METALLICA MINERALS LIMITED
ABN: 45 076 696 092
ASX Code: MLM

ASX RELEASE

18 APRIL 2018

HIGH PURITY SILICA SANDS AT CAPE FLATTERY

HIGHLIGHTS

- **Maiden sampling program at Cape Flattery Project, Far North Queensland, confirms presence of high purity silica sands**
- **Sampling identifies high purity silica sands with samples of greater than 99% silica sand (SiO_2)**
- **Exploration target of 20-100 million tonnes across three identified areas**
- **Located adjacent to Mitsubishi's Cape Flattery mine, the world's single largest source of silica sand**

Metallica Minerals Limited (**ASX:MLM**) (**Metallica**, or the **Company**) is pleased to advise that a low-cost maiden sampling program at its 100%-owned Cape Flattery Silica Sands project (**CFSS**) in far north Queensland has confirmed the presence of high purity silica sands.

CFSS is located on the coast near Cape Flattery in far north Queensland and is adjacent to Mitsubishi's Cape Flattery Silica Sands mine, the world's largest silica sands mine. Silica sands are used in a range of industrial applications, including as a key glass-making ingredient.

The CFSS sampling program identified three target areas with silica oxide (SiO_2) percentages of greater than 99%. These target areas form the basis for the Exploration Target developed by Metallica of 20-100 million tonnes of high purity silica sands, with insitu quality ranging between 96.9% and 99.6% SiO_2 (see Table 1).

The Company plans to develop an exploration program to test the continuity of the silica sand in the Exploration Targets which are adjacent to the Mitsubishi mining areas as it examines options for unlocking value from the asset.

Cautionary Statement: An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

High purity silica sands are becoming more sought after, with the global market growing at a compound annual growth rate (CAGR) of around 6% between 2010 and 2017, according to industry research firm IMARC Group. In 2017, a total of 188 million tonnes of silica sand was produced globally.

The growth has been driven by silica sand's applications across a broad range of industries including glass-making, foundry casting, water filtration, chemicals and metals, along with the hydraulic fracturing process and an increasing amount of hi-tech products including solar panels. For example,

the global glass-making industry, one of the major consumers of high purity silica, has experienced significant growth recently as a result of demand from the construction and automotive industries.

IMARC forecasts have demand for silica sands increasing at a CAGR of 7.2% through to 2022, with annual revenues reaching US$9.6 billion.

