



TECHNOLOGY
METALS AUSTRALIA LIMITED

ASX Announcement

30 January 2019

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Directors

Michael Fry:
Chairman

Ian Prentice:
Managing Director

Sonu Cheema:
Director and Company Secretary

Issued Capital

50,043,334 ("TMT") Fully Paid Ordinary Shares

20,000,000 Fully Paid Ordinary Shares classified as restricted securities

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

20,623,334 – Unquoted Options – various exercise prices and dates

ASX Code: TMT, TMTO

FRA Code: TN6



OUTSTANDING DIAMOND DRILL RESULTS CONFIRM GABANINTHA RESOURCE GROWTH POTENTIAL

HIGHLIGHTS

- **NORTHERN BLOCK DIAMOND DRILLING RESULTS HIGHLIGHT CONTINUITY OF HIGH GRADE VANADIUM MINERALISATION ALONG STRIKE AND DOWN DIP.**
- **CONSISTENCY OF WIDTH AND GRADE CONFIRMED AT CENTRAL PIT, INCLUDING:**
 - **14M AT 1.21% V₂O₅ FROM 156M (EXTENSION) AND**
 - **15.5M AT 1.22% V₂O₅ FROM 16M (INFILL).**
- **NORTH PIT DEPTH EXTENSION CONFIRMED, INCLUDING:**
 - **16.5M AT 1.0% V₂O₅ FROM 166M.**
- **DIAMOND DRILLING HIGHLIGHTS SHALLOW WEATHERING AND LOW OXIDATION LEVELS IN NORTH BLOCK, PARTICULARLY NORTH PIT.**
- **RESOURCE UPGRADE TO ALSO INCLUDE MAIDEN BASE METAL RESOURCE TO BE DELIVERED IN CURRENT QUARTER.**
- **DETAILED HIGH QUALITY DEFINITIVE FEASIBILITY STUDY TO INCORPORATE BASE METAL RECOVERY CIRCUIT DUE FOR DELIVERY IN MID 2019.**

BACKGROUND

Technology Metals Australia Limited (ASX: TMT) ("**Technology Metals**" or the "**Company**") is pleased to announce results of the diamond drilling component from the Northern Block of tenements resource infill and extension drilling program in support of the Definitive Feasibility Study ("**DFS**") at its Gabanintha Vanadium Project ("**Gabanintha**" or "**Project**").

The resource infill and extension drilling program consisted of 45 holes for 6,730m across the Northern Block of tenements and the Southern Tenement; with nine (9) diamond holes (including four (4) RC pre-collars) in the North Pit area and eight (8) diamond holes in the Central Pit area.

The diamond drilling was designed to infill and extend the Northern Block Mineral Resource estimate in the North and Central Pit areas, aimed at increasing the Indicated Mineral Resource category / Probable Reserve estimate, and provide additional geotechnical and metallurgical data.

Managing Director Ian Prentice commented: "The results of these diamond drill holes at the Northern Block of tenements at Gabanintha further highlight the scope to materially increase the Indicated Resource component of this globally significant vanadium Project, with a flow on to an expected material increase in the Project reserve as part of the rapidly progressing high quality DFS".

RESOURCE INFILL AND EXTENSION DRILLING – NORTHERN BLOCK DIAMOND DRILLING

The Gabanintha resource extension and infill drilling program, which consisted of 6,730m of RC and Diamond drilling across 45 holes, 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);
- upgrade, and convert part of, the Southern Tenement Inferred Mineral Resource estimate;
- provide geotechnical data, in particular for the footwall portions of the designed pre-feasibility study (“PFS”) open pits, to enable a steepening of the designed open pit walls; and
- generate additional diamond core sample for the ongoing metallurgical test work program, including testing by proposed process plant equipment suppliers.

