ASX Announcement

9 May 2023

Arrowsmith Brand Mineral Resource Estimate

Highlights:

- **New Silica Sand Mineral Resource Estimate at Arrowsmith Brand Project**
- **New Project at Arrowsmith with an Inferred Resource of 523 Mt @ 97.3% SiO_2**
- **Drill program added 268 Mt @ 96.7% SiO_2 to overall VRX Silica Mineral Resource Estimate**
- **New Mining Lease application for Arrowsmith Brand**

VRX Silica Limited (**VRX Silica** or **Company**) (ASX: VRX) is pleased to announce the Company has extended its known JORC 2012 compliant Resources at the Arrowsmith Silica Sand Project area with a new Resource at its newly named Arrowsmith Brand project, located 270km north of Perth.

The new Resource is contiguous and south of the Arrowsmith North Silica Sand Project and bounded to the south by the Brand Highway road reserve.

VRX Silica Managing Director Bruce Maluish said: *"The combined Resources at the Arrowsmith Projects now provide a future pipeline of additional production utilising some of the infrastructure to be developed at the Arrowsmith North Project.*

"Although development of Arrowsmith Brand is not a priority at the moment, VRX is cognizant of the extended timelines that are now commonplace for mining approvals and this project has the potential to expand production to meet ever increasing demand for silica sand products.

The silica sand at Brand is similar to Arrowsmith North and testwork to-date has included samples from within this Resource and indicated similar products can be produced.

"Following the production of the preliminary estimate at Brand, VRX has lodged an application for a Mining Lease at Brand and this pending."

The Arrowsmith Brand Mining Lease Application M 70/1418 has an area of 1,995 Ha and predominately within Exploration Licence E70/5027, partially within E70/5109 and is contiguous with the granted Arrowsmith North Mining Lease M70/1389, Figure 1 below.

ASX: VRX

Capital Structure

Shares on Issue:
560.4 million

Unlisted Options:
41.3 million

Corporate Directory

Paul Boyatzis
Non-Executive Chairman

Bruce Maluish
Managing Director

Peter Pawlowitsch
Non-Executive Director

David Welch
Non-Executive Director

Ian Hobson
Company Secretary

Silica Sand Projects

Arrowsmith Silica Sand Projects, 270km north of Perth, WA.

Muchea Silica Sand Project, 50km north of Perth, WA.

Boyatup Silica Sand Project, 100km east of Esperance, WA.

The Company is actively assessing other silica sand projects in Australia.

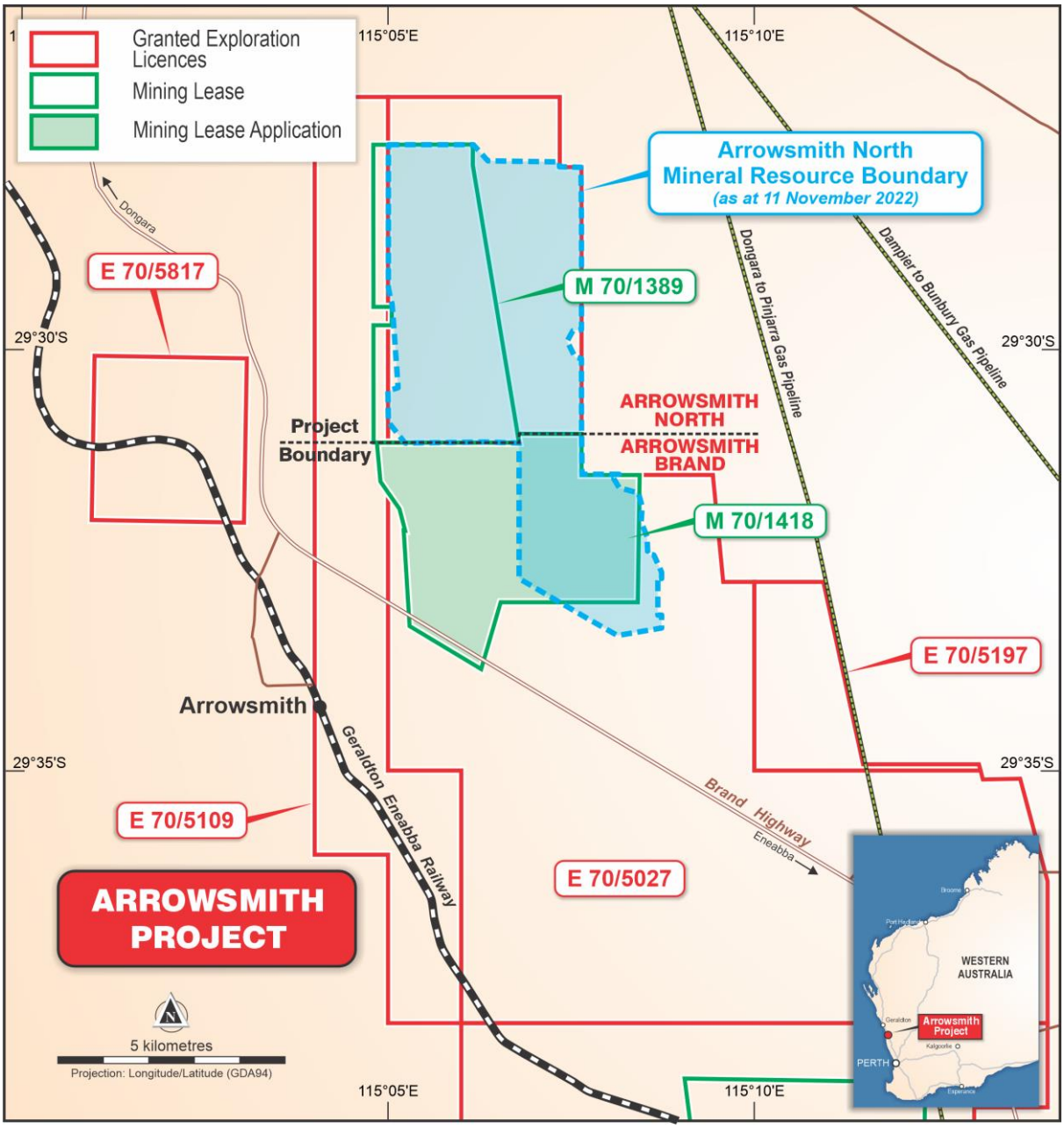


Figure 1: Arrowsmith Brand Silica Sand Project Location

Detailed Information

An opportunity to generate an additional silica sand project focused on an area of the Arrowsmith North mineral resource area that is not in the near-term development pipeline. By splitting the existing Arrowsmith North Project at the southern boundary of the granted mining lease M70/1389, see Figure 1, the Arrowsmith Brand Silica Sand Project (**Arrowsmith Brand**) was created.

Arrowsmith Brand contains a subset of the previously reported Arrowsmith North mineral resource estimate (**MRE**)[1], also Figure 1. Table 1 shows the prior Arrowsmith North MRE split between the new Arrowsmith Brand Project and the Arrowsmith North Project.

