



**TECHNOLOGY**  
METALS AUSTRALIA LIMITED

**ASX Announcement**

**31 January 2020**

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**Directors**

Michael Fry:  
**Chairman**

Ian Prentice:  
**Managing Director**

Sonu Cheema:  
**Director and Company Secretary**

**Issued Capital**

87,554,167 ("TMT") Fully Paid  
Ordinary Shares

14,888,750 – Quoted Options  
("TMT-O") exercisable at \$0.40 on or  
before 24 May 2020

6,008,334 – Unquoted Options –  
various exercise prices and dates

**ASX Code: TMT, TMT-O**

**FRA Code: TN6**



## QUARTERLY ACTIVITIES REPORT & APPENDIX 5B

**FOR THE QUARTER ENDING 31 DECEMBER 2019**

The Board of Technology Metals Australia Limited (ASX: **TMT**) ("**Technology Metals**" or the "**Company**") is pleased to provide an update on activities for the quarter ending 31 December 2019.

### HIGHLIGHTS

- Focus on progressing the development of the high grade, low cost, large scale, long life Gabanintha Vanadium Project (GVP) following delivery of the high quality DFS.
- CNMNC offtake discussions in latter stages of negotiation and documentation for completion of a binding Offtake Agreement.
- Offtake MOU with Fengyuan extended until the end of March 2020 to enable orderly progression of mutual due diligence and conversion to a binding Offtake Agreement.
- Advanced engagement with potential strategic partners and project funding partners with a shared long term view of the vanadium industry.
- Continuing to work with NAIF as part of the Company's strategic approach in securing the funding required to progress the development of the GVP.
- Progressing environmental approvals with spring surveys undertaken to provide complete seasonal coverage of the Project area.
- Received the Environmental Scoping Document (ESD) from the WA EPA to guide future work leading to the preparation and submission of the Environmental Review Document (ERD).
- As at the end of December 2019 the Company had cash of \$0.52 million. Subsequent to the end of the quarter the Company completed a placement to international and domestic strategic and high net worth investors to raise \$2.14m before costs.
- As at 30 January 2020 the Top 20 shareholders held 46% of the fully paid ordinary shares. A tranche of unlisted options exercisable at \$0.25 expired as at 31 December 2019.

**Chairman, Michael Fry commented:** "TMT is in an enviable position amongst its vanadium industry peers with an outstanding high quality DFS on the large, long life, lowest cost quartile Gabanintha Vanadium Project supported by advanced engagement with customer groups and potential project development partners / financiers positioning this Project to be the next new green fields vanadium project to be developed in the World"

## GABANINTHA VANADIUM PROJECT

During the December 2019 Quarter the Company continued to advance activities designed to progress the development of the high grade, low cost, large scale, long life Gabanintha Vanadium Project ("Project" or "GVP"). The very high quality definitive feasibility study ("DFS") on the development of the globally significant GVP was released in August 2019. Following the release of the DFS the Company has been in ongoing discussions with offtake partners, equipment vendors and suppliers, strategic partners and project funding parties as well progressing Project environmental and permitting activities.

The DFS was based on the Northern Block of tenements at GVP (see Figure 1) which host a Measured and Indicated Mineral Resource of 30.0 Mt at 0.9%  $V_2O_5$  within a global Measured, Indicated and Inferred Mineral Resource of 131 Mt at 0.9%  $V_2O_5$ . The Proven and Probable Ore Reserve of 29.6 Mt at a diluted grade of 0.88%  $V_2O_5$  (a very high +98% tonnage conversion from Measured and Indicated Resource) supports an initial 16 year project life, with +1.0%  $V_2O_5$  feed grade for the first 12 years one of the World's highest grade projects. The GCP's large global Mineral Resource provides clear scope for a material increase to the initial project life.

