ACN 159 819 173



ASX Release

24 January 2018

### HIGH-GRADE RC INTERCEPTS EXTEND VANGUARD PROSPECT SANDSTONE GOLD PROJECT, WESTERN AUSTRALIA

- 2017 RC drilling at Vanguard has defined 2 well mineralized structures over +300m of ~eastwest strike, which dip between 50 to 70 degrees to the north.
- Mineralization is open along strike and at depth and oxidized to 50-60m depth.
- Other mineralized structures intersected in isolated holes may represent oblique structures, with potential for high-grade plunging shoots.
- Assays from last holes of 2017 Vanguard program (to hole SRC070) include:

SRC046	:	8m	@	7.6g/t Au	from 34m*
SRC047	:	4m	@	3.6g/t Au	from 143m
SRC048	:	3m	@	5.1g/t Au	from 53m*
and		2m	@	12.3g/t Au	from 82m*
#and		7m	@	7.0g/t Au	from 126m
SRC059	:	9m	@	3.3g/t Au	from 1m*
and		1m	@	17.9g/t Au	from 92m
SRC064	:	11m	@	3.1g/t Au	from 8m*
and		4m	@	3.0g/t Au	from 28m*
and		16m	@	3.3g/t Au	from 41m*
SRC066	:	2m	@	5.0g/t Au	from 34m*
SRC067	:	33m	@	2.3g/t Au	from 39m*
incl.		19m	@	3.2g/t Au	from 39m*
	-	-			

#Denotes previously reported result

\*Denotes Oxide gold mineralization

- Successive reverse circulation (RC) and aircore and drilling programs are planned, commencing early February with initial 5,000m RC at Vanguard to support a maiden Mineral Resource estimate.
- The Alpha Domain in which Vanguard sits is comprised of favourable stratigraphy (differentiated dolerite, basalt and ultramafic rocks) cut by late brittle structures, and extends over 20km from Indomitable prospect in the north to Maninga Marley in the south.
- The initial targets in the *Alpha Domain* represent opportunities to discover substantial oxide mineralization from near surface, while the abandoned pits such as Oroya, Lord Nelson and Lord Henry represent excellent secondary targets requiring deeper drilling.

Commenting on these results, Alto's Managing Director Dermot Ryan said:

"The intersections of the east-west striking and oblique mineralized structures at Vanguard represent potential for high grade plunging shoots, which are elusive in our current 40m x 80m and 40m x 40m drill pattern. In addition, the mafic host sequence we have identified is the most favourable host in the Yilgarn for multi-million ounce deposits. Alto is very excited to be the key player in the revival of the Sandstone Goldfield". Alto Metals Limited (ASX: AME) ("Alto", "the Company") is pleased to advise that final assays from the recently completed 34-hole (5,433m) reverse circulation (RC) drilling program at the evolving Vanguard prospect have been received including several more high-grade intercepts (refer Table 1, holes SRC046-067) and Figures 3 – 7 indicating that oxide mineralization is open in all directions.

Importantly, primary mineralization below the oxide zone has also been extended and remains open at depth, and where intersected by cross-cutting structures has the potential to form high-grade plunging shoots.

The recently discovered and expanded Vanguard mineralization highlights the opportunity Alto has at Sandstone, to discover new shallow oxide gold deposits, but equally important, the opportunity to discover large primary gold deposits in favourable host rocks below the shallow drilling completed by previous explorers.

Work by Alto over the past 18 months in collating and reviewing historical exploration data reinforces our view that there is significant potential for the discovery of high-grade primary gold deposits at Sandstone, similar to those discovered in other greenstone belts in the Yilgarn of Western Australia,

Alto has planned a succession of systematic focused drilling campaigns in 2018 to extend oxide and especially primary gold mineralization to delineate an initial one million ounce gold JORC 2012 Mineral Resource as part of its overall objective to re-establish mining at Sandstone (refer Table 2)

