



TECHNOLOGY
METALS AUSTRALIA LIMITED

YARRABUBBA PROJECT

A STEP CHANGE FOR THE GVP

**Noosa Mining & Exploration
Investor Conference**

11 – 13 November 2020



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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 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 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.

All currency amounts are in AUD\$ unless stated otherwise.

Corporate Overview

TMT

ASX Code

\$2.2m

Cash

(as at 30 September 2020)

\$41.9m

Market Cap

(as at 10 November 2020)

123.2m

Total Shares

on Issue

9.60m

Unlisted Options
(various exercise)

8.25m

Unlisted Options *
(\$0.20 – 10/05/23)

CAPITAL STRUCTURE

TOP SHAREHOLDERS

Holder	Holdings
Great Southern Flour Mills P/L	11.4%
Mr Chris Retzos	6.2%
Buxiao Yu	5.3%
Colin David Iles	4.5%
Station Nominees P/L	4.1%

* Director and employee options – 50% vested on grant of mining licence, 50% to vest on Gabanintha FID

Board and Management



Ian Prentice
Managing Director



Michael Fry
Non-Exec Chairman



Sonu Cheema
Non-Exec Director / Co Secretary

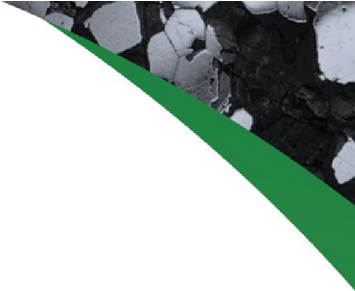


David English
Technical Adviser





-
- The map displays the state of Western Australia with a focus on the central and northern regions. Key locations marked include Perth, Geraldton, Carnarvon, Meekatharra, Wiluna, Newman, Port Hedland, and Karratha. The Gabanintha Project is highlighted with a red star near Meekatharra. Infrastructure shown includes the Great Northern Highway, various railways, and gas pipelines. A legend in the bottom left corner defines the symbols for Railway, Major Road, Gas Pipeline, and Port. A scale bar indicates distances up to 200 kilometres. An inset map in the top left corner shows the project's location within the broader context of Australia. The Technology Metals Australia logo is positioned in the top right corner.



