DIATREME Resources

ASX ANNOUNCEMENT

9 September 2025

Bulk metallurgical testwork confirms NSP product quality

- **Successful bulk metallurgical testwork confirms Northern Silica Project's low-iron, high-purity silica sand suitable for photovoltaic glass manufacture.**
- **Bulk testwork achieves high product yields (85.6%) with low impurities.**
- **Testwork validates process scalability from previous benchtop results to bulk production.**
- **Results support progression to final plant engineering and commercial agreements for North Qld project, set to help power the solar energy boom.**

Emerging silica sands developer, Diatreme Resources Limited (ASX:DRX) announces the results of recent metallurgical testwork on silica sand samples from the Northern Silica Project (NSP), located approximately 30 km north of Hope Vale in Far North Queensland. The series of testwork programs has confirmed the NSP's ability to produce a high-purity, low-iron silica sand product in line with photovoltaic market specifications, amid a continuing solar energy boom.

Diatreme's CEO, Neil McIntyre commented: *"These outstanding test work results confirm that the NSP can produce the high purity, low-iron silica required by the world's glass manufacturers. Achieving sub-100 ppm Fe_2O_3 in our product following industry standard processing techniques reinforces the project's credentials as a long-life supplier of high-grade low iron silica sand.*

"As we advance through the Pre-Feasibility Study, we are more confident than ever in the NSP's capacity to deliver a world-class, long-life silica sand operation. We will continue to fast-track our test work and engineering programs, to unlock the project's full potential and pave the way for its development."

BULK TESTWORK

To support the NSP's upcoming Pre-Feasibility Study (PFS) and Maiden Ore Reserves, a ~1 tonne composite sample was provided from the 2023 drilling program. The bulk sample was composited from an area within the Measured area of the Si2 Mineral Resource, representing part of a proposed mining area *(Figure 2, Figure 3)*. Sample selection is outlined in *Table 6* and *Figure 5*, and aimed to have equidistant sampling across the area, with every 1m interval selected from 40 drillholes within the X & Y extents of the Mineral Resource Estimate. The area sampled sites above the floor constraints (wet season groundwater maximum, and B1 sand horizon). The sample selection aligned with the likely mining method that will propose to mine the full face of the dune from top to bottom.

Bulk testwork was performed at Mineral Technology's Carrara, QLD facility, (with product tests at ALS Labs, Brisbane) which has produced a low-iron, high-purity silica sand at an overall recovery of 85.6%. This was accomplished using a conventional wet flowsheet comprising gravity separation, attrition scrubbing, up-current classification, and a horizontal rotor wet high-intensity magnetic separation (WHIMS) unit *(Figure 4).* Notably, the two-stage spiral circuit (rougher plus mid-scavenger) delivered the largest iron (Fe_2O_3) reduction, while achieving a 91.9% recovery. Subsequent process stages (attritioning/desliming, UCC, and WHIMS magnetic separation) provided further incremental iron removal.

A set of samples were delivered to the National Glass New Materials Innovation Centre in Bengbu (Bengbu Lab) in China to validate the testwork at Mineral Technologies, using the same assay methodology used by potential offtake partners. A discrepancy was observed between the ALS lab and the Bengbu lab, with both results reported in Table 1.

Stage	ALS Brisbane Fe_2O_3 ppm	Bengbu Lab Fe_2O_3 ppm	Recovery % (as % of bulk testwork feed)
Feed	*1088*	-	*100*
Spiral Product	205	159	91.9
Attritioned Product	210	180	88.1
UCC Product	180	150	85.9
WHIMS Non-Mag Product	120	110	85.6
Final Product	128	107	85.6

Table 1: Assay results comparison for ALS Brisbane and Bengbu Lab China.

	Chinese National Standard Criteria *JC/2314-2015*	***Bengbu Lab*** ***Final Product***
Fe_2O_3	≤100ppm	107 ppm
TiO_2	≤300ppm	120 ppm
Cr_2O_3	≤5ppm	1.45 ppm
0.104mm Fraction	≤5%	0.23 % under 0.106mm

Table 2: Comparison on NSP Testwork Product against Chinese PV Glass Standard.

Sieve Size (mm)	Mass %	Cumulative Mass %
<0.106	0.23	0.23
0.106	1.14	1.37
0.125	8.97	10.34
0.15	15.4	25.74
0.18	17.1	42.84
0.212	23.9	66.74
0.25	17.4	84.14
0.3	10.9	95.04
0.355	3.73	98.77
0.425	1.18	99.95
0.6	0.04	100

Table 3: Size Fraction Analysis

Figure 1: Spiral Separation stage of bulk metallurgical testwork from the Northern Silica Project.