Hole No.	From	То	Interval	Grade	
Hole NO.	(m)	(m)	(m)	(g/t Au)	
SRC046	34	42	8	7.6	
SRC047	143	147	4	3.6g	
SRC048	53	56	3	5.1g	
and	82	84	2	12.3	
and	126	133	7	7.0	
SRC059	1	10	9	3.3	
and	92	93	1	17.9	
SRC064	8	19	11	3.1	
and	28	57	29	2.3	
incl.	28	32	4	3.0	
and	41	57	16	3.3	
SRC066	34	36	2	5.0	
SRC067	39	72	33	2.3	
incl.	39	68	19	3.2	
and	69	73	4	3.0	
SRC041	33	48	15	2.4	
SRC048	126	133	7	7.0	
SRC059	1	10	9	3.3	
and	92	96	4	3.9	
SRC030	135	141	6	2.4	
SRC031	96	100	4	5.6	
SRC032	103	125	22	3.3	
incl.	109	110	1	15.8	
and	116	125	9	4.6	
incl.	121	122	1	11.9	
and	140	144	4	5.8	
SRC034	49	55	6	2.1	
SRC036	0	21	21	1.9	
and	89	98	9	4.7	
incl.	92	93	1	9.9	
and	95	96	1	22.5	
SRC037	118	124	6	2.1g	

#### **Table 1. Significant Vanguard Assay Results**

Refer Appendices 1 & 2 for latest assay results +0.5g/t Au and drill collar information \*Previously reported 15 Dec 2017

Of particular note is that the mineralized host rocks in Alto's *Alpha Domain* and at Vanguard comprise differentiated dolerite, basalt and ultramafics, a combination synonymous with Kalgoorlie's World Class Golden Mile Dolerite, the Mt Charlotte orebody and the Jundee gold deposit.

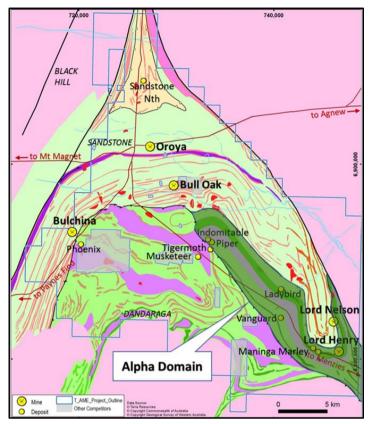


Figure 1. Geological Interpretation of Sandstone Greenstone Belt, showing Alto's Landholdings and Major Prospects

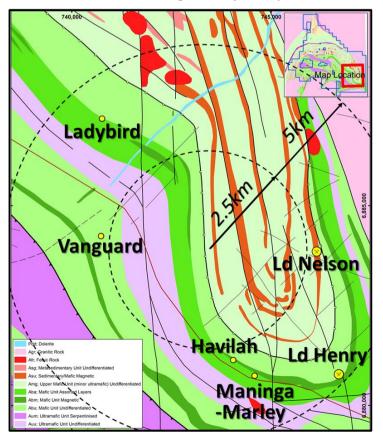


Figure 2. Geological Interpretation of Vanguard – Maninga Marley Area

RC drilling at Vanguard has determined that the oxide zone, which generally extends to 50m-60m depth from surface, is otherwise open in all other directions and frequently contain long intercepts of 2 - 3g/t of "free dig" gold mineralization. The oxide zones lie above, and are derived from, multiple zones of moderate to steeply dipping high-grade, structurally controlled primary mineralization which remains open at depth,

**Figure 3** is a plan view showing the location of the Vanguard grid, Alto's RC drill hole collars, and a general outline of the gold mineralized structures defined to date. Note hole **SRC019**, 200m to the southeast of the main zone. Refer Figures 4 - 7 for schematic cross sections. The *yellow assay boxes reflect additional 1m assays received after the date of the last Vanguard ASX release on 15 December 2017, and the white assay boxes reflect previously reported assay intervals.* 

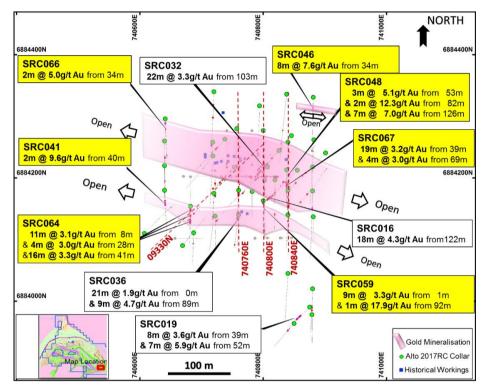


Figure 3. Vanguard Prospect, Plan of 2017 RC Drill Hole locations and Mineralized Structures

