5 April 2018



## ASX ANNOUNCEMENT

# Muchea Silica Sand Project Drilling Results

## Highlights:

- Aircore and hand auger results received for Ventnor's preliminary due diligence drill program
- Results indicate high-grades of silica sand
- Excellent potential for high tonnage resource
- Supports decision to secure option over project

Ventnor Resources Limited (**Ventnor** or **Company**) (ASX: VRX) is pleased to announce results from its preliminary due diligence drill program at the Muchea Silica Sand Project.

As announced to ASX on 26 March 2018, the Company has, subject to shareholder and regulatory approvals, secured from Australian Silica Pty Ltd (**AS**) an option to acquire tenement E70/4886 (**Tenement**), which forms the Muchea Silica Sand Project located 50km north of Perth, Western Australia.

As part of its initial due diligence investigations into the project prior to grant of the option, Ventnor conducted an aircore (**AC**) and hand auger drilling program within the Tenement area to confirm the potential of the project as indicated by previous work undertaken by AS.

Ventnor's drilling included an AC drilling program of 46 holes for 522 metres and 43 hand auger holes for 249 metres with an average intercept grade of 99.5% SiO<sub>2</sub>.

A full analysis of all the quality control data has now been assessed. This analysis validates the drill assay dataset and conforms to the guidelines for reporting under the JORC-2012 code.

Ventnor Managing Director, Bruce Maluish said: "The results of our preliminary due diligence drilling program have confirmed the results provided by Australian Silica and also that this project has the potential for a very large high-grade silica sand resource. It supports and justifies the Company's decision to secure an option to acquire the underlying tenement."

He continued, "As part of our due diligence investigations, we have also commenced a comprehensive testwork program to ascertain what products could be produced and marketed from the project and later to support a JORC-2012 compliant Mineral Resource. The testwork program, which is ongoing, will also produce sufficient quantities of products to enable samples to be sent to prospective customers.

## ASX: VRX

#### **Capital Structure**

Shares on Issue: 251.3 million

Unlisted Options: 21.25 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 Sands Project, 270km north of Perth, 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.



The Company has already received a number of enquiries from potential Asian customers."

"As part of its due diligence the Company undertook an environmental desktop study which will also support a referral to the relevant environmental authorities prior to field studies for a Mining Proposal," Mr Maluish said.

#### **Detailed Information**

The Muchea Silica Sand Project is located on tenement E70/4886 (refer Figure 1 below), located in the Muchea area, 50km north of Perth,



Figure 1: Muchea Silica Sand Project Location

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



Figure 2 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 2: Schematic section of Silica Sand Dune Exploration Target

## Drilling

As part of its preliminary due diligence investigations into the Muchea Silica Sand Project, Ventnor conducted the following drilling activities:

- An aircore drilling program of 46 holes for 522 metres (Blue outline and dots shown on Figure 3).
- 43 hand auger holes for 249m (Red outline and stars, shown on Figure 3).





Figure 3: Aircore and auger drilling completed on E70/4886, with exploration targets.

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.



#### Aircore

Vertical aircore drilling was completed by Wallis Drilling using a Landcruiser mounted Mantis 82 drill rig to take 1m downhole samples. Drilling encountered only unconsolidated sand and was terminated either at the water table or extended when an iron rich layer was intersected. The detailed results of the drilling are shown in Table 1, and the hole positions, coloured by grade ranges, shown as dots on Figure 3. The high grade composites shown in Table 1 were calculated using a 99% SiO<sub>2</sub> lower cut-off grade with a maximum of 2m of internal dilution.