Arrowsmith North - Mineral Resource
11 November 2022 Estimate

Classification	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Measured	10	95.9	1.9	0.7	0.3	0.7
Indicated	237	97.7	1.00	0.40	0.20	0.50
Inferred	521	98.2	0.80	0.30	0.20	0.40
Total	**768**	**98.0**	**0.90**	**0.30**	**0.20**	**0.40**

Arrowsmith North Mineral Resource in Arrowsmith Brand Project

Classification	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Inferred	255	98.0	0.91	0.31	0.17	0.44
Total	**255**	**98.0**	**0.91**	**0.31**	**0.17**	**0.44**

Arrowsmith North Mineral Resource Ex Arrowsmith Brand Project

Classification	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Measured	10	95.9	1.9	0.7	0.3	0.7
Indicated	237	97.7	1.0	0.4	0.2	0.5
Inferred	266	98.4	0.7	0.3	0.2	0.4
Total	**513**	**98.0**	**0.9**	**0.3**	**0.2**	**0.4**

Table 1: Prior Arrowsmith North MRE apportioned to Brand Mineral Resource

In December 2022, VRX Silica completed a vacuum drilling program in the Arrowsmith North project area extending into the Arrowsmith Brand project area, see Figure *2*. A total of 68 holes for 786m were drilled on M70/1389 to gain material for future metallurgical testwork within the proposed Arrowsmith North mining area. These holes infill the existing 50m spaced grade control drilling which was used to estimate the measured resource and proven reserve[1]. These samples will not materially change these estimates and have not been assayed.

An additional 49 holes for 656m were drilled on existing tracks to the south in what is now known as the Arrowsmith Brand Project. These holes infill and extend the prior reported MRE for Arrowsmith North. Drilling intersected high quality silica sand which has been assayed and modelled and has resulted in a MRE for the Arrowsmith Brand Project Area.

[1] ASX announcement of 11 November 2022, "*Arrowsmith North Mineral Resource and Ore Reserve Update*".

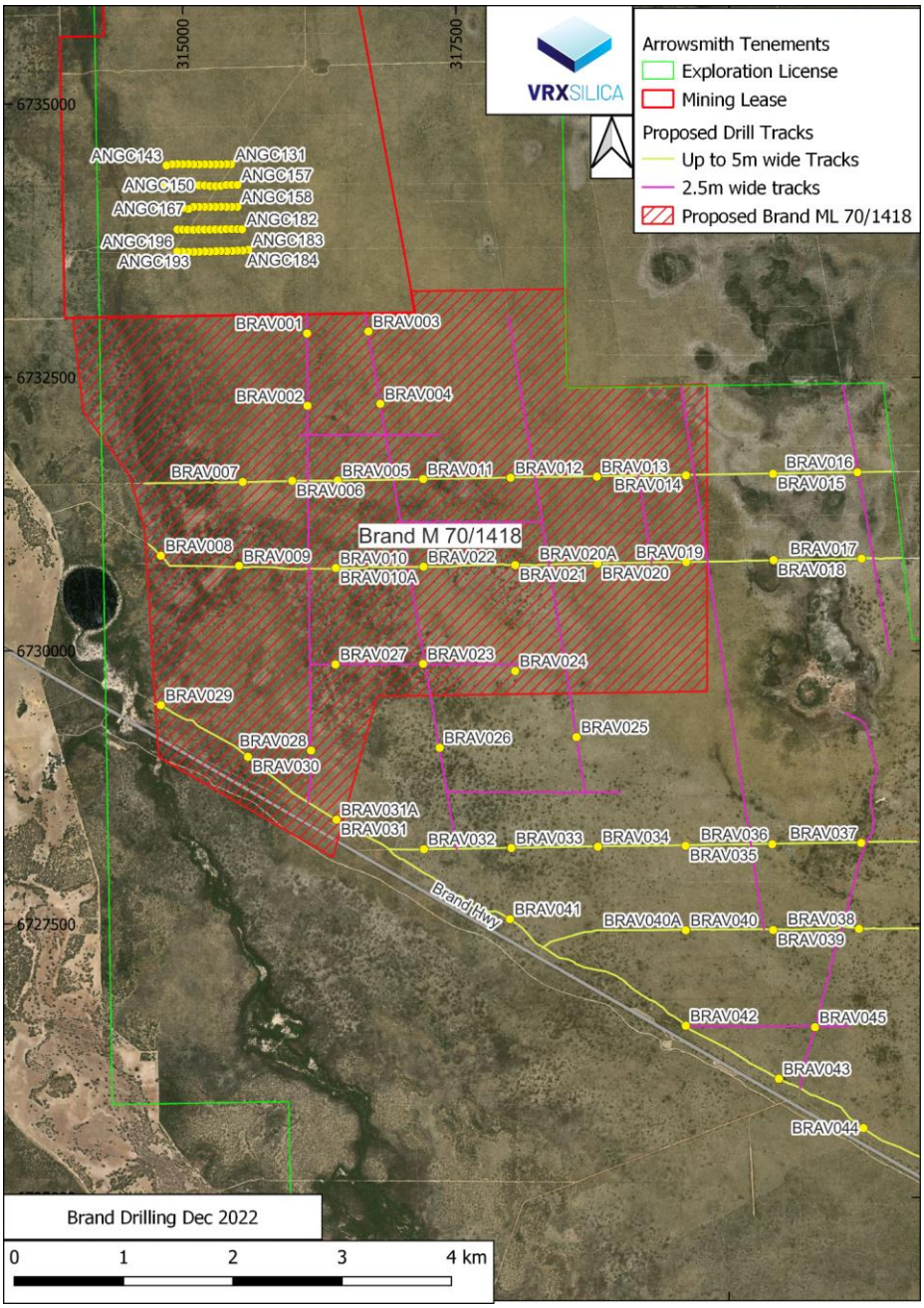


Figure 2 – December 2022 Drill hole locations.

The Arrowsmith Brand MRE is reported in accordance with the JORC Code 2012 Edition. Drilling was completed generally on an 800m x 800m drill hole grid and defines a band of homogeneous yellow sand overlying white sand. Drilling encountered zones of clay rich fine sand which was excluded from the MRE. The potential silica sand products from Arrowsmith Brand are expected to be suitable for industries such as flat, automobile and container glass manufacturing and foundry casting.

The Arrowsmith Brand MRE is shown in Table 2. A drill hole listing is tabulated in Appendix 1 and summary information is included in this announcement and a JORC 2012 Table 1 is included in Appendix 2.

Arrowsmith Brand Mineral Resource Estimate – as at 09/05/2023

Classification	Zone	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Inferred	White	144	98.4	0.8	0.2	0.2	0.4
	Yellow	379	96.9	1.6	0.5	0.2	0.7
	Total	523	97.3	1.4	0.4	0.2	0.6
Increase over Prior Estimate		268	Million Tonnes				

Note: Interpreted mineralisation is above a basal layer of clay and/or limestone. Depletion zones include the upper 0.3 m excluded for rehabilitation purposes. Only areas with a minimum sand depth of 1m were included. Differences may occur due to rounding.* ***Prior estimate is summarised in Table 1.*

Table 2: Brand Mineral Resource

ASX Listing Rule 5.8.1 Summary

The following summary presents a fair and balanced representation of the information contained within the MRE technical report:

Geology and Geological Interpretation

Silica sand mineralisation at Arrowsmith Brand occurs within the coastal regions of the Perth Basin, and the targeted silica sand deposits are aeolian sand dunes that overlie limestones and paleo-coastline.