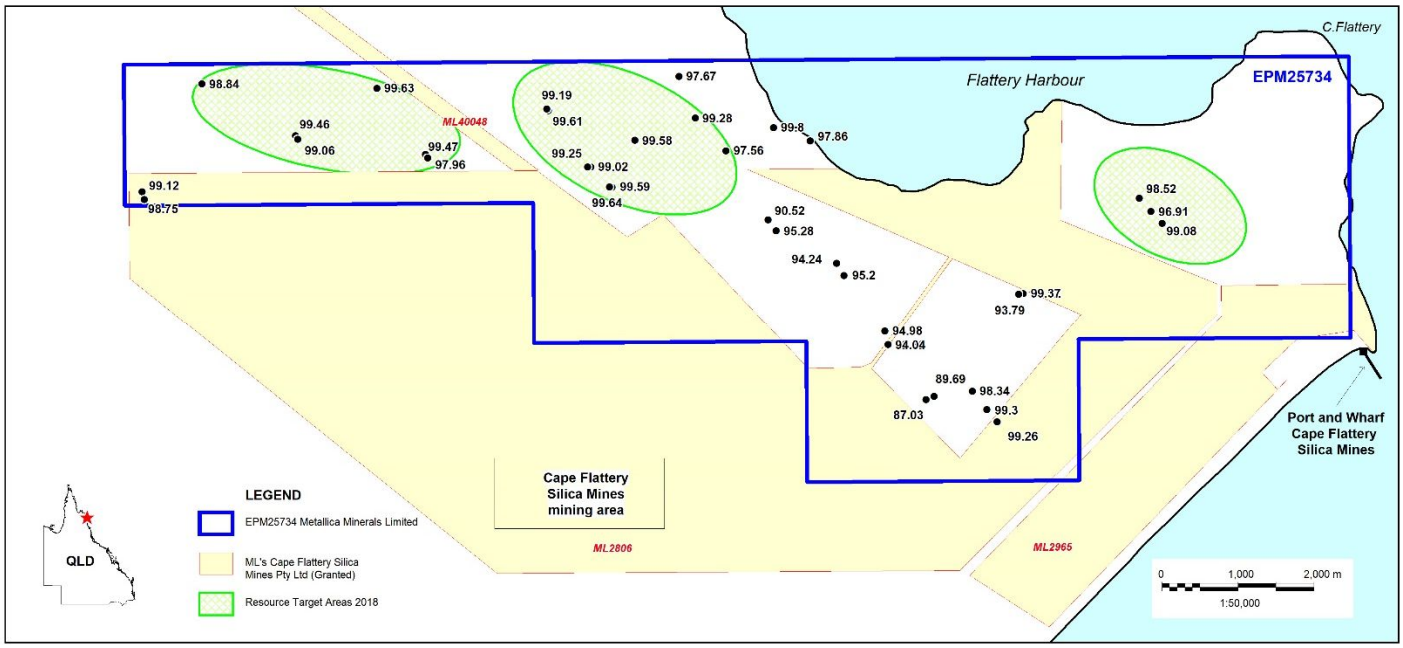


Figure 1 - Sample locations and Exploration Target Areas

Metallica Managing Director, Mr Simon Slesarewich said:

"The Company is very pleased with results of the sampling program, which have confirmed the presence of high grade silica sand, similar to that mined by Mitsubishi in the area since 1967. Our intention is to progress the CFSS with low-cost exploration while maintaining as our priority the development of the Urquhart Bauxite Project, which is also located in Far North Queensland."

