



**TECHNOLOGY**  
METALS AUSTRALIA LIMITED

ASX Announcement

5 October 2018

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#### Directors

Michael Fry:  
**Chairman**

Ian Prentice:  
**Managing Director**

Sonu Cheema:  
**Director and Company Secretary**

#### Issued Capital

35,508,334 ("TMT") Fully Paid Ordinary Shares (pre the issue of recent placement shares)

22,510,000 Fully Paid Ordinary Shares classified as restricted securities

14,615,000 Unquoted Options exercisable at \$0.25 on or before 31 December 2019 – 13,690,000 classified as restricted securities

2,750,000 Unquoted Options exercisable at \$0.35 on or before 12 January 2021

6,133,333 Quoted Options ("TMTO") exercisable at \$0.40 on or before 24 May 2020

3,258,334 Unquoted Options exercisable at \$0.40 on or before 24 May 2020

**ASX Code: TMT, TMTO**

**FRA Code: TN6**

# GABANINTHA STAGE 1 DRILLING COMPLETED

## HIGHLIGHTS

- STAGE 1 PROJECT ENHANCEMENT DRILLING COMPLETED.
- ALL RESOURCE INFILL AND EXTENSION HOLES INTERSECTED BROAD ZONES OF MASSIVE MAGNETITE MINERALISATION.
- MASSIVE MAGNETITE MINERALISATION INTERSECTED 25 TO 50M DOWN DIP OF CURRENT INDICATED RESOURCE, TO VERTICAL DEPTHS OF UP TO 190M.
- DRILLING AT THE NORTH PIT AND THE SOUTHERN TENEMENT CONFIRM THE VERY SHALLOW OXIDATION PROFILE.
- SHALLOW OXIDATION AND FOOTWALL COMPETENCY HIGHLIGHT OPPORTUNITY TO STEEPEN PIT WALLS.
- DRILLING TO GENERATE BULK SAMPLE FOR VENDOR AND LARGE SCALE METALLURGICAL TESTWORK NEARING COMPLETION.
- INITIAL ASSAY RESULTS FROM RC DRILLING EXPECTED IN MID TO LATE OCTOBER 2018.

## BACKGROUND

Technology Metals Australia Limited (ASX: TMT) ("Technology Metals" or the "Company") is pleased to provide an update on progress of drilling programs in support of the definitive feasibility study ("DFS") at its Gabanintha Vanadium Project ("Gabanintha" or "Project").

Stage 1 Project enhancement drilling program at Gabanintha, which consisted of 6,730m of Diamond and RC Drilling across the Northern Block of tenements and the Southern Tenement, has now been completed. Holes targeted infill and depth extension of the Mineral Resource, provided geotechnical data for the proposed open pit walls and generated additional sample for metallurgical test work.

Large diameter diamond drilling designed to generate bulk sample for process plant equipment vendors and large scale metallurgical test work commenced on 22 September 2018. This drilling is expected to be completed by mid October 2018.

The recently completed capital raising enables the Company to maintain momentum and focus on the work required for the completion of the DFS.

**Managing Director Ian Prentice commented:** "The stage 1 enhancement drilling program has delivered very exciting outcomes with confirmation of very shallow oxidation in the North Pit and Southern Tenement, depth extension of the massive magnetite mineralisation and overall footwall competency that is likely to deliver steeper pit walls".

## COMPLETION OF STAGE 1 DRILLING PROGRAM

The stage 1 Project enhancement drilling program, which consisted of 6,730m of RC and Diamond drilling across 45 holes (see Tables 1 and 2), was designed to:

- extend the Northern Block Mineral Resource estimate to increase the overall resource size and the Indicated Mineral Resource category / Probable Reserve estimate (see Figure 1);
- provide geotechnical data, in particular for the footwall portions of the designed pre-feasibility study ("PFS") open pits, to provide sufficient data to enable a steepening of the designed open pit walls, thereby dramatically decreasing the overall strip ratio;
- generate additional diamond core sample for the ongoing metallurgical test work program, including testing by proposed process plant equipment suppliers; and
- upgrade, and convert part of, the Southern Tenement Inferred Mineral Resource estimate to the Indicated Resource category.