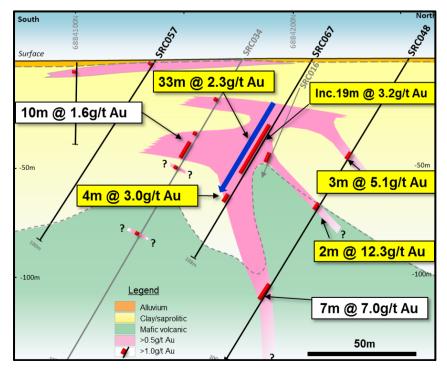


Figure 4. Vanguard Cross Section 740,840mE (GDA94, Zone 50)

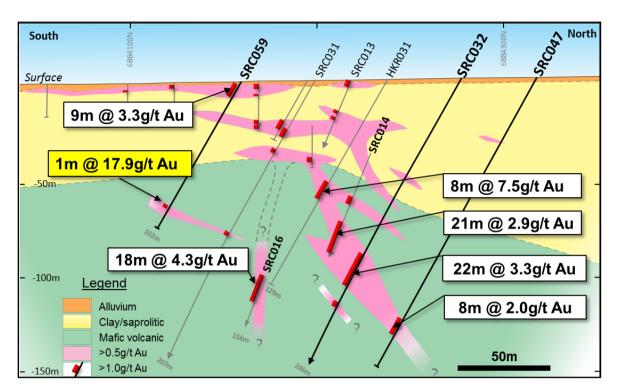


Figure 5. Vanguard Cross Section 740,800mE (GDA94, Zone 50)

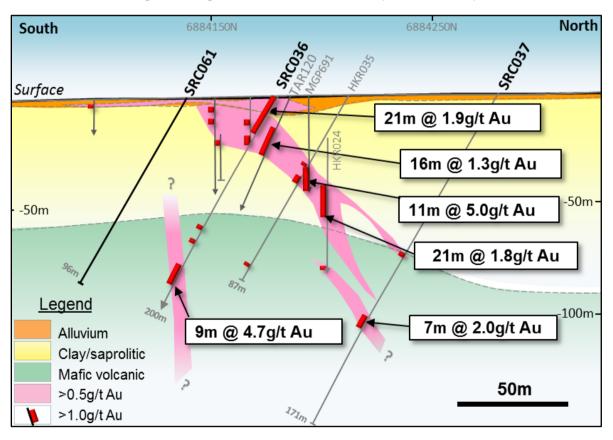


Figure 6. Vanguard Cross Section 740,760mE (GDA94, Zone 50)

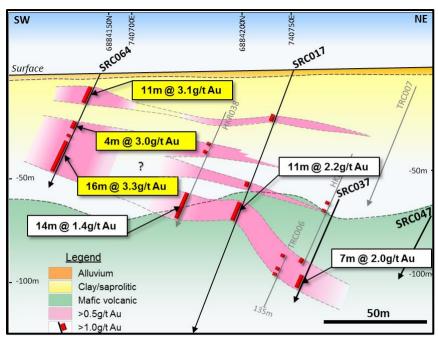


Figure 7. Vanguard Oblique Cross Section (Local Grid Oriented SW-NE)

### ABOUT ALTO AND THE SANDSTONE GOLD PROJECT

Alto holds ~75% (800km<sup>2</sup>) and is systematically exploring the historic Archaean Sandstone Goldfield 600km north of Perth in the East Murchsion Mineral Field of Western Australia. Since acquiring the Project in June 2016, Alto has compiled and reviewed a large legacy database ahead of a series of focused exploration and drilling campaigns which commenced late-2016.

Alto's immediate objective is the delineation of a combined 1 million ounce JORC 2012 Mineral Resource, comprised of relatively shallow gold deposits (new deposits such as Vanguard North, Vanguard and Indomitable) and existing deposits (such Lord Nelson and Lord Henry) that can be profitably mined either though trucking to existing mills in the district or through re-establishment of standalone oxide and primary gold mining operations at the Project. Ultimately, Alto aims to find +5 million ounces of gold, which is comparable other more intensely explored greenstone belts in the Yilgarn of WA.

Alto's existing Mineral Resource base, estimated by Snowdens, is shown in Tables 2 & 3 below.

