



TECHNOLOGY
METALS AUSTRALIA LIMITED

ASX Announcement

1 July 2021

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Directors

Michael Fry:
Chairman

Ian Prentice:
Managing Director

Sonu Cheema:
Director and Company Secretary

Issued Capital

150,178,057 ("TMT") Fully Paid
Ordinary Shares

6,313,167 – Unquoted Options
exercisable at \$0.25 on or before 15
June 2022

12,350,000 – Unquoted Director
and Employee Options at various
exercise prices and expiry dates

2,650,000 – Performance Rights

ASX Code: TMT

FRA Code: TN6



YARRABUBBA DFS ON TRACK IN SUPPORT OF STAGED GABANINTHA DEVELOPMENT STRATEGY

HIGHLIGHTS

- Project defining pilot scale testwork underway in support of the Yarrabubba Project definitive feasibility study.
- Follows excellent metallurgical testwork results that confirmed the opportunity to generate a high grade iron ore – vanadium (>63% Fe, >1.6% V₂O₅) product.
- RC drilling to infill and extend the Yarrabubba resource completed successfully with all samples expected to be received in the laboratory by the end of the week.
- Gabanintha Vanadium Project ERD approvals advancing well following constructive feedback from the EPA.
- Discussions progressing well with end users of Yarrabubba products and potential funders / development partners.
- Extension of term agreed on binding vanadium offtake agreement with CNMC (Ningxia) Orient Group Co Ltd.
- The vanadium price has been strengthening as global economies progressively emerge from COVID-19.

Technology Metals Australia Limited (ASX: **TMT**) ("**Technology Metals**" or the "**Company**") is pleased to provide an update on the development progress on its Yarrabubba Iron-Vanadium Project ("**Yarrabubba**") and Gabanintha Vanadium Project ("**GVP**"). The Company is progressing a definitive feasibility study ("**DFS**") on Yarrabubba under its strategy to progress this significant stand alone high grade, high purity iron ore project to provide an opportunity to implement the cost effective staged development of the Tier 1 high grade, low cost, large scale, long life GVP.

Yarrabubba is expected to produce around 1.5 Mtpa of high grade, high purity iron ore at >63% Fe and >1.6% V₂O₅ at a high overall mass recovery of ~50% as well as a high value titanium by-product from the non-magnetic tailings stream.

Managing Director Ian Prentice commented: "The TMT team is continuing to make outstanding progress on the Yarrabubba DFS as part of the staged development strategy for delivery of the globally significant, Tier 1 GVP. Yarrabubba's product streams of premium iron ore, with vanadium credits, and titanium by-product are all highly sought and experiencing very positive pricing and strong near to mid term outlooks, boding well for a very strong economic outcome".

The Yarrabubba Iron-Vanadium Project (“**Yarrabubba**”), on granted Mining Lease M51/884 about 14km south east of the Gabanintha Vanadium Project (“**GVP**”), hosts an Indicated and Inferred Mineral Resource estimate (“**MRE**”) of 27.7Mt at 38.7% Fe and 0.9% V₂O₅ including high grade massive mineralisation of 14.4Mt at 48.1% Fe and 1.1% V₂O₅ (ASX Announcement 1 July 2020). The Indicated Mineral Resource component of 9.6Mt at 45.3% Fe and 1.0% V₂O₅ consists of only fresh mineralisation which commences from 10 to 15m below surface. Yarrabubba hosts a Maiden Probable Ore Reserve estimate of 9.4Mt at 45.3% Fe and 0.97% V₂O₅, consisting of only fresh mineralisation and a large proportion of the high grade massive magnetite unit (ASX Announcement 16 September 2020).

