource estimate current as of 13 September 2021*

*** Galalar Sub-total inferred, indicated and measured*

Table 3 – Probable Ore Reserve, Galalar Silica Project

JORC Category	Silica Sand (Mt)	Silica Sand (Mm3)	Cut-off SiO_2 (%)	Waste (Mt)	SiO_2 %	Fe_2O_3 %	TiO_2 %	LOI %	Al_2O_3 %	Density (t/m^3)
Probable Ore Reserves	**32.53**	**20.33**	**98.5**	**0.04**	**99.20**	**0.08**	**0.11**	**0.16**	**0.13**	**1.60**

+61 7 3397 2222

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

diatreme.com.au

COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Targets & Exploration Results is based on information compiled by Mr Frazer Watson, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy, and the Australian Institute of Geoscientists. Mr Watson is a full-time employee of Diatreme Resources Limited. Mr Watson has sufficient experience that 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 Resource and Ore Reserves'. Mr Watson 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 Si2 Resource is based on information, geostatistical analysis and modelling carried out by Mr Chris Ainslie, Project Engineer – Mining & Quarrying. Mr Ainslie is an employee of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Ainslie worked under the supervision of Mr Carl Morandy, Mining Engineer who is Managing Director of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy and Mr Brice Mutton, Senior Geologist who is an Associate of Ausrocks Pty Ltd and is a Fellow of the Australasian Institute of Mining & Metallurgy and a Fellow of the Australian Institute of Geoscientists. Ausrocks Pty Ltd have been engaged by Cape Silica Holdings Pty Ltd (CSHPL) to prepare this independent report and there is no conflict of interest between the parties. Mr 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). Mr 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 corresponding JORC 2012 Table 1 is attached to this report can be found in Appendix B.

+61 7 3397 2222

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

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.

+61 7 3397 2222

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

diatreme.com.au

NORTHERN SILICA PROJECT: SI2 RESOURCE – UPGRADED MINERAL RESOURCE ESTIMATE (EXCERPTS ONLY)

Prepared for Diatreme Resources Limited by Ausrocks Pty Ltd

Exploration

Three drill programs have been carried out on the Si2 Resource:

- Program #1: The maiden drill program, carried out in November 2021, comprised forty-seven (47) vacuum drill holes totalling 897.6m. A Maiden Inferred Mineral Resource Estimate was undertaken (refer to ASX Release: 10 January 2022)
- Program #2: A second drill program, carried out in December 2021, sought to extend the Mineral Resource to the South-East toward the coastline. The drill program comprised thirty-three (3) vacuum drill holes totalling 919.3m. An Expanded Mineral Resource Estimate was undertaken (refer to ASX Release: 17 March 2022).
- Program #3: A third drill program, carried out from September – November 2022, sought to extend the Mineral Resource to the West and South-East towards the coastline and further define and increase the Mineral Resource. This program was comprised of 76 aircore holes (1747m), and 12 hand auger holes (52m). An additional 20 vacuum holes (167.4m) from early 2022 drilling in the PLT exploration target were incorporated into the MRE. The third program totalled 1966.4m.

These programs have now been supported by a detailed topographic survey (LiDAR), acquired in December 2022, providing a far superior update on the hummocky surface dune profile.
The LiDAR survey, together with a total of 188 drillholes, were used to define this Upgraded Mineral Resource Estimate in accordance with the JORC Code (2012).

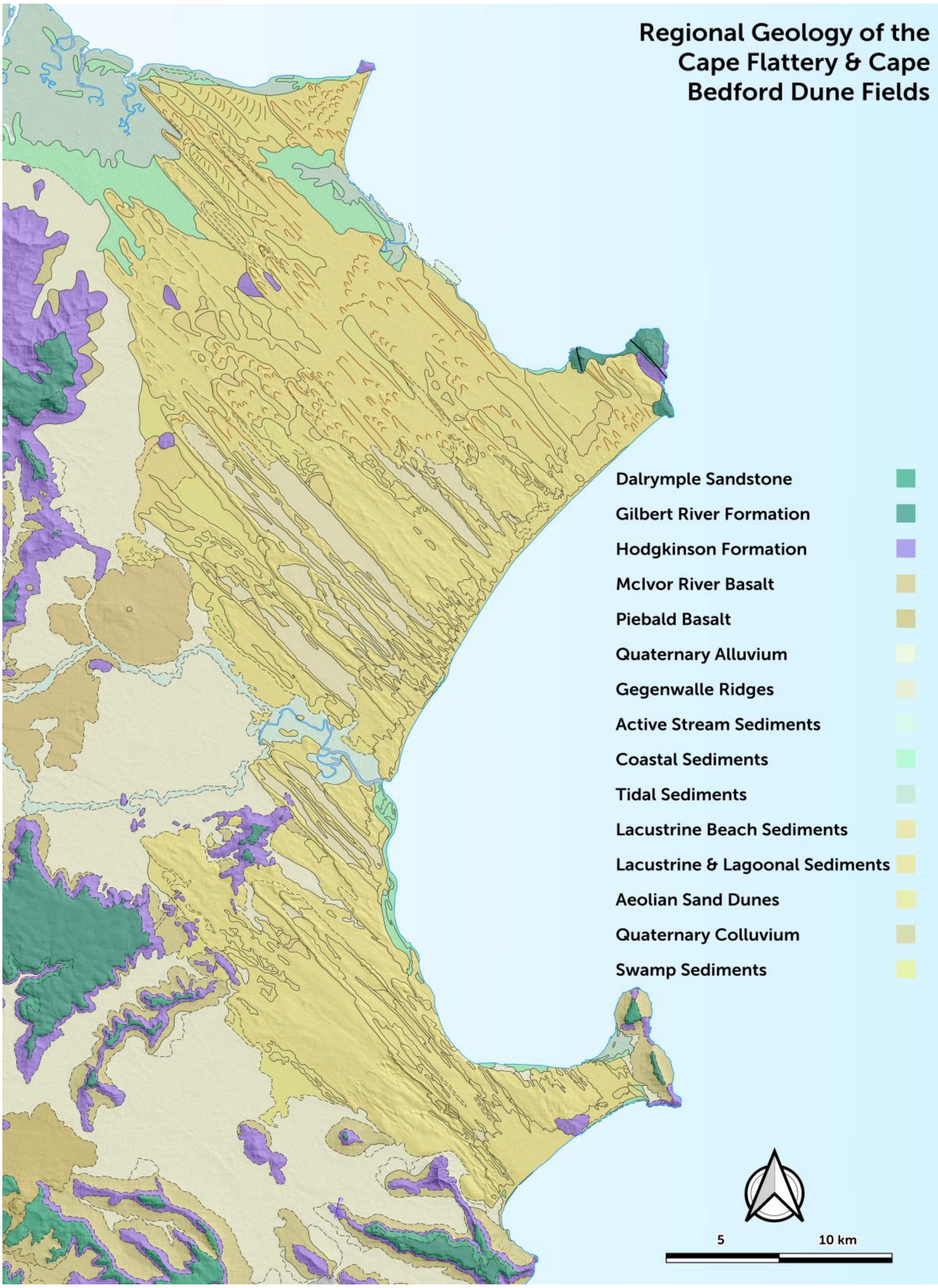
Regional Geology

The Cape Bedford / Cape Flattery Dune Field is one of several extensive areas of aeolian dunes which occur on the tropical east coast of Cape York Peninsula. The dune field covers an area of 700km2 and contains a variety of depositional and erosional landforms. The Cape Flattery & Cape Bedford Dune Fields lie to the east of an upland area consisting mainly of Mesozoic sedimentary rocks with a few outcrops of lower Palaeozoic metamorphics and volcanics. Exposed outcrops are found at Nob Point, Cape Bedford, Cape Flattery and Lookout Point. The dominant source sand of the dune field is considered to be from the weathering of Mesozoic sandstone which widely outcrops regionally to the west of the area. Strong prevailing South-easterly winds appear to have been the consistent wind direction in the region, and still prevail today for most of the year. These winds are the energy source for the establishment and remobilisation of the sand dune systems.

Local Geology

The geological characteristics of the Si2 Exploration Target and Resource are a series of inactive and vegetated elongate parabolic dunes, which is part of the greater Si2 Dune Complex. The sand is white in colour, and in places the paleo B1 horizon is absent, and rather the groundwater basement is intersected. There is a relative absence of active parabolic dune blowouts within the exploration target.
The Si2 exploration target extends 11km in the direction of prevailing winds and is up to 3,000m in width, elevated between 40 and 140m, and is bound to the east and west by interdune wetlands. Fully contained within the Si2 exploration target is the Si2 Resource which was developed across three phases of exploration drilling between November 2021 and December 2022. The resource and the exploration target occupy the southern half of the Si2 Dune Complex, which extends northwest into the PLT exploration target. The Si2 Dune Complex is bound in the North by the Casuarina Dune Complex, in the east by the Coral Sea, and in the South by the Si1 Dune Complex. Based

on observation from LiDAR and drilling, the Si2 Dune Complex is the topographically highest and largest accumulation of aeolian sand within the broader Cape Flattery and Cape Bedford Dune Field. The Si2 exploration target extends 11km in the direction of prevailing winds and is up to 3,000m in width, elevated between 40 and 140m, and is bound to the east and west by interdune wetlands.



