

Alto Metals Limited
ABN: 62 159 819 173

**ASX: AME** 

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#### **Directors:**

Non- Executive Chairman Mr Terry Streeter

Managing Director Mr Dermot Ryan

Non-Executive Director Dr Jingbin Wang

Non-Executive Director Mr Terry Wheeler

Company Secretary & CFO Mr Patrick Holywell ASX RELEASE JUNE 2018 QUARTERLY REPORT
26 July 2018



# **HIGHLIGHTS – SANDSTONE GOLD PROJECT**

- Discovery of additional mineralized "shoots" in AC/RC drilling at Vanguard. Significant intersections include:
  - SAC214: 12m @ 2.5 g/t Au from 0m to 12m, and
     9m @ 4.0 g/t Au from 60m to 69m (EoH)
  - SRC091: 17m @ 2.3 g/t Au from 9m to 26m
  - SRC098: 6m @ 6.1 g/t Au from 92m to 98m
- ➤ Infill drilling of shallow gold mineralization at **Indomitable Camp.** Preliminary 4m composite results include:
  - SAC137: 4m @ 4.7 g/t Au from 8m to 12m
  - SAC138: 8m @ 7.3 g/t Au from 4m to 12m
- ➤ Mining Lease Application 57/646 lodged over the Indomitable Camp deposits and scoping study started.
- Resource estimation progressing on Indomitable Camp and Vanguard Camp deposits by end December.
- Additional high priority target areas identified from the recent extensive soil sampling program over the Sandstone Greenstone Belt.

Corporate: \$0.9 million cash @ 30 June 2018.

Managing Director Dermot Ryan commented: "The RC and aircore drilling at the Sandstone during the Quarter has delivered some excellent results at our advanced prospects such as Vanguard, Tiger Moth and Indomitable. As a result, we have subsequently applied for a mining lease over the Indomitable Camp deposits, and have commenced a scoping study, to be underpinned by a JORC 2012 resource estimate by Carras Mining Pty Ltd".

"We are still waiting on a considerable number of drill sample assays from the laboratory that we believe will add to our list of targets for follow up during the remainder of 2018. Our soil sampling program has also identified a number of outstanding gold-in-soil anomalies that require drill testing to determine the presence of any substantial gold mineralization at depth".

#### **SUMMARY OF EXPLORATION ACTIVITIES - JUNE QUARTER**

Alto Metals Limited (ASX: AME) ("Alto", "the Company") is pleased to provide a summary of activities for the Quarter ending 30 June 2018 at its 100% owned 800km2 Sandstone Gold Project, 150km east of Mount Magnet in Western Australia, and provide an overview of planned activities for the September Quarter.

Exploration activities for the 3 months ended 30 June 2018 have included:

- RC drilling at the Vanguard and Maninga Marley Prospects (23 holes, 1,729 metres),
- Aircore drilling at 9 prospects to test and expand the footprint of known prospects and gold-in-soil anomalies (253 holes, 12,205 metres),
- Collection of 2,972 soil samples from 17 areas selected as priority targets,
- Preliminary assessment of the Indomitable Camp and Vanguard Camp deposits, and
- Commencement of desktop studies regarding the potential volume and gold content of the extensive historic tailings on the Company's landholdings.

### **RC DRILLING**

During the Quarter, 23 RC holes (total 1,729m) were drilled at Vanguard and Maninga Marley.

### **Vanguard RC Drilling**

Between  $1^{st} - 4^{th}$  April, a total of 14 RC holes for 1,173 metres were drilled at and around Vanguard. Eleven short step-out vertical RC holes (total 853m) were drilled to the southeast of Vanguard and 4 RC holes (total 320m) were drilled to the northeast of Vanguard to follow up isolated high-grade RC drill intersections obtained from previous Alto drilling campaigns.

Alto reported 50gm fire assay results for all 1metre samples +0.5g/t Au on 31 May 2018. The +1g/t assay results are shown below in Table 1.

