

26 February 2019

Latest Testwork and Product Catalogues from Arrowsmith and Muchea

Highlights:

- **Improved results from all projects with grades reaching:**
 - **Muchea: +99.9% SiO₂ (<80ppm Fe₂O₃)**
 - **Arrowsmith North: 99.7% SiO₂**
 - **Arrowsmith Central: 99.6% SiO₂.**
- **Expanded product catalogue including:**
 - **High-Grade products used for ultra-clear glass from Muchea;**
 - **Glassmaking products from Arrowsmith and Muchea;**
 - **Foundry sand products from Arrowsmith.**
- **Preferred circuit design established.**
- **Process plant engineering to be completed March 2019.**
- **In-fill drilling planned for March 2019.**

VRX Silica Limited (**VRX Silica** or **Company**) (ASX: VRX) is pleased to announce the results from its testwork program to produce silica sand products from its Arrowsmith Silica Sand Project, located 270km north of Perth, WA, and its Muchea Silica Sand Project, 50km north of Perth.

The Company has completed its third iteration of testwork on each of its projects: Arrowsmith North, Arrowsmith Central and Muchea Silica Sand Projects.

VRX Silica Managing Director Bruce Maluish said: *“The results from this testwork are a culmination of three iterations during the past year to both determine the optimum products from each of the projects and to contribute to the final circuit design.”*

“There are two products from each of Arrowsmith and Muchea for the glassmaking industry, and four products from Arrowsmith for the foundry industry,” said Maluish.

A catalogue has now been produced and forwarded to our potential customers.

Based on this testwork, the circuit design for the processing plant has been finalised, while the engineering work by CDE Global (**CDE**) is nearing completion.

ASX ANNOUNCEMENT

ASX: VRX

Capital Structure

Shares on Issue:
366 million

Unlisted Options:
63 million

Corporate Directory

Paul Boyatzis

Non-Executive Chairman

Bruce Maluish

Managing Director

Peter Pawlowitsch

Non-Executive Director

John Geary

Company Secretary

Company Projects

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

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

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

Biranup base metals and gold Project adjacent to the Tropicana Gold Mine, WA, (subject to option with MCT).

Warrawanda Nickel Project south of Newman, WA.

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

The engineering works include:

- Concept flow sheets (mass and water balance);
- Equipment list (containing power demand);
- Site Drawings;
- Capex Estimate +/- 15%;
- Concept Construction and Installation schedules.

Test Work Program

Composite samples from all projects were sent to world leading sand testing laboratory CDE (www.cdeglobal.com), in Cookstown, Northern Ireland, for testing. An initial testwork program was completed and the results announced on *20 September 2018 (Silica Sand Bulk Testwork Results)*. The results demonstrated that glass-quality silica sand could be produced from Muchea, Arrowsmith North and Arrowsmith Central Projects. This outcome enabled the estimation of Mineral Resources for the three projects (announced *20 November 2018, 2 October 2018, and 13 December 2018* respectively).

The table below summarises the Company's current silica sand resources:

Table 1: Summary of Silica Sand Mineral Resources

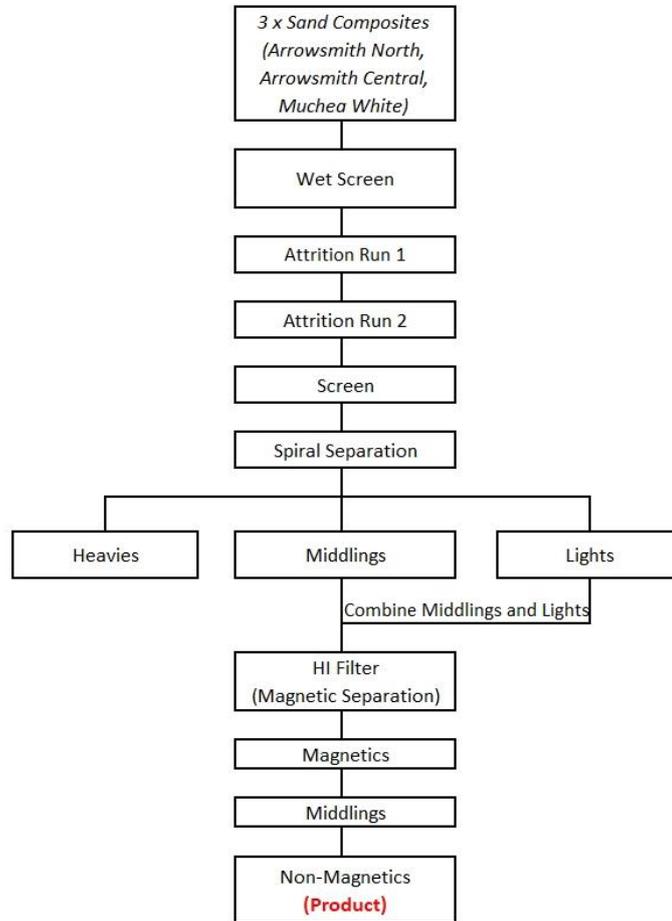
Project Name	Indicated		Inferred		Total	
	Mt	SiO ₂ %	Mt	SiO ₂ %	Mt	SiO ₂ %
Arrowsmith North			193.6	98.0%	193.6	98.0%
Arrowsmith Central			28	97.7%	28	97.7%
Muchea	19	99.7%	172	99.6%	191	99.6%
Total	19	99.7%	393.6	98.8%	412.6	98.7%