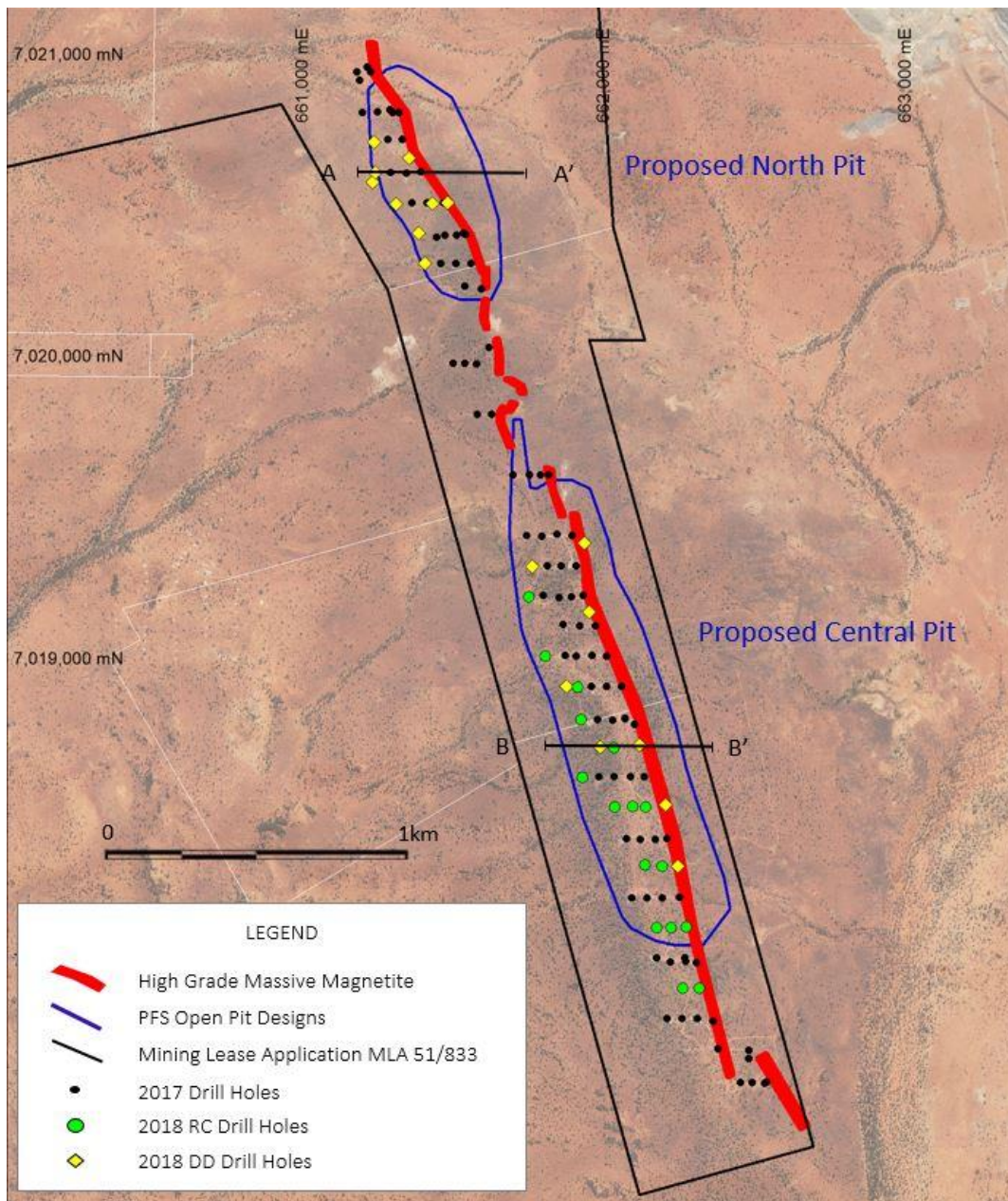


Figure 1: Drill Collar Location Plan, Northern Block of Tenements

The drilling program consisted of:

- 9 holes for a total of 1,651m, divided in to 524m of RC drilling and 1,127m of diamond drilling in the North Pit area, Northern Block of tenements (previously reported);
- 24 holes for a total of 3,643m, divided in to 2,364m of RC drilling and 1,279m of diamond drilling in the Central Pit area, Northern Block of tenements; and
- 12 holes for a total of 1,436m, divided in to 826m of RC drilling and 610m of diamond drilling in the Southern Tenement.

Drilling was extremely successful across the Project area in both infilling and extending the defined mineralisation, with all holes targeting the resource intersecting broad zones of the basal massive magnetite mineralisation. The depth extension drilling typically targeted the basal massive magnetite mineralisation between 25 and 50m down dip of the current Indicated Mineral Resource / base of the designed "PFS" open pits. It is expected that a proportion of this previously defined Inferred Mineral Resource will be upgraded to Indicated Mineral Resource category and that the Inferred Mineral Resource will be extended down dip.

Broad zones of basal massive magnetite mineralisation have been intersected at vertical depths to the top of the mineralisation of 175m in the North Pit area and 190m in the Central Pit. Figure 2 below, a cross section through the Central Pit, demonstrates the extension of the basal massive magnetite mineralisation beyond the previous extent of drilling and the designed "PFS" open pit and highlights the scope to materially increase the Indicated Mineral Resource and deepen the open pit design.