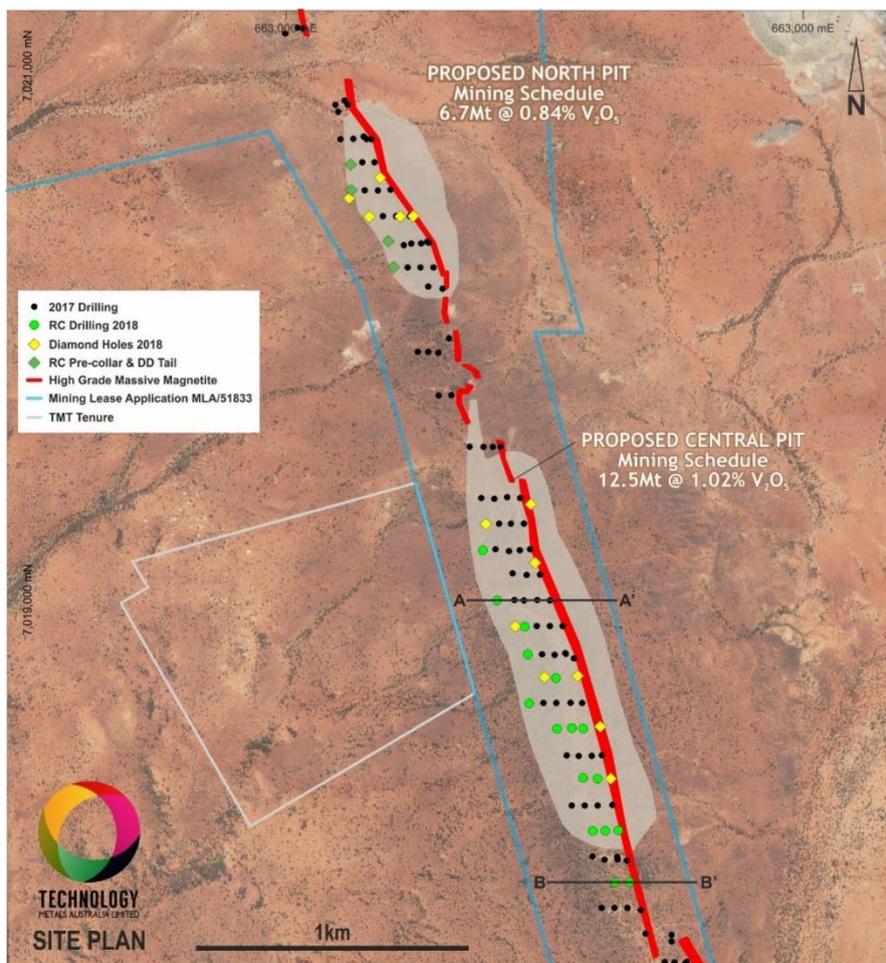


Figure 1: Drill Collar Location Plan, Northern Block of Tenements

Diamond drilling in the Northern Block of tenements consisted of:

- nine (9) holes for a total of 1,127m in the North Pit area, with one (1) geotechnical hole (GBDD017) not designed to intersect the mineralisation and the majority of the basal massive magnetite mineralisation intersected in GBDD014 removed for metallurgical testwork (assays pending) (see Figure 1); and
- eight (8) holes for a total of 1,279m in the Central Pit area, with four (4) geotechnical holes (GBDD027 to GBDD030) not designed to intersect the mineralisation and the majority of the basal massive magnetite mineralisation intersected in GBDD023 removed for metallurgical testwork (assays pending) (see Figure 1).

Assay results for five (5) of the diamond drill holes completed in the North Pit area of the Northern Block of tenements were reported in December 2018 (see ASX announcement of 20 December 2018; "Further Gabanintha Drill Results Confirm Resource Depth Extension; Shallow Oxidation in North Pit"). Assay results for the RC drilling component of the resource and infill drilling program were reported in November 2018 (see ASX announcement of 8 November 2018; "Project Enhancement RC Drilling Confirms High Grade Continuity").

The Company has now received assay results for the balance of the diamond drill holes completed in the Northern Block of tenements (see Table 1). NB: five of the diamond holes completed in the Northern Block of tenements were solely for collection of geotechnical data (not assayed) and the majority of the basal massive magnetite mineralisation intersected in two holes (GBDD014 and GBDD023) has been removed for metallurgical testwork (assays pending).

Diamond drilling in the Northern Block of tenements has been extremely successful in both infilling and extending the high grade basal massive magnetite mineralisation, with all holes designed to intersect the mineralisation returning high grade intervals, including **16.5m at 1.0% V₂O₅ from 166m** (GBDD019, North Pit extension), **14m at 1.21% V₂O₅ from 156m** (GBDD024, Central Pit extension) and **15.5m at 1.22% V₂O₅ from 16m** (GBDD025, Central Pit infill). (see Figure 2)

Hole ID	From (m)	To (m)	Interval (m)	V ₂ O ₅ %	TiO ₂ %	Fe %	SiO ₂ %	Al ₂ O ₃ %	LOI %
GBDD014	41.5	51.25	9.75	Awaiting Assay after Metallurgical property testing					
GBDD014	51.25	52.5	1.25	1.16	13.0	52.7	17.2	7.0	1.0
GBDD015	55.5	60	4.5	1.19	13.7	52.1	3.6	4.5	-1.2
GBDD015	70	76.5	6.5	0.98	11.2	44.0	3.3	3.4	-0.3
GBDD016	14	20	6.0	0.91	10.3	39.2	14.8	8.3	4.3
GBDD016	23	25	2.0	1.09	12.3	47.1	8.5	5.5	1.3
GBDD018	144	157	13	1.13	12.9	50.2	4.8	5.2	-1.1
GBDD019 ¹	166	182.5	16.5	1.00	11.6	45.7	9.5	5.9	-0.6
GBDD020	127	142	15	0.94	10.8	43.4	11.4	6.0	0.1
GBDD021 ²	208.5	220	11.5	1.07	12.5	48.4	6.5	5.4	-0.9
GBDD021	226.5	229	2.5	0.97	11.1	45.1	11.3	4.9	-0.8
GBDD022	204	214	10	0.99	11.5	45.0	10.2	6.1	-1.0
GBDD023	3	4	1.0	1.20	14.6	44.6	8.3	7.3	3.9
GBDD023	4	14	10	Awaiting Assay after Metallurgical property testing					
GBDD023	14	18	4.0	1.08	12.2	42.8	11.6	8.5	4.1
GBDD024 ³	156	170	14	1.21	13.8	52.9	2.5	4.2	-1.3
GBDD025 ⁴	16	31.5	15.5	1.22	14.2	49.4	4.3	5.6	2.3
GBDD026 ⁵	135.5	152.5	17	1.18	13.5	51.8	3.3	4.8	-1.3

Note: High grade intervals have been nominally defined using a 0.9% V₂O₅ lower cut-off grade, length weighted average grades and including no more than 2m of consecutive lower / medium grade mineralisation.