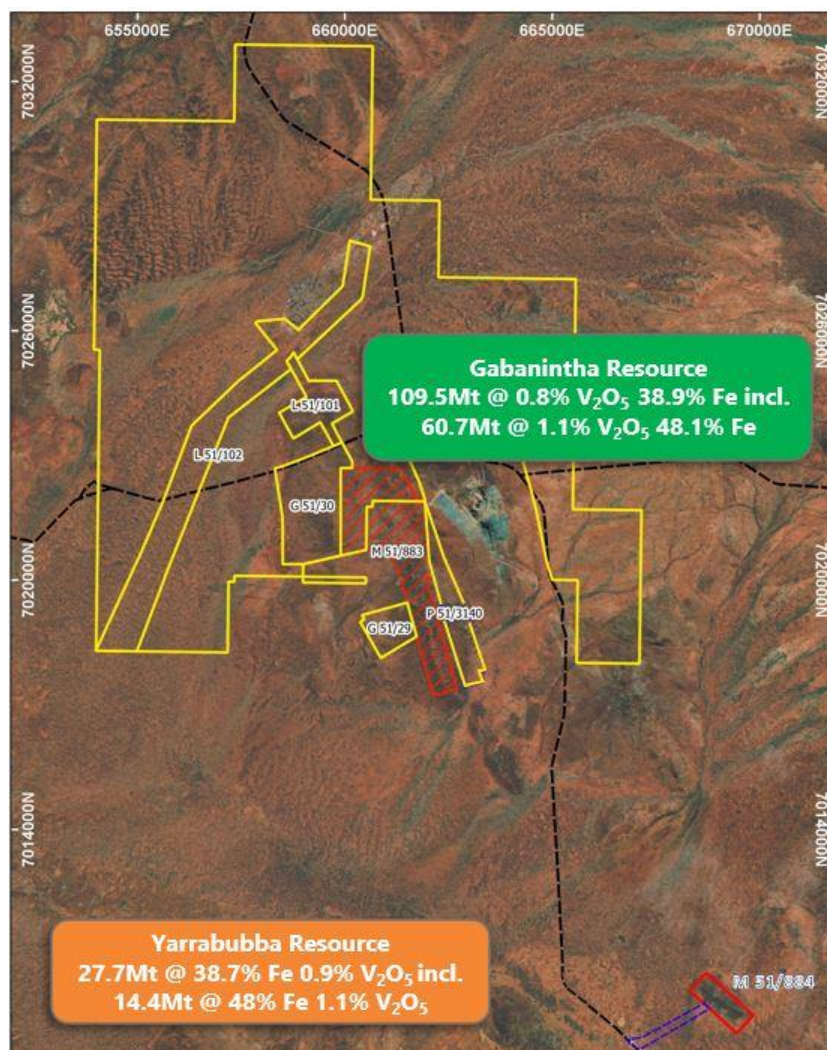


Figure 1: Project Location – Gabanintha Vanadium Project and Yarrabubba Iron-Vanadium Project

Laboratory scale testwork has identified the opportunity to produce outstanding high grade, high purity iron (+vanadium) concentrates across all of the mineralised units at Yarrabubba through a conventional crushing, milling and (magnetic) beneficiation (“**CMB**”) processing circuit. This work has indicated that Yarrabubba will produce around **1.5 Mtpa of iron (+vanadium) concentrates at >63% Fe and >1.6% V₂O₅ at a coarse 75 micron grind size**, with a high overall mass recovery of ~50%. This testwork has also identified the scope to generate a high value titanium by-product from the non-magnetic tailings stream (ASX Announcement 13 April 2021).

The key geometallurgical characteristics of the Yarrabubba ore of high in-situ iron grades, high mass recoveries and a shallow oxidation profile differentiate this project from most magnetite deposits and enable a simpler (low risk) CMB flowsheet to deliver a very high quality final iron (+vanadium) product.

Pilot Scale Metallurgical Testwork Program

Metallurgical testwork has now progressed to the project defining pilot scale stage, utilising bulk samples generated from the diamond drilling campaign completed in early 2021. The initial stages of this program involve a comprehensive program of Davis Tube Recovery (“**DTR**”) testwork throughout the Yarrabubba orebody; with the results from this work (mass recoveries, Fe grades and recoveries, V₂O₅ grades and recoveries) to inform an updated resource model as well as assist in variability assessment and selection of final representative bulk samples for pilot scale processing.

The pilot scale testwork will be based on three representative 1 to 2 tonne composite samples from the north, central and south portions of the Yarrabubba orebody. This program is designed to confirm that the process flowsheet is fit for purpose at larger scale as well as generate bulk samples of high grade, high purity iron (+vanadium) concentrate for final stages of customer engagement.

The non magnetic tailings from the processed representative composite samples will be subject to pilot scale testwork based on the proposed ilmenite recovery circuit, expected to consist of standard gravity separation via spirals, with scope for sulphide flotation and final magnetic separation, to generate a titanium product expected to be consistent with the indicative Yarrabubba Ilmenite Product (YIP1) specifications (ASX Announcement 13 April 2021).

RC Drilling Program

The Yarrabubba resource infill and extension RC drilling program, which commenced in mid June following a further delay due to rain, was completed successfully in late June, with all samples expected to be received in the laboratory by the end of this week. This program is designed, in conjunction with the previously completed comprehensive diamond drilling program, to convert inferred mineral resources to indicated mineral resource category as well as expand the overall mineral resource. Due to workstream backlogs experienced in Western Australian mineral laboratories as a result of increased exploration activity and COVID-19 restrictions, final results from this program are expected by mid August.

