

#### ASX Announcement

31 January 2018

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#### Directors

Michael Fry: **Chairman** 

Ian Prentice: Executive Director

Sonu Cheema: Director and Company Secretary

#### **Issued Capital**

22,600,001 ("TMT") Fully Paid Ordinary Shares

12,500,000 Fully Paid Ordinary Shares classified as restricted securities

15,000,000 Unquoted Options exercisable at \$0.25 on or before 31 December 2019 (13,700,000 classified as restricted securities)

3,000,000 Unquoted Options exercisable at \$0.35 on or before 12 January 2021

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

ASX Code: TMT

FRA Code: TN6

# QUARTERLY ACTIVITIES REPORT & APPENDIX 5B

FOR THE QUARTER ENDING 31 DECEMBER 2017

The Board of Technology Metals Australia Limited (ASX: **TMT**) ("**Technology Metals**" or the "**Company**") is pleased to provide an update on the Company's activities for the quarter ending 31 December 2017.

## HIGHLIGHTS

Maiden Inferred Mineral Resource estimate of 21.5MT at 0.9% V2O5 for Southern Tenement, including a high grade component of 10.4 MT at 1.1% V2O5.

Diamond drilling within Northern Block Inferred Mineral Resource (62.8MT at 0.8% V2O5) confirmed excellent down dip and along strike continuity of vanadium mineralisation, with exceptional high grade zones including:

> 27.5m \* at 1.04% V2O5 from 101m and 15m at 1.21% V2O5 from 42m

Detailed metallurgical testwork on diamond core underway with bulk density data from portions of whole core exceeding values used for the Northern Block maiden Inferred Mineral Resource.

Upgrade of the Northern Block Mineral Resource is underway with expected delivery of a maiden Indicated Mineral Resource within the overall Global Mineral Resource.

The detailed metallurgical testwork and updated Mineral Resource will feed in to a pre feasibility study on the development of the Gabanintha Vanadium Project.

The Company's marketing consultant has engaged with a number of Chinese Vanadium end users with discussions progressing.

As at the end of December 2017 the Company had cash of \$1.0 million and as at 29 January 2018 the Top 20 shareholders held 53.5% of the fully paid ordinary shares.

**Chairman, Michael Fry commented:** "The exceptional grade of the Southern Tenement mineral resource and results from the diamond drilling in the Northern Block underscore the position of the Gabanintha Vanadium Project as one of the highest grade globally significant vanadium development projects in the World".

## SUMMARY

During the December 2017 Quarter, a maiden Inferred Mineral Resource estimate was announced for the Southern Tenement ("**Southern Tenement**") area at the Gabanintha Vanadium Project ("**Project**") based on data from the Company's 23-hole RC drilling program reported in mid September 2017<sup>1</sup>. The Inferred Mineral Resource ("**Southern Tenement Resource**") estimate of 21.5 Mt at 0.9% V<sub>2</sub>O<sub>5</sub> and 10.1% TiO<sub>2</sub> includes an outstanding high grade component of **10.4 Mt at 1.1% V<sub>2</sub>O<sub>5</sub> and 12.6% TiO<sub>2</sub>** (as announced in December 2017<sup>2</sup>).

Results were received for the diamond drilling completed on the Northern Block ("**Northern Block**") of tenements at the Project. This drilling further confirmed the excellent down dip and along strike continuity of vanadium mineralisation within the Northern Block. Data from the diamond drilling, plus the previously reported reverse circulation ("**RC**") drilling, is being used to update the previously announced maiden Inferred Mineral Resource<sup>3</sup> ("**Northern Block Resource**") of 62.8Mt at 0.8% V<sub>2</sub>O<sub>5</sub> and 9.7% TiO<sub>2</sub>, with the update expected to include a portion in the Indicated Mineral Resource category.

Representative samples from the diamond drilling on the Northern Block have been selected for detailed metallurgical testwork ("**Testwork**") designed to follow up the highly encouraging results of the preliminary (sighter) round of Testwork completed on composite RC drill samples from the March 2017 drilling program at the Project (as announced in early September 2017<sup>4</sup>). The comminution testwork and in-situ bulk density measurement components of the Testwork were completed during the quarter (as announced in November 2017<sup>5</sup>) with in-situ bulk density data for both the high grade basal massive magnetite material and the medium grade disseminated material exceeding those used for the Northern Block Resource.