Hole ID	MGA Nth	MGA East	Drilled	Comp.	SiO <sub>2(Calc.)</sub>	SiO <sub>2(Calc.)</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	K₂O	MgO	Na <sub>2</sub> O	TiO <sub>2</sub>	
			Depth	Depth	2(Caic.)	+LOI <sub>1000C</sub>	2 - 3		- 2 - 3	2 -		- 2 -	- 2	- 10000
			m	m	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MAC001	6515718	396644	6	1	99.63	99.73	350	203	600	65	63	53	1,314	0.10
MAC002	6515719	396260	6	6	99.56	99.64	982	Х	600	550	61	78	1,261	0.09
MAC003	6515735	395746	6	4	99.43	99.63	1,128	Х	500	476	61	72	1,480	0.20
MAC004	6515735	395121	9	5	99.61	99.78	553	Х	480	135	53	29	944	0.17
MAC005	6515740	394750	10	6	99.70	99.84	303	Х	300	25	45	22	855	0.15
MAC006	6515745	394339	12	12	99.71	99.82	329	Х	308	26	53	11	1,004	0.11
MAC007	6515769	393931	15	14	99.06	99.61	2,013	7	315	57	44	18	1,441	0.54
MAC008	6515782	393568	15	3	99.57	99.84	408	Х	300	53	62	15	740	0.27
MAC009	6516076	393393	15	10	99.34	99.71	1,477	Х	320	79	49	45	928	0.37
MAC010	6516481	393389	15	9	99.63	99.82	276	Х	356	19	30	5	1,095	0.19
MAC011	6516835	393389	36	21	99.44	99.65	1,574	6	748	160	41	35	895	0.21
MAC012	6517032	393158	18	12	99.68	99.82	464	Х	350	91	33	19	764	0.15
MAC013	6517020	392764	15	11	99.45	99.76	521	Х	400	43	57	16	1,298	0.31
MAC014	6517005	392327	21	15	99.41	99.69	1,173	Х	547	22	38	3	1,275	0.28
MAC015	6515156	396641	10	7	99.25	99.64	1,062	44	371	406	77	54	1,609	0.39
MAC016	6514718	396643	9	8	99.47	99.73	888	25	213	254	55	17	1,262	0.26
MAC017	6514493	396209	15	6	99.63	99.78	624	Х	200	260	46	26	1,073	0.15
MAC018	6514062	395743	6	4	99.30	99.66	1,588	Х	125	201	67	25	1,341	0.36
MAC019	6513774	395428	9	5	99.57	99.76	688	X	320	83	59	8	1,249	0.18
MAC020	6513720	396525	9	4	99.59	99.86	381	X	X	37	65	X	889	0.28
MAC021	6513201	396536	9	4	99.60	99.83	436	X	75	48	69	X	1,085	0.23
MAC022	6512853	396609	12	9	99.68	99.85	345	X	100	62	29	X	951	0.17
MAC023	6512368	396707	15	12	99.79	99.88	296	X	6/	/4	11	X	693	0.10
MAC024	6511/06	39/101	11	11	99.18	99.69	1,828	X 10	145	15	22	X	1,085	0.51
MAC025	6511885	396685	9	/	99.17	99.74	956	18	143	34	33	X	1,384	0.57
IVIAC026	6516560	394339	9	/	99.74	99.86	268	X 20	/1	6	/	X	1,006	0.13
MAC027	6516998	394346	6	4	99.47	99.84	3/3	29	100	24	42	X 12	1,032	0.37
NIAC028	6517404	394337	9 12	/	99.68	99.89	277	X	244	X	28	12 V	716	0.21
IVIAC029	6517070	394103	12	9	99.73	99.80	329	× ×	244	10	30	^	705	0.13
MAC021	6517537	202567	12	10	99.70	99.07	190	^ V	20	10 V	1/ V	4 V	750	0.12
MACO22	6517276	20228/	12	10	99.60	99.90	100	10	142	10	12	^	759 915	0.10
MAC032	6517038	303516	19	17	99.00	99.85	1 152	10 X	629	10	27	12	9/9	0.17
MAC034	6517042	303006	10	5	99.45	99.72	1 3 2 1	x	1/0	10	58	212	1 305	0.27
MAC035	6515308	395287	9	6	99.71	99.89	250	x	23	X	21	x	878	0.75
MAC036	6515267	395659	7	5	99.56	99.84	507	26	X	46	42	27	938	0.10
MAC037	6515270	396364	, 10	5	98.75	99.73	825	60	140	264	71	57	1 226	0.20
MAC038	6514704	397033	6	4	98.97	99.70	1 087	74	225	185	72	41	1 307	0.50
MAC039	6514227	397026	6	6	99.59	99.78	711	x	200	115	34	50	1,116	0.18
MAC040	6514065	397298	12	12	99.46	99.80	486	21	233	32	63	40	1 090	0.10
MAC041	6515221	394715	9	6	99.56	99.85	229	19	167	X	45	X	1.007	0.29
MAC042	6514592	394493	9	7	99.55	99.80	821	17	129	80	37	14	851	0.26
MAC043	6514514	394875	15	3	99.58	99.85	529	X	X	X	31	13	961	0.27
MAC044	6514457	395052	9	5	99.50	99.80	434	28	440	28	44	10	975	0.30
MAC045	6514363	395388	7	4	99.69	99.86	460	30	50	35	60	X	765	0.17
MAC046	6516085	394337	9	7	99.63	99.84	509	16	43	22	35	х	999	0.21
* X = below	detection li	mit			•									
	Averag	e Composit	e Depth	7.8	99.51	99.78	774	8	277	81	39	17	1,030	0.27