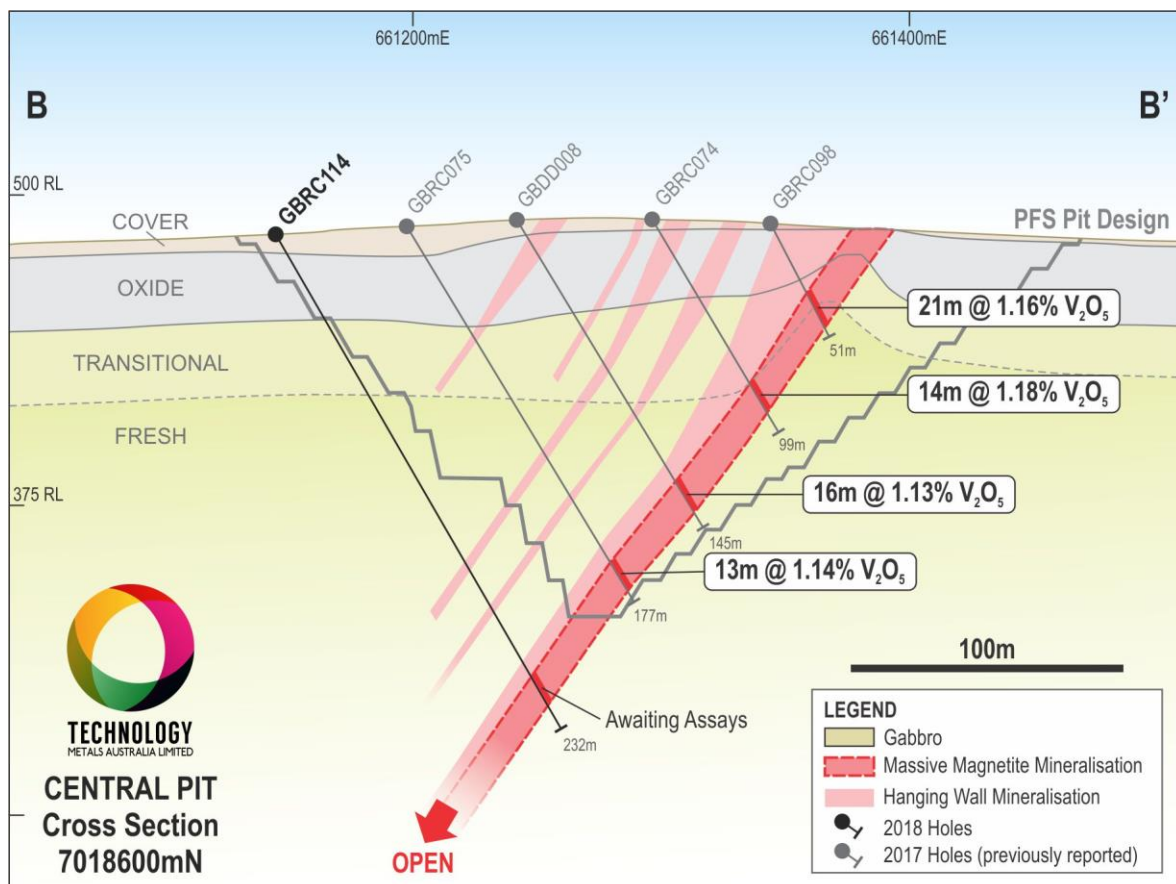


Figure 2: Cross Section – Central Pit, Northern Block

Infill RC and Diamond drilling has consistently intersected the massive magnetite zone and overlying banded and disseminated mineralisation. This additional data will assist in the development of a more detailed geological model, which in particular is expected to enhance the continuity of mineralisation in the southern portion and extension of the Central Pit area, with scope to add significant tonnage to the Indicated Mineral Resource in this area.

Initial assay results from the RC drill hole component of the stage 1 drilling program are expected to be available in mid to late October 2018. Processing of diamond core from the stage 1 drilling program is being progressively undertaken, with cutting of the core for sampling and assaying expected to commence in mid October 2018. The balance of the diamond core in mineralised zones will be used for ongoing metallurgical test work.

In the North Pit area and the Southern Tenement diamond drilling has confirmed the previously identified very shallow oxidation profile. The shallow oxidation profile has positive implications for early access to higher yielding high grade mineralisation and is expected to be a significant economic contributor for the development of the Project.

The shallower oxidation profile in these areas, combined with the overall interpreted competency of the host rocks, highlights the potential for steeper pit walls than those included in the PFS proposed open pit designs, particularly the very shallow (~40°) footwall pit slope angle (see Figure 3).

The cross section through the North Pit shown in Figure 3 highlights the very shallow footwall slope angle in the PFS proposed pit design and one of the recently completed Geotech focused diamond drill holes. Steepening of this footwall slope angle would be expected to have a material impact on the overall strip ratio, thereby reducing operating costs and enabling the open pits to be extended at depth to capture more of the defined basal massive magnetite mineralisation.