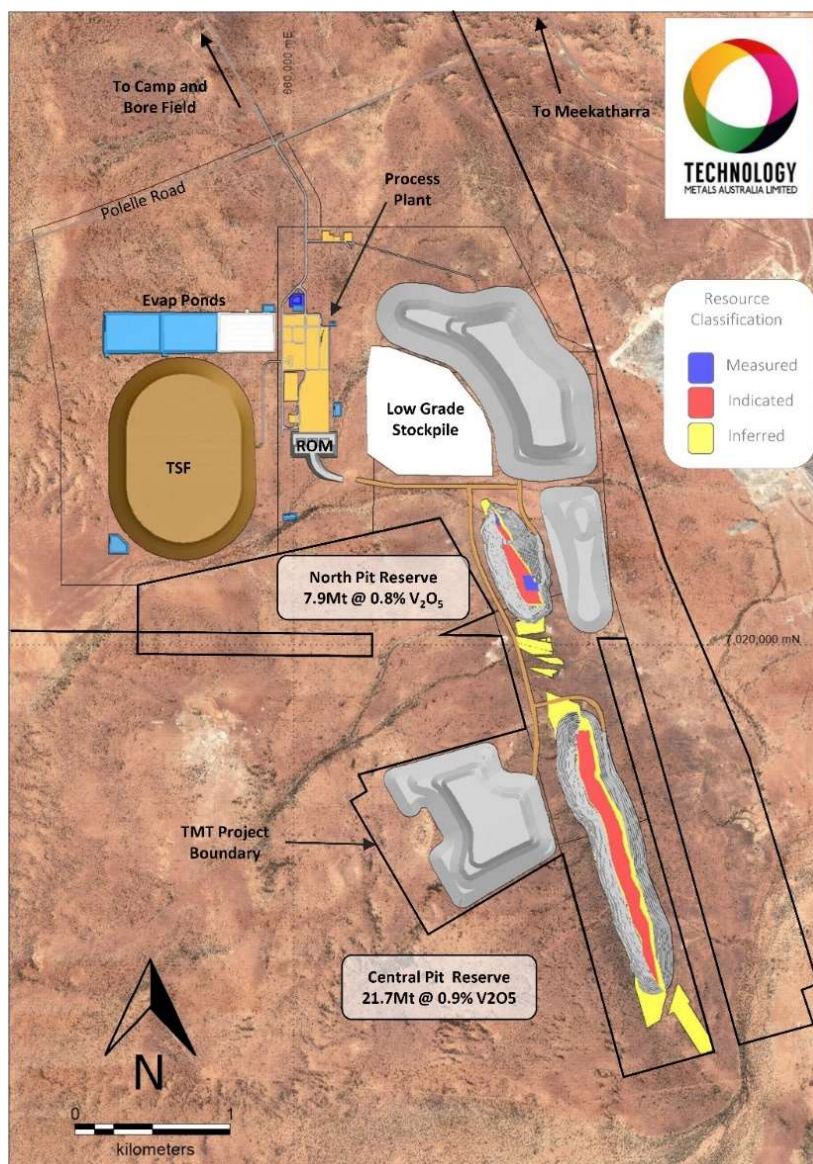
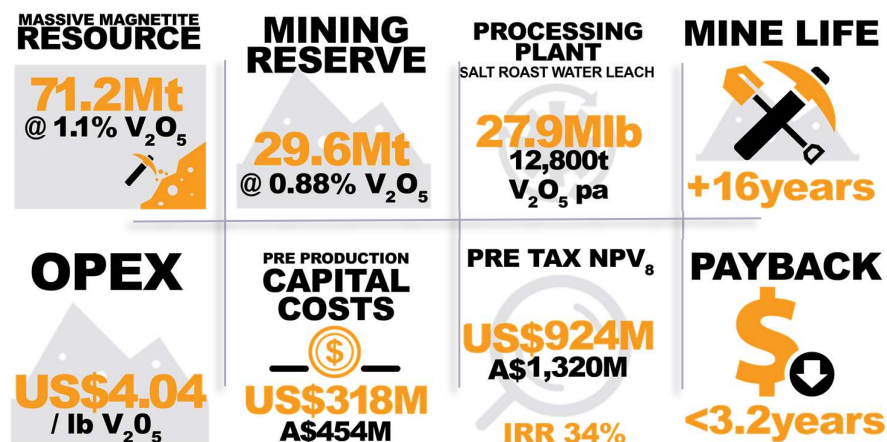


Figure 1: Gabanintha Vanadium Project – Site Layout

## GABANINTHA VANADIUM PROJECT DEFINITIVE FEASIBILITY STUDY SUMMARY<sup>1</sup>



AUD/USD 0.70, US\$10.88/lb long term V<sub>2</sub>O<sub>5</sub> price, estimate confidence level of -5% to +15%

- Lowest quartile life of mine cash costs of US\$4.04/lb V<sub>2</sub>O<sub>5</sub> compare favourably to global producers.
- Industry leading end-to-end vanadium recovery of 77% on fresh massive ore with class leading 71% mass recovery to magnetic concentrate confirmed by pilot scale testwork.
- Critical pilot scale kiln roast test work completed by industry lead kiln supplier, FLSmidth Inc.
- Average annual production of 27.9 Mlb (12,800T) of very high purity V<sub>2</sub>O<sub>5</sub> – would establish Gabanintha as the World's largest primary vanadium producer.
- Feed grade of +1.0% V<sub>2</sub>O<sub>5</sub> for first 12 years – one of the World's highest grade projects.
- Conservative +two-year throughput and recovery ramp up assumptions used in financial modelling.
- Clear scope to extend mine life well beyond 20 years supported by conversion of some of the balance of the global Measured, Indicated and Inferred Mineral Resource of 131 Mt at 0.9% V<sub>2</sub>O<sub>5</sub>
- Life of mine EBITDA estimate of A\$4.1 Bn.
- Estimated A\$1.09 Bn free cash flow generated in the first six years of operation.
- 15-yr historical average price of US\$8.78/lb V<sub>2</sub>O<sub>5</sub> delivers pre-tax NPV<sub>8</sub> of US\$464m (A\$663m) and IRR of 21%.
- Pre-production process plant capital of US\$318m (A\$454m).

