



**TECHNOLOGY**  
METALS AUSTRALIA LIMITED

**ASX Announcement**

**14 September 2017**

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#### **Directors**

Michael Fry:  
**Chairman**

Ian Prentice:  
**Executive Director**

Sonu Cheema:  
**Director and Company Secretary**

#### **Issued Capital**

21,300,001 ("TMT") Fully Paid Ordinary Shares

13,800,000 Fully Paid Ordinary Shares classified as restricted securities

15,000,000 Unquoted Options exercisable at \$0.25 on or before 31 December 2019 classified as restricted securities

10,000,000 Class B Performance Shares classified as restricted securities

**ASX Code: TMT**

**FRA Code: TN6**

## **OUTSTANDING RESULTS AT GABANINTHA SOUTHERN TENEMENT**

### **HIGHLIGHTS**

**Initial RC drilling at Southern Tenement has intersected high grade massive magnetite hosted mineralisation on every 200m spaced traverse along the +1.4km strike.**

**High grade vanadium mineralisation confirmed to be associated with the massive magnetite zone, including;**

- 28m at 1.06% V<sub>2</sub>O<sub>5</sub> from 129m, and
- 11m at 1.14% V<sub>2</sub>O<sub>5</sub> from 28m

**Broad zones of hangingwall mineralisation directly above the massive magnetite zone deliver thick combined intersections, such as;**

- 52m at 0.89% V<sub>2</sub>O<sub>5</sub> from 77m, and
- 40m at 0.89% V<sub>2</sub>O<sub>5</sub> from 118m

**Drilling defines down dip continuity of high grade mineralisation to in excess of 125m vertical.**

**Data from this program to be used to establish maiden Mineral Resource estimate for the Southern Tenement which will add to the projects overall Mineral Resource.**

### **BACKGROUND**

Technology Metals Australia Limited (ASX: **TMT**) ("**Technology Metals**" or the "**Company**") is pleased to announce results of its maiden Reverse Circulation ("**RC**") drilling program at the Southern Tenement at its Gabanintha Vanadium Project ("**Project**"). The drilling program consisted of 23 holes for 2,233 m and was undertaken in conjunction with the recently completed infill and extensional RC and diamond drilling program on the previously announced Inferred Mineral Resource<sup>1</sup> ("**Resource**") on the Northern Block of tenements at the Project.

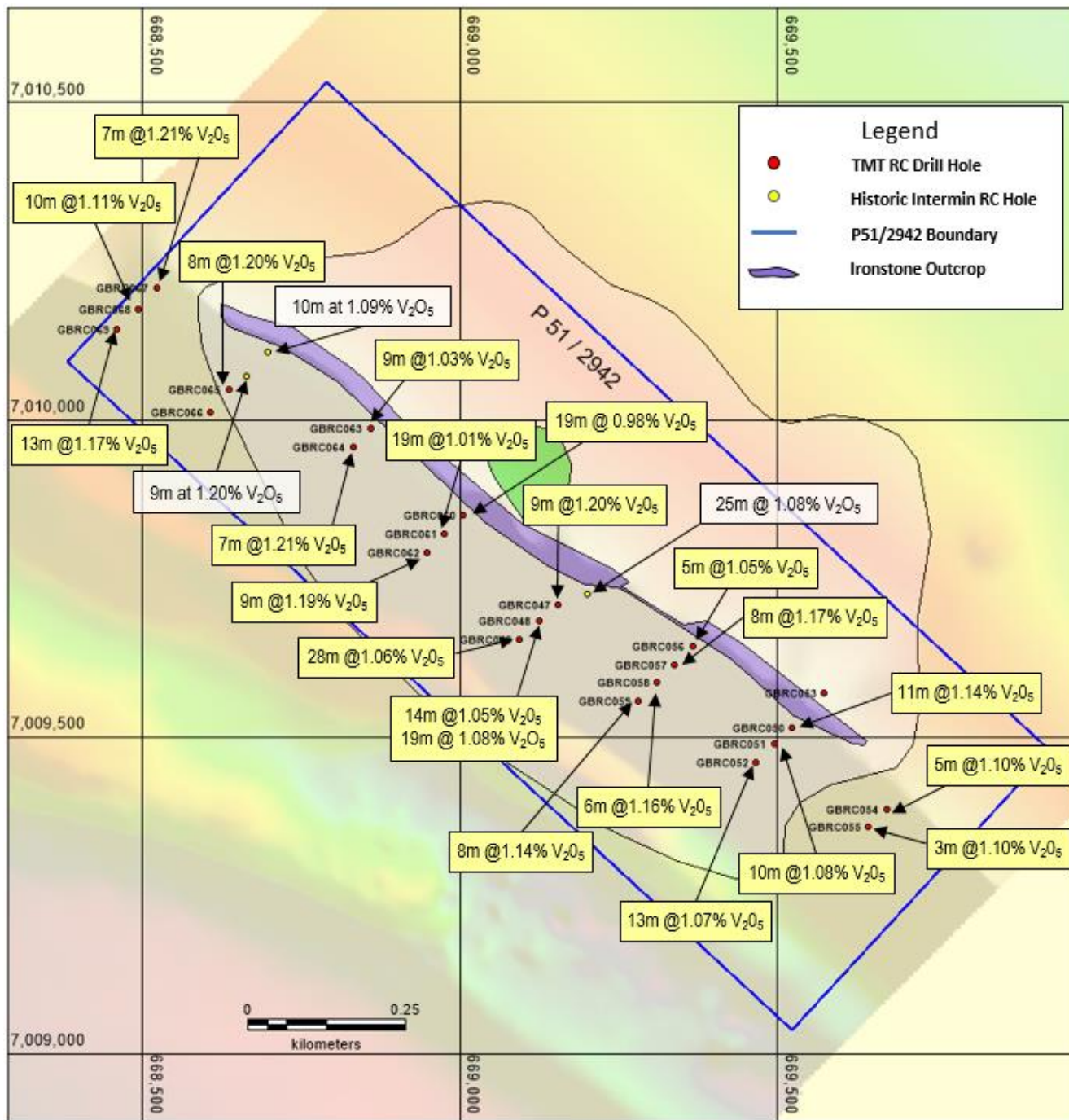
RC drilling on the Southern Tenement, completed on 200m line spacing over a +1.4km strike length, was successful in defining high grade basal massive magnetite hosted vanadium mineralisation on each of the traverses completed (see Figure 1).