Assays

Assay testing was carried out for the vacuum drilling programs by ALS Laboratories, Brisbane prior to April 2022, and by Bureau Veritas, Adelaide from April 2022 onwards. A total 3,260 SiO_2 assays (1827 at ALS and 1433 at Bureau Veritas) were used in the Mineral Resource Estimate. Sixty-eight (68) blanks and nighty-nine (99) duplicates have been employed to check repeatability of assay results. Sixteen (16) holes were twinned for metallurgical testing. Assaying after April 2022 was carried out by Bureau Veritas in Adelaide. Bureau Veritas has 39 office and labs throughout Australia and New Zealand and over 200 laboratories worldwide. Bureau Veritas is NATA Accredited No. 626 for compliance with ISO/IEC 17025 – Testing, site ID 1519.
Assaying was primarily to determine the silica content – SiO_2 and major accessory minerals such as Al_2O_3, Fe_2O_3, TiO_2. Analysis of samples prior to April 2022 was via ALS's procedures designated ME-XRF26 (whole rock by fusion/XRF) for SiO2 and trace elements, and by ME-GRA05 (H_2O/LOI) for Loss of Ignition by TGA furnace. Analysis of samples after April 2022 was via Bureau Veritas procedures designated XF100 which is considered a total whole rock analysis and by TG002 for LOI. Preparation and analysis of samples utilised tungsten carbide pulverisation techniques. Laboratory Quality Assurance (QA) includes the use of internal standards using their own certified reference material, laboratory duplicates, blanks and pulp repeats. ALS provide detection limits of 0.01% for all analytes except Zircon (Zr) which is 0.07%. Bureau Veritas provide detection limits of 0.01% for most analytes, except P_2O_5 , SO_3 Ba_O, Zr and Cr which have detection limits of 0.001%. Consideration was given to the XRF method very marginally under-reporting silica grade resulting from the variability of Total results and possibly slightly overestimating iron (Fe2O3) grade, however no adjustments were made, and the data was used "as received" from ALS and Bureau Veritas.

Metallurgical Testing

Standard characterisations have been conducted on a silica sand sample from Si2 Resource. The sample was brightly coloured white quartz, typical of most samples tested from the Cape Flattery region. The sample was a composite of intervals from PLT095M, PLT098M and PLT102M.
The sample produced a non-magnetic product with SiO2 grades of 99.9% and Fe2O3 content of 120ppm. Testing confirms that conventional processing technologies can produce high grade quality products.

Final Product from Sample

fraction	% wt to feed	Assay (%)														
		SiO_2	Al_2O_3	CaO	Fe_2O_3	K_2O	MgO	Na_2O	P_2O_5	SO_3	TiO_2	ZrO_2	MnO	V_2O_5	Cr_2O_3	LOI_{1000}
		Sample 5														
-710+45µm feed	99.7	99.6	0.066	0.004	0.076	0.003	0.003	0.002	n/a	n/a	0.124	n/a	n/a	n/a	<0.01	0.04
gravity float (-2.7sg)	99.3	99.8	0.028	0.003	0.015	0.003	0.001	0.001	n/a	n/a	0.018	n/a	n/a	n/a	<0.01	0.06
attritioned float (+106µm)	98.0	99.9	0.026	0.004	0.013	0.003	0.001	0.001	n/a	n/a	0.016	n/a	n/a	n/a	<0.01	0.01
non-magnetic float	97.4	99.9	0.025	0.004	0.012	0.003	0.001	0.001	n/a	n/a	0.015	n/a	n/a	n/a	<0.01	0.02
slimes (-45µm)	0.2	93.4	0.35	0.13	1.94	0.02	0.04	n/a	0.015	0.03	1.00	0.13	0.04	0.01	0.014	2.51
slimes post attritioning (-106µm)	1.3	99.25	0.135	0.013	0.075	0.004	0.012	0.010	0.001	0.004	0.114	n/a	0.004	<0.001	0.001	0.18

Cut-Off Grade

A total 188 drill holes were used to define the Upgraded Mineral Resource Estimate. SiO_2 % ranged from 95.28%-100.00% (excluding the B1 floor units at the bottom of the hole which is inherently contaminated with clays/indurated material).
A silica (SiO_2 %) grade cut-off was used to define the in-situ resource to achieve a marketable high purity silica sand. Geological logging and returned assay grades and intersections showed an obvious grade demarcation of ore versus waste at 98.5% SiO_2. This was further supported by statistical analysis and representation. Lengthy continuous vertical intervals of >98.5% SiO_2 was the norm, and these intervals were used for the modelling and Mineral Resource Estimate. The clear in-situ grade demarcation of >98.5% SiO_2 persisted throughout the exploration program and across the whole of the Resource Area.
Only in a few rare drill holes did the resource intervals include intermediate sub-marginal silica grades, but these intervals were restricted to several vertical meters or less. Here the grades were >96% SiO_2 in any case.
The surface to one (1) metre interval consistently returned a <98.5% silica assay and returned higher than normal LOI. This logged interval included a thin average 0.3m topsoil and recorded organic material which caused minor contamination. This one (1) metre interval was adjusted by adopting the succeeding one metre assay grade. A topsoil layer from surface (0.0m to 0.3m) was excluded from the Upgraded Mineral Resource Estimate.
A silica grade cut-off of 98.5% SiO_2 is robust and was applied as the cut-off grade for the resource modelling and Mineral Resource Estimate.
Limitations with the XRF method also contribute to the cut-off grade as variability is the 'Total' result affects the SiO_2 percentage. CSHPL utilise "as received" analysis results and do not correct for Total.

Mineral Resource Estimate

Micromine 2023 was used to complete the Upgraded Mineral Resource Estimate in accordance with the JORC Code (2012). A block model was generated to model the overall deposit shape and volume. The block model was defined by the top of the resource (0.3m below the surface topography to exclude the topsoil layer), the base of the resource (base of the drill holes) and the interpreted geological boundaries. Parent blocks were sized at 50mE x 50mN x 2mRL. Sub-blocks were sized at 5mE x 5mN x 1mRL. The block model was subject statistical and geostatistical analysis and the Ordinary Kriging (OK) method was used to populate the blocks. The Inverse Distance Weighting (IDW) method was used to check the model and yielded comparable results. Swath plots were used to validate the interpolation technique to ensure accuracy. In addition to modelling SiO2 data in the block model, Fe_2O_3, TiO_2, Al_2O_3 and LOI were also block modelled with other assayed elements not modelled due to low values at or near the detectable limits.
The following parameters and assumptions formed the basis for the Upgraded Mineral Resource Estimate in accordance with the JORC Code (2012).

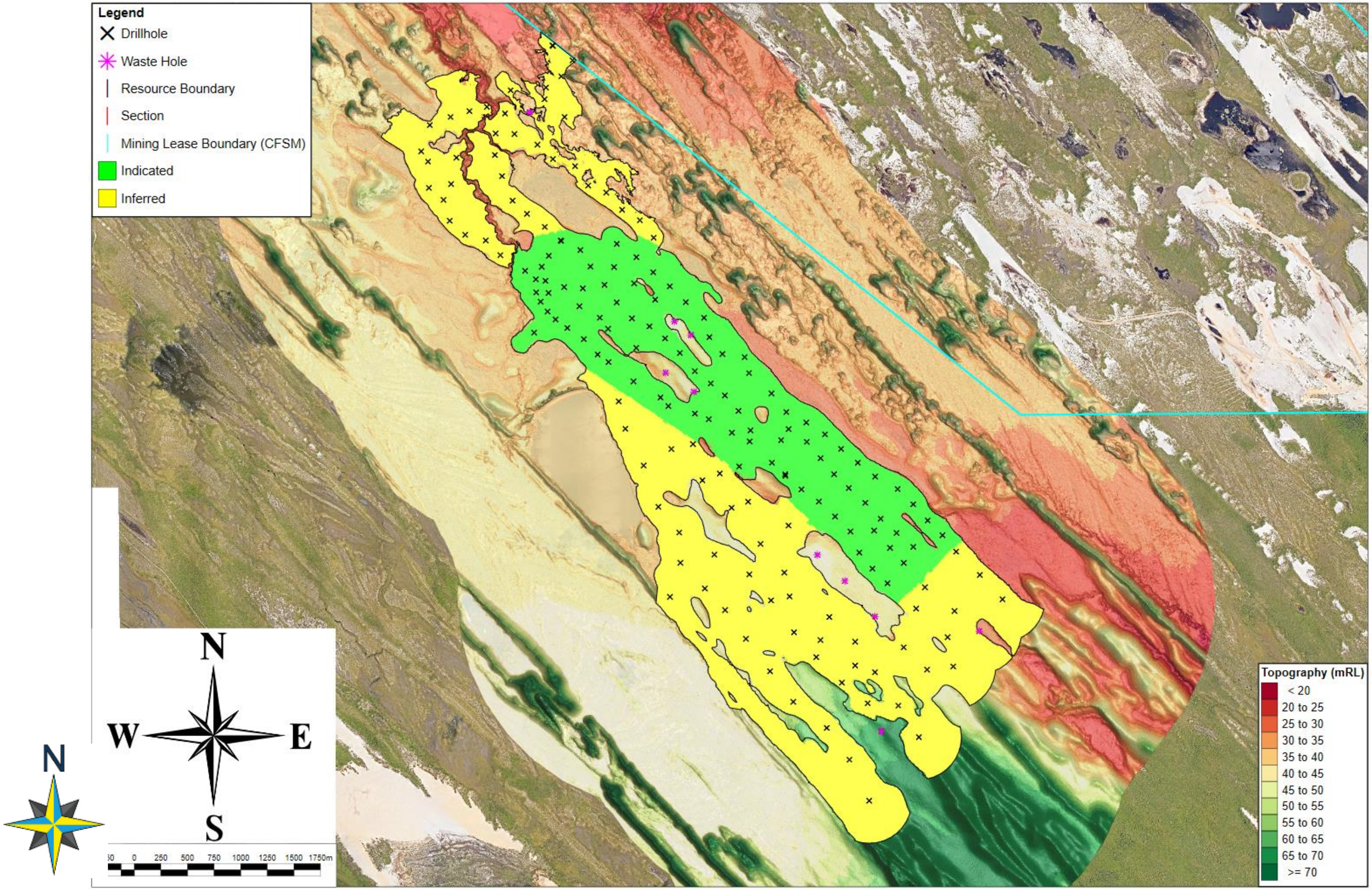
- A detailed remote sensing Light Detection and Radar Ranging (LiDAR) was carried out December 2022. This survey covered the entire Si2 Resource area and provided elevation and aerial imagery for interpretation.
- Density of sand – 1.6 t/m3
- A topsoil thickness of 0.3m has been assumed based on sources from CFSM, visual assessment and drillhole intercepts. Topsoil thickness may vary across the Resource Area based on the vegetation density.
- Fe2O3, TiO2, Al2O3 and LOI were reported as secondary elements constrained to the cut-off grade of SiO_2.
- The Resource boundary was determined by geological interpretation of cross sections and then modelling the top and bottom surface in Micromine 2023 and considering where the surfaces intersect. Further information contained the resource parameters and assumptions can be found in Appendix B – JORC Table 1.