A refined testwork flow sheet was developed after reviewing the results of the initial program (see Figure 1). The major changes in this program have been the increase in attritioning (twice), and the inclusion of a range of magnetic intensities in the magnetic separator, HI Filter.

Attritioning is a high energy interaction of grains rubbing on grains which liberates attached fine particles and reduces particle size by breakage on corners and grain boundaries. This reduces contaminants and improves particle shape.

Figure 1: Testwork Flow Sheet

CDE Phase 3 Testwork Program



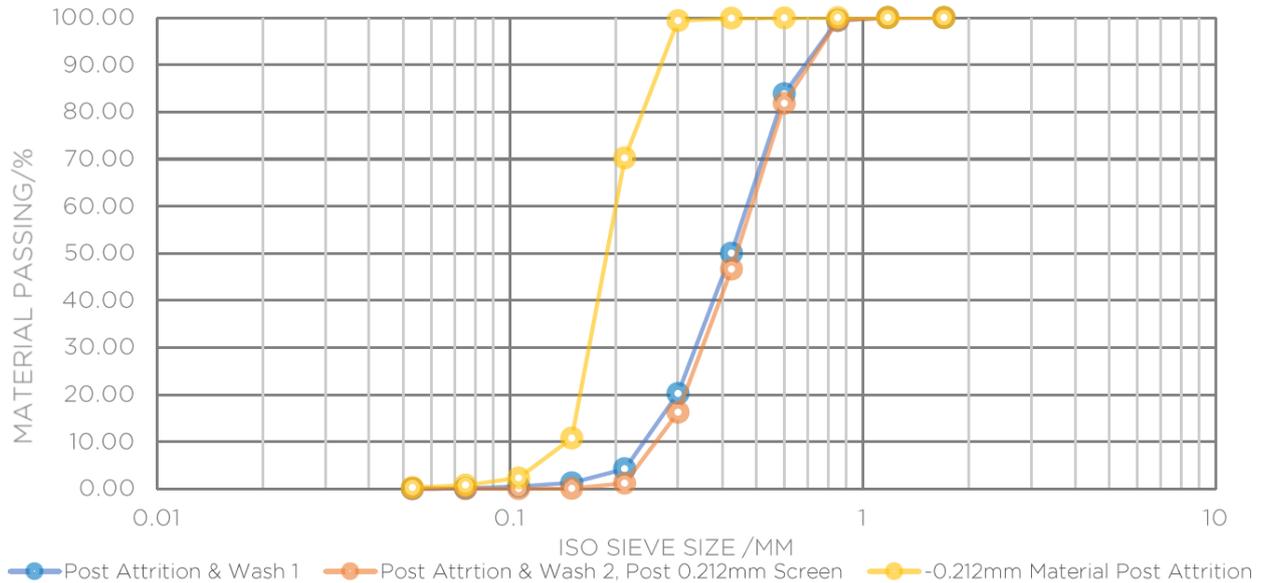
The CDE attrition cells are a high-energy paddle cell (see Figure 2), which works at a high-density slurry of 75% solids.

