

VANADIUM SAFER. LONGER. GREENER. STRONGER

NEW WORLD METALS CONFERENCE SEPTEMBER 2023

ASX:TMT

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Competent Person's 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 Matthew Clark. Mr Clark is a Senior Resource Geologist of CSA Global Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy. Mr Clark 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 Clark consents 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 Ross Cheyne of Orelogy who takes overall responsibility for the Report as Competent Person. Mr Cheyne 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, Ross Cheyne 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 Murchison Technology Metals project is based on and fairly represents, information and supporting documentation compiled by Mr Brett Morgan, a full-time employee of Technology Metals Australia. 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.

Pursuant to LR-5-19-1 production target and financial forecast: Refer ASX Release - 21 August 2019 for full details of the DFS: Financial Metrics at long term historical average price of US\$8.78/lb V2O5.

Pursuant to LR-5-19-2 production target and financial forecast: The material assumptions as per the ASX release on 21 August 2019 continue to apply and have not materially changed.

Refer to ASX Releases on 5 August 2022 for full details of global Murchison Technology Metals Project Ore Reserve, and Yarrabubba Vanadium and Ilmenite Ore Reserves.

A COMPELLING INVESTMENT



Delivering Australia's critical minerals strategy to enable the clean energy transition



Tier 1 Project with Onsite Downstream Processing

Vanadium is a critical mineral in the EU, USA, India, Japan and Australia Outstanding geology enabling proven integrated processing in Australia



Strong Experienced Team

High-performing professionals and contractors who have delivered major projects

Training and development of skilled workforce in battery technology



Building International Partnerships

Backing from RCF VII provides long-term project development support

Collaboration with top industry players: Tata Steel, LE System, Delectrik



Meaningful ESG Performance

Commitment to decarbonisation through abatement and energy efficiency strategies

Careful management of the environment and water stewardship



Enabling Infrastructure

Development of the Gabanintha Gas Pipeline that will support the region

Contribution to road upgrade to ensure operational efficiency



Collaboration with Traditional Owners

Working constructively with the Yugunga-Nya People

Ensure shared benefits and socioeconomic opportunities

CORPORATE OVERVIEW



Capital Structure

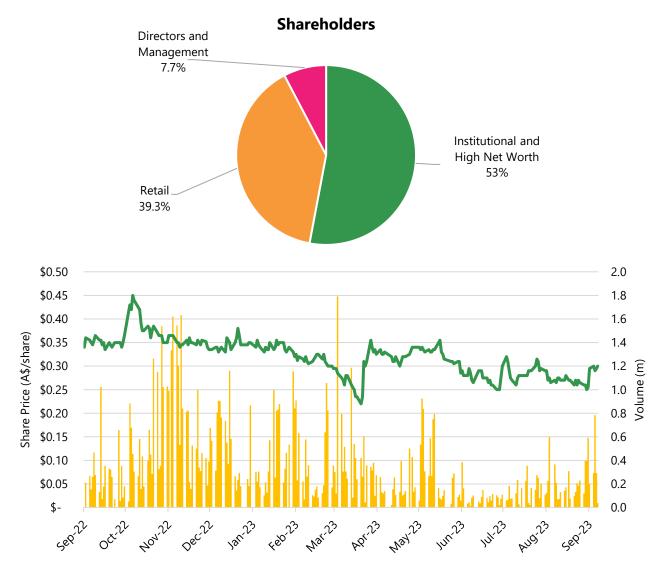
| Key Metrics | |
|---|-----------------------------|
| ASX Code | TMT |
| Cash | \$16.5m (at 30 June 2023) |
| Market Cap | \$75m (at 8 September 2023) |
| Shares on Issue | 254.3m |
| Unlisted Options ¹ (Various exercise) | 10.8m |
| Performance Rights ² | 6.2m |

¹ Director and employee options that vest on project development hurdles

² 51% vest on MTMP FID, 49% vest on first production

| Holder Name | Holding (%) |
|---|-------------|
| Resource Capital Fund VII L.P. | 18.2% |
| BNP Paribas Nominees | 8.7% |
| Standard Pastoral Company | 5.5% |
| TOTAL TOP 20 | 59.1% |
| Board and Management holdings (fully diluted) | 7.6% |

^{*}Based on issued capital as at 8 September 2023



EXPERIENCED BOARD & MANAGEMENT





Michael Fry **Non-Executive Chairman**

Michael holds a Bachelor of Commerce degree from the University of Western Australia, is a Fellow of the Financial Services Institute of Australasia, and is a past member of the Australian Stock

Michael has extensive corporate and commercial experience, financial and capital market knowledge and a background in corporate treasury management.



Ian Prentice **Managing Director**

lan holds a Bachelor of Science (Geology) from the University of Western Australia and has over 30 years experience in the global mining industry, spanning exploration, development and open cut and underground mining.

lan is a member of the Australasian Institute of Mining and Metallurgy.



Dr. Carmen Letton **Non-Executive Director**

Carmen is a mining engineer and mineral economist with 35 years of global experience in senior leadership roles in operations, business improvement and operational excellence.

Carmen was most recently the Head of Resource Development and Life of Asset Planning (Asset Strategy Development) at Anglo American.



Jo Gaines **Non-Executive Director**

Jo is an experienced leader and strategic policy director, having previously worked at high level of government as the Deputy Chief of Staff to the Premier of Western Australia. She brings extensive experience in stakeholder engagement, including across all levels of government and within the private sector.

Jo holds a Bachelor of Arts from the University of Western Australia, a Post Graduate Diploma in Occupational Health and Safety from Curtin University and is a graduate of the Australian Institute of Company Directors.



David English Chief Operating Officer

David is a mining professional with over 30 years operations and project development experience in the Western Australian resources industry, having delivered Sandfire Resources' DeGrussa Project and IGO Limited's Nova Nickel Project as the Project Manager.

David was GM Operations at the Windimurra Vanadium Project from February 2008 until February 2010 involved in the redevelopment of the project.



Elisha Civil **Chief Financial Officer**

Elisha is a Chartered Accountant with over 20 years' experience in the resources sector including General Manager Finance at Regis Resources, and Group Manager Finance and Tax at Fortescue Metals Group.

Elisha holds an MBA from the University of Western Australia, and a Bachelor of Commerce from Murdoch University.



John McDougall **Exploration Manager**

John holds a Bachelor of Science with Honours (Geology) from the University of Tasmania and has over 20 years experience in mineral exploration, with iron ore, base and precious metals experience.

John has been managing the geological data acquisition at Gabanintha and Yarrabubba since February 2017.



Sonu Cheema **Company Secretary**

Sonu is a Partner at Cicero Group with over 10 years' experience working with public and private companies in Australia and abroad.