ELECTROSTATIC SEPARATION TESTWORK

Following from the bulk testwork program at Mineral Technologies, further testwork on the NSP product was evaluated as an additional refinement step. A High Tension Roll (HTR) electrostatic separator, in combination with the IRMS, was tested on the final silica sand product. The combined HTR+IRMS process successfully met the target iron specification of 90 ppm Fe_2O_3, confirming that additional separation can further improve product purity.

Mineral Technologies undertook further benchtop testwork on the final wet plant product, with a sample passed through only an induced roll magnetic separator (IRMS), yielding a possible product at 90 ppm Fe_2O_3 with an 84.3% overall mass yield. Importantly, the dry magnetic stage on its own (IRMS-only) achieved a higher (84.3%) recovery, indicating minimal yield impact, but also indicating that HTR is not required to achieve product specification.

Stage	*ALS Brisbane* *Fe_2O_3 ppm*	*Recovery %* *(as % of bulk testwork feed)*
IRMS Product	90	84.3
HTR + IRMS Product	90	65.9

Table 4: Electrostatic and Induced Roll Magnet Separation results.

MAGNETIC PRODUCT OPTIMISATION

Results from testwork undertaken on the NSP material indicates that the magnetic separation phase is important in achieving the product quality requirements. Diatreme engaged Chinese magnetics supplier, Shandong Huate Magnet Technology to test magnetic separation equipment on NSP material.Huate's testwork on a pre-WHIMS feed sample (190ppm Fe_2O_3) used advanced vertical ring high-gradient magnetic separators in sequence. The result was a reduction in Fe_2O_3 from 190 ppm down to 89 ppm at 81.6% recovery from the bulk testwork feed, with a further test on their HTDZ Slurry Magnetic Filter achieving 86ppm Fe_2O_3 at 66.5% recovery from the bulk testwork feed.

This outcome validates the efficiency of alternative magnetic separation techniques more suited in removing iron impurities, in comparison to the WHIMS unit used in the bulk testwork. The Huate trials demonstrated that with specialised magnetic circuits, ultra-low iron levels can be achieved in the NSP's product. The success of the magnetic equipment optimisation confirms there is significant flexibility to either enhance final product quality or potentially streamline the process while still achieving sub 100 ppm Fe_2O_3 in the product, reinforcing the processing options available to the NSP.

Stage	*Huate Lab* *Fe_2O_3 ppm*	*Recovery %* *(as % of bulk testwork feed)*
1st Pass LHGC WHIMS Product	92	83.8
2nd Pass LHGC WHIMS Product	89	81.6
HTDZ Slurry Magnetic Separator Product	86	66.5

Table 5: Vertical ring high-gradient magnetic separator test work results.

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NEXT STEPS

Building on these positive results, Diatreme has sent additional material for magnetics testwork in Europe with a magnetic equipment vendor. This upcoming program is scheduled to commence in the next quarter and will focus on refining the process flowsheet and equipment selection and configuration at an industrial scale.

Spatial variability testwork will commence in Q4 2025 across the NSP deposit to test the flowsheet on samples from different zones of the deposit. This aims to ensure consistent product quality and optimise mine planning. Diatreme then plans to undertake larger scale bulk processing trials, to support the flowsheet design and provide bulk product samples to potential offtake partners. These results will be used to inform the selection and configuration of magnetic separation equipment in the flowsheet used in future feasibility studies.

The above forward work programs form an integral part of the NSP's future Feasibility Studies and will underpin continuing engagement with potential offtake partners. Data from all testwork programs will be used to finalise product specifications, process engineering and capital expenditure estimates.

This strategy ensures that the NSP's development is aligned with end user requirements and market expectations. By de-risking the processing flowsheet and demonstrating consistent product quality at scale, Diatreme aims to secure binding offtake agreements prior to the Final Investment Decision, thereby strengthening the project's commercial foundations.

In June 2025, the NSP was awarded Major Project Status by the Federal Government's Major Projects Facilitation Agency, reflecting its alignment with the Government's critical minerals strategy and the opportunity it provides for significant economic growth for North Queensland. Diatreme has an estimated global silica sand resource exceeding 500 million tonnes across the Cape Flattery and Cape Bedford areas of North Queensland.

