

12 October 2017

## **ASX ANNOUNCEMENT**

# **New Arrowsmith Silica Sand Project**

- Potential for significant silica sand resources
- Asian supply deficit predicted in near term for silica sand
- Growing demand for glass manufacturing, concrete and tech metals
- Unique logistics solution with rail transecting the project area

Ventnor Resources Ltd (**Ventnor**) (ASX: VRX) announces a new silica sand project at Arrowsmith, 270km north of Perth, WA.

During the June quarter Ventnor applied for three Exploration Licenses totaling 350 km<sup>2</sup> holding significant sand prospects.

Arrowsmith could address dwindling sand supply in the Asia-Pacific region used in glass manufacturing, concrete construction and as a tech metal.

Supply deficits are due to Asian regional governments acknowledging sand as a strategic resource. Prior mining activities such as river dredging have caused environmental damage. Coastal developments are increasing, reducing access to resources, as is social pressure on often illegal sand mining operations.

Asian demand is increasing for energy-saving double glazing and for applications within the expanding automobile industry in China and India.

Demand is increasing for high purity silica sand in the production of Photo Voltaic panels and Silicon-Metal composite material for high capacity Lithium-ion rechargeable batteries.

Demand for sand in current burgeoning infrastructure-construction programs utilising concrete in Asia - particularly China, India and Vietnam - has put pressure on suppliers and consequently, on prices.

Preliminary reconnaissance work on the Arrowsmith Project indicates substantial potential for sand resources suitable for both glass making and construction.

Arrowsmith is traversed by the Eneabba-Geraldton rail line, which provides direct access to the ship-loading facilities at the Geraldton Port facilitating a unique logistics solution.

EL applications predominantly cover Vacant Crown Land, are extensively covered by cleared tracks from historic oil exploration seismic surveys, and easily accessed by the adjacent Brand Highway.

The area potentially has low environmental impact mining propositions; rehabilitation techniques are well established in the industry.

Preliminary assays and testwork indicate that processing to upgrade the silica to glass- making quality will have a low capital intensity, low technical risk and requiring no chemicals.

#### ASX: VRX

# Capital Structure

Shares on Issue 223 million

Unlisted Options 8.75 million

Market Cap @ 1.5¢ a share \$3.5 million (fully diluted)

Cash \$0.7M

## **Corporate Directory**

**Paul Boyatzis** 

Non-Executive Chairman

# Bruce Maluish

Managing Director

# Peter Pawlowitsch

Non-Executive Director

## John Geary

Company Secretary

## **Company Projects**

Ventnor has a continuing royalty on future production by Sandfire from the Thaduna Copper Project in the Doolgunna district, WA.

Biranup base metals and gold Project adjacent to the Tropicana Gold Mine, WA.

Warrawanda Nickel Project south of Newman, WA.

The Company is actively assessing other projects in Australia.



## **SILICA SAND**

## **MARKET DYNAMICS**

- 1. Globally, silica sand is a strong growth mineral due to the demand by the construction sector, wherein its use in the manufacture of flat glass for windows is constant. Greater growth is being felt in the Asian market, particularly China where there is a massive glass manufacturing expansion.
- 2. There's increased demand for specialised plate glass required in double glazing created by Asian/Pacific governments in efforts to reduce energy demands.
- 3. Developing Asian markets have increasing demand for glass in their developing automobile industry.
- 4. New markets address increasing demand for silica sand as a "tech metal" for use in production of Photo Voltaic panels and Silicon-Metal composite material for high capacity Lithium-ion rechargeable batteries.
- 5. Rationalisation of major producers of silica sand has resulted in a relatively small number of sand-producing corporations.
- 6. The market for silica sand in the Asia/Pacific region is forecast to advance 6.1% per year to 138 million metric tons in 2018.
- 7. Silica sand demand by region is shown in table below:

Region	% of Global demand
Asia-Pacific	47%
North America	20%
Western Europe	16%
Eastern Europe	8%
Africa/Middle East	5%
Central and South America	4%

# **SILICA SAND USES**

## Introduction

Quartz is the most common silica crystal and the second most common mineral on the earth's surface. It is found in almost every type of rock: igneous, metamorphic, and sedimentary. While quartz deposits are abundant, and quartz is present in some form in nearly all mining operations, high purity and commercially viable deposits occur less frequently. Silica sand deposits are most commonly surface-mined in open pit operations, but dredging and underground mining methods are also employed.

Silica sand has supported human progress throughout history, being a key raw material in the industrial development of the world, especially in the glass, metal casting, and ceramics industries. Silica contributes to today's information technology revolution, being used in computer components, providing raw materials for silicon chips and as quartz for PV panels.



## Glassmaking

Silica sand is the primary component of all types of standard and specialty glass. It provides the essential  $SiO_2$  component of glass formulation; its chemical purity is the primary determinant of colour, clarity and strength in glass. Industrial sand is used to produce flat glass for building and automotive use, container glass for foods and beverages, and tableware.

## Metal Casting

Industrial sand is an essential part of both the ferrous and non-ferrous foundry industries. Metal parts ranging from engine blocks to sink faucets are cast in a sand-and-clay mould to produce their external shape, using a resin-bonded core to create the desired internal shape. Silica's high fusion point (1,760°C) and low rate of thermal expansion produce stable cores and moulds compatible with all pouring temperatures.