1 – 1.64m section has been removed for metallurgical testwork, interval calculated excluding this section

2 – 1m section removed for metallurgical testwork, interval calculated excluding this section

3 – 2.72m section has been removed for metallurgical testwork, interval calculated excluding this section

4 – 2.5m section removed for metallurgical testwork, interval calculated excluding this section

5 – 1.87m section removed for metallurgical testwork, interval calculated excluding this section

Table 1: High Grade Intersections – North Pit, Northern Block

The North Pit and Central Pit areas of the Northern Block of tenements has now been drilled on nominal 100m line spacings over a combined strike length in excess of 2.3km (see Figures 1 and 2), with a particular focus on extending the Indicated Resource component at depth and to the south of the southern portion of the Central Pit area. This drilling has confirmed the outstanding consistency of grade and width of the broad zones of basal massive magnetite mineralisation both along strike and down dip, extending the mineralisation in excess of 300m south of the current southern end of the Central Pit / southern limit of the Indicated Resource and intersecting the basal massive magnetite mineralisation at vertical depths of up to 190m. The high grade basal massive magnetite mineralisation remains open along the full strike length of the North Pit and Central Pit areas.

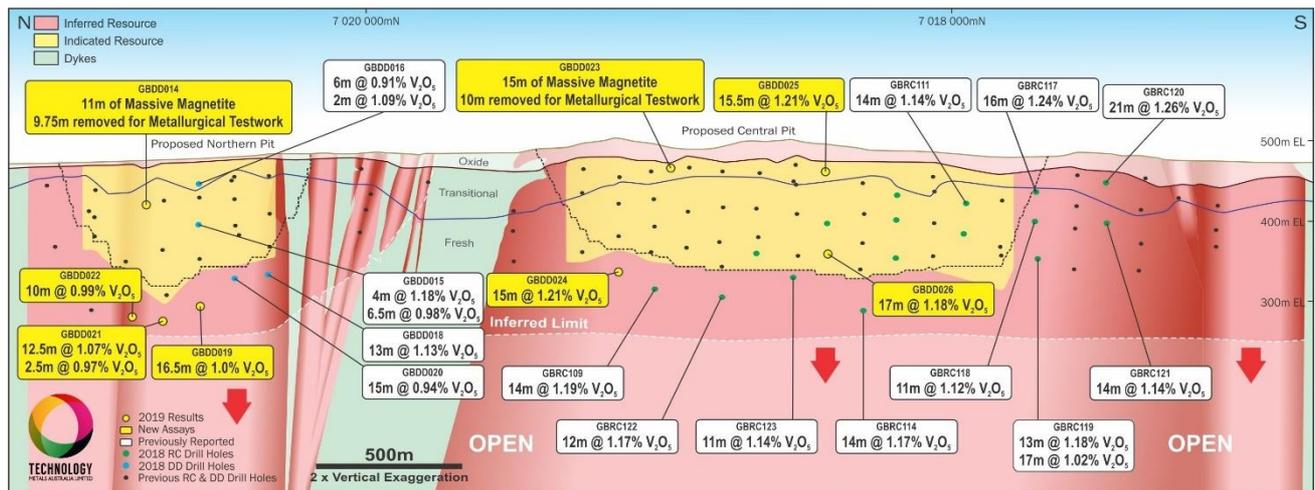


Figure 2: Long Section, Northern Block of Tenements

The shallow diamond drill holes completed in this program confirm the very shallow weathering profile and low oxidation levels in the North Pit area, with negative or low (<3%) LOI's in all but one of the basal massive magnetite mineralisation intersections in this area, and the relatively shallow weathering profile and low oxidation levels in the Central Pit area. N.B. low LOI's indicate the presence of magnetite at shallow depths, with associated high recovery factors to magnetic concentrates. The shallow oxidation profile has positive implications for early access to higher yielding high grade mineralisation.

The presence of this higher yielding high grade mineralisation has been confirmed through a systematic program of Davis Tube Recovery (DTR) testwork that has been completed on composite samples throughout the North Pit and Central Pit areas. The DTR testwork was completed on composite samples (up to 4m composites) from all lenses and oxidation states across the proposed open pit areas using samples from the 2017 drilling program above a 0.4% V₂O₅ cut off grade. Full analysis of the data from this DTR testwork is ongoing, with initial results indicating an average 85% vanadium recovery in to a magnetic concentrate across all ore types within the current proposed North Pit.

MINERAL RESOURCE ESTIMATE UPDATE – INCORPORATING BASE METALS

Assay results and geological data from the Gabanintha resource extension and infill drilling program are being incorporated in to an update of the overall Gabanintha Project Mineral Resource Estimate, initially focused on the Northern Block of tenements. The drilling has been very successful in extending the basal massive magnetite mineralisation down dip of the current Indicated Mineral Resource Estimate / base of the designed "PFS" open pits as well as along strike to the south.