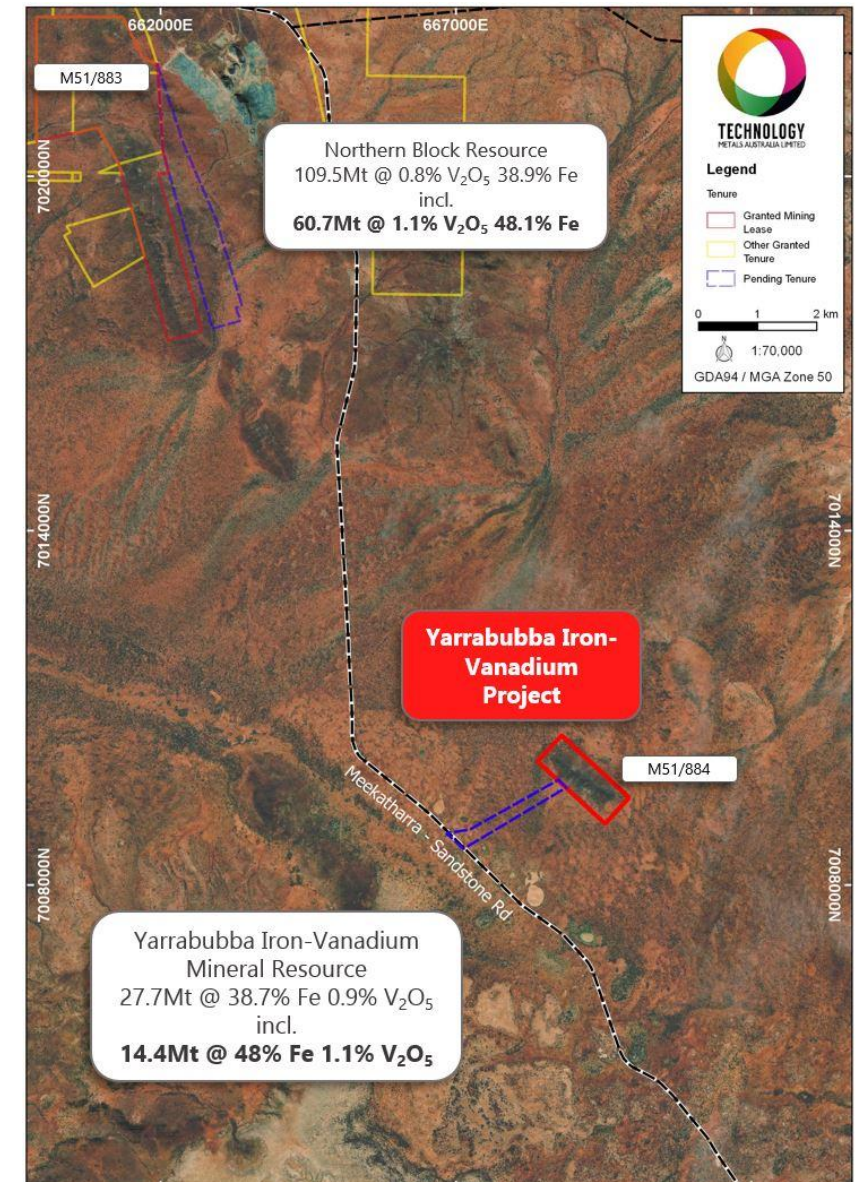


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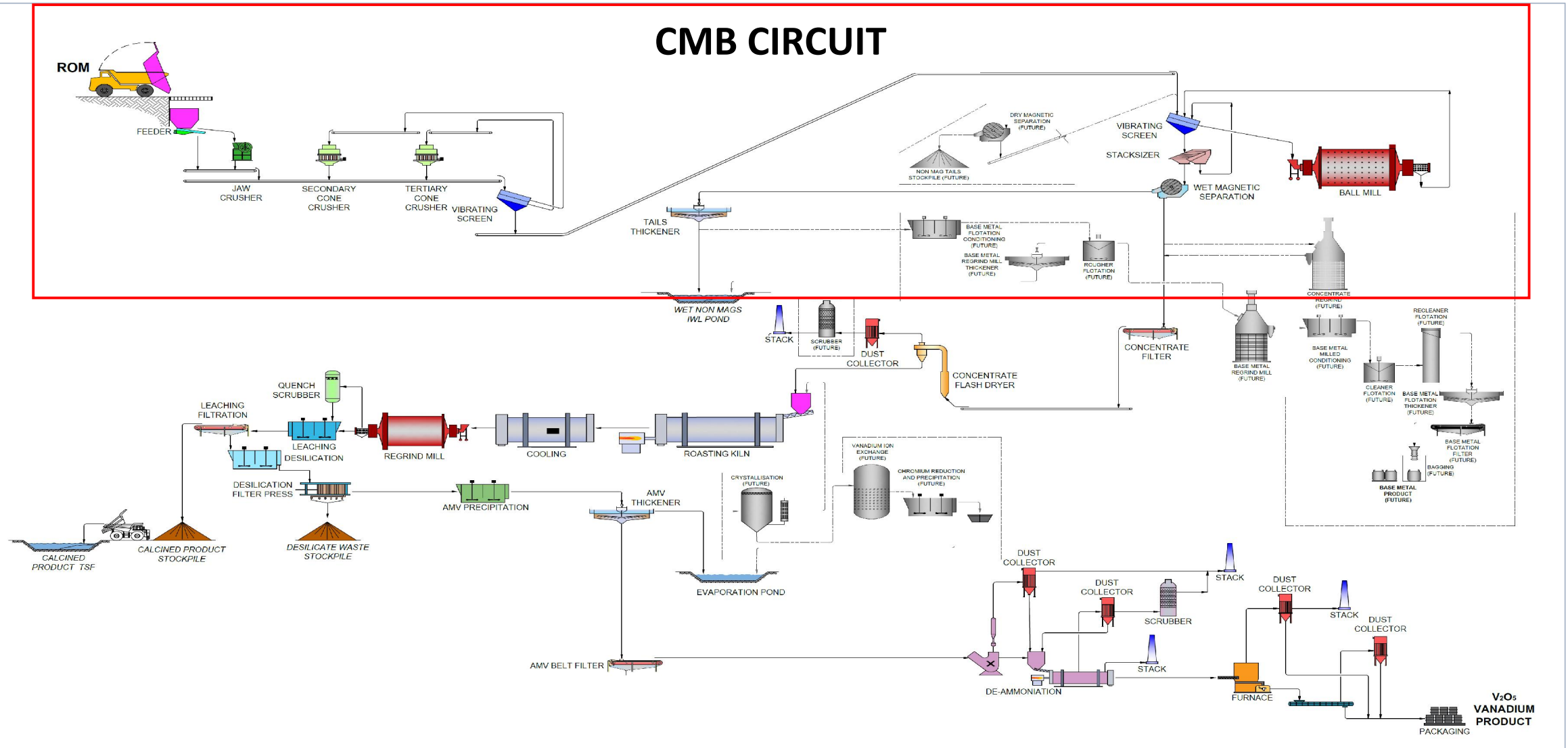
THE EMERGING OPPORTUNITY YARRABUBBA IRON-VANADIUM PROJECT

Opportunity to Unlock the Value

- Low entry cost Project complimentary to, and expected to reduce funding and development risk for, the Gabanintha Vanadium Project (GVP).
- Simple open pit mining, with mined ore to feed a crushing, milling and beneficiation (CMB) circuit to produce magnetic concentrate.
- Concept is to build CMB circuit at GVP which will benefit the long term Project development.
- GVP DFS provides significant advantage in progressing the development of Yarrabubba.
- Yarrabubba Probable Ore Reserve of 9.4Mt at 45.3% Fe and 0.97% V_2O_5 .
- Within Mineral Resource of 27.7Mt at 38.7% Fe and 0.9% V_2O_5 .



