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# EXPANDED EXPLORATION ACTIVITIES ACROSS SILICA SAND PROJECTS

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## Highlights

- **Auger drilling completed across high priority areas targeting additions to Stockyard Mineral Resource of 9.6 million tonnes at 98.9% SiO<sub>2</sub><sup>i</sup>**
- **Infill auger drilling program completed to upgrade classification from Inferred to Indicated Mineral Resources at Stockyard**
- **Exploration auger and aircore drilling programs commenced at Bookara Project to test priority targets and potentially define additional shallow high purity silica sand resources**
- **Regional reconnaissance soil samples have highlighted the potential for high purity silica sand, with very low iron content, with a best result of 99.6% SiO<sub>2</sub> and 200ppm Fe<sub>2</sub>O<sub>3</sub> returned from the Mindarra Project**

Industrial Minerals Ltd (ASX: **IND** or the **Company**) is pleased to provide an update on recently completed resource definition activities across the Stockyard and Bookara High Purity Silica Sand (**HPSS**) Projects in Western Australia.

Reconnaissance trips have also been completed over several of IND's silica sand projects to verify and add geological context to desktop studies. The reconnaissance trips were also conducted to initiate and progress discussions with landholders to secure access agreements over tenure considered prospective for high purity silica sand.

Strategically, the Company has also been focused on exploring for the potential of low-iron high purity silica sand at its Projects. Pleasingly, the Mindarra Project has returned exceptional results from first pass reconnaissance surface soil sampling, with a best result of **99.6% SiO<sub>2</sub> and 200ppm Fe<sub>2</sub>O<sub>3</sub>**.

**IND's Managing Director, Jeff Sweet commented:**

*"We are very pleased to be progressing resource definition activities at Stockyard, while also advancing exploration and reconnaissance programs at our other high priority projects.*

*"The planned addition and upgrade of resources at Stockyard will feed into Feasibility Studies currently underway. While the discovery of low-iron high purity silica sand at Mindarra has added another compelling project to IND's development pipeline."*

## Exploration Activities Update

Key geological consultants have been engaged to undertake prospectivity studies on each of IND's silica sand projects. Following desktop studies, IND's projects north of Perth were prioritised for reconnaissance exploration work programs, given their proximity to the Port of Geraldton and the advanced Stockyard Project.

The purpose of the prospectivity study is two-fold:

1. To identify targets for the exploration and development of areas prospective for HPSS
2. To review and rationalise IND's large landholding to:
  - a. optimise expenditure on the most prospective ground
  - b. rationalise tenure deemed to have low prospectivity

The main criteria used for ranking projects' prospectivity included:

1. Presence / absence of native vegetation
2. Proximity to port
3. Remote sensing evidence for high purity silica sand deposition

IND has been actively progressing exploration across its portfolio of silica sand projects, with reconnaissance surface soil sampling completed across the Bookara and Mindarra Projects, located north of Perth (refer to Figures 1, 2 and 3).

Reconnaissance visits have also commenced over IND's silica sand projects to the south of Perth, with assay results from these work programs pending.

### Mindarra Silica Sand Project

The Mindarra Project (**Mindarra**) comprises a 305km<sup>2</sup> exploration lease and is located 125 kilometres north of Perth and 320 kilometres from the Port of Geraldton. The project is at an early exploration stage, with recent desktop studies and reconnaissance work highlighting its potential to contain high purity silica sand.

Initial surface soil samples taken from the Mindarra Project have returned exceptional results exhibiting high purity silica, coupled with very low iron content. Significant soil sample results are depicted in Figure 4 and include:

- **99.6% SiO<sub>2</sub>, 200ppm Fe<sub>2</sub>O<sub>3</sub>** in sample MS13
- **99.5% SiO<sub>2</sub>, 233ppm Fe<sub>2</sub>O<sub>3</sub>** in sample MS14
- **99.4% SiO<sub>2</sub>, 397ppm Fe<sub>2</sub>O<sub>3</sub>** in sample MS08
- **99.4% SiO<sub>2</sub>, 629ppm Fe<sub>2</sub>O<sub>3</sub>** in sample MS05

To assess the sand's amenability to upgrade via a simple screen and wash process, the soil samples were sieved and washed with water to remove fines and organic matter. Pleasingly, results show that a significant reduction in iron impurities can be achieved by this method, with results shown in Table 1 below.