### Cautionary Statement

The DFS referred to in this announcement is based upon a JORC Compliant Mineral Resource Estimate (ASX: Gabanintha Northern Block Resource Upgrade: 29 March 2019) (inclusive of the updated Proven and Probable Ore Reserve referred to in this announcement). Mineralisation to be mined in the DFS schedule includes 2% Inferred Mineral Resources in the first 12 years of production and a total 17% Inferred Mineral Resources over the life of mine. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. The inclusion of the Inferred Mineral Resources in the production schedule is not anticipated to impact materially on the Project's economic viability. The Ore Reserves and Mineral Resource Estimate underpinning the DFS have been prepared by Competent Persons with Competent Person' Statements attached.

Process and engineering designs for the DFS were developed to support capital and operating estimates to an accuracy of -5% to +15%. Key assumptions that the DFS was based on (including those defined as Material Assumptions under ASX Listing Rule 5.9.1) are outlined in the body of this announcement and Appendix 1. TMT believes the production target, forecast financial information derived from that target and other forward-looking statements included in this announcement are based on reasonable grounds.

Several key steps need to be completed in order to bring Gabanintha into production. Many of these steps are referred to in this announcement. Investors should note that if there are delays associated with completion of those steps, outcomes may not yield the expected results (including the timing and quantum of estimated revenues and cash flows). The economic outcomes associated with the DFS are based on certain assumptions made for commodity prices, exchange rates and other economic variables, which are not within the Company's control and subject to change. Changes in such assumptions may have a material impact on the economic outcomes.

To develop the Project as per the assumptions set out in the DFS will require additional capital. Investors should note that any failure to procure the required additional capital may result in a delay or change in nature and scale of the Project.

<sup>1</sup> – Technology Metals Australia – ASX Announcement dated 21 August 2019, Gabanintha Vanadium Project Definitive Feasibility Study

## MARKETING ACTIVITIES

During the quarter the Company has been in ongoing discussions with offtake partners, equipment vendors and suppliers, strategic partners and project funding parties. The Company continues to actively pursue partnerships with groups with a shared long term view of the vanadium industry and capacity to participate at a meaningful level in the Project.

To date these activities have delivered offtake MOU's with two counterparties covering 40% of the proposed annual average GVP production; 2,000Tpa  $V_2O_5$  with CNMC (Ningxia) Orient Group Co., Ltd. ("**CNMNC**") and 3,000Tpa  $V_2O_5$  with Shaanxi Fengyuan Vanadium Technology Development Co., Ltd. ("**Fengyuan**"). The Company is engaged with these counterparties to progress the conversion of the relevant MOU's through to binding Offtake Agreements.

In November 2019, the Company conducted a series of meetings in China including further meetings with CNMNC, Fengyuan and CNMNC's sister company China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd ("**NFC**"). The Company has now had a number of meetings with representatives of NFC, discussing scope for NFC to explore the opportunity to provide support to the development of GVP via EPC arrangements and potential funding support. These discussions are at a very early stage and may not lead to a mutually beneficial outcome, however they demonstrate the importance of further developing the Company's relationship with the CNMC group. Discussions with CNMNC regarding the conversion of the offtake MOU to a binding Offtake Agreement are in the latter stages of negotiation and documentation and will be progressed further in the current quarter.

Fengyuan and the Company are also progressing the conversion of the offtake MOU to a binding Offtake Agreement and are undertaking mutual due diligence in parallel with the offtake negotiations. The due diligence process is expected to include Fengyuan completing a GVP site visit, which is likely to take place in the current quarter (subject to any short term travel restrictions). Given the status of activities between Technology Metals and Fengyuan, and to enable the orderly progression of the mutual due diligence, the Fengyuan offtake MOU has been formally extended until the end of March 2020.

During the quarter the Company announced that it has progressed its engagement with the Northern Australia Infrastructure Facility ("**NAIF**") to the Due Diligence Stage of the NAIF assessment process. Technology Metals is continuing to work closely with NAIF as the Company progresses offtake agreements, environmental approvals and refines the GVP development metrics. This work will culminate in the development of a formal Investment Proposal, which is a precondition for the NAIF Board to make an Investment Decision. At this stage, NAIF has not made a decision to offer a loan or provide financial assistance of any sort and there is no certainty that an agreement will be reached between the parties.