# Metallurgical Uses

In metal production, silica sand operates as a flux to lower the melting point and viscosity of slag to make it more reactive and efficient. Lump silica is used either alone or in conjunction with lime to achieve the desired base/acid ratio required for final purification of metals.

### Chemical Production

Silicon-based chemicals are found in thousands of everyday applications ranging from food processing to soap and dye production. These chemicals are used in products such as household and industrial cleaners, in the manufacture of fibre optics, and to remove impurities from cooking oil and brewed beverages.

## Paint and Coatings

Paint formulators select micron-sized industrial sands to improve the appearance and durability of architectural and industrial paints and coatings. High purity silica produces critical performance properties such as brightness reflectance and colour consistency.

#### Ceramics

Ground silica is an essential component of the glaze and body formulations of all types of ceramic products, including tableware, sanitary ware and floor and wall tile. In the ceramic body, silica is the skeletal structure onto which clays and flux components attach. Silica products are also used as the primary aggregate to provide high-temperature resistance to acidic attack in industrial furnaces.

#### Filtration and Water Production

Industrial sand is used to filter water to become drinkable. Uniform grain shapes and grain size distributions produce efficient filtration bed operations for the removal of contaminants from wastewater to provide potable water. As silica is chemically inert, it will not degrade or react when it comes in contact with acids, contaminants, volatile organics, or solvents.

#### Oil and Gas Recovery

Known commonly as proppant, or "frac sand," industrial sand is pumped down holes in deep well applications to prop open rock fissures to increase the flow rate of natural gas or oil. In this specialised application, round whole-grain sand is used to maximise permeability and to prevent formation cuttings from entering the well bore.



### **CONSTRUCTION SAND**

Construction sand is the primary structural component in a wide variety of building and construction products. Whole-grain silica is used in flooring compounds, mortars, specialty cements, stucco, roofing shingles, skid-resistant surfaces, and asphalt mixtures to provide packing density and flexural strength without adversely affecting the chemical properties of the binding system. Ground silica performs as a functional extender to add durability, anti-corrosion and weathering properties in epoxy-based compounds, sealants and caulks.

## **ASIAN MARKETS**

#### SINGAPORE

Singapore building construction uses one million tonnes of concrete a month, which includes 300,000 tonnes of construction sand. Current sources are Malaysia, Cambodia, Myanmar and occasionally Philippines. Other regional sources have placed restrictions on or have totally banned exports of their local sand. Sources are generally dredged from rivers with consequential unacceptable environmental impacts. The Singapore Building and Construction Authority (BCA) has placed a requirement that 5% of construction sand be imported from "non-traditional" sources which includes Australia. Singapore is concerned that current sources may become unreliable or intermittent and is actively encouraging a greater spread of sources. Importers are concerned that the BCA will raise that requirement to 10% from non-traditional sources, as originally intended. If Singapore continues at its current rate of growth, this could be a significant market for Australian suppliers.

#### INDIA

The building expansion program underway has put incredible pressure on sand suppliers for concrete, so much so that illegal dredging of rivers has resulted in recent public scrutiny of the environmental long-term impacts. This is also potentially a significant market for construction sand.

#### **VIETNAM**

Vietnam has gone from an exporter of industrial sand, to an importer, with increased use in concrete with a significant building boom underway.

Ventnor management believes that the Arrowsmith Project has the potential for significant silica sand resources to supply increasing markets in the Asia-Pacific region for both glass making and construction and increasingly the Tech metal market.



# **Arrowsmith Project Details**

Ventnor Resources has applied for three exploration licenses north of Eneabba, Western Australia, to explore for construction sand and high-quality silica sand. The details of these tenements, known collectively as the Arrowsmith Project, are shown below in Table 1, with the location in Figure 1.

Tenement	Holders	Application Date	Expected Grant Date	Area (Km²)
ELA70/4986	Ventnor Mining Pty Ltd	25/05/2017	Early Q1 2018	93
ELA70/4987	Ventnor Mining Pty Ltd	25/05/2017	Early Q1 2018	86
ELA70/5027	Ventnor Mining Pty Ltd	29/08/2017	Late Q1 2018	179

Table 1 – Arrowsmith Tenement Details

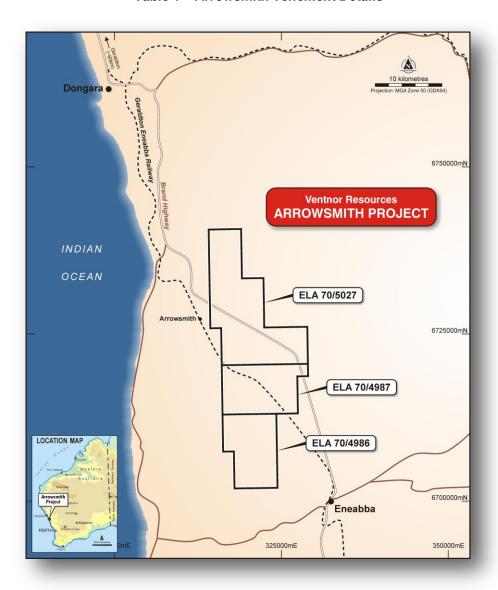


Figure 1 – Arrowsmith Project Location



The targeted silica sand deposits are the aeolian sand dunes that overlie the Pleistocene limestones and paleo-coastline which host the Eneabba heavy mineral deposits.