The results from the Northern Block of tenements drilling are expected to result in a proportion of the previously defined Inferred Mineral Resource Estimate being upgraded to Indicated Mineral Resource category and that the Inferred Mineral Resource Estimate will be extended further down dip. This expected upgrade of the Northern Block of tenements Indicated Mineral Resource Estimate highlights the scope to materially deepen the open pit design. Importantly the high grade basal magnetite mineralisation remains open at depth along the combined North Pit and Central Pit areas strike length in excess of 2.3km.

As disclosed in December 2018 the Company has identified scope to produce a base metal concentrate from the non-magnetic tailings (tailings) fraction of the vanadium processing circuit (see ASX announcement of 12 December 2018; "Outstanding Gabanintha Metallurgical Results"). Preliminary testwork delivered a concentrate with a combined base metal content of 10 – 15%, containing up to 2.31% cobalt, 4.47% nickel and 9.50% copper. There remains significant scope to optimise the base metal recovery and concentrate grade.

The Company has identified the base metal concentrate as a potential significant contributor in support of the development of the Gabanintha Project. In order to further evaluate this potential contribution it has been decided to include the relevant base metals in the updated Gabanintha Mineral Resource Estimate to provide a maiden base metal Mineral Resource Estimate for the Project. This will ensure more definitive modelling of the grade and distribution of the base metals within the fresh massive magnetite horizon, thereby enabling the assessment of the expected timing and volume of base metal concentrate and facilitate discussions with potential customers for this additional product.

An updated Gabanintha Project Mineral Resource Estimate, incorporating the results of the recent resource infill and extension drilling program plus the base metals in the mineral resource estimate, is expected to be delivered in the current quarter.

BULK SAMPLE TESTWORK

A representative 685kg sub-sample of the bulk sample collected from the large diameter drilling program completed in September / October 2018 was composited, prepared and crushed in the laboratory, with a 300kg split of this sample then ground and passed through a triple pass Low Intensity Magnetic Separation (LIMS) to generate a magnetic concentrate. A 156kg magnetic concentrate sample was then processed by a roasting kiln supplier as a sighter test to confirm optimal operating parameters and enable progression of engineering design to meet the required conditions. The calcine product from this roasting sighter testwork is now being processed to deliver additional final vanadium product, which is expected to be available during the current quarter.

The bulk sample was collected from within the current North Pit region, which has a very shallow oxidation profile, and is considered representative of the expected process plant feed for the initial mine life at Gabanintha. This sample is 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 optimal mass recovery in to a magnetic concentrate and metallurgical recovery of vanadium.

The drilling to collect this sample, completed in September / October 2018, consisted of 21 diamond drill holes for 1,444m. Individual samples from this close spaced bulk drilling program were submitted for analysis in late 2018, with results from this work expected in February 2019.

The bulk sample is now being prepared for pilot plant / roasting testwork and additional vendor / equipment supplier testwork as required as the final stages of the DFS. Details of the testwork programs being undertaken and the expected time lines for each stage will be relayed to shareholders as they become available.

ONGOING / FUTURE WORK

Ongoing activities in support of the DFS include:

- Updating the global Mineral Resource, including the Indicated portion of the Resource;
- Revising the PFS open pit mine designs incorporating updated geotechnical data;
- Updating mine scheduling based on detailed geometallurgical data;
- Provide an updated ore reserve estimate within the expanded global Mineral Resource,
- Processing plant 3D modelling and layout progressing on schedule;
- Major process plant equipment request for quote (RFQ's) packages either sent out to preferred vendors or under final evaluation; and
- Revised capital and operating cost estimates to a DFS level of accuracy and an updated Project financial model.

The updated Gabanintha Project Mineral Resource Estimate plus findings from the geotechnical diamond drilling completed as part of the resource infill and extension program will be incorporated in to the mining studies to be undertaken as part of the DFS. It is expected that the updated mining studies will enable steeper overall pit slope angles than those used in the pre feasibility study open pit designs.

Following the identification of a base metal concentrate as a potential significant contributor in support of the development of the Gabanintha Project it has been decided to incorporate a Base Metal Recovery ("BMR") circuit in to the process flow sheet and overall DFS. Early stage works have been completed on the BMR, however incorporation of more detailed design work is expected to result in a minor extension of the delivery timeline for the DFS report. This however is not expected to be a significant variance to the DFS timeline which is scheduled for delivery in mid 2019.

Initial water drilling in support of the DFS has been very successful, with some of the proposed dewatering monitoring bores installed adjacent to the designed open pits and a potential initial process water source identified. Further work to quantify and fully define this water source will be completed in the first half of 2019.

RC drilling focused on assessment of the northern extent of the mineralisation on strike from the proposed North Pit was completed in late 2018, with a total of eight (8) holes drilled targeting the identified magnetic trend. All of the holes intersected massive magnetite mineralisation with assay results for this drilling expected shortly.