NAIF is a A\$5 billion facility set up as an initiative of the Australian Federal Government to provide loans, which may be on concessional terms, to support and encourage infrastructure development in northern Australia. The GVP, a long-life strategic project for northern Australia, will be the largest single primary vanadium producer in the World and includes construction of a gas pipeline (by a third party), processing plant, power plant, and accommodation infrastructure.

Vanadium's strategic importance to the Australian economy has been recognised with its inclusion on the Australian Government's list of critical minerals in Australia. The importance of critical minerals to the Australian Federal Government has been further underlined with the establishment of the Critical Minerals Facilitation Office ("**CMFO**") at the beginning of 2020. Engagement with NAIF, and by extension the CMFO, forms part of the Company's strategic approach in securing the funding required to progress the development of the GVP.

The delivery of the technically and financially robust GVP DFS has enabled the Company and its financial advisers to progress the evaluation of a range of financing strategies, including engagement with prospective strategic investors. The Project funding is expected to consist of some or all of debt, JV interest, direct project investment and/or equity, with initial discussions with potential strategic investors and financiers completed during the quarter. A range of development opportunities for the Project, through engineering / EPC, build own operate transfer, plant and equipment procurement packages, and/or a combination of these, are being pursued by the Company and its advisers.

### **Gas Supply**

As disclosed in the GVP DFS the Company has entered into a Memorandum of Understanding (MOU) with DDG Operations Pty Limited ("**DDG**"), part of the Australian Gas Infrastructure Group ("**AGIG**"), to co-operate in the joint conduct of investigations (FEED study) in relation to the construction of a natural gas pipeline from the AGIG owned and operated Dampier Bunbury Natural gas Pipeline.

The MOU contemplates Technology Metals becoming a Foundation Customer for a new gas pipeline, with DDG to fund, build, own and operate the pipeline in return for Technology Metals entering into an annual take or pay tariff over a period to be agreed between the parties. Natural gas is proposed to be used as the heating energy source in the roasting kiln and other parts of the process circuit and for electricity generation.

DDG and the Company continue to progress discussions around the optimal development of a natural gas pipeline to meet Technology Metals requirements, as well as to provide natural gas to third party customers in the region, and the appropriate timing to complete the required FEED study to ensure development of the pipeline is complimentary to development of the GVP.

### **Equipment vendors**

Vanadium industry leading kiln supplier FLSmidth Inc ("**FLS**") completed the critical risk reducing pilot scale kiln roast test work for the GVP DFS. This testwork confirmed that the GVP ore is suited to processing via the salt roast / water leach process flow sheet similar to what is currently operating at Largo Resources' Maracas Menchen vanadium mine in Brazil. It also confirmed the ability to produce a high purity (>99%) V<sub>2</sub>O<sub>5</sub> product, which may be amenable for the premium vanadium market, at industry leading vanadium recoveries.

The Company has further engaged with FLS following the completion of the GVP DFS to explore the process plant equipment, including but extending beyond the roasting kiln, that FLS may be able to supply to the Project. This work is ongoing but expanding the scope of equipment to be sourced from FLS may assist in structuring the Project funding package. These discussions are at an early stage, ongoing and may not result in a materially positive outcome for the Project.

## **ENVIRONMENTAL APPROVALS**

The Company self-referred the proposed Project development to the WA Environmental Protection Authority ("**EPA**"), with the EPA determining that the Project will undergo a formal environmental impact assessment with no public comment period. During the quarter the EPA provided the Company with the Environmental Scoping Document ("**ESD**"), with input from other key decision-making agencies, that set out the key environmental factors to be addressed in support of the Environmental Review Document ("**ERD**"). The Company has reviewed the ESD and is incorporating the matters addressed into its future work program leading to the preparation and ultimate submission of the ERD.

The Company's ecological consultants, Biologic Environmental Survey, conducted "spring" fauna, flora and vegetation surveys during the quarter. These surveys provided complete seasonal coverage of the Project development envelope as discussed in the ESD, with the reports and data from these surveys to be amalgamated with the reports and data from previous surveys and incorporated in to the ERD.



A key component of the ERD is the definition of the water source needed to satisfy processing, potable supply and dust-suppression requirements for the Project. Work completed as part of the DFS, and subsequent to the DFS, has identified a water source within a paleochannel located to the north west of the processing facility covered by Miscellaneous Licence L51/102 (see Figure 2). The bore water as indicatively tested indicates a low salinity and low particulate composition which is to the benefit of the Project.