**Executive Director Ian Prentice commented;** "The definition of high grade vanadium mineralisation over +1.4km of strike at the Southern Tenement in the same geological setting as seen in the Northern Block of tenements is an outstanding result and bodes well for an upgrade to the Project's overall Mineral Resource"

1 – Technology Metals Australia – ASX Announcement dated 13 June 2017, Maiden Inferred Resource Defined at Gabanintha Including High Grade Component of 29.5Mt at 1.1% V<sub>2</sub>O<sub>5</sub>. Ian Prentice

The Company's initial RC drilling program at the Southern Tenement targeted approximately 1.4km of strike of outcropping ironstone (see Figure 1) interpreted to represent the same massive magnetite zone within the layered mafic igneous unit intersected in the Northern Block of tenements, which hosts the Company's Inferred Mineral Resource (see Figure 3 for location of the Southern Tenement relative to the Northern Block of tenements). Historic drilling by Intermin Resources NL ("Intermin") returned up to 25m at 1.08% V<sub>2</sub>O<sub>5</sub> from the Southern Tenement.

The drilling consisted of 23 RC holes (GBRC047 to GBRC069) for 2,233m on 200m spaced traverses. Holes were drilled at 60° to the north east, with depths ranging from 45m to 171m.



**Figure 1:** Gabanintha Vanadium Project – Southern Tenement RC Drilling with High Grade Intersections

This drilling has been very successful in defining high grade basal massive magnetite hosted vanadium mineralisation on each of the traverses completed (see Table 1) over the +1.4km strike, with 21 of the 23 holes intersecting high grade mineralisation. Better intersections include **28m at 1.06% V<sub>2</sub>O<sub>5</sub> from 129m** (GBRC049), **11m at 1.14% V<sub>2</sub>O<sub>5</sub> from 28m** (GBRC050) and **19m at 1.01% V<sub>2</sub>O<sub>5</sub> from 66m** (GBRC061). The width and tenor of mineralisation intersected correlates extremely well with the results of the drilling completed by Intermin.

Importantly the drilling intersected some very thick zones of medium to high grade mineralisation (see Appendix 1) incorporating broad zones of hanging wall disseminated mineralisation directly above the high grade basal massive magnetite zone, returning intersections such as **52m at 0.89% V<sub>2</sub>O<sub>5</sub> from 77m**, including 14m at 1.15% V<sub>2</sub>O<sub>5</sub> from 78m and 19m at 1.08% V<sub>2</sub>O<sub>5</sub> from 96m (GBRC048) and **40m at 0.89% V<sub>2</sub>O<sub>5</sub> from 118m**, including 28m at 1.06% V<sub>2</sub>O<sub>5</sub> from 129m (GBRC049).

Hole ID	From (m)	To (m)	Interval (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	LOI%
GBRC047	57	60	<b>3</b>	<b>1.14</b>	13.1	50.1	4.9	5.3	-0.9
GBRC047	68	77	<b>9</b>	<b>1.20</b>	13.5	52.1	4.3	3.4	-1.5
GBRC048	78	92	<b>14</b>	<b>1.15</b>	13.2	50.0	4.7	5.2	-0.7
GBRC048	96	115	<b>19</b>	<b>1.08</b>	12.2	46.7	5.5	7.9	0.0
GBRC049	129	157	<b>28</b>	<b>1.06</b>	12.0	46.7	5.5	7.7	0.5
GBRC050	28	39	<b>11</b>	<b>1.14</b>	12.8	50.6	4.6	4.1	-0.4
GBRC051	64	74	<b>10</b>	<b>1.08</b>	12.2	48.4	5.4	7.0	-0.4
GBRC052	97	110	<b>13</b>	<b>1.07</b>	12.2	47.7	5.7	6.9	-0.8
GBRC053	NO SIGNIFICANT INTERVAL – TESTED PARALLEL ZONE TO THE EAST								
GBRC054	47	52	<b>5</b>	<b>1.10</b>	12.6	48.7	5.0	6.6	-0.5
GBRC055	85	88	<b>3</b>	<b>1.10</b>	12.3	48.4	5.6	7.1	-0.9
GBRC056	26	31	<b>5</b>	<b>1.05</b>	11.7	47.3	5.0	6.9	2.4
GBRC057	58	66	<b>8</b>	<b>1.17</b>	13.2	51.3	4.5	4.2	-1.2
GBRC058	85	101	<b>6</b>	<b>1.16</b>	12.9	50.6	4.9	4.7	-0.9
GBRC059	127	135	<b>8</b>	<b>1.14</b>	12.7	49.8	5.1	5.6	-0.9
GBRC060	20	39	<b>19</b>	<b>0.98</b>	11.3	43.4	6.5	10.8	1.5
GBRC061	66	85	<b>19</b>	<b>1.01</b>	11.6	44.6	5.6	10.4	-0.1
GBRC062	98	101	<b>3</b>	<b>1.05</b>	12.1	46.8	5.6	7.8	-0.2
GBRC062	111	120	<b>9</b>	<b>1.19</b>	13.2	52.0	4.3	3.2	-1.1
GBRC063	18	27	<b>9</b>	<b>1.03</b>	12.0	45.4	5.4	7.5	2.4
GBRC064	55	62	<b>7</b>	<b>1.21</b>	13.4	53.0	4.1	2.9	-1.6
GBRC065	82	90	<b>8</b>	<b>1.20</b>	13.8	53.3	4.0	2.0	-1.6
GBRC066	NO SIGNIFICANT INTERVAL – INTERSECTED BROAD MEDIUM GRADE ZONES								
GBRC067	31	34	<b>3</b>	<b>1.02</b>	12.1	41.5	7.4	10.3	3.5
GBRC067	45	52	<b>7</b>	<b>1.21</b>	13.4	47.2	5.2	5.2	1.6
GBRC068	81	91	<b>10</b>	<b>1.11</b>	12.5	48.7	5.7	5.8	-0.3
GBRC069	111	124	<b>13</b>	<b>1.17</b>	13.1	50.8	4.5	3.7	-0.3

**Note:** High grade intervals have been nominally defined using a 0.9% V<sub>2</sub>O<sub>5</sub> lower cut-off grade, length weighted average grades and including no more than 2m of consecutive lower / medium grade mineralisation. Where applicable lower cut off grades have been used in broadly mineralised high grade intersections to ensure continuity.