The drill spacing along the dune traverse ranged from confirmatory level spacing (150m-250m) to a scout level spacing (250m-400m) ending in water table or B1/basement. The level of accuracy with the surface data (LiDAR), drill spacing and interpreted geological continuity allowed two resource categories to be defined (Indicated and Inferred Mineral Resource). Importantly, a significant portion (>43%) of the Resource is now categorised as "Indicated".
The results of the Upgraded Mineral Resource Estimate are provided in the table below and the Resource Area is shown on the following page. Representative dune profiles across the Resource Area are shown in the Sections West-East and South-North below.

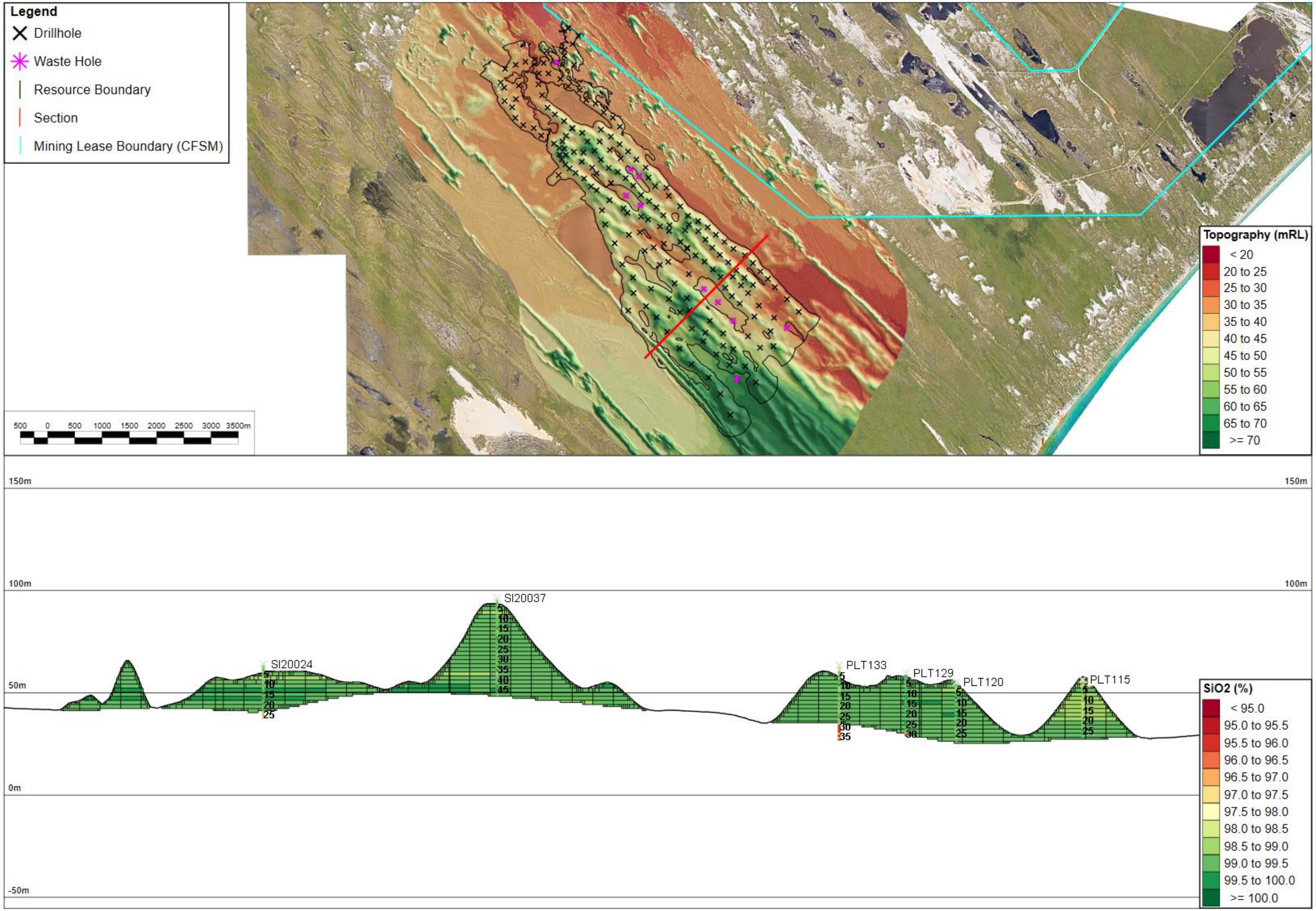
Si 2 Prospect - Indicated Mineral Resource Estimate, March 2023

JORC Resource Category	Silica Sand (Mt)	SiO_2 (%)	Fe_2O_3 (%)	TiO_2 (%)	Al_2O_3 (%)	LOI (%)	Total (%)	Silica Sand (Mm^3)	Density (t/m^3)	Cut-off Grade SiO_2 (%)
Indicated	103	99.31	0.10	0.14	0.09	0.13	99.83	65.0	1.6	98.5
Inferred	132	99.27	0.11	0.15	0.12	0.17	99.90	82.0	1.6	98.5
Total	235	99.29	0.11	0.15	0.11	0.15	99.87	147.0	1.6	98.5

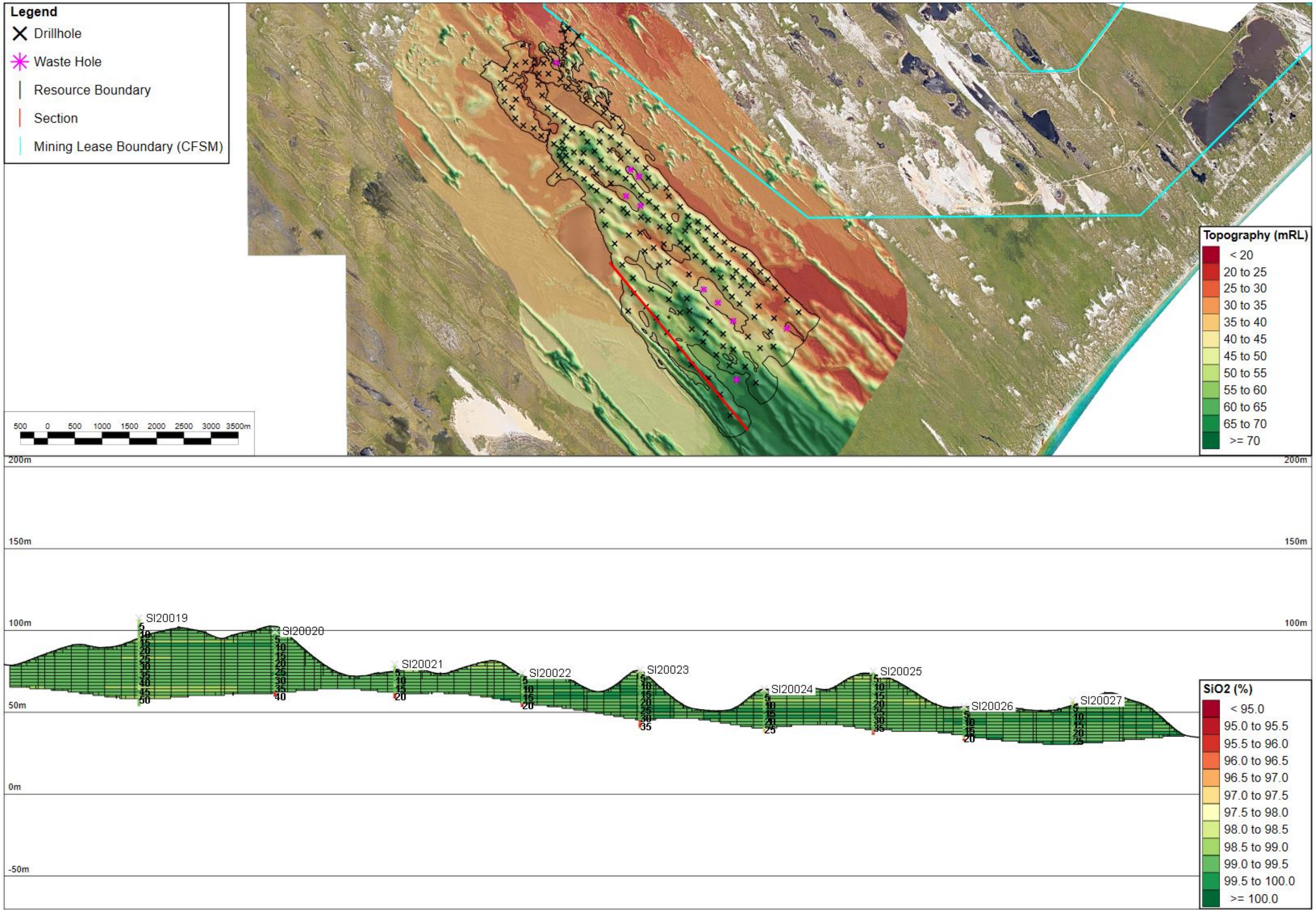
Resource Area of the Upgraded Mineral Resource Estimate