The geological modelling was completed based on government soil mapping data in conjunction with vacuum and AC drill logging data. The Mineral Resources were estimated using an inverse distance squared grid interpolation informed by domained drill hole composites. The horizontal extents of the interpreted sand layers are limited to an 800m buffer away from drill holes.

The silica sands are covered by a 300 m thick humus layer and are underlain by clay layers and/or limestone.

Drilling Techniques

Drilling over the project area was completed by means of vacuum drilling. Drilling was completed along existing tracks with a drill spacing of 800 m resulting in an effective spacing of 800m x 800m.

Drill hole depths range between 2 m and 26 m with an average depth of 13.2 m. All holes were drilled vertically.

Drill hole collar locations are shown in Figure 2, with the full drill hole listing in Appendix 1.

Sampling and Sub-sampling Techniques

Vacuum drilling samples are 1 m down hole intervals with sand collected from a mounted vacuum flask, approximately 2kg (representing 100% of the drilled sand) was collected. Two sub-samples, A and B, of approximately 200 g were taken from the drill samples. Samples were bagged and ticketed with sample numbers prior to transport to the analytical laboratory.

Sample Analysis Method

The “A” samples from all drilling were submitted to Intertek Laboratory, located in Maddington, W.A. The samples were dried and then pulverised in a zircon bowl to reduce the particle size to -75 µm. Multi-element analysis from the pulverised samples was completed by an initial

four-acid digest including Hydrofluoric, Nitric, Perchloric and Hydrochloric acids in Teflon tubes. The digest was then analysed by means of Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry (ICP-OES) analysis. Loss on Ignition at 1000°C (LOI) was analysed by Thermal Gravimetric Analyser (TGA). Silica is then reported by difference (SiO2 % = 100% - (LOI % + Major oxides)).

The assay results have also undergone internal laboratory quality assurance (QA), which includes the analysis of standards, blanks, and repeat quality control (QC) samples. Standards were included in the drill sample submissions at a ratio of 1:20. Field duplicate samples were submitted in a ratio of 1:20, and the laboratory routinely duplicated analyses from the pulverised samples at a ratio of 1:25.

An analysis of all the QC data was undertaken and validates the drill assay dataset for use in the Mineral Resource estimate.

Estimation Methodology

A regularized 50m spaced square grid was created over the project extent. Grades interpolated onto the gride include SiO_2, Al_2O_3, Fe_2O_3, LOI (1000°C), and TiO_2. Grades from composited data were interpolated into the parent cells by inverse distance squared. Grid values were estimated using a search ellipse of 800 m.

Hard boundary estimation was used when estimating by domaining the interpolated layers from the drill hole assays such that samples from one sand domain could not be used to interpolate other domains.

A dry bulk density value of 1.66 t/m^3 was applied to all blocks in the white and yellow sand domains.

Mineral Resource Classification

The Mineral Resource has been classified based on the guidelines specified in The JORC Code. The classification level is based upon an assessment of geological understanding of the deposit, geological and mineralisation continuity, drillhole spacing, QC results, search and interpolation parameters and an analysis of available density information. JORC Code Clause 49 was also considered when classifying the Mineral Resource.

All material within the Arrowsmith Brand Mineral Resource is classified as Inferred.

Silica sand Mineral Resources must be reported at least in terms of purity and size distribution, in addition to SiO_2 and tonnes, and should also take account of logistics and proximity to markets. Likely product specifications for the Arrowsmith North deposit are applicable for the Arrowsmith Brand deposit and supported by the results of the composite sample process test work program undertaken between 2018 and 2021.

Cut-Off Grades

No cut-off grades were used for reporting the Mineral Resource. The Mineral Resource is reported from all classified blocks with interpolated SiO_2 grades.

Modifying Factors

VRX has completed metallurgical test work on composites of selected drill hole samples during 2018, 2019 and 2021 to gain knowledge of attributes including final product size distribution, purity and particle shape, so as to allow consideration of potential product specifications and general product marketability. This testwork is considered applicable to the Arrowsmith Brand

material as prior testwork included samples from within this MRE. Discussion of results is presented in JORC Table 1 (Section 3), in Appendix 2.

The Competent Person is of the opinion that process test work on the composite drill samples indicates the Arrowsmith Brand deposit should be suitable for the eventual production of silica sand for glass, ceramic and foundry markets. In addition, project location and logistics support the classification of the Arrowsmith Brand deposit as an industrial Mineral Resource in terms of Clause 49 of the JORC Code.

Reasonable Prospects Hurdle

The Competent Person deems that there are reasonable prospects for eventual economic extraction on the following basis:

- Available process testwork indicates that likely product qualities for glass, ceramics and foundry sand are considered appropriate for eventual economic extraction from Arrowsmith Brand.
- Potentially favourable logistics and project location support the classification of the Arrowsmith Brand deposit as an industrial Mineral Resource in terms of JORC Clause 49.
- The deposit is located adjacent to major road and rail infrastructure, and is 270 km north of Perth, which offers a large and suitably qualified workforce to develop the Project.
- The Mineral Resource has no overburden (excluding a shallow zone of sand to be retained for rehabilitation purposes) and is of shallow depth.

Resource Estimation Methodology

Drilling was logged by colour and reviewed for iron content and 3 domains were created;

- **white sand** <2,000ppm Fe_2O_3
- **yellow sand** >2,000ppm <10,000ppm Fe_2O_3
- **high iron sand** >10,000ppm Fe_2O_3. The high iron sand coincided with other elevated minerals included Al_2O_3, CaO_3, TiO_2 and LOI.

Resource modelling was completed on these three interpreted domains.

A grid interpolation of each domain was performed on a 50 by 50m grid overlaid on the drilling area with a 800m extended buffer, see Figure 3. Drilling composites were created for each domain representing the depth and average assay for the major elements, including LOI, the SiO_2 grade was determined by difference. The grid points were determined using an inverse distance squared weighting to interpolate the grid values. Grid point data was exported to excel to report the global averages for each domain.