Water drilling completed to date along the full strike of the system has delivered deep and shallow monitoring bores and a production bore. Data from test pumping of these bores has been compiled and used by the Company's consultants AQ2 to develop a hydrogeological understanding of the borefield area. This work has indicated a further round of drilling is likely to be required to fully evaluate the system prior to the submission of the ERD. The scope and quantum of this work is being developed and will form part of the Company's future work program.

## TENEMENTS

During the quarter General Purpose Lease 51/30 was granted (see table 1 and Figure 2) and extension of term applications were lodged for Prospecting Licences P51/2930 (covered by G51/29), P51/2942 (covered by application M51/884), P51/2943 and P51/2944 (together covered by application M51/883). Subsequent to the end of the quarter Prospecting Licences P51/2930, P51/2942, P51/2943 and P51/2944 were extended for a further four years.

The Company continued to engage with representatives of the native title claimant group in the Project area to progress the process of grant of its two Mining Lease applications; M51/883 over the Northern Block of Tenements and M51/884 over the Southern Tenement.

LOCATION	TENEMENT	INTEREST ACQUIRED OR DISPOSED OF DURING THE QUARTER	ECONOMIC INTEREST
Gabanintha Project (WA)	E51/1510-I	Nil	100%
Gabanintha Project (WA)	E51/1818	Nil	100%
Gabanintha Project (WA)	L51/101	Nil	100%
Gabanintha Project (WA)	L51/102	Nil	100%
Gabanintha Project (WA)	P51/2785-I	Nil	100%
Gabanintha Project (WA)	P51/2930	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)	G51/29	Nil	100%
Gabanintha Project (WA)	G51/30	Nil - Granted	100%
Gabanintha Project (WA)	M51/883	Nil - Application	100%
Gabanintha Project (WA)	M51/884	Nil - Application	100%
Gabanintha Project (WA)	P51/3140	Nil - Application	100%

**Table 1:** Tenement Status as at 31 December 2019

## **FUTURE WORK**

The Company remains focused on the continued engagement with offtake partners, industry participants and prospective project funding partners, the progression of environmental activities in support of completion and lodgement of the ERD and discussions with the Yugunga-Nya Claimant Group and its representatives to progress a suitable Mining agreement and the timely grant of the GVP Mining Leases.

As detailed above it is envisaged that additional water definition and evaluation work will be required to finalise the location of the initial production bores and to provide input for the ERD. The Company is also actively engaging with suppliers of long lead processing plant equipment, including the kiln, to ensure a timely progression of the development of the GVP.

TMT expects the FEED study on the GVP will commence following further progression of the environmental activities in support of the statutory approvals process.

Work is also progressing on updating the Southern Tenement Mineral Resource. Assays from previously completed drilling on this tenement will be incorporated into an updated geological model and recently compiled geotechnical data will be used to complete the resource upgrade, which is expected to be completed in the current quarter.

## **VANADIUM MARKET COMMENTARY**

Global vanadium prices declined at the beginning of the quarter and then remained relatively stable in a US\$5.50 to US\$6.00/lb  $V_2O_5$  range for the remainder of the quarter. European prices, driven by specific macro economic events, underperformed relative to Chinese prices. Post the end of the quarter European vanadium product prices have increased markedly reflecting a period of restocking and a tightening of supply in China.

Vanadium consumption in China, particularly related to the steel industry, increased markedly year on year in 2019 driven by the increase of intensity of use of vanadium in the Chinese steel industry. The majority of the increased consumption in the Chinese steel industry has been in the form of vanadium nitrogen alloys, consistent with production growth expectations of the Company's two offtake partners, CNMNC and Fengyuan, two of China's largest vanadium nitrogen alloy producers.

The decline in vanadium prices has also seen the beginning of a reversal of niobium substitution in the Chinese steel industry, further driving increased vanadium consumption.

Chinese vanadium supply increased dramatically at the beginning of 2019 as a response to the unsustainably high vanadium prices seen in late 2018, with the recommissioning of high cost steel mills and high cost / highly polluting stone coal mines. The decline in prices in the second half of 2019 has seen a gradual decline in supply as these higher cost producers have begun to exit the market, particularly the Chinese stone coal producers.

Continued demand in the Chinese steel industry combined with the recent decline in supply is expected to see the vanadium price move closer to the long term historical average price over the course of 2020. Prices at these levels are supportive of continued growth in consumption whilst limiting the capacity for high cost producers to re-enter the market.

This scenario underpins the importance to the global vanadium industry of the development of stable, long term, lowest cost quartile, high quality green fields projects such as the GVP.

Current vanadium pricing is also seeing the emergence of a range of vanadium redox flow battery (VRFB) projects, an important sector for the continued growth of vanadium demand in the medium to long term which will be reliant on the vanadium price remaining in a more sustainable price range.