Cross Section (West to East) through the NSP – Si2 Resource Block Model



Long Section (South to North) through the NSP – Si2 Resource Block Model



Conclusions

The outcome of this Upgraded Mineral Resource Estimate for Si2 Resource is summarised as follows:

- Indicated Mineral Resource Estimate of 103 Mt at 99.31% SiO_2, 0.10% Fe_2O_3, 0.14% TiO_2, 0.09% Al_2O_3 and 0.13% LOI
- Inferred Mineral Resource Estimate of 132 Mt at 99.27% SiO_2, 0.11% Fe_2O_3, 0.15% TiO_2, 0.12% Al_2O_3 and 0.17% LOI
- Total Mineral Resource Estimate of 235 Mt at 99.29% SiO_2, 0.11% Fe_2O_3, 0.15% TiO_2, 0.11% Al_2O_3 and 0.15% LOI

The Upgraded Mineral Resource Estimate represents a 90% increase on the previous Inferred Mineral Resource of 124 Mt (March 2022). And importantly, the accuracy of the surface topographic survey (LiDAR) in particular, now upgrades a significant portion (>43%) of the Mineral Resource to the Indicated category.

The Si2 Resource has been broadly defined by drilling and the geological controls are reasonably well understood. The Project contains white, high purity silica sands (SiO_2 average: 99.29%) and low iron (Fe2O3 average: 0.11%). The high quality and its overall size and consistency, favourably ranks the Si2 Resource.

The extent and variability of the Upgraded Mineral Resource Estimate is expressed in terms of the full Resource Area:

- Max Length (along strike): 8km
- Max Width: 2.4km
- Mineral Resource Area: Approximately 1275ha
- Resource Thickness: Averages 11.7m (ranging up 54.7m)
- Top of Resource: 21.5mRL to 108mRL (the top of the resource corresponds to the topography)
- Bottom of Resource: 18mRL to 75mRL (the base of the resource corresponds to water table / basement)

The basement to the resource (possibly a paleo B1) is defined by a sharp or distinct lowering of silica grades and change of colour to brown, orange and/or red. The basement contains an undulating surface, with an elevated 'domed' zone in the southern Resource Area that could represent a pre-existing, older dune structure. Modelling shows that the basement consistently underlies the higher-grade silica resource in the south-western zone, but intercepts with the water table elsewhere within the resource limit the ability to interpret a site-wide basement level. There is no defined correlation between the basement and the water table.

The basement needs to be checked and tested in the interdune locations by drilling to assist better defining geological continuity and support potential upgrade areas.

The known nature and formation of the dune sands, together with consistent high silica grades achieved in drill holes, places a high degree of confidence in the geological interpretation. Continuity of geology (chip tray photographs) and grade (assays) can be readily identified and traced between all drill holes. A detailed topographic survey now provides accuracy on the dunes rapidly undulating or hummocky terrain and profiles. The interpreted geology of the Si2 Resource is relatively robust, and any alternative interpretation of the deposit is considered unlikely to have a significant influence on the Mineral Resource Estimate undertaken.

The high purity of the silica and the potential impact by trace elements (especially Fe_2O_3) demand that sampling and assaying protocols are continuously tested, reviewed and upgraded where determined. The block model knowledge could be leveraged to further interrogate isolated drillhole and assay anomalies including high Fe_2O_3 zones.

Recommendations

There is scope to increase the knowledge and understanding of the Si2 Resource by completing the following additional work:

- Undertake infill drilling to complete a semi-gridded coverage across the wider-tested drill areas to enable further upgrade the Mineral Resource categories and size.
- In particular, the basement needs to be checked and tested in the interdune locations by drilling to assist better defining geological continuity and support potential upgrade areas.
- Conduct "certified" bulk density measurements.
- Verify topsoil thickness across the resource area, given the variation in vegetation density throughout the Resource Area.
- Review the model and especially isolated drillhole and assay anomalies, including high Fe_2O_3 zones.
- Ensure Sampling and Assaying Procedures are continuously reviewed and improved. Maintain systematic application of assay checking.

3.1 Drillhole Data of Drilling Program

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
SI2HA0013	308842	8339375	32.47	5.0	5.0	99.24	0.02	0.08	0.07	0.25
SI2HA0011	308388	8340610	37.46	4.0	0.0	N/A	N/A	N/A	N/A	N/A
SI2HA0010	308233	8340739	41.36	4.0	0.0	N/A	N/A	N/A	N/A	N/A
SI2HA0009	308052	8340942	33.11	5.0	4.0	99.30	0.02	0.07	0.07	0.27
SI2HA0008	307854	8341095	42.26	5.0	4.0	99.23	0.08	0.17	0.21	0.23
SI2HA0005	308415	8340076	42.68	5.0	0.0	N/A	N/A	N/A	N/A	N/A
SI2HA0007	308150	8340256	37.27	3.0	0.0	N/A	N/A	N/A	N/A	N/A
SI2HA0006	307874	8340489	35.32	3.0	2.0	98.93	0.05	0.12	0.09	0.45
SI2HA0004	307609	8340668	40.93	5.0	5.0	99.22	0.06	0.12	0.09	0.29
SI2HA0002	306183	8342276	32.00	3.0	3.0	99.05	0.05	0.09	0.11	0.17
SI2HA0003	307372	8341048	55.55	5.0	5.0	99.22	0.18	0.33	0.10	0.21
SI20053	308191	8338150	47.97	18.0	16.0	99.19	0.07	0.13	0.12	0.15
SI20019	310064	8336235	107.38	54.0	54.0	99.09	0.19	0.24	0.12	0.17
SI20020	309878	8336620	99.29	40.0	37.0	99.34	0.10	0.11	0.12	0.19
SI20021	309665	8336919	79.05	21.0	18.0	99.23	0.12	0.16	0.14	0.17
SI20022	309350	8337164	73.85	21.0	19.0	99.36	0.11	0.12	0.10	0.13
SI20023	309132	8337451	75.78	36.0	31.0	99.38	0.08	0.12	0.14	0.12
SI20024	308905	8337756	63.90	27.0	24.0	99.22	0.11	0.19	0.14	0.19

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
SI20025	308709	8338026	74.92	39.0	36.0	99.24	0.12	0.20	0.12	0.17
SI20026	308519	8338229	53.32	21.0	18.0	99.33	0.11	0.16	0.13	0.19
SI20027	308289	8338470	57.10	27.0	27.0	99.41	0.11	0.15	0.10	0.14
SI20075	310753	8338729	44.01	21.0	21.0	99.08	0.17	0.23	0.14	0.14
SI20043	310178	8336887	69.81	6.0	0.0	N/A	N/A	N/A	N/A	N/A
SI20044	310050	8337151	69.69	9.0	7.0	98.88	0.24	0.37	0.13	0.18
SI20045	309807	8337344	68.17	12.0	7.0	99.24	0.18	0.19	0.13	0.15
SI20046	309566	8337584	75.47	18.0	16.0	98.74	0.21	0.28	0.13	0.31
SI20047	309357	8337817	58.33	9.0	6.0	99.18	0.11	0.19	0.13	0.28
SI20048	309141	8338117	58.27	12.0	9.0	99.41	0.08	0.16	0.09	0.20
SI20051	308937	8338361	66.85	21.0	19.0	99.17	0.14	0.20	0.13	0.16
SI20052	308608	8338547	60.69	24.0	22.0	99.15	0.13	0.21	0.12	0.15
SI20028	308278	8338754	68.34	36.0	36.0	99.38	0.09	0.14	0.10	0.14
SI20029	308082	8338996	52.71	21.0	21.0	99.36	0.12	0.20	0.10	0.12
SI20030	307943	8339384	48.58	18.0	18.0	99.35	0.10	0.17	0.09	0.12
SI20049	309932	8337505	61.34	24.0	14.0	99.32	0.12	0.15	0.13	0.21
SI20050	309606	8337744	66.92	18.0	15.0	99.20	0.13	0.17	0.15	0.18
SI20042	310531	8336832	107.92	51.0	50.0	99.18	0.16	0.19	0.11	0.13
SI20041	310338	8337128	78.90	21.0	18.0	99.30	0.10	0.15	0.11	0.18
SI20040	310118	8337442	71.56	21.0	19.0	99.11	0.17	0.24	0.10	0.13
SI20039	309932	8337729	61.22	21.0	19.0	99.30	0.08	0.11	0.11	0.13
SI20038	309689	8337961	67.37	36.0	29.0	99.20	0.12	0.18	0.10	0.17
SI20037	309315	8338154	96.14	48.0	48.0	99.26	0.11	0.14	0.11	0.18
SI20036	309266	8338378	77.46	34.0	33.0	99.39	0.12	0.15	0.10	0.12
SI20035	309042	8338647	62.21	21.0	19.0	99.59	0.05	0.07	0.09	0.13
SI20034	308770	8338987	42.43	9.0	4.0	99.00	0.16	0.17	0.22	0.35
SI20033	308496	8339245	44.16	9.0	6.0	99.15	0.11	0.14	0.10	0.23
SI20032	308204	8339539	50.35	30.0	30.0	99.30	0.08	0.12	0.08	0.18
SI20031	307771	8339729	60.75	30.0	30.0	99.39	0.08	0.11	0.08	0.17
SI20054	307709	8339986	40.43	12.0	12.0	99.16	0.05	0.10	0.15	0.23
SI20064	308425	8339872	49.98	24.0	20.0	99.23	0.12	0.21	0.11	0.16
SI20059	310608	8337466	48.07	18.0	16.0	98.19	0.39	0.12	0.71	0.47
SI20060	310388	8337676	38.42	15.0	7.0	99.57	0.06	0.08	0.11	0.16

