

8 January 2024

High Grade Silica Flour Testwork Results

Highlights:

- ✓ **Positive preliminary results from specialist comminution testwork**
- ✓ **High yield of preferred product**
- ✓ **50% of costs covered by WA Government Grant**
- ✓ **Results will inform the process circuit design for a High Grade Silica Flour pilot plant**
- ✓ **Economic study underway**

VRX Silica Limited (**VRX** or **Company**) (ASX: VRX) is pleased to announce preliminary results of its specific high-grade silica flour comminution testwork on its Muchea Silica Sand Project products conducted at a specialist laboratory in Germany.

The testwork was to determine the potential yield, quality and power requirements to produce silica flour suitable for the manufacture of LCD glass.

VRX Managing Director Bruce Maluish said:

“We were pleased with the results of the testwork, which were largely in line with our expectations and determined that Muchea silica sand is suitable for producing high grade silica flour for the rapidly expanding LCD glass market.”

“This testwork on Muchea silica sand has also determined the parameters required for an economic assessment into the viability of the potential for a new industry in WA. This will follow the testwork program.”

“The State Government is contributing financially to the testwork program and potentially the required pilot plant through the previously announced Investment Attraction Fund grant.”

“The testwork program also provides a suitable quantity of samples to be forwarded to potential buyers which allows VRX to commence its marketing program for potential end users.”

ASX: VRX

Capital Structure

Shares on Issue:
583 million

Unlisted Options:
57 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.

Geothermal Energy
Dandaragan Geothermal
Energy Permit, 145km
north of Perth, WA

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

Detailed Information

On 15 November 2023, VRX announced¹ it had airfreighted a 1,000kg sample of selected Muchea sand to a specialist testwork laboratory in Germany, to undertake comminution testing to determine the yield and quality of silica flour that can be produced from the raw material selected from the Muchea Silica Sand Project. This testwork follows the grant to VRX² of \$2 million in matched funding under the Investment Attraction Fund (**IAF**), part of the State Government's Diversify WA initiative, a collaboration between government, industry and the community supporting the WA Government's focus on creating secure, quality jobs, growing and diversifying the economy and attracting new investment.

The testwork program followed a typical flow sheet of ball mill grinding followed by air classification and sizing to produce the specific particle size required by LCD glass manufacturers. The target specification, provided by VRX, conforms to the requirements of major producers of LCD screens in Asia.

The testing resulted in determining two critical outcomes; the bond work index (BWI) required to reduce the particle size of the Muchea sand feed to that required for the product specification, and the preferred product yield.

The BWI has been determined at 23.7kW/t, with a product yield of 44.1%. These figures are consistent with VRX expectations for this level of study. The BWI now allows VRX to determine a pilot plant scaled list of equipment. It is anticipated that OEM will provide equipment and basic layouts, and VRX will employ a local engineering company to design and construct the pilot plant. Once operational, the pilot plant will be fine-tuned to provide the required specification and an expectation of an increase in product yield.

All testing material and products are being returned to VRX for elemental testing to determine they conform to product specification for key elements, in particular iron. It is not expected that the precursor sand has been significantly changed as all media used in testing was ceramic. Samples of the final products will be sent to the major silica flour customers in Asia to confirm they conform to their specifications. The overground fines, or "by-product", will also be marketed in Asia and in local industries such as fibreglass, paint and epoxy filler applications.

Once the products are received, VRX will consider other downstream processing options. These research and development activities, which start with the production of silica flour, will ultimately result in high value downstream processing opportunities that will maximise the value of VRX's world-class high-quality Muchea Silica Sand Project.

This announcement has been authorised for release to ASX by the Managing Director, Bruce Maluish.

Further information:

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¹ ASX announcement 15 November 2023, "Sample Shipped for High Grade Silica Flour Test Work."

² ASX announcement 18 July 2023, "\$2m Grant to Produce High Grade Silica Sand."

Competent Persons' Statement

The information in this document that relates to Muchea Metallurgical Results are based on data collected and compiled under the supervision of Mr David Reid, who is a full-time employee of VRX Silica. 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 (JORC Code). Mr Reid consents to the inclusion of the data in the form and context in which it appears.

JORC Code 2012 Edition Table 1 Section 1

Sampling Techniques and Data

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

Criteria	Commentary
<i>Sampling techniques</i>	A metallurgical bulk sample was sourced near surface from within the mining lease M70/1390. The sample was representative of near surface geology.
<i>Drilling techniques</i>	No drilling is being reported.
<i>Drill sample recovery</i>	Sub-surface composite sample was excavated from M70/1390.
<i>Logging</i>	No drilling is being reported.
<i>Subsampling techniques and sample preparation</i>	Sample was prepared by screening at Nagrom in Perth WA to provide a 1,000kg sample despatched to the Germa specialised metallurgical laboratory.
<i>Quality of analytical data and laboratory tests</i>	Metallurgical grinding to determine yield of specified product and determination of BMI.
<i>Verification of sampling and analyses</i>	No sample analysis was done.
<i>Location of data points</i>	No drilling is being reported.
<i>Data spacing and distribution</i>	No drilling is being reported.
<i>Orientation of data in relation to geological structure</i>	No drilling is being reported.
<i>Sample security</i>	The bulk sample was collected under supervision by VRX Staff.
<i>Audits or reviews</i>	No drilling is being reported.

JORC Code 2012 Edition Table 1 Section 2

Reporting of Exploration Results

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

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	The metallurgical bulk sample was collected within Tenement M70/1390, which is owned by Wisecat Pty Ltd a 100% owned subsidiary of VRX Silica Limited.
<i>Exploration done by other parties</i>	All exploration on the tenement has been completed by VRX.
<i>Geology</i>	<p>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 at Muchea are hosted by the Bassendean Sand, which extends over large areas of the Swan coastal plains of the Perth Basin.</p> <p>The term Bassendean Sand was introduced in 1972 (Playford, P. E., and Low, G. H. 1972. Definitions of some new and revised rock units in the Perth Basin: Western Australia. Geological Survey, Annual Report for 1971, p. 44–46) for the widespread unit of quartz sand extending over large areas of the coastal plain, from about 23 km north of Jurien, to about 15 km southwest of Busselton.</p> <p>Quartz grains of the Bassendean Sand are interpreted as being derived from granitic rocks in the Darling Range and have accumulated as shoreline and dune sands during two or more periods of relatively stable sea level, ranging from about 8 to 25 m above present sea level.</p> <p>According to published reports (e.g. GSWA Bulletin 21) the Bassendean Sand is typically clean, well rounded and well sorted; however, its physical, chemical, and mineralogical characteristics can vary. The sand is generally white near surface but at depth it is usually high in iron and yellow to brown in colour.</p>
<i>Drillhole information</i>	No drilling is being reported.
<i>Data aggregation methods</i>	Exploration results are not being reported.
<i>Relationship between mineralisation widths and intercept lengths</i>	Exploration results are not being reported.
<i>Diagrams</i>	No required.
<i>Balanced reporting</i>	Exploration results are not being reported.
<i>Other substantive exploration data</i>	The metallurgical bulk sample was collected to undertake comminution testing to determine the yield and quality of silica flour that can be produced from the raw material. The sample was processed at Nagrom for preconditioning prior to shipping to Germany.
<i>Further work</i>	Product samples will be forwarded to potential customers for feedback on suitability for future supply.

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% SiO₂)* 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% SiO₂)* 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.



*Information relating to grades are extracted from releases to ASX on 28 August 2019 and 11 November 2022 (Arrowsmith North) and 18 October 2019 (Muchea). The company is not aware of any new information or data that materially affects this information.

VRX Silica Limited

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