*Table 1. Mindarra surface soil sample results -pre and post sieving and washing*

Sample ID	SiO <sub>2</sub> %	Original Result Fe <sub>2</sub> O <sub>3</sub> ppm	Post Sieve and Wash Result Fe <sub>2</sub> O <sub>3</sub> ppm	Change in Fe <sub>2</sub> O <sub>3</sub> ppm
MS13	99.6%	200	120	-80
MS14	99.5%	233	195	-38
MS08	99.4%	397	309	-88
MS05	99.4%	629	589	-40

These results demonstrate that Mindarra has the potential to host extremely high purity silica, containing very low iron impurities, amenable to a simple screening and washing upgrade process, that could attract a premium price given its high demand and suitability for the PV Solar Panel market.

### Bookara Silica Sand Project

The Bookara Project (**Bookara**) comprises a large landholding of approximately 1190km<sup>2</sup>. The Project is logistically well located, surrounded by infrastructure and just 50 kilometres from the Port of Geraldton.

Bookara exhibits characteristics favourable for high purity silica sand deposition, as highlighted by review of open-source remote sensing and geophysical datasets. Following a prospectivity review, the Project was identified as a high priority project to be pursued in the exploration and delineation of high purity silica sand resources to complement the Stockyard Mineral Resource inventory.

A reconnaissance trip has given further support, confirming the presence of several white silica sand exposures at surface, with the depth of silica sand deposits estimated to range from 1-3 metres.

Recently completed surface soil sampling returned a best result of **98.7% SiO<sub>2</sub>, 1387ppm Fe<sub>2</sub>O<sub>3</sub>**.

Air core and auger drilling programs have commenced at Bookara to test areas considered prospective for silica sand mineralisation. Soil sample locations and areas being targeted by drilling are shown in Figure 5. Drill spacing and QAQC protocols have been designed to facilitate mineral resource estimation should the drilling meet with successful definition of high purity silica sand as identified at surface.

The Company is also advancing discussions with landholders to ensure land access agreements are in place to progress exploration over the broader project area.

## Resource Definition Activities Update

### Stockyard Silica Sand Project

The recently completed Mineral Resource Estimate (**MRE**) for Stockyard stands at **9.6 million tonnes grading 98.9% SiO<sub>2</sub>**, with Indicated Resources of 4.0 million tonnes at 98.8% SiO<sub>2</sub> and Inferred Resources of 5.6 million tonnes at 98.9% SiO<sub>2</sub>. Mineral Resources contained within the granted Mining Lease total **1.9 million tonnes grading 98.8% SiO<sub>2</sub>** and are classified entirely as Indicated.

An infill auger program has been completed targeting high priority mineralisation amenable to the upgrade in classification from Inferred to Indicated Resources. Infill drilling has been designed to improve geological confidence and provide additional information in areas where mineralisation is currently classified as Inferred due to low drill density.

Initial areas targeted as part of the resource classification upgrade are high purity silica sand (HPSS) bodies that sit proximal to the granted Mining Lease and where IND intends to commence mining activities (refer to Figure 6).

An auger program targeting resource extensions and exploration targets identified as part of the Stockyard MRE has also recently been completed at the Project. Any HPSS mineralisation defined by this phase of exploration drilling will provide valuable additions to the Stockyard resource inventory and projected mine life.

Results from recently completed exploration and resource drilling are expected to be returned early in January 2023. Should results be favourable, the Company will seek to expedite a resource upgrade for the Stockyard Project. Any potential additions to Indicated Resources will be considered as part of the Stockyard Ore Reserve, which is being completed as part of the Feasibility Studies currently underway.



*Plate 1. Auger sample at the Stockyard Project, November 2022*

Next Steps:

- Continue landholder engagement and secure land access agreements over prospective areas - dedicated stakeholder consultation manager engaged to progress access agreements
- Reconnaissance field trips to inspect prospective areas for high purity silica sand at IND's projects
- Surface soil samples to be taken on public land/access roads where no access agreements in place
- Further exploration work programs to be planned and executed to progress exploration and definition of high purity silica sand at IND's projects once reconnaissance results returned

IND's low impact and low-cost rapid exploration and resource definition techniques give the Company a significant advantage in its efforts to explore and develop its highly prospective tenure and pipeline of quality projects. The Stockyard Project development provides a blueprint for future silica sand development opportunities for the Company.

This announcement has been approved by the Industrial Minerals Board.