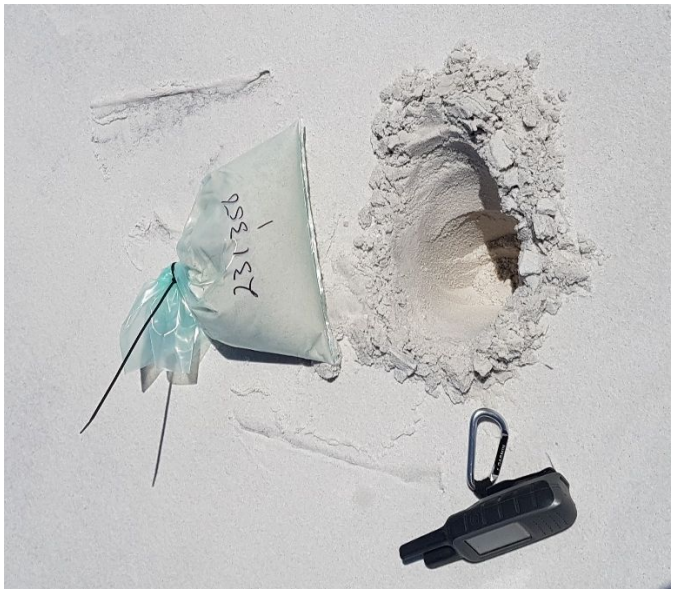


Figure 2 – Auger Sample

Figure 3 – Process of taking an Auger Sample

Sample Number	Sample type	Easting (AMG)	Northing (AMG)	SiO2 (%)	Fe2O3 (%)	TiO2 (%)
231352	Auger	959638	8342207	99.28	0.07	0.15
231353	Grab	954356	8342113	99.46	0.06	0.12
231354	Auger	954382	8342067	99.06	0.08	0.19
231355	Grab	959435	8342756	97.67	0.3	0.26
231356	Grab	952309	8341431	99.12	0.08	0.14
231357	Grab	953136	8342827	98.84	0.04	0.09
231358	Grab	952338	8341330	98.75	0.07	0.14
231359	Auger	963381	8338277	99.3	0.07	0.13
231360	Auger	963515	8338110	99.26	0.09	0.13
231361	Auger	963197	8338520	98.34	0.11	0.18
231362	Auger	962585	8338426	87.03	0.41	0.78
231363	Auger	962691	8338467	89.69	0.65	0.63
231364	Auger	965762	8340665	99.08	0.13	0.21
231365	Auger	965617	8340824	96.91	0.13	0.2
231366	Auger	965469	8341003	98.52	0.09	0.17
231367	Auger	963903	8339793	99.12	0.03	0.07
231368	Auger	963903	8339793	93.79	0.1	0.23
231367b	Auger	963844	8339789	99.37	0.05	0.08
231370	Auger	962102	8339164	92.82	1.5	0.25
231371	Auger	962103	8339163	94.04	0.62	0.27
231372	Auger	962065	8339340	94.98	0.93	0.21
231373	Auger	960029	8341767	97.56	0.1	0.19
231374	Auger	957701	8342353	99.61	0.02	0.03
231375	Grab	957678	8342378	99.19	0.02	0.04
231376	Auger	960665	8342055	99.8	0.08	0.17
231377	Auger	958243	8341601	99.02	0.02	0.04
231378	Grab	958200	8341602	99.25	0.03	0.05
231379	Auger	961147	8341866	97.86	0.12	0.43
231380	Auger	960562	8340848	90.52	1.08	0.28
231381	Auger	960666	8340703	95.28	0.45	0.23
231382	Auger	958516	8341329	99.59	0.04	0.09
231383	Grab	958480	8341335	99.64	0.05	0.08
231384	Grab	956062	8341826	99.47	0.1	0.24
231385	Grab	956090	8341776	97.96	0.29	0.72
231386	Grab	955444	8342706	99.63	0.02	0.07
231387	Grab	958833	8341935	99.58	0.01	0.03
231388	Auger	961546	8340094	95.2	0.68	0.19
231389	Auger	961450	8340257	94.24	0.58	0.19

Table 1 - Sampling results

Silica sand deposits fringe the Queensland coastline as Pleistocene to Holocene coastal deposits that extend up to 12km inland and average 25-30m in thickness. Large sand masses form as high transgressive or parabolic dunes, as beach ridge barriers or as tidal delta sands.

The Cape Flattery dune field is extensive, covering over 100km^2. The Quaternary dune field occupies a low coastal plain, with older sandstones of the Laura Basin and Hodgkinson Basin bounding its western edge and forming prominent outliers and headlands. The dune field consists predominantly of white, active, transgressive parabolic and elongate parabolic dunes, and rounded degraded dunes stabilised by vegetation, within a low lying inter-dune sandplain interspersed with dune lakes and swamps. The elongate parabolic dunes have a nose that may reach 90m high, with trailing arms / ridges parallel to the prevailing south-easterly winds.

The dunes represent a source of high quality silica sand, as deep leaching of the sand masses has formed a podzolic soil profile with a thick A2 horizon of white silica sand up to 40m thick. The sand has been well sorted by aeolian processes.

