

# STOCKYARD PROJECT

## POSITIVE TEST WORK RESULTS

### Highlights

- Land Access Agreements provide sample from private farmland across Stockyard Project
- Initial test work undertaken by Intertek Genalysis Perth shows the raw white sand samples taken from ground within the Stockyard Project has exceptional insitu product characteristics and upgrades significantly based on only wet screening
  - Ultra-premium insitu silica dioxide grade (SiO<sub>2</sub>) reported at 99.9% for the +150 to -600 micron (µm) size range
  - Insitu impurity profile was also reported as very low by regional standards with Fe<sub>2</sub>O<sub>3</sub> averaging 199ppm and Al<sub>2</sub>O<sub>3</sub> averaging 462ppm for the key sizing ranges
- Bodes well for a simple mobile processing route producing a high value DSO product
- Beneficiation testwork to be undertaken to determine product characteristics from utilising a combination of physical separation methods including wet/dry screening cyclone and spirals
- Raw insitu product samples have been shipped to potential offtake party in China

Industrial Minerals Ltd (ASX: **IND** or the **Company**) is pleased to announce the receipt of initial size fraction analysis from a 200kg bulk sample taken from private farmland within the Stockyard Project. The bulk sample material was taken from an exposed cleared white sand area identified following the assessment of satellite imagery, historical soil analysis data and on-farm records.

Size Fraction	Al <sub>2</sub> O <sub>3</sub> ppm	Fe <sub>2</sub> O <sub>3</sub> ppm	SiO <sub>2</sub> %	TiO <sub>2</sub> ppm	LOI-1000°C %	Passing %
-2.36+1.18mm	722	390	99.6	622	0.39	0.7
-1.18mm+600µm	390	263	99.9	573	0.09	5.5
-600+300 µm	376	152	99.9	768	0.08	22.6
-300+150 µm	503	221	99.9	1,440	0.07	47.6
-150 µm	1,228	979	99.8	5,198	0.16	23.6

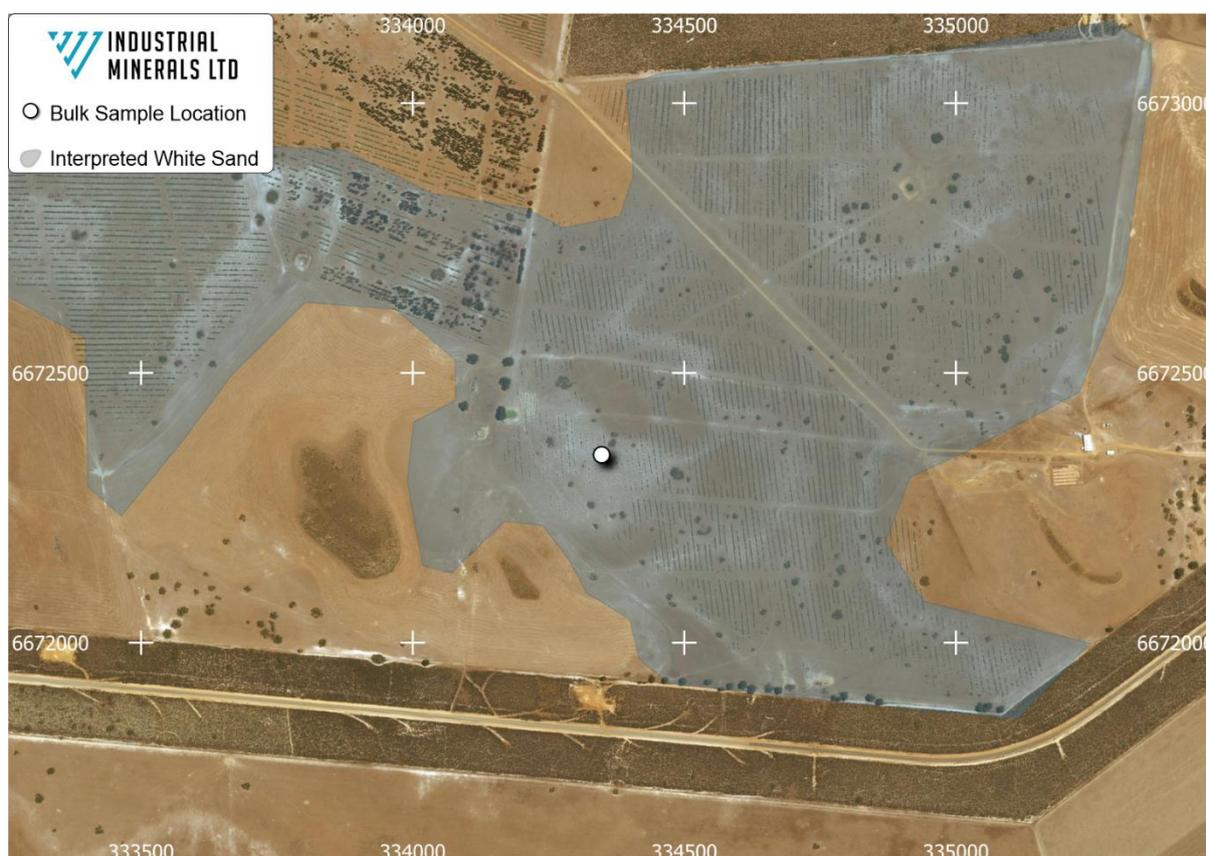
**Table 1: Summary size fraction analysis by Intertek Genalysis**

