Leading the Charge in the Vanadium Industry

Rapidly progressing the DFS for the development of a globally significant, high grade, vanadium project

Technology Metals Australia Limited
2nd AGM – 16 November 2018

ASX: TMT, TMTO; FRA: TN6

www.tmtlimited.com.au
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Competent Person’s Statement

The information in this presentation 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 presentation 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 presentation 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 Resource estimates is based on information compiled by Mr Aaron Meakin. Mr Meakin is a Principal Consultant with CSA Global and a Member of the Australian Institute of Mining and Metallurgy. Mr Meakin has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (“JORC Code”). Mr Meakin consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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

The information in this report that relates to the Processing and Metallurgy for the Gabanintha project is based on and fairly represents, information and supporting documentation compiled by Damian Connelly who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full time employee of METS. Damian Connelly has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (“JORC Code”). Damian Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All currency amounts are in AUDS unless stated otherwise.
Invest in a World-Class Vanadium Development Project

- Vanadium – the stand out commodity over the past 18 months
- Gabanintha – a large, high grade, globally significant deposit
- Robust Pre-Feasibility Study delivered June 2018
- Progressing Definitive Feasibility Study for June quarter 2019 delivery
- Project metrics compare very favourably to global peers
**Corporate Overview**

**Company Snapshot**

<table>
<thead>
<tr>
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<th>TMT, TMTO</th>
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<tr>
<td><strong>ASX Codes</strong></td>
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<tr>
<td><strong>Proforma cash as at 30 Sept 2018</strong></td>
<td>~$7.3m</td>
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<tr>
<td><strong>Market Cap (as at 13 November 2018)</strong></td>
<td>~$37.0m</td>
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<tr>
<td><strong>Tradeable Shares on Issue</strong></td>
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<td><strong>Escrowed Shares on Issue</strong></td>
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<tr>
<td><strong>Total Shares on Issue</strong></td>
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<td><strong>Unlisted Options (various)</strong></td>
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</tr>
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<td><strong>Listed Options - ($0.40 – 24/05/20)</strong></td>
<td>6.13m</td>
</tr>
</tbody>
</table>

* $6M Placement & 12,000,000 fully paid shares issued – Refer ASX Announcement 5 October 2018  
** 22.5m shares, 13.7m $0.25 options subject to restriction until 21 December 2018,  
*** 14.6m $0.25, 31/12/19 expiry; 2.75m $0.35 12/01/21 expiry; 3.26m $0.40, 24/05/20 expiry

“We think there’s a revolution coming in vanadium redox flow batteries. You’ll have to get into the mining business and produce ultra-pure vanadium electrolyte for those batteries on a massive scale"

- Robert Friedland, May 2017

**Michael Fry**  
**Non-Executive Chairman**  
Michael Fry 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 Exchange.

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

**Ian Prentice**  
**Managing Director**  
Mr Prentice is a Member of the Australasian Institute of Mining and Metallurgy and holds a BSc (Geology) from the University of Western Australia.

Mr Prentice has served as a Director for a number of ASX-listed resource companies, with activities ranging from exploration and project acquisition in Asia and Africa through to project development and production in Australia.

**Sonu Cheema**  
**Non-Executive Director and Company Secretary**  
Mr Cheema has completed a Bachelor of Commerce majoring in Accounting at Curtin University and is a member of CPA Australia.

Mr Cheema holds the position of Accountant and Company Secretary for Cicero Corporate Services and has over 10 years’ experience working with public and private companies in Australia and abroad.
Key Milestones

- Listed in 2016
- First Drilling Program Feb 17
- Maiden Northern Block Resource June 17
- 2nd Round Drilling Program commences Jul 17
- Initial Magnetic Separation Testwork Results Sept 17
- Maiden Southern Tenement Resource Dec 17
- Detailed Magnetic Separation Testwork Results Feb 18
- High Purity of V2O5 Product Confirmed May 18
- Delivery of Technically & Financially Robust PFS Jun 18
- Global Resource Update including Maiden Indicated Resource Mar 18
- Testwork Confirms Ore Amenable to Conventional Processing Apr 18
- 99.5% Purity Product Confirmed
- Commencement of DFS August 18
- Stage 1 RC Drilling Results confirm high-grade continuity
- 2017 AGM
Vanadium Markets
Outlook
Supply/Demand
VRB’s
Vanadium Shines – the Perfect Storm

- Structural change in industry has seen consumption outstrip supply since 2010
- Industry rationalisation, strict environmental regulations in China and limited new capacity impacting supply
- Chinese rebar standards driving consumption - intensity of vanadium use in Chinese steel currently 0.048kg/T moving to European/USA levels of 0.078 - 0.097kg/T
- Specialty alloys and VRB’s the second leg of growth
Vanadium Market in Deficit

- Consumption in 2017 of ~85,800t V versus production of ~83,200t V.
- Chinese market dynamics impacting on ability to fill global supply gap.
- Current $V_2O_5$ pricing\(^1\) reflects surging Chinese demand and limited readily available supply:
  - **CHINA** US$32.50 – 33.25/lb
  - **EUROPE** US$28.50 – 28.90/lb
- Global deficit forecast to increase to ~21,300t V (~37,900t $V_2O_5$) in 2025 (Source: TTP Squared).
- Emerging primary producers vital to meeting the increasing demand.