-ENDS-

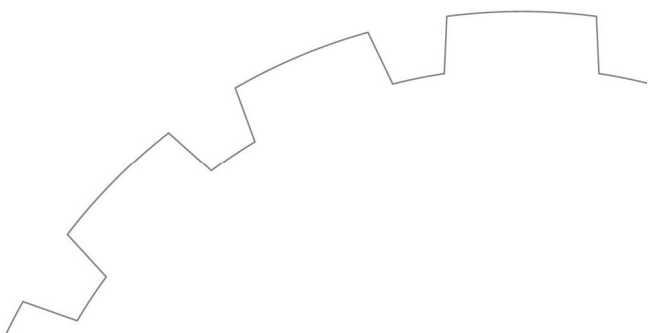
For more information please contact:-

Metallica Minerals Ltd:
Simon Slesarewich
Managing Director
Phone: + 61 7 3249 3000
admin@metallicaminerals.com.au

Media Enquiries:
Luke Forrestal
Media + Capital Partners
Phone: + 61 411 479 144
luke.forrestal@mcpartners.com.au

Competent Person's Statement

The information in this report that relates to the Exploration Results and Targets was undertaken by Mr Neil Mackenzie-Forbes, who is a Member of the Australian Institute of Geoscientist and is a Consulting Geologist employed by Sebrof Projects Pty Ltd. Mr Neil Mackenzie-Forbes has in excess of 20 years mining and exploration experience in Australia with major mining and junior exploration companies. Mr Mackenzie-Forbes has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Neil Mackenzie-Forbes consents to the inclusion of this information in the form and context in which it appears in this release/report.



Appendix A - JORC CODE, 2012 EDITION – TABLE 1 DESCRIPTIONS

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual	• Preliminary sampling of high quality low contaminant silica sand occurrences at Cape Flattery was completed. • The program was designed to collect samples for initial analysis to determine SiO_2 and iron and titanium oxide contamination percentages. • Sampling was conducted via two methods depending upon the nature of the sand dune and outcrop. • Where vegetation was present, a 50mm hand auger was used to collect samples 300mm below the surface soil layer. • Where sand was exposed in a windblown sand dune, a grab sample with a scoop was collected. • Sample were submitted to commercial laboratory for drying, splitting (if required), pulverisation in a tungsten carbide bowl, and XRF analysis • Sampling techniques are mineral sands "industry standard' for dry beach sands with low levels of induration and slime.

Criteria	JORC Code explanation	Commentary
	commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• As the targeted mineralisation is silica sand, geological logging of the material is a primary method for identifying mineralisation
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• Sampling utilized a hand held sand auger of 50mm diameter to collect samples below the soil horizon • Augering generally collected a sample between 300 and 600mm depth.
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.	• Sand augering was used to collect a fresh sample below the soil horizon and sand samples was retrieved from the sand auger by spilling onto clean plastic sheet. • The plastic sheet ensured 100% recovery and prevents spillage and contamination. • The sampling is preliminary and sampling bias was not considered and expected to be negligible. • At this preliminary stage, no relationship is evident between sample recovery and grade
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Sand samples were geologically logged recording lithology, colour, hardness, grain size and induration. • Geological and geotechnical logging was not conducted to support resource estimation, it is preliminary in scope. • Logging was qualitative in nature and based on observation by an experienced geologist.
Sub-sampling	• If core, whether cut or sawn and whether quarter, half or all core taken.	• No sub-sampling was completed, all samples were submitted for sample preparation whole.

Criteria	JORC Code explanation	Commentary
techniques and sample preparation	• 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.	• Sample size is considered appropriate for the material sampled. • Where topsoil was present, no sampling was conducted within the top 300mm from surface as that horizon will be stockpiled for revegetation in any potential future mining operation.
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.	• Sampling and analysis was preliminary in nature and designed to collect data to determine the sand quality and if future exploration is warranted. • Samples were submitted to ALS Townsville, where they were dried, weighed and split. • Analysis was undertaken by ALS Brisbane utilizing a Tungsten Carbide pulverization, ME-XRF26 (whole rock by Fusion/XRF) and ME-GRA05. • Due to the preliminary nature of the program no blanks, standards or duplicates were analysed.
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.	• Sampling is preliminary and the results are used to confirm the existence of silica sand and used to design an exploration program to better quantify silica sand quantity and quality. • All data captured and stored in both hard copy and electronic format