Table 1: Aircore Drill results



#### Hand Auger

Hand auger drilling was completed by Ventnor personnel using a 100mm screw auger to take 1m downhole samples. Drilling encountered unconsolidated sand and was terminated when the hole collapsed or when an iron rich layer was intersected. The high grade downhole composites from the drilling are shown in Table 2. Figure 3 shows the hole positions, coloured by grade ranges, displayed as stars. The high-grade composites in Table 2 were calculated using either the 1m sample, or a 99% SiO<sub>2</sub> lower cut-off grade, with a maximum of 2m of internal dilution. It should be noted that the full depth of high grade sand was not always tested due to hole collapse during auger drilling.

Hole ID	MGA_Nth	MGA_East	Drilled Depth	Comp. Depth	SiO <sub>2(Calc.)</sub>	SiO <sub>2(Calc.)</sub> +LOI <sub>1000C</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	K <sub>2</sub> O	MgO	Na <sub>2</sub> O	TiO <sub>2</sub>	LOI <sub>1000C</sub>
			m	m	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MA001	6512891	392252	6	6	99.63	99.82	367	27	350	53	70	63	887	0.19
MA002	6512861	391793	6	1	98.61	99.13	6,505	121	700	350	101	86	846	0.52
MA003	6512892	392784	6.2	1	98.75	99.30	4,920	114	400	433	95	108	871	0.55
MA004	6512674	393383	6	6	99.40	99.71	1,119	37	533	121	83	79	952	0.31
MA005	6513041	393387	8	8	99.12	99.41	4,122	13	263	788	64	95	513	0.29
MA007	6512919	393785	4.2	4.2	99.38	99.84	292	133	100	22	90	69	891	0.45
MA008	6512471	393977	6	6	99.22	99.63	1,881	30	117	324	67	71	1,207	0.41
MA009	6512993	394560	4.1	4	99.23	99.67	1,294	42	100	253	69	66	1,485	0.43
MA010	6513249	394874	4.5	2	99.53	99.78	643	55	250	153	69	62	975	0.25
MA011	6512439	393991	6	2	99.27	99.79	706	84	100	88	62	46	993	0.53
MA012	6511292	393842	4.1	4	99.75	99.88	328	Х	Х	40	26	32	741	0.14
MA013	6511297	394618	4.1	4	99.67	99.87	260	36	50	11	53	34	881	0.20
MA014	6511312	395392	5.5	5.5	99.59	99.81	269	26	333	22	49	37	1,174	0.22
MA015	6511166	395829	6	6	99.67	99.91	194	22	Х	Х	57	36	564	0.24
MA016	6511426	396210	7	7	99.74	99.90	192	15	Х	6	23	29	706	0.16
MA017	6512407	396602	7	7	99.56	99.90	202	25	Х	Х	43	39	684	0.34
MA018	6512102	396043	8	8	99.70	99.92	185	Х	Х	Х	7	16	611	0.22
MA019	6512586	395377	2	2	99.50	99.88	269	Х	Х	Х	47	45	824	0.38
MA020	6511710	395955	6	6	99.69	99.91	175	17	Х	Х	17	28	604	0.22
MA021	6514496	393398	5.8	5.8	99.74	99.91	217	24	50	11	16	38	513	0.17
MA022	6514870	392668	3.8	3.8	99.58	99.89	244	42	Х	19	39	48	662	0.32
MA023	6514975	392004	6	6	99.68	99.84	516	23	233	96	10	41	647	0.16
MA024	6515093	391544	3.5	3	99.65	99.87	315	Х	67	73	31	47	732	0.22
MA025	6513222	391878	3.9	1	97.42	98.34	13,627	156	1,000	499	96	80	1,086	0.92
MA026	6514002	392039	3.95	3.95	99.57	99.87	362	37	100	47	39	46	702	0.29
MA027	6514873	393405	6	6	99.74	99.89	239	25	117	24	10	23	610	0.16
MA028	6515301	393393	5.95	5.95	99.68	99.86	209	26	217	Х	18	27	930	0.18
MA029	6517289	393389	6	6	99.64	99.91	216	34	Х	9	12	43	545	0.28
MA030	6514665	393943	5.5	5.5	99.74	99.91	196	23	Х	Х	26	43	576	0.17
MA031	6514314	393806	4.2	4.2	99.66	99.85	526	21	180	86	48	56	569	0.19
MA032	6514456	395053	4.9	4.9	99.64	99.88	210	21	40	Х	30	46	864	0.24
MA033	6511707	394656	2.5	2.5	99.48	99.82	351	66	133	86	57	68	1,022	0.34
MA034	6516082	392885	4	4	99.65	99.88	264	Х	50	26	22	54	810	0.23
MA035	6516234	392482	3.8	3.8	99.60	99.86	242	33	200	17	36	53	778	0.26
MA036	6516392	391866	4.6	4.6	99.72	99.90	214	26	60	Х	32	48	646	0.17
MA037	6516755	392059	6	6	99.66	99.87	205	21	200	X	18	36	762	0.21
MA038	6516009	391684	6	6	99.73	99.90	206	26	X	X	41	49	699	0.17
MA039	6515507	392284	6	6	99.64	99.87	212	27	X	X	41	53	930	0.23
IVIA040	6513432	393933	1.8	1.8	99.23	99.60	1,904	X	350	507	53	81	1,056	0.38
MA041	6513121	392554	4.5	4.5	99.76	99.91	228	X	40	44	9	48	526	0.15
IVIA042	6513480	392860	4.9	4.9	99.73	99.8/	339	28	140	42	11	53	630	0.14
IVIA044	6512/31	394297	9	3	99.69	99.84	383	X	X	42	X	46	1,083	0.15
IVIAU46	0514/5/	393408	30	D	99.67	99.87	3/6	41	X	19	19	3/	825	0.20
* x = belo	X = below detection limit Average Composite Depth 4.6 99.58 99.82 660 28 117 81 37 48 770 0.24													