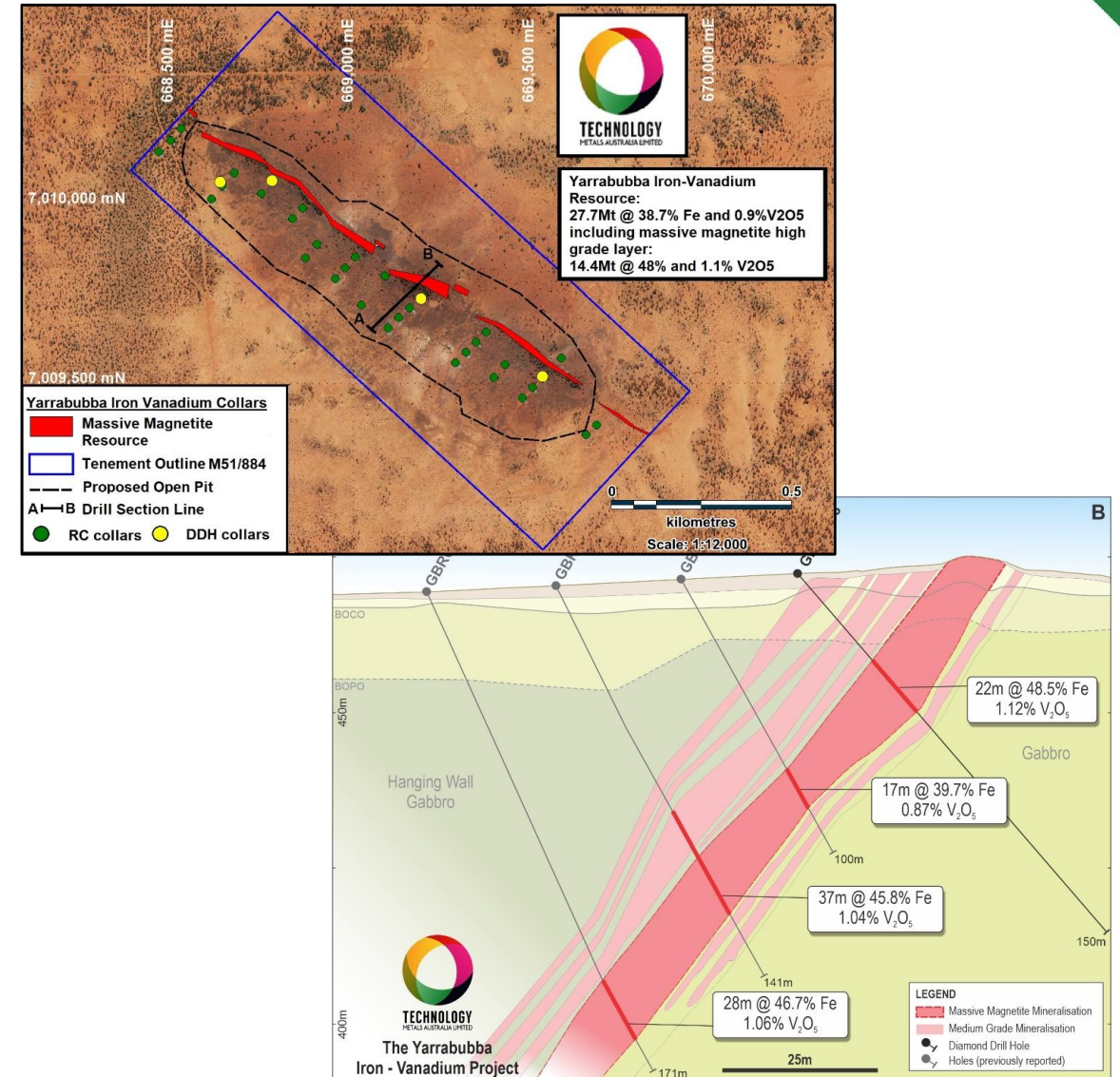
Processing Flow Sheet



GVP Schematic Flow Sheet Block Diagram

Premium Iron-Vanadium Magnetic Concentrate

- Representative LIMS testwork confirms opportunity to produce high grade, high purity iron-vanadium magnetic concentrate.
- Weighted average grade of 64.3% Fe (at up to 86.6% recovery) and 1.71% V_2O_5 (at up to 91.8% recovery) at a 32-micron grind size.
- High resource weighted average mass recovery of 47.6% to maximise resource recovery.
- Low levels of deleterious elements with weighted average 0.42% SiO_2 , 0.67% Al_2O_3 , 0.011% S and 0.001% P.
- Provides opportunity to meet the Platts 65 product specification and receive premium pricing.





Sinosteel Australia Letter of Intent

- Sinosteel Australia part of the WA business community since 1991.
- Lol covers negotiation of a life-of-mine iron-vanadium offtake.
 - Annual quantity of up to 1.5Mtpa
 - Pricing based on the Platts 65% Fe Index Price and the FerroAlloyNet China V_2O_5 Index Price
- EPC contract to be negotiated with Sinosteel Equipment & Engineering Co., Ltd (MECC).

“Sinosteel Australia is very pleased to have established this relationship with Technology Metals Australia and aim to progress our offtake and EPC contract discussions on the premium quality Yarrabubba Iron-Vanadium Product based on the principles of mutual benefit and respect” Sinosteel Australia Managing Director David Sun



GABANINTHA VANADIUM PROJECT




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August 2019 DFS - Outcomes¹

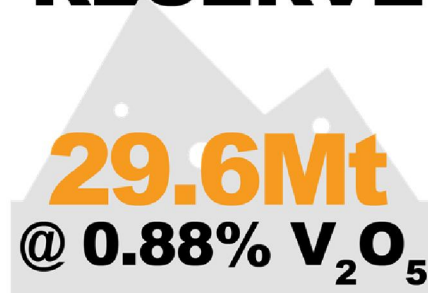
MASSIVE MAGNETITE RESOURCE

71.2Mt
@ 1.1% V_2O_5



MINING RESERVE

29.6Mt
@ 0.88% V_2O_5



PROCESSING PLANT

27.9Mlb
 V_2O_5 pa



HIGH PURITY PRODUCT

>99% V_2O_5



OPEX

US\$4.04
/ lb V_2O_5



MINE LIFE

+16years



PRE PRODUCTION CAPITAL COSTS

US\$318M
A\$454M



PAYBACK

<3.2years

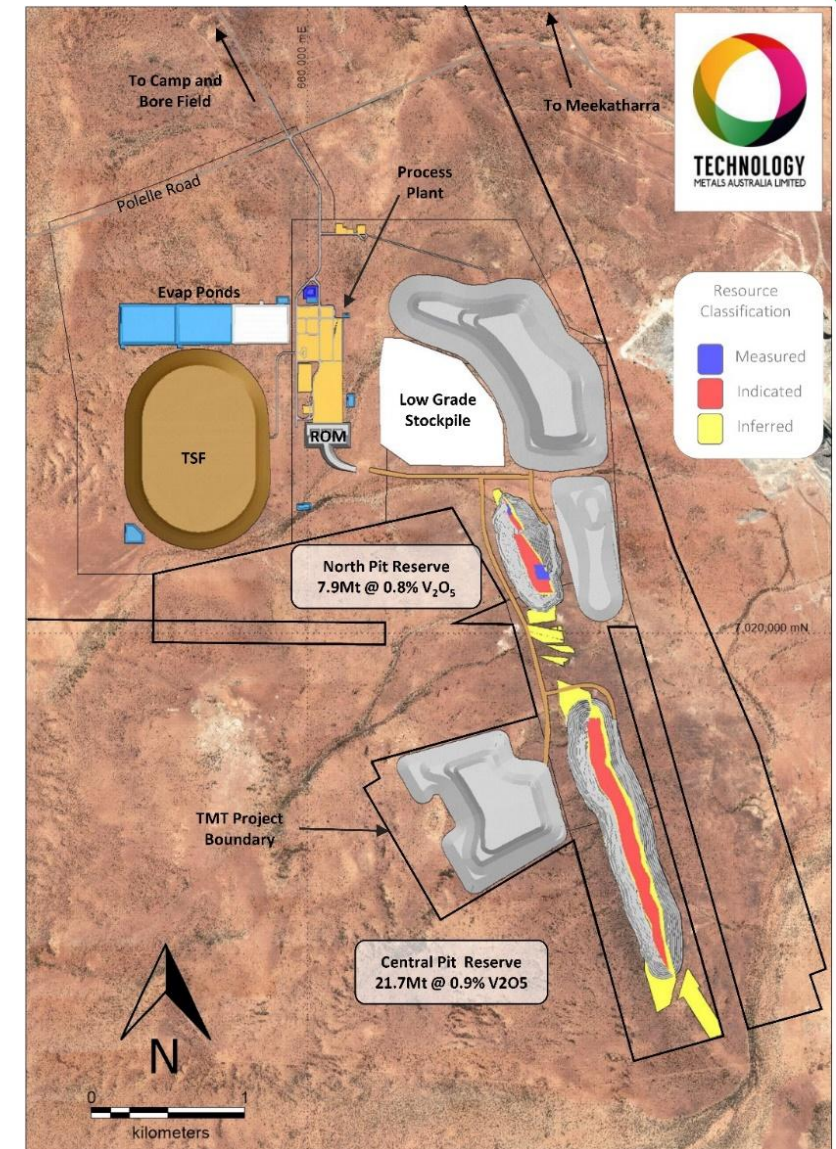
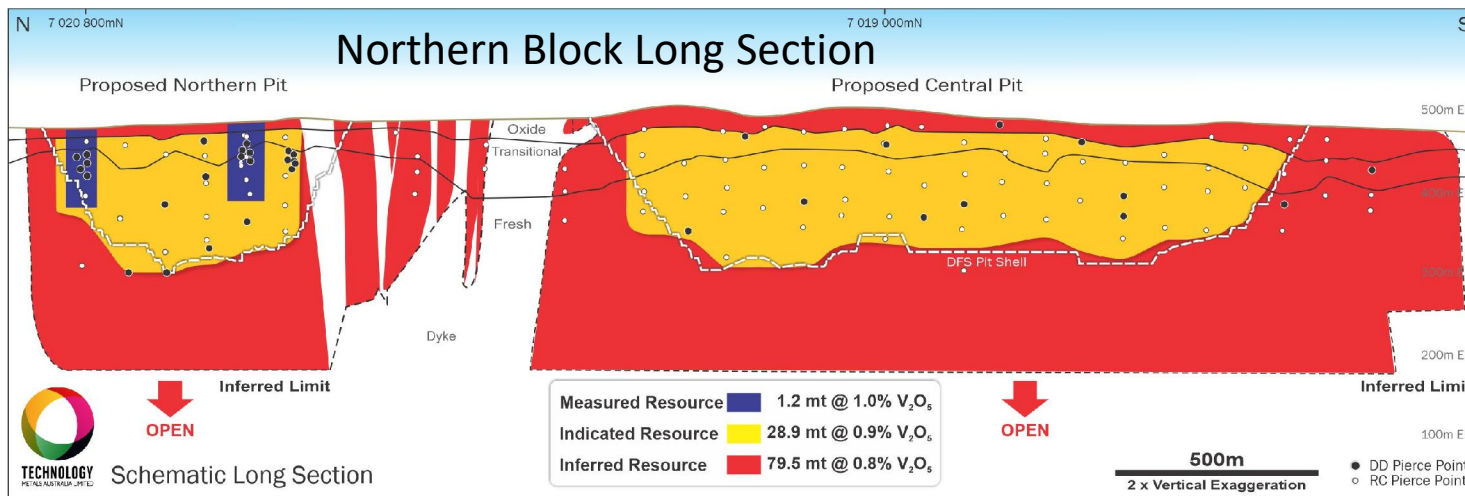




