

IND EXPANDS INTO HIGH PURITY QUARTZ

Complementing Advanced HPSS Project Development

Highlights

- IND expands its exploration focus into High Purity Quartz on its existing Karratha tenure.
- Surface samples taken on recent reconnaissance trip will test the quality of the quartz outcrops and suitability of the quartz for specialised applications.
- RC and diamond drill program planning will commence on receipt of surface sample assay results.
- Broadens IND's exposure to the fast-growing end markets of solar PV, semi-conductors and other high-tech applications.
- Karratha tenure is well-positioned for export of end product via numerous ports in northern Western Australia.

Industrial Minerals Ltd (ASX: **IND** or the **Company**) is pleased to announce that following the passing of the wet season, it has been able to undertake a reconnaissance trip to its Karratha lease to assess the potential of the High Purity Quartz ("**HPQ**") targets (Plate 1).

IND's Managing Director Jeff Sweet commented:

"It was great to get back on site post wet season to progress exploration activities at our Karratha Project. Following desktop geological assessment of this tenure, quartz veins were identified as potential sources for High Purity Quartz, and we eagerly await the results of surface sampling to guide our planning for a drill program.

"HPQ is a key feedstock for photo voltaic solar panels, semi-conductors, specialty glass and other high-tech applications. Extending our exploration activities to include HPQ complements our advanced High Purity Silica Sand projects and has the potential to broaden IND's exposure to these fast-growing end markets."



Plate 1: Substantial quartz outcrop on tenement E47/3144

About High Purity Quartz

High Purity Quartz ("HPQ") v High Purity Silica Sand ("HPSS")

Silica sand and quartz sand both have silica as the main component however, quartz sand is a crystal and is made of quartz stone. Silica sand is made of sand and gravel containing silica. The appearance is quite different (Plate 2).



Plate 2: Left: -4.0mm, + 2.0mm crushed HPQ from Karatha. Right: Stockyard HPSS product sent to China for beneficiation testwork.

The manufacturing method for HPQ is also very different as set out in Table 1.

HPQ	DSO HPSS
<ul style="list-style-type: none"> Crushing, grinding and classification of ROM Autogenous grinding Sensor based sorting (SBS) Attrition scrubbing and desliming Electrostatic separation Magnetic separation 	<ul style="list-style-type: none"> Wet Screen Desliming Dewater Bulk shipping

Table 1: Comparison of HPPS and HPQ processing routes

HPQ Market

- HPQ is a special feedstock used in industries with high-tech applications, for example, the solar industry and semi-conductors, whilst lower quality HPQ is used in glass manufacturing. The source materials for HPQ may come from either quartz sand or quartzite rock that is beneficiated to remove impurities and further processed to reach strict quality specifications.
- The starting quality of feedstock for solar panels and semi-conductors is generally considered to be 99.95 % SiO₂, with <500 ppm of total impurities.
- The ultra-premium market requires higher quality feedstock, and the Ultra HPQ product mix is summarised in Table 2.

PRODUCT	PURITY	APPLICATION
HP5 (Powder)	99.995%	High Purity Filler, specialty glass/ceramics, and Epoxy Molding Compounds
HP5 (Sand)	99.995%	Halogen and mercury lamps, fused quartz tubing, crucibles and ingots
HP7	99.997%	Solar Mono-crystalline crucibles, high quality fused glass tubing and quartzware
HP9	99.999%	Semiconductor grade crucibles and high-end solar and semiconductor applications

Table 2: Ultra HPQ product mix

E47/3144 – Karratha Quartz Target

IND conducted field reconnaissance and surface sampling at its Karratha Project after desktop geological assessment identified potential High Purity Quartz targets.

Samples collected from site are currently being tested with analysis and assays pending. One example of a sample collected from Karratha is shown in Plate 3.

Following the receipt of the assay results, IND will plan and conduct a RC and Diamond drill program to determine the potential size of the resource and the quality of the quartz under cover.



Plate 3: Quartz Sample from E47/3144

This announcement has been approved by the Industrial Minerals Board.

For enquiries regarding this release please contact:

Company Enquiries:

Mr. Jeff Sweet,
Managing Director
(08) 6270 6316

Website: www.industmin.com
Contact: admin@industmin.com

Broker and Media Enquiries:

Fiona Marshall
Senior Communications Advisor
White Noise Communications
0400 512 109
fiona@whitenoisecomms.com

About IND

IND is a diversified Industrial Mineral project developer with a primary focus on High Purity Silica Sand and High Purity Quartz. IND is exploring and developing its highly prospective Australian High Purity Silica Sands and complementary Industrial Mineral Projects. IND holds 100% of 20 High Purity Silica Sand projects and six 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.