Work on the Yarrabubba resource estimation update will commence prior to the receipt of the RC assays, with an updated Yarrabubba MRE expected towards the end of the current quarter. The new Yarrabubba MRE will be used to update the open pit mining model to generate a revised open pit reserve and provide a detailed mining schedule / cost model to be incorporated in to the Yarrabubba Definitive Feasibility Study (“**DFS**”) processing schedule and financial model.

The RC drilling program also included drilling to inform the necessary dewatering parameters for the Yarrabubba open pit development. Data from this work is being compiled and assessed by the Company’s hydrogeological consultants.

Yarrabubba Definitive Feasibility Study Status

The DFS in support of the Yarrabubba development is progressing well, with metallurgical testwork advancing to the pilot stage, all drilling completed in support of the mineral resource / reserve upgrade completed, environmental studies proceeding in line with schedule and customer engagement making good progress. Work streams being performed by third parties, such as laboratories, however are experiencing some delays due to extreme levels of activity across the mining and exploration industry and COVID-19 restrictions. These third party delays are starting to have an impact on data flow and have resulted in the timing of some of the DFS workstreams being impacted. Irrespective of these impacts the Company remains focused on the delivery of the Yarrabubba DFS during Q4 this year.

Market Engagement – Yarrabubba

Technology Metals is progressing engagement with a broad range of counterparties in regards to product offtake, project development and funding, and technical collaboration. Yarrabubba is a major breakthrough for the Company, providing two product streams – the high grade, high purity iron (+vanadium) concentrate and the titanium by-product – and delivering potential for a low risk, lower entry cost project that is complementary to, and expected to reduce funding and implementation risk for, Gabanintha.

Engagement with Sinosteel is progressing with regard to potential for long term offtake of the high grade, high purity iron (+vanadium) concentrate, supported by the high level of technical collaboration that has taken place between the Company's technical team and Sinosteel Equipment & Engineering Co., Ltd ("MECC"). Early stage discussions have also been held with other potential end users that have approached the Company with a high level of interest in the high grade, high purity iron (+vanadium) concentrate product.

The Company is also progressing opportunities with potential end-users of the YIP1 titanium by-product, as assessed by TZMI, a global, independent consulting and publishing company with extensive experience in the mineral sands, titanium dioxide and coatings industries. TZMI's assessment of the YIP1 ilmenite product indicates that China would be the preferential market for the product, with a range of potential end-users demonstrating a high level of interest in the product. A representative sample of YIP1 is expected to be provided to a range of prospective customers in the current quarter to facilitate the commencement of discussions regarding product offtake.

Gabanintha Environmental Review Document

The Company referred the GVP to the WA Environmental Protection Authority ("**EPA**") in November 2018, with the EPA determining that the GVP will undergo a formal environmental impact assessment with no public comment period. A range of environmental field surveys were completed between 2017 and 2020 designed to address the key environmental factors in relation to the development of the GVP. The compilation of all of the data collected and preparation of a final draft Environmental Review Document ("**ERD**") was completed early this year, with a final draft of the ERD submitted to the EPA in early March 2021.

Feedback from the EPA and other decision-making authorities ("**DMA's**") on the final draft ERD has been received, with the Company and its environmental consultants having completed a review of the feedback and participated in a constructive consultation process with both the EPA and the key DMA's. Based on the feedback received and the consultation process, an updated ERD addressing the matters raised is being prepared and is to be submitted for formal review in the current quarter.

Vanadium Pentoxide Offtake

The Company entered into a binding vanadium pentoxide Offtake Agreement ("**Agreement**") with CNMC (Ningxia) Orient Group Company Ltd. ("**CNMNC**") over vanadium production from GVP in April 2020 (ASX Announcement 27 April 2020). CNMNC's vanadium alloy production business, CNMC Ningxia Orient Group Special Materials Co., Ltd., produces vanadium nitrogen alloys ("**VN**") and ferrovanadium ("**FeV**") for use in the Chinese steel industry.

The Agreement covers a minimum annual quantity of V₂O₅ to be purchased of 2,000 Tpa on a take or pay basis with an agreed pricing structure and an initial three year term, with an option to extend for a further three years. Under the Agreement a range of conditions precedent were to be either satisfied or waived by TMT by 30 June 2021.