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World Class Resource – Simple Open Pit Mining

- DFS mine life of 16 years based on Ore Reserve of 29.6Mt at 0.88% V_2O_5 .
- High grade mineral resource of 60.7Mt at 1.1% V_2O_5 within total mineral resource of 109.5Mt at 0.8% V_2O_5 .
- Crusher feed in excess of 1.0% V_2O_5 for at least first 12 years.
- Ore body characterised by very shallow oxidation profile.
- Open pits limited by drilling at depth and on strike to the south.



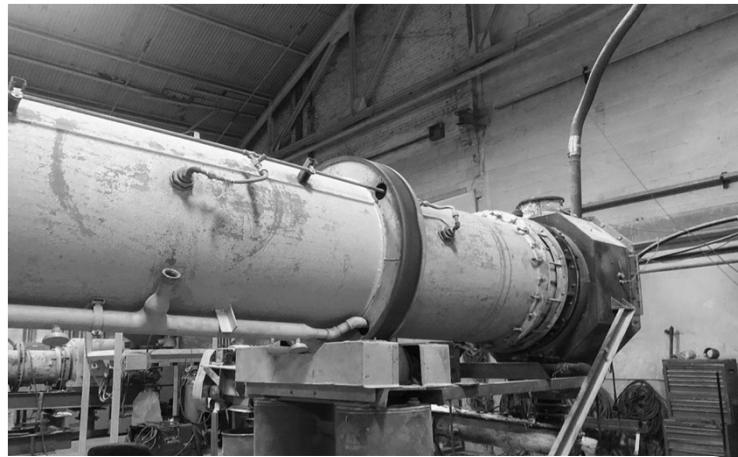
Pilot Test Work De-Risks Project and Confirms Scalability



CONFIRMS VERY HIGH YIELD TO MAGNETIC CONCENTRATE

11.5T bulk sample processed through Crushing Milling Beneficiation pilot plant

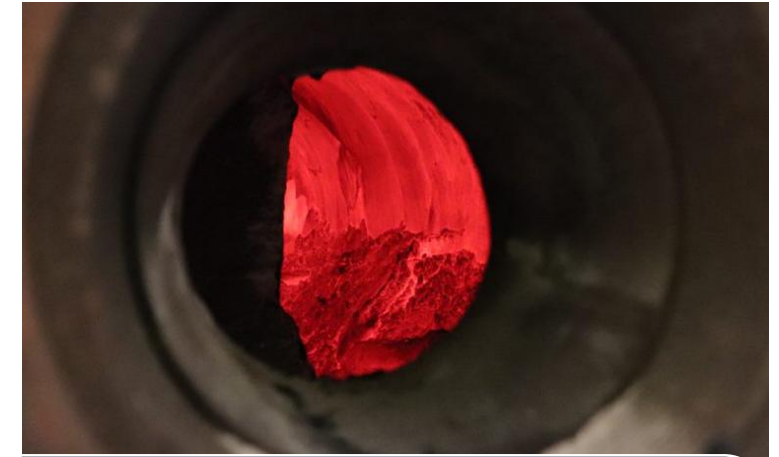
Confirmed very high yield to magnetic concentrate with low deleterious elements



PILOT SCALE KILN TESTWORK CONFIRMS VERY HIGH RECOVERY RATES

7.5T of magnetic concentrate processed through pilot scale rotary kiln delivered average vanadium recovery of 88.6%

Confirms end-to-end vanadium recovery of 77% for fresh massive magnetite ore



DFS INCORPORATES KILN DESIGN AND OPERATING PARAMETERS

Pilot scale continuous salt roast / kiln testwork completed by kiln experts FLSmidth

FLSmidth provided kiln design and operating parameter inputs for DFS



Offtake Agreements – Binding and MoU

CNMNC a subsidiary of China Nonferrous Metal Mining Group Company.