	Collar Information					Selected Interval		Total Depth (m)
HoleID	Easting	Northing	Elevation	Azimuth	Dip	From	To	
SI21002	309383	8339831	60.8	0°	-90°	1	34	39
SI21003	309562	8339731	60.3	0°	-90°	1	33	36
SI21004	309728	8339590	51.6	0°	-90°	1	15	27
SI21005	309875	8339460	50.7	0°	-90°	1	13	27
SI21006	310036	8339317	48.4	0°	-90°	1	23	24
SI21013	310392	8338672	65.8	0°	-90°	1	36	40
SI21014	310239	8338826	56.2	0°	-90°	1	32	33
SI21015	310086	8338932	58.1	0°	-90°	1	32	34
SI21016	309940	8339096	53	0°	-90°	1	28	30
SI21017	309811	8339240	56.4	0°	-90°	1	32	33
SI21018	309660	8339370	59.7	0°	-90°	1	35	42
SI21019	309541	8339515	58.2	0°	-90°	1	35	36
SI21020	309367	8339650	60	0°	-90°	1	36	36
SI21021	309253	8339760	69.3	0°	-90°	1	41	45
SI21023	309216	8339591	63.3	0°	-90°	1	29	33
SI21025	309035	8339674	58.8	0°	-90°	1	20	21
SI21028	308992	8339552	55.2	0°	-90°	1	14	30
SI21029	309084	8339495	60.3	0°	-90°	1	17	21
SI21030	309205	8339360	59	0°	-90°	1	16	21
SI21031	309323	8339223	49	0°	-90°	1	7	9
SI21032	309504	8339093	55.3	0°	-90°	1	18	24
SI21033	309674	8338969	59.3	0°	-90°	1	27	32
SI21034	309776	8338808	61	0°	-90°	1	30	30
SI21035	309851	8338897	70.5	0°	-90°	1	42	45
SI21036	309562	8339158	56	0°	-90°	1	25	27
SI21038	309438	8339305	56.6	0°	-90°	1	23	27
SI21040	309303	8339452	63.2	0°	-90°	1	27	30
SI21042	309887	8338756	62.9	0°	-90°	1	30	33
SI21044	309909	8338660	58.9	0°	-90°	1	21	24
SI21045	310044	8338489	56.1	0°	-90°	1	20	21
SI21046	310171	8338336	52.8	0°	-90°	1	21	24
SI21047	310321	8338217	49	0°	-90°	1	12	15
SI21048	310386	8338146	49	0°	-90°	1	13	15
SI21049	310439	8338099	47.9	0°	-90°	1	11	15
SI21050	309942	8338869	62.2	0°	-90°	1	34	39
SI21051	310174	8338673	53.5	0°	-90°	1	21	24
SI21052	310327	8338533	40.3	0°	-90°	1	7	12
SI21053	310455	8338390	38.2	0°	-90°	1	7	18
SI21054	310529	8338324	33.3	0°	-90°	1	3	12
SI21072	309014	8339428	43.9	0°	-90°	1	8	9

Table 6: Table of Material Drillholes and Composite Selection Intervals.