The Exploration Targets for the Arrowsmith Project are:

Arrowsmith North – 100 Million to 140 Million tonnes high-quality silica sand;

Arrowsmith South – 40 Million to 80 Million tonnes high-quality silica sand.

The potential quality and grade of these Exploration Targets are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource; it is uncertain if further exploration will result in the estimation of a Mineral Resource.

The image (Figure 2) below is a topographic map of the area generated by Shuttle Radar Topography Mission data (**SRTM**). This map was used to identify potential dune structures as topographic highs, which have been followed by ground field investigation and sampling using a hand-held auger.

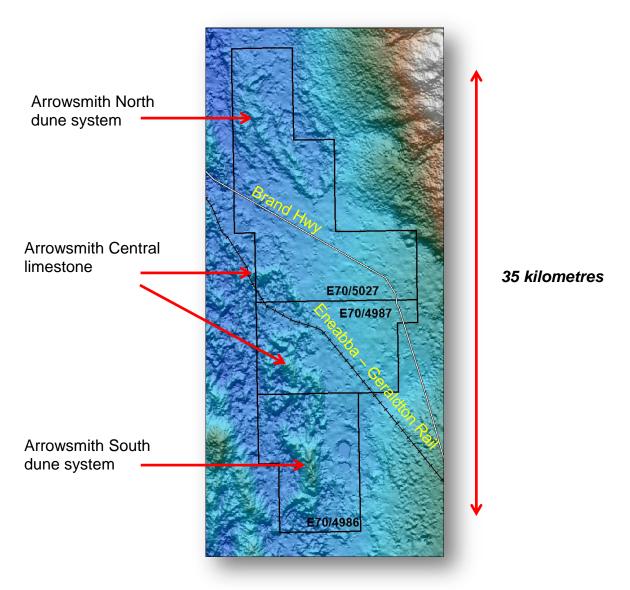


Figure 2 Arrowsmith Project SRTM topography



The image (Figure 3) below is a schematic section showing the silica sand dune that is targeted for exploration. The targeted dune is the area above the surrounding natural surface and well above the standing water table.

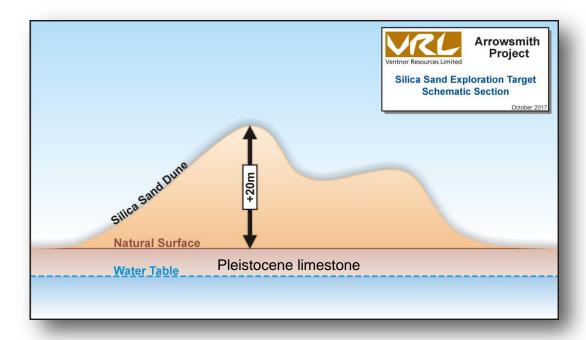


Figure 3 Schematic section of Silica Sand Dune Exploration Target

Three areas were investigated: Arrowsmith North for construction sand which may also be upgraded to glass quality; Arrowsmith Central, which is prospective for sand and also limestone; and Arrowsmith South, prospective for high quality silica sand.

Initial samples were taken by hand auger and selected from below the humus layer, typically the first 30cm. Samples were sent to Intertek Laboratory in Perth for silica sand analysis via a Four-Acid digest and ICP finish. The table below shows the major constituents of the sand, with full analytical results available in the Appendix.



MGA East	MGA_North		SiO2	Al2O3	Fe2O3	K2O	TiO2	LOI-1000C
Zone50	Zone50	Location	%	ppm	%	ppm	ppm	%
317330	6729258	Arrowsmith North	98.40	6,979	0.19	1,885	1,621	0.33
317160	6730256	Arrowsmith North	97.80	10,547	0.36	993	1,155	0.53
316989	6731249	Arrowsmith North	98.00	9,448	0.30	800	1,243	0.48
316818	6732242	Arrowsmith North	96.80	15,988	0.55	1,629	1,636	0.69
316642	6733263	Arrowsmith North	97.30	12,801	0.48	983	1,397	0.63
316319	6735123	Arrowsmith North	97.90	9,826	0.36	881	1,513	0.52
316115	6736295	Arrowsmith North	98.40	7,389	0.26	588	1,102	0.40
316109	6737182	Arrowsmith North	98.20	8,611	0.29	891	1,320	0.40
316584	6737185	Arrowsmith North	96.10	7,538	0.19	3,997	1,264	1.13
316974	6737193	Arrowsmith North	99.10	3,733	0.10	891	874	0.23
317964	6737207	Arrowsmith North	99.00	3,684	0.14	411	1,277	0.31
321170	6731628	Arrowsmith North	99.30	2,653	0.12	213	1,044	0.21
319751	6731161	Arrowsmith North	98.50	6,527	0.24	269	1,092	0.40
318790	6721353	Arrowsmith Central	95.00	25,477	0.58	5,847	1,737	0.98
318383	6721357	Arrowsmith Central	94.90	25,529	0.59	6,663	2,376	0.92
317956	6722076	Arrowsmith Central	95.70	21,472	0.44	7,531	2,079	0.66
316750	6722030	Arrowsmith Central	95.50	21,314	0.42	7,649	1,988	0.83
315686	6725167	Arrowsmith Central	97.30	13,323	0.26	2,121	1,360	0.63
323890	6718805	Arrowsmith Central	99.30	2,898	0.09	677	1,246	0.15
322516	6718792	Arrowsmith Central	98.30	7,907	0.17	2,326	1,268	0.28
321399	6712070	Arrowsmith South	94.90	26,338	0.55	7,923	1,880	0.83
321141	6711127	Arrowsmith South	96.10	18,871	0.43	5,220	1,688	0.82
321295	6710201	Arrowsmith South	97.70	10,848	0.12	5,318	1,611	0.30
321715	6707710	Arrowsmith South	98.30	8,371	0.08	4,554	1,562	0.18
322815	6705357	Arrowsmith South	97.40	11,735	0.34	2,464	2,693	0.52
323118	6704616	Arrowsmith South	97.10	13,528	0.40	2,521	3,146	0.49
323047	6702748	Arrowsmith South	96.60	17,069	0.31	2,934	3,257	0.69
318284	6705732	Arrowsmith South	93.30	35,969	0.61	10,230	2,329	1.04
319519	6705047	Arrowsmith South	95.90	20,165	0.40	7,256	1,784	0.61
318284	6705732	Arrowsmith South	97.60	11,079	0.16	6,018	2,241	0.21
319519	6705047	Arrowsmith South	98.30	6,955	0.14	2,338	2,313	0.39