Table 2.	Sandstone	<b>Gold Project</b>
Mineral	Resources	JORC (2012)

Prospect	Category	Tonnes (,000)	Grade (g/t)	Ounces (,000)
Lord Nelson	Inferred	983	2.2	68
Lord Henry	Indicated	1,238	1.6	65
	Inferred	110	1.3	4
Lord Henry Total		1,348	1.6	69
TOTAL		2,331	1.8	137

\*Cautionary Note: A Competent Person has not completed sufficient work to accurately classify the JORC 2004 estimates as Mineral Resources under the JORC 2012 Code

Table 3. Sandstone	Gold Project
Mineral Resources	JORC (2004)*

Prospect	Category	Tonnes (,000)	Grade (g/t)	Ounces (,000)
Havilah	Indicated	285	1.7	15.5
	Inferred	41	2.1	2.8
Maninga Marley	Inferred	80	3.1	8.0
Vanguard	Inferred	330	1.6	16.7
Ladybird	Indicated	118	2.5	9.6
	Inferred	40	2.1	2.7
Tigermoth	Inferred	561	1.7	31.2
Piper	Indicated	91	1.4	4.0
Bull Oak Reefs	Inferred	390	1.5	18.8
Sandstone North	Inferred	77	2.0	4.9
Oroya Underground	Inferred	63	5.3	10.7
TOTAL		2,076	1.9	125

#### **HISTORICAL PRODUCTION AND EXPLORATION**

Since the discovery of gold at the end of the 19<sup>th</sup> Century, the Sandstone Greenstone Belt has produced over 1.3 million ounces of gold from numerous underground and open pit mining operations. Of this, some 612,000 ounces was produced between 1994 and 20 from the open-pit mining of shallow oxide ore by ASX listed companies Herald Resources Ltd and Troy Resources Ltd.

The numerous former open pits, prospects and gold occurrences now owned by Alto include Lord Nelson, Lord Henry, Havilah, Bull Oak, Vanguard, Ladybird, Maninga Marley, Sandstone North, Oroya, Tiger Moth, Musketeer, Piper and Bulchina.

Between 1994 and 2009, the exploration focus at Sandstone was largely on exploring for and mining shallow oxide ore to feed the 1987 vintage Herald/Troy Nunngarra Mill, at a time when the Australian dollar gold price was substantially lower than it is today.

The project is easily accessible by sealed highway and air with excellent communications systems, grid power and water availability

Alto's experienced management and technical team has a track record in discoveries and is supported by an External Research Advisory Committee (ERAC) led by Professor David Groves.

The group is using a *'minerals systems'* approach and has identified a pipeline of high-priority lithostructural targets most likely to host million-ounce gold deposits. These target areas are being progressively assessed and ranked, using both the large legacy database which Alto has assembled from WA Mines Department Open File system, and by field observations.

These project areas were shown Figure 1. The field assessment and ranking of these project areas, which includes mapping and geochemical sampling, is ongoing.

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#### Competent Person Statement

The information in this Report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Dermot Ryan, who is an employee of Xserv Pty Ltd and a Director and security holder of the Company. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralization and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Historic exploration results and mineral resources referred to in this Report were previously reported by Troy Resources NL pursuant to JORC Code 2004. Alto Metals Limited understands that this information has not been updated since to comply with the JORC Code 2012, but believes the information has not materially changed since it was last reported.

Unin	Ero ro	Te	Intowial	Grade	]
Hole ID	From (m)	To (m)	Interval (m)	(g/t Au)	
SRC046	34	42	8	7.64	-
and	143	144	1	5.79	-
and	169	171	2	1.94	
unu	105	1/1		1.5 1	
SRC047	34	36	2	0.76	
and	143	147	4	3.57	
and	150	154	4	1.54	-
SRC048	53	56	3	5.10	
and	82	84	2	12.3	
and	87	88	1	0.65	-
and	126	133	7	7.00	*Previously reported
unu	120	100	,	7.00	
SRC058	28	29	1	1.00	*
and	32	35	3	0.95	
and	42	48	6	0.91	*
and	103	108	5	1.31	
			_	-	
SRC059	1	10	9	3.30	*
inc.	9	10	1	20.12	
and	92	93	1	17.89	
SRC062	62	68	6	0.83	-
SRC064	8	19	11	3.13	*
and	28	57	29	2.40	
inc.	36	38	2	1.80	
and	41	57	16	3.30	*
inc.	43	50	7	5.26	-
	15		,	5.20	
SRC065	3	5	2	0.70	
and	50	52	2	4.48	
67.0000	45	47		2.24	
SRC066	15	17	2	2.31	-
and	34	36	2	5.00	-
and and	44 76	45 78	1 2	2.10 0.88	-
and	117	119	2	1.39	
dilu	11/	115	2	1.55	-
SRC067	23	24	1	0.77	]
and	33	34	1	0.77	
and	39	72	33	2.29	
inc.	39	58	19	3.16	ļ
inc.	61	64	3	0.62	
inc.	68	72	4	2.96	
and	79	82	3	0.50	4
SRC068	39	45	6	1.35	4
and	48	49	1	0.87	•
					1
	6	9	3	0.59	
SRC069					
SRC069 and and	36 75	37 76	1	1.15 3.15	