Sonu's role includes completion and preparation of management and ASX financial reports, investor relations, initial public offers, mergers and acquisitions, management of capital raising activities and auditor liaison.

TMT VANADIUM SUPPORTING MOVE TO NET ZERO





Vanadium batteries the safer, sustainable option for long duration energy storage

Vital efficiency drivers for renewable energy sources

= CO₂ Savings

Iron - Steel sector one of the largest CO₂ emitters

Adding vanadium reduces steel weight, increases capacity and reduces volume

= CO₂ Savings

THE WORLD'S NEXT PRIMARY VANADIUM MINE



Integrated downstream processing to battery pre-cursor World-leading jurisdiction



Large high-grade resource – 153.7Mt at $0.8\% V_2O_5$ with high vanadium in concentrate grades (up to $1.6\% V_2O_5$)



Shallow weathering provides high yielding fresh ore early in project life delivering lowest quartile costs



Conventional integrated salt roast water leach processing to deliver **downstream battery pre-cursor** with high recoveries



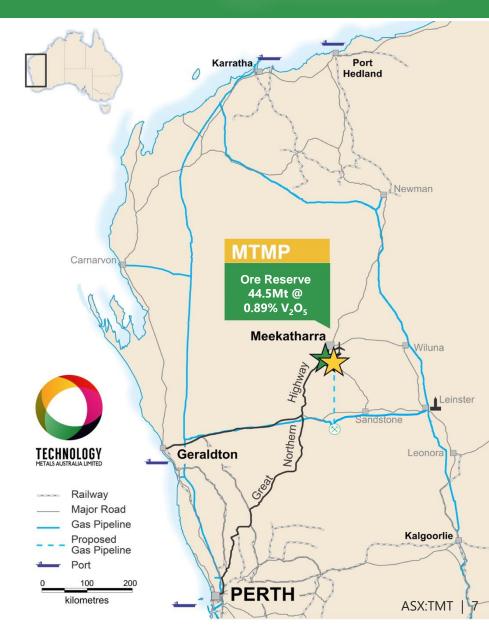
High purity vanadium product (>12,500 tpa) + **ilmenite** by-product provides dual revenue from a well-established market



Financial support from Danish export credit agency EIFO (previously EKF) to deliver a **critical mineral** to the world



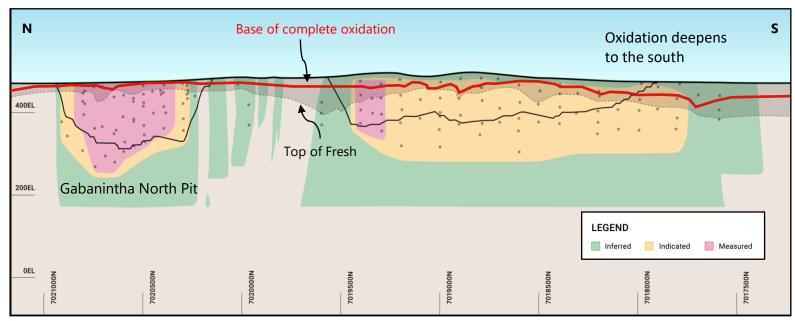
Average annual EBITDA of A\$182m*



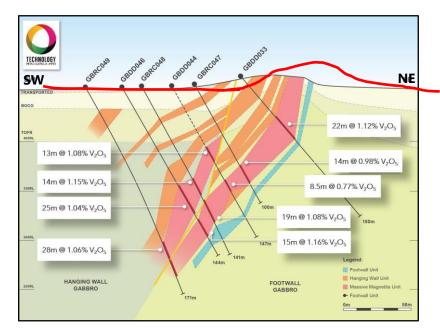
EARLY ACCESS TO HIGH YIELDING ORE



- Outcropping high grade ore traditional open pit ore mining from surface
- Very shallow (<5m) weathering at Yarrabubba and Gabanintha North
- Fresh and transitional ore = high yield from mined ore to magnetic concentrate at coarse grind size
- Use of conventional salt roast water leach downstream processing on site with industry leading recoveries



Gabanintha Long Section



Yarrabubba Cross Section

ILMENITE BY-PRODUCT



Yarrabubba's dual revenue streams enhances the MTMP

- Marketing trip in August with industry leading consultants TZMI confirms strong demand for Yarrabubba product
- China the preferential market given its growth in large-scale sulfate pigment production centres on the eastern seaboard
- Testwork on Yarrabubba tails stream confirmed an ilmenite product containing >47% TiO₂
- Low levels of common deleterious elements delivers an attractive blend feedstock for sulfate pigment producers
- MTMP to produce an average of 100,000 tpa ilmenite during the Yarrabubba operating period



Ilmenite circuit optimisation work. Source: Technology Metals Australia

IMPLEMENTATION OF A TIER 1 PROJECT



Driving the MTMP forward with corporate and project-level activities unlocking long-term value and delivering sustained success

Final Integration Study Construction Implementation Phase Investment **Decision**

Implementation activities include:

- Delivery of the Bankable Financial Model
- Construction readiness planning and scheduling FEED
- Collaborative engagement with Traditional Owners
- Permitting and approvals
- Independent Technical Expert (ITE) Review
- Progression of funding strategy
- Product marketing and customer offtake agreements

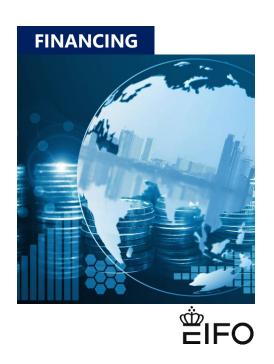
PROJECT DELIVERY ACTIVITIES













Iron Mine Contracting and GR Engineering working with the MTMP team as Integrated Project Team to progress detailed construction planning, identifying cost and schedule reduction opportunities

FLSmidth to deliver pyro-processing technology and major equipment for the concentrator and leach circuit, supported by Danish export credit agency **EIFO**'s potential financial backing of around A\$150 million

LOCKING DOWN KEY INFRASTRUCTURE



Working with our partners to lock down logistical and energy requirements

GAS PIPELINE





Northern Goldfields Interconnect (NGI) pipeline completed July 2023

Early Works Agreement for Gabanintha Gas Pipeline:

- Permitting and approvals
- FEED and procurement

KEY ROADS





Road Access and Maintenance Deed Agreement executed

Covers the key roads:

- Nanine Polelle Rd
- Meekatharra-Sandstone Rd

PORT LOGISTICS





Progressing Port Access and Services Agreement for:

- Export of ilmenite via the Port of Geraldton
- Import of reagents for the processing plant