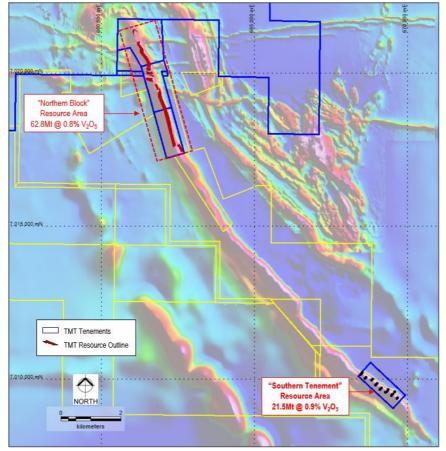


Figure 1: Gabanintha Vanadium Project Layout

- 1 ASX Announcement dated 14 September 2017, Outstanding Results at Gabanintha Southern Tenement.
- 2- ASX Announcement dated 18 December 2017, Maiden Southern Tenement Inferred Resource of 21.5 Mt at 0.9% V $_{2}O_{5}$ .
- 3 ASX Announcement dated 13 June 2017, Maiden Inferred Resource Defined at Gabanintha Including High Grade Component of 29.5Mt at 1.1% V2O5.
- 4 ASX Announcement dated 8 September 2017, Excellent Preliminary Metallurgical Testwork at Gabanintha.
- 5 ASX Announcement dated 20 November 2017, Gabanintha Vanadium Project Update.

# NORTHERN BLOCK – DIAMOND DRILLING

The diamond drilling component of the resource infill and extension drilling program in the Northern Block, which consisted of 13 HQ holes for 1,235m (GBDD001 to GBDD013), was completed in early September with detailed geological logging and cutting of the core completed in late September. This drilling was designed to provide detailed geological and structural data relating to the mineralised lodes and surrounding host rocks as well as representative samples within the Northern Block Resource for detailed metallurgical testwork.

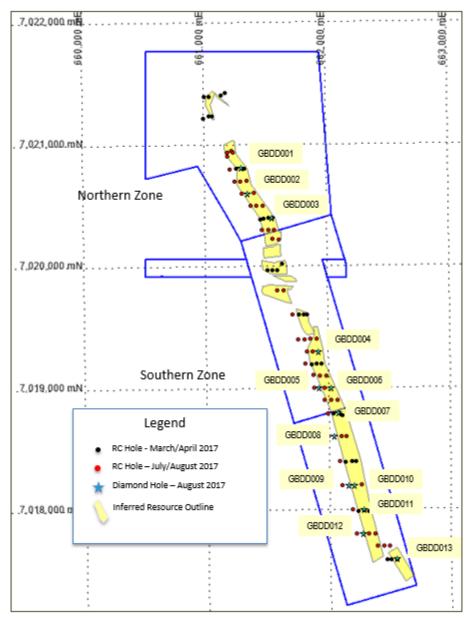


Figure 2: Gabanintha Vanadium Project – Northern Block Drilling Plan

Diamond drilling was completed along the strike of the Northern Block Resource, with three (3) holes in the Northern Zone and ten (10) holes in the Southern Zone (see Figure 2). The holes were drilled at 60° to the east, with depths ranging from 36m to 149.5m (see Appendix 1 for drill hole collar data). Five RC holes from the March/April 2017 drilling program completed by the Company were twinned with diamond holes.

The diamond drilling component of the program aimed to further enhance confidence in the strike and down dip continuity of the defined mineralisation, focusing on both the hanging wall disseminated zones and the high grade basal massive magnetite zone. Results for the diamond drilling completed in this program are shown in Table 1 and Appendix 2.

This drilling confirmed the excellent width and tenor of the high grade basal massive magnetite zone, including intersections such as  $27.5m^*$  at 1.04% V<sub>2</sub>O<sub>5</sub> from 101m (GBDD002), 15m at 1.21% V<sub>2</sub>O<sub>5</sub> from 42m (GBDD007) and 9m at 1.35% V<sub>2</sub>O<sub>5</sub> from 51m (GBDD013).

Broad zones of hanging wall disseminated mineralisation directly above the high grade basal massive magnetite zone were confirmed by the diamond drilling, with intersections such as **51m at 0.78% V<sub>2</sub>O<sub>5</sub> from surface**, including 16m at 1.15% V<sub>2</sub>O<sub>5</sub> from 34m (GBDD004), **73m at 0.71% V<sub>2</sub>O<sub>5</sub> from 4m**, including 14m at 1.21% V<sub>2</sub>O<sub>5</sub> from 58m (GBDD011) and **58m at 0.80% V<sub>2</sub>O<sub>5</sub> from 12m**, including 9m at 1.35% V<sub>2</sub>O<sub>5</sub> from 51m (GBDD013).