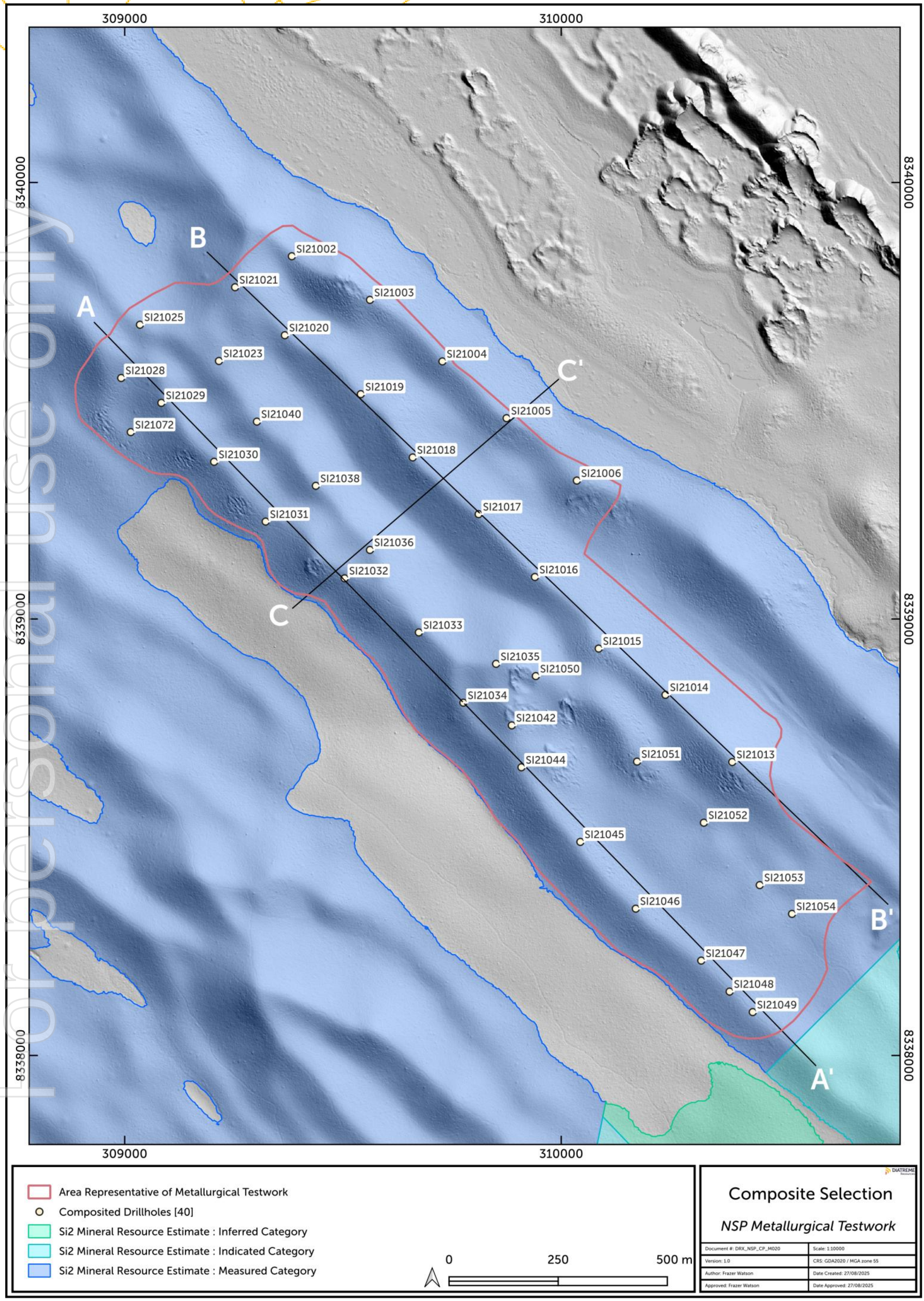

Figure 2: Drillholes, and Sections on Plan.

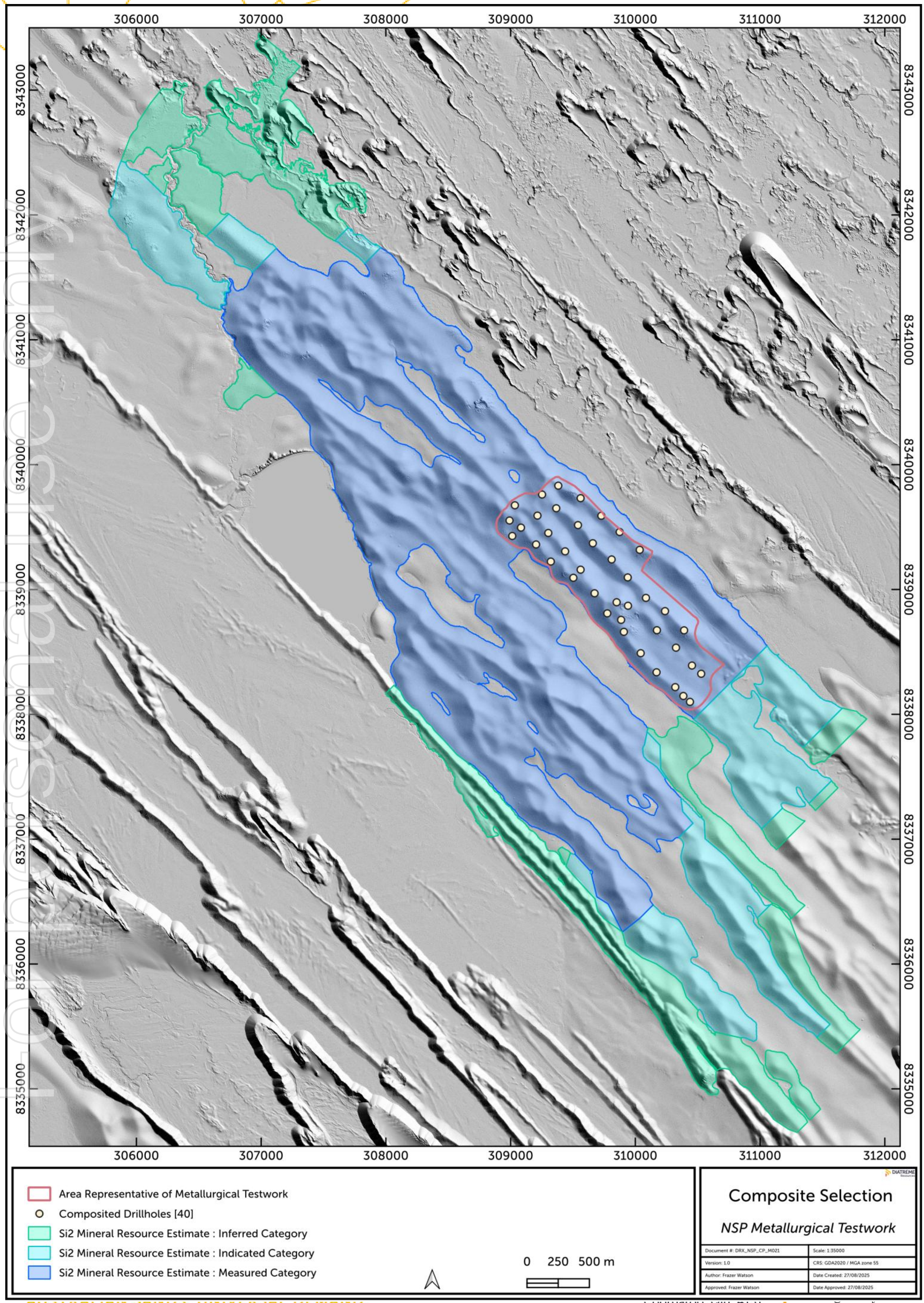

Figure 3: Location of Samples with respect to broader Si2 Deposit.