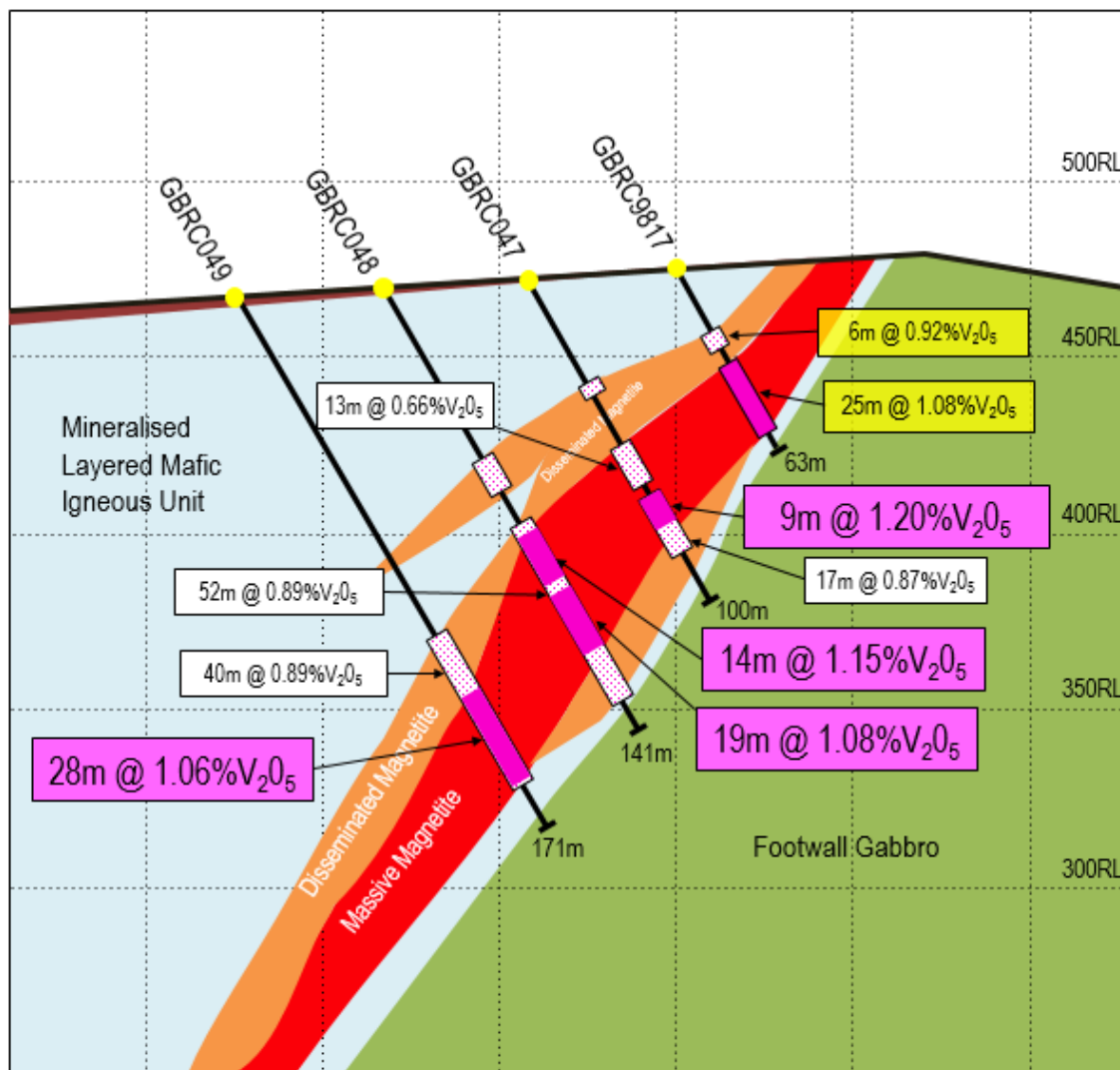
**Table 1:** Gabanintha Vanadium Project, Southern Tenement, RC Drilling High Grade Intersections

Table 1 shows the elevated titanium (TiO<sub>2</sub>) and iron grades associated with the high grade vanadium zones and once again the very encouraging low levels of potential contaminant elements aluminium (Al<sub>2</sub>O<sub>3</sub>) and silica (SiO<sub>2</sub>).



The thickening of the medium to high grade mineralisation within parts of the Southern Tenement is demonstrated in Figure 2, an oblique cross section along Line 5 of the drill traverses, which includes the historical Intermin hole GBRC9817. This section shows the distribution of the disseminated and massive magnetite zones and the very broad medium to high grade mineralisation associated with these zones.

This section demonstrates the excellent down dip continuity of the high grade basal massive magnetite zone, which is comparable to the continuity seen in the mineralised zones in the Northern Block of tenements.