		•	•	•	-	•	•		
Hole ID	East GDA94	North GDA94	Depth (m)	Dip	Azimuth	From (m)	To (m)	Interval (m)	Grade (g/t Au)
SRC091	740843	6883951	60	-90	0	9	26	17	2.29
incl.						9	15	6	4.09
incl.						12	13	1	11.9
and						29	30	1	4.31
SRC092	740841	6883968	60	-90	0	39	42	3	2.09
and						44	46	2	2.18
and						53	55	2	1.00
SRC093	740880	6883952	80	-90	0	24	25	1	2.31
and						41	42	1	1.28
SRC096	740922	6883977	100	-90	0	48	49	1	2.37
and						75	76	1	4.63
SRC098	740919	6884016	100	-90	0	92	98	6	6.07
incl.						96	98	2	11.59
SRC099	740883	6883989	80	-90	0	51	71	20	1.58
incl.						53	54	1	4.49
and						62	71	9	2.44
incl.						62	63	1	5.71
and						67	68	1	8.15
SRC100	740877	6883976	80	-90	0	34	39	5	2.93
	i	1		1			1	1	

-90

0

45

46

80

Table 1. Vanguard Prospect, 1m RC Samples, Fire Assay Results +1.0g/t Au

Exploration Licence 57/1033

740862

6884322

**SRC104** 

1.98

The holes to the southeast of the known Vanguard mineralization have confirmed a new mineralized structure, illustrated in Figure 1, oblique **Section B – B'** below. The location of Section B – B' is shown in Figure 2. Further RC drilling is required to extend this mineralized structure into the primary zone.

6884,100N-741,000Esw NE 5884,000N-740,900E-5883,900N 740,800F В B' 8SRC098 L7SRC018 18SRC091 Surface Base of Alluvium 17m @ 2.3g/t Au from 9m 9m @ 2.4g/t Au from 62m Incl. 1m @ 11.9g/t Au from 12m Incl. 1m @ 5.7g/t Au from 62m -50m -50m & 1m @ 8.2g/t Au from 67m Top of Fresh Rock 6.1g/t Au from 92m -100m-Incl. 2m @ 11.6g/t Au from 96m Interpreted Gold Mineralization Structure -100m 8m @ 3.6g/t Au from 39m Legend & 7m @ 5.9g/t Au from 52m Incl. 1m @ 26.2g/t Au from 53m Alluvium Clay/saprolitic Mafic volcanic -150m >0.5g/t Au -150m >1.0g/t Au

Figure 1. Vanguard Prospect, Oblique Section of Mineralized Structure in Oxide Zone

# **Maninga Marley RC Drilling**

During the Quarter, 9 short RC holes (total 616m) were drilled to test for gold mineralized "shoots". Although several holes intersected low grade (+0.5g/t Au) mineralization, only hole SRC111 achieved a significant intersection, reported on 31 May 2018.

North Depth То Interval Grade East From **Hole ID** Azimuth Dip GDA94 GDA94 (m) (m) (m) (m) (g/t Au) **SRC112** -90 744652 6880720 80 0 47 53 6 2.19 47 50 3 incl. 4.11 49 50 1 8.97 incl.

Table 2. Maninga Marley Prospect, 1m RC Sample, Fire Assay Results +1.0g/t Au

Exploration Licence 57/1033

#### **AIRCORE DRILLING**

During the Quarter, Alto drilled 253 aircore holes (total 12,205m) at nine prospects to define and/or extend the footprints of known oxide gold mineralization. As part of this program, Alto completed an initial 110 AC holes for 3,397 metres at Vanguard, Tiger Moth and Indomitable. 4 metre composite assays were received for Tiger Moth (31 holes, 620m) and the 1<sup>st</sup> stage AC holes at Vanguard (35 holes, 2,073m).

Assay results from the 2<sup>nd</sup> stage holes at Vanguard and holes at Indomitable, Indomitable North, Maninga Marley, Kurrajong, Lord Henry South, Bulchina North, Sandstone North (total 143 holes, 8,808m) are still awaited. Refer Appendix 3.

#### **Vanguard AC drilling**

A total of 35 shallow vertical AC holes (total 2,073metres) were drilled around Vanguard in this first round of drilling, and the 4m composite fire assay results reported to the ASX on 3 July 2018. Fire assays from 1 metre resplit samples are awaited.

Table 3. Vanguard 2018 Aircore Extension Program, 4m AC Samples, Fire Assay Results +1.0g/t Au

Hole ID	East GDA94	North GDA94	Depth (m)	Dip	Azimuth	From (m)	To (m)	Interval (m)	Grade (g/t Au)
SAC206	740684	6884243	63	-90	0	40	60	20	1.36
SAC207	740682	6884278	62	-90	0	60	62	2	1.77
SAC214	740599	6884198	69	-90	0	0	12	12	2.47
and						16	20	4	1.58
and			·			60	69	9	4.03
SAC220	740403	6884298	71	-90	0	52	56	4	1.23

This AC drilling confirmed two newly discovered mineralized structures (on "Section C") which have similar orientations to the mineralized structures on Sections A and B, previously defined by Alto's drilling. All five mineralized structures plunge shallowly to the northeast and are open at depth. The depth of oxidation is approximately 50m, and the primary host rock is mafic volcanics. Long sections showing these plunging mineralized structures are shown overleaf.