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
SI20058	310117	8337965	38.00	15.0	0.0	N/A	N/A	N/A	N/A	N/A
SI20061	309835	8338299	37.75	21.0	0.0	N/A	N/A	N/A	N/A	N/A
SI20057	309577	8338544	41.81	17.0	0.0	N/A	N/A	N/A	N/A	N/A
SI20062	309305	8338820	35.54	18.0	16.0	99.44	0.05	0.10	0.12	0.17
SI20056	308925	8339044	44.17	21.0	17.0	99.35	0.09	0.17	0.13	0.15
SI20063	308659	8339309	41.95	21.0	19.0	99.39	0.05	0.10	0.11	0.17
SI20055	308407	8339585	34.27	15.0	6.0	99.30	0.09	0.18	0.08	0.15
SI2HA0012	306914	8340632	37.18	5.0	5.0	99.40	0.08	0.16	0.10	0.09
SI20018	307381	8340571	54.19	27.0	27.0	99.38	0.06	0.10	0.09	0.15
SI20017	307511	8340427	61.64	30.0	30.0	99.23	0.10	0.17	0.09	0.14
SI20016	307613	8340356	59.10	30.0	30.0	99.26	0.11	0.15	0.10	0.15
SI20015	307848	8340174	55.88	30.0	30.0	99.34	0.08	0.12	0.14	0.13
SI20014	308102	8340023	66.00	39.0	36.0	99.53	0.07	0.09	0.07	0.10
SI20013	308176	8339942	62.48	30.0	30.0	99.52	0.04	0.05	0.08	0.09
SI20012	308556	8339819	58.98	36.0	22.0	99.41	0.07	0.12	0.13	0.13
SI20011	308773	8339692	45.19	21.0	10.0	99.46	0.06	0.08	0.11	0.22
SI20066	310854	8337496	67.60	34.0	32.0	99.24	0.12	0.19	0.11	0.16
SI20067	310801	8337771	46.92	15.0	15.0	98.90	0.26	0.28	0.27	0.25
SI20065	310505	8338040	47.09	21.0	13.0	99.37	0.08	0.14	0.11	0.18
SI20070	311098	8337828	30.51	12.0	0.0	N/A	N/A	N/A	N/A	N/A
SI20069	310866	8338017	31.77	12.0	11.0	99.15	0.05	0.10	0.14	0.28
SI20071	310588	8338240	31.25	15.0	9.0	99.11	0.05	0.07	0.13	0.33
SI20068	310389	8338469	39.65	12.0	7.0	99.29	0.14	0.22	0.12	0.17
SI20073	311317	8338127	43.42	24.0	24.0	98.62	0.33	0.47	0.17	0.14
SI20074	311104	8338356	37.86	18.0	17.0	99.03	0.18	0.25	0.15	0.14
SI20072	310881	8338575	35.20	15.0	15.0	99.29	0.11	0.16	0.12	0.13
SI20010	309273	8339302	58.05	21.0	16.0	99.35	0.07	0.09	0.10	0.14
SI20009	309149	8339410	64.49	24.0	21.0	99.40	0.09	0.15	0.10	0.18
SI20008	308940	8339610	63.11	24.0	23.0	99.18	0.14	0.16	0.17	0.23
SI20007	308948	8339714	56.18	21.0	12.0	99.26	0.13	0.22	0.12	0.19
SI20006	308835	8339897	51.86	18.0	16.0	99.20	0.15	0.20	0.16	0.17
SI20005	308707	8340042	58.32	31.0	19.0	99.31	0.11	0.12	0.14	0.21
SI20004	308574	8340155	59.75	28.0	20.0	99.23	0.13	0.13	0.11	0.17

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
SI20003	308425	8340270	56.57	15.0	13.0	99.09	0.17	0.19	0.16	0.10
SI20002	308284	8340441	57.82	30.0	16.0	99.15	0.13	0.15	0.14	0.12
SI20001	308145	8340578	56.47	21.0	19.0	99.13	0.17	0.23	0.12	0.08
SI20076	307665	8341248	46.39	12.0	9.0	99.32	0.04	0.08	0.08	0.25
PLT247	307196	8341060	59.69	33.0	32.0	99.52	0.05	0.08	0.07	0.15
PLT246	307531	8340772	49.71	17.7	17.7	99.31	0.08	0.12	0.08	0.14
PLT245	307340	8340880	60.84	30.0	30.0	99.25	0.09	0.12	0.06	0.15
PLT244	307226	8340676	54.68	23.0	23.0	99.28	0.06	0.10	0.07	0.10
PLT243	307200	8342658	47.00	9.0	9.0	99.39	0.05	0.05	0.06	0.11
PLT137	309276	8339287	57.10	2.0	2.0	99.71	0.07	0.20	0.10	0.21
PLT136	309427	8339160	62.74	25.0	22.0	99.38	0.05	0.09	0.08	0.11
PLT135	309591	8339046	62.83	33.0	29.0	99.21	0.08	0.11	0.11	0.11
PLT134	309743	8338905	66.80	44.5	38.0	99.17	0.09	0.11	0.10	0.11
PLT133	309888	8338764	63.19	36.8	29.0	99.03	0.14	0.21	0.11	0.09
PLT132	309971	8338566	59.15	31.0	23.0	99.19	0.12	0.18	0.09	0.08
PLT131	310094	8338415	54.46	21.0	19.0	99.17	0.10	0.14	0.07	0.09
PLT130	310236	8338278	50.36	21.0	18.0	99.50	0.07	0.10	0.10	0.07
PLT129	310110	8338773	59.48	31.0	29.0	99.54	0.07	0.09	0.08	0.09
PLT128	310260	8338610	44.86	12.0	10.0	99.48	0.06	0.08	0.08	0.13
PLT127	309236	8339622	62.63	30.0	29.0	99.31	0.17	0.25	0.08	0.11
PLT126	309306	8339726	68.03	42.0	42.0	99.43	0.12	0.17	0.08	0.09
PLT125	309477	8339606	59.11	34.0	34.0	99.49	0.07	0.11	0.07	0.10
PLT124	309607	8339452	62.23	40.0	40.0	99.10	0.19	0.31	0.11	0.16
PLT123	309733	8339302	56.46	32.0	31.0	99.48	0.06	0.09	0.07	0.15
PLT122	309872	8339172	54.61	29.0	29.0	99.45	0.08	0.10	0.07	0.12
PLT121	310027	8339033	50.78	25.0	25.0	99.17	0.12	0.17	0.09	0.21
PLT120	310172	8338884	54.90	29.5	29.5	99.39	0.08	0.11	0.07	0.12
PLT119	310321	8338751	62.62	37.0	35.0	99.36	0.07	0.07	0.07	0.12
PLT118	310478	8338620	53.27	28.0	25.0	99.39	0.07	0.07	0.08	0.10
PLT117	310614	8338868	43.90	18.5	18.5	99.24	0.14	0.17	0.11	0.15
PLT116	310478	8339020	48.34	22.0	22.0	99.36	0.10	0.14	0.08	0.11
PLT115	310331	8339163	56.20	29.0	29.0	98.86	0.24	0.36	0.12	0.10
PLT114	310120	8339280	44.47	17.5	17.0	99.17	0.13	0.20	0.11	0.11