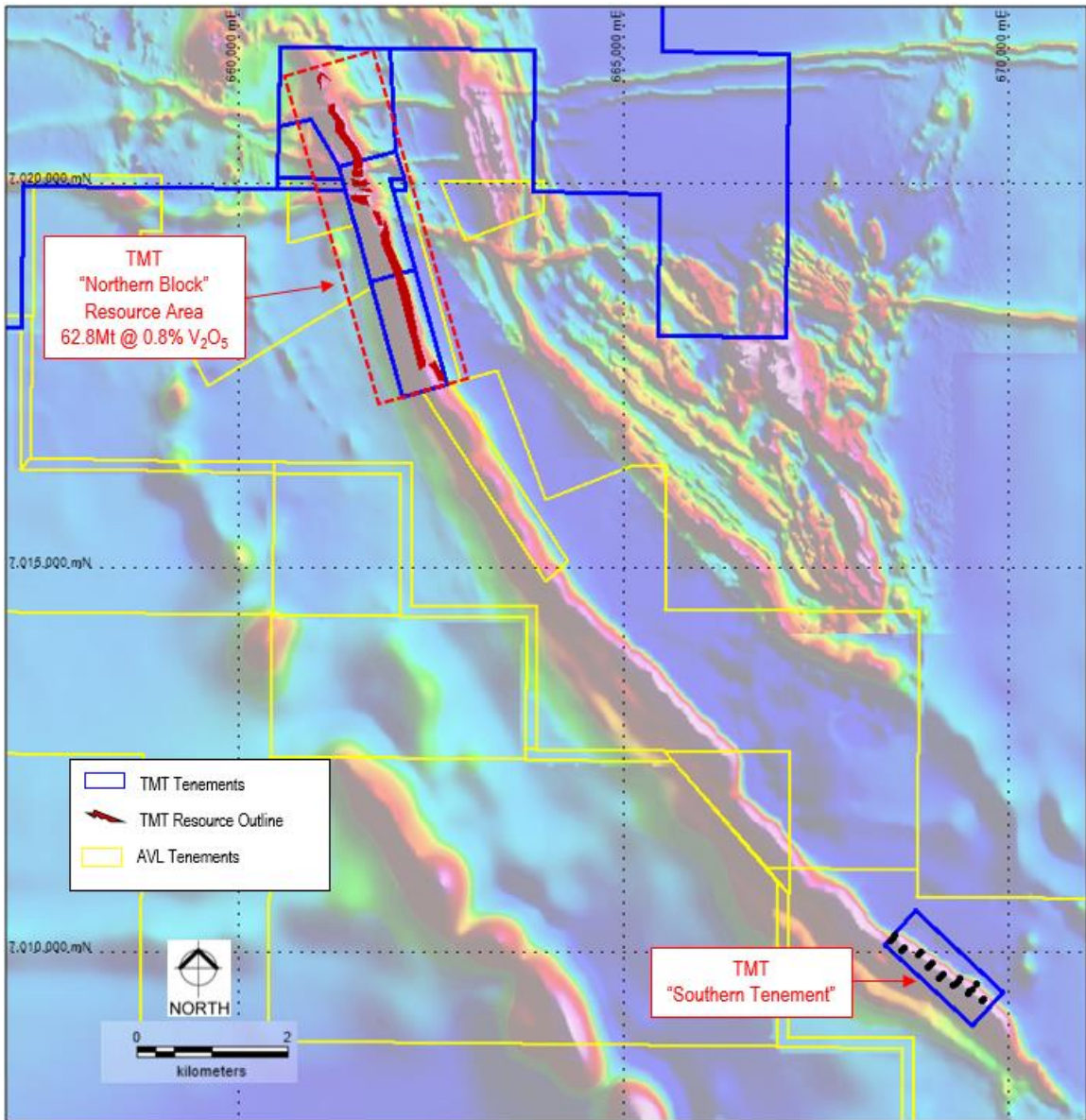


**Figure 2:** Oblique Section, Line 5, Southern Tenement RC Drilling

Data from this drilling will be provided to the Company's independent geological consultants, CSA Global, with the aim of establishing a maiden Mineral Resource for this portion of the Project, which it is expected will be included in an upgraded resource for the overall Project incorporating the latest RC and diamond drilling data, metallurgical testwork and bulk density data for the Northern Block of tenements.

#### PROGRAM UPDATE

The resource infill and extensional drilling program at the Project, including this drilling on the Southern Tenement, has now concluded, with a total of 72 RC holes for 7,491m and 13 diamond holes for 1,235m completed. The diamond drilling, which included twinning of five of the RC drill holes from the previous program, was designed to provide representative samples within the Mineral Resource for detailed metallurgical testwork as well as provide detailed geological data relating to the various mineralised lodes and surrounding host rocks. Geological logging and sampling of the diamond holes is in progress, with results to be reported as they become available.



**Figure 3:** Gabanintha Project Layout

## ABOUT VANADIUM

Vanadium is a hard, silvery grey, ductile and malleable speciality metal with a resistance to corrosion, good structural strength and stability against alkalis, acids and salt water. The elemental metal is rarely found in nature. The main use of vanadium is in the steel industry where it is primarily used in metal alloys such as rebar and structural steel, high speed tools, titanium alloys and aircraft. The addition of a small amount of vanadium can increase steel strength by up to 100% and reduces weight by up to 30%. Vanadium high-carbon steel alloys contain in the order of 0.15 to 0.25% vanadium while high-speed tool steels, used in surgical instruments and speciality tools, contain in the range of 1 to 5% vanadium content. Global economic growth and increased intensity of use of vanadium in steel in developing countries will drive near term growth in vanadium demand.

An emerging and likely very significant use for vanadium is the rapidly developing energy storage (battery) sector with the expanding use and increasing penetration of the vanadium redox batteries (“**VRB's**”). VRB's are a rechargeable flow battery that uses vanadium in different oxidation states to store energy, using the unique ability of vanadium to exist in solution in four different oxidation states. VRB's provide an efficient storage and re-supply solution for renewable energy – being able to time-shift large amounts of previously generated energy for later use – ideally suited to micro-grid to large scale energy storage solutions (grid stabilisation). Some of the unique advantages of VRB's are:

- a lifespan of 20 years with very high cycle life (up to 20,000 cycles) and no capacity loss,
- rapid recharge and discharge,
- easily scalable into large MW applications,
- excellent long term charge retention,
- improved safety (non-flammable) compared to Li-ion batteries, and
- can discharge to 100% with no damage.

Global economic growth and increased intensity of use of vanadium in steel in developing countries will drive near term growth in vanadium demand.

The global vanadium market has been operating in a deficit position for the past five years (source: TTP Squared Inc), with a forecast deficit of 9,700 tonnes in 2017. As a result vanadium inventories have been in steady decline since 2010 and they are forecast to be fully depleted in 2017 (source: TTP Squared Inc). Significant production declines in China and Russia have exacerbated this situation, with further short term production curtailment expected in China as a result of potential mine closures resulting from impending environmental inspections.