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%
GBDD001	44	66	22	0.91	10.6	41.5	8.1	13.3	0.0
GBDD002	101	129	27.5*	1.04	11.8	47.3	5.4	8.1	-0.9
GBDD003	8	25	17	1.07	12.5	48.0	5.6	6.4	0.8
GBDD004	34	50	16	1.15	13.4	50.4	4.8	4.4	2.2
GBDD005	110	124	13.5*	1.20	13.2	51.9	4.7	4.0	-1.5
GBDD006	17	32	15	1.20	13.6	50.6	4.6	3.9	2.2
GBDD007	42	57	15	1.21	13.7	50.7	4.6	3.3	1.9
GBDD008	123	139	16	1.13	12.8	50.1	5.2	5.7	-1.3
GBDD009	129	143	14	1.15	12.4	48.0	5.6	6.8	-0.8
GBDD010	99	107	8	1.15	12.9	50.4	4.8	5.0	-1.2
GBDD011	58	72	14	1.21	12.1	46.6	5.9	7.8	1.7
GBDD012	112	124	12	1.18	13.3	51.7	4.4	4.1	-1.2
GBDD013	51	60	9	1.35	16.1	42.7	8.1	7.9	3.7

**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.

\* - 0.5m of whole core consumed in metallurgical testwork (not assayed) treated as absent

Table 1: Gabanintha Vanadium Project, Northern Block Diamond Drilling, High Grade Intersections

Logging of the diamond core has identified three distinct mineralised domains within the layered mafic igneous unit; disseminated magnetite hanging wall shoots, a mixed disseminated and banded magnetite (with 5 to 50cm massive cumulate and structural bands) hanging wall shoot and the high grade basal massive magnetite zone. The high grade basal massive magnetite zone is typically coarse grained (see Figure 3), whilst the disseminated magnetite hanging wall shoots tend to be finer grained. The mixed disseminated and narrow banded massive magnetite hanging wall shoot consistently overlies, and typically grades in to, the basal massive magnetite zone (see Figure 4).

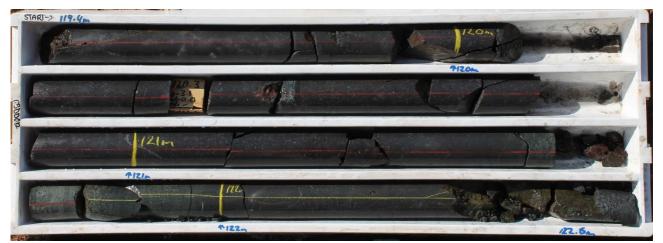


Figure 3: Massive Magnetite Zone - GBDD012 - 119.4m to 122.6m

Five of the diamond holes were designed to "twin" RC holes completed in the March / April RC drilling program; GBDD001 twinned GBRC027, GBDD003 twinned GBRC022, GBDD007 twinned GBRC011, GBDD011 twinned GBRC002 and GBDD013 twinned GBRC005. The diamond holes typically returned similar widths and grades of vanadium mineralisation as the relevant RC holes, albeit that vanadium grades appear to be slightly higher in the diamond holes.

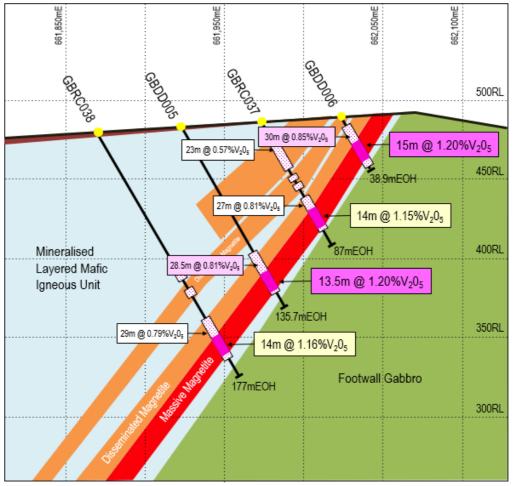


Figure 4: Gabanintha Vanadium Project – Northern Block – Cross Section 7,019,000N

# DETAILED METALLURGICAL TESTWORK – DIAMOND DRILLING COMPOSITES

The Company's metallurgical consultants Mineral Engineering Technical Services Pty Ltd ("**METS**") have developed a detailed metallurgical testwork program ("**Testwork**") for representative samples from the diamond drilling on the Northern Block designed to follow up the highly encouraging results of the preliminary (sighter) round of Testwork completed on composite RC drill samples from the March 2017 drilling program at the Project.

The representative composite samples were selected by METS, in consultation with the Company's geological team, across a range of zones within the Northern Block Resource based on geological characteristics, with the aim of testing a mix of oxide, transitional and fresh material from medium grade disseminated hanging wall and high grade basal massive magnetite zones.