- Binding take-or-pay offtake for **2,000Tpa** (4.4Mlb pa) ~16% of annual production.
- Three year term with three-year extension.
- Pricing referenced to the published European and Chinese domestic prices.
- Progressing discussions with sister company, **NFC**, on EPC and scope for funding solutions.



Shaanxi Fengyuan offtake MOU over 3,000Tpa.

- Take-or-pay ~24% of annual production.
- Five-year term with five-year extension.

Big Pawa offtake MOU over 1,000Tpa take-or-pay and up to 5,000 Tpa

Offtake discussions progressing with a range of other counterparties across a range of industries and jurisdictions.

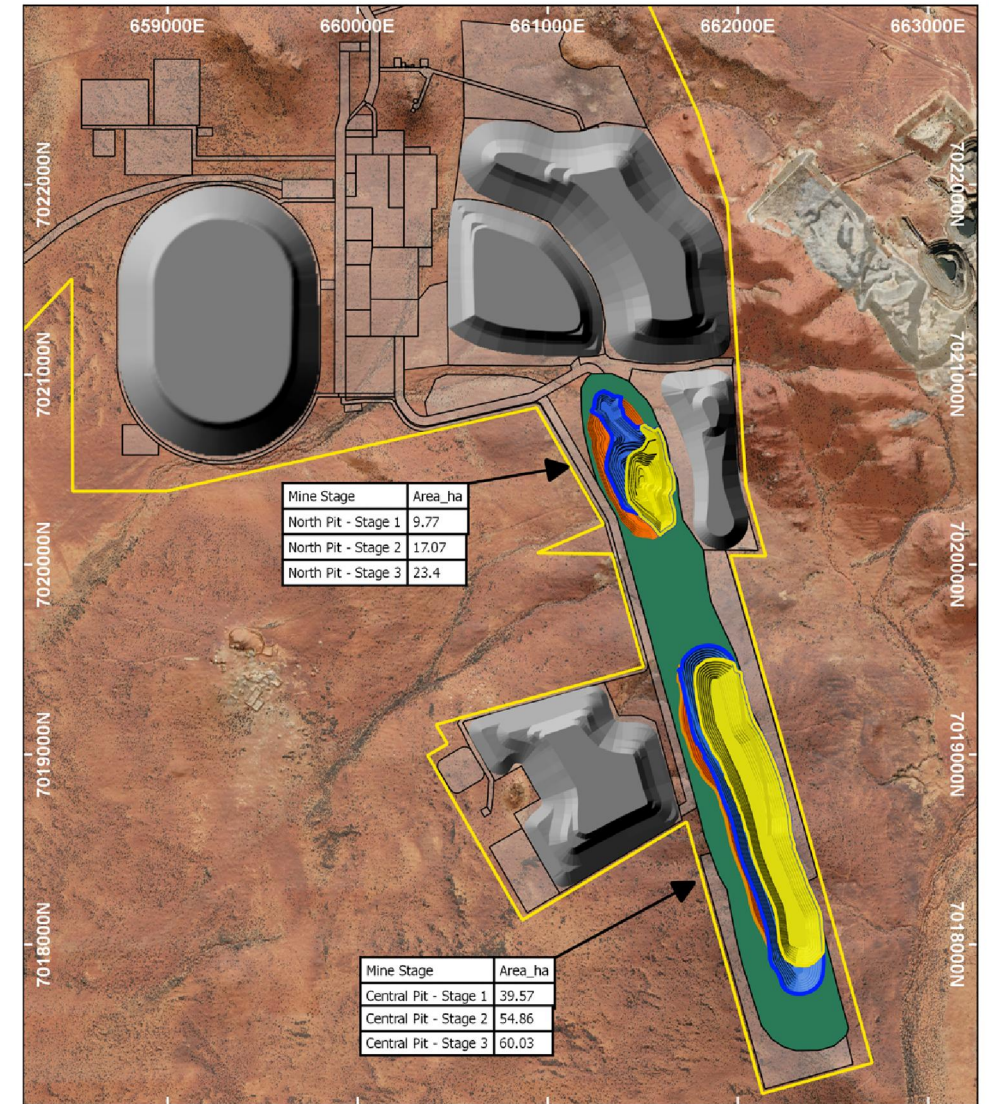
6,000 to 10,000 tonnes of TMT's proposed production of 12,800Tpa V_2O_5 covered under Binding Offtake and MoU

Project Development Activities

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- Metallurgical, geotechnical and resource infill drilling to commence at Yarrabubba.
- Yarrabubba reserve estimation / open pit design to be updated.
- Environmental approvals progressing with ERD to be lodged early Q1 2021.
- Yarrabubba flowsheet design and optimisation.
- Ongoing market engagement for product offtake and funding options.
- Logistics, haulage routes options analysis.
- NAIF engagement – part of strategic funding approach.
- Western Australian Government Lead Agency Support - Future battery industry strategy supporting downstream processing options.
- Equipment vendor engagement – FLSmidth kiln supply agreement executed.



Investment Case

- ✓ **Leveraged** to demand for premium iron product and structural change in the vanadium industry.
- ✓ **Delivering** offtake and partner engagement underpinned by high quality DFS.
- ✓ **Globally Significant** low cost, large scale and long life vanadium project.
- ✓ **Stable** operating environment with excellent infrastructure and access to services.
- ✓ **Team in place** focused on progressing the project to maximise shareholder value.





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**FOLLOW US AS WE CREATE
VALUE FOR SHAREHOLDERS**



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APPENDICES

One of The Highest Grade Deposits in the World*

- Global combined resource of **137.2Mt** at **38.9% Fe** and **0.9% V₂O₅**
- High grade resource of **75.1Mt** at **48.1% Fe** and **1.1% V₂O₅** in consistent basal massive magnetite
- Gabanimtha Vanadium Project **Proven and Probable Reserve of 29.6Mt** at **0.88% V₂O₅** at extremely high 98% tonnage conversion
- Yarrabubba Project maiden **Probable Reserve of 9.4Mt** at **45.3% Fe** and **0.97% V₂O₅**

**MINING
RESERVE**

29.6Mt
@ 0.88% V₂O₅

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.

* – Refer TMT ASX announcements dated 29 March 2019 and 1 July 2020 for full details of the mineral resource estimation.