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
PLT113	309957	8339410	41.55	14.5	14.5	99.18	0.10	0.16	0.09	0.12
PLT112	309799	8339540	49.86	22.0	22.0	99.36	0.08	0.08	0.07	0.13
PLT111	309648	8339677	51.16	23.5	23.5	99.24	0.09	0.10	0.08	0.13
PLT110	309472	8339788	69.18	42.0	42.0	99.20	0.14	0.19	0.09	0.08
PLT109	309285	8339886	66.99	39.0	39.0	99.02	0.17	0.25	0.09	0.09
PLT108	309145	8340061	52.02	24.0	24.0	99.19	0.12	0.20	0.09	0.07
PLT107	308934	8340253	30.49	10.5	10.5	99.12	0.09	0.15	0.09	0.12
PLT106	308893	8340402	42.19	14.0	14.0	99.42	0.05	0.07	0.08	0.10
PLT105	308684	8340431	49.77	26.0	23.0	99.51	0.09	0.16	0.08	0.13
PLT104	308562	8340590	63.34	35.0	33.0	99.28	0.10	0.11	0.08	0.14
PLT103	307115	8340756	56.86	25.0	25.0	99.42	0.11	0.18	0.06	0.10
PLT102	307040	8340830	58.52	27.0	27.0	99.22	0.11	0.18	0.07	0.10
PLT101	306975	8340923	66.53	36.5	36.5	99.34	0.08	0.11	0.06	0.12
PLT100	307049	8341005	68.48	39.5	39.5	99.21	0.11	0.15	0.07	0.09
PLT099	306933	8341010	71.01	42.0	42.0	99.21	0.08	0.11	0.06	0.08
PLT098	307020	8341119	70.27	42.5	42.5	99.14	0.09	0.13	0.06	0.14
PLT097	306930	8341133	63.38	35.0	35.0	99.15	0.11	0.15	0.07	0.12
PLT096	306829	8341213	54.84	26.0	26.0	99.31	0.07	0.11	0.05	0.16
PLT095	306985	8341251	60.19	32.0	32.0	99.08	0.12	0.18	0.07	0.15
PLT094	307052	8341354	54.73	26.0	26.0	99.19	0.12	0.15	0.08	0.10
PLT093	308511	8340772	44.86	14.5	10.0	99.32	0.14	0.24	0.11	0.24
PLT092	308340	8340919	45.32	14.5	8.0	99.16	0.18	0.32	0.11	0.13
PLT091	308189	8341067	47.95	26.5	12.0	99.01	0.17	0.28	0.10	0.09
PLT090	307998	8340691	68.36	30.0	30.0	99.31	0.12	0.18	0.08	0.11
PLT089	307833	8340766	58.60	26.0	26.0	99.50	0.08	0.12	0.07	0.17
PLT088	307690	8340916	66.57	35.0	35.0	99.44	0.14	0.17	0.08	0.14
PLT087	306612	8342102	30.98	3.0	3.0	98.95	0.13	0.29	0.12	0.47
PLT086	306545	8342301	30.19	3.0	3.0	99.33	0.05	0.08	0.10	0.34
PLT085	306552	8342503	30.32	3.0	3.0	98.83	0.04	0.04	0.25	0.30
PLT084	306711	8341872	49.10	20.0	20.0	99.50	0.07	0.11	0.06	0.17
PLT083	306847	8341748	49.49	20.5	20.5	99.42	0.11	0.19	0.07	0.13
PLT082	307014	8341625	50.26	22.0	22.0	99.39	0.09	0.10	0.08	0.19
PLT081A	307169	8341493	57.06	27.0	22.0	99.28	0.14	0.19	0.07	0.12

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
PLT081	307163	8341498	56.37	3.0	3.0	98.85	0.20	0.35	0.10	0.12
PLT080	307348	8341408	58.30	31.0	29.0	99.25	0.09	0.11	0.09	0.06
PLT079	307443	8341253	65.63	37.0	28.0	99.18	0.19	0.28	0.10	0.10
PLT078	306596	8341360	34.15	6.0	6.0	99.31	0.05	0.15	0.06	0.19
PLT077	306459	8341498	36.44	7.0	7.0	99.15	0.12	0.20	0.08	0.21
PLT076	306266	8341551	34.31	4.4	4.4	99.50	0.03	0.05	0.06	0.26
PLT075	306120	8341683	41.10	11.0	11.0	99.42	0.11	0.16	0.09	0.17
PLT074	306062	8341879	40.80	10.8	10.8	99.47	0.12	0.21	0.10	0.13
PLT073	306133	8342028	36.88	8.5	8.5	99.61	0.06	0.09	0.07	0.14
PLT072	305924	8341992	46.06	15.5	15.5	99.20	0.09	0.14	0.07	0.26
PLT071	305916	8342239	40.61	9.7	9.7	99.54	0.05	0.06	0.05	0.18
PLT070	305852	8342335	41.59	10.0	10.0	99.32	0.12	0.19	0.08	0.08
PLT069	307575	8341081	73.77	40.0	40.0	99.03	0.24	0.33	0.11	0.17
PLT068	308033	8341199	51.64	32.5	17.0	99.65	0.08	0.10	0.10	0.17
PLT067	307691	8341466	49.76	19.5	19.5	99.39	0.13	0.22	0.08	0.21
PLT066	307875	8341341	53.62	23.5	23.5	99.60	0.07	0.11	0.08	0.11
PLT065	308038	8341524	46.01	17.0	14.0	99.66	0.04	0.08	0.06	0.13
PLT064	307908	8341688	39.62	8.5	8.5	99.60	0.03	0.05	0.05	0.17
PLT063	307741	8341786	38.53	7.5	7.5	99.19	0.10	0.17	0.08	0.16
PLT062	307592	8341948	37.68	6.7	6.7	99.34	0.05	0.09	0.07	0.25
PLT061	307422	8342014	33.51	3.0	3.0	99.34	0.06	0.10	0.09	0.11
PLT060	307299	8342196	35.68	5.0	5.0	99.06	0.11	0.20	0.09	0.28
PLT059	307090	8342263	31.90	1.7	1.7	98.94	0.05	0.14	0.08	0.41
PLT058	306945	8342398	32.51	2.8	2.8	99.28	0.05	0.11	0.07	0.26
PLT057	306729	8342498	30.92	2.5	2.5	99.24	0.06	0.14	0.06	0.23
PLT012	306693	8342909	33.00	5.7	5.7	99.07	0.05	0.08	0.07	0.13
PLT011B	307090	8343326	33.00	6.0	6.0	99.01	0.10	0.20	0.06	0.06
PLT011A	307086	8343331	34.00	4.0	4.0	99.23	0.08	0.15	0.05	0.14
PLT010	307275	8343190	31.00	2.5	2.5	99.51	0.03	0.04	0.04	0.18
PLT009	307169	8343040	31.00	2.0	2.0	99.57	0.04	0.06	0.03	0.22
PLT008	307025	8342934	31.00	2.0	2.0	99.63	0.03	0.03	0.04	0.13
PLT007	307012	8342825	31.00	2.0	2.0	99.06	0.04	0.07	0.05	0.38
PLT006	306874	8342702	31.00	2.0	0.0	N/A	N/A	N/A	N/A	N/A

Hole ID	Easting	Northing	Collar RL	Hole Depth	Sand Resource Thickness	SiO_2	Fe_2O_3	TiO_2	Al_2O_3	LOI
	m	m	m	m	m	Average % (Sand Resource Thickness Only)				
PLT005	306640	8342691	31.00	4.0	4.0	98.94	0.09	0.21	0.06	0.24
PLT004	306470	8342753	29.00	5.0	5.0	99.15	0.09	0.25	0.11	0.12
PLT003	306306	8342713	31.00	6.0	6.0	99.34	0.04	0.10	0.05	0.12
PLT002	306128	8342658	33.00	3.5	3.5	99.03	0.08	0.19	0.08	0.19
PLT001	305933	8342582	36.00	5.0	5.0	98.99	0.07	0.13	0.06	0.26

Holes with results showing "N/A" indicate the holes that were used to sterilise the MRE

End Of Excerpt Report

Si2 Resource: Upgraded Mineral Resource Estimate – February 2023

- **Section 1 Sampling Techniques and Data**

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.	• Prior to April 2022; Vacuum (VX) Drilling samples were collected in 1m intervals (~2kg) after passing through a single-tiered (50/50) riffle splitter. The samples were then sent for analysis, from which up to 250g was pulverised to produce a fused bead for XRF analysis. • After April 2022; Aircore (AC) drilling samples were collected in 1m intervals (~2kg) after passing through a single-tiered (50/50) riffle splitter. The samples were then sent for analysis, from which 150g was pulverised to produce a fused bead for XRF analysis. • Prior to April 2022; Hand Auger (HA) samples were collected in 1m intervals (~1kg. The samples were then sent for analysis, from which up to 250g was pulverised to produce a fused bead for XRF analysis. • After April 2022; Hand Auger (HA) samples were collected in 1m intervals (~1kg) The samples were then sent for analysis, from which up to 150g was pulverised to produce a fused bead for XRF analysis. • Duplicate samples were taken every 25m as the alternate 50% split of a single-tiered riffle splitter, apart from holes where the alternate split was sampled for metallurgy. • Correct interval delineation on VX and AC drilling is achieved with metre intervals marked on the drill mast, and samples are collected when the base of the top drive reaches a metre interval. • Correct interval delineation on HA sampling is achieved when the top of the metre extension rod reaches ground level. • The Competent Person considers the quality of the sampling to be fit for the purpose of exploration and resource definition.
Drilling techniques	• Drill type (e.g., core, reverse circulation, open-hole 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).	• Three (3) types of drilling have been utilised for exploration, Aircore (AC), Vacuum (VX and Hand Auger (HA) • Hole Depth (EOH) is determine geologically either at the water table or in clayey sands after the base of mineralisation.