A focus of this testwork program will be to assess the magnetic separation characteristics of the medium grade hanging wall disseminated mineralisation independent of the basal massive magnetite zone. METS are of the view that the medium grade hanging wall disseminated mineralisation may beneficiate to produce a higher vanadium grade concentrate, largely due to the higher proportion of gangue minerals in this material which may report to the non-magnetic concentrate. This is supported by the higher concentrate grades reported for the Transition zone composite from the original RC drilling samples

The testwork program is designed to build on the data from the preliminary (sighter) round of testwork and consists of:

- comminution testwork,
- generation of in-situ bulk density data,
- geometallurgical characterisation,
- establishment of grind sensitivity on beneficiation, and
- magnetic separation testwork.

ALS Metallurgy has been engaged to conduct the testwork under the supervision of METS, with the comminution testwork and in-situ bulk density measurements having already been completed. This work was completed on six portions of whole core, three of the medium grade disseminated hanging wall zone, from transitional to fresh material, and three of the high grade basal massive magnetite zone, from fresh material.

The in-situ bulk density data from the portions of whole core range from 4.411/m<sup>3</sup> to 4.541/m<sup>3</sup> for the high grade basal massive magnetite material and 3.02t/m<sup>3</sup> to 3.22t/m<sup>3</sup> for the medium grade disseminated material. The in-situ bulk density values recorded from the laboratory compare very well with data recorded in the field from the diamond drill core when it was geologically logged. This data is being used by CSA Global in the update of the Mineral Resource for the Project. Density values used for the estimation of the maiden Inferred Mineral Resource for the Northern Block were 3.6t/m<sup>3</sup> for the high grade basal magnetite zone and 2.4t/m<sup>3</sup> for the hanging wall disseminated zone. It needs to be noted that these values included a portion of oxide material which would deliver an overall lower bulk density, so they are not directly comparable with the data recorded from the portions of whole core.

Geometallurgical characterisation, grind liberation and initial magnetic separation testwork is underway on six representative composite samples from across the Northern Block Resource; oxide, transitional and fresh material from medium grade disseminated hanging wall and high grade basal massive magnetite zones. Results from these stages of work are expected to be available over the coming weeks.

Follow up detailed testwork will focus on a range of composite samples from discrete locations throughout the Northern Block Resource to provide characterisation along the strike and down dip of the Mineral Resource. This metallurgical data will feed in to the pre-feasibility study currently underway on the Project, which is designed to:

- assess potential processing flowsheet options,
- provide conceptual open pit mine designs / pit optimisations,
- provide indicative capital expenditure estimates, and
- provide indicative operating cost estimates.

## SOUTHERN TENEMENT – MAIDEN INFERRED MINERAL RESOURCE

A maiden Inferred Mineral Resource estimate, of 21.5 Mt at  $0.9\% V_2O_5$  and  $10.1\% TiO_2$  ("**Southern Tenement Resource**"), including an outstanding **high grade component of 10.4 Mt at 1.1% V\_2O\_5 and 12.6% TiO\_2**, was announced for the Southern Tenement area at the Project during the quarter. The maiden Inferred Mineral Resource estimate has been reported in accordance with the JORC Code 2012 by CSA Global and incorporated data from the 23 RC holes (for 2,232m) completed in the Company's July / August 2017 drilling program.

RC drilling, completed on a nominal 200 m line spacing over a +1.4 km strike length with holes spaced nominally 40 m apart on section lines, was successful in defining high grade basal massive magnetite hosted vanadium mineralisation on each of the traverses completed. Holes were drilled at 60° to the north east, with depths ranging from 45 m to 171 m. This drilling targeted the +1.4km strike of outcropping ironstone interpreted to represent the same massive magnetite zone within the layered mafic igneous unit intersected in the Northern Block.

The modelled mineralisation has been defined based on surface mapping, magnetic modelling and the RC drilling data. Mineralisation has been divided in to the high grade massive magnetite zone and disseminated and/or banded magnetite zones in the hanging wall and foot wall of the massive magnetite. The high grade massive magnetite zone was constrained geologically and by using a nominal  $0.9\% V_2O_5$  lower cut-off grade, while the banded and disseminated magnetite zones were constrained using a nominal  $0.4\% V_2O_5$  lower cut-off grade. The Inferred Mineral Resource was estimated using the inverse distance squared method and was quoted for mineralisation within the defined zones above a  $0.4\% V_2O_5$  lower cut-off grade.