For enquiries regarding this release please contact:

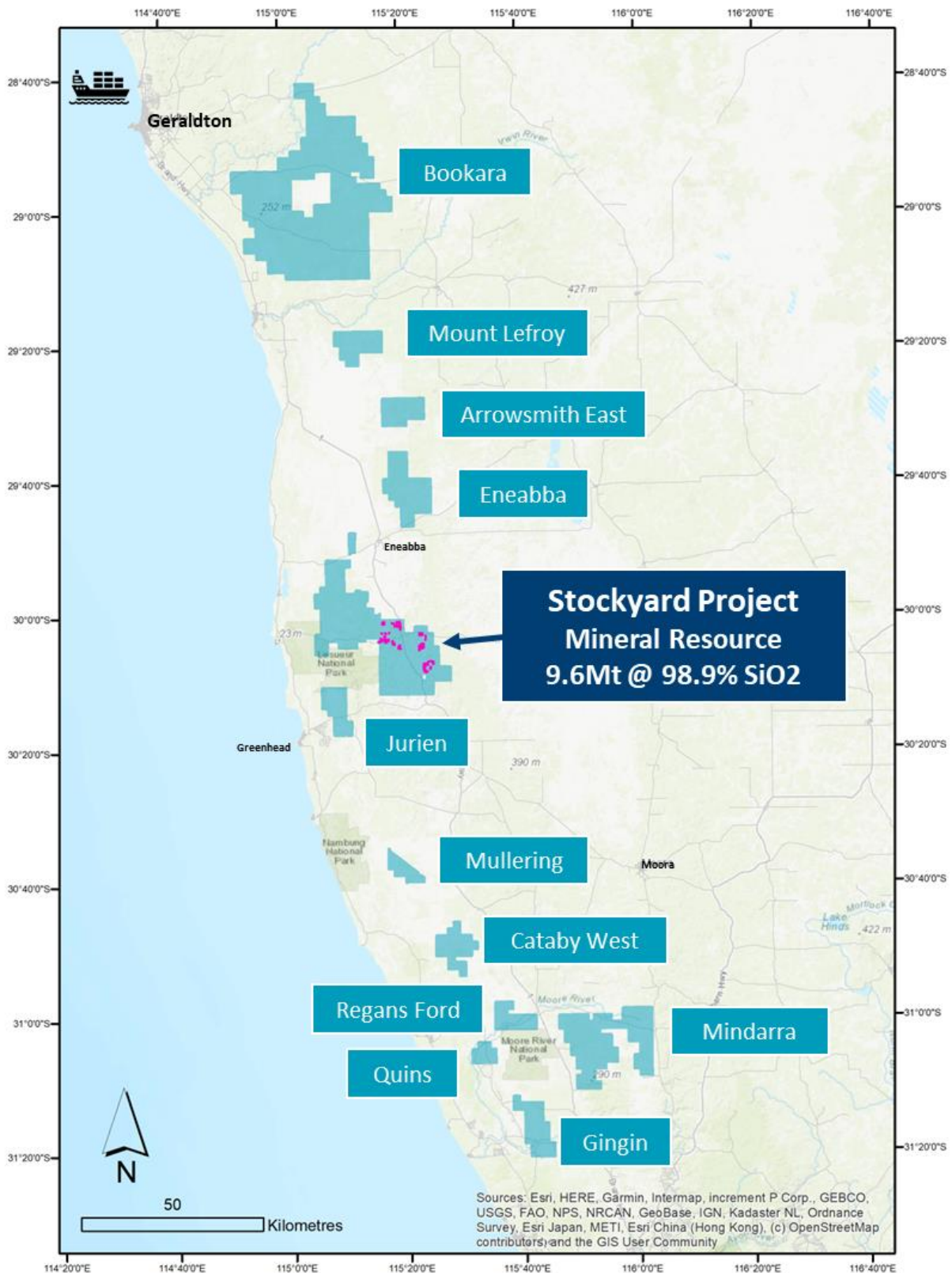
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**Figure 1. Industrial Minerals Silica Sand Projects (North of Perth) displaying the Stockyard Project Mineral Resource, Geraldton Port and main roads**