The tightening supplies of vanadium are resulting in a global shortage, with prices appreciating dramatically in recent months. Reports out of China have indicated significant increases in the “spot” market for vanadium pentoxide in recent weeks, with trades completed at US\$12.30 to US\$13.00 per lb V<sub>2</sub>O<sub>5</sub>, a four-fold increase over the past 12 months.

*For, and on behalf of, the Board of the Company,*

Ian Prentice  
**Executive Director**  
**Technology Metals Australia Limited**

- ENDS -

## **About Technology Metals Australia Limited**

**Technology Metals Australia Limited (ASX: TMT)** was incorporated on 20 May 2016 for the primary purpose of identifying exploration projects in Australia and overseas with the aim of discovering commercially significant mineral deposits. The Company's primary exploration focus is on the Gabanintha Vanadium Project located 40km south east of Meekatharra in the mid-west region of Western Australia with the aim to develop this project to potentially supply high-quality V<sub>2</sub>O<sub>5</sub> flake product to both the steel market and the emerging vanadium redox battery (VRB) market.

The Project, which consists of five granted tenements and one exploration licence application, is on strike from, and covers the same geological sequence as, Australian Vanadium Limited's (ASX: AVL) Gabanintha Vanadium project. Vanadium mineralisation is hosted by a north west – south east trending layered mafic igneous unit with a distinct magnetic signature. Mineralisation at Gabanintha is similar to the Windimurra Vanadium Deposit, located 270km to the south, and the Barambie Vanadium-Titanium Deposit, located 155km to the south east. The key difference between Gabanintha and these deposits is the consistent presence of the high grade massive vanadium – titanium – magnetite basal unit, which is expected to result in an overall higher grade for the Gabanintha Vanadium Project.

Data from the Company's maiden drilling program was used by independent geological consultants CSA Global to generate a maiden Inferred Mineral Resource estimate, reported in accordance with the JORC Code 2012 edition, for the Northern Block of tenements at the Project. The Mineral Resource estimate confirmed the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

**Table 2 Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project as at 12 Jun 2017**

Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project as at 12 Jun 2017									
Mineralised Zone	Classification	Million Tonnes	V <sub>2</sub> O <sub>5</sub> %	Fe %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	TiO <sub>2</sub> %	LOI %	Density t/m <sup>3</sup>
Basal massive magnetite	Inferred	29.5	1.1	46.4	6.1	8.2	12.6	1	3.6
Hanging wall disseminated	Inferred	33.2	0.5	26.6	14.9	27.1	7.2	5.1	2.4
<b>Combined Total</b>	<b>Inferred</b>	<b>62.8</b>	<b>0.8</b>	<b>35.9</b>	<b>10.8</b>	<b>18.3</b>	<b>9.7</b>	<b>3.2</b>	<b>2.8</b>
* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V <sub>2</sub> O <sub>5</sub> lower cut off for the basal massive magnetite zone and using a nominal 0.4% V <sub>2</sub> O <sub>5</sub> lower cut off for the hanging wall disseminated mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V <sub>2</sub> O <sub>5</sub> . Differences may occur due to rounding.									

The above Mineral Resource estimate was first reported via Technology Metals Australia – ASX Announcement dated 13 June 2017, Maiden Inferred Resource Defined at Gabanintha Including High Grade Component of 29.5Mt at 1.1% V<sub>2</sub>O<sub>5</sub>. The company is not aware of any new information or data which materially affects the information included in this announcement.

<b>Capital Structure</b>	
Tradeable Fully Paid Ordinary Shares	21.3m
Escrowed Fully paid Ordinary Shares <sup>1</sup>	13.8m
Fully Paid Ordinary Shares on Issue	35.1m
Unquoted Options <sup>2</sup> (\$0.25 – 31/12/19 expiry)	15.0m
Class B Performance Shares <sup>3</sup>	10.0m

1 – 1.3 million fully paid ordinary shares will be tradeable from 21 September 2017 and 12.5 million fully paid ordinary shares will be tradeable from 21 December 2018.

2 – 1.3 million unquoted options are subject to restriction until 21 September 2017 and 13.7 million unquoted options are subject to restriction until 21 December 2018.

3 - Convert in to 10 million fully paid ordinary shares on achievement of an indicated resource of 20 Million tonnes at greater than 0.8% V<sub>2</sub>O<sub>5</sub> on or before 31 December 2019. All Performance Shares and any fully paid ordinary shares issued on conversion of the Performance Shares are subject to restriction until 21 December 2018.

### **Forward-Looking Statements**

*This document includes forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Technology Metal Australia Limited's planned exploration programs, corporate activities and any, and all, statements that are not historical facts. When used in this document, words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should" and similar expressions are forward-looking statements. Technology Metal Australia Limited believes that its forward-looking statements are reasonable; however, forward-looking statements involve risks and uncertainties and no assurance can be given that actual future results will be consistent with these forward-looking statements. All figures presented in this document are unaudited and this document does not contain any forecasts of profitability or loss.*

### **Competent Persons Statement**

*The information in this report that relates to Exploration Results are based on information compiled by Mr Ian Prentice. Mr Prentice is a Director of the Company and a member of the Australian Institute of Mining and Metallurgy. Mr Prentice has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are 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' ("**JORC Code**"). Mr Prentice consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Mineral Resources are based on information compiled by Mr Galen White. Mr White is a Principal Consultant with CSA Global and a Fellow of the Australian Institute of Mining and Metallurgy. Mr White has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are 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' ("**JORC Code**"). Mr White consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to the Processing and Metallurgy for the Gabanintha project is based on and fairly represents, information and supporting documentation compiled by Damian Connelly who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full time employee of METS. Damian Connelly has sufficient experience 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'. Damian Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*



**APPENDIX 1**

Gabarintha Vanadium Project, Southern Tenement, RC Drilling Significant Intersections