Table 2: Hand Auger Drill results



#### Twinned holes

Three Auger holes were twinned by aircore drilling to validate the hand auger as a robust means of sampling the *in situ* resource, in the absence of aircore drilling. The comparisons of the drilling results are shown in Table 3, below. The averages of the twin sampled depth are considered robust enough to validate the auger sampling method.

From	То	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	From	То	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	From	То	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>	SiO <sub>2 Calc</sub>
		2 cuic	+LOI 1000C	L cuit	+LOI 1000C			L Cuic	+LOI 1000C	L cuit	+LOI 1000C			L cuic	+LOI 1000C	2 cuic	+LOI 1000C
		MA017	(Auger)	MACO	)23 (AC)			MA029	(Auger)	MACO	32 (AC)			MA032	(Auger)	MACO	44 (AC)
0	1	99.10	99.89	99.66	99.89	0	1	98.57	99.91	99.28	99.87	0	1	99.34	99.87	98.80	99.61
1	2	99.75	99.89	99.68	99.89	1	2	99.86	99.93	99.70	99.88	1	2	99.60	99.88	99.68	99.84
2	3	99.32	99.90	99.72	99.89	2	3	99.85	99.92	99.81	99.90	2	3	99.75	99.87	99.60	99.87
3	4	99.68	99.88	99.69	99.89	3	4	99.83	99.92	99.80	99.90	3	4	99.74	99.90	99.71	99.87
4	5	99.53	99.91	99.84	99.92	4	5	99.88	99.91	99.17	99.64	4	5	99.74	99.86	99.74	99.84
5	6	99.70	99.90	99.85	99.92	5	6	99.83	99.89	99.65	99.82	5	6			90.00	95.64
6	7	99.80	99.92	99.88	99.92	6	7			99.88	99.91	6	7			91.85	96.81
7	8			99.92	99.93	7	8			99.83	99.91	7	8			92.74	96.30
8	9			99.84	99.89	8	9			99.81	99.92	8	9			93.71	96.04
9	10			99.86	99.88	9	10			99.77	99.83	Twi	n Ave.	99.64	99.88	99.51	99.81
10	11			99.82	99.86	10	11			99.76	99.84						
11	12			99.67	99.74	11	12			99.70	99.83						
12	13			98.64	99.21	12	13			94.88	98.09	]					
Twi	n Ave.	99.56	99.90	99.76	99.90	13	14			90.45	95.40						
						Twi	n Ave.	99.64	99.91	99.57	99.84	]					