CNMNC and the Company have agreed to a 12 month extension on the binding vanadium pentoxide Agreement, such that the satisfaction or waiver of the conditions precedent has now been extended to at least 30 June 2022.

Vanadium Market

The vanadium market has been strengthening consistently over the course of 2021 as global economies have been progressively emerging from COVID-19 restrictions and stimulus spending has begun to drive increased demand for vanadium.

Figure 2 shows the relative vanadium pentoxide price performance over the past 18 month period, covering the beginnings of the COVID-19 pandemic and the gradual emergence from the pandemic induced economic downturns.

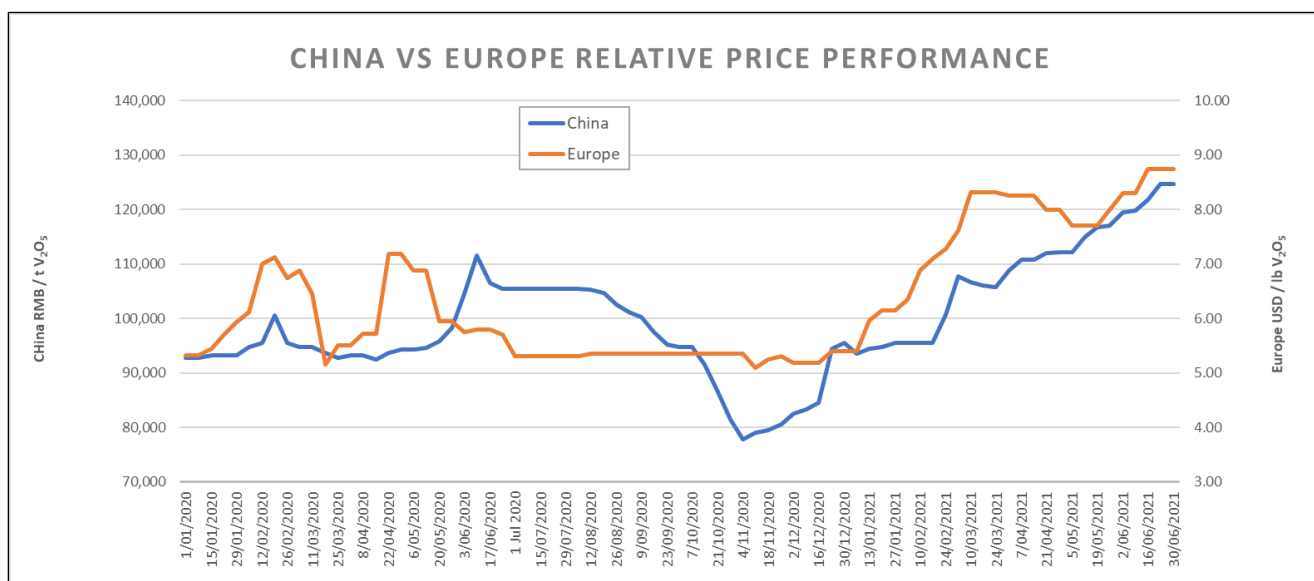


Figure 2: Vanadium Pentoxide Price – China vs Europe – 1 January 2020 to 30 June 2021

The European V₂O₅ price was relatively stable in the low to mid US\$5/lb range for the second half of calendar 2020, however it has shown consistent improvement in the first half of calendar year 2021, finishing the period at US\$8.75/lb. The Chinese V₂O₅ price has mirrored this improvement, reflecting a balancing of the supply – demand fundamentals of the vanadium market.

Chinese domestic demand has consistently exceeded domestic supply, driven by the continued growth in steel production and the intensity of use of vanadium in Chinese finished steel products, particularly rebar, and rapidly increasing consumption in vanadium redox flow batteries. Supply was supplemented with imports in over the course of 2020 and in to early 2021, however these imports declined as ex-China economies began to emerge from the COVID-19 pandemic.

This set of circumstances has resulted in the consistent improvement in global vanadium prices (see Figure 2), which is expected to continue for some time reflecting the limited potential for supply side response without the development of new vanadium mining projects, such as Yarrabubba and GVP.

The Company is ideally placed to respond to this demand driven market, with a DFS completed on the Tier 1 high grade, low cost, large scale, long life GVP and a DFS nearing completion on the high grade, high purity iron (+vanadium) concentrate plus titanium by-product Yarrabubba.

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 primary 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. 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.