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August 19 DFS – Processing¹

1. **Crushing & Screening** - ROM ore is crushed down to an 80% passing size of 8mm
2. **Grinding & Wet Magnetic Separation** - material ground down to an 80% passing size of 0.25mm, followed by wet magnetic separation to remove finely liberated gangue from the vanadium-bearing magnetite
3. **Roasting** – the vanadium-bearing magnetite concentrate is roasted with sodium-based salt to convert V_2O_5 to water soluble sodium metavanadate. Pilot scale kiln testwork by FLSmidth informed engineering and operating parameters
4. **Leaching & Precipitation** - sodium metavanadate is leached out of the roasted product with water followed by re-precipitation of vanadium into ammonium metavanadate
5. **De-ammoniation & Calcination** - the ammonia is removed from the precipitated product to form a vanadium pentoxide powder / flake product
6. **Packaging** - package the saleable product to meet the requirements for offtake



**HIGH PURITY
PRODUCT**



>99% V_2O_5

¹Refer TMT ASX announcement dated 21 August 2019 for full details of the Definitive Feasibility Study

August 19 DFS

– Material Physical Assumptions & Anticipated Outputs*

PRODUCTION



Key Metric	Unit	DFS
Average V ₂ O ₅ Production Rate	MIb Per Annum	27.9
Targeted Production Commencement	Year	2022
Estimated Mine / Processing Life	Years	+16
Life of Mine Production	MIb V ₂ O ₅	447.1
Processing Rate – ROM (Yrs 1 – 12)	Mtpa	1.7 - 2.3
Estimated mineralisation to be mined	Mt	35.7
Average LOM Strip Ratio		4.3
Average Diluted Mining Grade (LOM)	% V ₂ O ₅	0.83
Average Plant Feed Grade (Yrs 1 -12)	% V ₂ O ₅	1.04
Average Yield to Mag Con (Yrs 1 – 12) ¹	%	71
Average V Recovery (Yrs 1 – 12) ¹	%	70

Conservative throughput and recovery ramp up assumptions of +2 years.

Operating parameters based on the lower end of the range of parameters defined from pilot scale test work.

Kiln pilot scale test work completed by industry leading kiln supplier FLSmidth.



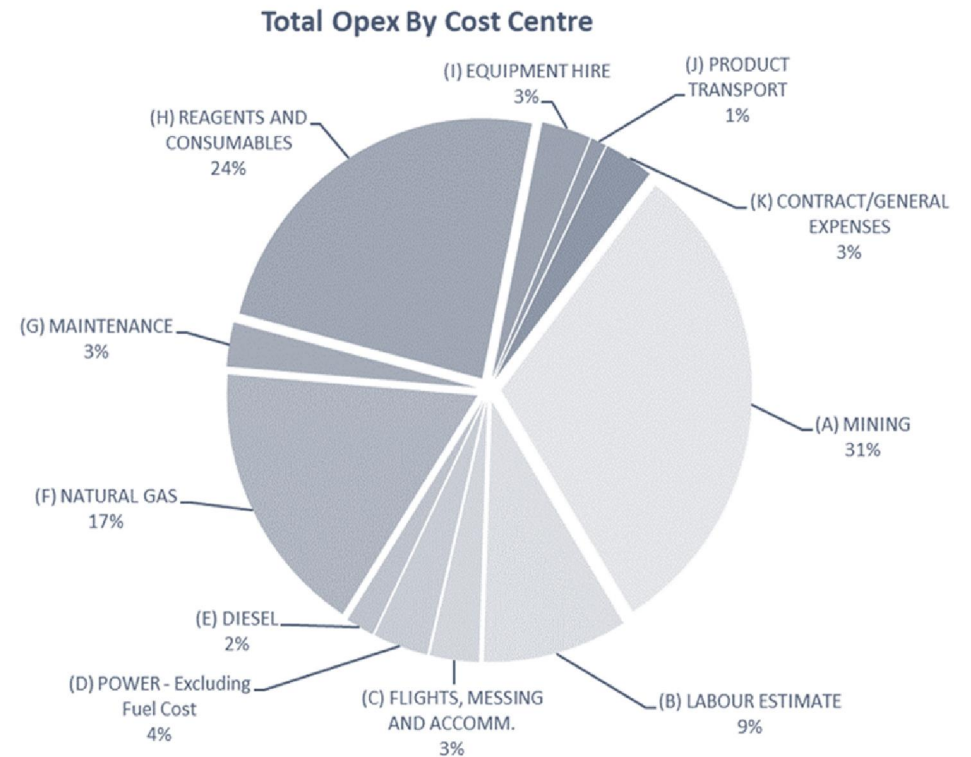
¹Includes two year ramp up period, and blended transitional / partly oxidised feed in the early years

*Refer TMT ASX announcement dated 21 August 2019 for full details of the Definitive Feasibility Study

Process Plant Capex and Operating Cost Breakdown

GVP DFS ¹ Major Capital Areas	Total (A\$)
Mining	185,107
Process Plant	169,269,827
Tailings Facility	21,568,006
Infrastructure	45,940,142
Services	28,660,977
Other Items (Spares, First Fills etc.)	6,354,685
Indirects (EPCM, Owners Costs, Insurances etc.)	132,341,850
CAPEX EXCLUDING CONTINGENCY	\$404,320,593
CONTINGENCY	\$49,485,583
CAPEX INCLUDING CONTINGENCY	\$453,806,176