Table 3: Twinned drilling results

## **Exploration Target**

Based on these results the Company has developed Exploration Targets for the Muchea Silica Sand Project. These are:

- Aircore drill area 70 Million to 125 Million tonnes silica sand with a grade in excess of 99.5% SiO<sub>2</sub>.
- Auger drill area 100 Million to 150 Million tonnes silica sand with a grade in excess of 99.5% SiO<sub>2</sub>.

#### 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 Exploration Targets have been quantified by using the following criteria and assumptions:

#### Aircore drill area

- 37 drill holes (AC drillholes only)
- Exploration Target area 835 ha
- 1.66t/m<sup>3</sup> in situ bulk density (independently determined)
- Between 80% and 100% of area contains high grade silica sand
- Depth of high grade sand between 6 to 9 metres



### Auger drill area

- 50 drill holes (includes 10 aircore and 40 hand auger drillholes)
- Exploration Target area 1,800 ha
- 1.66t/m<sup>3</sup> in situ bulk density (independently determined)
- Between 80% and 100% of area contains high grade silica sand
- Depth of high grade sand of 4 to 5 metres
- It should be noted that auger drilling did not test the full depth of high grade sand in all holes due to hole collapse, and the depth of high grade sand may be deeper in some areas.

The dry *in situ* bulk density has been measured by an independent contractor using a nuclear densometer at 4 sites, with the arithmetic average used in the determination of the Exploration Target.

A grade of 99.5% SiO<sub>2</sub> is a critical grade for glassmaking quality sand. Drill results indicate an *in situ* grade in excess of this quality, and it is expected that further processing will increase this grade to provide high-value sand for speciality glass.

#### **Quality Control Data**

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. In addition to the duplicates the laboratory routinely repeated analysis from the pulverised samples in a ratio of 1:25. The number of QA/QC samples represents ~14% of the total assays.

A full analysis of all the quality control data has now been assessed. This analysis validates the drill assay dataset and conforms with the guidelines for reporting under the JORC-2012 code.

#### **Reduced Level**

The reduced level (RL) of the drilling collars is generated from publicly available SRTM data. SRTM topography is known to have localised precision issues, which preclude it from being used for a volume measurement as part of a mineral resource estimation. The Company intends to acquire high accuracy Light Imaging, Detection And Ranging data (LiDAR), which has the necessary precision and accuracy for a Mineral Resource estimation.

#### **Further Work Required**

Metallurgical testwork will determine the best quality products available from the project with low deleterious minerals and highest  $SiO_2$  grade that can be produced from the bulk resource. This will determine if the bulk resource can be declared as a Mineral Resource under the JORC-2012 guidelines.

The drilling results reported in this announcement demonstrate the major impurities are  $TiO_2$ ,  $Al_2O_3$  and  $Fe_2O_3$ . Given Ventnor's experience with testwork completed at its Arrowsmith Silica Sand Project, it is expected that a significant amount of these impurities may be removed using conventional sand processing techniques such as gravity separation by spirals, attritioning, sizing and magnetic separation. It is believed that the *in situ* resource could be processed to achieve a product grade higher than 99.9%  $SiO_2 + LOI_{1000C}$ .



#### Further information:

Bruce Maluish Managing Director Ventnor Resources 0418 940 417 Andrew Rowell Cannings Purple arowell@canningspurple.com.au 0400 466 226

#### **Competent Person's Statement**

The information in this release that relates to exploration results and exploration targets 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 release of the matters based on information provided by him and in the form and context in which they appear.