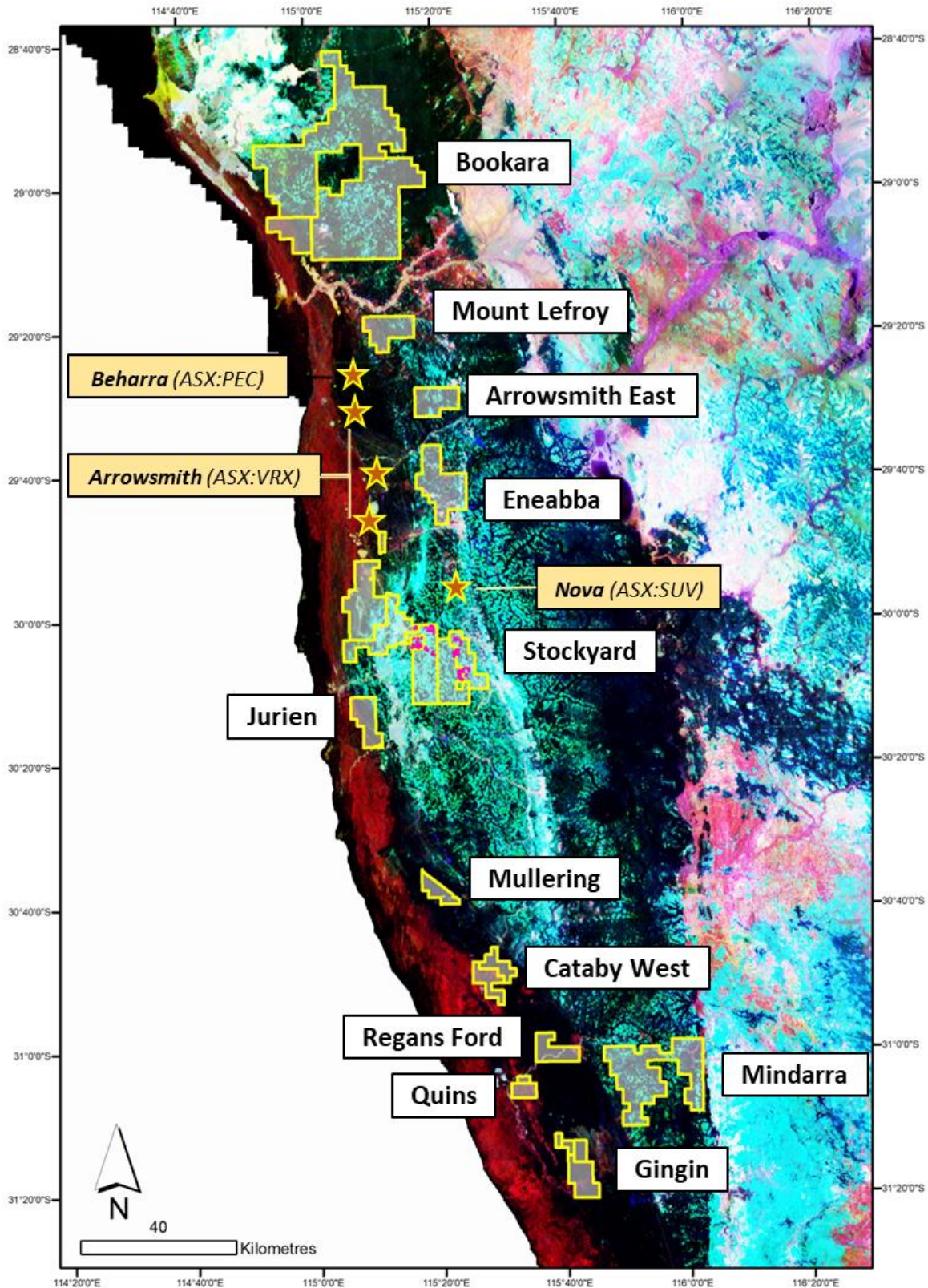
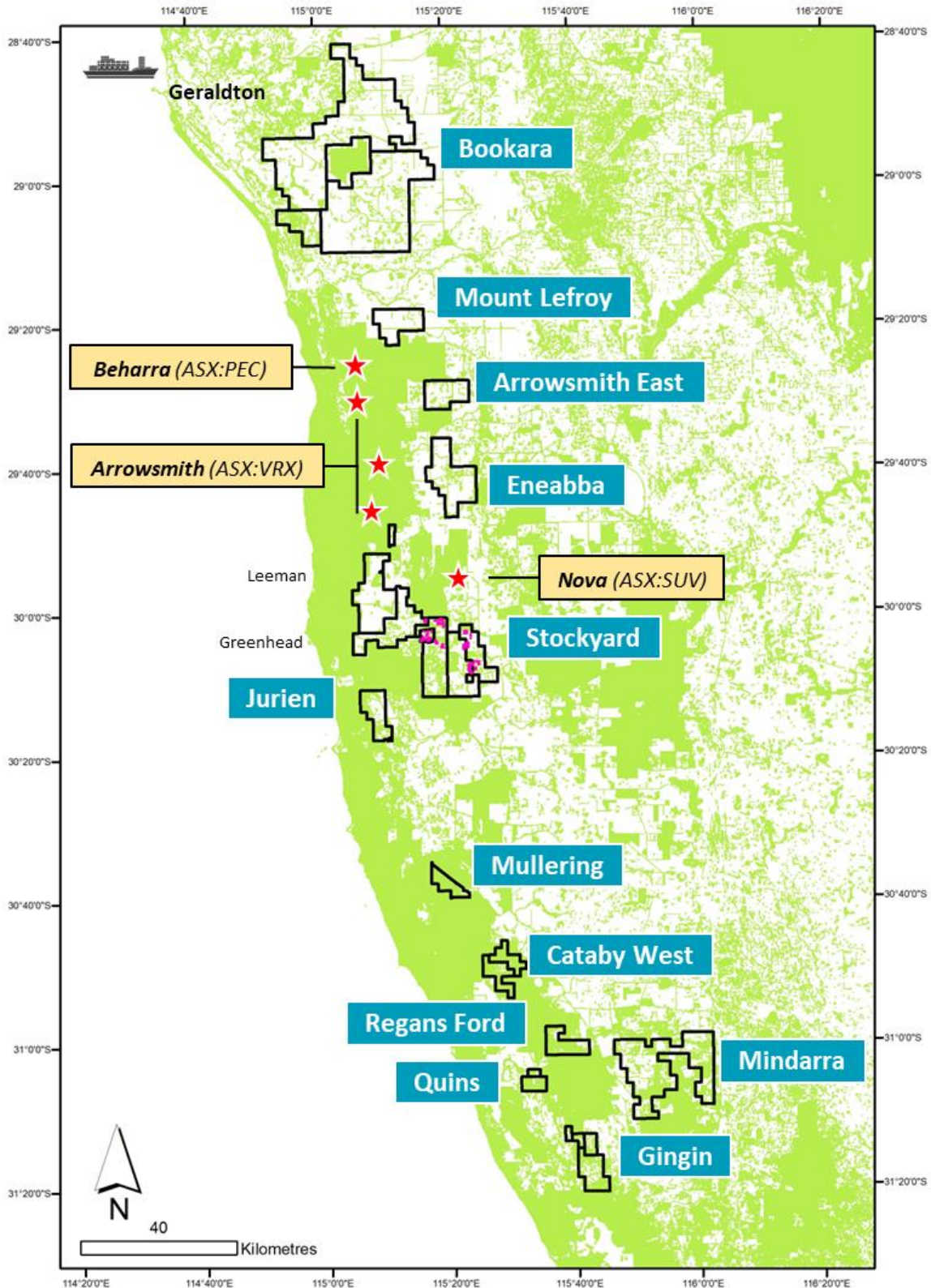