# APPENDIX 1. Vanguard Prospect, Latest 1m RC Samples, 50gm Fire Assays, +0.5g/t Au

### ASX Release

SRC070	60	61	1	0.53
and	65	66	1	0.67
and	109	110	1	0.86

#### APPENDIX 2. Collar details of Vanguard RC Drill Holes Completed in October-November 2017

Hole ID	East	North	RL	Dip	Azimuth	Depth
1	GDA94	GDA94	(m)	Degrees	Degrees	(m)
SRC029	740820	6884100	486	-60	0	201
SRC030	740820	6884160	486	-60	0	207
SRC031	740802	6884196	487	-60	180	207
SRC032	740800	6884277	488	-60	180	246
SRC033	740840	6884045	485	-60	180	153
SRC034	740840	6884180	488	-60	180	165
SRC035	740838	6884336	490	-60	180	231
SRC036	740760	6884180	487	-60	180	213
SRC037	740757	6884280	488	-60	180	171
SRC038	740720	6884175	487	-60	180	200
SRC039	740718	6884258	488	-60	180	200
SRC040	740720	6884340	489	-60	180	235
SRC041	740640	6884180	486	-60	180	200
SRC042	740640	6884260	487	-60	180	201
SRC043	740880	6884020	486	-60	180	150
SRC044	740880	6884179	477	-60	180	207
SRC045	740882	6884262	489	-60	180	200
SRC046	740881	6884331	490	-60	180	189
SRC047	740794	6884317	488	-60	180	183
SRC048	740840	6884258	489	-60	180	200
SRC057	740840	6884140	487	-60	180	100
SRC058	740819	6884197	487	-60	180	150
SRC059	740800	6884163	487	-60	180	102
SRC060	740782	6884178	487	-60	180	80
SRC061	740760	6884140	486	-60	180	96
SRC062	740722	6884138	486	-60	180	96
SRC063	740687	6884111	485	-60	180	100
SRC064	740682	6884154	486	-60	180	120
SRC065	740640	6884220	486	-60	180	100
SRC066	740641	6884296	486	-60	180	138
SRC067	740838	6884213	487	-60	180	108
SRC068	740879	6883978	485	-60	180	90
SRC069	740881	6884137	487	-60	180	80
SRC070	740880	6884218	488	-60	180	114