Classification	Material	Million Tonnes	V₂O₅%	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO₂%	TiO₂%	LOI%	P%	<b>\$%</b>
Inferred	Massive magnetite	10.4	1.1	49.1	4.9	5.9	12.6	-0.4	0.004	0.3
Inferred	Disseminated magnetite	11.1	0.6	30.2	11.9	23.4	7.7	2.4	0.01	0.4
Inferred	Combined	21.5	0.9	39.3	8.5	14.9	10.1	1.0	0.01	0.3

Table 2: Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project Southern Tenementas at 15 December 2017

\* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V2O5 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 banded and 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 high grade massive magnetite zone dips to the south west (215°) at an average of 55°, has a true thickness ranging from 5 metres in the far south of the tenement to 17 metres in the north, and has been modelled over a strike length of about 1.6 km. The zone has been cross cut and slightly offset or displaced by five interpreted faults (see Figure 5), which appears to account for some "flexing" and possible thickening of the high grade massive magnetite zone.

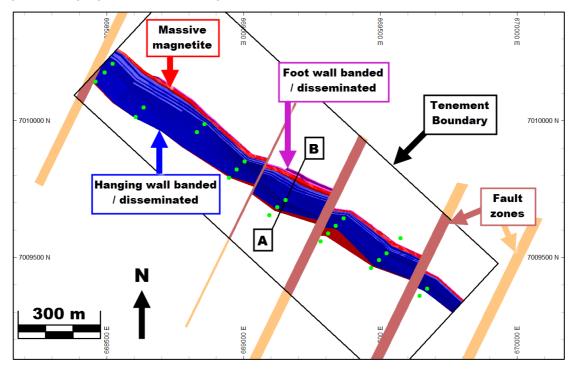


Figure 5: Plan View of the Modelled Mineralisation with Cross – Cutting Structures. Drill Collars in Green.

The disseminated / banded mineralisation consists of up to six (6) separate layers with a cumulative true thickness of up to 30 m in the north and centre of the deposit, consisting of up to four (4) hanging wall and two (2) foot wall layers, reducing to about 8 m across two hanging wall layers in the south.

The schematic cross section in Figure 6 shows the high grade basal massive magnetite zone (red) overlain by a series of medium grade hanging wall disseminated / banded lodes (blue) and overlying two (2) medium grade foot wall disseminated / banded lodes (purple). The geometry of the hanging wall layers may result in any open pit development of the basal massive magnetite zone incorporating the medium grade hanging wall disseminated lodes, thereby potentially resulting in an overall lower strip ratio. The lower strip ratio may be expected to have a potentially material positive impact on project economics, meaning that more of the high grade basal massive magnetite could be accessible in an open pit development.

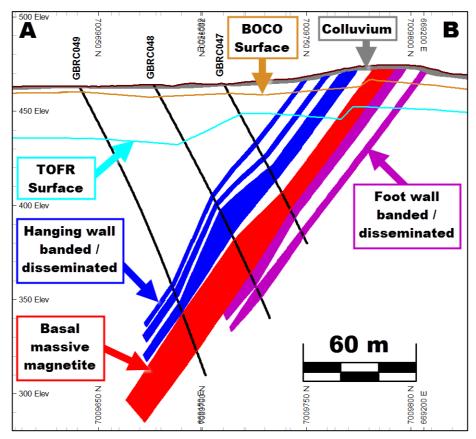


Figure 6: Schematic Cross Section Across Central Portion of the Deposit (see Figure 3 for section location)

Density measurements taken from the 13 diamond drill holes completed on the Northern Block of tenements have been applied to the Southern Tenement on the basis that the same material types as those in the Northern Block are present on the Southern Tenement. The density measurements were domained based on the modelled weathering state surfaces within the resource and applied to those domains within the model (see Table 3).

Weathering State	Waste	Disseminated / banded magnetite	Massive magnetite
Oxide	1.8	2.1	3.2
Transition	2.6	2.9	3.7
Fresh	2.9	3.4	4.3

Table 3: Density values in t/m<sup>3</sup> applied to model domains

There is opportunity to add to the Southern Tenement Mineral Resource, with mineralisation remaining open at depth, and to update a portion of the Mineral Resource to the Indicated Resource category with areas of closer spaced drilling (100 m line spacing). The Company will incorporate recommendations from CSA Global in its planning for further resource infill and extensional drilling at the Southern Tenement, with this work expected to also incorporate a component of diamond drilling designed to provide geological data relating to the various mineralised lodes and to provide samples for detailed metallurgical testwork.

## UPDATE OF NORTHERN BLOCK RESOURCE ESTIMATE

CSA Global, the Company's independent geological consultant, is utilising the data from the recently completed drilling program as well as results of density measurements from the diamond drilling to update the Northern Block Resource. It is expected that this updated Mineral Resource will include a portion reported in the Indicated category based on the confirmed continuity of mineralisation, particularly the high grade basal massive magnetite zone, and the areas of closer spaced drilling (100 m line spacing).

This work is aimed at delivering a global Mineral Resource for the Project combining the updated Northern Block Mineral resource estimate with the maiden inferred Mineral Resource estimate for the Southern Tenement. The Company is expecting to be in a position to report the results of this resource estimation work over the course of the current quarter.