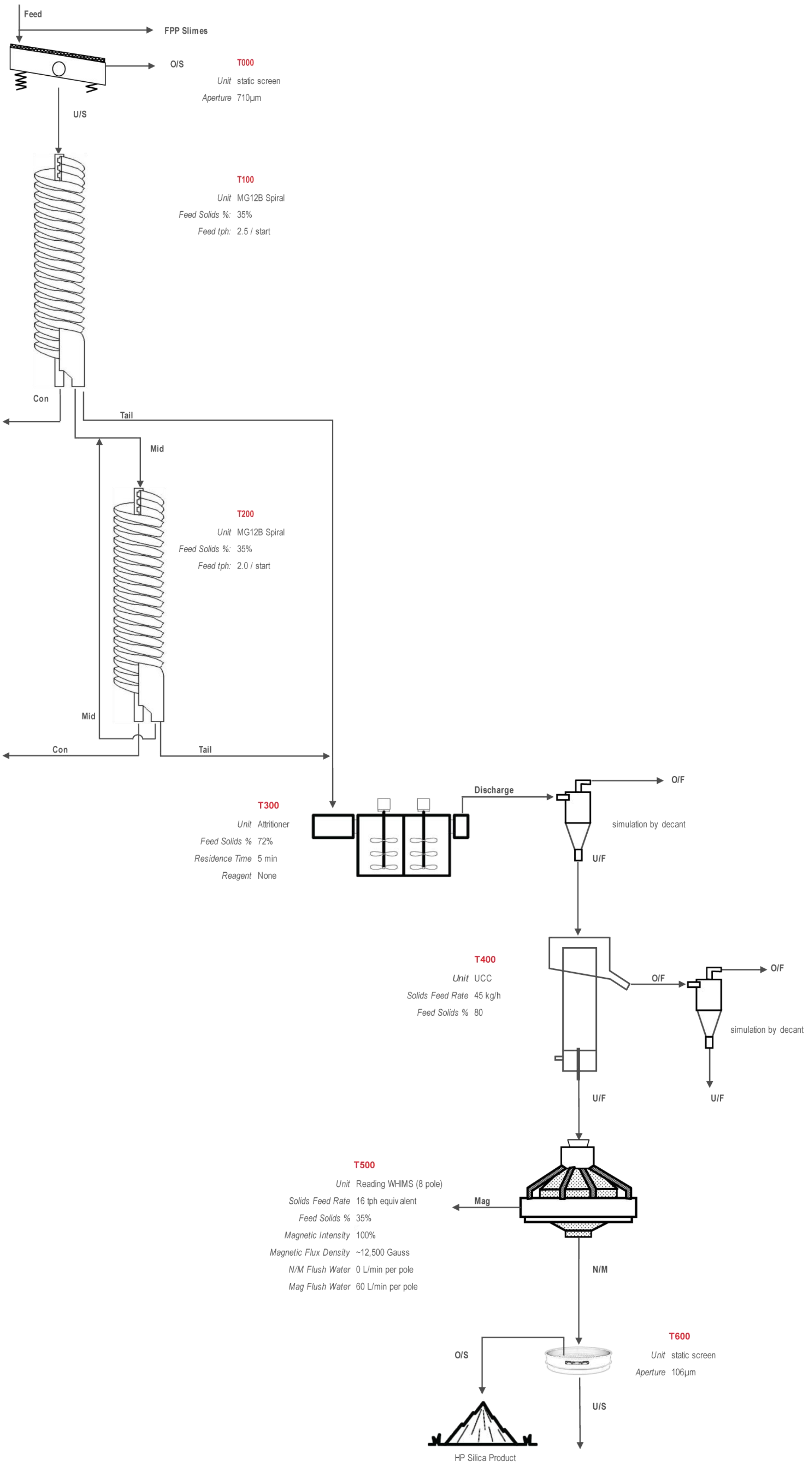

Figure 4: Testwork Flow Diagram of work conducted at Mineral Technologies.