All Co-ordinates in GDA94, Zone 50, and within Exploration Licence 57/1033

# JORC Code, 2012 Edition – Table 1 report

## 24 January 2018 - Sandstone Project

## Section 1 Sampling Techniques and Data

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

Criteria	Commentary
Sampling techniques	<ul> <li>RC drilling carried out by Alto Metals Ltd in October-November 2017.</li> <li>RC samples were passed directly from the in-line cyclone through a rig mounted cone splitter. Samples were collected in 1 m intervals into bulk plastic bags and 1 m calico splits (which were retained for later use).</li> <li>From the bulk sample, a 4 m composite sample was collected using a split PVC scoop and then submitted to the laboratory for analysis.</li> <li>1 m calico splits were submitted to the laboratory if the composite sample assay values are equal to or greater than 0.2 g/t Au.</li> <li>In certain cases, selected samples from some holes were passed from the cyclone through a rig mounted cone splitter, and samples collected into calico bags at 1 m intervals were submitted directly for analysis. The remaining bulk sample was placed on the ground in 1 m intervals.</li> </ul>
Drilling techniques	RC drilling was with a KWL 350 drill rig with an onboard 1100/350 compressor using a sampling hammer of nominal 140mm hole.
Drill sample recovery	<ul> <li>The 1m calico samples were selectively weighed using hand-held scales to ensure a consistent sample weight of 2-3 kg was obtained.</li> <li>RC recoveries in bulk plastic bags were recorded as a percentage by visual examination.</li> <li>A truck mounted 1000/1000 auxiliary/booster was used as required.</li> <li>Samples were mostly dry, except for a portion of the clay zone where the samples were recorded as moist, and several holes at depths generally greater than 150m downhole.</li> <li>It is not known whether a relationship exists between sample recovery and grade and whether sample bias may have occurred.</li> </ul>
Logging	<ul> <li>RC drill chips were sieved from each 1 m sample and geologically logged.</li> <li>Due to the heavily oxidised nature of the drilled areas, a portion of the samples consisted of clay.</li> <li>Washed drill chips from each 1 m sample were stored in chip trays and photographed.</li> <li>Geological logging of drillhole intervals was done with sufficient detail to meet the requirements of resource estimation.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>RC samples were sent to MinAnalytical Laboratory Services Australia Pty Ltd located in Canning Vale, Western Australia.</li> <li>MinAnalytical were responsible for sample preparation and assaying for drillhole samples and associated check assays.</li> <li>MinAnalytical is certified to NATA in accordance with ISO17025:2005 requirements for all related inspection, verification, testing and certification activities.</li> <li>4m composite RC samples were dried and then ground in an LM5 ring mill for 85% passing 75 microns.</li> <li>1m RC samples from within 4m composite sample intervals reporting +0.2ppm Au, or selected based on geological observation, were dried then crushed and homogenised to produce a 3 kg sample for the LM5 ring mill.</li> <li>For the 4m composite sampling, field duplicate samples were collected at a rate of 1:40 and field blank samples were inserted at a rate of 1:40.</li> <li>For the 1m sampling, field blank samples were inserted at a rate of 1:40, and field standards were inserted at a rate of 1:40, giving an overall 1:20 sample to standard ratio. And found to be acceptable.</li> <li>QA/QC procedures for sub-sampling follow MinAnalytical procedures.</li> <li>Sample sizes are considered appropriate for the grain size of the material being sampled.</li> </ul>
Quality of assay data	<ul> <li>RC samples were analysed using an Aqua Regia digest with an ICP/MS finish for gold and a limited suite of base metal elements (Ag, As, As, Bi, Cu, Co, Ni, Pb, Sb, Te, W, Zn). This</li> </ul>