Figure 2. Image of Vanguard Deposits Showing Existing RC and AC Holes with Maximum Gold Values Projected to the Drill Collar ("Max Au Plan")

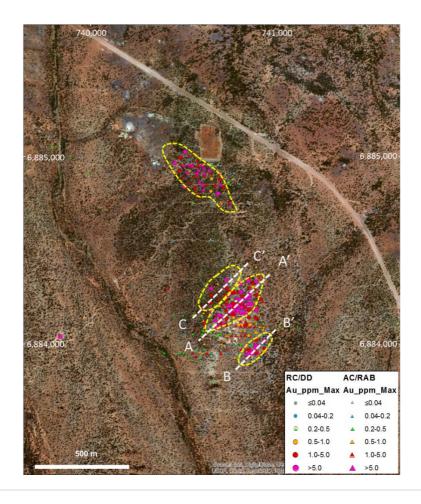
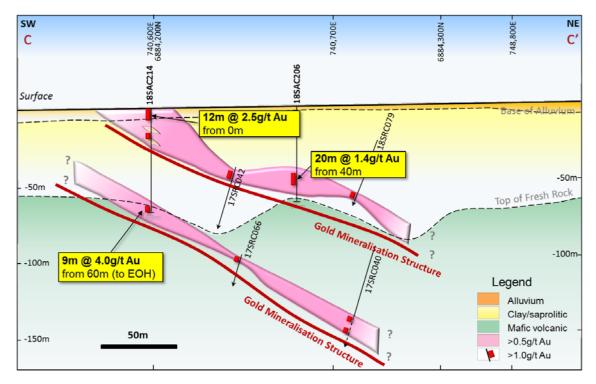


Figure 3. Long Section "C" Showing the 2 New Mineralized Structures and 2018 Vertical Aircore Holes



Note 1: Alto's angled RC holes drilled in 2017 "clipped" these mineralized structures, but did not define them.

Note 2: Mineralization in SAC214 (9m @ 4.0 g/t Au from 60m to 69m) is open at end of hole (EoH).

#### **Tiger Moth AC Drilling**

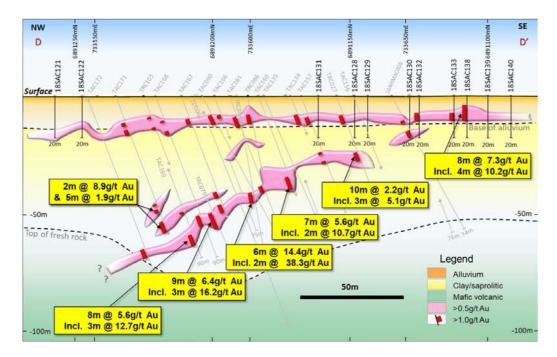
At Tiger Moth, 31 AC holes (20m each, total 620m) were drilled to test the grade and thickness of the shallow laterite gold hosted mineralization. The 4m composite fire assay results were reported to the ASX on 10 July 2018. Fire assays from 1 metre resplit samples are awaited.

The higher grades obtained are the result of in situ weathering of the up-dip position of the primary mineralized structure. Significant gold results are shown in Table 4 below, and in Figure 4 overleaf.

Table 4. Tiger Moth 2018 Laterite Aircore Drill Program, 4m Samples, Fire Assays +1.0 g/t Au

Hole ID	East GDA94	North GDA94	Depth (m)	From (m)	To (m)	Interval (m)	Grade (g/t Au)
SAC126	733560	6891141	20	8	20	12	1.2
SAC127	733582	6891140	20	8	20	12	1.6
SAC128	733623	6891139	20	8	12	4	1.0
SAC132	733652	6891123	20	8	12	4	1.28
SAC133	733672	6891118	20	8	12	4	1.93
SAC134	733581	6891101	20	12	16	4	1.83
SAC135	733600	6891098	20	8	16	8	1.99
SAC136	733620	6891100	20	8	12	4	1.77
SAC137	733640	6891098	20	8	12	4	4.68
SAC138	733660	6891099	20	4	12	8	7.30
SAC143	733601	6891057	20	12	20	8	1.00