Criteria	JORC Code explanation	Commentary
	• Discuss any adjustment 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 sample locationswere surveyed using a handheld GPS and accurate to within ±5m. • UTM coordinates, Zone 55L, GDA94 datum.
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.	• Preliminary sampling pattern was designed to test the Target area generated using aerial photography. • All 6 Target areas were tested in at least one location. • Additional sampling was completed across the tenement where access was available. • Additional sampling targeted areas of sand dune and large gaps in the preliminary sampling pattern
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.	• Sample orientation wasn't a consideration for this preliminary sampling program. • The dune field has ridges dominantly trending 320° - 330°. .
Sample security	• The measures taken to ensure sample security.	• Samples were placed into helicopter when collected for transport back to Cooktown. • On return to Cooktown, samples were transferred to a light vehicle (LV) where samples were sorted and placed into numbered plastic poly-weave bags and secured inside the LV. • The samples were transported to ALS Laboratory in Townsville in the LV were they were delivered to ALS sample prep staff.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Due to the preliminary nature, no review or audits have been completed of the sampling techniques and data.

Section 2 Reporting of Exploration Results

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

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 tenement is known as EPM 25734 "Cape Flattery" and is located north of the regional town of Cooktown in Far North Queensland. • The tenement is held 100% by Oresome Australia Pty Ltd which is a wholly owned subsidiary of Metallica Minerals Ltd • The EPM encircles the northern boundaries of the Established Mining Leases of Cape Flattery Mineral Sands project at Cape Flattery. • Due to the square shape of sub blocks, portions of some blocks extend off-shore and overlap Category A environmentally sensitive areas. • All mineral exploration will be on-shore.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The tenement has been previously explored with the last phase of exploration completed in the 1980s. • Historical exploration data is limited as the nearby Mining Lease areas and as such kept out of the public domain whilst the Mining Leases are granted.
Geology	• Deposit type, geological setting and style of mineralisation.	• The silica sands are part of a Quaternary dune field occupying a low coastal plain, with older sandstones of the Laura Basin

Criteria	JORC Code explanation	Commentary
		and Hodgkinson Basin bounding its western edge and forming prominent outliers and headlands. • The dune field consists predominantly of white, active, transgressive parabolic and elongate parabolic dunes, and rounded degraded dunes stabilised by vegetation. • Interdune sandplain interspersed with dune lakes and swamps. The elongate parabolic dunes have a nose that may reach 90m high, with trailing arms / ridges parallel to the prevailing south-easterly winds. • The dunes represent a source of high quality silica sand, as deep leaching of the sand masses has formed a podzolic soil profile with a thick horizon of white silica sand locally up to 40m thick. • The sand has been well sorted by aeolian processes and the grain size distribution is well sorted.
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not	• Sampling location and results are tabulated in the text (Table 1) detailing sample coordinates. • All auger holes were drilled vertically (-90°) • Auger holes were samples below 300mm depth to sample the horizon below the top soil. • The adjacent sand mine routinely removes and stockpiles 300mm of topsoil for later re-use for rehabilitation and not included in resource estimates.

Criteria	JORC Code explanation	Commentary
	detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Data is reported as received from the laboratory no averaging or other aggregations
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• The preliminary nature of sampling infers no relationship between mineralisation and sample interval. • Sampling is to determine if sand quality has potential mineralisation quality.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• A plan showing sample location is provided relative to the EPM. • There is insufficient data to generate sections.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high	• All exploration results are reported and the preliminary nature of the sampling infers no grade or mineralisation zones.

Criteria	JORC Code explanation	Commentary
	grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All exploration results received have been reported.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Geological observations are consistent with aeolian dune mineralisation • No bulk density measurements have been undertaken. • The mineralisation is unconsolidated sand. • There are no known deleterious substances at this time. • No metallurgical test work is planned at this preliminary stage.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Initial drilling to test for depth and lateral extensions of potential mineralisation is currently being planned.