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 Andrew Jewson, who is a Member of the Australian Institute of Geoscientists and consultant to Industrial Minerals Ltd. Mr Jewson is also a shareholder of Industrial Minerals Ltd. Mr Jewson 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 Jewson 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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Figure 1 – Karratha Project in close proximity to Port of Dampier

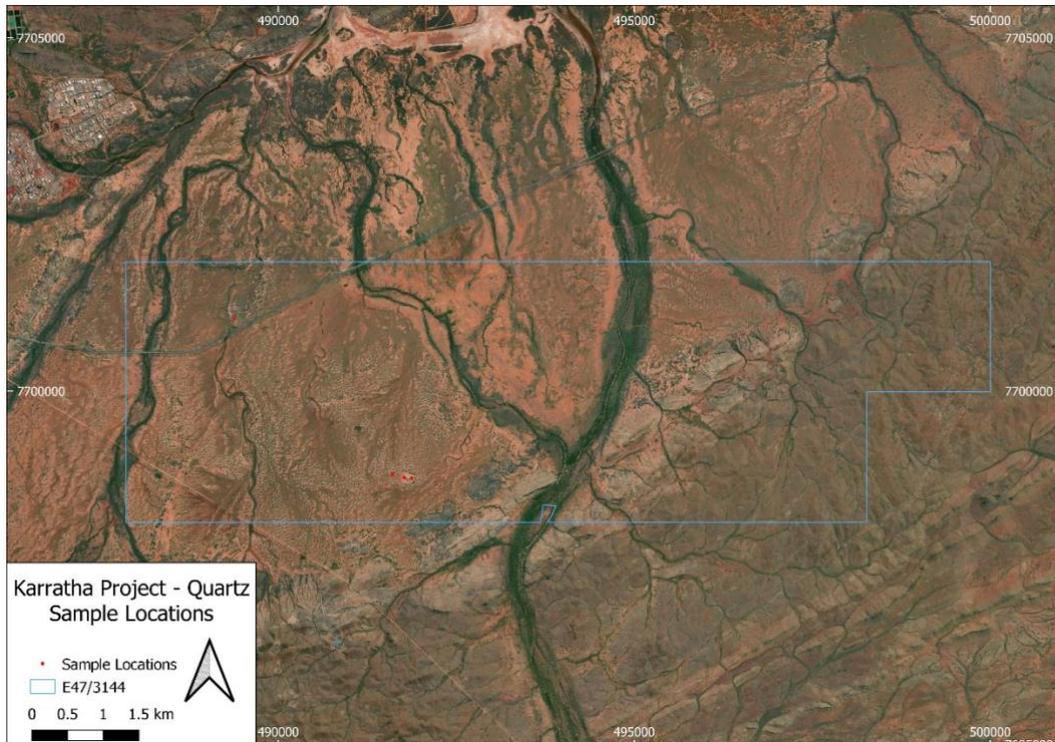


Figure 2. Quartz sample location within Exploration Licence E47/3144

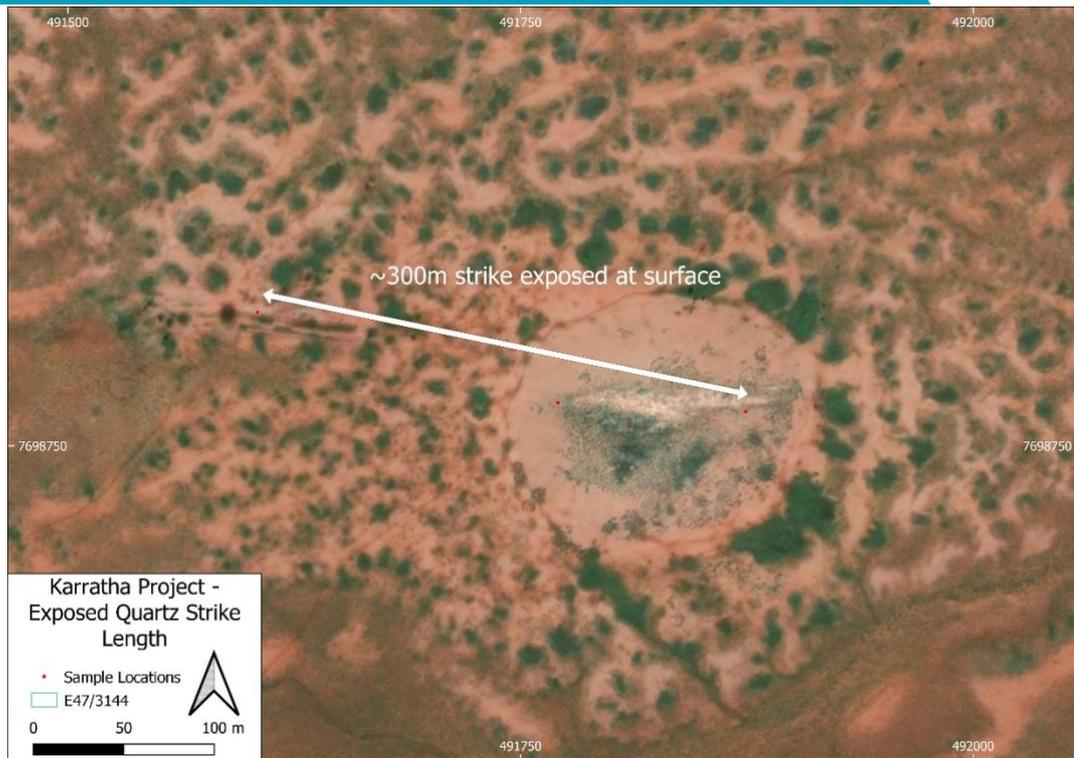


Figure 3. Quartz vein exposed at surface

Sample ID	Easting	Northing	RL
KP0008	491,874	7,698,769	150
KP0009	491,771	7,698,774	150
KP0010	491,605	7,698,824	150
KP0011	489,380	7,701,024	150

Table 3. Rock sample locations

Appendix 2: JORC Tables 1 and 2

JORC Table 1 – Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> Selective rock sampling was completed, representative of each of the styles of mineralisation observed. Composite rock samples were undertaken across potentially mineralised material in order to gain an understanding of the nature of the mineralisation. 2-3kg samples were submitted to Intertek Genalysis Perth for drying, crushing, splitting, and pulverisation in a zircon bowl.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> No Drilling Reported.
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No Drilling Reported.
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All rock samples were photographed and were geologically logged. The rock samples are for the purposes of understanding the nature of mineralisation, not for the inclusion in a mineral resource estimation.
Subsampling techniques and sample preparation	<ul style="list-style-type: none"> 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 subsampling 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. 	<ul style="list-style-type: none"> No Drilling Reported. 2-3kg samples were submitted to Intertek Genalysis Perth for drying, crushing, splitting, and pulverisation in a zircon bowl. The sampling protocol implemented is considered to be appropriate and industry standard for dealing with rock samples. 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.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • QAQC protocols included the use of crushed sample duplicates, certified reference material and coarse blank samples. • Sampling of material was selective in nature and duplicate samples of similar styles of mineralisation was undertaken. • The sample sizes are appropriate for the grain size of the material.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <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> • <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> 	<ul style="list-style-type: none"> • No Drilling Reported. • No Assays Reported. • The assay methods utilised are considered industry standard.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • No Drilling Reported. • No Assays Reported. • All data was recorded in field logging sheets, digitised then imported into a validated database. • No adjustments were made to the assay data.