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

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

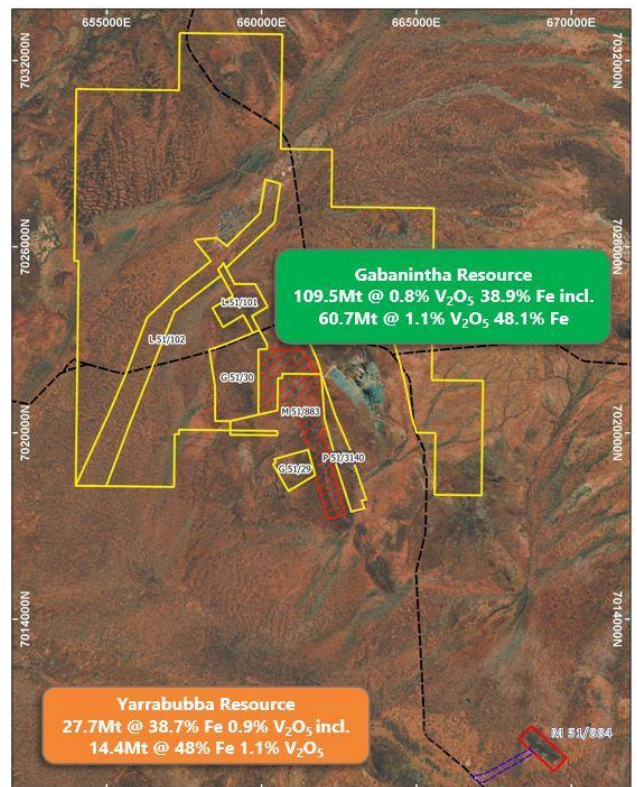
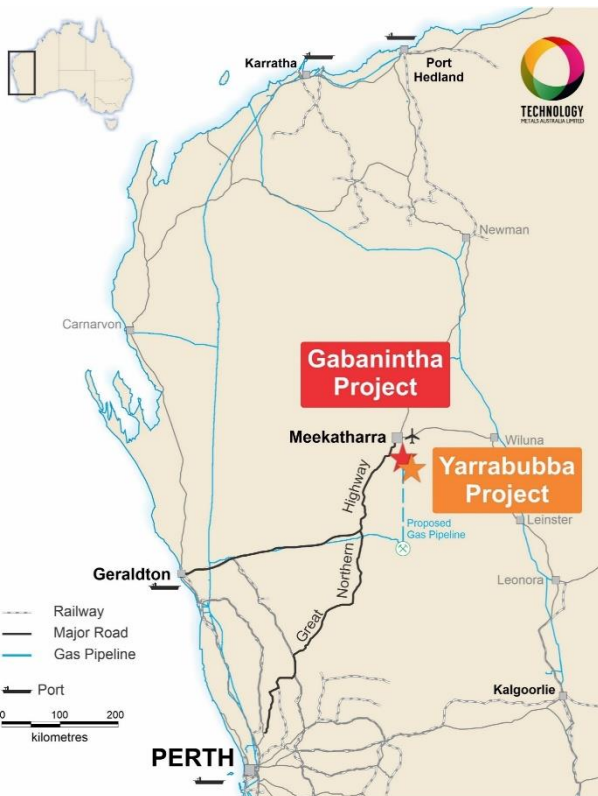
Ian Prentice
Managing Director
Technology Metals Australia Limited

- 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 (VRB) market.

The Project consists of eight granted tenements and two applications divided between the Gabanintha Vanadium Project (8 tenements) and the Yarrabubba Project (2 tenements). Vanadium mineralisation is hosted by a north west –south east trending layered mafic igneous unit with a distinct magnetic signature. A key difference 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.



Project Locations 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 31 RC holes and 4 PQ sized diamond holes completed in late 2018 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.

Global Mineral Resource estimate for the Gabanintha Vanadium Project as at 29 June 2020.