Hole ID	From (m)	To (m)	Interval (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	LOI%
GBRC067	14	34	20	0.54	6.8	27.1	17.4	24.7	7.6
including	31	34	3	1.02	12.1	41.5	7.4	10.3	3.5
GBRC067	41	56	15	0.84	9.4	35.0	9.0	17.3	4.3
including	45	52	7	1.21	13.4	47.2	5.2	5.2	1.6
GBRC068	46	48	2	0.45	5.8	22.2	17.4	29.9	2.6
GBRC068	56	68	12	0.52	6.7	25.4	16.3	26.9	3.3
including	58	60	2	0.93	11.5	42.6	8.5	11.2	1.2
GBRC068	80	91	11	1.08	12.1	47.6	6.1	6.5	0.1
including	81	91	10	1.11	12.5	48.7	5.7	5.8	-0.3
GBRC069	7	9	2	0.57	7.8	28.4	10.1	26.7	4.5
GBRC069	80	91	11	0.47	6.0	22.6	16.9	29.8	2.4
GBRC069	97	125	28	0.89	10.2	40.2	7.1	13.4	2.1
including	97	103	6	0.96	11.4	43.3	6.7	9.8	1.0
and	111	124	13	1.17	13.1	50.8	4.5	3.7	-0.3
GBRC065	47	59	12	0.48	6.2	23.4	17.2	29.8	1.4
including	56	57	1	0.98	12.1	44.2	7.7	10.1	-0.1
GBRC065	64	68	4	0.63	7.8	29.3	13.4	24.1	1.2
including	67	68	1	1.02	12.3	44.8	5.4	10.2	-0.2
GBRC065	72	95	23	0.79	9.2	36.4	8.4	17.5	2.0
including	82	90	8	1.20	13.8	53.3	4.0	2.0	-1.6
and	93	94	1	0.94	10.3	41.2	6.1	13.0	1.5
GBRC066	82	95	13	0.48	6.1	23.1	16.9	29.9	1.7
including	90	91	1	1.00	12.2	45.6	7.2	8.8	-0.3
GBRC066	103	109	6	0.70	8.3	33.5	8.7	20.9	2.4
including	104	105	1	0.97	11.5	44.7	6.3	9.8	0.3
and	107	108	1	1.12	12.8	48.8	4.2	6.8	-0.8
GBRC066	112	124	12	0.63	7.4	29.5	10.6	24.5	2.9
and	118	119	1	1.07	12.0	47.3	4.7	8.4	0.1
and	121	122	1	1.02	11.2	44.7	5.7	10.7	0.5
GBRC066	135	142	7	0.61	6.9	28.6	11.2	24.4	2.5
including	137	138	1	0.95	10.3	41.9	7.3	11.2	1.7
GBRC063	0	6	6	0.65	8.1	28.9	11.8	22.4	6.6
including	3	4	1	0.96	11.8	42.5	8.7	11.1	3.7
GBRC063	18	35	17	0.73	8.5	34.0	8.3	19.6	3.4
including	18	27	9	1.03	12.0	45.4	5.4	7.5	2.4
and	33	34	1	0.94	0.9	0.9	0.9	0.9	0.9
GBRC064	33	36	3	0.66	8.3	30.0	14.2	22.8	1.2
including	34	35	1	0.93	11.6	41.7	9.1	12.1	0.3
GBRC064	39	41	2	0.57	7.5	27.4	13.6	26.3	1.6
GBRC064	50	62	12	0.95	10.8	43.3	6.5	12.2	0.2
including	55	62	7	1.21	13.4	53.0	4.1	2.9	-1.6
GBRC064	65	68	3	0.73	5.2	24.2	10.5	29.9	3.9

Hole ID	From (m)	To (m)	Interval (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	LOI%
GBRC060	6	41	35	0.73	8.7	33.6	10.9	20.0	3.0
including	20	39	19	0.98	11.3	43.4	6.5	10.8	1.5
GBRC061	57	59	2	0.65	8.2	30.8	14.0	22.7	0.8
GBRC061	61	86	25	0.89	10.5	40.1	7.7	14.5	0.3
including	66	85	19	1.01	11.6	44.6	5.6	10.4	-0.1
GBRC061	88	90	2	0.43	5.0	22.0	12.9	32.1	3.5
GBRC062	20	24	4	0.47	6.6	25.7	10.9	32.5	3.8
GBRC062	91	101	10	0.63	7.6	29.1	13.2	26.2	0.7
including	98	101	3	1.05	12.1	46.8	5.6	7.8	-0.2
GBRC062	104	106	2	0.77	9.6	36.0	9.6	17.8	2.0
GBRC062	109	123	14	0.93	10.5	42.0	6.5	12.9	1.0
including	111	120	9	1.19	13.2	52.0	4.3	3.2	-1.1
GBRC047	37	39	2	0.71	8.9	34.1	11.3	19.9	1.5
including	38	39	1	0.92	11.5	42.1	8.4	11.7	0.5
GBRC047	51	64	13	0.66	8.3	32.5	10.2	22.9	2.8
including	53	54	1	1.11	13.2	49.8	4.0	6.1	-0.9
and	57	60	3	1.14	13.1	50.1	4.9	5.3	-0.9
GBRC047	68	85	17	0.87	9.9	39.7	7.6	14.7	1.0
including	68	77	9	1.20	13.5	52.1	4.3	3.4	-1.5
GBRC047	90	93	3	0.63	6.9	29.9	8.5	25.2	2.9
GBRC048	61	69	8	0.46	5.9	22.5	17.4	30.0	1.8
GBRC048	77	129	52	0.89	10.2	39.8	7.7	14.4	1.0
including	78	92	14	1.15	13.2	50.0	4.7	5.2	-0.7
and	96	115	19	1.08	12.2	46.7	5.5	7.9	0.0
and	127	128	1	0.91	11.5	42.7	6.5	12.6	-0.6
GBRC049	30	33	3	0.41	5.8	21.9	16.0	31.7	3.2
GBRC049	118	158	40	0.89	10.3	40.1	7.9	14.0	1.1
including	129	157	28	1.06	12.0	46.7	5.5	7.7	0.5
GBRC056	12	15	3	0.70	8.9	31.9	13.1	21.4	5.0
GBRC056	21	31	10	0.80	9.1	38.5	8.8	15.7	4.1
including	26	31	5	1.05	11.7	47.3	5.0	6.9	2.4
GBRC057	43	49	6	0.42	5.4	21.1	15.1	33.1	2.2
including	46	47	1	1.02	13.0	42.7	6.9	11.3	0.3
GBRC057	51	53	2	0.54	6.98	25.1	14.8	28.5	1.9
GBRC057	56	72	16	0.86	9.7	39.7	8.1	15.2	1.4
including	58	66	8	1.17	13.2	51.3	4.5	4.2	-1.2
GBRC057	76	78	2	0.47	5.6	24.4	16.5	26.6	3.5
GBRC058	1	8	7	0.49	6.8	24.9	12.7	29.1	3.9
including	1	2	1	0.93	12.4	43.6	5.8	11.0	1.9
GBRC058	72	82	10	0.48	6.1	23.0	17.5	30.2	1.0
GBRC058	84	87	3	0.55	7.2	26.3	14.8	27.2	1.4
including	86	87	1	0.94	11.7	42.6	7.8	11.8	0.1
GBRC058	91	102	11	0.96	10.8	43.0	7.2	11.6	0.4
including	85	101	6	1.16	12.9	50.6	4.9	4.7	-0.9
GBRC059	37	39	2	0.64	8.8	31.4	11.9	23.2	0.9
GBRC059	126	142	16	0.83	9.3	37.8	8.2	16.4	1.9
including	127	135	8	1.14	12.7	49.8	5.1	5.6	-0.9