\(^1\) Source: FerroAlloyNet, 13 November 2018.
Market Disrupter – VRB’s

- Vanadium Redox Batteries (VRB’s) provide an efficient storage and re-supply solution for renewable energy, suitable for large-scale applications.
- VRB’s are able to time-shift large amounts of previously generated energy for later use – balancing solar and wind intermittency.
- Vanadium ions in different oxidation states are used to store energy; battery capacity expandable by adding more storage tanks.
- VRB and chemical industry vanadium demand set to climb to 23,730t V metal by 2020.
- Rongke Power developing a 200MW/ 800MWh battery in Dalian, China, using ~6,960 tonnes $V_2O_5$. 
Gabanantha Vanadium Project
Project Overview

- 40km south of Meekatharra in Western Australia.
- Excellent infrastructure – sealed Highway from Perth passes within 30km of the project.
- Port of Geraldton 500km to the south west accessible via sealed highway.
- Gas pipeline within 160km.
- Granted tenure with Mining Lease applications in place.
- Global resource of 119.9Mt at 0.8% V₂O₅ including high grade component of 55.0Mt at 1.1% V₂O₅.
- Maiden reserve of 16.7Mt at 0.96% V₂O₅ within initial Indicated resource of 21.6 Mt at 0.9% V₂O₅.
**Geological Setting**

- Mineralisation hosted by a layered mafic igneous unit – magnetite layers host vanadium and titanium.
- Over 5.5km strike length of the mineralised unit – divided into Northern Block and Southern Tenement.
- Outstanding consistency of grade and continuity of mineralisation within broad high grade basal massive magnetite zone.
- Mineralisation outcrops along majority of strike length and dips to the west / south west at 55° to 60°.
- High grade basal massive magnetite zone overlain by multiple medium grade zones.
- Mineralisation open at depth with basal massive magnetite zone intersected at over 190m vertical.
June 2018
Pre-Feasibility Study
Pre-feasibility Study Delivers²

Investor Presentation
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Pre-feasibility Study Delivers²

-- Refer TMT ASX announcement dated 21 June 2018 for full details of the pre-feasibility study.

² – Refer TMT ASX announcement dated 21 June 2018 for full details of the pre-feasibility study.
Metallurgical Bench Scale Testwork\(^3\)

- Testwork completed on diamond drilling samples; six initial composites with weights ranging from 29kg to 49kg.
- Recoveries of up to 97.8% V in to magnetic concentrate with very high weight recoveries of up to 85.6%.
- Concentrate grades of +1.3% V\(_2\)O\(_5\) for transitional and fresh high grade massive magnetite zone.
- Exceptional rejection of deleterious elements Si and Al results in very high quality magnetic concentrate.
- Downstream test work confirms conventional salt roast / water leach processing with low reagent consumption.
- Final product grades of +99.5% V\(_2\)O\(_5\) achieved.
- Product expected to be suited to both steel and chemical / VRB industries.

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Study Team Rapidly Progressing DFS

- DFS being executed by Wave International, managed and assisted by TMT geological and processing personnel, with contribution from a range of industry leading consultants.
- Project enhancement drilling program completed.
- Bulk sample collection drilling program completed along the strike of the proposed North Pit.
- Product generation testwork has progressed to scaled-up kiln testwork – pilot plant scale testwork planned for early 2019.
- Detailed process plant design and engineering completed with packages sent to prospective vendors for quotation.
- Environmental and heritage studies progressing in support of advancing mining lease grant and statutory approvals.
- On track to deliver high quality DFS results June quarter 2019.
PFS identified significant enhancement opportunities, including:

- Open pit designs limited by drilling depth/Indicated Resource.
- Conversion from Inferred to Indicated Resources to materially increase mine life.
- Detailed geotechnical data to enable steeper open pit walls, thereby reducing strip ratio.

Project enhancement drilling of 6,730m of RC and Diamond drilling (45 holes) across Northern Block and Southern Tenement.