## CORPORATE

As at 30 January 2020 the Top 20 shareholders held 46% of the fully paid ordinary shares and the Company had cash of \$0.52 million as at 31 December 2019. Subsequent to the end of the quarter the Company announced that it has received commitments for a placement of up to 19,445,833 fully paid ordinary shares at a price of \$0.11 per share to raise approximately \$2,139,042 before costs. The placement price is equal to the last closing price of Technology Metals' shares on 28 January 2020 and a 15% discount to the 30 day VWAP.

The fully subscribed Placement was well supported by new and existing high net worth investors and the Company is pleased to welcome strategic domestic and international investors on to the register. The strategic investors offer an opportunity to deepen the Company's relationships in Asia with a wealth of experience and contacts in Technology Metals' key customer markets. Individual strategic investors have had significant operational experience and investments within the rapidly emerging battery metals markets.

Funds raised will be used to progress the development of the large, long life, low cost World class Gabanintha Vanadium Project, with a focus on progressing environmental and permitting activities as well as continue to advance discussions with potential strategic investors, project funding parties and offtake partners, and general working capital.

The Board of TMT intends to participate for up to \$60,500 in the Placement for up to 550,000 fully paid ordinary shares. This participation in the Placement will be subject to shareholder approval at an upcoming General Meeting of Shareholders.

Project specific announcements lodged on the ASX during the December 2019 quarter were:

- Offtake MOU with Leading Chinese Vanadium Nitrogen Producer, 1 October 2019;
- Gabanintha Vanadium Project Advances to NAIF Due Diligence Phase, 9 October 2019;
- Technology Metals Australia Receives R&D Refund, 16 October 2019;
- CNMNC Offtake MOU – Short Extension of Term, 29 November 2019;
- TMT AGM Investor Presentation, 29 November 2019; and
- Gabanintha Vanadium Project Development Status Update, 17 December 2019.



## 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 flow batteries ("**VRFB's**"). VRFB'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. VRFB'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 VRFB'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.

This announcement has been authorised by the Board of Technology Metals Australia Limited.

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

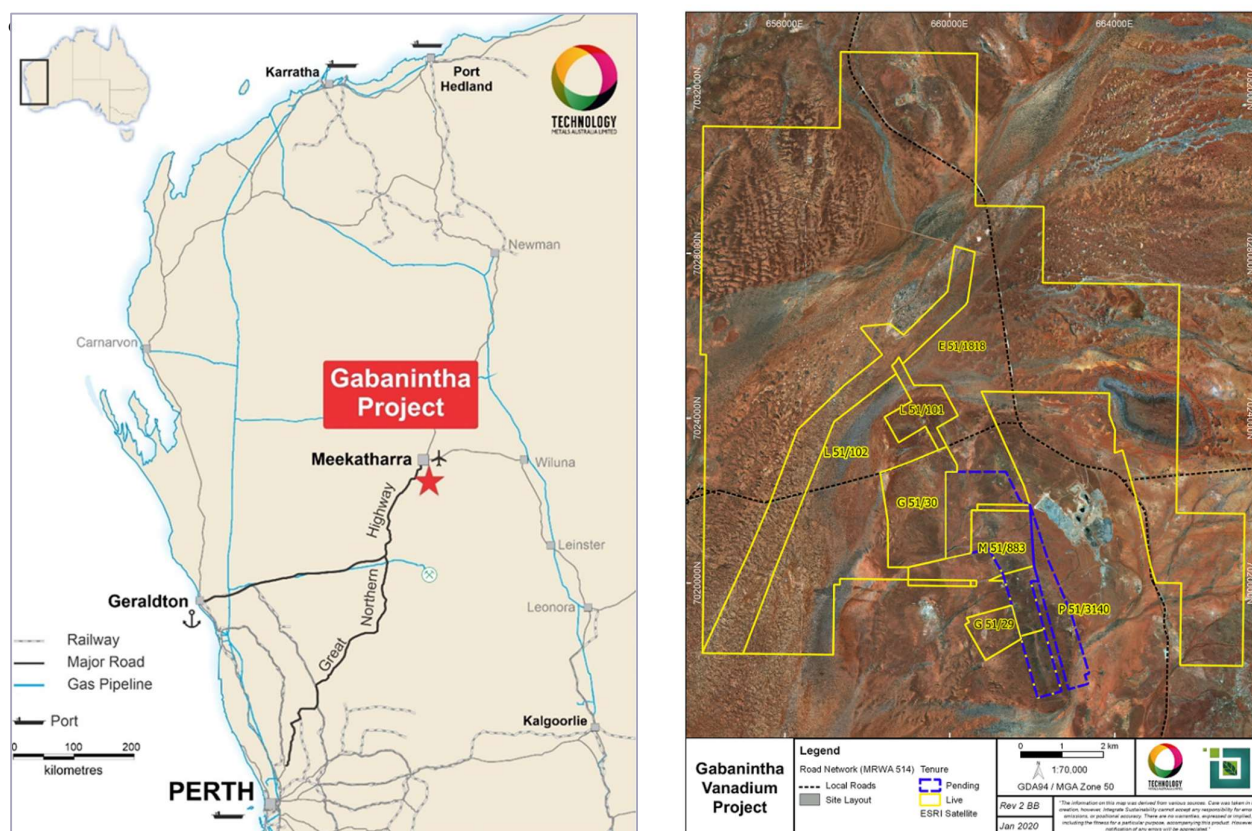
Ian Prentice  
**Managing Director**  
**Technology Metals Australia Limited**