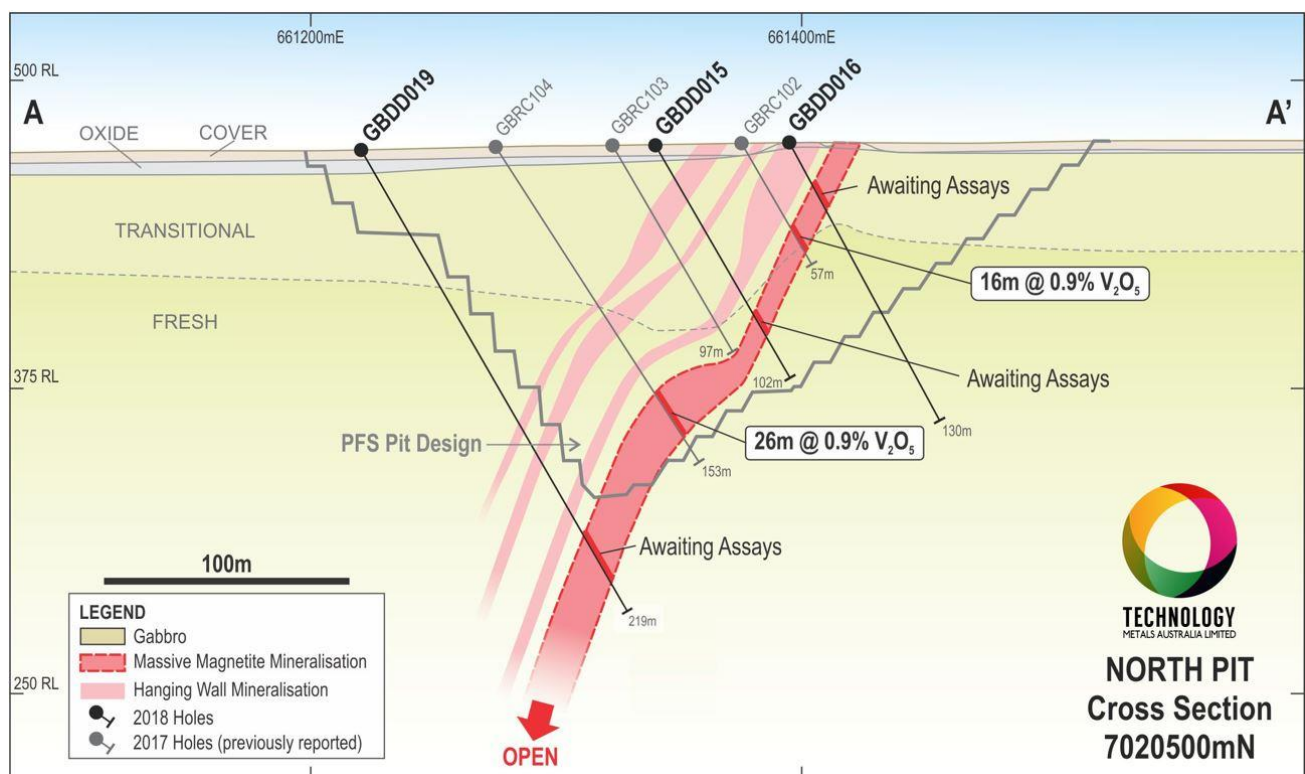


Figure 3: Cross Section – North Pit, Northern Block

Geotechnical data from the diamond drilling completed in the stage 1 program is being collated, reviewed and analysed by the Company's geotechnical consultants. The outcomes of this work will be incorporated in to updated open pit mine designs as the DFS progresses.

Table 1: RC Drilling Collar Table, Stage 1 Project Enhancement Drilling Program

Hole ID	Easting	Northing	RL (m)	EOH (m)^	Massive Magnetite Intersected
GBDD018*	661416	7020301	473	147.0	Yes, partly in RC
GBDD020*	661396	7020402	473	143.9	Yes, in diamond tail
GBDD021*	661253	7020602	471	89.5	Yes, in diamond tail
GBDD022*	661250	7020701	471	144.0	Yes, in diamond tail
GBRC109	661761	7019196	483	220	Yes
GBRC110	662044	7018697	495	130	Yes
GBRC111	662149	7018500	488	84	Yes
GBRC112	662106	7018503	490	124	Yes
GBRC113	662048	7018500	487	160	Yes
GBRC115	662205	7018304	481	95	Yes
GBRC116	662148	7018308	484	147	Yes
GBRC117	662285	7018103	478	64	Yes
GBRC118	662234	7018101	480	112	Yes
GBRC119	662186	7018101	483	208	Yes
GBRC120	662328	7017901	482	64	Yes
GBRC121	662272	7017900	483	124	Yes
GBRC122	661816	7019000	479	220	Yes
GBRC114	661940	7018598	483	232	Yes
GBRC123	661935	7018789	485	202	Yes
GBRC132	661923	7018898	488	178	Yes
GBRC124	668670	7010085	464	82	Yes
GBRC125	668744	7010027	465	90	Yes
GBRC126	668898	7009886	466	94	Yes
GBRC127	668867	7009848	464	130	Yes
GBRC128	669086	7009799	468	46	Yes
GBRC129	669021	7009717	465	154	Yes
GBRC130	669419	7009552	467	94	Yes
GBRC131	669388	7009516	466	136	Yes