ENVIRONMENT AND HERITAGE



Our mission to develop and operate a world-class critical minerals project that makes a positive difference to the local community, minimises impacts to the environment and contributes to global decarbonisation



Yugunga-Nya Knowledge Holders undertaking field consultation at the MTMP for preparation of the Cultural Heritage Management Plan. Source: Technology Metals



TMT team undertaking community briefing sessions with the Yugunga-Nya Source: Technology Metals

Our key focus areas are environmental and water stewardship, emissions reduction, cultural and heritage protection. We are:

- Collaborating with our Traditional Owners towards a Cultural Heritage Management Plan and Project Access Agreement
- Liaising with the Environmental Protection Authority (EPA) on advancing permitting and approvals

PROPOSED GREEN VILLAGE AT THE MTMP



Planned installation of roof-mounted solar arrays on all accommodation buildings at the MTMP Village, connected to vanadium battery energy storage, to help reach our decarbonisation goals



QUALITY COMMERCIAL PARTNERSHIPS



Collaborating with key players in the vanadium markets



Source: Technology Metals Australia



Source: Delectrik



Source: Tata Steel Limited

LE SYSTEM CO., Ltd.

- MOU to undertake feasibility study with LE System for production of vanadium electrolyte in Australia
- Maiden batch of electrolyte made from MTMP feedstock

DELECTRIK

- MOU for supply of vanadium products from MTMP to Delectrik in India
- · Supply of vanadium electrolyte in Australia for Delectrik vanadium battery installations

TATA STEEL

- MOU for technical collaboration and supply of vanadium products
- · Opportunities for investment into TMT or MTMP

VERTICAL INTEGRATION: ORE TO ELECTROLYTE



TMT's strategy is to deliver a vertically integrated domestic supply chain



RAW MATERIALS EXTRACTION

Large high-grade resource at the MTMP enabling 25 years of production of vanadium-bearing ore



MATERIALS PROCESSING

Integrated processing on site enabling downstream processing of ore into high-purity battery pre-cursor vanadium pentoxide



ELECTROLYTE PRODUCTION

Electrolyte production facility based in WA to supply vanadium electrolyte to battery specifications



INTEGRATION **INTO BATTERIES**

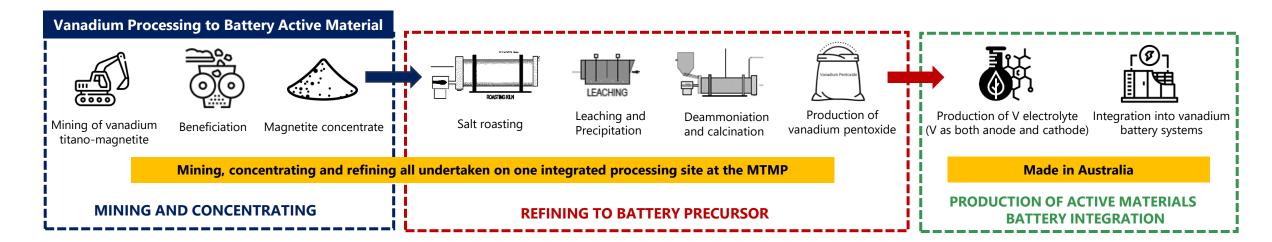
Working with manufacturers to deliver and commission our electrolyte into their batteries

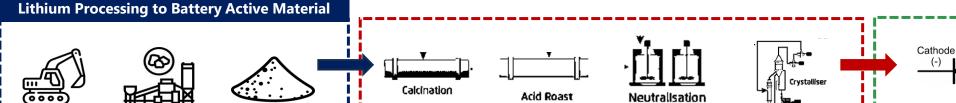
On-site at the MTMP

Increasing downstream value

BATTERY ACTIVE MATERIAL MADE RIGHT HERE IN OZ







Calcination

and milling

Mining of hard rock

spodumene

Beneficiation

Spodumene concentrate

Most Australian lithium mines produce and export spodumene concentrate, which requires further refining to lithium hydroxide or lithium carbonate

MINING AND CONCENTRATING

While Australia is starting to establish midstream capabilities in refining to lithium hydroxide/lithium carbonate, China still accounts for ~89% of global processing capability*

Neutralisation,

evaporation and

causticisation

Acid roast and

leaching

REFINING TO BATTERY PRECURSOR

Production of anode and cathode active material, using graphite, lithium,

Lithium hydroxide

crystallisation

cobalt, nickel, manganese

Anode

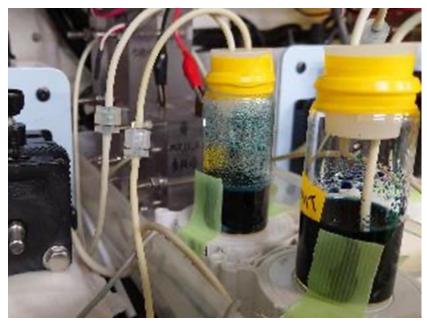
Cell manufacturing

China currently dominates the downstream processing supply chain for active battery materials and cell manufacturing, with market share of 64% and 60% respectively*

PRODUCTION OF ACTIVE MATERIALS BATTERY INTEGRATION

DOWNSTREAM ELECTROLYTE PRODUCTION





Mini-cell tests conducted at LE System's Tsukuba Battery Laboratory Source: LE System

- Vanadium electrolyte produced from MTMP pre-cursor material at LE System's facility in Tokyo
- Testing of MTMP electrolyte confirmed high purity and performance meeting major battery manufacturer specifications





TMT's visit to LE System's electrolyte production facility in Namie, Fukushima Source: Technology Metals Australia

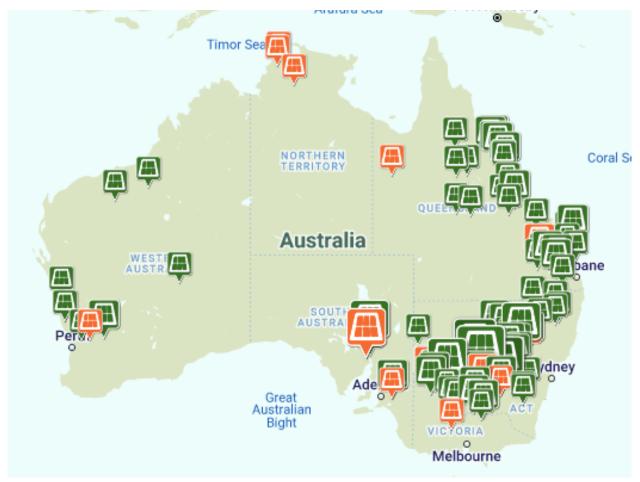
- Electrolyte production technology licensing agreement with LE System to enable TMT's electrolyte production facility in WA
- Proposed electrolyte production facility to have capacity of 166MWh
- Feasibility study ongoing on location of facility, with consideration for proximity to potential end users in Australia

SUPPORTING THE RENEWABLE ENERGY TRANSITION



Australia is considered an "Electrostate" – countries that supply energy transition materials and/or supply renewable energy – Australia does BOTH!