## APPENDIX A – JORC 2012 Table 1

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>AC drilling samples are 1m down hole intervals with sand collected from a cyclone mounted rotary cone splitter, ~2-3kg (representing 50% of the drilled sand) was collected. Two subsamples, A and B, of ~200g were taken from the drill samples. The remainder was retained for metallurgical testwork.</li> <li>Auger drilling samples are 1m down hole intervals with sand collected from a plastic tub which received the full sample, ~8kg, from the hole. The sand was homogenised prior to sub sampling, two sub-samples, A and B, of ~200g were taken from the drill samples. A bulk sample of ~5kg was retained for each 1m interval for metallurgical testwork.</li> <li>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 ICP analysis.</li> <li>All auger samples were weighed to determine if down hole collapse was occurring, if the samples weights increased significantly the hole was terminated to avoid up hole contamination.</li> <li>The targeted mineralisation is unconsolidated silica sand dunes, the sampling techniques are considered to be "industry standard".</li> <li>Due to the visual nature of the material, geological logging of the drill material is the primary method of identifying mineralisation.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-</li> </ul>	<ul> <li>Vertical NQ sized aircore drilling was completed by Wallis Drilling using a Landcruiser mounted Mantis 82 drill rig.</li> </ul>



Criteria	JORC Code explanation	Commentary
	sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>A 100mm diameter hand screw auger was used to drill until hole collapse.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul> <li>Aircore <ul> <li>Visual assessment and logging of sample recovery and sample quality</li> <li>Reaming of hole and clearance of drill string after every 3m drill rod</li> <li>Sample splitter and cyclone cleaned regularly to prevent sample contamination</li> <li>No relationship is evident between sample recovery and grade</li> </ul> </li> <li>Hand Auger <ul> <li>All material recovered from the hole is collected in a plastic drum and weighed, the weights are used to determine when the hole is collapsing, and drilling is terminated.</li> <li>No relationship is evident between sample recovery and grade</li> </ul> </li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative of quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological logging of drill samples is done by the field geologist with samples retained in chip trays for later interpretation.</li> <li>Logging is captured in an excel spreadsheet, validated and uploaded into an Access database</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half of all core taken.</li> <li>If non-core, whether fiffled, tube-sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>AC drill samples are rotary split 50:50 into a calico bag resulting in 2-3kg 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 QAQC purposes. The bulk sample is retained for later metallurgical testwork.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicates/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Auger drill material, ~8kg, is collected in a plastic tub and homogenised, 2 x 200g sub-samples, A and B, are taken from the drill material. The A sample is submitted to the laboratory and the B sample is retained for repeat analysis and QAQC purposes. A 5kg bulk sample is retained for later metallurgical testwork.</li> <li>The sample size is considered appropriate for the material sampled.</li> <li>The 200g samples are submitted to the Intertek Laboratory in Maddington, Intertek use a zircon bowl pulveriser to reduce</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their deviations, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>the particle size to -75um.</li> <li>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.</li> <li>The assay results have also undergone internal laboratory QAQC, which includes the analysis of standards, blanks and repeat measurements.</li> <li>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.</li> <li>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 QAQC samples therefore represents ~14% of the total assays.</li> </ul>



Criteria	JORC Code explanation	Commentary
		• A full analysis of all the quality control data has been undertaken. This analysis validates the drill assay dataset and conforms with the guidelines for reporting under the JORC 2012 code.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent of alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections validated against geological logging</li> <li>Twinned holes AC Vs Auger were completed validate the robustness of hand auger as an appropriate method of testing the in-situ sand. Assay comparisons shown an acceptable correlation between the 2 drilling methods.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other location used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole locations were measured by hand-held GPS with the expected relative accuracy; GDA94 MGA Zone 51 grid coordinate system is used. The reduced level (RL) of the drilling collars is generated from publicly available SRTM data.</li> <li>SRTM topography is known to have localised precision issues which preclude it from being used for a volume measurement as part of a mineral resource estimation. The Company intends to acquire high accuracy light imaging, detection, and ranging data (LiDAR), which has the necessary precision and accuracy for Mineral Resource estimation.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill holes were spaced 400-800m apart along existing tracks.</li> <li>It is believed that due to the relatively low variability of assays between drill holes that the current spacing maybe sufficient for the estimation of a Mineral Resource.</li> <li>No sample compositing (down hole) has been done.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation is sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the</li> </ul>	<ul> <li>Sampling is being done on aeolian sand dunes the auger orientation is therefore considered appropriate.</li> </ul>



Criteria	JORC Code explanation	Commentary
	orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	The measures taken to ensure sample security.	<ul> <li>All samples are selected onsite under the supervision of Ventnor Geological staff.</li> </ul>
		• 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	The results of any audits or reviews of sampling techniques and data.	There has been no audit or review of sampling techniques and data at this time.