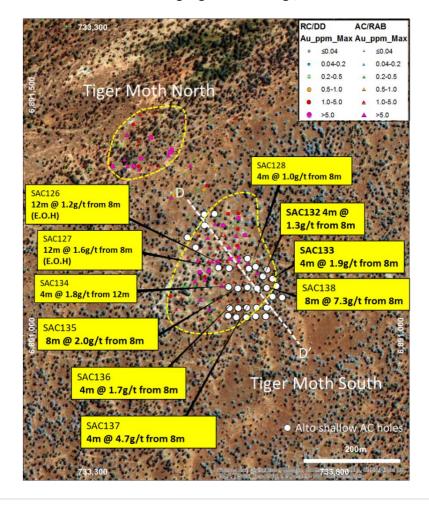
Figure 4. Tiger Moth Long Section "D" (+/- 20m) Showing Laterite & Bedrock Mineralized Structures.



**Note: Tiger Moth North** may be the surface expression of a further NW plunging quartz stockwork "shoot" hosted by the same shear structure as the main Tiger Moth (South) deposit. Further drilling is required.

Figure 5. Image of Tiger Moth Showing Historic RC and 2018 AC Holes ("Max Au Plan")

Alto Laterite AC Holes Highlighted with +1gt/t Au Intersections



# **SOIL SAMPLING**

10.64

Alto collected 2,972 soil samples from 17 selected areas in April/ May 2018, which have been integrated with competitor's soils sample results (Figure 5 below). The image below displays in **yellow** the names of these significant soil anomalies which require follow up. **Note**: Gold-in-soil anomalies were detected over the Bulchina and Lord Nelson gold deposits pre-mining. Collectively, these two deposits produced ~457,000 ounces of gold.

5.8 4.25 3.42 2.89 -2.52 -2.22 1.86 -1.69 1.56 -1.43 -1.32 -1.23-1.14-1.08 -1.04 1.01 \_ppb

Figure 6. Sandstone Project 1VD Magnetic Image, with Integrated Soil Sample Analyses.

At the **Hancocks** prospect, 5km south east of Sandstone town, assay results from the 478 soil samples collected have defined a coherent +15 parts per billion (ppb) gold-in-soil anomaly over +8km<sup>2</sup>. 93 of the samples (19% of total collected) assayed greater than 30ppb. Mapping and further soil sampling is required around the southwest and eastern edge of the anomaly before targeting and drill testing can commence. (Refer AME:ASX release 17 July 2018)

At the **Edale** prospect, 10km east of Sandstone, assays results from 28 samples out of a total of 340 samples collected in the vicinity the Edale Fault returned anomalous results +7ppb Au in three discrete linear zones, each between 1,000m -1,500m long. Further soil sampling is planned to extend the anomaly to the southeast. (Refer AME:ASX release 20 June 2018)

At the **Superb** prospect, 12km south of Sandstone, 24 soil samples out of a total of 74 samples collected in the vicinity of a geophysical target have defined a 1,500m long, south-east striking gold in soil anomaly of +7ppb Au. The anomaly is open to the south east and further soil sampling is required. (Refer AME:ASX release 27 June 2018)

At the **Valiant** prospect, 7km south southeast of Sandstone, 32 soil samples out of 336 samples collected over the general area encompassing litho-structural targets TR09-TR11 and TR13 & TR021 have defined 2.5km² gold-in-soil anomaly centred on a 2,500m wide northwest trending corridor of heavily fractured mafic rocks, banded iron formation (Bif) and felsic intrusives, under laterite. Mapping and drill testing is required. (Refer AME:ASX release 12 July 2018)

# **EVENTS POST 30 JUNE 2018**

# Resource Evaluation - "Indomitable Camp" Deposits

The Indomitable Camp deposits are located approximately 15km southeast of Sandstone. Alto has commenced a review of the mineralization at Tiger Moth, Piper and Indomitable to determine if the deposits could potentially be mined economically, with ore trucked and processed at third party milling facilities. On 21 July 2018, Alto pegged a 365.4hectare mining lease over the "Indomitable Camp" Deposits. The formal Mining Lease application (M57/646) was lodged at the DMIRS on 23 July 2018.