### ALTO METALS LIMITED

Criteria	Commentary
and	technique is considered a partial digest.
laboratory tests	<ul> <li>1m samples, and 4m composite samples reporting &gt;4000ppb Au, were analysed by 50g</li> <li>Fire Assay method. This technique is considered a total digest.</li> <li>No geophysical tools or handheld XRF instruments were used to determine the geochemical</li> </ul>
	<ul> <li>Laboratory Certified Reference Materials and/or in-house controls, blanks, splits and replicates are analysed with each batch of samples. These quality control results are reported along with the sample values in the final report. Selected samples are also re-</li> </ul>
	<ul><li>analysed to confirm anomalous results.</li><li>Laboratory and field QA/QC results are reviewed by Alto personnel.</li></ul>
Verification of sampling and assaying	<ul> <li>Alto has not conducted any independent verification of the assay data.</li> <li>Drill chips were inspected where significant intersections were reported.</li> <li>No twinned holes have been drilled to date.</li> <li>Data is entered and validated in Micromine. Alto also has a Datashed database maintained by a Database Administrator.</li> <li>Values below the applytical dataction limit were replaced with holf the dataction limit value.</li> </ul>
Location of	Values below the analytical detection limit were replaced with half the detection limit value.  The Vance and Levillet Manian Marley gride are inceed as CDA04
data points	<ul> <li>The Vanguard and Havilah-Maninga Marley grids are ibased on GDA94.</li> <li>Alto used handheld GPS to locate and record drill collar positions, accurate to +/-5 metres horizontal.</li> </ul>
	<ul> <li>There is no documentation on the collar survey methodology or downhole surveys for Troy and Herald Resources AC and RC holes. Although most drill sites have been rehabilitated, some drill collars are still marked in the field by a strip of PVC protruding from the surface, and they can be accurately located in GDA94 space.</li> </ul>
	<ul> <li>Downhole surveys were completed on Vanguard, and Havilah-Maninga Marley RC holes using a north- seeking gyro down hole survey tool operated by the drilling contractor.</li> <li>DGPS data is also used for topographic control.</li> </ul>
Data spacing and distribution	<ul> <li>Drill holes were typically spaced on a 40m by 40m spacing at Vanguard.</li> <li>The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedure, where such an estimation has been undertaken.</li> <li>4m composite sampling has been undertaken with 1m resplits collected where assay mention appropriate for the Mineral Resource for the Mineral Resource and the second statement of the second statement</li></ul>
	results were reported above 0.2ppm Au. 4m composites from holes SRC065 - SRC070 went straight to 50gm FA.
Orientation of data in relation to geological structure	<ul> <li>Geological structures have been interpreted from drilling due to the lack of outcrop in the Vanguard and Maninga Marley areas.</li> <li>The historic drill orientation for Vanguard and Havilah-Maninga Marley was typically -60° on north south and east west grids.</li> <li>Alto's drill orientation at Vanguard was -60° on 180° and at Havilah-Maninga Marley was -60° on 180°.</li> </ul>
Sample security	<ul> <li>4m composite and 1m original RC drill samples comprised approximately 3 kg of material within a labelled and tied calico bag.</li> <li>Individual sample bags were placed in a larger plastic polyweave bag then into a bulka bag that was despatched to the laboratory via McMahon Burnett freight.</li> <li>Sampling data was recorded on field sheets and entered into a database then sent to the head office.</li> <li>Laboratory submission sheets are also completed and sent to the laboratory prior to sample</li> </ul>
	receival.
Audits or reviews	<ul> <li>Alto has reviewed and compiled available technical data for Vanguard and Havilah-Maninga Marley. No audit has been completed to date.</li> </ul>

# **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	<ul> <li>Alto's drilling program at Vanguard and Havilah-Maninga Marley was completed on E57/1033, granted on 20 September 2016 to Sandstone Exploration Pty Ltd, a wholly owned subsidiary of ASX listed Alto Metals Limited.</li> <li>The total Sandstone Project area covers approximately 800 km<sup>2</sup> with five exploration licences granted on 20 September 2016 and two prospecting licences granted on 11 June 2016, and two exploration licence applications and two prospecting licence applications.</li> </ul>
Exploration done by other parties	<ul> <li>Previous work carried out by Troy and Herald Resources at Vanguard was described in Alto's ASX releases dated 20 June 2017 and 20 July 2017.</li> <li>Previous work carried out by Troy and Herald Resources at Havilah-Maninga Marley was described in Alto's ASX release dated 29 August 2017.</li> <li>At Vanguard, Herald Resources undertook RAB and RC drilling around the old Vanguard workings (on ML57/22) in 1999, and estimated a Mineral Resource (JORC 2004) of 330,000t at 1.57g/t Au for 16,657oz.</li> <li>At Havilah-Maninga Marley, Herald Resources undertook RC drilling (51 drill holes) between 1997-1999, on 40m x 20m spacing to target strike extensions of historic workings.</li> <li>Between 1999-2009 Troy undertook shallow AC and RC drilling at Vanguard and Havilah-Maninga Marley, drilling on east-west and north-south grids.</li> </ul>
Geology	Interpreted geology of Vanguard and Havilah-Maninga Marley is described in this report.
Drill hole Information	<ul> <li>Alto's drill hole collar information and assay results +0.5 g/t Au are reported in this report.</li> <li>Herald and Troy's drilling results for the same areas were published in Alto's ASX releases dated 20 July 2017 and 29 August 2017.</li> </ul>
Data aggregation methods	<ul> <li>Alto's gold assay results +0.5 g/t Au for Vanguard RC drilling are reported in this report.</li> <li>Troy's and Herald's gold assay results +1.0 g/t Au for Vanguard, and Havilah-Maninga Marley drilling (on sections drilled by Alto) were reported graphically in previous reports.</li> <li>Aggregate sample assays are calculated using a length weighted average.</li> <li>Where aggregated intercepts presented in the report include shorter lengths of high grade mineralisation, these shorter lengths have also been tabulated.</li> <li>No metal equivalents have been used or reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>At Vanguard the mineralisation strikes in multiple directions; E-W, NNW-SSE and NW-SE with both steep and shallow dipping quartz sulphide veins.</li> <li>Alto drill holes were typically oriented -60 → 180, and were designed to intersect the mineralisation perpendicular to the interpreted ore zones.</li> <li>All intersections are reported as downhole length and no correction for true width has been applied. The relationship between true width and downhole length is not known at this stage given the variable orientation of the mineralisation generally strikes east-west and is associated with wide zones of quartz stockworks within and associated mafic volcanic rocks.</li> <li>All intersections are reported as downhole length and no correction for true width has been applied. The relationship between true width and downhole length is not known at this stage given the variable orientation of the mineralisation generally strikes east-west and is associated with wide zones of quartz stockworks within and associated mafic volcanic rocks.</li> <li>All intersections are reported as downhole length and no correction for true width has been applied. The relationship between true width and downhole length is not known at this stage given the variable orientation of the mineralisation.</li> </ul>
Diagrams	Refer to figures in main body of report.
Balanced reporting	• All available Alto drill hole Au assay results published, using a +0.5 g/t Au cut-off grade.
Other substantive exploration data	No other material information available for prospect areas at this stage.