# MARKETING ACTIVITIES

The Company, via its corporate adviser, has engaged a China based marketing consultant with extensive experience in the Chinese natural resources industry. The marketing consultant has engaged with a number of Chinese vanadium end users, in both the energy storage (VRB) and steel sectors, on behalf of the Company. These developing relationships are an important component of the Company's strategy to align itself with potential vanadium end users as it progresses the development of the Gabanintha Vanadium Project.

An investor roadshow in Europe was completed during the quarter, including a presentation at the Invest in Australian Resources conference in Frankfurt, attendance at the International Precious Metals and Commodities Show in Munich and a presentation at the Invest in Australian Resources event at Munich. This marketing is in support of the TMT's Frankfurt Stock Exchange listing and its European based investors.

## **TENEMENT STATUS**

There have been no changes in the Company's tenement position.

LOCATION	TENEMENT	INTEREST ACQUIRED OR DISPOSED OF DURING THE QUARTER	ECONOMIC INTEREST
Gabanintha Project (WA)	E51/1510-I	Nil	100%
Gabanintha Project (WA)	P51/2785-I	Nil	100%
Gabanintha Project (WA)	P51/2942	Nil	100%
Gabanintha Project (WA)	P51/2943	Nil	100%
Gabanintha Project (WA)	P51/2944	Nil	100%
Gabanintha Project (WA)	ELA51/1818	100% - Application	100%

## Table 4: Tenement Status as at 31 December 2017

# CORPORATE

As at 29 January 2018 the Top 20 shareholders held 53.5% of the fully paid ordinary shares and the Company had cash of \$1.0 million as at 31 December 2017.

Project specific announcements lodged on the ASX during the December quarter were:

- Infill Drilling at Gabanintha Northern Block Confirms High Grade Continuity, 18 October 2017
- TMT Investor Presentation and Roadshow, 1 November 2017
- Gabanintha Vanadium Project Update, 20 November 2017
- Exceptional Results from Diamond Drilling at Gabanintha, 7 December 2017
- Maiden Southern Tenement Inferred Resource of 21.5 MT at 0.9% V<sub>2</sub>O<sub>5</sub>, 18 December 2017

## **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 environmental restrictions and the banning of the import of vanadium slag.

The tightening supplies of vanadium are resulting in a global shortage, with prices appreciating dramatically since mid 2017, with reports indicating that vanadium pentoxide prices have rallied a further 27% already in 2018 to in excess of US12/lb V<sub>2</sub>O<sub>5</sub>, from a low of less than US4/lb V<sub>2</sub>O<sub>5</sub> in early 2107.

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

Ian Prentice Executive Director Technology Metals Australia Limited

### 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 V2O5 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 drilling programs completed over the course of 2017 has been used by independent geological consultants CSA Global to generate maiden Inferred Resource estimates, reported in accordance with the JORC Code 2012, for the Northern Block of tenements and the Southern Tenement at the Project (see Tables 5 and 6). The resource estimates confirmed the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

Mineralised Zone	Classification	Million	V2O5	Fe	Al2O	SiO2	TiO2	LOI	Density
	Classification	Tonnes	v203 %	%	3%	310Z %	1102 %	201 %	t/m3
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
Combined Total	Inferred	62.8	0.8	35.9	10.8	18.3	9.7	3.2	2.8
* Note: The Mineral Re cut off for the basal r disseminated mineralis	massive magnetite	zone and usi	ng a nom	inal 0.4	% V2O5	lower ci	ut off for	the ho	anging wall

**Table 5:** Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project Northern Block as at12 Jun 2017

 Table 6: Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project Southern Tenement as at 15 December 2017

solids above a lower cut-off grade of 0.4% V2O5. Differences may occur due to rounding.

Classification	Material	Million Tonnes	V2O5%	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO2%	TiO₂%	LOI%	P%	<b>\$%</b>
Inferred	Massive magnetite	10.4	1.1	49.1	4.9	5.9	12.6	-0.4	0.004	0.3
Inferred	Disseminated magnetite	11.1	0.6	30.2	11.9	23.4	7.7	2.4	0.01	0.4
Inferred	Combined	21.5	0.9	39.3	8.5	14.9	10.1	1.0	0.01	0.3

\* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V2O5 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 banded and 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.

Capital Structure	
Tradeable Fully Paid Ordinary Shares	22.6m
Escrowed Fully paid Ordinary Shares <sup>1</sup>	12.5m
Fully Paid Ordinary Shares on Issue	35.1m
Unquoted Options <sup>2</sup> (\$0.25 – 31/12/19 expiry)	15.0m <sup>3</sup>
Unquoted Options (\$0.35 – 12/01/21 expiry)	3.0m
Class B Performance Share <sup>3</sup>	10.0m

1 - 12.5 million fully paid ordinary shares will be tradeable from 21 December 2018.