Figure 2. Industrial Minerals Silica Sand Projects (North of Perth), Radiometric Imagery and Peer Projects



**Figure 3. Industrial Minerals Silica Sand Projects (North of Perth), Native Vegetation and Peer Projects**



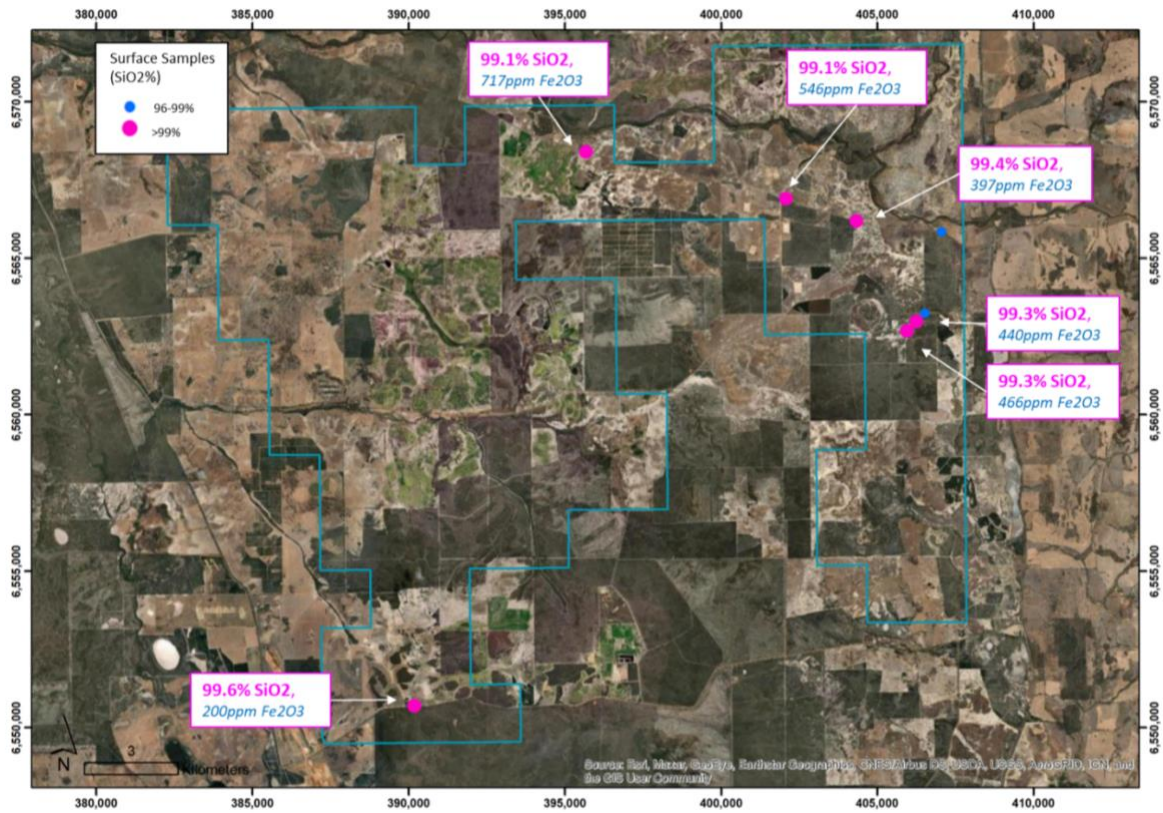


Figure 4. Mindarra Project displaying surface soil samples and satellite imagery

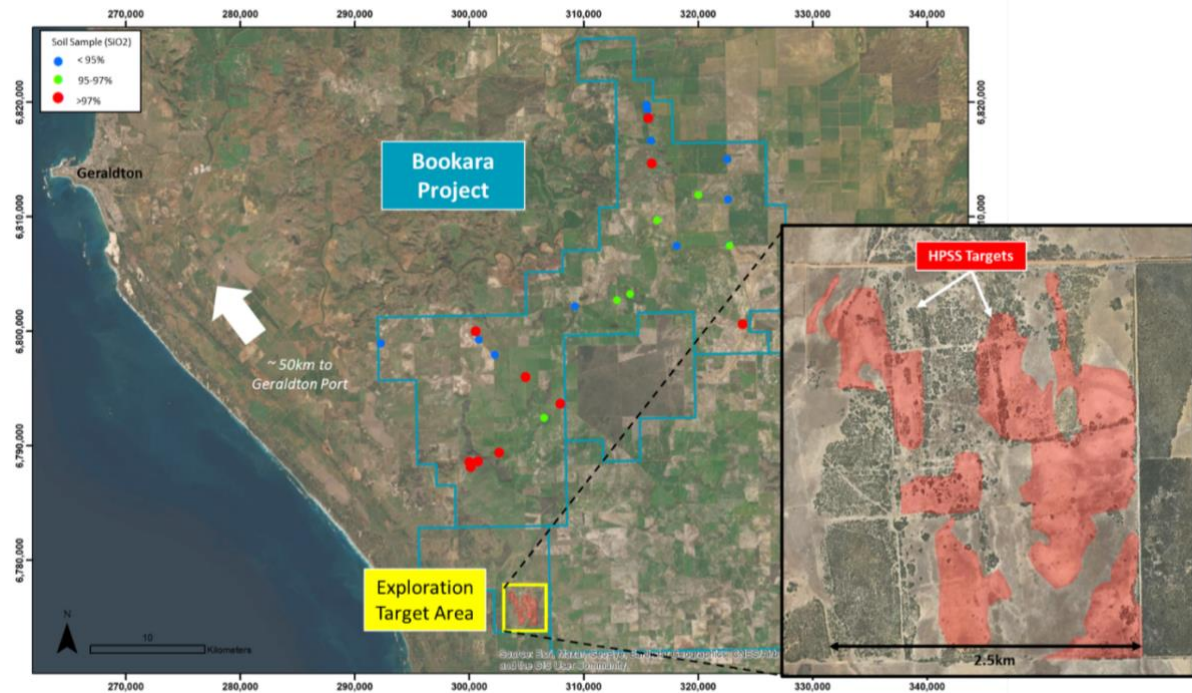
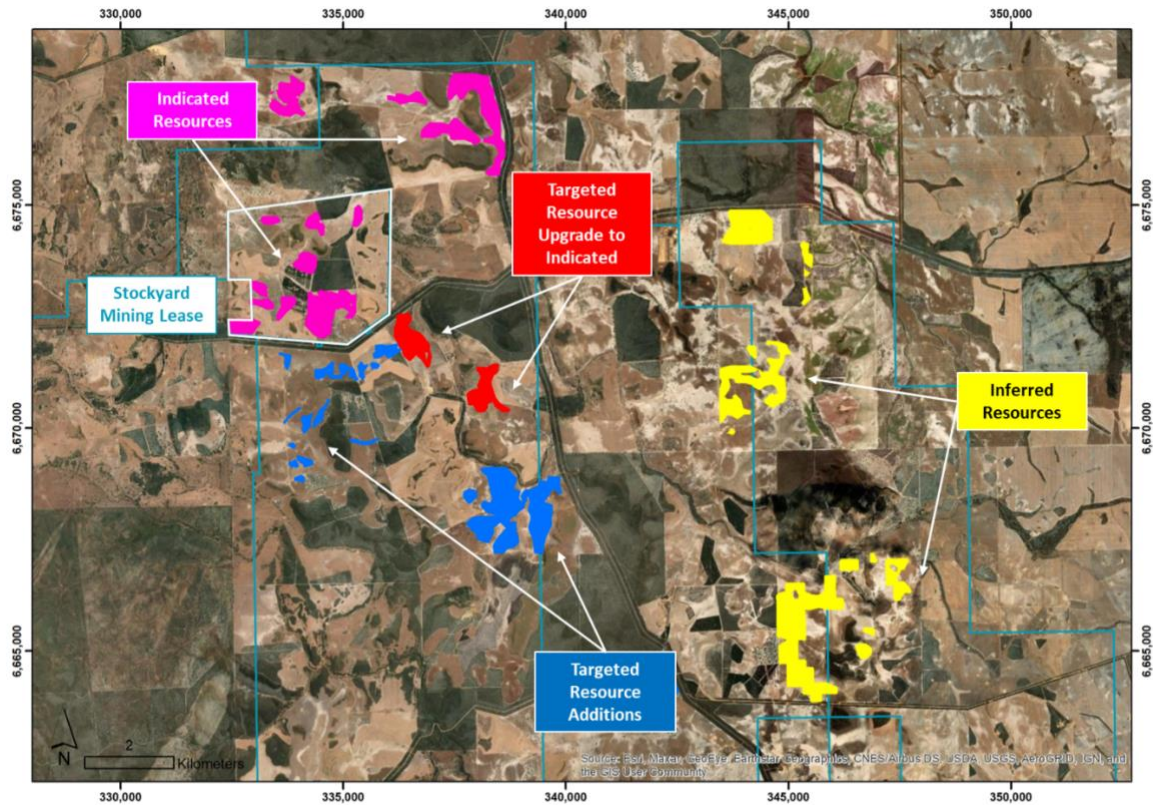