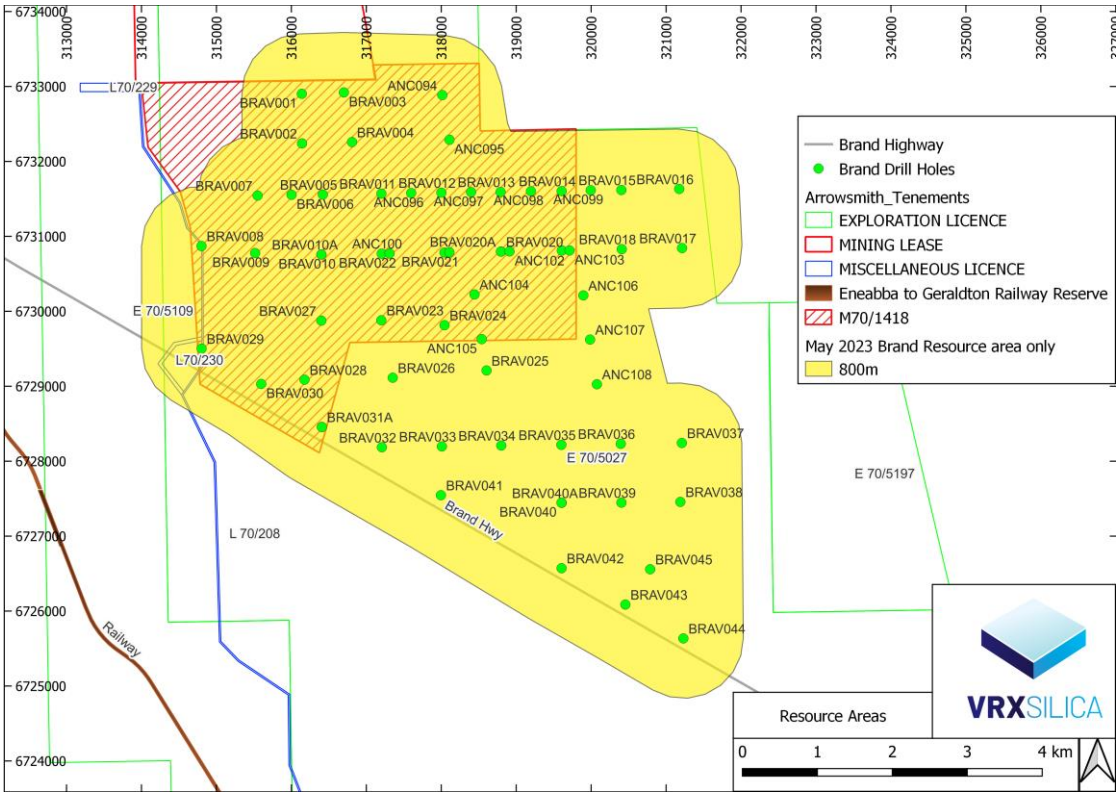


Figure 3 - 800m buffer around December 2022 Drilling

For reporting purposes the MRE was restricted to a maximum distance of 400m from drill holes and a minimum of 200m from the north side of the Brand Highway, Figure 4, the area within the existing Arrowsmith North MRE was also excluded.

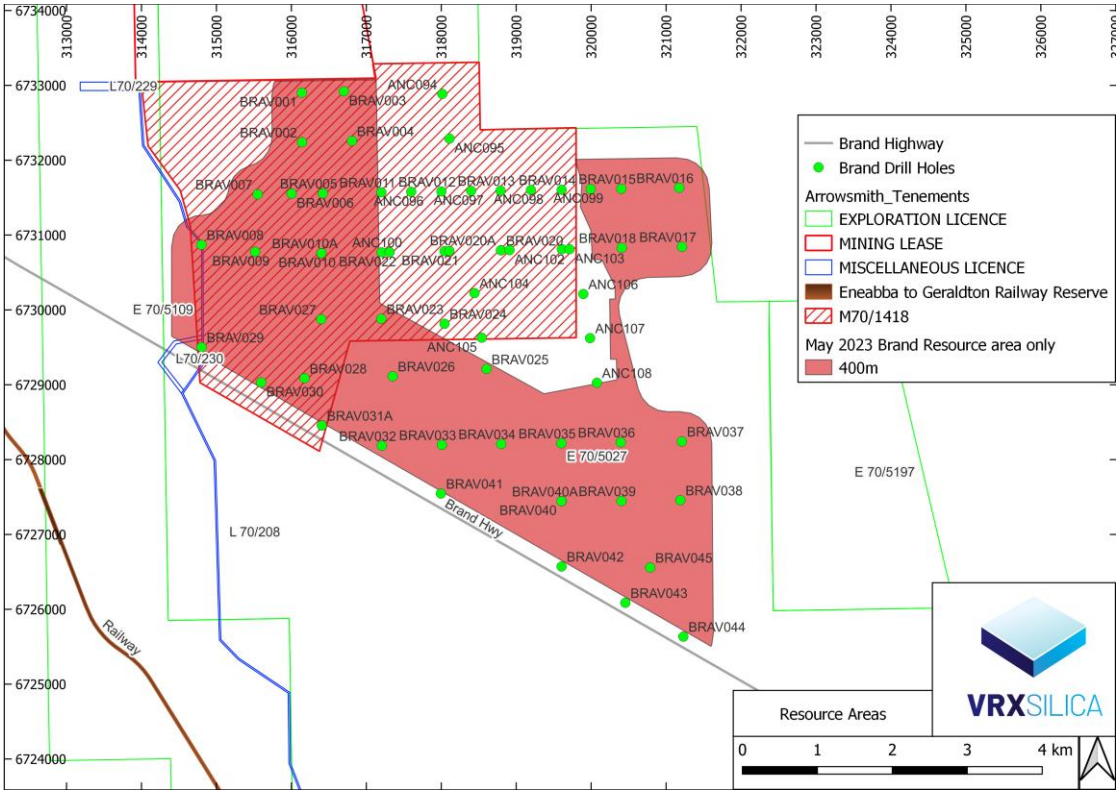


Figure 4 - 400m buffer around December 2022 drilling and 200m north of Brand Highway

Future Work

VRX has lodged a mining lease application over 1,995 Ha, details Table 3 see Figure 1. The application is in the final stages of the DIMRS process and the Company expects grant in the near term. Once granted VRX expects to advance the project using the well known process that has been followed at the 3 other silica sand projects that are currently being actively developed. These activities include; environmental surveys, further metallurgical testwork, marketing studies and mine planning studies, which will inform scoping and pre-feasibility studies.

Tenement	Holder	Application date	Grant Date	Area (Ha)
M 70/1418	Ventnor Mining Pty Ltd	01/08/2022	Pending	1,995

Table 3: Arrowsmith Brand tenement application details

VRX Silica Limited – Summary of Silica Sand Mineral Resources and Ore Reserves

Mineral Resources - as at 09/05/2023

Project	Classification	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Muchea	Indicated	29	99.6	0.1	0.0	0.1	0.2
	Inferred	179	99.6	0.1	0.0	0.1	0.2
	Total	208	99.6	0.1	0.0	0.1	0.2
Arrowsmith North	Measured	10	95.9	1.9	0.7	0.3	0.7
	Indicated	237	97.7	1.0	0.4	0.2	0.5
	Inferred	266	98.4	0.7	0.3	0.2	0.4
	Total	513	98.0	0.9	0.3	0.2	0.4
Arrowsmith Brand	Inferred	523	97.3	1.4	0.4	0.2	0.6
	Total	523	97.3	1.4	0.4	0.2	0.6
Arrowsmith Central	Indicated	28.2	96.6	1.7	0.4	0.2	0.7
	Inferred	48.3	96.9	1.5	0.4	0.2	0.7
	Total	76.5	96.8	1.5	0.4	0.2	0.7
Boyatup	Inferred	60	67.8	0.8	0.2	0.1	0.9
	Total	60	67.8	0.8	0.2	0.1	0.9

Total Mineral Resource 1,381 Million Tonnes

Ore Reserves

Project	Classification	Product	Mt	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Muchea	Probable	F80	10.2	99.9	0.02	0.008	0.03	0.1
		F80C	4.25					
		F150	4.25	99.8	0.07	0.015	0.035	0.1
Muchea Ore Reserve			**18.7**	**Million Tonnes**				
Arrowsmith North	Proved	AFS20	0.8	99.5	0.25	0.07	0.05	0.1
		AFS35	3.9	99.5	0.5	0.06	0.05	0.1
		AFS55	2.7	99.2	0.5	0.1	0.05	0.1
		Local	1.8					
	Proved Ore Reserve		**9.2**	**Million Tonnes**				
	Probable	AFS20	24.2	99.5	0.25	0.07	0.05	0.1
		AFS35	102.5	99.5	0.5	0.06	0.05	0.1
		AFS55	51.1	99.2	0.5	0.1	0.05	0.1
		Local	34.1					
	Probable Ore Reserve		**212**	**Million Tonnes**				
Arrowsmith North Ore Reserve			**221**	**Million Tonnes**				
Arrowsmith Central	Probable	CF400	4.2	99.6	0.25	0.04	0.03	0.1
		C20	8.4					
		C40	4.2					
		High TiO_2	2.2			<1%	2%	
Arrowsmith Central Ore Reserve			**18.9**	**Million Tonnes**				
Total Ore Reserve			**259**	**Million Tonnes**				

Competent Person's Statement and Notice

The information in this document that relates to Arrowsmith Brand Exploration Results and Arrowsmith Brand Mineral Resource Estimate is based on data collected under the supervision of Mr David Reid, in his capacity as Exploration Manager. Mr Reid, BSc (Geology), is a registered member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and the activity being undertaken to qualify as a Competent Person under the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Reid consents to the inclusion of the data in the form and context in which it appears.