Criteria	JORC Code explanation	Commentary
		• AC drilling was by a track mounted drill rig with a 3" blade bit, and a rod length of 3m. • VX drilling was by a tractor mounted drill rig with a 60mm diameter blade bit, and a rod length of 1.8m • Hand Auguring (HA) was conducted using a Dormer Sand Auger with an internal diameter of 2".
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.	• Aircore and Vacuum drilling achieved 100% sample recovery throughout. • Sample recovery is monitored on the rig for a consistent sample size. • Hand auger sampling excluded contamination on the outside of the auger. from the sub-samples to prevent cross-contamination. • Sample recovery is maximised within a closed system from the drill bit to the riffle splitter. • No relationship between recovery and grade has been observed.
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.	• All drillholes have been logged in their entirety, with qualitative descriptions of moisture content, lithology, grainsize and colour. • The quality of logging is sufficient for exploration and resource definition.
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.	• Prior to April 2022, Sample preparation was completed at ALS in Brisbane, using the PUL-33 and SPL-21 methods, where samples are sorted, weighed wet, and then dried at 105°C, samples are then split using a rotary sample divider, and volumetrically weighed to a nominal 250g before undergoing the PUL-33 method, where sample are pulverised in a tungsten carbide bowl. • After April 2022, Sample preparation is completed at Bureau Veritas in Adelaide using the PR001 method where samples are sorted, weighed wet, and then dried at 105°C, samples are then split using a rotary sample divider, and volumetrically weighed to a nominal 150g before undergoing the PR305 method where samples are pulverised in a tungsten carbide bowl.

Criteria	JORC Code explanation	Commentary
		• These methods are determined to be appropriate by the Competent Person to avoid contamination. • Crushing is not required with the grain size of the sample material. • Field duplicates were submitted at a nominal rate of 1 in 25 for quality control. • The variability observed between field duplicate assay results is considered appropriate for the style of mineralisation by the Competent Person. • The Competent Person considers the drill sample sizes as appropriate for the grain size of the material, the style of mineralisation and the nature of the drilling program.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• Prior to April 2022, AC, VX and HA samples had undergone sample preparation and geochemical analysis at Australian Laboratory Services (ALS) in Brisbane. All element results were determined by X-Ray Fluorescence Spectrometry (XRF), method code: XRF26, with H_2O/LOI determined by thermogravimetric analysis (TGA) using method code OA-GRA05x. • As of April 2022, AC, VX and HA samples have undergone sample preparation and geochemical analysis by Bureau Veritas in Adelaide. All element results were determined using XRF, method code: XF100 which is considered a total whole rock analysis. • Field duplicates are conducted every 25th sample which is submitted to the lab as blind duplicates, CRM (ELIM22) is utilised at the start of each hole (nominally every 30 samples), and certification of the ELIM22 CRM by OREAS has yet to be finalised. • Bureau Veritas conducts its own checks, and the results have been provided to CSHPL and are monitored. • No sample contamination has been detected. • The quality control procedures adopted by CSHPL establishes an acceptable level of accuracy.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company Personnel. • The use of twinned holes.	• Significant intersections have been verified by independent consultants Ausrocks Pty Ltd.

Criteria	JORC Code explanation	Commentary
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Twinned holes showed an acceptable level of variability with consideration to the mineralogy and grain size. • Collar, Logging, Photographic and Assay data is captured by and stored within the geological logging/database software MX Deposit. • No adjustment has been made to assay data.
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 drill hole locations have been surveyed using a Handheld GPS (Garmin Montana 700i) which provides accuracy for collar surveys of ± 3m. • The collar data is recorded in the UTM coordinate system: Map Grid of Australia 1994 (MGA94) Zone 55, which uses the Geocentric Datum of Australia 1994 (GDA94) datum on the GRS80 ellipsoid. • All drill holes are vertical, no down-hole surveying is conducted. • LiDAR elevation models were used as the topographic surface.
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.	• First pass drilling spaced nominally at 380m along dune crests, and infill drilling at a nominal 180 - 200m along the trailing arm of an elongate parabolic dune, and in the interdunal valleys. • The data spacing and distribution is considered by the Competent Person to be sufficient to establish geological and grade continuity appropriate for varying Mineral Resource and Ore Reserve estimation procedures and their respective determined classification. • No sample compositing has been applied.
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 deposit style is an aeolian sand deposit, comprised of a series of complex dune systems superimposed upon progressively older dune systems. • The vertical drilling intersects the bedforms at an angle that represents the true width of mineralisation. • No sampling bias is introduced by the orientation of drilling.
Sample security	• The measures taken to ensure sample security.	• Samples were sealed by cable-tie in polywoven bags, and securely stored on-site until transported by TNT courier and their third party to Bureau Veritas in Adelaide.

Criteria	JORC Code explanation	Commentary
		• Reconciliation reports are provided by the laboratory and checked against the sample submission forms.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Internal reviews and audits have been conducted by CSHPL. Ausrocks Pty Ltd has conducted a review of the 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 Northern Resource Area is located adjacent to the coastline in Far North Queensland, approximately 53km north of Cooktown. The project is adjacent to the southwest corner of the Cape Flattery Silica Mines (CFSM) Mining Lease. CFSM has been in operation since 1967 and is Queensland's largest producer of high purity silica and is reported to have the highest production of high purity silica sand of any mine in the world • The project is located at the northern end of the Cape Flattery/Cape Bedford dune field complex within the Exploration Permits for Minerals (EPM) 17795 & 27212. The Northern Resource Area and nearly all the EPM is located on one land title, Lot 35/SP232620, a freehold lot of 110,000 hectares. • The Project and EPM is in the Mareeba Mining District and falls within the Hope Vale Aboriginal Shire Council area. This lies approximately 35km north of the township of Hope Vale, with a population of approximately 1,500 in the Hope Vale Aboriginal Shire Council. • CSHPL (previously Diatreme) was granted EPM 17795 "Cape Bedford" on 22 June 2016 for a period of 5 years targeting heavy mineral sand and silica sand. The EPM was granted under protected Native Title Protection Conditions. In 2021, a renewal was lodged for an additional 5 years, which was formally renewed in October 2022, and the tenure is in good standing. • EPM 17795 is an extensive EPM currently comprising 147 continuous subblocks (approximately 480km2) covering the majority of the Cape

Criteria	JORC Code explanation	Commentary
		Flattery-Cape Bedford Quaternary dune field complex. The dune field complex is characterised by large transgressive elongate and parabolic sand dunes that have a predominant strike of 320-330 degrees. The extensive dune field complex of massive sand extends inland from the present coast for approximately 10km and for approximately 50km from north to south. • Three contiguous EPM's have been taken up by Diatreme & JV entities, EPM 27212 (granted 27th September 2021), EPM 27265 (granted 30th January 2020) and application EPM 27430 (granted 26th October 2021). These tenements cover small areas of the dune complex not within EPM 17795. • Diatreme Resources (in conjunction with its Joint Ventures Northern Silica Pty Ltd and Casuarina Silica Pty Ltd) has three mining lease applications currently undergoing approvals, ML100235, ML100308, ML100309, and four accompanying mining lease infrastructure applications, ML 100310, ML 100311, ML 100312, ML 100313.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Exploration for silica sand has been undertaken in the Cape Flattery – Cape Bedford area in 11 Authorities to Prospect (ATP's) or Exploration Permits for Minerals (EPMs) since the 1960's. In general, past exploration of the dune field has primarily focused on the prominent high-level active dunes of clean white silica sand. Potential for economic concentrations of heavy mineral sand also exists throughout the lower dune elevation and older sand areas. • The only work relevant to Si2 Resource area are two (2) "Dormer Holes" completed by CFSM in 1983/84. In 1983/1984, CFSM carried out a regional exploration program over areas to the west and the northwest of their mining lease at Cape Flattery. Results are only publicly available for holes West No. 10 and West No. 12. CFSM didn't report (or analyse) for SiO_2 and only completed HM and Fe_2O_3 by methods that are not directly comparable to contemporary XRF analysis. As there are no assay certificates or any QA/QC for this historic data, it is considered qualitative and is not used in the current Mineral Resource Estimate but is referenced for transparency.

Criteria	JORC Code explanation	Commentary
Geology	• Deposit type, geological setting and style of mineralisation.	• The Northern Silica Project is comprised of a series of combined silica sand dune complexes. • The Cape Flattery & Cape Bedford dune fields are aeolian dunes established in the Pleistocene epoch and regularly remobilised during the Pleistocene and Holocene epochs. The dune fields are situated on a coastal plain overlying the Hodgkinson Formation basement with Dalrymple Sandstone forming mesa on basement highs. • Mineralisation is considered to be due to repeated podsolization (leaching) events mobile dune systems on existing silica-rich sand dunes.
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 Person should clearly explain why this is the case.	• A tabulation of the material drill holes used in this Mineral Resource Estimate is attached to this JORC Table 1. • Refer to table in the relevant sections of the announcement.
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.	• Data aggregation is a calculation of the mean average on the respective podsolization profiles across mineralised and non-mineralised zones. • A cut-off grade of 98.5% SiO_2 is used for the mineral resource estimation.
Relationship between	• These relationships are particularly important in the reporting of Exploration Results.	• All drilling was vertical (-90°) intersecting undulating flat-lying aeolian dune sands.