2-13.7 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 the Northern Block Mineral Resource estimate 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 Southern tenement Mineral Resource estimate is based on information compiled by Mr Aaron Meakin. Mr Meakin is a Principal Consultant with CSA Global and a Member of the Australian Institute of Mining and Metallurgy. Mr Meakin has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report 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' ("**JORC Code**"). Mr Meakin 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

Gabanintha Vanadium Project, Northern Block Diamond Drilling, Collar Table GDA94, MGA Zone 50

Hole ID	Easting	Northing	RL	Azimuth	Dip	Hole Depth	Comment
GBDD001	661296	7020810	469.1	90	-60	89.7	Twin GBRC027
GBDD002	661355	7020599	471.9	90	-60	132.7	
GBDD003	661551	7020404	476.6	90	-60	36	Twin GBRC022
GBDD004	661910	7019296	498.4	90	-60	51.2	
GBDD005	661920	7019000	483.8	90	-60	135.7	
GBDD006	662019	7019001	488.3	90	-60	38.9	
GBDD007	662083	7018798	497.6	90	-60	66.3	Twin GBRC011
GBDD008	662042	7018600	490.1	90	-60	144.7	
GBDD009	662166	7018203	482.7	90	-60	149.5	
GBDD010	662206	7018202	480.4	90	-60	108.3	
GBDD011	662282	7017992	480.6	90	-60	80	Twin GBRC002
GBDD012	662270	7017800	479.6	90	-60	132.6	
GBDD013	662546	7017591	471.3	90	-60	69.6	Twin GBRC005

## **APPENDIX 2**

Gabanintha Vanadium Project, Northern Block Diamond Drilling, Significant Intersections

Hole ID	From (m)	To (m)	Interval (m)	V2O5%	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	LOI%
GBDD001	12	16	4	0.59	8.4	33.6	10.1	19.4	7.1
GBDD001	24	67	43	0.70	8.4	34.2	9.0	21.0	1.2
Including:	44	66	22	0.91	10.6	41.5	8.1	13.3	0.0
GBDD002	53	68	15	0.41	5.9	23.3	12.3	32.3	0.6
GBDD002	81	85	4	0.50	7.2	26.3	13.3	28.3	0.4
GBDD002	101	129	27.5*	1.04	11.8	47.3	5.4	8.1	-0.9
GBDD003	4	32	28	0.86	10.0	39.7	7.8	15.3	1.0
Including:	8	25	17	1.07	12.5	48.0	5.6	6.4	0.8
GBDD004	0	51	51	0.78	9.9	31.9	14.4	20.1	7.1
Including:	34	50	16	1.15	13.4	50.4	4.8	4.4	2.2
GBDD005	2	7	5	0.50	9.4	18.9	21.8	28.7	9.7
GBDD005	23	31	8	0.45	6.9	26.7	17.0	26.8	8.6
GBDD005	46	53	7	0.40	5.9	26.4	13.0	30.4	6.9
GBDD005	96	125	28.5*	0.81	9.6	37.2	10.3	17.5	0.4
Including:	110	124	13.5*	1.20	13.2	51.9	4.7	4.0	-1.5
GBDD006	6	36	30	0.85	10.0	38.6	11.3	15.1	5.0
Including:	17	32	15	1.20	13.6	50.6	4.6	3.9	2.2
GBDD007	14	57	43	0.72	8.8	34.3	15.1	18.3	6.4
Including:	42	57	15	1.21	13.7	50.7	4.6	3.3	1.9
GBDD008	0	17	17	0.56	6.8	23.3	19.9	29.9	8.9
GBDD008	115	139	24	0.93	10.8	41.8	8.4	13.3	-0.1
Including:	123	139	16	1.13	12.8	50.1	5.2	5.7	-1.3
GBDD009	4	13	9	0.43	6.5	17.8	24.7	32.8	9.4
GBDD009	18	26	8	0.46	7.0	28.9	15.2	25.6	8.3
GBDD009	63	77	14	0.42	6.0	24.6	14.2	29.3	7.6
GBDD009	109	145	36	0.67	8.2	32.5	20.3	22.5	1.0
Including:	129	143	14	1.15	12.4	48.0	5.6	6.8	-0.8
GBDD010	2	22	20	0.54	7.3	24.5	18.8	26.6	8.9
GBDD010	57	61	4	0.48	6.7	25.2	10.8	30.0	1.9
GBDD010	73	107	34	0.64	7.8	31.5	11.1	23.4	1.4
Including:	99	107	8	1.15	12.9	50.4	4.8	5.0	-1.2
GBDD011	4	77	73	0.71	8.4	27.4	17.8	23.5	7.4
Including:	58	72	14	1.21	12.1	46.6	5.9	7.8	1.7
GBDD012	13	54	41	0.50	7.1	21.6	21.2	28.7	9.8
GBDD012	64	70	6	0.47	5.7	29.3	10.6	26.2	5.9
GBDD012	90	128	37.5*	0.71	8.7	33.5	11.4	22.0	5.4
GBDD012	112	124	12	1.18	13.3	51.7	4.4	4.1	-1.2
GBDD013	12	69.6	57.6	0.80	8.9	22.4	19.6	24.0	10.3
Including:	51	60	<b>9</b>	1.35	16.1	42.7	8.1	7.9	3.7