Material Type	Classification	Mt	V ₂ O ₅ %	Fe%	Al ₂ O ₃ %	SiO ₂ %	TiO ₂ %	LOI%	P%	S%
Massive Magnetite	Measured (North)	1.2	1	44.7	6.2	10.4	11.4	0	0.009	0.2
	Indicated (North)	18.5	1.1	49.1	5.2	5.8	12.9	-0.1	0.007	0.2
	Indicated (South)	7.3	1.1	49.2	5.1	5.8	12.6	-0.6	0.004	0.3
	Total Indicated	25.8	1.1	49.1	5.1	5.8	12.8	-0.3	0.007	0.2
	Inferred (North)	41	1.1	47.7	5.6	7.1	12.6	0.3	0.008	0.2
	Inferred (South)	7.1	1.1	46.9	5.6	7.4	12.1	0.5	0.005	0.3
	Total Inferred	48.1	1.1	47.6	5.6	7.2	12.5	0.3	0.008	0.2
	Massive Global	75.1	1.1	48.1	5.5	6.8	12.6	0.1	0.007	0.2
Disseminated / Banded Magnetite	Indicated (North)	10.3	0.6	28.6	13.1	25.5	7.5	3	0.03	0.2
	Indicated (South)	2.3	0.7	33.1	9.5	20.6	8.5	2.3	0.014	0.3
	Total Indicated	12.6	0.6	29.5	12.5	24.6	7.7	2.8	0.027	0.2
	Inferred (North)	38.5	0.5	27.1	12.7	27.4	6.9	3.3	0.027	0.2
	Inferred (South)	11	0.6	27.7	13	25.9	7	2.7	0.015	0.3
	Total Inferred	49.5	0.5	27.2	12.8	27.1	6.9	3.2	0.024	0.2
Diss / Band Global	62.1	0.6	27.7	12.7	26.6	7.1	3.1	0.025	0.2	
Combined	Global Combined	137.2	0.9	38.9	8.7	15.7	10.1	1.5	0.015	0.2

*Note: The Mineral Resources were estimated within constraining wireframe solids using a nominal 0.9% V₂O₅% lower cut-off grade for the massive magnetite zones and using a nominal 0.4% V₂O₅% lower cut-off grade for the banded and disseminated mineralisation zones. The Mineral Resources are 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 estimate and the 2019 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 39.6 Mt at 0.9% V₂O₅ located within the Northern Block of tenements and the Southern Tenement at Gabanintha.

Ore Reserve Estimate as at 15 September 2020

Reserve Category	Tonnes (Mt)	Grade V ₂ O ₅ %	Contained V ₂ O ₅ Tonnes (Mt)
Proven	1.1	0.96	0.01
Probable	37.9	0.90	0.34
Total	39.0	0.90	0.26

- 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% V₂O₅, and North Pit dilution for banded and disseminated ore of 29% at 0.0% V₂O₅; a Central Pit dilution for massive magnetite ore of 10% at 0.46% V₂O₅, and Central Pit dilution for banded and disseminated ore of 20% at 0.0% V₂O₅; a Southern Pit dilution for massive magnetite ore of 12% at 0.49% V₂O₅, and Southern Pit dilution for banded and disseminated ore of 15% at 0.21% V₂O₅
- Rounding errors may occur

Capital Structure	
Fully Paid Ordinary Shares on Issue	150.1m
Unquoted Options (\$0.25 – 15/06/22 expiry)	6.31m
Unquoted Options (\$0.20 – 10/05/23 expiry) ¹	8.0m
Unquoted Options (\$0.50 – 01/01/24 expiry) ²	4.35m
Class B Performance Rights ³	1.325m
Class C Performance Rights ⁴	1.325m

- Director and employee options – 3.875m vested on grant of the mining licences, 4.125 million vest on Gabanintha FID
- Employee options – 3.925million vest and subject to the Company making a final investment decision (FID) for the Yarrabubba Project prior to 30 October 2023 and 0.425 million vest subject to the Company achieving first commercial production from the Yarrabubba Project prior to 30 October 2023.
- Each Class B Performance Right is a right to receive one fully paid ordinary share in TMT, subject to the terms of the employee incentive scheme and subject to the Company making a final investment decision (FID) for the Yarrabubba Project prior to 30 October 2023.
- Each Class C Performance Right is a right to receive one fully paid ordinary share in TMT, subject to the terms of the employee incentive scheme and subject to the Company achieving first commercial production from the Yarrabubba Project prior to 30 October 2023.

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 John McDougall. Mr McDougall is the Company's Exploration Manager and a member of the Australian Institute of Geoscientists. Mr McDougall 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 McDougall 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 Aaron Meakin is a Principal Consultant of CSA Global Pty Ltd and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Aaron Meakin 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 Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves ("**JORC Code**"). Mr Aaron Meakin consent to the disclosure of the information in this announcement 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 an employee of CSA Global Pty Ltd. Mr Grosso takes overall responsibility for the Report as Competent Person. Mr Grosso is a Member 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, Daniel Grosso 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 Yarrabubba project is based on and fairly represents, information and supporting documentation compiled by Mr Brett Morgan of METS Engineering Group Pty Ltd. Mr Morgan is a Member 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, Brett Morgan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.