Figure 2: Attrition cells



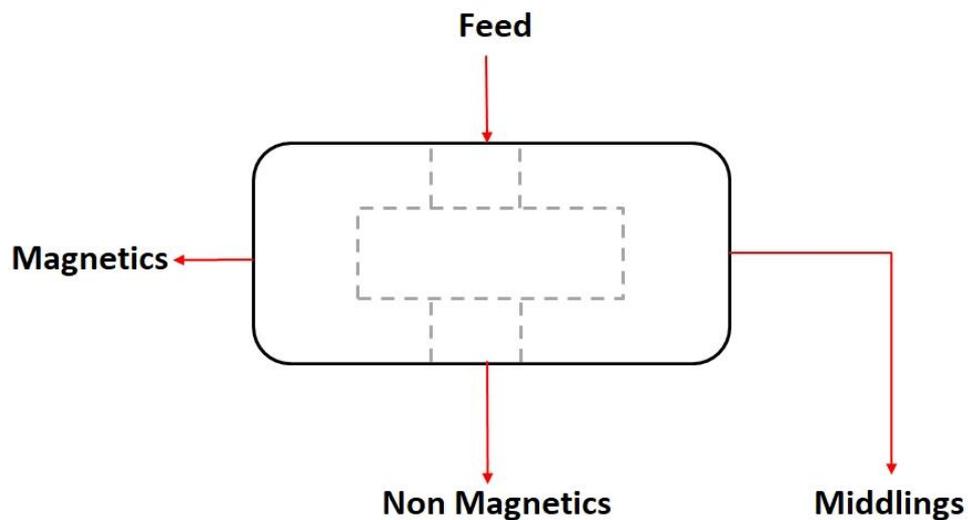
The latest program introduced a second stage of attritioning which showed positive results, see Figure 3.

Figure 3: Results of attritioning



The other major change was a range of magnetic intensities using a HI Filter magnetic separator to determine the effectiveness in reducing iron levels. The HI Filter process, illustrated in Figure 4, uses a magnetised mesh to separate feed material into three distinct fractions: magnetics, middlings, and non-magnetics. The material which passes freely through the magnetised filter is “non-magnetic” since the magnetic field has little or no effect on the material. The HI Filter is then flushed, which releases lightly magnetic particles to a separate stream labelled “middlings.” Finally, the Hi Filter is de-energised and a combination of water and compressed air is used to discharge the magnetic particles which have collected in the matrix; this material is collected and labelled “magnetics.”

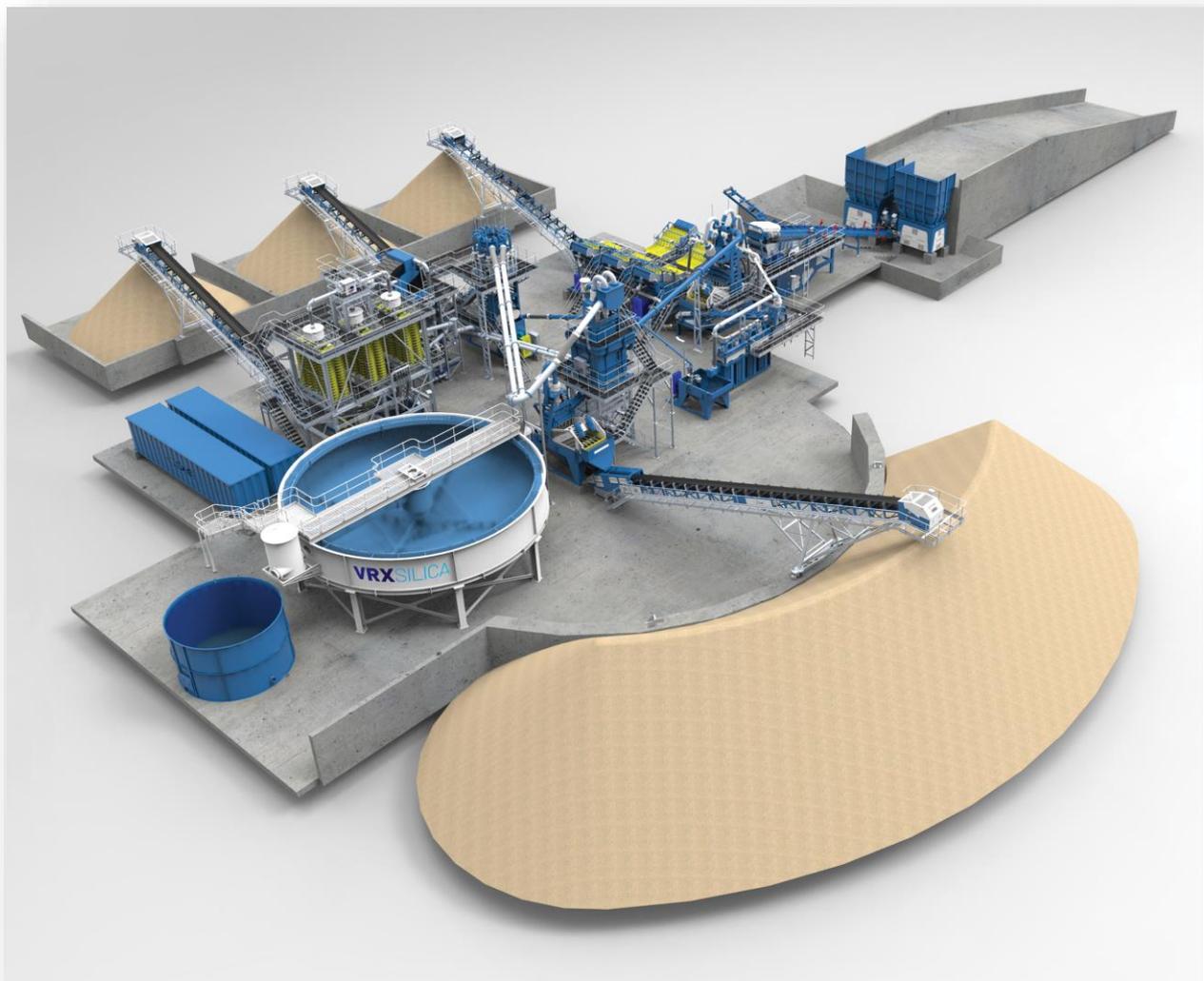
Figure 4: Schematic of Hi Filter process