High grade silica sand is sand which has purity greater than 99.5% SiO<sub>2</sub>. It typically will require processing to remove the various deleterious minerals to achieve the highest possible silica grade. Auger samples were composited into two samples representing "Cream" and "Yellow" sand and supplied to Nagrom Laboratory in Perth to determine the Size by Analysis.

This technique analyses the elemental chemistry of a suite of particle sizes to determine where the deleterious minerals report to. Below is a selected summary of the results; the full table is contained within the appendix.

The results indicate that +90% of the dune sand is sized between +0.212mm and -1mm, preferentially retains the silica sand grains while eliminating many of the impurities.

These preliminary indications are encouraging in that the dune sand located on the Arrowsmith tenements can be upgraded by conventional techniques, to provide a high-grade purity of 99.5% SiO<sub>2</sub> with only nominal amounts of benign deleterious minerals.



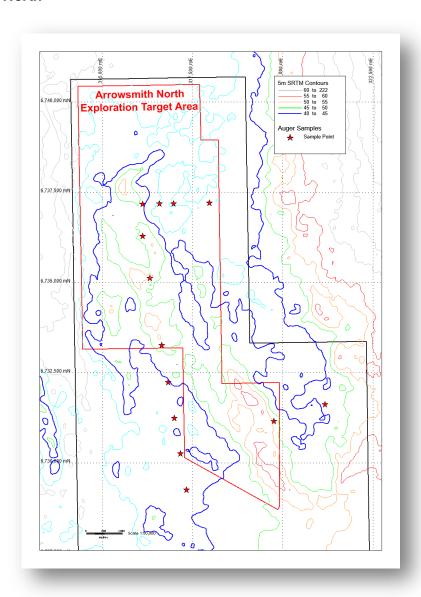
					Size	by Ana	lysis
AMPLE	Mass	$SiO_2$	LOI <sub>1000</sub>	$Fe_2O_3$	$Al_2O_3$	$TiO_2$	CeO <sub>2</sub>
	%	%	%	%	%	%	ppm
rrowsmith	ı North	Cream	Sand				
Assay Hea		98.757	0.22	0.145	0.334	0.104	3.0
Arrowsmit	h North	Cream	Sand Size	e by An	alysis		
Size (mm)							
+1	0.16%	96.054	0.57	2.761	0.335	0.043	<1
+0.5	41.86%	99.319	0.06	0.348	0.181	0.041	<1
+0.355	24.88%	98.918	0.01	0.625	0.220	0.048	<1
+0.212	26.20%	99.047	0.06	0.486	0.272	0.060	<1
+0.106	5.36%	96.879	0.02	1.717	0.566	0.527	3
+0.075	0.43%	91.143	0.16	3.829	1.481	2.057	65
+0.045	0.45%	90.356	0.31	4.127	2.102	1.225	58
+0.038	0.10%	89.604	0.68	4.198	2.557	1.015	50
-0.038	0.55%	81.893	5.03	3.484	5.676	1.303	68
+0.212 - 1mr	n 92.94%	99.135	0.05	0.461	0.217	0.048	<1
rrowsmith	North	Vallow	Sand				
Assay Hea		97.780	0.44	0.328	0.870	0.134	8.0
Assay iica	u	37.760	0.44	0.520	0.070	0.134	0.0
Arrowsmit	h North	Yellow	Sand Siz	e by An	alvsis		
Size (mm)				, , , , , , , , , , , , , , , , , , , ,			
+1	0.67%	96.971	0.09	2.459	0.479	0.063	4
+0.5		98.995	0.11	0.425	0.369	0.050	2
+0.355		98.709	0.10	0.519	0.404	0.064	2
+0.212		98.378	0.09	0.758	0.526	0.087	2
+0.106	3.57%	95.624	0.19	1.511	1.225	0.774	12
+0.075	0.78%	88.111	0.10	4.241	3.257	1.957	96
+0.045	0.34%	89.209	0.57	3.408	3.031	1.341	103
	0.29%	89.694	0.60	3.088	3.303	1.014	67
+0.038							
+0.038	2.23%	58.879	9.97	7.225	20.339	1.575	197