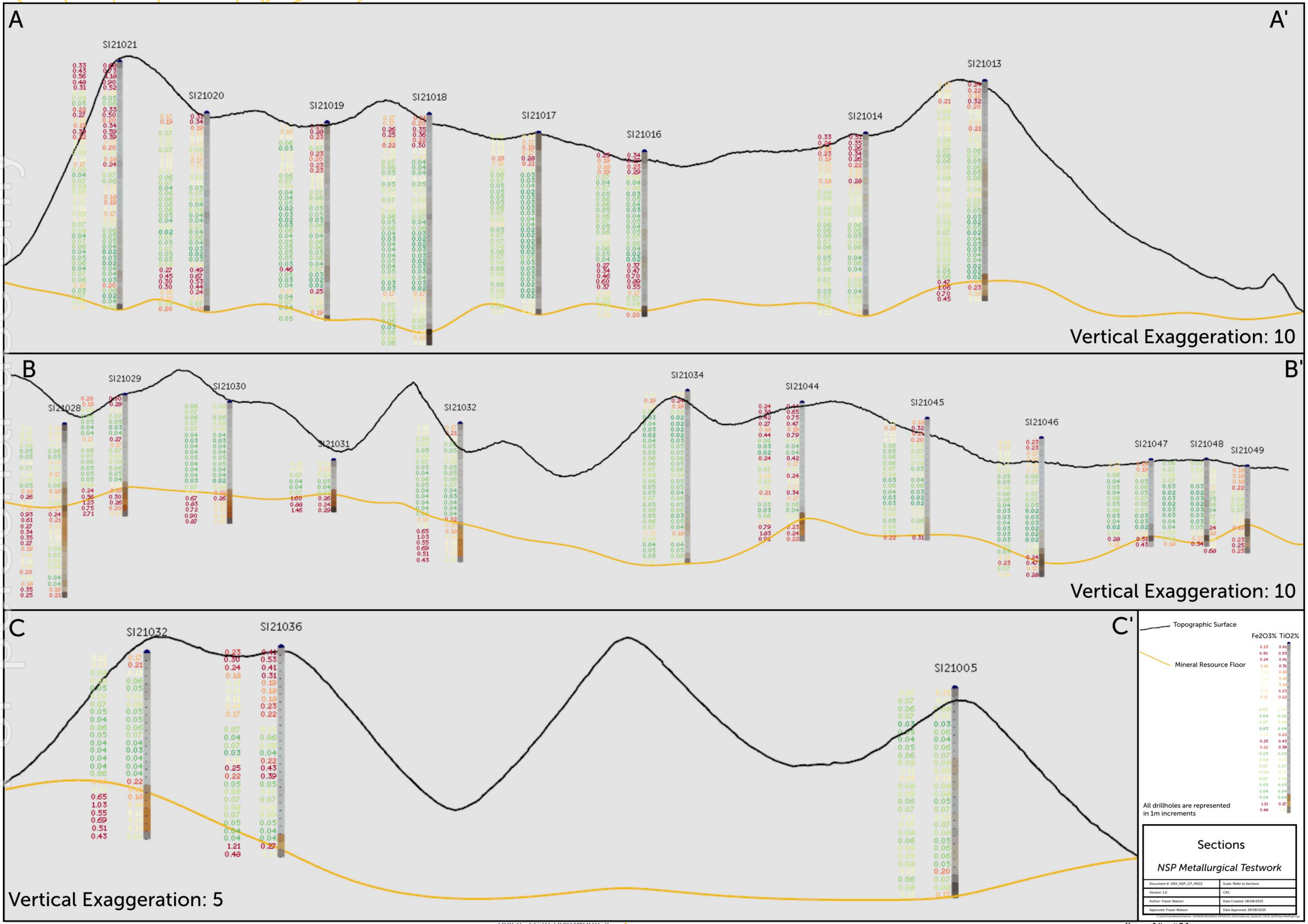

Figure 5: Cross Sections indicating Mineralised Interval Selections.

This announcement is authorised for release by the Board.

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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 Northern Silica Project (NSP) and Galalar Silica Sand Project in Far North Queensland, located adjacent to the world's biggest silica sand mine at Cape Flattery, together with the Cape Flattery Silica Project. Both the Northern Silica and Cape Flattery projects have been designated "Coordinated Projects" by the Queensland Government and are strategically located near the export focused Cape Flattery Port.

The NSP has been designated a Major Project by the federal government, currently the only such **Major Project declared for Queensland**. This reflects the significance of the low iron, high purity silica sand project in the context of critical minerals, both for Queensland and Australia.

In Western Australia's Eucla Basin, Diatreme's Cyclone Zircon Project is considered one of a handful of major zircon-rich discoveries of the past decade. Diatreme also owns 100% of the Clermont Copper-Gold Project in central Queensland.

Global material solutions group Sibelco is Diatreme's development partner on its silica projects portfolio. Sibelco has invested circa $49 million into both the silica sands project and Diatreme at the corporate level.