Comminution testwork in support of the DFS and other metallurgical / equipment vendor testwork is underway utilising representative sections of whole diamond drill core selected and removed by the Company's metallurgical consultants prior to cutting and sampling of the drill core. This work will enable correct sizing and operating parameters of key components of the processing circuit to be included in the DFS.

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 reported deficit of ~2,600 tonnes V metal in 2017. Vanadium Inventories are reported to have been fully depleted in 2017 (source: TTP Squared Inc). Significant production declines in China and Russia have exacerbated this situation, with further production curtailment occurring in China as a result of mine closures resulting from environmental restrictions and the banning of the import of vanadium slag. Chinese domestic consumption, driven by increasing intensity of use in steel (in particular in rebar) have impacted on Chinese exports ability to fill the global supply gap.

The increasing demand and limited supply side reaction is forecast to result in a global deficit of ~21,300t V (~37,900t V₂O₅) in 2025 (Source: TTP Squared) assuming full resumption of Chinese Stone Coal production.

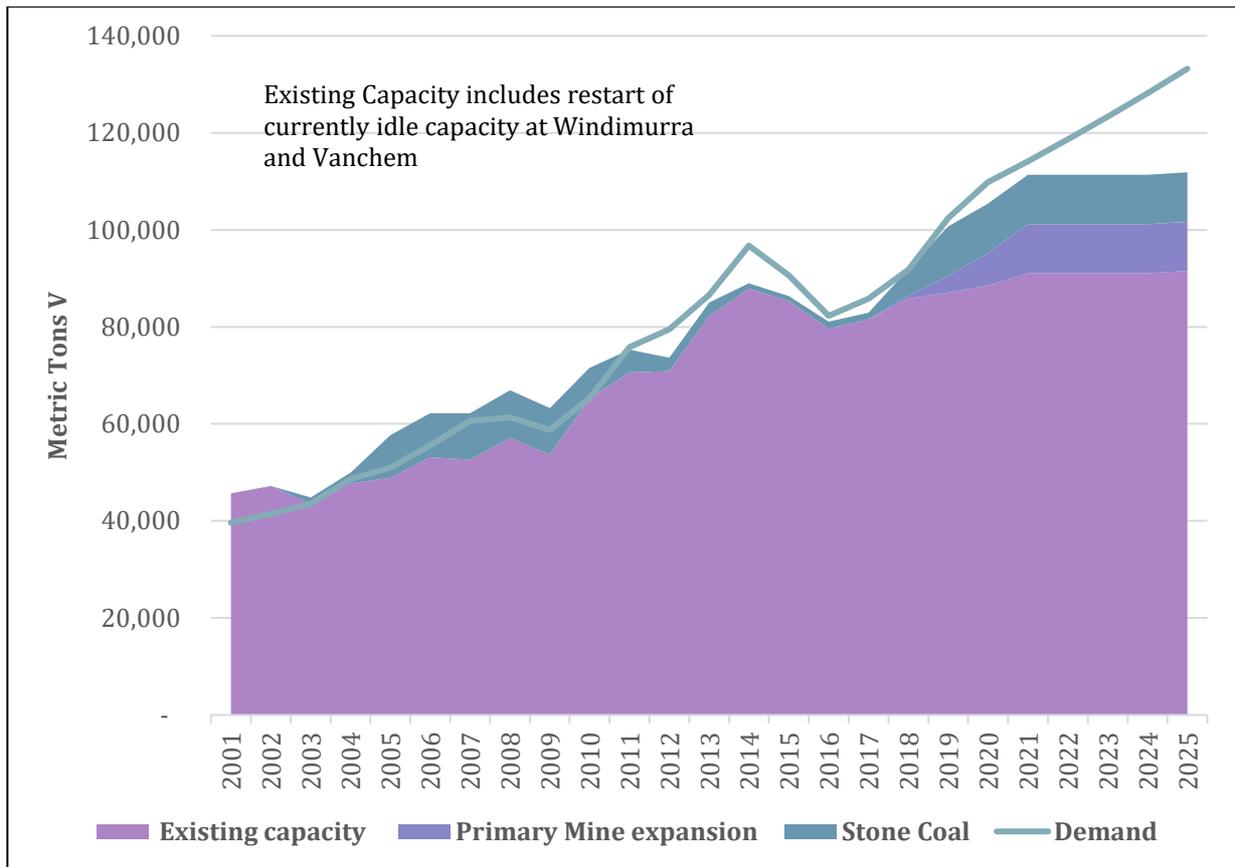


Figure 4: Vanadium Supply and Demand; source TTP Squared

The tightening supplies of vanadium are resulting in a global shortage, with prices appreciating dramatically since mid 2017. The vanadium pentoxide price increased to in excess of US\$30/lb V₂O₅ in late 2018, from a low of less than US\$4/lb V₂O₅ in early 2017, before seasonal factors in the Chinese market saw prices return to around US\$16.50/lb V₂O₅ in early 2019.