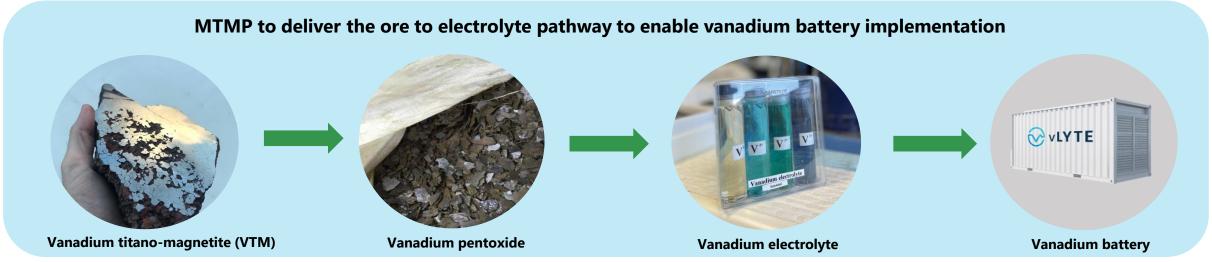
- Mining vanadium and processing to vanadium electrolyte domestically in Australia for use in long-duration Vanadium Batteries can meet the needs of domestic renewable energy (solar and wind farm) projects with a total value of \$23.5 billion, powering 16,416MW
- Vanadium batteries have a broader temperature operation envelope between -20°C to 50°C – good candidate for Australia's northern and inland remote regions
- **Producing vanadium electrolyte** domestically in Australia where vanadium batteries are being installed is more efficient and reduces carbon emissions from transport



VANADIUM – PART OF THE CRITICAL MINERALS STRATEGY

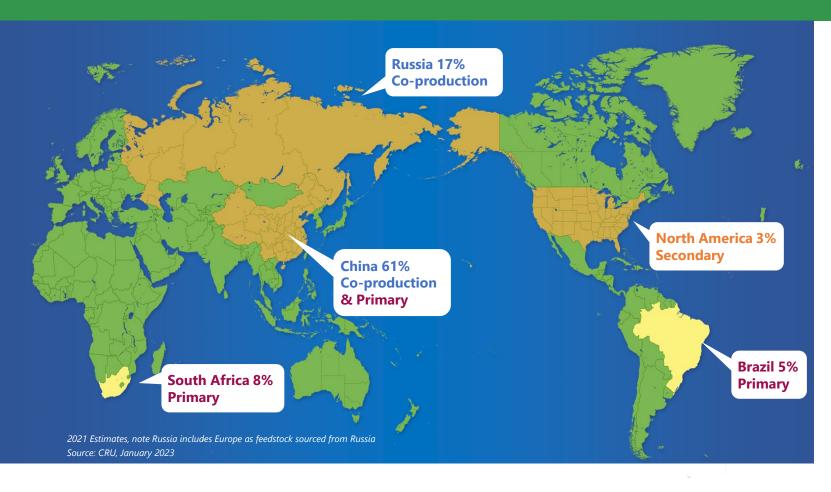


- Federal Government Critical Minerals Strategy 2023-2030 \$500 million earmarked for investment through NAIF for strategicallyaligned projects
- TMT's corporate strategy demonstrates alignment with the Critical Minerals Strategy to be a significant supplier of vanadium and champion downstream production of vanadium electrolyte
- TMT is progressing engagement with Federal Government funding agencies
- Our social licence to operate is paramount to success engagement with Traditional Owners the Yugunga-Nya People is ongoing and positive, with regular discussions on employment and training opportunities, alongside heritage protection and development of Cultural Heritage Management Plan
- Environmental stewardship WA Environmental Protection Authority (EPA) completed site visit to the MTMP



GLOBAL VANADIUM SUPPLY





Customers looking for secure supply

- 1. Co-production from vanadium bearing slag smelted from steel production - ~71% supply
- 2. Primary production from majority vanadium bearing ores - ~17% of supply
- 3. Secondary production from hydrocarbon residues and catalysts - ~12% of supply

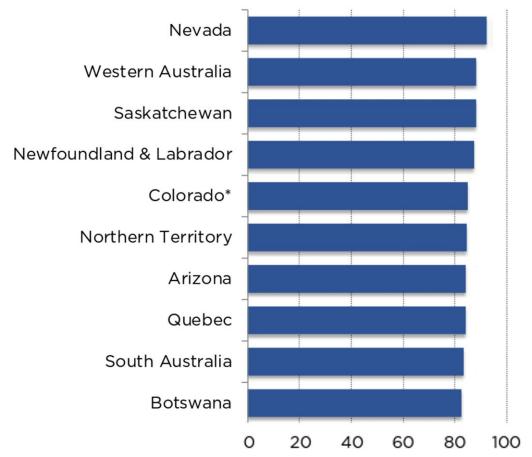
China and Russia dominate supply

Supply disruptions stemming from China could have a potentially large effect on energy security in the West given the concentration of battery material production in China

AN ATTRACTIVE SOURCE OF SUPPLY



Top 10 Jurisdictions for Mining Investment



Source: Fraser Institute, Annual Survey of Mining Companies, 2022.

- Western Australia, the second most attractive mining jurisdiction in the world
- Australia hosts 18% of the world's vanadium resources*
- Alternative sources of new supply are in China, Russia or South Africa, all of which are far less attractive locations for investment

Australia has the potential to serve an important role among allies to secure critical energy metals such as vanadium

Source: CRU, January 2023

^{*}United States Geological Survey and Geoscience Australia, 2017.

WHY VANADIUM BATTERIES?





SAFETY



RELIABLE PERFORMANCE



LONG LIFE



NO DEGRADATION



LOW ENERGY COST



EASY TO EXPAND CAPACITY



SINGLE CHEMICAL ELEMENT



SUSTAINABILITY



Allows the vanadium to be extracted from the electrolyte and redeployed in new vanadium battery installations infinitely.

Prime example of the 'circular economy', where the value of the material is retained and maximised through reuse.