Intertek Genalysis in Perth were engaged to conduct Particle Size Elemental Analysis of the raw sample. The very positive initial results indicate that the key +150 to -600 µm size range consists of very high SiO<sub>2</sub> content of 99.9% and low impurities, allowing IND to investigate the direct shipping ore (DSO) potential of the white sand. Importantly, it is highly likely that the white sands will be amendable to simple/low-cost off the shelf processing methods to wash and grade the sand, further supporting a DSO model.

Raw white sand samples have also been shipped to a potential offtake party for further definitive testing at their own glass manufacturing plants in China. Based on discussions with the potential offtake partners, the very high SiO<sub>2</sub> content combined with the low impurity profile bodes well for the potential sale price of the product as a high value premium product.

IND technical director Jeff Sweet stated: *“This initial test work further supports IND’s first mover strategy to target white sand deposits located within freehold cleared land in close proximity to existing road and port infrastructure. The test work results are a clear indication of the potential of the Stockyard Project to deliver a high value premium product to Asian glass market buyers.”*

*“Our technical teams are now working on a larger metallurgical test work program including preliminary processing test work that will seek to process up to 200t of material through a commercial sand plant located within close proximity to the Stockyard project”* he also added.



**Figure 1: Stockyard Bulk Sample Location Plan**

## Stockyard Project Overview

The Stockyard Project is comprised of three granted exploration licences covering >270km<sup>2</sup> within a region of freehold pastoral land. Land access agreements have been entered into to facilitate sampling and exploration activities across freehold properties in the region. The Project is located 220km north of Perth and 10km west-south-west of the town of Eneabba in Western Australia. The Project is located proximal to the Brand Highway.

The Project was targeted specifically due to the presence of white silica sands at surface which had been cleared previously of native vegetation for agricultural purposes. Due to the poor carrying capacity of the land underlain by silica sand, the primary target areas for IND have been underutilised from an agricultural perspective.

The aim of IND is to implement an environmentally responsible exploration and development strategy, through targeting areas which have already been cleared for agricultural purposes. Through this strategy, IND is aiming to have minimal impact on sensitive native vegetation and fauna in the region.

In addition, through collaboration with agronomists with local experience, IND aims to improve the carrying capacity of areas with sand to be extracted. Land is either to be returned to farmers with a higher cultivation and carrying capacity or alternatively to native vegetation.