GVP Operating Cost Estimate Breakdown

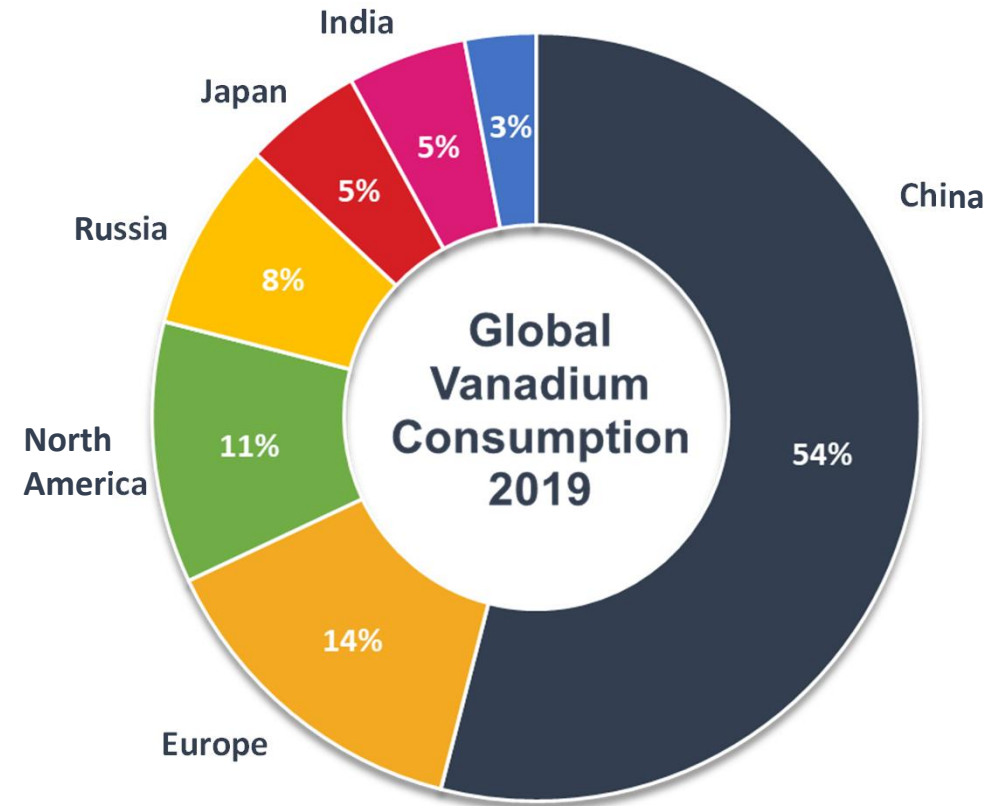
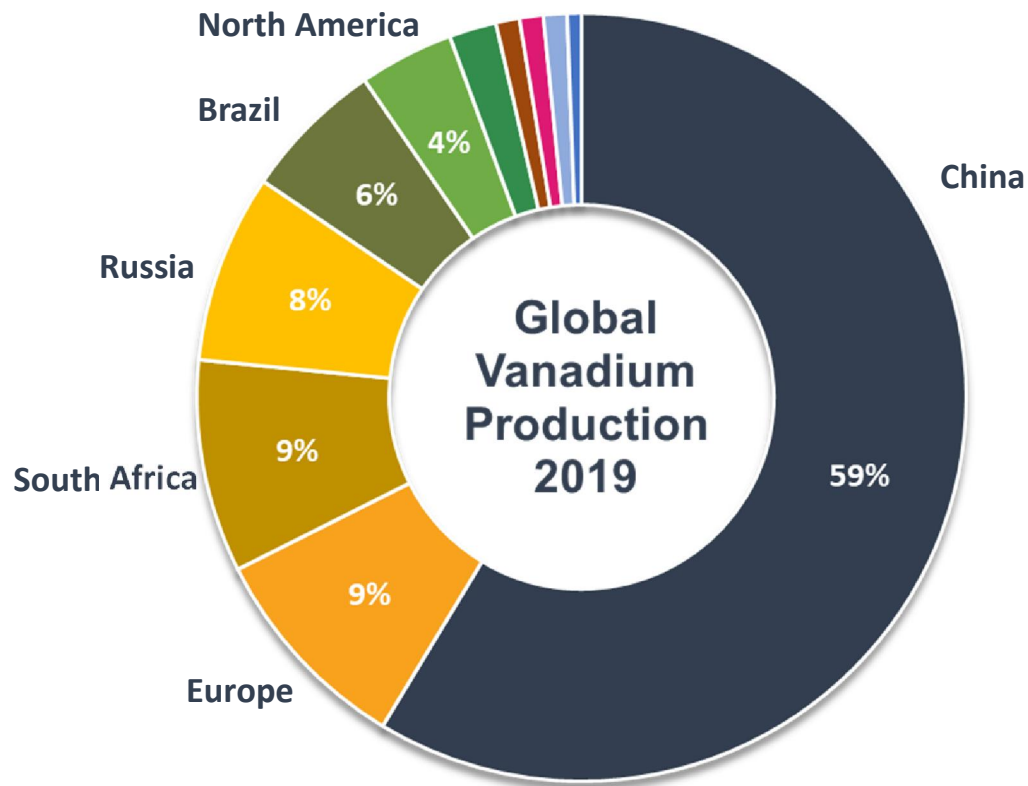


¹Refer TMT ASX announcement dated 21 August 2019 for full details of the Definitive Feasibility Study