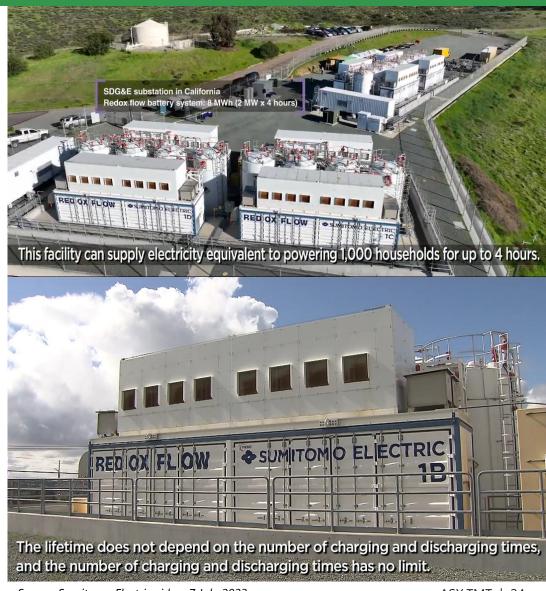
VANADIUM BATTERIES: THE GREEN TRANSFORMATION



- Evaluation of Sumitomo Electric's vanadium battery demonstration project in San Diego, California shows significant results achieved for high operating rate and durability
- Showcased the vanadium battery's ability to handle emergency microgrid operations and maintain high supply and demand of adjustment capabilities
- Project was supported by California Governor's Office of Business and Economic Development (GO-Biz) and delivered in collaboration with San Diego Gas & Electric
- Sumitomo has a total of 36 projects totaling 47MW, 162MWh across six countries

"The Vanadium Battery is the only case where the battery component can be used for 20 years, of all battery systems around the world".

Toshikazu Shibata,
 Manager of Flow Battery System Engineering Department, Sumitomo Electric



VANADIUM BATTERIES FILL THE ENERGY STORAGE GAP



While solar and wind generate very cheap electricity, long duration energy storage is needed to <u>maximise efficiency</u>

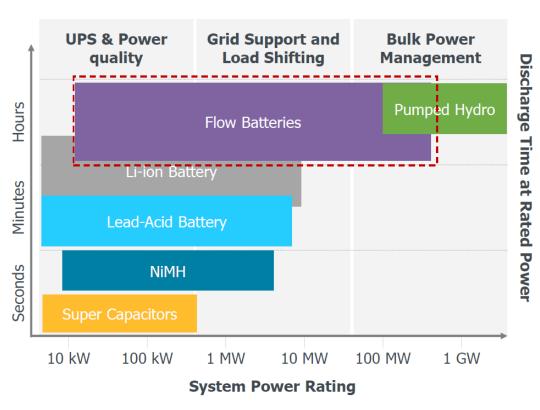
Energy sector is taking note:

"Long duration storage could supplement the high demand peak period covered by the 460MW Eraring battery currently under development and add to the overnight generation availability provided by the Shoalhaven Hydro Scheme"

- Greg Jarvis, Origin Head of Energy Supply and Operations*

"In order for us to really integrate renewables and provide 24/7 green energy, we've got to solve those long duration time periods. Lithium-ion can be unstable in the extreme heat of regional WA...we need to look for something that for us probably won't be lithium-ion, so probably vanadium flow."

- Stephanie Unwin, Horizon Energy Chief Executive Officer^

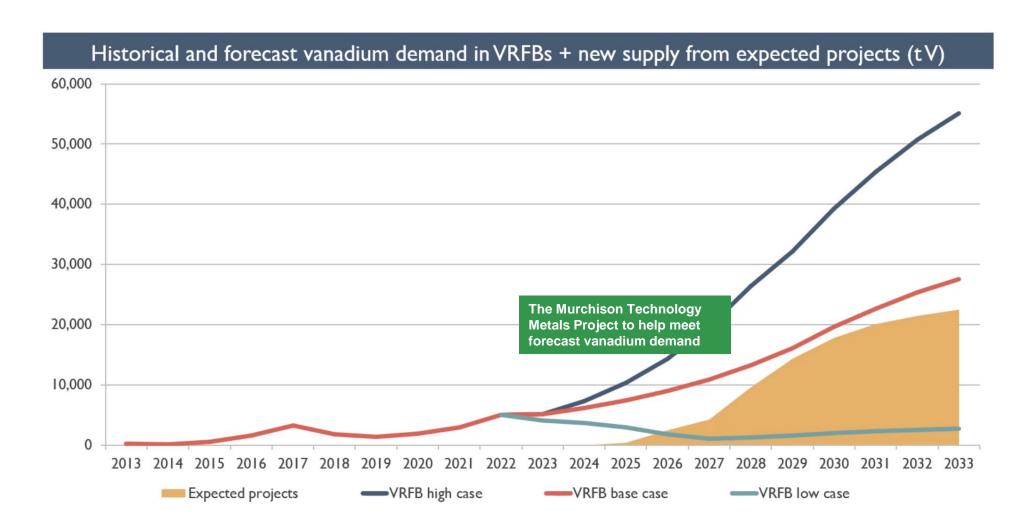


Source: via VTechFlow from International Renewable Energy Agency

^{*} Source: Origin Energy "Origin acquires interest in Newcastle's Allegro Energy and agrees to long duration storage trial at Eraring", 28 June 2023 ^Source: Australian Financial Review "Delay Eraring closure as 'insurance', says Transgrid's Redman", 20 June 2023

FORECAST DEMAND FROM VANADIUM BATTERIES





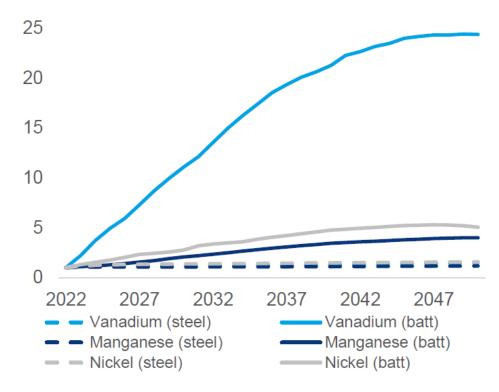
Source: Project Blue, June 2023

GROWTH FORECAST FROM BATTERY MARKETS



Vanadium for batteries expected to grow to 33% of global market in 2030*

Increase in demand (index 2022)



Source: Wood Mackenzie, Batteries and Steel: friends or enemies?, March 2023

- Current market in balance at around \sim 220,000t V_2O_5 in 2022
- **Consumption** is expected to grow to \sim 380,000t V_2O_5 by 2031
- Current production, state supported projects in China and vanadium from recycling is not expected to meet future consumption
- Supply shortfall forecast for 2031 of \sim 45,000t V₂O₅ – MTMP to produce ~12,500ktpa

VANADIUM BATTERY DEVELOPMENT: AUSTRALIA



Emerging demand for vanadium battery installations around Australia



Source: Yadlamalka Energy

South Australia - Yadlamalka Energy

Largest of its kind in the southern hemisphere - holds 2MW/8MWh, or 10GWh of dispatchable solar power annually