### **EXPLORATION TARGETS**

Exploration Targets for potential high-grade silica sand have been generated for two areas within the Arrowsmith Project: Arrowsmith North and Arrowsmith South, see below:

### **Arrowsmith North**



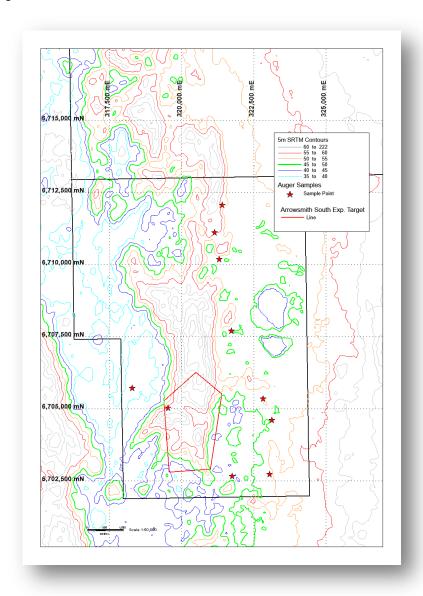
# Arrowsmith North Exploration Target

The Arrowsmith North Exploration Target area focuses on a prominent broad dune structure, (see above), and avoids existing infrastructure and potential conservation areas. The potential volume is estimated from the 40mRL (surrounding RL) to the top of the dune and assumes that between 70% and 100% of the dune is silica sand suitable for processing. The estimate uses an *in-situ* bulk density of 1.5t/m³ to calculate the tonnage. The area has the potential to be a significant tonnage of construction sand adjacent to the Eneabba-Geraldton rail line with direct access to the Geraldton Port. The target grade of +95% SiO<sub>2</sub> is considered conservative as all samples, except two, taken from the area exceed this value; processing is expected to increase this grade.



### **Arrowsmith South**

The Arrowsmith South Exploration Target focuses on the southern end of a topographical high that is noted as containing an intercalation of limestone and dune sands (see below), and avoids existing infrastructure and potential conservation areas. The potential volume is estimated from the 45mRL to the top of the dune and assumes that between 50% and 100% of the dune is silica sand for processing. The estimate uses an *in-situ* bulk density of 1.5t/m³ to calculate the tonnage. The target grade of +95% SiO<sub>2</sub> is considered conservative as assays from all samples taken from the area exceed this value; processing is expected to increase this grade.



# **Arrowsmith South Exploration Target**

The initial metallurgical testwork indicates that the *in-situ* sand can be beneficiated to produce a high SiO<sub>2</sub> silica sand product, suitable for commercial sale.



#### **Future Work**

Mineralogical analysis is currently underway to determine the deleterious minerals that remain in the +0.212mm and -1mm size fraction. Dependent on this determination, testwork will determine the best methodology to remove these minerals from the silica sand grains.

A deeper hand-auger program will be undertaken in the next few months to better determine the variability of the sand quality through the dune system.

An aircore drilling program is proposed to determine the extent of the dune system and the variability of the grade, to be undertaken early 2018 when granting of the tenements is anticipated.

Bulk samples will be collected to undertake further metallurgical testwork and determine the most suitable processing circuit.

#### Further information:

Bruce Maluish Managing Director Ventnor Resources 0418 940 417 Peter Klinger Cannings Purple pklinger@canningspurple.com.au 0411 251 540

# **Competent Person's Statement**

The information in this release that relates to Exploration Results is based on, and fairly represents, information compiled by Mr David Reid who is a Member of the Australian Institute of Geoscientists (MAIG). Mr Reid is a contractor to Ventnor Resources Limited. Mr Reid has sufficient experience which is 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 Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Reid consents to the inclusion in this report of the matters based on information provided by him and in the form and context in which it appears.



# APPENDIX A - JORC 2012 Table 1

# **Section 1 Sampling Techniques and Data**

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

Criteria	Commentary
Sampling techniques	A motorised post hole auger was used to generate ~3kg of sample from each hole.
Drilling techniques	A motorised post hole auger was used to drill 1.5m-deep, 100mm-diameter holes.
Drill sample recovery	The sand that was drilled was loosely packed and damp and therefore, even amounts of samples were collected down the hole.
Logging	Sand was logged by colour.
Sub-sampling techniques and	A ~200g sub-sample was taken from each auger sample for submission to the laboratory.
sample preparation	Intertek uses a zircon bowl pulveriser to reduce the particle size to -75um.
Quality of assay 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 QAQC, which includes the analysis of standards, blanks and repeat measurements.
	The Company is in the process of testing a high-purity silica standard that has been created for the Company by OREAS Pty Ltd and will become the analytical standard in future assay work.
Verification of	Assay results have been verified by company personnel.
sampling and assaying	There are no twinned holes drilled.
3	Primary data is captured on a laptop using MS Office Software. The data is checked manually to ensure there are no errors.
Location of data points	Auger sample locations have been completed by hand-held GPS with the expected relative accuracy; GDA94 MGA Zone 51 grid coordinate system is used.
Data spacing and distribution	Auger holes were spaced depending on the presence of dune sand, typically no closer than 1,000m.
Orientation of data in relation to geological structure	Sampling is being done on aeolian sand dunes and is a first pass sampling program to determine the underlying type of sand available. The auger orientation is therefore considered appropriate.
Sample security	All samples are selected onsite under the supervision of Ventnor Geological staff.
	Samples are delivered to the Intertek laboratory in Maddington. Genalysis receipt received samples against the sample dispatch documents and issued a reconciliation report for every sample batch.
Audits or reviews	The sampling techniques and data collection processes are of industry standard.