### Bulk Sampling Program

A 200kg bulk sample was obtained through auger sampling to a maximum depth of 2m across a cleared sandy paddock, across private freehold land. The entire sample was submitted to Intertek Genalysis Perth for analysis. Wet screening was conducted based on the nominal size fractions of -2.36+1.18mm, -1.18mm+600µm, -600+300 µm, -300+150 µm and -150 µm. Each of the respective intervals were analysed. The aim of the testwork was to determine in which size fractions the deleterious elements reported and ideally what size fractions could potentially yield a premium marketable product to end users.

Encouragingly, the head grade analysis of the bulk sample determined that the insitu material contained very low contaminants. Through the use of size fraction analysis, the +150 to -600 µm size range contained what is regarded as a very low impurity product.

It is important to note that only a single stage of beneficiation was utilised to obtain these results. In general, to produce a saleable silica sand product a combination of physical separation methods are utilised. Subsequent testwork will involve optimising of screen size fractions, wet screening, magnetic separation, and further gravitational separation methods.

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**For enquiries regarding this release please contact:**

Mr. Ashley Pattison,  
Executive Chair  
(08) 6270 6316

**About IND:**

IND is a diversified Industrial Mineral project developer with a primary focus on High Purity Silica Sand. IND will focus on exploring and developing its highly prospective Australian High Purity Silica Sands and complementary Industrial Mineral Projects.

IND now holds 100% of 12 High Purity Silica Sand projects and five complementary Industrial Mineral projects across Western Australia and is focused on exploring and developing these projects, which have the potential to add significant value to investors and stakeholders.

Website: [www.industmin.com](http://www.industmin.com)

### **Competent Person**

The information in this announcement that relates to exploration activities on the Projects is based on information compiled and fairly represented by Mr Robert Wason, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wason has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Wason consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

### **Forward-looking Statements**

Certain statements contained in this document may be 'forward-looking' and may include, amongst other things, statements regarding production targets, economic analysis, resource trends, pricing, recovery costs, and capital expenditure. These 'forward-looking' statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by IND, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as 'believe', 'expect', 'anticipate', 'indicate', 'target', 'plan', 'intends', 'budget', 'estimate', 'may', 'will', 'schedule' and others of similar nature. IND does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Investors should not place undue reliance on forward-looking statements as they are not a guarantee of future performance.

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**Table 1 – Sample Location & Detailed Size Fraction Results**

Sample	Easting	Northing
21WAR041- Bulk	334,348	6,672,348

Size Fraction	Al <sub>2</sub> O <sub>3</sub> ppm	Fe <sub>2</sub> O <sub>3</sub> ppm	K <sub>2</sub> O ppm	MgO ppm	Na <sub>2</sub> O ppm	SiO <sub>2</sub> %	TiO <sub>2</sub> ppm	LOI-1000°C %	Yield %
Insitu Material	641	388	59	47	-	99.9	2,122	0.10	100
-2.36+1.18mm	722	390	40	76	-	99.6	622	0.39	0.7
-1.18mm+600µm	390	263	-	-	-	99.9	573	0.09	5.5
-600+300 µm	376	152	-	-	-	99.9	768	0.08	22.6
-300+150 µm	503	221	-	-	-	99.9	1,440	0.07	47.6
-150 µm	1,228	979	266	61	33	99.8	5,198	0.16	23.6

## Appendix 2: JORC Tables 1 and 2

## JORC Table 1 – Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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 downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	Auger drilling was completed to a depth of 2m to obtain a composite 200kg bulk sample
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	Auger drilling consisted of a manually hand operated 75 mm diameter sand auger with PVC casing utilised to reduce contamination potential as the auger is withdrawn from the hole. The auger was driven about 300 mm then retracted and the sample was placed in a UV resistant plastic bag and this continued until the sample interval was completed. The sample was labelled with the drillhole number then placed in a second plastic bag and sealed and removed from site for logging and sample preparation.
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>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.</i></li> </ul>	Each sample bag was weighed to determine the actual sample recovery. The type of sand auger used provided a clean sample with less possibility of contamination compared to a flight auger.