"It feels like we're on the verge of a vanadium revolution...it's got some important advantages – one of which is it doesn't deteriorate over time unlike lithium-ion." *

– Andrew Doman, Yadlamalka founder and chairman



Source: Vecco Group

Energy Queensland – vanadium battery deployment

Vecco Group and Sumitomo Electric to supply vanadium electrolyte and battery hardware respectively for a 250kW/750kWh vanadium battery for Energy Queensland

"Vanadium flow batteries will play a significant role in the Queensland SuperGrid and we expect to see deployments of this proven technology accelerate as the local supply chain expands." ^

- Tom Northcott, Vecco Managing Director

^{*} In Daily, "Yadlamalka Energy turns on battery storage and solar project at Port Pirie", 21 June 2023

[^] PV Magazine, "State puts vanadium tech to test as 'Australian first' manufacturing plant opened", 23 June 2023

VANADIUM BATTERY DEVELOPMENT: CHINA



China investing heavily in vanadium batteries as part of Net Zero strategy

- Henan Provincial Investment Smart Energy Co. Ltd to commence a 40MW/240MWh vanadium battery energy storage project – part of Henan Province's energy security strategy
- Total investment is about 800 million yuan, or approximately A\$171 million, with a design life of 25 years
- After completion it will be the largest user-side all-vanadium battery energy storage power station in China, providing emergency power supply and power demand response services and improving flexibility of power grid adjustment

- In Hubei Province, a 100MW/500MWh vanadium battery power station in the Xiangyang High-Tech Zone was declared
- In Zhejiang Province, Hangzhou Dreieck Energy Technology Co. Ltd launched an integrated production facility with an annual capacity of 300MW of vanadium battery.



Source: Hangzhou Dreieck Energy Technology Co., Ltd

Source: FerroAlloyNet August 2023

VANADIUM BATTERY DEVELOPMENT: N. AMERICA



Vanadium battery technology gaining recognition in North America

- Invinity recently delivered the 8.4MWh vanadium battery for the Chappice Lake Solar Storage Project in Alberta, Canada, for renewable project developer Elemental Energy*
- The project features a 21MWp (40,000 panels) solar array coupled with Invinity's battery technology.
- Once operational, Chappice Lake Solar Storage Project will contribute low-cost, low-carbon electricity to the Alberta grid, projected to support the needs of over 7,000 Albertans
- The Project received funding support from Emissions Reduction Alberta (ERA)

- Stryten Energy LLC, a US-based energy storage provider, completed installation of a 20KW/120KWh vanadium battery at Snapping Shoals EMC, a utility provider, in Covington, Georgia^
- Stryten notes it has seen "quite a bit of interest" in vanadium batteries due to the investment tax credits under the Inflation Reduction Act (IRA)



Source: Stryten Energy

^{*} Source: Invinity Energy Systems ^ Source: Stryten Energy

LONG DURATION ENERGY STORAGE RECOGNISED



US Department of Energy (DOE) to support commercialisation of non-lithium-ion battery assets

- DOE to accelerate commercialisation of long-duration energy storage (LDES) – defined as inter-day (10-36 hours) and multi-day storage (36-160 hours) – Li-ion batteries considered insufficient for these purposes
- The US grid may require 225-460GW of LDES capacity by 2050 representing \$330 billion in cumulative capital requirements*
- Supply chains must be able to support at least 3 GW of annual LDES manufacturing and deployment capacity per year by 2030, and up to 10-15 GW by 2035
- Vanadium recognised as critical material for LDES:

"Finding sufficient amounts of <u>vanadium from secure mines</u> may be an especially acute vulnerability...possible interventions to address supply chain vulnerabilities include national reserve or stockpile – advanced purchases of raw materials that would allow the manufacturing, shipment and installation of LDES to continue..."^



DOE recognizes long duration energy storage as a critical technology

pv magazine USA, 27 June 2023

U.S. Government eyes \$9 billion liftoff for long duration energy storage by 2030

pv magazine USA, 25 May 2023

^{*} US Department of Energy - Pathways to Commercial Liftoff, https://liftoff.energy.gov/long-duration-energy-storage/ ^ US Department of Energy - Pathways to Commercial Liftoff: Long Duration Energy Storage, March 2023

VANADIUM IN STEEL REDUCES CO₂ EMISSIONS



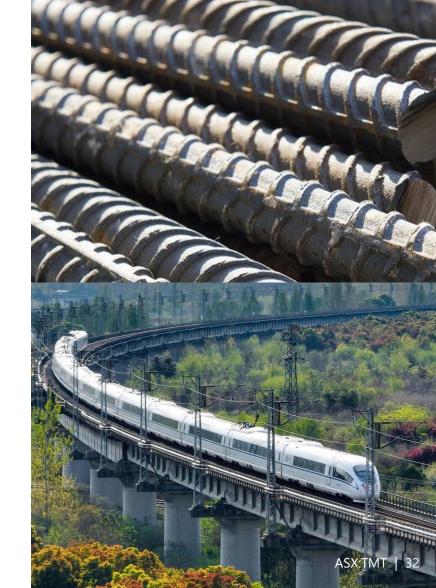
Steel sector one of the largest CO₂ emitters

- 1 tonne steel = 1.85 tonne CO₂ released
- Approximately 8% global CO₂ emissions from steel in 2020
- Inclusion of vanadium enables higher quality, stronger steel, lowering emissions
- Chinese industry reduced 2019 CO₂ emissions by 1.5% by including vanadium in rebar¹



The benefits of upgrading to high-strength vanadium steel

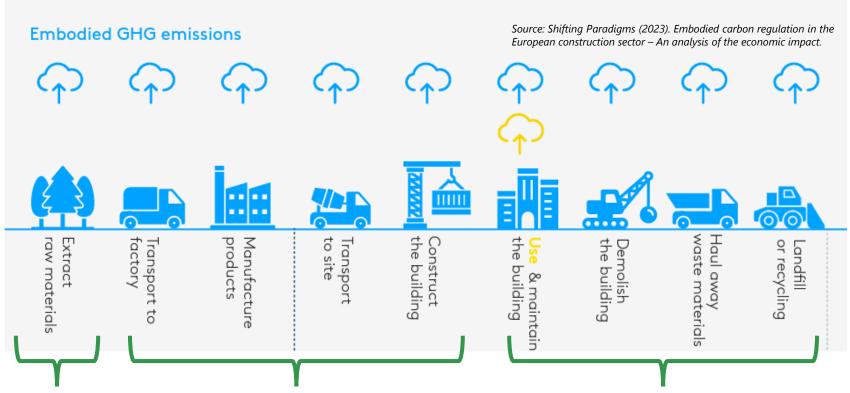




REDUCTION IN EMBODIED CARBON



Vanadium in steel can help reduce building/infrastructure embodied carbon



Decarbonisation strategies at the MTMP designed to reduce CO₂ during V₂O₅ production