# **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 project areas augured are located within the Arrowsmith Project area on ELAs70/4986, 4987, 5027. These tenements are held by Ventnor Mining Pty Ltd a 100% owned subsidiary of Ventnor Resources Pty Ltd.
	The tenements are not yet granted.
Exploration done by other parties	Exploration has been completed on the tenements by a number of Companies in the past for heavy mineral sands, including Tronox and Iluka. The area forms part of the Eneabba-Dongara Gas field and has been explored for coal as well as gas and is currently a gas producing field.
	No exploration for high grade silica sand has been completed in the past.
Geology	The targeted silica sand deposits are the aeolian sand dunes that overlie the Pleistocene limestones and paleo-coastline which host the Eneabba heavy mineral deposits.
Drill hole Information	The location of samples is presented in summary in the body of the report and in their entirety in the Appendix. All samples are surveyed with a hand-held GPS and recorded in MGA94 Zone50, Elevation (RL) is not recorded.
Data aggregation methods	Not applicable
Relationship between mineralisation widths and intercept lengths	Unknown at this stage
Diagrams	See plans supplied.
Balanced reporting	The accompanying document is considered to represent a balanced report.
Other substantive exploration data	Not applicable.
Further work	Mineralogical analysis is currently underway to determine the deleterious minerals that remain in the +0.212mm and -1mm size fraction. Dependent on this determination, testwork will determine the best methodology to remove these minerals from the silica sand grains.
	An aircore drilling program is proposed to determine the extent of the dune system and the variability of the grade, to be undertaken early 2018 when the tenements are granted.
	Bulk samples will be collected to undertake metallurgical testwork and determine the most suitable processing circuit.



# Appendix - Full Assay Tables

# **Arrowsmith Project - Reconnaissance sampling**

MGA_East	MGA_North	1 4 :	Al2O3	CaO	CoO	Cr2O3	CuO	Fe2O3	K2O	Li2O	MgO	Mn2O3	Na2O	NiO	P2O5	SiO2	TiO2	V205	LOI-1000C
Zone50	Zone50	Location	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%
317330	6729258	Arrowsmith North	6,979	111	Х	Х	Χ	0.19	1,885	8	79	17	156	Х	Х	98.40	1,621	6	0.33
317160	6730256	Arrowsmith North	10,547	129	Χ	Х	Χ	0.36	993	10	134	11	119	Χ	Х	97.80	1,155	10	0.53
316989	6731249	Arrowsmith North	9,448	115	Χ	Х	Χ	0.30	800	11	119	12	104	Χ	Х	98.00	1,243	11	0.48
316818	6732242	Arrowsmith North	15,988	134	Χ	18	Χ	0.55	1,629	16	155	20	150	Χ	Х	96.80	1,636	14	0.69
316642	6733263	Arrowsmith North	12,801	107	Χ	14	2	0.48	983	17	127	16	115	2	Х	97.30	1,397	14	0.63
316319	6735123	Arrowsmith North	9,826	140	Χ	Х	2	0.36	881	7	131	18	105	3	Х	97.90	1,513	10	0.52
316115	6736295	Arrowsmith North	7,389	114	Χ	Х	Χ	0.26	588	13	105	13	95	Х	Х	98.40	1,102	8	0.40
316109	6737182	Arrowsmith North	8,611	113	Χ	Х	3	0.29	891	11	110	17	114	Х	Х	98.20	1,320	10	0.40
316584	6737185	Arrowsmith North	7,538	7,690	Χ	Х	Χ	0.19	3,997	9	5,126	90	273	Χ	Х	96.10	1,264	4	1.13
316974	6737193	Arrowsmith North	3,733	109	Χ	Х	Χ	0.10	891	10	97	10	92	Χ	Х	99.10	874	Х	0.23
317964	6737207	Arrowsmith North	3,684	131	Χ	Х	2	0.14	411	9	106	15	70	Χ	Х	99.00	1,277	5	0.31
321170	6731628	Arrowsmith North	2,653	Х	Χ	Х	3	0.12	213	13	81	10	59	Χ	Х	99.30	1,044	5	0.21
319751	6731161	Arrowsmith North	6,527	118	Χ	Χ	Χ	0.24	269	8	117	10	72	2	Х	98.50	1,092	7	0.40
318790	6721353	Arrowsmith Central	25,477	342	Х	28	Χ	0.58	5,847	20	279	24	485	6	Х	95.00	1,737	15	0.98
318383	6721357	Arrowsmith Central	25,529	396	Χ	27	Χ	0.59	6,663	16	264	33	581	3	Х	94.90	2,376	17	0.92
317956	6722076	Arrowsmith Central	21,472	294	Χ	19	Χ	0.44	7,531	13	226	28	640	3	Х	95.70	2,079	13	0.66
316750	6722030	Arrowsmith Central	21,314	436	Χ	17	Χ	0.42	7,649	12	243	28	662	Χ	Х	95.50	1,988	12	0.83
315686	6725167	Arrowsmith Central	13,323	371	Χ	Х	3	0.26	2,121	13	213	26	276	Χ	Х	97.30	1,360	10	0.63
323890	6718805	Arrowsmith Central	2,898	Х	NA	Х	NA	0.09	677	NA	58	15	116	NA	Х	99.30	1,246	6	0.15
322516	6718792	Arrowsmith Central	7,907	102	NA	Χ	NA	0.17	2,326	NA	76	19	262	NA	Х	98.30	1,268	10	0.28
321399	6712070	Arrowsmith South	26,338	299	Χ	24	Χ	0.55	7,923	17	254	27	616	3	Х	94.90	1,880	14	0.83
321141	6711127	Arrowsmith South	18,871	307	Χ	21	Χ	0.43	5,220	12	212	23	409	3	Х	96.10	1,688	11	0.82
321295	6710201	Arrowsmith South	10,848	161	Χ	Χ	Χ	0.12	5,318	6	122	22	419	Χ	Х	97.70	1,611	6	0.30
321715	6707710	Arrowsmith South	8,371	Х	Χ	Χ	Χ	0.08	4,554	5	88	18	290	Χ	Х	98.30	1,562	3	0.18
322815	6705357	Arrowsmith South	11,735	147	Χ	14	Χ	0.34	2,464	10	163	36	203	Χ	Х	97.40	2,693	12	0.52
323118	6704616	Arrowsmith South	13,528	125	Χ	16	Χ	0.40	2,521	8	156	44	206	2	Х	97.10	3,146	14	0.49
323047	6702748	Arrowsmith South	17,069	171	Χ	17	2	0.31	2,934	6	160	35	221	3	Х	96.60	3,257	14	0.69
318284	6705732	Arrowsmith South	35,969	392	NA	13	NA	0.61	10,230	NA	339	43	740	NA	Х	93.30	2,329	20	1.04
319519	6705047	Arrowsmith South	20,165	284	NA	11	NA	0.40	7,256	NA	163	26	562	NA	Х	95.90	1,784	13	0.61
318284	6705732	Arrowsmith South	11,079	145	NA	Х	NA	0.16	6,018	NA	95	39	393	NA	Х	97.60	2,241	9	0.21
319519	6705047	Arrowsmith South	6,955	167	NA	Х	NA	0.14	2,338	NA	97	30	184	NA	Χ	98.30	2,313	8	0.39