- 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 has been 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  $V_2O_5$  flake product to both the steel market and the emerging vanadium redox battery (VRFB) market.

The Project consists of eleven granted tenements and three applications (including two Mining Leases) divided between the Northern Block of Tenements (12 tenements) and the Southern Tenement (2 tenements). Vanadium mineralisation is hosted by a north west – south east trending layered mafic igneous unit with a distinct magnetic signature. A key differentiation between Gabanintha and a number of other vanadium 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.



**Figure 2:** GVP Location and Tenure

Data from the Company's 2017 and 2018 drilling programs including 111 RC holes and 53 HQ and PQ diamond holes 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 confirms the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

In August 2019 the Company announced the results of a DFS focused on the Northern Block of tenements, confirming the Gabanintha Vanadium Project as a high value, long life, low cost technically robust Project at what would be the World's largest primary vanadium production profile capable of producing very high purity  $V_2O_5$ .

**Table 2:** Global Mineral Resource estimate for the Gabanintha Vanadium Project as at 27 March 2019

Material Type	Classification	Tonnage (Mt)	V <sub>2</sub> O <sub>5</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	TiO <sub>2</sub> %	LOI%	P%	S%
Massive Magnetite	<b>Measured (North)</b>	<b>1.2</b>	<b>1.0</b>	<b>44.7</b>	<b>6.2</b>	<b>10.4</b>	<b>11.4</b>	<b>0.0</b>	<b>0.009</b>	<b>0.2</b>
	<b>Indicated (North)</b>	<b>18.5</b>	<b>1.1</b>	<b>49.1</b>	<b>5.2</b>	<b>5.8</b>	<b>12.9</b>	<b>-0.1</b>	<b>0.007</b>	<b>0.2</b>
	Inferred (North)	41	1.1	47.7	5.6	7.1	12.6	0.3	0.008	0.2
	Inferred (South)	10.4	1.1	49.1	4.9	5.9	12.6	-0.4	0.004	0.3
	<b>Total Inferred</b>	<b>51.5</b>	<b>1.1</b>	<b>48.0</b>	<b>5.5</b>	<b>6.9</b>	<b>12.6</b>	<b>0.1</b>	<b>0.007</b>	<b>0.2</b>
	<b>Massive Global</b>	<b>71.2</b>	<b>1.1</b>	<b>48.2</b>	<b>5.4</b>	<b>6.7</b>	<b>12.7</b>	<b>0.1</b>	<b>0.007</b>	<b>0.2</b>
Disseminated / Banded Magnetite	<b>Indicated (North)</b>	<b>10.3</b>	<b>0.6</b>	<b>28.6</b>	<b>13.1</b>	<b>25.5</b>	<b>7.5</b>	<b>3.0</b>	<b>0.030</b>	<b>0.2</b>
	Inferred (North)	38.5	0.5	27.1	12.7	27.4	6.9	3.3	0.027	0.2
	Inferred (South)	11.1	0.6	30.2	11.9	23.4	7.7	2.4	0.012	0.4
	<b>Total Inferred</b>	<b>49.6</b>	<b>0.6</b>	<b>27.8</b>	<b>12.5</b>	<b>26.5</b>	<b>7.1</b>	<b>3.1</b>	<b>0.024</b>	<b>0.2</b>
	<b>Diss / Band Global</b>	<b>59.9</b>	<b>0.6</b>	<b>27.9</b>	<b>12.6</b>	<b>26.4</b>	<b>7.2</b>	<b>3.1</b>	<b>0.025</b>	<b>0.2</b>
<b>Combined</b>	<b>Measured + Indicated + Inferred</b>	<b>131</b>	<b>0.9</b>	<b>39.0</b>	<b>8.7</b>	<b>15.7</b>	<b>10.1</b>	<b>1.4</b>	<b>0.015</b>	<b>0.2</b>

\* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V<sub>2</sub>O<sub>5</sub> lower cut-off grade for the basal massive magnetite zone and using a nominal 0.4% V<sub>2</sub>O<sub>5</sub> lower cut-off grade 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

Data from the global Mineral Resource and the recently completed DFS on the GVP were used by independent consultants CSA Global to generate a Proven and Probable Ore Reserve estimate based on the Measured and Indicated Mineral Resource of 30.1 Mt at 0.9% V<sub>2</sub>O<sub>5</sub> located within the Northern Block of tenements at Gabanintha.