Vanadium in steel increases strength while reducing weight – leading to economy of material

Less CO₂ emissions during transport of steel to site and during construction activities (i.e., less weight and material to transport and lift)

Vanadium in structural steel increases service life of the building – **resists corrosion**, the leading cause of deterioration in reinforced concrete structures, and withstands seismic activities

Longer building and infrastructure service life **defers** CO₂ generated from demolition and waste haulage **Embodied carbon** refers to CO₂ emissions associated with materials and construction processes through the whole lifecycle of a building or infrastructure

World Green Building Council calling for Net Zero embodied carbon in all new buildings and infrastructure by 2050

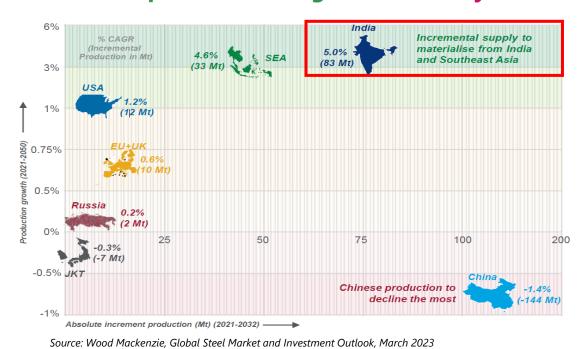
Vanadium in HSLA steels contributed to an overall CO₂ savings of 1.18 mMT in 2018*

*Source: Santos et al., iScience 24, November 19, 2021.

INDIA LEADING GROWTH IN STEEL PRODUCTION



India's steel production target is 300Mt by 2030, from 134Mt in FY22





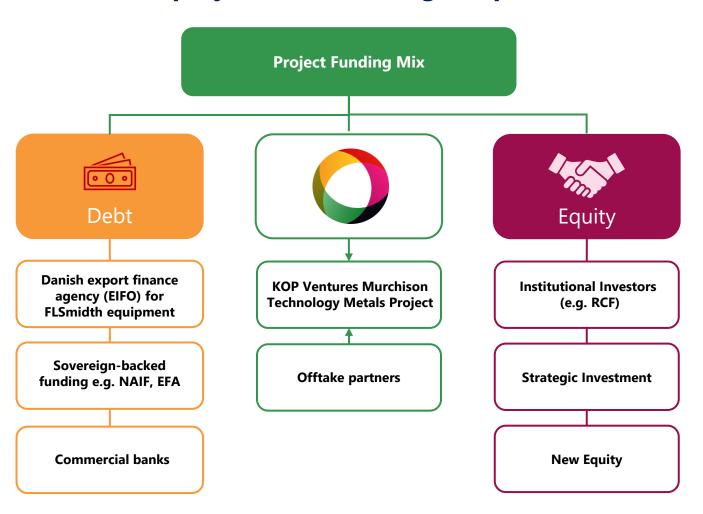
Source: Vanitec, April 2023

- India's National Infrastructure Pipeline (NIP) of projects to require US\$1.4 trillion over next five years*
- Roads, Urban and Housing, Railways, Power (Conventional and Unconventional) and Irrigation to make up ~80% of funds
- Indian Railway Ministry investing US\$680 billion to upgrade railways by 2030^
- High-strength vanadium alloy needed for infrastructure and high-speed rail with **vanadium as alloying element for high-speed rail tracks**. Forecast that steel-specific vanadium intensity of use will **increase to 58g/t** in India by 2030 increasing vanadium consumption to **17,000tpa by 2030**
- TMT MOU in place with TATA STEEL

FUNDING STRATEGY



Debt and equity mix from a range of partners



- EIFO issued letter of interest for A\$150m financing support for major equipment
- RCF VII holds an of 18.2% shareholding with continuing support and positive outlook for the vanadium sector
- Discussions ongoing with potential offtake partners and strategic investors into the MTMP
- Independent Technical Expert (ITE) Review in support of debt financiers' due diligence process

A COMPELLING INVESTMENT





Industry Leading Tier 1 Project

- Outstanding geology enabling proven processing techniques
- Located in Western Australia. a globally attractive mining jurisdiction
- Excellent access to gas and essential infrastructure



Critical Minerals for a Cleaner Future

- Vanadium, a Critical Mineral in the EU, USA, India and Australia
- Intensifying demand for vanadium batteries
- Strategic use of vanadium in steel for lower CO₂ emissions



Strong Experienced Team to Deliver

- High-performing professionals who have delivered major projects
- Focused on development strategy to maximise shareholder value
- Seasoned industry players engaged for project implementation



Quality Investors and Partners

- Backing from RCF VII provides long-term project development support
- Building robust relationships with international partners, including LE System and Tata Steel