The information in this document that relates to the estimation and reporting of the Mineral Resources and Ore Reserves for the Company's projects are extracted from releases to ASX on 28 August 2019 and 11 November 2022 (Arrowsmith North), 15 August 2019 and 17 September 2019 (Arrowsmith Central), 18 October 2019 (Muchea) and 18 August 2022 (Boyatup). The Company confirms that it is not aware of any new information or data that materially affects the information included in this document and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

This announcement has been authorised for release to ASX by the Board of Directors.

Further information:

Bruce Maluish
Managing Director
brucem@vrxsilica.com.au
0418 940 417

Peter Klinger
Cannings Purple
pklinger@canningspurple.com.au
0411 251 540

APPENDIX 1 – Drill Hole Listing

Hole_ID	MGA_Nth	MGA_East	RL	Hole_Depth	Date Drilled
BRAV001	6732902	316139	38.3	15	9/12/2022
BRAV002	6732240	316142	37.6	14	9/12/2022
BRAV003	6732920	316700	43.7	17	9/12/2022
BRAV004	6732258	316809	39.1	16	9/12/2022
BRAV005	6731557	316419	36.3	7	9/12/2022
BRAV006	6731554	316002	38.1	7	9/12/2022
BRAV007	6731544	315549	39.1	16	9/12/2022
BRAV008	6730870	314800	31	8.1	9/12/2022
BRAV009	6730777	315516	34.3	6	10/12/2022
BRAV010	6730757	316400	36.4	7.2	10/12/2022
BRAV010A	6730757	316401	36.4	7.2	10/12/2022
BRAV011	6731570	317201	39.8	17	10/12/2022
BRAV012	6731582	318001	46.5	24	10/12/2022
BRAV013	6731592	318791	49.5	19.5	10/12/2022
BRAV014	6731604	319606	45.1	14	10/12/2022
BRAV015	6731618	320403	40.9	10	10/12/2022
BRAV016	6731632	321175	43.4	8.5	10/12/2022
BRAV017	6730843	321213	42.9	8	10/12/2022
BRAV018	6730829	320408	40.4	8	10/12/2022
BRAV019	6730811	319608	51.1	26	10/12/2022
BRAV020	6730797	318797	49.4	25	11/12/2022
BRAV020A	6730796	318796	49.4	25	11/12/2022
BRAV021	6730784	318043	38.7	15	11/12/2022
BRAV022	6730769	317205	39.6	17	11/12/2022
BRAV023	6729880	317200	37	9	11/12/2022
BRAV024	6729814	318043	39.9	17	11/12/2022
BRAV025	6729210	318604	42	19	11/12/2022
BRAV026	6729113	317352	38.9	10	11/12/2022
BRAV027	6729875	316399	36	8	11/12/2022
BRAV028	6729087	316175	36.9	10	11/12/2022
BRAV029	6729502	314801	34.1	5	12/12/2022
BRAV030	6729030	315597	35.6	4	12/12/2022
BRAV031	6728456	316406	45.3	7	12/12/2022
BRAV031A	6728455	316407	45.3	4	12/12/2022
BRAV032	6728185	317207	38.5	11	12/12/2022
BRAV033	6728196	318008	40.5	2	12/12/2022
BRAV034	6728208	318800	43.3	20	12/12/2022
BRAV035	6728217	319602	44.7	13	12/12/2022

Hole_ID	MGA_Nth	MGA_East	RL	Hole_Depth	Date Drilled
BRAV036	6728231	320395	47	6.5	12/12/2022
BRAV037	6728242	321210	48.3	13.2	12/12/2022
BRAV038	6727456	321190	49.9	10	12/12/2022
BRAV039	6727446	320404	47.7	23.5	12/12/2022
BRAV040	6727444	319606	45.7	20	12/12/2022
BRAV040A	6727444	319604	45.7	19	12/12/2022
BRAV041	6727545	317995	39.6	18	13/12/2022
BRAV042	6726571	319605	45	13	13/12/2022
BRAV043	6726086	320456	48.6	14.5	13/12/2022
BRAV044	6725634	321230	51.7	20	13/12/2022
BRAV045	6726557	320787	49.5	14	13/12/2022

APPENDIX 2 – JORC 2012 Table 1

Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Vacuum drilling samples are 1 m down hole intervals with sand collected from a mounted vacuum flask, approximately 2kg (representing 100% of the drilled sand) was collected. Two sub-samples, A and B, of approximately 200 g were taken from the drill samples. Samples were bagged and ticketed with sample numbers prior to transport to the analytical laboratory. The remaining bulk sample is retained for each 1m interval for metallurgical testwork. The "A" sample was submitted to the Intertek Laboratory in Maddington, Perth for drying, splitting (if required), pulverisation in a zircon bowl and a specialised silica sand 4 acid digest and Inductively Coupled Plasma Mass Spectrometry analysis. The targeted mineralisation is unconsolidated silica sand dunes, the sampling techniques are "industry standard". Due to the visual nature of the material, geological logging of the drill material is the primary method of identifying mineralisation. The Competent Person is satisfied that the sampling techniques are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Drilling techniques	Vertical 75mm sized vacuum drilling was completed by a Contract Drilling Company using a tractor mounted vacuum drill rig. The Competent Person is satisfied that the drilling techniques are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Drill sample recovery	Aircore: • Visual assessment and logging of sample recovery and sample quality. • Reaming of hole and clearance of drill string after every 3m drill rod. • Sample vacuum flask cleaned regularly to prevent sample contamination. • No relationship is evident between sample recovery and grade. The Competent Person is satisfied that the sample recoveries are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Logging	Geological logging of drill samples is done by the field geologist with samples retained in chip trays for later interpretation. Logging is captured in an Excel spreadsheet, validated and uploaded into an Access database. This information is of a sufficient level of detail to support the Mineral Resource estimate. The Competent Person is satisfied that the geological logging techniques are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Subsampling techniques and sample preparation	The full vacuum drill sample is retained in a calico bag resulting in 2kg of dry sample, 2 x 200g sub-samples, A and B, are taken from the drill sample. The A sample is submitted to the laboratory and the B sample is retained for repeat analysis and QA/QC purposes. The bulk sample is retained for later metallurgical testwork. The sample size is considered appropriate for the material sampled. The 200g samples are submitted to the Intertek Laboratory in Maddington. Intertek use a zircon bowl pulveriser to reduce the particle size to -75µm. The Competent Person is satisfied that the sub-sampling techniques and sample preparation are appropriate for this style of deposit, and for use in Mineral Resource estimation.