Location of data points	<ul style="list-style-type: none"> • <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> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • The position of the sample locations was determined by handheld GPS. • The Grid system used was GDA2020 Zone 50. • The topographic control on sample locations was derived from GPS.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <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> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Rock sampling was completed on an irregular spacing based on outcrop exposure and zones of geological interest. • Rock chip sampling undertaken is not proposed to be included within any future resource estimations. • Composite rock samples were undertaken across potentially mineralised material in order to gain an understanding of the nature of the mineralisation.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <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> • <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> 	<ul style="list-style-type: none"> • Rock chip sampling is only point samples and as such is not effected by orientations. • No Drilling Reported.
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • 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 laboratories provided a sample reconciliation report which was audited against the sample submission sheet.
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • No audits are documented to have occurred in relation to sampling techniques or data.

JORC Table 1 – Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Karratha project comprising Exploration Licence E47/3144 is 100% owned by Industrial Minerals Ltd. The underlying land is held as pastoral land and IND has entered into an Aboriginal Heritage Agreement with the Traditional Owners. A 1% net smelter royalty applies across the project. An extension of term has been applied for by Industrial Minerals Ltd for a further 5 year term for E47/3144.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Past exploration by others targeted gold, base metals. IND is the first company to explore for high purity quartz rock at the project.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Regionally the project area is located in the northwest of the Pilbara Craton. The geology within the tenement comprises greenstones of the West-Pilbara Granite Greenstone Terrain. The potential deposit is quartz vein.
Drill hole information	<ul style="list-style-type: none"> 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"> easting and northing of the drillhole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar dip and azimuth of the hole downhole 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. 	<ul style="list-style-type: none"> No Drilling Reported. All information including drilling with no significant results has been included in the body of this results.
Data aggregation methods	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All sample results have been reported including those with no significant results. No Drilling Reported. No metal equivalence are reported.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. 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'). 	<ul style="list-style-type: none"> No drilling reported.
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Maps and plans have been included in body of the announcement.

Criteria	JORC Code explanation	Commentary
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All results were included in the body of this report.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All information is included in body of report.
Further work	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Sampling undertaken has been utilised to assist with the prioritising of drill targets and further release will be made to market upon completion of the refined drill program. Maps including the location of samples and prospects are included in the body of this release.