^Holes with diamond drill core tails are deeper than stated

\*RC pre collared holes with diamond tails

Table 2: Diamond Drilling Collar Table, Stage 1 Project Enhancement Drilling Program

Hole ID	Easting	Northing	RL (m)	EOH (m)	Massive Magnetite Intersected
GBDD014	661364	7020650	472	130.0	Yes
GBDD015	661441	7020498	474	102.0	Yes, split by a dolerite
GBDD016	661492	7020500	474	129.6	Yes
GBDD017	661244	7020570	471	177.7	No, Geotech hole drilled west
GBDD018*	661416	7020301	473	189.6	Yes
GBDD019	661322	7020497	472	218.9	Yes
GBDD020*	661396	7020402	473	210.9	Yes
GBDD021*	661253	7020602	471	267.4	Yes
GBDD022*	661250	7020701	471	225.8	Yes
GBDD023	661963	7019147	488	130	Yes
GBDD024	661772	7019298	484	230.1	Yes
GBDD025	662129	7018705	493	140.3	Yes
GBDD026	662000	7018700	491	219.6	Yes
GBDD027	661887	7018899	485	189.8	No, Geotech hole drilled west
GBDD028	662256	7018304	479	130	No, Geotech hole drilled footwall
GBDD029	662215	7018508	484	120.0	No, Geotech hole drilled footwall
GBDD030	661947	7019375	495	118.8	No, Geotech hole drilled footwall
GBDD031	668631	7010053	463	160	Yes
GBDD032	668773	7010062	466	140.1	Yes
GBDD033	669184	7009735	468	150	Yes
GBDD034	669520	7009518	468	160	Yes

\*RC pre-collar (see previous table)

### BULK SAMPLE GENERATION DRILLING

Large diameter diamond drilling designed to generate bulk sample for process plant equipment vendors and large scale metallurgical testwork as part of the DFS commenced on 22 September 2018. Samples are being collected from a number of locations within the current North Pit region which has been identified as having a very shallow oxidation profile.

Material is being collected to replicate the expected process plant feed for the initial mine life at Gabanintha, focusing on a blend of transitional basal massive magnetite mineralisation, fresh hanging wall banded mineralisation and a large portion of fresh basal massive magnetite mineralisation. This blend is expected to deliver an optimal mass recovery in to a magnetic concentrate and metallurgical recovery of vanadium.

This drilling is expected to be completed by mid October 2018, with the samples to then be composited and prepared prior to delivery to process plant equipment vendors, including potential roasting kiln suppliers.

## 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 the vanadium pentoxide prices having increased further in 2018 to in excess of US\$20/lb V<sub>2</sub>O<sub>5</sub>, from a low of less than US\$4/lb V<sub>2</sub>O<sub>5</sub> in early 2017.

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

Ian Prentice  
**Managing 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 40 km 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 consists of seven granted tenements (and two Mining Lease applications). 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 Barrambie 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 results in an overall higher grade for the Gabanintha Vanadium Project.

Data from the Company's 2017 drilling programs (85 RC holes (for 8,386 m) and 13 HQ diamond holes (for 1,235.5 m) at the Northern Block and 23 RC holes (for 2,232 m) at the Southern Tenement) has been used by independent geological consultants CSA Global to generate a global Inferred and Indicated Mineral Resource estimate, reported in accordance with the JORC Code 2012 edition, for the Project. The Resource estimate confirmed the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

Table 1: Global Mineral Resource estimate for the Gabanintha Vanadium Project as at 5 March 2018