Hole ID	From (m)	To (m)	Interval (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	LOI%
GBRC050	12	46	34	0.64	7.6	30.4	12.3	24.1	1.8
including	28	39	11	1.14	12.8	50.6	4.6	4.1	-0.4
GBRC051	53	57	4	0.63	8.1	29.8	14.0	23.4	0.9
GBRC051	62	75	13	0.98	11.2	44.4	6.8	10.7	0.1
including	64	74	10	1.08	12.2	48.4	5.4	7.0	-0.4
GBRC052	9	14	5	0.52	7.3	26.1	13.3	27.7	2.7
including	9	10	1	0.96	12.8	43.8	6.3	10.1	2.1
GBRC052	92	113	21	0.90	10.4	40.6	8.4	13.6	0.0
including	97	110	13	1.07	12.2	47.7	5.7	6.9	-0.8
GBRC053	5	8	3	0.43	5.6	24.1	8.1	32.8	1.7
GBRC053	15	17	2	0.41	5.3	22.6	8.4	35.2	2.1
GBRC054	42	54	12	0.80	9.5	36.7	9.7	17.5	1.2
including	43	44	1	0.93	11.5	43.2	7.7	11.1	0.9
and	47	52	5	1.10	12.6	48.7	5.0	6.6	-0.5
GBRC055	81	90	9	0.67	7.7	31.2	10.6	23.2	1.7
including	85	88	3	1.10	12.3	48.4	5.6	7.1	-0.9

**Note:** Significant intervals have been defined using a 0.4% V<sub>2</sub>O<sub>5</sub> lower cut-off grade, length weighted average grades and no more than 3m of consecutive lower grade mineralisation

**APPENDIX 2**

Gabarintha Vanadium Project, Southern Tenement RC Drilling Program, Collar Table (GBRC047 to GBRC069) - GDA94, MGA Zone 50

Traverse	Hole ID	Easting	Northing	RL	Azimuth	Dip	Hole Depth
Line 1	GBRC067	668521.8	7010207.5	463.3	45	-60	69
Line 1	GBRC068	668493.1	7010174.5	463.3	45	-60	99
Line 1	GBRC069	668459.5	7010142.3	463.2	45	-60	135
Line 2	GBRC065	668635.1	7010047.7	463.2	45	-60	105
Line 2	GBRC066	668606.5	7010012.4	463.0	45	-60	147
Line 3	GBRC063	668858.6	7009986.0	467.2	45	-60	45
Line 3	GBRC064	668831.1	7009957.6	465.7	45	-60	75
Line 4	GBRC060	669005.0	7009850.2	468.2	45	-60	45
Line 4	GBRC061	668975.9	7009820.4	466.1	45	-60	93
Line 4	GBRC062	668948.4	7009790.6	464.8	45	-60	138
Line 5	GBRC047	669155.2	7009709.2	466.3	45	-60	100
Line 5	GBRC048	669124.4	7009683.1	465.1	45	-60	141
Line 5	GBRC049	669094.4	7009653.5	464.3	45	-60	171
Line 6	GBRC056	669366.6	7009642.1	466.8	45	-60	45
Line 6	GBRC057	669338.2	7009614.0	466.1	45	-60	87
Line 6	GBRC058	669310.7	7009585.9	465.4	45	-60	117
Line 6	GBRC059	669282.1	7009557.0	465.0	45	-60	153
Line 7	GBRC050	669523.4	7009514.5	467.7	45	-60	51
Line 7	GBRC051	669495.5	7009488.7	466.2	45	-60	87
Line 7	GBRC052	669467.0	7009460.0	465.3	45	-60	117
Line 7	GBRC053	669574.6	7009569.8	469.7	45	-60	51
Line 8	GBRC054	669672.4	7009384.8	463.7	45	-60	63
Line 8	GBRC055	669644.2	7009357.7	463.7	45	-60	99