- Drilling confirmed extension of massive magnetite mineralisation and competency of host rocks.
- Extension of Indicated Resource and steeper open pit walls will enable open pits to be deepened, thereby increasing mine life.
Project Enhancement Drilling Program

- Resource infill and extension holes intersected broad massive magnetite mineralisation.
- Results from RC drilling (3,741m across 28 holes) confirm success in infilling and extending high grade mineralisation.
- Massive magnetite mineralisation intersected 25 to 50m down dip of Indicated Resource; vertical depths of up to 190m.
  - 14m at 1.17% V$_2$O$_5$ from 208m
  - 12m at 1.17% V$_2$O$_5$ from 192m
- Infill holes expected to extend Central Pit Indicated Resource by +300m to south.
  - 16m at 1.26% V$_2$O$_5$ from 28m
  - 14m at 1.14% V$_2$O$_5$ from 90m
- Diamond drilling (2,989m across 21 holes) results expected in coming weeks.

4 – Refer TMT ASX announcement dated 8 November 2018 for full details of project enhancement RC drilling results.
“Aggressive development timeline maintained”
Global Vanadium Projects (ex China)

TMT at the Right End of the Chart

Market Cap\(^5\) | $2.34bn | $37.0m | $65.6m | $946m | $136m | $20.6m | $53.3m | $102m
---|---|---|---|---|---|---|---|---
Vametco | Largo HG | TMT HG | AVL HG | Largo All | TMT All | Bushveld Minerals | Atlantic | Neometals | Vanadium Corp | KRC Measured | TNG Limited

5 – Market capitalisation of listed entities as at 13 November 2018. Bushveld Minerals and Neometals hold other significant resource assets. Vametco 75% owned by Bushveld Minerals. Atlantic Limited not listed.
Investment in Technology Metals

- **Leveraged to structural change in vanadium industry** with positive outlook for commodity pricing driven by demand growth in steel and VRB’s.

- **Exposure to a globally significant** high grade, large scale and long life vanadium development project.

- **PFS confirms conventional** processing and open pit mining resulting in a lower risk development scenario.

- **Rapidly progressing the DFS** supported by a team of industry experts to execute the significant project enhancements identified in the PFS.

- **Stable well resourced mining environment** with excellent infrastructure and access to services.

- **Experienced Board and management** team focused on rapidly progressing the project to maximise shareholder value.
Global Mineral Resource

- Overall Global Resource of **119.9Mt at 0.8% V₂O₅** split between **98.4Mt at 0.8% V₂O₅** in the Northern Block and **21.5Mt at 0.9% V₂O₅** in the Southern Tenement.

- One of the highest grade deposits in the World, with exceptional high grade resources of **55.0Mt at 1.1% V₂O₅** within consistent basal massive magnetite.

- **Probable Reserve of 16.7Mt at 0.96% V₂O₅** contained within Indicated Resource of **21.6Mt at 0.9% V₂O₅** (Northern Block only – includes a high grade component of 14.5Mt at 1.1% V₂O₅).

- Scope identified to materially increase the Indicated Resource within an expanded global resource.

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<tr>
<th>Material</th>
<th>Classification</th>
<th>Tonnage (Mt)</th>
<th>V2O5%</th>
<th>Fe%</th>
<th>AI2O3%</th>
<th>SiO2%</th>
<th>TiO2%</th>
<th>LOI%</th>
<th>P%</th>
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<td>Massive magnetite</td>
<td>Indicated</td>
<td>14.5</td>
<td>1.1</td>
<td>49.2</td>
<td>5.1</td>
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<td>48.3</td>
<td>5.5</td>
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<td></td>
<td>Indicated + Inferred</td>
<td>55.0</td>
<td>1.1</td>
<td>48.5</td>
<td>5.4</td>
<td>6.3</td>
<td>12.7</td>
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<td>Disseminated magnetite</td>
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<td>Combined</td>
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<td>0.8</td>
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<td>9.7</td>
<td>2.1</td>
<td>0.016</td>
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* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V2O5 lower cut-off for the Massive magnetite zone and using a nominal 0.4% V2O5 lower cut-off for the banded and disseminated mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V2O5. Differences may occur due to rounding.

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6 – Refer TMT ASX announcements dated 13 June 2017, 18 December 2017 and 6 March 2018 for full details of the mineral resource estimation.
Northern Block Resource Classification

- PFS open pit designs for North Pit (mining schedule of 6.7Mt at 0.84% $V_2O_5$) and Central Pit (mining schedule of 6.7Mt at 0.84% $V_2O_5$).
- Highlights that pit designs capture the majority of the Indicated Resource (yellow), the lack of drilling beneath the pit designs and the broad spacing of drilling at the southern end of the Central Pit.
- Clear scope to materially increase the Indicated Resource within an expanded Global Resource.
- Drilling has now been completed to depth below the pit designs and infilled to minimum 100m line spacing.
- Bulk sample drilling in North Pit expected to upgrade a portion of the resource to Measured Category.
Processing Facility Schematic

Gabanintha Project – Schematic Processing Plant Layout