Criteria	Commentary
Quality of analytical data and laboratory tests	Samples were submitted for analysis to the Intertek Laboratory in Maddington in Perth WA. The assay methods used by Intertek are as follows: multi-elements are determined by a specialised four-acid digest including Hydrofluoric, Nitric, Perchloric and Hydrochloric acids in Teflon tubes. Analysed by Inductively Coupled Plasma Mass Spectrometry, silica is reported by difference. The assay results have also undergone internal laboratory quality assurance (QA), which includes the analysis of standards, blanks, and repeat quality control (QC) samples. The Company has been validating a high-purity silica standard that was created for the Company by OREAS Pty Ltd. This was required as there is no commercial standard available for high purity silica sand. The standard was "round robin" assayed at several laboratories in Perth prior to the commencement of drilling. The standard was then included in the drill sample submissions to Intertek, in sequence, on a ratio of 1:20. Field duplicate samples were submitted in a ratio of 1:20 and in addition to this Intertek routinely duplicated analysis from the pulverised samples in a ratio of 1:25. The number of QC samples therefore represents ~14% of the total assays. A full analysis of all the QC data has been undertaken. This analysis validates the drill assay dataset and conforms with the guidelines for reporting under the JORC Code. The Competent Person is satisfied that the QA procedures put in place are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Verification of sampling and analyses	Significant intersections were validated against geological logging. 10% of all drill holes are twin drilled which shows strong correlation between the paired assays.
Location of data points	Vacuum drill hole locations were measured by hand-held GPS with the expected relative accuracy; GDA94 MGA Zone 50 grid coordinate system is used. The Competent Person is satisfied that the surveying techniques and accuracy of data are appropriate for this style of deposit, and for use in Mineral Resource estimation.
Data spacing and distribution	Vacuum holes were spaced 800m apart along existing tracks. No sample compositing (down hole) has been completed.
Orientation of data in relation to geological structure	Sampling is being undertaken on aeolian sand dunes and all holes were drilled vertically. The drill orientation is therefore considered appropriate to the geological controls affecting mineralisation.
Sample security	All samples are selected onsite under the supervision of VRX Geological staff. Samples are delivered to the Intertek laboratory in Maddington. Intertek receipt received samples against the sample dispatch documents and issued a reconciliation report for every sample batch.
Audits or reviews	There has been no audit or review of sampling techniques and data.

Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	All drilling supporting the Arrowsmith Brand Mineral Resource has been within tenement E70/5027, which is owned by Ventnor Mining Pty Ltd, a 100% owned subsidiary of VRX Silica Limited. The tenement was granted 14 June 2018 and all drilling was conducted on vacant crown land.
Exploration done by other parties	Minor exploration for oil and gas, and for mineral sands was completed by various companies. Other than work completed by VRX, no exploration for silica sand has been completed.
Geology	Most economically significant silica sand deposits in Western Australia are found in the coastal regions of the Perth Basin, and the targeted silica sand deposits are the aeolian sand dunes that overlie Pleistocene limestones and paleo-coastline, which also host the regional heavy mineral deposits. Within the project area, data obtained from the Department of Agriculture soil mapping shows there are pale and yellow deep sands predominating with lesser swampy areas and occasional iron rich sand ridges. Locally the silica sand deposit is understood to be layered where yellow sand is deposited it is underlain by white sand. The silica sand deposit is bounded at depth by a basal limestone which is closer to the surface in the south and deeper in the north.
Drillhole information	Not relevant. Exploration results are not being reported. Mineral Resources are being disclosed (see Section 3). Sample and drillhole coordinates are provided in Appendix 1.
Data aggregation methods	Not relevant. Exploration results are not being reported. Mineral Resources are being disclosed (see Section 3).
Relationship between mineralisation widths and intercept lengths	Not relevant. Exploration results are not being reported. Mineral Resources are being disclosed (see Section 3).
Diagrams	Refer to figures within the main body of this report.
Balanced reporting	Not relevant. Exploration results are not being reported. Mineral Resources are being disclosed (see Section 3).
Other substantive exploration data	Geological observations are consistent with aeolian dune mineralisation. Seven, certified, dry *in situ* bulk density measurements were completed by Construction Sciences Pty Ltd using a nuclear densometer. Groundwater was intersected in only a few holes that were drilled deeper deliberately to ascertain the position of the water table. The water table is typically below 15m depth. The mineralisation is unconsolidated sand. There are no known deleterious substances.
Further work	VRX has lodged a mining lease application over 1,995 Ha, details within the main body of this report. The application is in the final stages of the DIMRS process and the Company expects grant in the near term. Once granted VRX expects to advance the project using the well known process that has been followed at the 3 other silica sand projects that are currently being actively developed. These activities include; environmental surveys, further metallurgical testwork, marketing

Criteria	Commentary
	studies and mine planning studies, which will inform scoping and pre-feasibility studies

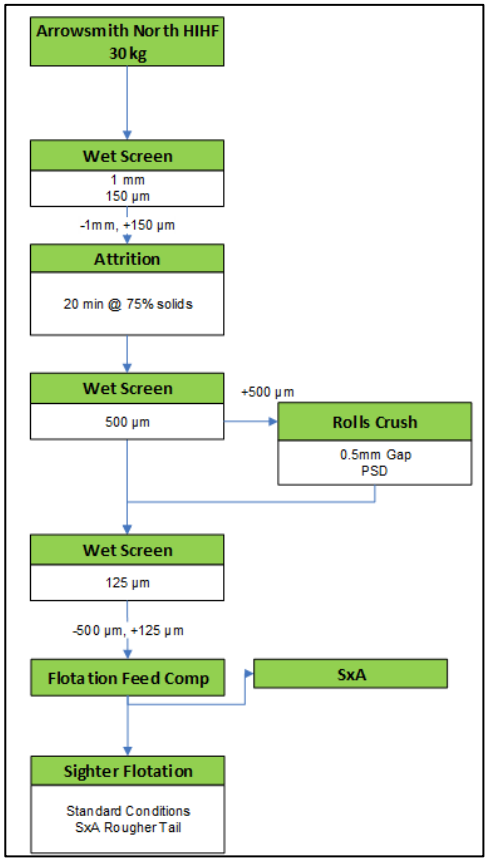
Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Database integrity	Data used in the Mineral Resource estimate is sourced from a Microsoft Excel database. Relevant tables from the Microsoft Excel database are converted exported to csv format for import into QGIS. Validation of the data imported comprises checks for overlapping intervals, missing survey data, missing analytical data, missing lithological data, and missing collars.
Site visits	The Competent Person is an employee of VRX and has made multiple site visits over many years to the Project.
Geological interpretation	Silica sand mineralisation at Arrowsmith Brand occurs within the coastal regions of the Perth Basin, and the targeted silica sand deposits are the aeolian sand dunes that overlie the limestones and paleo-coastline. Within the project area, data obtained from the Department of Agriculture soil mapping shows there are pale (logged by VRX as white sands) and yellow deep sands predominating, with lesser swampy areas and occasional iron rich sand ridges. The geological modelling was completed based on this soil mapping data in conjunction with the vacuum drill logging data. Drilling was logged by colour and reviewed for iron content and 3 domains were created; • **white sand** <2,000ppm Fe_2O_3 • **yellow sand** >2,000ppm <10,000ppm Fe_2O_3 • **high iron sand** >10,000ppm Fe_2O_3. The high iron sand coincided with other elevated minerals included Al_2O_3, CaO_3, TiO_2 and LOI. Resource modelling was completed on these three interpreted domains. The surface humus layer is typically about 300mm thick, this material eas excluded from the modelling and material reporting Despite both white and yellow sands being readily amenable to beneficiation, they have been separately modelled, based on the drill logging data and mapped soil type boundaries, as they are separately estimated due to differences in grades of the various mineral components. Assumptions have been made on the horizontal extents of the mineralisation based on the soil mapping data and the spacing and extents of the drilling information. A nominal maximum horizontal extrapolation limit of 800m past known drill data points has been applied with the material types additionally constrained within the VRX nominated target area and by the mapped material type boundaries. The vertical extents of the sand layers have been limited by interpretation of the nominal average thickness of each layer based on data from the deeper drilled aircore holes. Alternative interpretations based on the currently available data are considered unlikely to have a significant influence on the global Mineral Resource.