## APPENDIX 3

### JORC Code, 2012 Edition – Table 1

#### 1.1 Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation drilling was used to obtain 1m samples. The samples are cone split off the rig cyclone, with sample weights of 2 to 3 kg being collected.</li> <li>Duplicate 2 – 3kg samples were collected from every metre sample.</li> <li>Individual metre samples were selected for analysis based on geological logging, with zones below the mineralised intervals not submitted for analysis.</li> <li>Duplicate samples were submitted for analysis for every 20m down hole, ensuring duplicates were submitted for mineralised zones (based on geological logging and hand-held Olympus Vanta XRF results).</li> <li>Samples analysed by XRF spectrometry following digestion and Fused Disk preparation.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation drilling with face-sampling hammer</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Duplicate 2 – 3kg samples were collected from every metre sample.</li> <li>Sample recovery was assessed based on the estimated bulk sample collected for each metre. Each bag was not weighed. For 1 in 3 holes a spring gauge was used to ensure the cone split remained within the 2 to 3 Kg range.</li> <li>There does not appear to be any relationship between recovery and grade in this "massive" mineralisation.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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 or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Drill samples were logged in the field, with the total length of holes logged in detail.</li> <li>Drill chips for every metre were collected in trays and photographed.</li> <li>No geotechnical logging was undertaken due to all drilling being RC, thus a sample medium amenable to collecting geotechnical data.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <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 duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Duplicate 2 – 3kg samples were collected from every metre sample.</li> <li>• Samples were cone split at the drill rig, and represent approximately 5% of the total material for each metre sampled.</li> <li>• The majority of samples were dry.</li> <li>• Samples were dried and pulverised in the laboratory and fused with a lithium borate flux and cast in to disks for analysis.</li> <li>• Field duplicates were submitted such that there were at least 1 duplicate sample for every 20 samples analysed.</li> <li>• No diamond twin drilling has been completed to date to determine any potential relationship between current RC sampling size, grain size and grade, however the sample size is considered to be appropriate to the material being sampled.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 derivation, etc.</li> <li>• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Pulverised samples from every metre were fused with a lithium borate flux and cast in to disks and analysed by XRF spectrometry – method FB1/XRF77.</li> <li>• Field duplicates (at least 1 duplicate sample for every 20 samples analysed), laboratory check samples and standards are considered to be suitable quality control procedures.</li> <li>• Quality control procedures demonstrate acceptable levels of accuracy and precision have been achieved. CRM materials inserted to the sample stream at the laboratory have performed acceptably, and field duplicate samples have performed well.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or 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 style="list-style-type: none"> <li>• Significant intersections correlate with mineralised zones as defined from geological logging. All sampling was completed by an independent geologist.</li> <li>• The estimation of significant intersections has been verified by alternate company personnel.</li> <li>• There were no adjustments to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• The grid system used for collar positions is MGA94 – Zone 50.</li> <li>• Planned hole collar positions were located using hand held GPS.</li> <li>• Final hole collar positions were surveyed using differential RTK GPS with aa accuracy of ±5cm horizontally and ±10cm vertically.</li> <li>• Down hole surveys were completed using an Axis Gyro every 30m down hole and near the collar.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The drill data is on nominal 100m line spacing with holes located every 50m along the drill lines.</li> <li>Detailed airborne magnetics supports strike and down dip continuity assumptions of the massive magnetite zone which is known to host high grade mineralisation.</li> <li>This continuity has been additionally supported by drilling data.</li> <li>Data is considered appropriate for use in estimating a Mineral Resource.</li> <li>No sample compositing was applied.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of 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 orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling has been completed at an orientation that would have been unlikely to have introduced a sampling bias. The drill holes are drilled orthogonal to the measured strike <math>\pm 10^\circ</math>, the apparent thickness is 0.85 X the true thickness, drill deviations were not noticeably higher through the mineralised zone</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected in polyweave bags, sealed securely and transported by Company personnel until handover to a commercial transport company, which delivered the samples by road transport to the laboratory.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews have been completed to date.</li> </ul>

## 1.2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, 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 style="list-style-type: none"> <li>The areas drilled are located on current Prospecting Licences 51/2943 and 51/2944 and Exploration Licence 51/1510).</li> <li>The tenements are granted and held by The KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation drilling was completed in 1998 by Intermin Resources NL under an option agreement on tenements held by Oakland Nominees Pty Ltd – consisting of GRC9801 to GRC9805 (on Prospecting Licences 51/2164) and GRC9815 to GRC9817 (on Prospecting Licence 51/2183).</li> <li>The areas drilled are located on current Prospecting Licences 51/2943 (GRC9801, GRC9802), 51/2944 (GRC9803, GRC9804, GRC9805) and 51/2942 (GRC9815 to GRC9817) held by The</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited.</p> <ul style="list-style-type: none"> <li>• Exploration prior to this drilling included geological mapping and limited rock chip sampling completed across a zone of outcropping vanadiferous titanomagnetite layered mafic igneous unit by various parties.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Massive vanadiferous titanomagnetite layered mafic igneous unit in outcrop.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>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:</i></li> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> <li>• <i>If the exclusion of this 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 explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• See attached Appendix 1 and Appendix 2.</li> <li>• All relevant material from previous RC drilling has been reported to the ASX on the following dates: 9th March 2017, 4th April 2017, 19th April 2017 and 28th April 2017</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intervals (as shown in Appendix 1) have been defined nominally using a 0.4% V<sub>2</sub>O<sub>5</sub> lower cut-off grade, length weighted average grades and no more than 3m of consecutive lower grade mineralisation.</li> <li>• High grade intervals (as shown in Table 1) have been defined nominally using a 0.9% V<sub>2</sub>O<sub>5</sub> lower cut-off grade, length weighted average grades and no more than 2m of consecutive lower / medium grade mineralisation. Where applicable lower cut off grades have been used in broadly mineralised high grade intersections to ensure continuity.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Down hole lengths of mineralisation are reported.</li> <li>• See the cross section shown at Figure 2 for an approximation of true widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A map showing tenement and drill hole locations has been included (see Figure 1).</li> <li>• A cross section showing the relationship between mineralisation and geology has been included (see Figure 2).</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>A table of all intersections for the reported drilling has been included (see Appendix 1).</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Results for all mineralised intervals have been included, including both low and high grades.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Geophysical data in the form of aero magnetic data assists the geological interpretation of the main high magnetite unit and highlights offsets due to faults and or dykes. Historic drilling data is not used due to uncertainty in location and orientation</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further drilling is being completed on the deposit, including infill drilling to increase confidence in the geometry of mineralisation zones and to provide greater sample support.</li> <li>Samples from diamond drilling are planned to be collected to enable preliminary metallurgical testing of the different grades and types of mineralisation encountered in the drilling.</li> </ul>