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>The samples have been sufficiently logged including estimates of grain size, sorting and texture, and colour. Particular attention has been taken to ensure a more scientific and less subjective approach to colour has been adopted because colour (white to grey shades, and pale yellow shades) is one of the targeting features.</p>
<b>Subsampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>The entire auger hole was sampled and submitted for analysis. The composite bulk drill samples was submitted to Intertek Genalysis Perth for drying, further splitting, and pulverisation in a zircon bowl. A subsample of 200 g with -75 µm particle size was utilised for analysis.</p> <p>The laboratory sample size taken is appropriate for the sand being targeted.</p> <p>Aircore drilling is planned to be completed to determine the extent and grade distribution of silica mineralisation. At this stage duplicate samples have not been undertaken.</p>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<p>Auger samples were submitted to the Intertek Laboratory in Maddington, Perth, Western Australia. The assay method for multi-element analysis consisted of four-acid digest including hydrofluoric, nitric, perchloric and hydrochloric acids in Teflon beakers with inductively coupled plasma (ICP)-optical (atomic) emission spectrometry finish. Silica is reported by difference.</p> <p>No geophysical tools were utilised for the process.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>There were no twin auger holes</p> <p>All drilling and sampling procedures were monitored on site by a geologist on a hole-by-hole basis.</p> <p>All primary information was initially captured in a written log on site by a geologist, data entered, imported then validated and stored in a geological database.</p> <p>No adjustments to assay data have been performed.</p>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<p>The position of the auger hole locations was determined by a GPS model Garmin GPS Map 64s with an accuracy of 5 m. The CRS used was GDA94/MGA Zone 50</p> <p>The topography at the project site currently under exploration is flat to gentle undulating terrain. Elevation was derived from GPS. For future exploration a differential GPS survey is proposed to obtain adequate topographic control for inclusion in mineral resource estimation.</p>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>The auger drill holes were clustered around the bulk sample point location provided in the appendix of this report.</p> <p>The sampling completed is purely for metallurgical purposes to determine whether further systematic exploration is warranted. On the basis of the results returned it is proposed that drilling on a regular grid spacing for inclusion in mineral resource estimation is conducted.</p> <p>Drill hole compositing was utilised to obtain a total of 200kg of bulk sample material.</p>
<b>bOrientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<p>It is expected that the sand stratum sampled is relatively flat dipping and as such is representative of that layer of sediment. Auger drilling did not reach the base of sand layer and as such it is not known if it is representative of the overall sand formation. Air core drilling of this unit is required in order to determine the characteristics of the entire unit.</p>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p>All samples have been bagged and removed from site and are under the care of the contract senior geologist and field sampling supervisor. Auger samples were delivered to Intertek Genalysis Perth. The laboratory provided a sample reconciliation report which was audited against the sample submission sheet.</p>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<p>No audits or reviews have been conducted to date</p>

## JORC Table 1 – Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Land access agreement has been entered into to facilitate the taking of samples from the freehold land.</li> <li>The underlying land is held as pastoral freehold land and IND has entered into an agreement with the land owner to access and explore the property.</li> <li>No impediments on a licence to operate at time of reporting.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Past exploration by others targeting heavy mineral sands..
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	Unconsolidated Quaternary coastal sediments, part of the Perth Basin. Aeolian quartz sand dunes overlying Pleistocene limestones and paleo-coastline.
<b>Drill hole information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:               <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	The relevant auger hole location has been provided in the appendix of this report.
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No length weighted averages or cut off values applied as entire auger holes were utilised to generate a single composite sample.

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').</i></li> </ul>	All auger holes were drilled vertically to 2m and widths are therefore true.
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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 drillhole collar locations and appropriate sectional views.</i></li> </ul>	Map illustrating interpreted white sand unit and sample location included in body of report.
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	All results were included in the body of this report
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	All information included in body of report
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	An air core drilling program is proposed to be completed to determine the extent and grade distribution of silica sand across the Project.