Figure 5. Bookara Project displaying surface soil samples and exploration targets being tested by aircore and auger drilling programs



**Figure 6. Stockyard Resource coloured by classification (Indicated: magenta, Inferred: yellow), targeted resource classification upgrade (red) and targeted resource additions (blue)**

## Qualifying Statements

### Competent Person

The information in this announcement that relates to Exploration Activities is based on information compiled and fairly represented by Ms Melanie Leighton, who is a Member of the Australasian Institute of Geologists (MAIG). Ms Leighton has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which she 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". Ms Leighton consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources is based on information compiled and fairly represented by Mr Richard Stockwell, who is a Fellow of the Australasian Institute of Geologists (FAIG). Richard Stockwell is a Founding Director and Principal Geologist of Placer Consulting PL, who was engaged by Industrial Minerals Ltd. Mr Stockwell 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 Stockwell 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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## Appendix 1: Surface Soil Sample Details

**Table 2. Details of Reconnaissance Surface Soil Samples**

Project	Sample ID	Easting	Northing	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> ppm	Al <sub>2</sub> O <sub>3</sub> ppm	TiO <sub>2</sub> ppm	LOI %
Bookara	SX00061	308007	6793645	98.7	1387	4575	2216	0.42
Bookara	SX00060	304939	6795991	98.6	1257	5266	2816	0.39
Bookara	SX00066	300145	6788129	98.5	1693	6427	903	0.57
Bookara	SX00065	300021	6788586	98.2	1646	8898	1134	0.6
Bookara	SX00052	323926	6800620	98.1	2289	7154	2230	0.64
Bookara	SX00063	302631	6789403	98.1	1866	6685	2166	0.73
Bookara	SX00044	315963	6814657	98	1680	5855	2015	0.94
Bookara	SX00064	300776	6788631	97.5	1932	10917	1707	0.97
Bookara	SX00042	315653	6818618	97.4	1810	11355	3055	0.82
Bookara	SX00057	300575	6799990	97.2	2441	11378	2537	1.05
Bookara	SX00054	312934	6802706	96.9	4576	13088	2046	0.99
Bookara	SX00045	316428	6809664	96.4	3825	17556	2562	1.11
Bookara	SX00053	314072	6803222	96.1	3833	12484	3031	1.77
Bookara	SX00046	320032	6811889	95.5	3880	24261	2951	1.23
Bookara	SX00062	306541	6792423	95.2	5661	25825	2743	1.24
Bookara	SX00051	322744	6807462	95.2	6556	25110	2791	1.24
Bookara	SX00043	315905	6816628	95	4992	26454	3936	1.32
Bookara	SX00059	302227	6797914	94.9	5556	28026	3203	1.29
Bookara	SX00058	300845	6799245	94.6	6423	27467	3430	1.53
Bookara	SX00049	322688	6807506	94.2	7137	31371	3286	1.5
Bookara	SX00048	322623	6811497	94.2	12527	19264	2891	2.17
Bookara	SX00050	318115	6807434	93.6	10442	32964	3265	1.55
Bookara	SX00055	309233	6802161	92.4	9713	41863	3332	1.93
Bookara	SX00056	292290	6798901	92.2	25752	30506	3370	1.72
Bookara	SX00041	315557	6819364	89.2	7287	63990	5712	2.81
Bookara	SX00047	322566	6815018	89	9650	37989	3586	5.35
Bookara	SX00040	315518	6819745	88.7	18688	61120	4726	2.65
Mindarra	MS13	390197	6550689	99.6	200	271	1655	0.11
Mindarra	MS14	390197	6550689	99.5	233	241	1601	0.22
Mindarra	MS05	405957	6562667	99.4	629	1147	1907	0.17
Mindarra	MS08	404336	6566189	99.4	397	1169	1071	0.23
Mindarra	MS03	406256	6562973	99.3	440	1981	1480	0.26
Mindarra	MS04	405957	6562667	99.3	466	1025	1593	0.28
Mindarra	MS09	404336	6566189	99.2	537	1416	1296	0.42
Mindarra	MS02	406256	6562973	99.1	402	2204	1391	0.4
Mindarra	MS10	402085	6566895	99.1	546	3267	1698	0.33
Mindarra	MS12	395687	6568397	99.1	717	2049	2741	0.22
Mindarra	SX00009	397940	6560777	99.1	1239	1889	2530	0.34
Mindarra	MS11	402085	6566895	98.7	991	5598	1939	0.41
Mindarra	MS06	407066	6565836	97.9	2210	8675	1886	0.57
Mindarra	MS01	406528	6563232	97.8	3300	9120	1609	0.72
Mindarra	MS07	407066	6565836	96	11807	14072	3177	0.61