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

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

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

ASX releases referenced for this release:

- 23 June 2025 Mineral Resource Estimate upgrade paves way for NSP PFS
- 17 June 2025 Northern Silica Project awarded Major Project Status
- 20 March 2025 2024 Exploration Program results for Northern Silica Project

Diatreme Resources Limited confirms that it is not aware of any new information or data that materially affects the Mineral Resource Estimates referred to in this release. The form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements, and all material assumptions and technical parameters underpinning those estimates continue to apply and have not materially changed.

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COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Mr Frazer Watson, Technical Services Lead, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy, and the Australian Institute of Geoscientists. Mr Watson takes responsibility for the sampling and drilling methodologies within this announcement. 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 announcement that relates to Exploration Results (Metallurgical Testwork) is based on, and fairly represents, information and supporting documentation reviewed by Mr Phillip McMurtrie, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr McMurtrie takes responsibility for the metallurgical testwork reported within this announcement. Mr McMurtrie is a mining engineer and a consultant to Diatreme Resources Limited. Mr McMurtrie 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 McMurtrie consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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APPENDIX A: JORC TABLE 1

SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	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.	• Aircore drilling samples of dune sands were collected in 1m intervals (~2kg) after passing through a single-tiered (50/50) riffle splitter. The reserve 2kg sample was used for sub-sampling to composite into a 1t bulk sample. • The determination of the mineralised horizon is all samples in the A2 horizon of the dune sands, which are typically clean quartzose sands. • Mr Watson considers the quality of the sampling method to be fit for the deposit style, and the stage of exploration, given the homogenous nature of this silica sand deposit.
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).	• AC drilling was undertaken by a track mounted drill rig with a 3" blade bit, and a rod length of 3m. • Mr Watson considers the quality of the sampling method to be fit for the deposit style, as mineral sands are easily contaminated, or recoveries can be poor and would not be considered representative using other drilling methods.

Criteria	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.	• At the drill rig, and in the absence of systematic weighing, sample recovery was visually monitored on the rig for a consistent sample size.
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 grain size, sphericity, roundness, moisture content, lithology, and colour recorded. • Photography is captured on a chip tray basis firstly at the drill rig, and then later on a chip tray compartment by compartment basis when samples have dried. • Sample photography was performed in a controlled setting using Imago software with a Canon EOS R5 and a Canon 24-50mm lens, a hexadecimal colour value is extracted from the imagery, and the RGB values are derived through python scripts. Colour photography is verified against a Calibrite ColorChecker. • Mr Watson considers the quality of logging is sufficient for this stage of exploration.
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.	• AC samples were riffle split (50/50, single tier) after the cyclone, and placed in sample bags representing 1m intervals. • In mid 2024, several months after drilling was completed, a nominal 1kg equal mass contributions (determined by direct mass) of 887 samples were composited to produce a ~1t bulk composite sample. Sampling was conducted with plastic scoops and weighed before being placed in a clean plastic drum, and sealed. Scoops were cleaned between sampling stages.

Criteria	Explanation	Commentary
	• 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.	• Given the homogeneity of the dune sands, a 1kg sample is considered by the Competent Persons to be representative of the 1m interval sampled.
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.	• Three laboratories were used to undertake the analysis on the 1t bulk. ○ ALS Brisbane used ME-PKG85 on product quality samples, and ME-XRF26 on lower quality samples. ME-PKG85 and ME-XRF26 are considered a total digest. The ME-PKG85 method generally performed well on the provided CRM and field duplicates. ○ National Glass New Materials Innovation Center (NGNMIC) in Bengbu undertook assay in accordance with National Instrument JC/T 753-2022, and GB/T 3284-2015. The assay values for the field duplicates assayed at the NGNMIC were within acceptable levels. The tests are the Bengbu lab are considered to be a total digest. ○ The Huate tests were assayed at the Hengbiao Inspection & Testing Co Ltd, which is CNAS accredited, and assays are conducted in accordance with National Instrument GB/T 14506.32-2019, which is considered a total digest. CRM performed at Huate's lab returned results within acceptable tolerance. ○ The Competent Persons determine that the results from all labs establish an acceptable level of accuracy and precision.
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.	• Intersections have been verified with alternative company personnel. • Data entry procedures, data verification, and data storage is all managed in accordance with Diatreme Procedures. Where this work is managed by contractors, their relevant procedures are followed. • No adjustment to assay data is performed, apart from standard LOI corrections.