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 V₂O₅ 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 4: Global Mineral Resource estimate for the Gabanintha Vanadium Project as at 5 March 2018

Technology Metals Gabanintha Vanadium Project - Global Mineral Resources as at March 2018										
Material	Classification	Tonnage (Mt)	V2O5%	Fe%	Al2O3%	SiO2%	TiO2%	LOI%	P%	S%
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
	Indicated + Inferred	55.0	1.1	48.5	5.4	6.3	12.7	0.1	0.007	0.2
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
	Indicated + Inferred	64.9	0.6	27.5	13.5	26.4	7.2	3.9	0.025	0.2
Combined	Indicated + Inferred	119.9	0.8	37.1	9.8	17.2	9.7	2.1	0.016	0.2

* 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% V₂O₅ located within the Northern Block of tenements at Gabanintha.

Table 5: Ore Reserve Estimate as at 31 May 2018

Reserve Category	Tonnes (Mt)	Grade V₂O₅%	Contained V₂O₅ Tonnes (Mt)
Proven	-	-	-
Probable	16.7	0.96	0.16
Total	16.7	0.96	0.16

- Includes allowance for mining recovery (95%) and mining dilution (10% at 0.0 %V₂O₅)
- Rounding errors may occur

Capital Structure	
Tradeable Fully Paid Ordinary Shares	50.043m
Escrowed Fully paid Ordinary Shares ¹	20.00m
Fully Paid Ordinary Shares on Issue	70.043m
Unquoted Options (\$0.25 – 31/12/19 expiry)	14.59m
Unquoted Options (\$0.35 – 12/01/21 expiry)	2.75m
Quoted Options (\$0.40 – 24/05/20 expiry)	6.133m
Unquoted Options (\$0.40 – 24/05/20 expiry)	3.258m

¹ – 20 million fully paid ordinary shares subject to voluntary escrow until 30 June 2019.

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.

APPENDIX 1

Gabanintha Vanadium Project, Enhancement Drilling Program, Diamond Drilling Collar Table - GDA94, MGA Zone 50

Hole ID	Easting	Northing	RL (m)	Azimuth	Dip	EOH (m)	Area
GBDD014	661364	7020650	472	090	-60	130	Proposed North Pit
GBDD015	661441	7020498	474	090	-60	102	Proposed North Pit
GBDD016	661492	7020500	474	070	-60	129.6	Proposed North Pit
GBDD017	661244	7020570	471	270	-80	177.7	Proposed North Pit
GBDD018*	661416	7020301	473	270	-60	189.6	Proposed North Pit
GBDD019	661322	7020497	472	090	-60	218.9	Proposed North Pit
GBDD020*	661396	7020402	473	090	-60	210.9	Proposed North Pit
GBDD021*	661253	7020602	471	090	-60	267.4	Proposed North Pit
GBDD022*	661250	7020701	471	090	-60	225.8	Proposed North Pit
GBDD023	661963	7019147	488	090	-60	130	Proposed Central Pit
GBDD024	661772	7019298	484	090	-60	230.1	Proposed Central Pit
GBDD025	662129	7018705	493	090	-60	140.3	Proposed Central Pit
GBDD026	662000	7018700	491	090	-60	219.6	Proposed Central Pit
GBDD027	661887	7018899	485	270	-80	189.8	Proposed Central Pit
GBDD028	662256	7018304	479	090	-60	130	Proposed Central Pit
GBDD029	662215	7018508	484	090	-60	120	Proposed Central Pit
GBDD030	661947	7019375	495	090	-60	118.8	Proposed Central Pit
GBDD031	668631	7010053	463	040	-60	160	Southern Tenement
GBDD032	668773	7010062	466	040	-60	140.1	Southern Tenement
GBDD033	669184	7009735	468	040	-60	150	Southern Tenement
GBDD034	669520	7009518	468	040	-60	160	Southern Tenement

*RC pre-collar

APPENDIX 2

Gabanintha Vanadium Project, Northern Block, Diamond Drilling Significant Intersections