**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.

\* - 0.5m of whole core consumed in metallurgical testwork (not assayed)

+Rule 5.5

# **Appendix 5B**

# Mining exploration entity and oil and gas exploration entity monthly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

#### Name of entity

612 531 389

quarter")

31 December 2017

Con	solidated statement of cash flows	Current Quarter (Dec 2017) \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for:		
	(a) exploration & evaluation	(742)	(1,520)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(60)	(117)
	(e) administration and corporate costs	(204)	(418)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	2	11
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (GST Refund received during period)	144	174
1.9	Net cash from / (used in) operating activities	(860)	(1,870)

2.	Cash flows from investing activities	
2.1	Payments to acquire:	
	(a) property, plant and equipment	-
	(b) tenements (see item 10)	-
	(c) investments	-
	(d) other non-current assets	-

+ See chapter 19 for defined terms

1 September 2016

Apr	pendix 5B
Mining exploration entity and oil and gas exploration entity quarte	rly report

Consolidated statement of cash flows		Current Quarter (Dec 2017) \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	
	(b) tenements (see item 10)	-	
	(c) investments	-	
	(d) other non-current assets	-	
2.3	Cash flows from loans to other entities	-	
2.4	Dividends received (see note 3)	-	
2.5	Other (provide details if material)	-	
2.6	Net cash from / (used in) investing activities	-	
~		1	
3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	
3.2	Proceeds from issue of convertible notes	-	

3.10	Net cash from / (used in) financing activities	-	-
3.9	Other (provide details if material)	-	-
3.8	Dividends paid	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.6	Repayment of borrowings	-	-
3.5	Proceeds from borrowings	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.3	Proceeds from exercise of share options	-	-
3.Z	Proceeds from issue of convertible notes	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,872	2,882
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(860)	(1,870)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	1,012	1,012

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### Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

5.	Reconciliation of cash and cash equivalents at the end of the month (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current Quarter \$A'000	Previous Quarter \$A'000
5.1	Bank balances	48	259
5.2	Call deposits	964	1,613
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,012	1,872

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	(60
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	
6.3	Include below any explanation necessary to understand the transactio items 6.1 and 6.2	ns included in
Paym	nent of director's fees.	

7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

7.3	Include below any explanation necessary to understand the transactions included in
	items 7.1 and 7.2

8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1	Loan facilities	-	-
8.2	Credit standby arrangements	-	-
8.3	Other (please specify)	-	-
8.4	Include below a description of each facility ab whether it is secured or unsecured. If any add proposed to be entered into after month end,	ditional facilities have bee	n entered into or are

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Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation 300	
9.2	Development	-
9.3	Production	-
9.4	Staff costs	60
9.5	Administration and corporate costs	150
9.6	Other (provide details if material)	-
9.7	Total estimated cash outflows	510

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-	-	-	-
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2018

Print name: Sonu Cheema

#### Notes

- 1. The monthly report provides a basis for informing the market how the entity's activities have been financed for the past month and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this monthly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this monthly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

### Technology Metals Australia Limited

#### Annexure A – Performance Shares

In accordance with section 6.12 of the Company's ASX admission letter, the following table is provided in respect of performance securities issued.

Performance Share Class	Number of Performance Shares	Key Terms and Conditions	Status
Class A*	10,000,000	Convert in to 10 million fully paid ordinary shares and 10 million Class B Performance Shares on achievement of an inferred resource of 30 Million tonnes at greater than 0.8% V2O5 on or before 31 December 2019.	Milestone achieved with conversion to FPO shares on 4 July 2017.
Class B*	10,000,000	Class B Performance Shares, issued upon conversion of the 10 million Class A Performance Shares, 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.	Milestone not achieved with no conversion during the period.

\*All Performance Shares and any fully paid ordinary shares issued on conversion of the Performance Shares are subject to restriction until 21 December 2018.