Major Use is in Steel – Batteries Rapidly Emerging

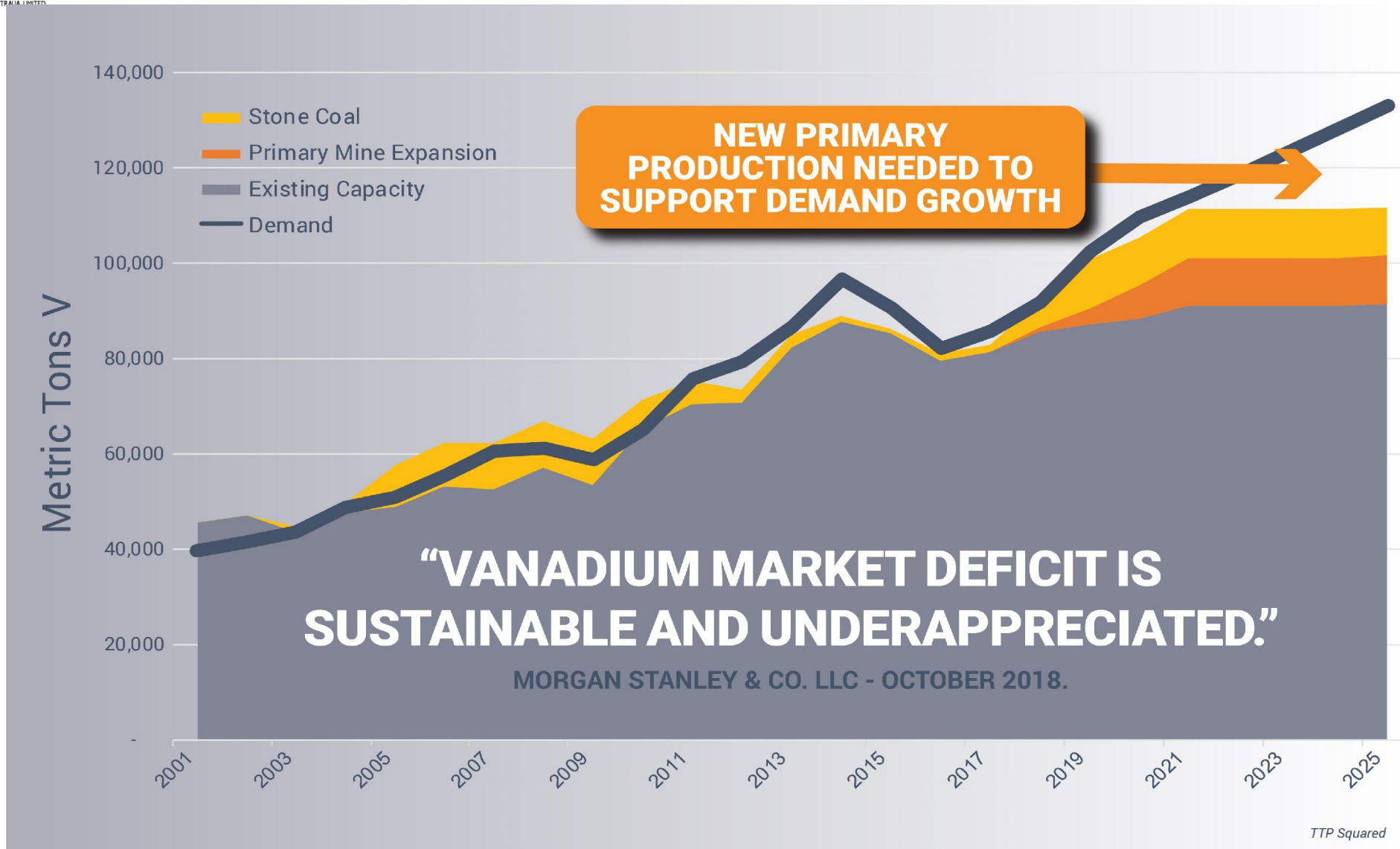


Vanadium Supply / Demand



- Europe, North America, Japan and India net importers.
- Indian consumption set to grow significantly in near to mid term.
- Currently no production from Australia

The Emerging Deficit



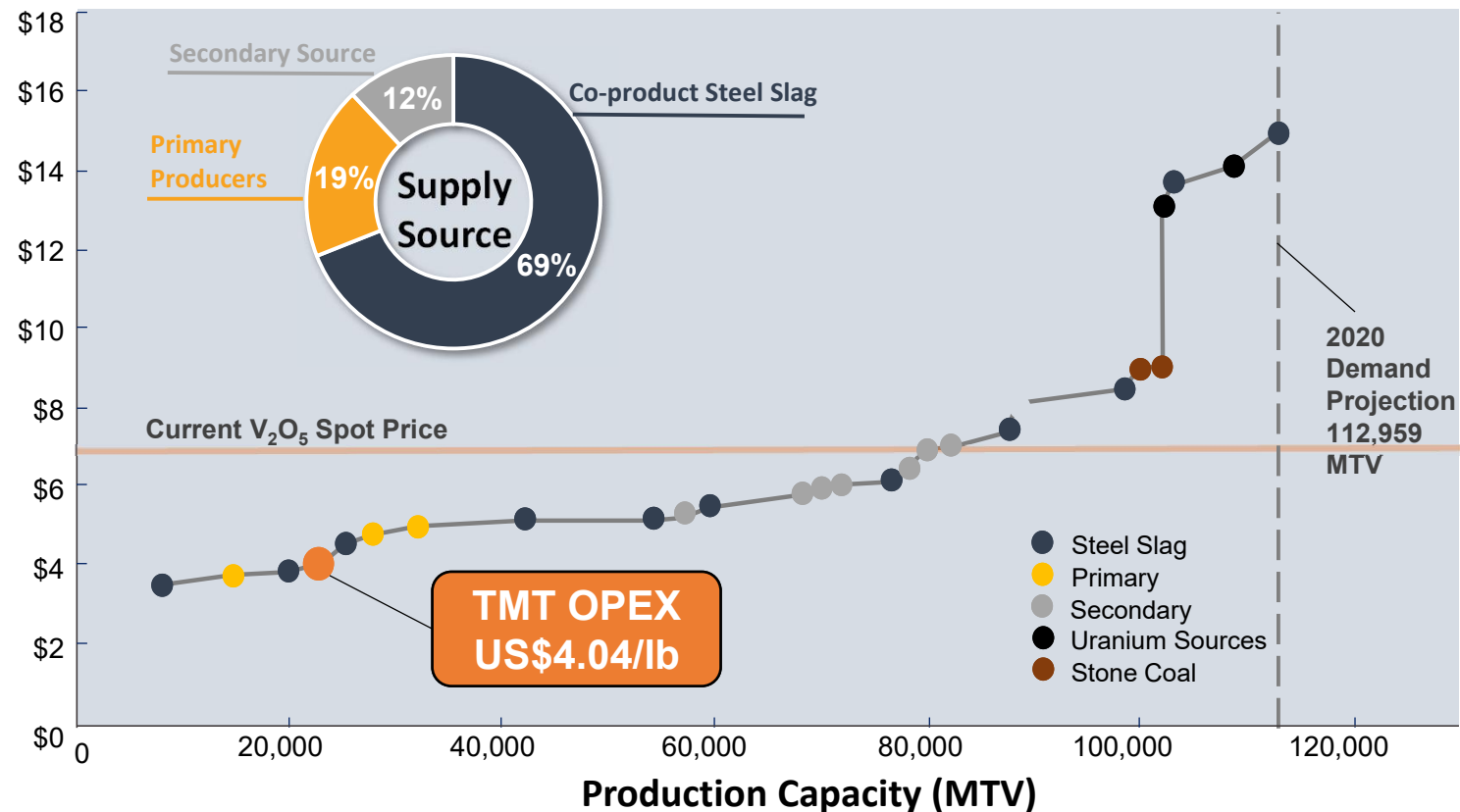
Consumption forecast to increase to 135,300t V by 2028 delivering a forecast deficit of 27,700t V (49,450t V₂O₅) without production expansions and new mine developments.

(Source: Roskill, 2019)

Vanadium Market Dynamics

- China net importer of vanadium in late 2019 – first time in 10 years.
- Price environment removed some of the higher cost / highly polluting Chinese supply.
- Tightening domestic Chinese market due to increased consumption in steel.
- COVID-19 impacts – expecting further stimulus spending on infrastructure.
- Current pricing very supportive of VRFB roll out – Dalian, Hokkaido batteries!
- Gabanintha lowest quartile costs at US\$4.04/lb* V₂O₅.
- All In Sustaining Cost estimate of US\$5.75/lb V₂O₅.

V₂O₅ Cash Cost Curve (Forecast CY2020)



Source: TTP Squared

* TMT operating costs do not incorporate any revenue benefits that may be generated from by-product credits, such as base metal production