Hole ID	From (m)	To (m)	Interval (m)	V205 %	TiO2 %	Fe %	SiO2 %	Al2O3 %	LOI %
GBDD014	15	23	8	0.53	8.5	27.9	26.4	12.5	6.7
GBDD014	41.5	51.25	9.75	Awaiting Assay after Metallurgical property testing					
GBDD014	51.25	52.5	1.25	1.16	13.0	52.7	17.2	7.0	1.0
GBDD015	22	24	2	0.56	28.9	2.0	26.7	0.9	5.0
GBDD015	55.5	60	4.5	1.19	13.7	52.1	3.6	4.5	-1.2
GBDD015	70	76.5	6.5	0.98	11.2	44.0	3.3	3.4	-0.3
GBDD015	76.5	78	1.5	0.72	18.3	2.9	13.0	0.9	2.9
GBDD015	85	87	2	0.63	7.0	31.9	26.1	8.1	1.0
GBDD016	4	12	8	0.77	9.0	36.7	18.3	9.7	5.1
GBDD016	14	20	6	0.91	10.3	39.2	14.8	8.3	4.3
GBDD016	23	25	2	1.09	12.3	47.1	8.5	5.5	1.3
GBDD018	90	94	4	0.47	6.7	25.4	29.2	11.2	2.4
GBDD018	121	125	4	0.52	7.0	26.3	27.8	13.7	1.8
GBDD018	144	157	13	1.13	12.9	50.2	4.8	5.2	-1.1
GBDD018	160	169	9	0.56	6.3	28.9	27.3	9.4	1.1
GBDD019	129	132	3	0.50	7.1	26.3	28.0	10.0	2.1
GBDD019	152	155.5	3.5	0.50	7.3	26.1	28.1	12.5	1.1
GBDD019	163	188	25	0.80	9.4	38.0	17.7	7.9	-0.1
including ¹	166	182.5	16.5	1.00	11.6	45.7	9.5	5.9	-0.6
GBDD020	86	90	4	0.47	6.7	25.4	30.4	11.5	0.3
GBDD020	92	97	5	0.41	5.8	22.0	31.7	14.7	1.8
GBDD020	105	108	3	0.45	6.4	24.7	30.8	12.8	0.8
GBDD020	127	142	15	0.94	10.8	43.4	11.4	6.0	0.1
GBDD021	197	200	3	0.85	10.5	40.6	14.4	6.4	-0.3
GBDD021	208.5	223.5	15	0.83	9.7	37.8	9.8	6.2	-0.5
including ²	208.5	220	11.5	1.07	12.5	48.4	6.5	5.4	-0.9
GBDD021	226.5	229	2.5	0.97	11.1	45.1	11.3	4.9	-0.8
GBDD022	141	144	3	0.60	8.5	32.5	34.2	13.0	1.6
GBDD022	189.5	214	24.5	0.79	9.5	38.1	17.9	7.1	-0.2
including	204	214	10	0.99	11.5	45.0	10.2	6.1	-1.0
GBDD023	2.5	19	16.5	0.99	11.4	40.5	13.9	9.6	4.9
including	3	4	1	1.20	14.6	44.6	8.3	7.3	3.9
and	4	14	10	Awaiting Assay after Metallurgical property testing					
and	14	18	4	1.08	12.2	42.8	11.6	8.5	4.1
GBDD024	5	12	7	0.41	9.5	28.7	24.2	15.1	8.3
GBDD024	148	152	4	0.53	7.1	25.8	28.1	14.3	1.8
GBDD024 ³	156	170	14	1.21	13.8	52.9	2.5	4.2	-1.3
GBDD025	0	32	32	0.81	10.2	33.5	18.5	15.1	6.1
including ⁴	16	31.5	15.5	1.22	14.2	49.4	4.3	5.6	2.3

GBDD026	0	5	5	0.75	6.7	41.4	17.8	10.2	4.3
GBDD026	10	14	4	0.54	8.5	28.1	23.2	18.7	8.3
GBDD026	40	43	3	0.46	5.5	25.5	29.0	16.7	9.6
GBDD026	103	106	3	0.50	6.8	26.1	29.0	10.6	1.3
GBDD026	132	153	21	1.02	11.9	45.5	9.2	7.1	-0.6
including ⁵	135.5	152.5	17	1.18	13.5	51.8	3.3	4.8	-1.3

Note: Broad high grade intervals have been nominally defined using a 0.9% V2O5 lower cut-off grade, length weighted average grades and including no more than 2m of consecutive lower / medium grade mineralisation. Lower grade intervals have been defined using a 0.4% V2O5 lower cut-off grade, length weighted average grades and including no more than 3m of consecutive sub grade mineralisation as internal dilution.

- 1 – 1.64m section has been removed for metallurgical testwork, interval calculated excluding this section
- 2 – 1m section removed for metallurgical testwork, interval calculated excluding this section
- 3 – 2.72m section has been removed for metallurgical testwork, interval calculated excluding this section
- 4 – 2.5m section removed for metallurgical testwork, interval calculated excluding this section
- 5 – 1.87m section removed for metallurgical testwork, interval calculated excluding this section

APPENDIX 5

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
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	<ul style="list-style-type: none"> 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. Duplicate 2 – 3kg samples were collected from every metre sample. Individual metre samples were selected for analysis. Duplicate samples were submitted for analysis for every 20m down hole, ensuring duplicates were submitted for mineralised zones (based on geological logging). Diamond Drilling was undertaken using triple tube drilling in the oxidised rock and conventional double tube in fresh rock to ensure maximum recovery PQ2/3 sized drill core was selected for metallurgical reasons and HQ2 core was selected for diamond tails and stand alone Geotechnical holes Except where geotechnical samples were taken, 1m or 0.5m samples were taken for analysis. Core cutting was done by quarter core using diamond blade saw and duplicates were taken from the remaining quarter with half core or three-quarter core retained where metallurgical or geotechnical samples were not taken Samples were taken by hand selecting a consistent side of the cut core, and loading into pre-numbered sample bags Every 20th sample was assayed as a duplicate by selecting facing quarter core for diamond drilling. All Samples are analysed by XRF spectrometry following digestion and Fused Disk preparation. Blanks and certified Gabanintha sourced standards were used at 1 in 50 samples and 1 in 20 samples respectively.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> Reverse circulation drilling with face-sampling hammer Triple and double tube diamond core (triple tube in weathered rock)