X - Below detection limit

NA - Not analaysed



Ventnor	Resour	ces Lin	nited		Size b	y Analy	vsis																							csource
SAMPLE	Mass	Fe <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	$Al_2O_3$	TiO <sub>2</sub>	MnO	Ca0	P <sub>2</sub> O <sub>5</sub>	$SO_3$	MgO	ZnO	K <sub>2</sub> O	V <sub>2</sub> O <sub>5</sub>	Cr <sub>2</sub> O <sub>3</sub>	CoO	NiO	CuO	As <sub>2</sub> O <sub>3</sub>	PbO	BaO	Na <sub>2</sub> O	Cl	SrO	Sb <sub>2</sub> O <sub>3</sub>	Nb <sub>2</sub> O <sub>5</sub>	$ZrO_2$	CeO <sub>2</sub>	U	Th	LOI <sub>1000</sub>
	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	%
Arrowsmith North Cream Sand																														
Assay F	lead	0.145	98.757	0.334	0.104	0.005	0.007	<0.001	0.001	<0.001	0.001	0.044	<0.001	0.007	0.055	0.002	<0.001	<0.001	0.002	0.004	<0.001	<0.001	0.001	<0.001	<0.001	0.013	3.0	<0.5	0.5	0.22
Arrowsi	mith No	rth Cre	am San	d Size l	ov Ana	lvsis																								
Size (mm)					7 7	70.0																								
+1	0.003	2 761	96.054	0 335	0.043	0.024	0.038	0.002	0.003	0.041	0.004	0.033	0.002	0.009	<0.001	0.004	<0.001	<0.001	<0.001	0.003	0.043	0.010	<0.001	<0.001	<0.001	0.006	<1	<0.5	1.5	0.57
+0.5	0.914		99.319					<0.001					<0.001							0.002				<0.001			<1	<0.5	0.5	0.06
+0.355	0.543		98.918		0.048	0.007		<0.001		0.017	<0.001		0.003	0.009	0.001	0.005	<0.001		<0.001		<0.001	0.005		<0.001		0.002	<1	<0.5	0.5	0.01
+0.212	0.572		99.047		0.060	0.006		<0.001	<0.001	0.017	<0.001	0.028	0.002	0.008	0.001	0.006	<0.001	***************************************	***************************************	<0.001	0.002	0.002	<0.001			0.004	<1	<0.5	<0.5	0.06
+0.106			96.879		0.527	0.020	0.005	<0.001	<0.001	0.013	<0.001	0.166	<0.001	0.009	<0.001	<0.001	<0.001		<0.001		0.019	0.009	<0.001			0.074	3.0	1.0	1.5	0.02
+0.075	0.009	3.829	91.143	1.481		0.053	0.022	0.011	0.031	0.031	0.002	0.748	0.010	0.013	0.002	0.008	<0.001	0.002	<0.001		0.061	0.006	0.002	<0.001		0.587	65.0	4.0	17.5	0.16
+0.045			90.356			0.045	0.037	0.011	0.036	0.050		1.153	0.006	0.013	0.002	0.009	<0.001		0.001	0.038	0.091	0.014	0.004		***************************************	0.334	58.0	3.0	14.5	0.31
+0.038			89.604			0.046	0.067	0.017	0.036	0.063		1.213	0.004	0.016	0.001	0.010	0.001	0.002	<0.001		0.203	0.037	0.003	<0.001		0.274	50.0	3.5	13.0	0.68
-0.038	0.012	3.484	81.893	5.676	1.303	0.033	0.154	0.037	0.164	0.126	0.011	1.513	0.009	0.023	0.001	0.006	0.005	0.002	0.001	0.045	0.187	0.012	0.005	<0.001	0.004	0.235	68.0	5.0	16.0	5.03
Arrowsm	ith Nor	th Yell	ow Sar	ıd																										
Assay F	lead	0.328	97.780	0.870	0.134	0.004	0.010	0.001	0.002	<0.001	<0.001	0.082	0.004	0.008	0.056	<0.001	0.001	<0.001	0.001	0.019	<0.001	<0.001	<0.001	<0.001	<0.001	0.021	8.0	0.5	1.0	0.44
Arrowsi	mith No	rth Yell	ow San	d Size l	by Ana	lysis																								
Size (mm)																														