**Table 3:** Ore Reserve Estimate as at July 2019

Reserve Category	Tonnes (Mt)	Grade V <sub>2</sub> O <sub>5</sub> %	Contained V <sub>2</sub> O <sub>5</sub> Tonnes (Mt)
Proven	1.1	0.96	0.01
Probable	28.5	0.88	0.25
<b>Total</b>	<b>29.6</b>	<b>0.88</b>	<b>0.26</b>

- Note: Includes allowance for mining recovery (98% for massive magnetite ore and 95% for banded and disseminated ore) and mining dilution applied as a 1 metre dilution skin; resulting in a North Pit dilution for massive magnetite ore of 13% at 0.45% V<sub>2</sub>O<sub>5</sub>, and North Pit dilution for banded and disseminated ore of 29% at 0.0% V<sub>2</sub>O<sub>5</sub>; a Central Pit dilution for massive magnetite ore of 10% at 0.46% V<sub>2</sub>O<sub>5</sub>, and Central Pit dilution for banded and disseminated ore of 20% at 0.0% V<sub>2</sub>O<sub>5</sub>.)
- Rounding errors may occur

Capital Structure	
Fully Paid Ordinary Shares on Issue	87.554m
Unquoted Options (\$0.35 – 12/01/21 expiry)	2.75m
Quoted Options (\$0.40 – 24/05/20 expiry)	14.889m
Unquoted Options (\$0.40 – 24/05/20 expiry)	3.258m

### **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 it has a reasonable basis for its forward-looking statements; 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 Managing 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 Grant Louw. Mr Louw is a Principal Consultant with CSA Global and a Member of the Australian Institute of Geoscientists. Mr Louw 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 Louw 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 Mr Brett Morgan and reviewed by Mr Damian Connelly, both employees of METS Engineering Group Pty Ltd. Mr Connelly takes overall responsibility for the Report as Competent Person. Mr Connelly 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 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'. The Competent Person, 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 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

Technology Metals Australia Limited

### ACN

612 531 389

### Quarter ended ("current quarter")

31 December 2019

### Consolidated statement of cash flows

Current Quarter  
(Dec 2019)  
\$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

(1,006)

(3,857)

(b) development

-

-

(c) production

-

-

(d) staff costs

(66)

(143)

(e) administration and corporate costs

(354)

(513)

1.3 Dividends received (see note 3)

-

-

1.4 Interest received

-

-

1.5 Interest and other costs of finance paid

-

(1)

1.6 Income taxes paid

-

-

1.7 Research and development refunds

-

-

1.8 Other: R&D Refund

2,769

2,769

BAS

159

458

**1.9 Net cash from / (used in) operating activities**

**1,502**

**(1,287)**

#### 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

-

-

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

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)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>-</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	1,417
3.6	Repayment of borrowings	(1,417)	(1,417)
3.7	Transaction costs related to loans and borrowings	(28)	(28)
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>(1,445)</b>	<b>(28)</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	467	1,839
4.2	Net cash from / (used in) operating activities (item 1.9 above)	1,502	(1,287)
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)	(1,445)	(28)
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>524</b>	<b>524</b>



5. <b>Reconciliation of cash and cash equivalents</b> 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	524	467
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>524</b>	<b>467</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 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 transactions included in items 6.1 and 6.2

**Current quarter  
\$A'000**

73

-

Payment of director's fees.

**7. Payments to related entities of the entity and their associates**

- 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

**Current quarter  
\$A'000**

22

-

The Company engages Cicero Corporate Services Pty Ltd, which Mr Sonu Cheema is a director of, for administrative, rent and company secretarial services.

**8. Financing facilities available**

*Add notes as necessary for an understanding of the position*

- 8.1 Loan facilities
- 8.2 Credit standby arrangements
- 8.3 Other (please specify)

**Total facility amount  
at quarter end  
\$A'000**

**Amount drawn at  
quarter end  
\$A'000**

-

-

-

-

-

-


- 8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after month end, include details of those facilities as well.

<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	240
9.2 Development	-
9.3 Production	-
9.4 Staff costs	70
9.5 Administration and corporate costs	205
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows</b>	<b>515</b>

<b>10. Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
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	G51/29 GVP L51/102 GVP	Direct Direct	0% 0%	100% 100%

### 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.

Sign here: .....  
  
 Director and Company Secretary

Date: 31 January 2020

Print name: Sonu Cheema

### Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter 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 quarterly 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.