Criteria	Commentary
	Continuity of geology and grade can be identified and traced between drillholes by visual and geochemical characteristics. Confidence in the grade and geological continuity is reflected in the Mineral Resource classification.
Dimensions	The modelled and classified extents of the yellow and white sand material within the target area are roughly 10 km north to south, and on average roughly 4km west to east. The modelled aeolian sand is roughly horizontal, with low relief. The currently modelled thickness of the sands is on average about 10m, ranging up to a nominal maximum thickness of 25m.
Estimation and modelling techniques	A grid interpolation of each domain was performed on a 50 by 50m grid overlaid on the drilling area with a 800m extended buffer. Drilling composites were created for each domain representing the depth and average assay for the major elements, including LOI, the SiO_2 grade was determined by difference. The grid points were determined using an inverse distance squared weighting to interpolate the grid values. Grid point data was exported to excel to report the global averages for each domain. For reporting purposes the MRE was restricted to a maximum distance of 400m from drill holes and a minimum of 200m from the north side of the Brand Highway the area within the existing Arrowsmith North MRE was also excluded. Modelling validation was carried out visually and graphically to ensure that the modelled grade reasonably represents the drillhole data. These visual checks confirm the model reflects the trends of grades in the drillholes. No reconciliation data is available as no mining has taken place.
Moisture	Tonnages have been estimated on a dry, *in situ,* basis. The sampled sand material was generally reasonably dry, with data collected from the density testing of seven intervals showing an average moisture content of 2.9%.
Cut-off parameters	No cut-off parameters have been applied, as both sand types appear to be readily amenable to beneficiation to a suitable product specification through relatively simple metallurgical processes as demonstrated by reported metallurgical testing results.
Mining factors or assumptions	The Project aims to mine high-grade silica sand via extraction and mechanical upgrading. Potential mining would involve sequential block mining of silica sand, development of a mine feed plant, moveable surface conveyor, pipeline, processing plant, freshwater supply bore, access corridor, laydown, administration, water storage and associated infrastructure including a gas fired power station, communications equipment, offices, workshop and laydown areas. The deposit is amenable to a shallow excavation where the upper surface is removed and continuously rehabilitated and are economic to exploit to the depths currently modelled. The deposit will be bulk mined and processed and therefore no requirement for minimum mining widths and dilution needs to be made. No mining has yet taken place.
Metallurgical factors or assumptions	VRX has completed a definitive metallurgical testwork program for Arrowsmith North that is repeated in full below. The Competent Person is satisfied that these testwork results are applicable to Arrowsmith Brand and for use in Mineral Resource estimation. 2018 testing: A composite auger sand sample from Arrowsmith North was tested in Ireland. The sample was screened at 4mm to remove oversize particles. The

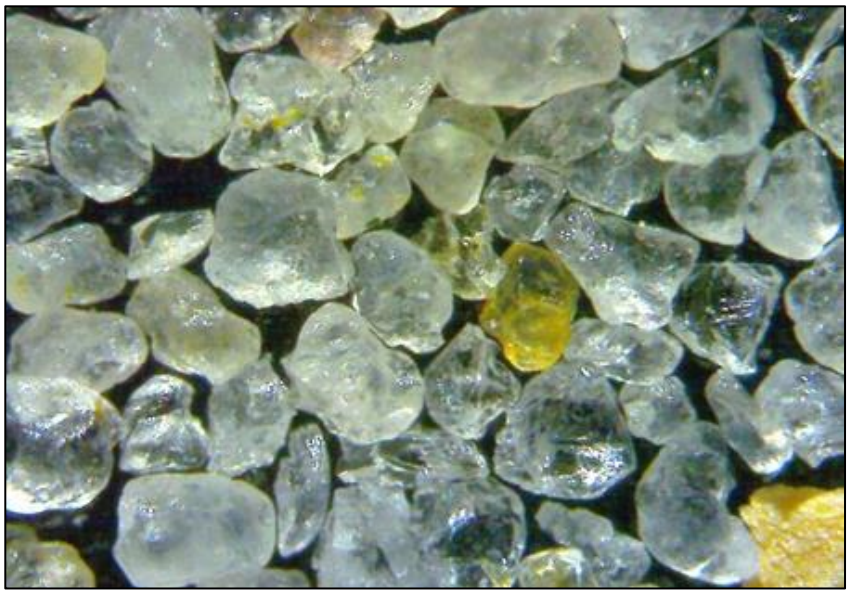
Criteria	Commentary
	remaining material was then subjected to an attrition process followed by spiral and magnetic separation methods. Attrition testing was carried out a retention period of 5 minutes, with the sample washed after attritioning to remove any liberated fine particles. Spiral testing was then carried out with approximately 80kg of attritioned material, after which the samples then underwent wet magnetic separation to explore the possibility of reducing the magnetic mineral content. Chemical analysis showed a general decrease in the Al_2O_3. Processing, attritioning and washing the material removed the largest fraction of Al_2O_3. The spiral separation process produced samples where the largest fraction of Al_2O_3 was found in the heavy mineral fraction. Magnetic separation resulted in the largest fraction of Al_2O_3 being in the magnetic fraction. The results for Fe_2O_3 follow the same general trend as for Al_2O_3. The percentage fraction of SiO_2 in the samples increased during the test process. Attritioning and washing the material removed fines and silt, which increased the SiO_2 content. The spirals test produced samples where the largest fraction of SiO_2 was found in the light fraction. Magnetic separation indicated that the largest fraction of SiO_2 was in the middling fraction. 2019 testing: raw material remaining from 2018 was removed from storage and was screened at 1mm to remove oversize material and organics. The sand was then wet screened through a 0.212mm sieve and PSD test run which showed that the +0.212 mm material contains some fines (3.25% passing the 0.212 mm sieve) and in contrast the -0.212mm sample contains a large amount of fines with 27.2% passing the 0.053mm sieve. Chemical analysis showed that the -0.212 mm fraction contains more Al_2O_3 and Fe2O3 than the +0.212 mm fraction, due to higher clay fraction in the finer sample. The 0.212-1 mm fraction was then attritioned for 5 minutes and washed over a 0.063 mm sieve, highlighting that the attrition and washing process removed fine particles, and reduced Al_2O_3, Fe_2O_3 and TiO_2 contents. The 0.212 mm material was then processed in a spirals test unit and three fractions were produced, namely heavy, middling and light. Particle size distribution analysis showed that the heavies contain the highest amount of fines and that the lights contain the lowest amount of fines, probably because fine-grained dense minerals containing Fe and Ti are concentrated with the heavy fraction. This observation was borne out by chemical analysis which showed that Al_2O_3, $Fe_2O_3$and TiO_2 are highest in the heavy fraction. Magnetic separation results in an increase in SiO_2 and a decrease in Al_2O_3, Fe_2O_3 and TiO_2 in the non-magnetic fraction compared with the feed material. The composite sample tested by CDE in 2018 and 2019 indicated that a product with AFS ~45 should be achievable and that some coarser AFS ~20 product may also be achievable. Most foundry sands fall into the range of ~0.1mm to 0.5mm and they are produced to meet specific size distributions which are commonly described by a number known as the 'AFS number'. The higher the AFS number, the finer the sand. Other foundry sand specifications include roundness and sphericity, clay content (generally <0.5%), moisture and SiO_2 content, which should be achievable with suitably processed Arrowsmith North silica sand. It was concluded that Process test work during 2018 and 2019 on composite drill samples indicated that the Arrowsmith North deposit is potentially suitable for producing silica sand for glass, ceramic and foundry markets. 2021 testing by BHM Perth indicated that some process steps could be eliminated from the previous flowsheet. The counter current classification (elutriation) and