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	• 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').	• Downhole length correlates with true width.
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.	• Plan view of drill hole collar locations and appropriate sectional views are within the text.
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 results are 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 contaminating substances.	• Fe_2O_3 percentage is the most significant limiting factor on high purity silica sand and determines value after SiO_2 percentage. • Fe_2O_3 when found in association with TiO_2, does not act as a contaminant or barrier to refining high-purity silica sand, with testing showing gravity separation to remove this impurity accurately. • Mineralisation is unconsolidated sand.
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 areas, provided this information is not commercially sensitive.	• Infill drilling to a semi-gridded pattern (nominal <150m) across the Si2 Resource to upgrade the Geological Confidence. • First-pass hand auguring to continue at the Casuarina exploration target. • Conduct bulk density testing across the Si2, Casuarina and PLT exploration targets. • Further exploration. • Metallurgical test work is completed, with assaying soon to be completed.

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, validated and electronically provided by CSHPL to Ausrocks Pty Ltd. • Ausrocks reformatted the database into appropriate file formats checking the veracity of the assay results. The data was further validated and cross checked against the geological logs and the chip tray photographs. • Micromine 2023 validated the files which were used for the Mineral Resource Estimate.
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.	• The Competent Person completed a site visit to the Si2 Resource on 18 October 2022. • The Competent Person has also previously visited Cape Flattery/Cape Bedford area on 20 October 2021 and has experience of the dunefield complex.
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 factors affecting continuity both of grade and geology.	• The Si2 Resource has been broadly defined by drilling and the geological controls are reasonably well understood. • The known nature and formation of the dune sands, together with consistent high silica grades achieved in drill holes, places a high degree of confidence in the geological interpretation. Continuity of geology (chip tray photographs) and grade (assays) can be readily identified and traced between all drill holes. • The interpreted geology of the Si2 Resource is relatively robust, and any alternative interpretation of the deposit is considered unlikely to have a significant influence on the total Mineral Resource Estimate undertaken. • No major factors affect continuity both of grade and geology. • Geological controls were applied to multiple cross and long sections to constrain the final resource wireframe. • Prior to interpolating and assigning assay values to each block, a solid was generated to model the overall deposit shape and volume by

Criteria	JORC Code explanation	Commentary

		applying the following parameters:
		• Top surface - defined as the base of topsoil which is 0.3m below surface topography.
		• Bottom surface – a gridded surface based on drillhole depths and geological interpreted boundary points.
		• Boundary – the resource boundary was defined by the following considerations:
		  ▪ Surface dune extents based on imagery and interpretation.
		  ▪ Geological interpretation of drill holes.
		  ▪ The area where the top and bottom surfaces intersected.
		  ▪ Area of influence around drill holes determined by confidence level.
		  ▪ Several iterations were run to cross check boundary sensitivities.

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 extent and variability of the Mineral Resource is expressed in terms of the full Resource Area
		  • Max Length (along strike): 8km.
		  • Max Width: 2.4km.
		  • Mineral Resource Area: Approximately 1275ha
		  • Resource Thickness: Averages 11.7m (ranging up 54.7m).
		  • Top of Resource: 21.5mRL to 108mRL (the top of the resource corresponds to the topography)
		  • Bottom of Resource: 18mRL to 75mRL (the base of the resource corresponds to water table / basement)

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	• Sample intervals have been collected at 1m throughout the drilling program. No sample bias based on the sample interval length. • Using Micromine 2023, Statistical and Geostatistical analyses was undertaken on silica (SiO_2) and the key impurities (Fe_2O_3, TiO_2, LOI, and Al_2O_3) of the dataset. Assay methods also returned results for Al_2O_3, BaO, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, SO_3, SrO, TiO_2 but they were not examined due to their very low grades (at or

Criteria	JORC Code explanation	Commentary
	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 (e.g. 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.	near detection range). • All sample intervals underwent basic statistical analysis (minimum, maximum, mean etc.). All variables showed that there were no requirements for top or bottom cutting. • The raw data distribution for silica and the key impurities (Fe_2O_3, TiO_2, Al_2O_3 and LOI) were analysed in detail and used in the block modelling. • Parent block sizing was chosen as 50mE x 50mN x 2mRL which was then sub-blocked to 5mE x 5mN x 1mRL. • The Ordinary Kriging (OK) method was used to estimate the grades and populate the block model. • Each block within the blank block model was assigned values for SiO_2, Fe_2O_3, TiO_2, Al_2O_3 and LOI. • Cross-sections throughout the block model were compared with the same sections through the drillhole data to showing that the modelling completed was indicative of the input data and the mineralisation. • Multiple cross section iterations were used to further define and constrain the model where data was minimal. • Finally, swath plots were used to validate the interpolation technique to ensure accuracy. Swath plots compared the drillhole and block model with SiO_2 and Fe_2O_3 grades which showed sufficient spatial correlation between both modelled estimates and input drillhole grades. • The Inverse Distance Weighting (IDW) method was used to check the model and yielded similar results.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• No moisture content testing has been conducted.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• A silica (SiO_2 %) grade cut-off was used to define the in-situ resource to achieve a marketable high purity silica sand. Geological logging and returned assay grades and intersections showed an obvious grade demarcation of ore versus waste at 98.5% SiO_2. This was further supported by statistical analysis and representation. Lengthy

Criteria	JORC Code explanation	Commentary
		continuous vertical intervals of >98.5% SiO_2 was the norm, and these intervals were used for the modelling and Mineral Resource Estimate. The clear in-situ grade demarcation of >98.5% SiO_2 persisted throughout the exploration program and across the whole of the Resource Area. • Only in a few rare drill holes did the resource intervals include intermediate sub-marginal silica grades, but these intervals were restricted to several vertical meters or less. Here the grades were >96% SiO_2 in any case. Consideration was given to the XRF method very marginally under-reporting silica grade resulting from the variability of Total results and possibly slightly overestimating iron (Fe_2O_3) grade, however no adjustments were made. • The surface to one (1) metre interval consistently returned a <98.5% silica assay and retuned higher than normal LOI. This logged interval included a thin average 0.3m topsoil and recorded organic material which caused minor contamination. This one (1) metre interval was adjusted by adopting the succeeding one metre assay grade. A topsoil layer from surface (0.0m to 0.3m) was excluded from the Mineral Resource Estimate. • A silica grade cut-off of 98.5% SiO_2 is robust and was applied as the cut-off grade for the resource modelling and Mineral Resource Estimate. • Limitations with the XRF method also contribute to the cut-off grade as variability is the 'Total' result affects the SiO_2 percentage. CSHPL utilise "as received" analysis results and do not correct for Total.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum 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.	• Similar to nearby operations, it is expected that mining will be conducted directly from the face by a Wheel Loader and material will be transported to the processing plant via conveyor or slurry pipeline. This mining method is flexible and is considered suitable for the deposit and is not likely to unnecessarily constrain the Mineral Resources. • Dilution was not considered in the Mineral Resource Estimate. In some holes there was minor additional resource below the >98.5%

Criteria	JORC Code explanation	Commentary
		silica floor which is slightly lower grade material and would only marginally dilute the product. • Based on the sample assays and geological logs, the top 0.3m of the deposit has been excluded from the Mineral Resource Estimate as it is assumed that this would be a soil and vegetation layer and would be scalped when mining the deposit and re-used for rehabilitation.
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.	• Standard characterisations have been conducted on a silica sand sample from Si2 Resource. The sample was brightly coloured white quartz, typical of most samples tested from the Cape Flattery region. The sample was a composite of intervals from PLT095M, PLT098M and PLT102M. • The sample produced a non-magnetic product with SiO_2 grades of 99.9% and Fe_2O_3 content of 120ppm. There was a minimal change in the Fe_2O_3 content between the attritioned float and non-magnetic products. This suggests that magnetic separation was ineffective for further improving the silica sand purity. • Following the magnetic separation stage, a PSD was completed on the non-magnetic fractions. All the mass was contained in the 710+106µm size fraction. The largest mass fraction was contained in the -180+150µm fraction.
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.	• No consideration of waste processes (e.g., tailings) have been made for the Project at this stage. However, similar to nearby operations tailings are not likely to be a significant factor for eventual economic extraction. • No detailed assessments of environmental impact have been conducted at this stage, however QLD Globe mapping shows that the Project is predominantly surrounded by 'Least Concern' Regional Ecosystems.

Criteria	JORC Code explanation	Commentary
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.	• No bulk density measurements have been undertaken on site. • A material density of 1.6t/m^3 was used for the Upgraded Mineral Resource Estimate. A material density of 1.6t/m^3 falls within the range of typical silica sand deposits.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (i.e., 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 drill spacing along the dune traverse ranged from confirmatory level spacing (150m-250m) to a scout level spacing (250m-400m) ending in water table or B1/basement. The level of accuracy with the surface data (LiDAR), drill spacing and interpreted geological continuity allowed two resource categories to be defined (Indicated and Inferred Mineral Resource). Importantly, a significant part of the Resource is now categorised as "Indicated". • 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.	• Internal reviews were conducted on the Mineral Resource Estimate.
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.	• It is the opinion of the Competent Person that the relative accuracy and confidence level across the reported geological intervals is adequate, given the drill density and continuity of geochemical samples. • The Resource boundary and the reported geological confidence intervals is relatively constrained based on the drill density. Further drill definition will better constrain dune sides/perimeters. • No production data is available at present as this is a Greenfields project. However, Cape Flattery Silica Mine lies in the same adjoining coastal dunes immediately to the Northeast, suggesting potential viability.

Criteria	JORC Code explanation	Commentary
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	