The testwork program also incorporated a significant increase in sizing and sample analysis to better understand the physical and chemical properties of the sand at all stages of the testwork program. This detailed information has allowed for a refinement of the process flow design and the creation of a catalogue of products that are possible to be produced from the three projects.

Based on this testwork, the circuit design for the processing plant has been finalised and the engineering work by CDE is nearing completion. An image of a conceptual processing plant is shown in Figure 5.

Figure 5: Conceptual sand processing plant



The Company is now able to generate a catalogue of products that can be produced from the three projects. These products are designed to supply the Glass-Making Industry and Foundry Industry with the products presented below. The individual Technical Data Sheets for each product are available on the Company's website www.vrxsilica.com.au.

Representative samples of these products can be sent to potential customers upon request.

Silica Sand Catalogue – Glass Sand

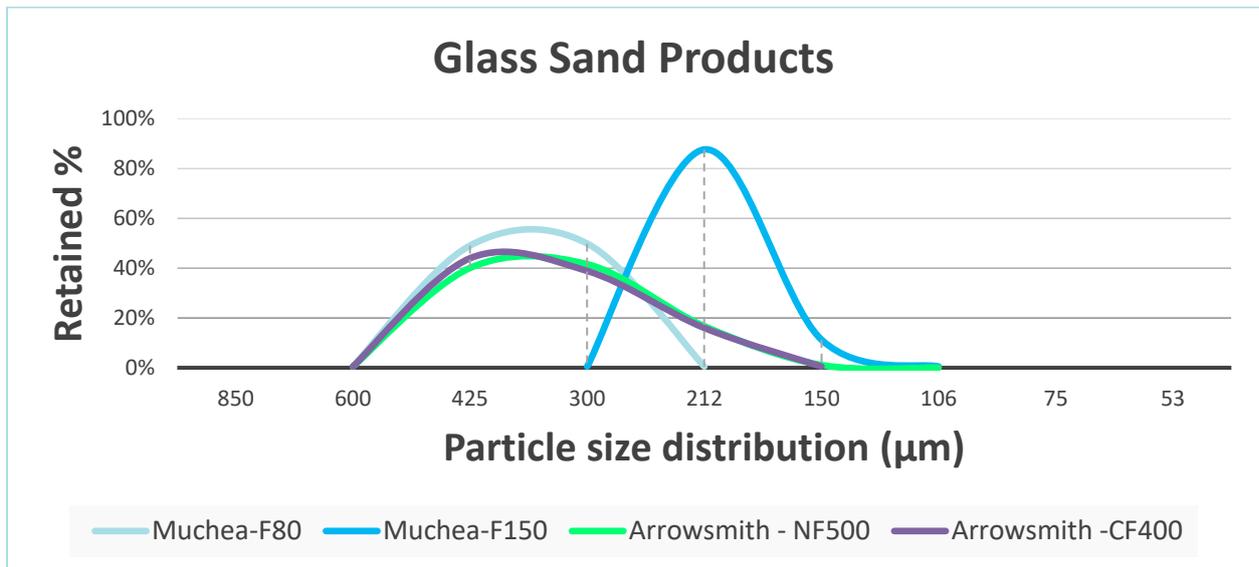
Chemical Composition (%)