Criteria	Commentary
	spiral stages were removed and replaced by flotation. High pressure grinding rolls (HPGR) were added to the flowsheet to crush all -1mm +500 µm sand to minus 500 µm which improved recoveries for glass sand products. The 2021 testing by BHM Perth was carried out on three sand types described by Ventnor as Low Feldspar (LF), Medium Feldspar (MF) and High Iron High Feldspar (HIHF) sands in the deposit. The LF and MF composites were from north of the March 2021 detailed QC drilling area. The HIHF composite was from the southern part of the 2021 drilling area. The HIHF product is higher in fines than LF and MF products. Bulk scale testwork on LF, MF and HIHF composites used a new flowsheet incorporating flotation and crushing as summarised below. **Flowsheet incorporating crushing and flotation**  **Comparison of HIHF with LF and MF products (XRF analyses)**

Stage	Mass	SiO_2	Al_2O_3	Fe_2O_3	K_2O	TiO_2
	%	%	ppm	ppm	ppm	ppm
-0.6, +0.425mm, NF500						
LF Bulk	24.10%	99.548	1,650	550	110	320
MF Bulk	34.50%	99.540	1,730	610	330	310
HIHF	16.85%	99.528	2,290	440	170	300
-0.425mm, +0.150mm, NF55						
LF Bulk	74.20%	99.512	2,106	584	493	320
MF Bulk	64.90%	99.278	3,088	786	1,177	322
HIHF	82.56%	99.084	4,088	563	1,473	302

Photomicrograph of rougher tail (product) from the HIHF composite

Photomicrograph of VRX 'AFS55' foundry sand product, showing sub-rounded quartz grains



BHM and VRX are of the opinion that the revised flowsheet, which includes flotation and high-pressure grinding rolls offers potential cost savings, may have lower environmental impact and should produce products suitable for glass, foundry and other industries. BHM are further of the opinion that the flotation process displays, to a high degree of confidence, that the material and mineralogical nature of the Arrowsmith North Silica Project can be processed to a consistent saleable glass sand product specification via the flotation process proposed.

CSA Global considers that the sample preparation, sample testing and analytical techniques are appropriate for this type of deposit, at this stage of the exploration process.

CSA Global notes that metallurgical (process) test methods can have a significant effect on the quality of concentrate produced at a laboratory scale, and that such

Criteria	Commentary
	tests should be tailored for specific geological and mineralogical conditions and desired product outcomes for specific markets. Therefore, it is cautioned that laboratory process test results used to estimate Mineral Resources for industrial minerals such as silica sand may not reflect either the process flowsheet adopted after completion of technical studies, or the layout of the final process plant. CSA Global is of the opinion that process test work on the composite drill samples indicates that the Arrowsmith North deposit should be suitable for the eventual production of silica sand for glass, ceramic and foundry markets. In addition, project location and logistics support the classification of the Arrowsmith North deposit as an industrial Mineral Resource in terms of Clause 49 of the JORC Code.
Environmental factors or assumptions	VRX is aiming to minimise impacts and speed up ecological recovery by employing modern and innovative mining and rehabilitation techniques. Mining will be progressively rehabilitated using Vegetation Direct Transfer (VDT). VDT is the practice of salvaging and replacing intact sods of vegetation with the underlying soil still intact (Ross et al. 2000). This results in faster regeneration of the ecosystem (Mattiske 2019) and increased survival rates of sensitive plant species that are often missing in other rehabilitation methods (Mattiske 2019, and references within). This form of mining and rehabilitation has the potential to minimise disturbance to fauna and their habitats. This includes minimising impacts to SRE species and allowing establishment and/or recolonisation of invertebrates much faster than traditional methods, as has been shown in trials by Rodgers et al. (2011).
Bulk density	Seven, certified, dry *in situ* bulk density measurements were completed by Construction Sciences Pty Ltd using a nuclear densometer. The results from the seven measurements are corrected based on the measured moisture factor. The mean dry *in situ* density result of 1.66 t/m^3 is used for all modelled material reported in the Mineral Resource estimate.
Classification	Classification of the Mineral Resource estimate was carried out accounting for the level of geological understanding of the deposit, quality of samples, density data and drillhole spacing. The Mineral Resource estimate has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table. Material that has been classified as Inferred was considered by the Competent Person to be sufficiently informed by geological and sampling data to imply but not verify geological and grade continuity between data points. Overall, the mineralisation trends are reasonably consistent over the drill sections. The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits or reviews	Internal audits have been completed by CSA Global for prior estimation and internally by VRX for the Arrowsmith Brand estimation. No external audits have been undertaken.
Discussion of relative accuracy/ confidence	The relative accuracy of the MRE is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code. The Mineral Resource statement relates to global estimates of *in situ* tonnes and grade.

About VRX Silica Limited

VRX Silica Limited (ASX: VRX) is the most advanced pureplay silica sand company listed on the ASX, developing its 100% owned silica sand projects at Arrowsmith (North, Brand and Central), Muchea and Boyatup in Western Australia.

Silica sand is the most used commodity on the planet after air and water. It is the main ingredient in all types of glassmaking, including specialty solar panel and high-tech glass, and foundry casting. It is a finite resource that is running out, with the Asia-Pacific region experiencing an ever-growing supply shortfall that is driving up prices.

Arrowsmith is located 270km north of Perth. Arrowsmith North boasts a minimum 25-year mine life capable of producing more than 2Mt tonnes per year of high-grade (99.7% SiO_2) silica sand for export to the foundry, container glass and flat glass markets in Asia, with permitting well advanced, and will lead production.

Muchea, located 50km north of Perth, is an ultra-high-grade (99.9% SiO_2) silica sand project capable of producing sand required for ultra-clear glass for solar panels and other high-tech glass applications.

Boyatup, located 100km east of Esperance, is under development and capable of producing sand for the glass market.