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	<ul style="list-style-type: none"> Duplicate 2 – 3kg samples were collected from every metre RC sample 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. There does not appear to be any relationship between recovery and grade in the “massive” mineralisation. Recovery was maximised in diamond drilling by using triple tube in weathered rock
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Drill samples were logged in the field, with the total length of holes logged in detail. Drill chips for every metre were collected in trays and photographed. All diamond core has been photographed to a high resolution for electronic storage prior to sampling Geotechnical logging was undertaken on all diamond holes within proposed pit boundaries. Geotechnical studies are underway to optimise wall angles on proposed pits
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Samples were cone split at the drill rig and represent approximately 5% of the total material for each metre sampled. The vast majority of samples were dry. Duplicate 2 – 3kg samples were collected from every metre sample. Field duplicates were submitted such that there were at least 1 duplicate sample for every 20 samples analysed for RC drilling. Every 20th sample was assayed as a duplicate by selecting facing quarter core for diamond drilling. The sample size is considered to be appropriate to the material being sampled. The target mineralisation is coarse grained magnetite bearing vanadium.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	<ul style="list-style-type: none"> 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. 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. Quality control procedures demonstrate acceptable levels of accuracy and precision have been achieved. CRM materials

Criteria	JORC Code explanation	Commentary
		inserted to the sample stream at the laboratory have performed acceptably, and field duplicate samples have performed well. Batches of samples are periodically sent for check assay by an umpire laboratory.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Significant intersections correlate with mineralised zones as defined from geological logging. All sampling was completed by an independent geologist. The estimation of significant intersections has been verified by alternate company personnel. There were no adjustments to assay data.
Location of data points	<ul style="list-style-type: none"> 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. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> The grid system used for collar positions is MGA94 – Zone 50. Planned hole collar positions were located using hand held GPS. Final hole collar positions were surveyed using differential RTK GPS with an accuracy of ±5cm horizontally and ±10cm vertically. Down hole surveys were completed using an Axis Gyro every 30m down hole and near the collar.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> The drill data is on nominal 100m line spacing with holes located every 50m along the drill lines. Detailed airborne magnetics supports strike and down dip continuity assumptions of the massive magnetite zone which is known to host high grade mineralisation. This continuity has been additionally supported by drilling data. Data is considered appropriate for use in estimating a Mineral Resource. No sample compositing is used in primary assay except for DTR recovery testing
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	<ul style="list-style-type: none"> 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 ±10°, the apparent thickness is 0.85 X the true thickness, drill deviations were not noticeably higher through the mineralised zone
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> RC 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.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Drill core samples were transported to the commercial laboratory as whole core by registered consignment and tray numbers confirmed by personnel in the laboratory core yard. All core from the current program was labelled with non degrading metal tags.
Audits reviews	<p>or</p> <ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> A representative from the independent geological consultants, CSA Global, visited the site during the infill and extensional drilling program and reported drilling and sampling procedures and practices to be acceptable. Apart from umpire assay and use of experienced field geologists (all >20yrs experience) to supervise sampling, no written audits have been completed to date. Data Validation is done by a supervising geologist, database geologist and a Resource consultant all independent and contracted to the company.

1.2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> The areas drilled are located on current Prospecting Licences 51/2942, 51/2943 and 51/2944 and Exploration Licence 51/1510). The tenements are granted and held by The KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> 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). 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 KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited. 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.

Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> • Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> • Massive vanadiferous titanomagnetite layered mafic igneous unit in outcrop.
Drill hole Information	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. • 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. 	<ul style="list-style-type: none"> • See attached Appendix 1, Appendix 2, Appendix 3 and Appendix 4.
Data aggregation methods	<ul style="list-style-type: none"> • 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. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • Significant intervals (as shown in Appendix 3 and Appendix 4) have been defined nominally using a 0.4% V₂O₅ lower cut-off grade, length weighted average grades and no more than 3m of consecutive lower grade mineralisation. • High grade intervals (as shown in Table 1 and Table 2) have been defined nominally using a 0.9% V₂O₅ lower cut-off grade, length weighted average grades and no more than 2m of consecutive lower / medium grade mineralisation.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • 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'). 	<ul style="list-style-type: none"> • Down hole lengths of mineralisation are reported. • Given the geometry of the mineralisation it is estimated that down hole lengths approximate true widths.
Diagrams	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • A map showing tenement and drill hole locations has been included (see Figure 1). • A long section showing the relationship between mineralisation, resource category and geology has been included (see Figure 2). • A table of all intersections for the reported drilling has been included (see Appendix 3 and Appendix 4).
Balanced reporting	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Results for all mineralised intervals have been included, including both low and high grades.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Samples from diamond drilling have been collected to enable further metallurgical testing of the different grades and types of mineralisation encountered in the drilling, including bulk samples for vendor testwork. Diamond drilling has also been used to gather geotechnical data relevant to open pit mine design parameters. Pending assay data for the remaining diamond drill holes expected in January 2019. Assay results of RC drilling for initial sterilisation in the Northern Block expected in first quarter 2019. Results of water exploration and dewatering assessment to be reported and a follow up water exploration / development program scheduled for the first half of 2019. Further sterilisation work in the Northern Block expected in the first half of 2019.