Ian PrenticeManaging Director



investors@tmtlimited.com.au

Suite 9, 330 Churchill Ave Subiaco WA 6008, AUSTRALIA

Ph: +61 8 6489 1600 Fax: +61 8 6489 1601





MTMP GLOBAL MINERAL RESOURCE ESTIMATE



| Classification | Material | Mt | V₂O₅ % | Fe % | Al₂O₃ % | SiO₂ % | TiO₂ % | LOI % | Р% | S % |
|-------------------------|------------------------|-------|--------|------|---------|--------|--------|-------|------|------------|
| Measured (Yarrabubba) | Massive | 4.4 | 1.1 | 48.1 | 5.5 | 7.3 | 12.4 | -0.4 | 0.01 | 0.3 |
| | Disseminated | 1.5 | 0.6 | 30.0 | 10.8 | 23.4 | 7.7 | 2.5 | 0.01 | 0.2 |
| Measured (Gabanintha) | Massive | 5.1 | 1.1 | 46.9 | 5.7 | 8.4 | 12.1 | -0.2 | 0.01 | 0.3 |
| | Disseminated | 1.1 | 0.8 | 36.4 | 7.9 | 19.6 | 9.0 | 0.5 | 0.01 | 0.2 |
| Measured | Massive + disseminated | 12.1 | 1.0 | 44.3 | 6.5 | 10.9 | 11.4 | 0.1 | 0.01 | 0.2 |
| Indicated (Yarrabubba) | Massive | 8.0 | 1.1 | 48.1 | 5.4 | 7.1 | 12.5 | 0.0 | 0.01 | 0.3 |
| indicated (Tarrabubba) | Disseminated | 6.9 | 0.6 | 28.4 | 12.5 | 25.2 | 7.2 | 2.6 | 0.02 | 0.3 |
| Indicated (Gabanintha) | Massive | 19.5 | 1.1 | 48.9 | 5.2 | 6.2 | 12.8 | -0.1 | 0.01 | 0.2 |
| indicated (Gabanintha) | Disseminated | 16.7 | 0.6 | 27.3 | 13.3 | 26.7 | 7.0 | 3.0 | 0.03 | 0.2 |
| Indicated | Massive + disseminated | 51.2 | 0.9 | 39.0 | 8.9 | 15.6 | 10.1 | 1.3 | 0.02 | 0.2 |
| Measured plus Indicated | Massive + disseminated | 63.2 | 0.9 | 40.0 | 8.4 | 14.7 | 10.4 | 1.1 | 0.02 | 0.2 |
| Inferred (Yarrabubba) | Massive | 5.7 | 1.1 | 47.4 | 5.6 | 7.8 | 12.3 | 0.1 | 0.01 | 0.3 |
| ililerred (Tarrabubba) | Disseminated | 11.4 | 0.6 | 27.9 | 12.6 | 25.8 | 7.2 | 2.0 | 0.02 | 0.4 |
| Informed (Cabanintha) | Massive | 36.5 | 1.1 | 46.7 | 6.0 | 8.3 | 12.3 | 0.4 | 0.01 | 0.2 |
| Inferred (Gabanintha) | Disseminated | 36.9 | 0.5 | 26.6 | 12.9 | 27.6 | 6.9 | 3.4 | 0.03 | 0.3 |
| Inferred | Massive + disseminated | 90.5 | 0.8 | 36.2 | 9.6 | 18.3 | 9.5 | 1.8 | 0.02 | 0.2 |
| TOTAL | Massive + disseminated | 153.7 | 0.8 | 37.7 | 9.1 | 16.8 | 9.8 | 1.5 | 0.02 | 0.2 |

Source: TMT Announcement, MTMP Global Mineral Resource Upgrade Delivers 26% Increase to Measured and Indicated Resource, 7 November 2022 *Notes:

- Mineral Resources are reported in accordance with the JORC Code (2012 Edition).
- 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.
- Mineral Resources are quoted from all classified blocks within the wireframe solids above a lower cut-off grade of 0.4% V2O5.
- Differences may occur due to rounding. Yarrabubba Measured and Indicated Mineral Resources are reported above an open pit optimised pit shell. Inferred Mineral Resources are reported to a lower RL limit of 250 mRL.

 Gabanintha Measured and Indicated Mineral Resources are reported above a lower RL limit of 240 to 280 mRL that approximates the Ore Reserve pit shells. Inferred Mineral Resources are reported to a lower RL limit of 170 mRL.

MTMP ORE RESERVE ESTIMATE

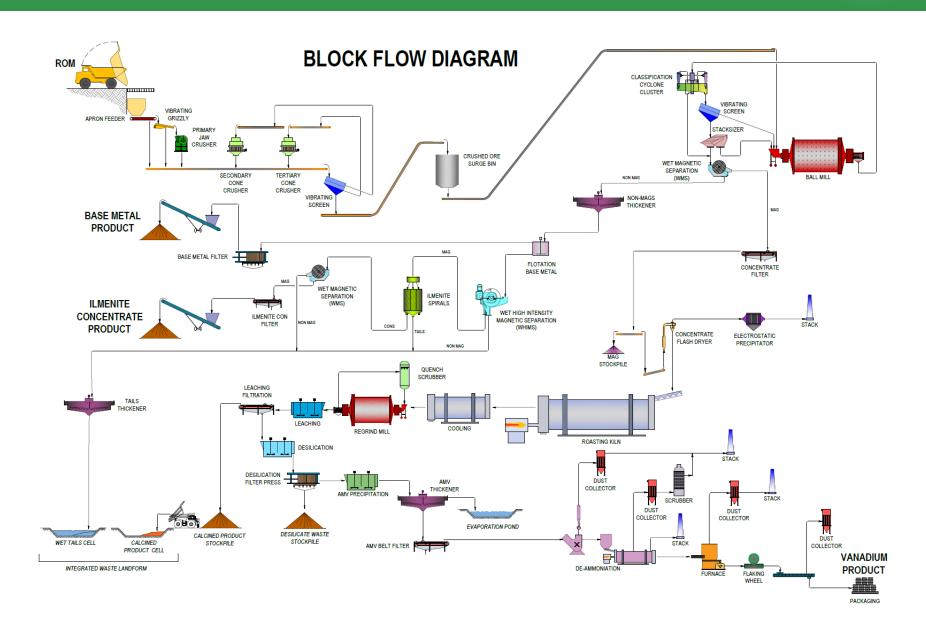


| Deposit | Ex-Pit Ore | | | Magnetic Conc. | | Non-Magnetic Conc. | | Rec. V₂O₅ | Rec. Ilmenite | Waste | Total | |
|------------------------|------------|-------|-------|----------------|-------|---------------------------------|------|-----------|------------------|--------|-------|-------|
| | Mt | V₂O₅% | TiO₂% | Mass Yield | Mt | V ₂ O ₅ % | Mt | TiO₂% | M lb | kt | Mt | Mt |
| Yarrabubba Probable | 15.88 | 0.87% | 10.0% | 44.4% | 7.04 | 1.61% | 8.84 | 12.35% | 202.7 | 1132.6 | 110.1 | 126.0 |
| Yarrabubba Total | 15.88 | 0.87% | 10.0% | 44.4% | 7.04 | 1.61% | 8.84 | 12.35% | 202.7 | 1132.6 | 110.1 | 126.0 |
| Gabanintha Proven | 1.12 | 0.95% | | 69.8% | 0.78 | 1.30% | | | 18.1 | | 154.5 | 183.1 |
| Gabanintha Probable | 27.48 | 0.90% | | 57.1% | 15.69 | 1.31% | | | 369.4 | | | |
| Gabanintha Total | 28.60 | 0.91% | 10.7% | 57.6% | 16.47 | 1.31% | | | 387.5 | 0.0 | | |
| Global MTMP Total | 44.48 | 0.89% | 10.5% | 52.9% | 23.52 | 1.40% | 8.84 | 12.35% | 590.3 | 1132.6 | 264.6 | 309.1 |

Source: TMT Announcement: MTMP Mine Life Increased to 25 Years – Maiden Ilmenite Reserve and Production Profile, 5 August 2022

FLOWSHEET





V₂O₅ PRICE PERFORMANCE



Strong underlying fundamentals for vanadium and upside via battery demand.

The more recent short-term weakness in the price is linked to the perceived slowdown in China (also reflected in negative moves in iron ore) but has bottomed out.

CHINA VS EUROPE RELATIVE PRICE PERFORMANCE