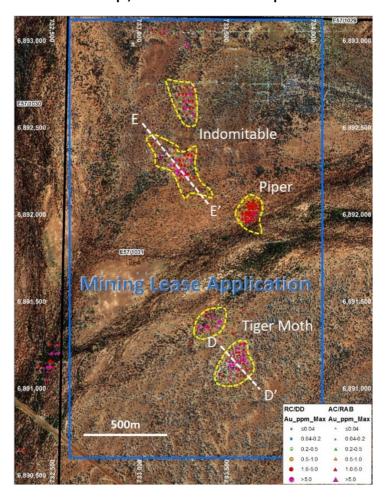


Figure 7.'Indomitable Camp', Known Mineralized Deposits within MLA 57/646

# Resource Evaluation - "Vanguard Camp" Deposits

Based on its RC and aircore drilling over the past 18 months, Alto has developed a new geological interpretation and model for gold mineralization at Vanguard. This has led to the discovery and definition to date of four additional high-grade gold zones. The Vanguard area currently comprises five near surface and plunging high-grade gold "shoots" within saprolite and bedrock.

Drilling data indicates that the oxide gold mineralization displays continuity to the surface, and that the primary mineralization (hosted in fresh rock) is of a higher grade than the oxide mineralization.

### **RESOURCE ESTIMATION AND EVALUATION – In progress**

Alto has commissioned an external consultant to upgrade the **Piper** and **Tiger Moth** deposits to meet the requirements of the JORC (2012) Code. Drilling data at the **Indomitable** deposit is being assessed to determine if there is sufficient data for the preparation of a maiden JORC (2012) mineral resource estimate to be completed. A maiden mineral resource estimate is also being calculated for **Vanguard**.

It is possible that Alto could commence open pit mining in 2019, subject to completion of the following:

- Negotiation of a Mining Agreement with relevant stakeholders,
- Metallurgical and geotechnical test work,
- Completion of relevant technical and feasibility studies,
- Obtaining various government approvals. Eg. Grant of Mining Lease, Mining Proposal.
- A workable agreement with third parties for treatment of mined ore, or other such mining/ processing agreements.

# **REVIEW OF HISTORIC HACKS AND OROYA MINES – In Progress**

During the Quarter, Alto commenced digitizing the historic underground workings and the historic Hacks and Oroya gold mines, and capturing WMC and Troy Resources drill hole data, in order to assist in evaluating exploration potential at the deposits. In addition, substantial deposits of historic battery sands *("tailings")* occur at Hacks, Oroya, Havilah and Maninga Marley. These tailings lie upon black plastic in 50m x 50m "cells" between 2 and 4m high, evidence that the tailings were heap leached at some stage between the 1970's and 1980's. Alto is reviewing the potential of these tailings to be leached.

#### **FORWARD EXPLORATION - EVALUATION PLANS JULY- DEC 2018**

The forward exploration plan for July to December 2018 will build on the work completed over the past 18 months and will include;

- Geological reconnaissance and focused soil sampling, followed by AC/RC drilling at a number of Alto's gold-in-soil anomalies
- AC drilling at Vanguard to define the extent of the newly discovered mineralized structures
- AC drilling at other areas such as Vanguard and Indomitable where the recent AC program has identified new mineralization.

The Company will also progress its resource evaluation work with;

- Extension and infill RC drilling at Indomitable and Vanguard Camps to respectively increase resources and resource definition
- Update to the Company's JORC 2012 Mineral Resource inventory following completion of resource estimates by Carras Mining Pty Ltd.
- Geotechnical and metallurgical drilling/testwork as part of scoping studies.

# **CORPORATE**

On 17 July 2018, the Company announced the resignation of Non-executive Director Mr Stephen Stone due to other executive and business related commitments.

# **CURRENT CAPITAL STRUCTURE**

	@ 30 June 2018
Total Fully Paid Ordinary Shares on issue:	185,459,462
Unlisted Performance Shares on Issue: (vendors)	25,000,000
Unlisted Performance Rights on Issue: (management)	6,750,000

# **CASH POSITION**

The Company's cash position at 30 June 2018 was \$0.9 million.