## Appendix 2: JORC TABLE 1

### 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>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>Surface grab/ soil samples were taken from accessible areas i.e. public roadsides</li> <li>Sampling techniques and quality are considered appropriate for this style of mineralisation.</li> </ul>
<b>Drilling techniques</b>	<p>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).</p>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul> <p>The total length and percentage of the relevant intersections logged.</p>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>
<b>Subsampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>The entire soil sample was submitted for analysis. The samples were submitted to: <ul style="list-style-type: none"> <li>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</li> </ul> </li> <li>Laboratory replicates are completed routinely at the splitting stage and results are included in precision analysis.</li> <li>The laboratory sample size taken is appropriate for the sand being targeted.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Surface soil samples were submitted to: <ul style="list-style-type: none"> <li>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.</li> </ul> </li> <li>No geophysical tools were utilised for the process.</li> <li>No quality control procedures have been used for surface soil samples, although standard assay laboratory quality control protocols have been adhered to.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul> <p>Discuss any adjustment to assay data.</p>	<ul style="list-style-type: none"> <li>No significant intersections have been compiled; only individual (unaggregated) results are reported.</li> <li>All sampling procedures were documented and monitored on site by a geologist and/ or field technician.</li> <li>All primary information was initially captured in a written log on site by a field technician, data entered, imported then visually validated and stored in a geological database. No data quarantine function is enabled at this time.</li> <li>A set of conversion factors, to 5 decimal places are developed from molecular weights and applied to elements to achieve oxide values.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> </ul> <p>Quality and adequacy of topographic control.</p>	<ul style="list-style-type: none"> <li>The position of the surface locations was determined by a GPS model Garmin GPS Map 64s with an accuracy of 5 m.</li> <li>The Grid system used was GDA2020 Zone 50.</li> <li>No topographic control has been used for reconnaissance surface soil samples</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> </ul> <p>Whether sample compositing has been applied.</p>	<ul style="list-style-type: none"> <li>Reconnaissance surface samples were generally limited to areas where access was available ie, public roadsides.</li> <li>All samples were taken and submitted as whole grab samples.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>It is expected that the sand stratum sampled is relatively flat dipping and as such is representative of that layer of sediment.</li> <li>There is not considered to be any mineralised structures that would cause any sampling bias from the orientation of drilling utilised.</li> </ul>
<b>Sample security</b>	<p>The measures taken to ensure sample security.</p>	<ul style="list-style-type: none"> <li>All samples have been bagged and removed from site and are under the care of the contract senior geologist and field sampling supervisor.</li> </ul>

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Criteria	JORC Code explanation	Commentary
		Auger samples were delivered to Intertek Genalysis Perth. The laboratories provided a sample reconciliation report which was audited against the sample submission sheet.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No Audits or reviews have been undertaken.

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<sup>i</sup> Refer to ASX Release dated 9<sup>th</sup> November 2022 “Stockyard Maiden Mineral Resource Estimate”