# **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul> <li>Type, reference name/number, location and ownership including agreements of material issues with third parties such as joint ventures, partnerships, overriding royalties, native title intersects, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>All drilling has been within Tenement E70/4886, which is subject to an option held by Ventnor Resources Limited and detailed in the VRX announcement of 26 March 2018.</li> <li>The tenement was granted 27 March 2017 and all drilling was conducted on VCL.</li> </ul>
Exploration done by other	<ul> <li>Acknowledgement and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Prior exploration on E70/4886 is also detailed in the VRX announcement of 26 March 2018</li> </ul>
parties		<ul> <li>Minor exploration for mineral sands has been completed by Tronox in the South Eastern corner of E70/4886 and has been excluded in any assessment by VRX.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	• The targeted silica sand deposits are the aeolian sand dunes that overlie the Pleistocene limestones and paleo-coastline which host the Gingin heavy mineral deposits.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> </ul>	<ul> <li>A tabulation of the material drill holes is presented in the main body of this report.</li> </ul>
	<ul> <li>Easting and northing of the drill hole collar.</li> </ul>	
	<ul> <li>Elevation of RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.</li> </ul>	
	<ul> <li>Dip and azimuth of the hole.</li> </ul>	
	<ul> <li>Down hole length and interception depth.</li> </ul>	
	If the exclusion of the information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly	



Criteria	JORC Code explanation	Commentary
	explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting exploration results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent yelves about the procedure of the pro</li></ul>	<ul> <li>The assay data presented for the silica sand is an arithmetic average of the 1m individual sample results.</li> <li>Down hole averages have been calculated above a grade of 99% SiO2 with no more than 2m of internal dilution.</li> <li>The grade distribution shows a very low variability with no anomalous high-grade results, therefore the most appropriate method of aggregating intercepts is the use a simple arithmetic average.</li> <li>No metal equivalents are used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known).</li> </ul>	<ul> <li>As the mineralisation is associated with aeolian dune sands the majority will be essentially horizontal, some variability will be apparent on dune edges and faces.</li> <li>All drilling is vertical; hence the drill intersection is essentially equivalent to the true width of mineralisation</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>A map of the drill collar locations is incorporated with the main body of the announcement. Representative cross-sections are not attached as there is insufficient drilling at this time to generate meaningful sections.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>The accompanying document is considered to represent a balanced report.</li> </ul>
Other substantive exploration	<ul> <li>Other exploration data, if meaningful and Material, should be reported including (but not limited to): geological observations; geophysical survey results; bulk samples – size and method of</li> </ul>	<ul> <li>Geological observations are consistent with aeolian dune mineralisation</li> <li>Four, certified, dry in-situ bulk density measurements were</li> </ul>



Criteria	JORC Code explanation	Commentary
data	treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	completed by Construction Sciences Pty Ltd using a nuclear densometer. The arithmetic average of these was used in the determination of the exploration targets.
		<ul> <li>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.</li> </ul>
		The mineralisation is unconsolidated sand.
		There are no known deleterious substances at this time.
Further work	• The nature and scale of planned further work (eg test for lateral extensions of depth extensions or large-scale step-out drilling).	<ul> <li>Testwork is required to determine if conventional sand processing techniques can upgrade the sand to a high value product.</li> </ul>
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions including the main geological interpretations and future drilling areas, provided the information is not commercially sensitive.</li> </ul>	<ul> <li>Infill drilling will be undertaken to further assess the depth and variability of the high-grade silica sand.</li> </ul>
		<ul> <li>The results of this work will enable the estimation of an in-situ resource.</li> </ul>



#### About Ventnor

Ventnor Resources Ltd (**Ventnor**) (ASX: VRX) has significant silica sand projects including four exploration license applications pending over the Arrowsmith Silica Sands Project, located 270km north of Perth, Western Australia. Initial testwork is focusing on confirming that the sand can be upgraded to glass-making quality.

The announcement of 26 March 2018 details the option over the Muchea Silica Sand Project which complements the Arrowsmith Silica Sands Project with additional silica sand resources.

Ventnor also has 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.

Also in Western Australia, 40km 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