<b>Technology Metals Gabanintha Vanadium Project - Global Mineral Resources as at March 2018</b>										
<b>Material</b>	<b>Classification</b>	<b>Tonnage (Mt)</b>	<b>V2O5%</b>	<b>Fe%</b>	<b>Al2O3%</b>	<b>SiO2%</b>	<b>TiO2%</b>	<b>LOI%</b>	<b>P%</b>	<b>S%</b>
Massive magnetite	Indicated	14.5	1.1	49.2	5.1	5.8	12.8	-0.2	0.007	0.2
	Inferred	40.5	1.1	48.3	5.5	6.5	12.7	0.2	0.007	0.2
	<b>Indicated + Inferred</b>	<b>55.0</b>	<b>1.1</b>	<b>48.5</b>	<b>5.4</b>	<b>6.3</b>	<b>12.7</b>	<b>0.1</b>	<b>0.007</b>	<b>0.2</b>
Disseminated magnetite	Indicated	7.1	0.6	29.9	12.6	24.4	7.8	2.9	0.032	0.1
	Inferred	57.7	0.6	27.2	13.7	26.7	7.2	4.0	0.024	0.2
	<b>Indicated + Inferred</b>	<b>64.9</b>	<b>0.6</b>	<b>27.5</b>	<b>13.5</b>	<b>26.4</b>	<b>7.2</b>	<b>3.9</b>	<b>0.025</b>	<b>0.2</b>
<b>Combined</b>	<b>Indicated + Inferred</b>	<b>119.9</b>	<b>0.8</b>	<b>37.1</b>	<b>9.8</b>	<b>17.2</b>	<b>9.7</b>	<b>2.1</b>	<b>0.016</b>	<b>0.2</b>

\* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V2O5 lower cut-off for the Massive magnetite zone and using a nominal 0.4% V2O5 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% V2O5. Differences may occur due to rounding.

Data from the Global Mineral Resource and the recently completed PFS on the Gabanintha Vanadium Project were used by independent consultants CSA Global to generate a maiden Probable Ore Reserve estimate based on the Indicated Mineral Resource of 21.6 Mt at 0.9% V<sub>2</sub>O<sub>5</sub> located within the Northern Block of tenements at Gabanintha.

Table 2: Ore Reserve Estimate as at 31 May 2018

<b>Reserve Category</b>	<b>Tonnes (Mt)</b>	<b>Grade V<sub>2</sub>O<sub>5</sub>%</b>	<b>Contained V<sub>2</sub>O<sub>5</sub> Tonnes (Mt)</b>
Proven	-	-	-
Probable	16.7	0.96	0.16
<b>Total</b>	<b>16.7</b>	<b>0.96</b>	<b>0.16</b>

- Includes allowance for mining recovery (95%) and mining dilution (10% at 0.0 %V<sub>2</sub>O<sub>5</sub>)
- Rounding errors may occur



<b>Capital Structure</b>	
Tradeable Fully Paid Ordinary Shares <sup>1</sup>	35.508m
Escrowed Fully paid Ordinary Share <sup>2</sup>	22.51m
Fully Paid Ordinary Shares on Issue	56.468m
Unquoted Options <sup>3</sup> (\$0.25 – 31/12/19 expiry)	14.615m
Unquoted Options (\$0.35 – 12/01/21 expiry)	2.75m
Unquoted Options (\$0.40 – 24/05/20 expiry)	9.392m

1 – fully paid ordinary shares on issue prior to recently announced placement of 12 million fully paid ordinary shares

2 – 22.51 million fully paid ordinary shares will be tradeable from 21 December 2018.

3 – 13.69 million unquoted options 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 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 that relates to Ore Reserves is based on information compiled by Mr Daniel Grosso and reviewed by Mr Karl van Olden, both employees of CSA Global Pty Ltd. Mr van Olden takes overall responsibility for the Report as Competent Person. Mr van Olden is a Fellow of The Australasian Institute of Mining and Metallurgy and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as Competent Person in terms of the JORC (2012 Edition). The Competent Person, Karl van Olden has reviewed the Ore Reserve statement and given permission for the publication of this information in the form and context within 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' ("**JORC Code**"). 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.