



VRXSILICA

Silica Sand Projects **Factsheet**

Supplying
Global
Demand

ASXVRX

Arrowsmith

CSA Global: Arrowsmith North Silica Sand Resource

Domain	Million Tonnes*	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	LOI%	TiO ₂ %
Yellow Sand	149.4	97.7	1.1	0.4	0.5	0.2
White Sand	44.2	99.1	0.3	0.1	0.2	0.2
All Sand	193.6	98.0	0.9	0.3	0.4	0.2

* Inferred

CDE Global: Bulk Testwork results

Sample Description	Al ₂ O ₃ ppm	Fe ₂ O ₃ ppm	K ₂ O ppm	TiO ₂ ppm	LOI _{1000C} %	SiO ₂ Calc.	SiO ₂ + LOI
Raw Material	11,313	3,885	881	1,096	0.58	97.67	98.25
Non-magnetic	1,797	414	276	198	0.09	99.63	99.72

CSA Global: Arrowsmith Central Mineral Resource

Domain	Million Tonnes*	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	K ₂ O	LOI%	TiO ₂ %
All Sand	28	97.7	1.2	0.3	0.3	0.5	0.2

* Inferred

CDE Global: Bulk Testwork results

Sample Description	Al ₂ O ₃ ppm	Fe ₂ O ₃ ppm	K ₂ O ppm	TiO ₂ ppm	LOI _{1000C} %	SiO ₂ Calc.	SiO ₂ + LOI
Raw Material	12,684	2,452	3,270	1,889	0.57	97.35	97.92
Non-magnetic	2,566	341	785	267	0.13	99.5	99.6

Sand crisis hits construction workers hard in Madurai

What has made the (sand) th...

(manufactured sand, is available in from desirable.

Running out of sand: in numbers

We illustrate the depletion of one of the world's most sought-after commodities of the 21st century: sand.

travel are the most-ext... While sand... seem like an abundant resource, ... than its

Muchea

CSA Global: Muchea Silica Sand Resource

Classification	Million Tonnes	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	LOI%	TiO ₂ %
Indicated	19	99.7	0.03	0.03	0.2	0.08
Inferred	172	99.6	0.04	0.02	0.2	0.08
Indicated + Inferred	191	99.6	0.04	0.02	0.2	0.08

CDE Global: Bulk Testwork results

Sample Description	Al ₂ O ₃	Fe ₂ O ₃	K ₂ O	TiO ₂	LOI _{1000C}	SiO ₂ Calc.	SiO ₂ + LOI
	ppm	ppm	ppm	ppm	%		
Raw Material	562	175	54	414	0.23	99.64	99.87
Non-magnetic	262	68	38	179	0.1	99.84	99.94

THIS WEEK IN ASIA

THE WORLD IS RUNNING OUT OF A RESOURCE, AND IT'S NOT OIL

A looming shortage of sand – a crucial resource once thought endless – could sink infrastructure projects, including those in the Belt and Road Initiative.

The world is facing a global sand crisis

The Conversation, September 8, 2017

When people picture sand spread across idyllic beaches and endless deserts, they understand to think of it as an abundant resource. But evidence strongly suggests that sand is becoming increasingly scarce in many regions, and governments are making a great effort to quantify how infrastructure systems such as roads and buildings are affected. In between, the world is facing a global sand crisis.

Demand for sand leads to global ecological crisis

Monday 8 February 2018

A shore thing

An improbable global shortage: sand

Thanks to booming construction activity in Asia, sand is in high demand

The economist

Significant silica sand resources ready to supply global shortage

INVESTMENT HIGHLIGHTS



Portfolio of highly prospective silica sand assets



Looming global product shortage is driving up prices



Western Australia ideally positioned for Asian markets



Silica sand is a strong growth mineral with many uses:

- *Glassmaking (double glazing, automobiles in China and India)*
- *Containers (increasingly replacing plastic)*
- *Specialty glass (solar panels)*
- *Foundry sand (demand increasing in India)*

CAPITAL STRUCTURE

Share Code (ASX)	VRX
Shares on Issue	400 m
Options issued	68.1 m
ASX 52 week high/low	\$0.056/\$0.19
Cash	\$1.2 m
Debt	Nil
Market Capitalisation	\$24 m

As at 30 April 2019

Reliable Supply Reliable Quality

Directors

Paul Boyatzis
Non-Executive Chairman

Bruce Maluish
Managing Director

Peter Pawlowitsch
Non-Executive Director

Share Registry

Computershare
Investor Services

ASX: 1300 850 505

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