DIATREME Resources

Criteria	Explanation	Commentary
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 drillholes used to composite the bulk sample are located by Differential GPS, in GDA2020 / MGA Zone 55, and tied to a 1m grid Digital Elevation Model, with a 0.1m relative accuracy (based off 10points/m2).
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.	• Selection of drillholes used for the composite were nominally equidistant apart (~200m) along dune crests, with each 1m interval selected in each drillhole (that intersected the Mineral Resource Estimate).
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.	• Podsol profiles (inference of the B1 illuviated horizon) in aeolian sands are considered a vertical gradient, influenced by gravity, terminating at a nominally horizontal floor with localised undulations. The vertical dimension is derived from topographic elevation modelling and interpreted base of sand. Orientation bias is not considered material in this context.
Sample security	• The measures taken to ensure sample security.	• Samples are stored in locked premises at all times, transport Chain of Custody forms are retained by Diatreme.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No external audits have been conducted.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	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 Silica Project is located adjacent to the coastline in Far North Queensland, approximately 53km north of Cooktown. The project is adjacent to the south 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. • Most of the EPM is located on one land title, Lot 35/SP232620, a freehold lot of 110,000 hectares. • EPM 17795 is owned by Northern Silica Pty Ltd, subsidiary of the Joint Venture Cape Silica Holdings Pty Ltd between Diatreme Resources 73.2% and Sibelco 26.8%. • 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, EPM 17795 was renewed for an additional 5 years. As of August 2025, the tenure is in good standing. • EPM 17795 is an extensive EPM comprising 147 continuous subblocks (approximately 480km2) covering the majority of the Cape Flattery-Cape Bedford Quaternary dune field complex. • EPM 17795 is considered a part of a broader exploration project by the Queensland Government's Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development. The other tenements in this project include EPM 27212, EPM 27265, EPM 27430, EPM 25734.
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 active parabolic dunes of clean white

Criteria	Explanation	Commentary
		silica sand. Potential for economic concentrations of heavy mineral sand also exists throughout the lower dune elevation and older sand areas. • No exploration was conducted on the Si2 dune by other parties, prior to it's discovery in November 2021. • As there are no assay certificates for this historic data, and the locations of which are dubious, the data is considered qualitative.
Geology	• Deposit type, geological setting and style of mineralisation.	• The Northern Silica Project is comprised of unlithified aeolian 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 thought to be due to repeated eluviation and illuviation events on immobilised dune systems comprised of an existing quartzose sand source. Deleterious metals are thought to have been eluviated by organic acids, transported vertically down through the dunes and illuviated either by binding to clay rich horizons, or in the water table.
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 Table of Material Drill Holes used to select the bulk sample is included in the body 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.	• The final product sample assayed at ALS is reported as the mean average of several repeat samples, with the lowest sample reporting at 110ppm Fe_2O_3, and the highest sample reporting at 140ppm Fe_2O_3

DIATREME Resources

Criteria	Explanation	Commentary
	• 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 spiral product from the Bengbu lab is reported as a weighted average from the results of the rougher and the mids retreat spirals.
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 (e.g., 'down hole length, true width not known').	• The samples composited are considered to be the full width of the mineralised interval, and are consistent with the June 2025 Si2 Mineral Resource Estimate.
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.	• Sections and Plans are included in the body of the announcement.
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.	• The final product sample assayed at ALS is reported as the mean average of several repeat samples, with the lowest sample reporting at 110ppm Fe_2O_3, and the highest sample reporting at 140ppm Fe_2O_3. • The Competent Persons determine the reporting of both results from Bengbu & ALS to be balanced reporting.
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.	• All yields & recoveries are reported on a dry tonnes basis. • Details on the Mineral Technologies metallurgical tests: ○ 970kg of material was screened to remove +0.71mm oversize material ○ Followed by 2 stages of gravity separation using MB12B spirals. The rougher spiral stage operated at 2.5t/h and 35%(w/w)solids. The middling stream, was processed on the second stage of spirals, at 2.0t/h and 35%(w/w) solids. ○ The spiral product was processed through high energy attritioning, at 72% solids, and a 5 minute residence time.

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Criteria	Explanation	Commentary
		○ The attritioned feed was then passed through an up-current classifier operating at 45kg/h, with feed solids at 80%. ○ The 8 pole WHIMS was fed at 16t/h equivalent, with 35% feed solids, and a 100% magnetic intensity of ~12500 gauss, using only mag flush water. ○ The non/mag fraction was then screened for +0.106mm fraction, which was taken as the final product. ○ For further tests, the final product was dried, and then passed through a High Tension Roll (electrostatic separator), and/or an Induced Roll Magnetic Separator • Details on the Huate metallurgical tests: ○ A 10kg reserve of the product stream from the up-current classifier from the Mineral Technologies testwork was sent to the Shandong Huate processed through a series of 2 vertical LHGC units, operating with a magnetic field strength of 1.4t, before being passed through a HTDZ magnetic slurry separator, with a field strength of 1.4t
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.	• Further magnetic optimisation testwork will be conducted in Europe in late 2025. • Further benchtop testwork will be conducted across the deposit, prior to another 1 or 2 large bulk tests being conducted in 2026.