+1	0.014	2.459	96.971	0.479	0.063	0.021	0.004	<0.001	<0.001	0.012	<0.001	0.050	0.003	0.007	0.002	0.003	<0.001	<0.001	<0.001	0.003	0.013	0.012	<0.001	<0.001	<0.001	0.009	4.0	0.5	2.0	-0.09
+0.5	1.219	0.425	98.995	0.369	0.050	0.004	<0.001	<0.001	<0.001	0.007	<0.001	0.025	0.001	0.008	0.001	0.002	<0.001	<0.001	<0.001	0.004	0.002	0.001	<0.001	<0.001	0.002	0.005	2.0	0.5	<0.5	0.11
+0.355	0.415	0.519	98.709	0.404	0.064	0.006	<0.001	<0.001	<0.001	0.008	<0.001	0.033	0.001	0.008	0.001	0.005	<0.001	<0.001	<0.001	0.004	0.002	0.002	<0.001	<0.001	<0.001	0.005	2.0	0.5	<0.5	0.10
+0.212	0.221	0.758	98.378	0.526	0.087	0.009	<0.001	<0.001	<0.001	0.011	0.001	0.076	0.002	0.030	0.001	0.032	<0.001	0.001	<0.001	0.006	0.008	0.005	<0.001	0.002	0.003	0.010	2.0	<0.5	<0.5	0.09
+0.106	0.072	1.511	95.624	1.225	0.774	0.021	0.006	0.002	<0.001	0.020	0.001	0.435	0.004	0.011	0.001	0.002	<0.001	0.001	<0.001	0.017	0.032	0.005	0.001	<0.001	0.004	0.106	12.0	0.5	2.5	0.19
+0.075	0.016	4.241	88.111	3.257	1.957	0.057	0.054	0.030	0.023	0.035	0.002	1.247	0.007	0.012	0.002	0.003	<0.001	0.002	0.002	0.034	0.266	0.021	0.003	<0.001	0.007	0.569	96.0	4.5	22.5	0.10
+0.045	0.007	3.408	89.209	3.031	1.341	0.038	0.058	0.010	0.039	0.027	0.003	1.579	0.007	0.014	0.002	0.005	<0.001	0.001	0.002	0.045	0.166	0.048	0.005	<0.001	0.005	0.410	103.0	4.0	23.0	0.57
+0.038	0.006	3.088	89.694	3.303	1.014	0.037	0.064	0.020	0.022	0.039	0.003	1.634	0.007	0.026	0.002	0.023	<0.001	<0.001	<0.001	0.043	0.169	0.046	0.004	<0.001	0.002	0.277	67.0	3.0	14.5	0.60
-0.038	0.045	7.225	58.879	20.339	1.575	0.010	0.134	0.041	0.034	0.205	0.007	1.256	0.023	0.034	0.002	0.015	0.001	0.002	0.005	0.039	0.150	0.006	0.005	<0.001	0.004	0.114	197.0	4.0	24.0	9.97



#### **About Ventnor**

Ventnor Resources is a gold and base metals-focused explorer that reached agreement with its JV partner Sandfire Resources NL for Sandfire to acquire 100% ownership of the historic Thaduna/Green Dragon Copper Project, 170 km north of Meekatharra in Western Australia, with Ventnor to maintain a royalty interest.

The Thaduna/Green Dragon Project is located 40km east of DeGrussa and represents the largest copper resource in the Doolgunna-Bryah Basin Region outside of Sandfire's DeGrussa-Doolgunna Project.

Ventnor has been granted tenements adjacent to the Tropicana Gold Mine in WA that are prospective for gold and base metals (Biranup Project), with prospects identified following an extensive review of historical data. The Company has compiled an extensive database of historic exploration, conducted extensive MLEM surveys in the region and completed initial drill programs at a number of its prospects.

As detailed in this announcement, Ventnor now has an extensive landholding prospective for silica sand.

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

# **Proven Management**

The Ventnor directors have extensive experience in mineral exploration and production, and in the management of publicly listed mining and exploration companies.

# **Project Locations**