Product	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O
Muchea-F80	+99.9	0.02	0.008	0.030	0.005	0.001	0.004
Muchea-F150	99.8	0.07	0.015	0.035	0.020	0.001	0.004
Arrowsmith-NF500	99.7	0.20	0.050	0.035	0.010	0.002	0.030
Arrowsmith-CF400	99.6	0.25	0.040	0.030	0.005	0.001	0.050

Particle Size

Sieve Opening / μm Retained

Product	850	600	425	300	212	150	106	75	53
Muchea-F80		0.5%	49%	50%	0.5%				
Muchea-F150				0.5%	88%	11%	0.5%		
Arrowsmith-NF500		0.5%	40%	42%	17%	1%	0%		
Arrowsmith-CF400		0.5%	44%	39%	16%	0.5%			



Physical Properties

Product	Density	Hardness	Colour	Ph	Moisture	LOI
Muchea-F80	2.65	7	White	7	<5%	0.1
Muchea-F150			White			
Arrowsmith-NF500			Cream			
Arrowsmith-CF400			Cream			

Silica Sand Catalogue – Foundry Sand

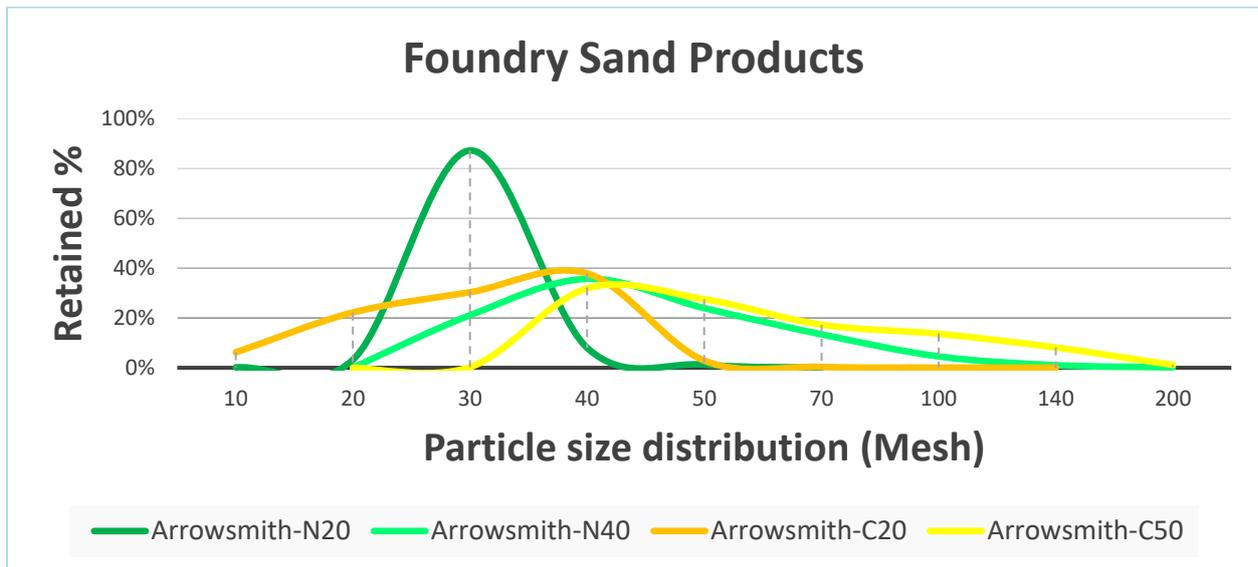
Chemical Composition (%)

Product	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O
Arrowsmith-N20	99.7	0.20	0.05	0.035	0.010	0.002	0.03
Arrowsmith-N40	99.7	0.20	0.05	0.035	0.010	0.002	0.03
Arrowsmith-C20	99.6	0.25	0.04	0.030	0.005	0.001	0.05
Arrowsmith-C50	99.6	0.25	0.04	0.030	0.005	0.001	0.05