### **INVESTMENTS IN ASX LISTED COMPANIES**

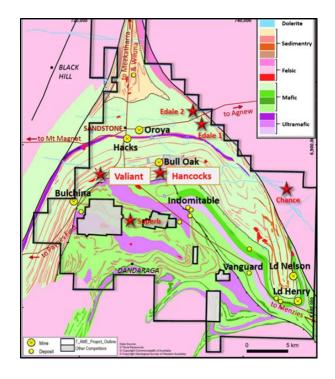
Alto holds 2,500,000 shares in ASX-listed Enterprise Metals, currently worth approximately \$50,000 (at a share price of 2 cents per share). This investment is reviewed on a regular basis.

# **STRATEGY & 2018 ACTION PLAN**

Alto's goal is to find at least 1 million ounces of gold at Sandstone and re-establish mining operations with its own dedicated mill.

Towards this goal, the Company has undertaken a succession of systematic and focused soil sampling, aircore and RC drilling campaigns, to discover large deposits of oxide and primary gold mineralization at Vanguard and other prospects in 2018. Refer Figure 8 below showing Alto's landholdings, interpreted geology, and major prospects.

Figure 8. Alto's Sandstone Landholdings over Interpreted Geology, with Location of Advanced Prospects and Soil Anomalies (in Red)



#### ABOUT ALTO AND THE SANDSTONE GOLD PROJECT

Alto holds ~800km<sup>2</sup> of the prospective Archaean Sandstone Goldfield, 600km north of Perth in the East Murchison 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 in late-2016. Alto's goal is the delineation of a +1 million ounce JORC 2012 Mineral Resource that could become the basis for a re-establishment of standalone oxide and primary gold mining and milling operations at the Project.

However, it is possible that in the short term, some of the existing open pit deposits may be amenable to treatment in a third party's operating plant.

#### **Further information:**

Dermot Ryan Managing Director

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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 (CP Geology) 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.

#### **Forward Looking Statements**

Certain statements in this document are or maybe "forward-looking statements" and represent Alto's intentions, projections, expectations or beliefs concerning among other things, future exploration activities. The projections, estimates and beliefs contained in such forward-looking statements don't necessarily involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Alto, and which may cause Alto's actual performance in future periods to differ materially from any express or implied estimates or projections. Nothing in this document is a promise or representation as to the future. Statements or assumptions in this document as to future matters may prove to be incorrect and differences may be material. Alto does not make any representation or warranty as to the accuracy of such statements or assumptions.

# **Tenement Information as Required by Listing Rule 5.3.3**

Appendix 1. Sandstone Tenement Schedule at 30 June 2018

Tenement	Location	Interest Held		
E57/1029	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
E57/1030	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
E57/1031	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
E57/1033	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
E57/1044	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
E57/1070	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Application
E57/1072	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Application
E57/1098*	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Application
P57/1377	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
P57/1378	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Granted
P57/1415	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Application
P57/1417	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Application

<sup>\*</sup> Acquired during June Quarter 2018

Appendix 2. Tenements Disposed of during June Quarter 2018

Tenement	Location	Interest Held	Registered Holder	Lease Status
E09/2204	Gascoyne	100%	Alto Metals Limited	Surrendered
M57/643	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Withdrawn
M57/644	Sandstone, WA	100%	Sandstone Exploration Pty Ltd	Withdrawn

Note: Sandstone Exploration Pty Ltd is a wholly owned subsidiary of Alto Metals Limited

**Appendix 3. Summary of Aircore Drill Holes June Quarter 2018** 

Prospect	From Hole	To Hole	No. Holes	Metres	Tenement
Tigermoth	SAC121	SAC151	31	620	E57/1031
Indomitable	SAC152	SAC195	44	704	E57/1031
Indomitable	SAC262	SAC265	4	366	E57/1029
Vanguard	SAC196	SAC249	54	3,177	E57/1033
Vanguard	SAC337	SAC373	37	3,416	E57/1033
Maninga Marley	SAC250	SAC261	12	118	E57/1033
Maninga Marley	SAC271	SAC282	12	65	E57/1033
Lord Henry South	SAC266	SAC270	5	124	E57/1031
Kurrajong	SAC283	SAC294	12	178	E57/1031
Midway	SAC295	SAC305	11	490	E57/1033
Indomitable Nth	SAC306	SAC307	2	172	E57/1029
Indomitable Nth	SAC309		1	79	E57/1029
Bulchina Nth	SAC308		1	70	E57/1030
Bulchina Nth	SAC310	SAC322	13	1,289	E57/1030
Sandstone Nth	SAC323	SAC336	14	1,337	E57/1029
TOTALS			253	12,205	