### ALTO METALS LIMITED

Criteria	Commentary						
Further work	<ul> <li>Additional drilling to test for lateral and depth extensions will be undertaken. Infill drilling may also be undertaken.</li> <li>Estimation of JORC 2012 Mineral Resources may also be undertaken following receipt of all</li> </ul>						
	assay results.						
Moisture	• Alto does not have any details regarding the moisture, methodology or modelling undertaken for Troy's Vanguard (JORC 2004) compliant Mineral Resource estimate.						
Cut-off parameters		<ul> <li>Alto has reported the exploration results above a 0.5 g/t Au cut-off grade due to the shallow nature of the mineralisation.</li> </ul>					
Mining factors or assumptions	No mining assumption	No mining assumptions at this early stage.					
Metallurgical factors or assumptions	<ul> <li>Vanguard has only been historically mined by hand through small shafts and diggings (1900 - 1930's?) so metallurgical data is not available, but Alto assumes the oxide gold mineralisation will have high recoveries.</li> </ul>						
	<ul> <li>Havilah and Maninga and diggings (1900 – of refractory gold be</li> </ul>	1930s) so m	etallurgical	•	•	nall and large shafts but there is no report	
<i>Environmental</i> • It is assumed that no environmental factors exist that could prohibit any potential							
factors or assumptions	<ul> <li>The Sandstone area has a strong history of mining, and there is strong local support for mining the area.</li> </ul>						
Bulk density	No bulk density measurements	No bulk density measurements undertaken at this early stage of exploration.					
Classification	<ul> <li>Troy published a (JORC 2004 compliant) Mineral Resource estimate for Vanguard (refer Snowden Report 2007) as follows:</li> </ul>						
	Prospect	Category	Tonnage (Kt)	Grade (g/t Au)	Gold (Koz)		
	Vanguard	Indicated	105	1.50	5.06		
	Vanguard	Inferred	225	1.60	11.57		
	Alto does not have a     Vanguard (JORC 20)					g undertaken for the	
	<ul> <li>Troy published a (JC Snowden Report 200</li> </ul>	RC 2004 cor	npliant) Mine			or Havilah (refer	
	Prospect	Category	Tonnage (Kt)	Grade (g/t Au)	Gold (Koz)		
	Havilah Havilah	Indicated Inferred	285 41	1.7 2.1	15.5 2.8		
	<ul> <li>Alto does not have any details regarding the methodology or modelling undertaken for the Havilah (JORC 2004) compliant Mineral Resource estimate.</li> </ul>						
Audits or reviews	• The Snowden Mineral Resource estimates published by Troy in 2007 for Vanguard was peer reviewed as part of Snowden's standard internal peer review process. Alto is not aware of any external reviews of the above Mineral Resource estimate.						
Discussion of relative accuracy/ confidence	<ul> <li>Alto does not have a Vanguard (JORC 20)</li> </ul>					g undertaken for the	