Particle Size

Sieve Opening / Mesh Retained

Product	10	20	30	40	50	70	100	140	200	AFS No
Arrowsmith-N20	0.1%	3%	87%	8%	1%	0.1%				21
Arrowsmith-N40		0%	21%	36%	24%	13%	5%	1%	0%	36
Arrowsmith-C20	6%	22%	30%	38%	3%	0.3%	0.1%	0%		22
Arrowsmith-C50		0%	0.3%	32%	28%	17%	14%	8%	1%	49



Physical Properties

Product	Density	Hardness	Colour	Ph	Moisture	LOI
Arrowsmith-N20	2.65	7	Cream	7	<5%	0.1
Arrowsmith-N40			Cream			
Arrowsmith-C20			Cream			
Arrowsmith-C50			Cream			

Future Work

Aircore drilling of all three projects is planned to commence March 2019 to infill, extend and upgrade the JORC status for each of the existing Resources. As results become available the Mineral Resource Estimates for each project will be updated.

Competent Persons Statements

The information in this document that relates to Arrowsmith Exploration Results 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 Mineral Resources is based on information compiled by Mr Grant Louw who is a full-time employee of CSA Global, under the direction and supervision of Dr Andrew Scogings who is an Associate of CSA Global. Dr Scogings is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. He is a Registered Professional Geologist in Industrial Minerals. Dr Scogings has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Dr Scogings consents to the disclosure of information in the form and context in which it appears.

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About VRX Silica

VRX Silica Ltd (**VRX Silica**) (**ASX: VRX**) has significant silica sand projects in Western Australia.

The Arrowsmith Silica Sand Project, located 270km north of Perth, comprises four granted exploration licences with one exploration licence and two mining lease applications pending. The Muchea Silica Sand Project, located 50km north of Perth, comprises one granted exploration licence, with one exploration licence and one mining lease applications pending. Testwork has confirmed a range of silica sand products which are capable of production at both projects. Further work is underway to enable feasibility studies to be completed.

The recently purchased Boyatup Silica Sand Project, located 100kms east of Esperance, comprises one granted exploration licence. Since acquisition the Company has applied for an extension exploration license. Initial indications are that this project will complement both Arrowsmith and Muchea while adding to the silica products VRX Silica will look to produce.

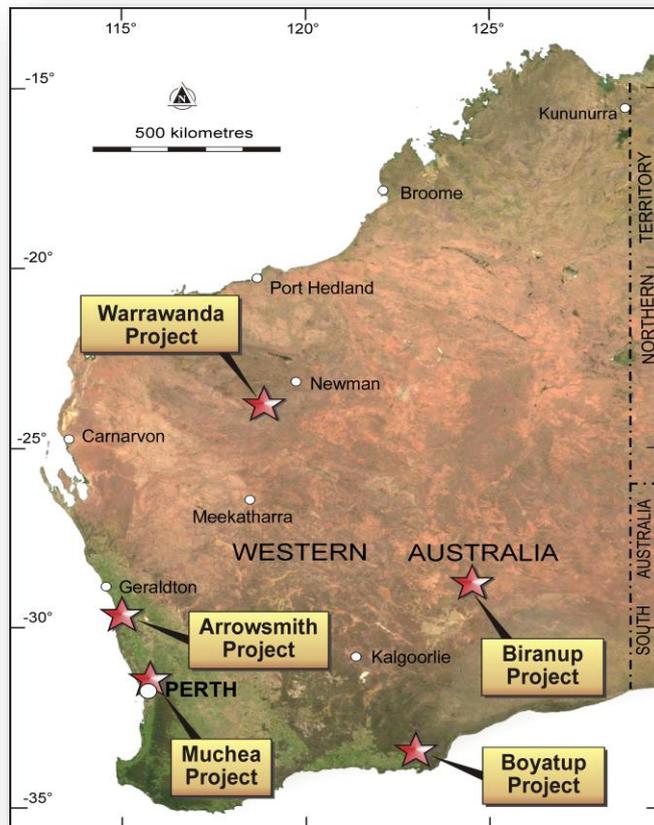
VRX Silica also has granted tenements at its Biranup Project, adjacent to the Tropicana Gold Mine in Western Australia's Goldfields that are prospective for gold and base metals, which are currently under option for partial sale and farm-in joint venture.

Also in Western Australia, 40km south of Newman, is VRX Silica's Warrawanda Nickel Project, which is prospective for nickel sulphides.

Proven Management

The VRX Silica Board and management team have extensive experience in mineral exploration and mine development into production and in the management of publicly listed mining and exploration companies.

Project Locations



VRX Silica Limited

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