



TECHNOLOGY
METALS AUSTRALIA LIMITED

TECHNOLOGY METALS FOR A CLEANER FUTURE

Spark+ Metals & Mining Day

30 September 2021



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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 Yarrabubba and Gabanintha projects 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 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, 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.

WHY INVEST?

**Strategic commodities
located in a Tier 1 jurisdiction**

Gabanintha Vanadium Project

- Large, long-life high purity vanadium project
- Lowest cost quartile
- DFS completed
- Offtake for 75% of average annual output

Yarrabubba Iron-Vanadium Project

- Potential near term development project
- DFS underway as standalone or starter project for Gabanintha development

Part of the future energy solution

- Potential for ore to be used in WA-made Vanadium Redox Flow Batteries (VRFBs)

Nationally significant project



CORPORATE OVERVIEW

CAPITAL STRUCTURE

TMT

ASX Code

\$22.6M*

Pro Forma Cash *(as at 30 Sept 2021)*

\$83.4M*

Market Cap *(as at 29 Sept 2021)*

203.5m*

Shares on Issue

18.7M

Unlisted Options *(Various exercise)*

2.65m

Performance Rights²

¹ Includes 12.35m director and employee options – 3.9m vested, 4.1m to vest on GVP FID, 4.35m vest on YIVP hurdles

² 50% vest on Yarrabubba FID, 50% vest on first production from Yarrabubba

* Pro forma post completion of \$20 million placement announced on 23 September 2021

RESOURCE CAPITAL FUND VII L.P. SECURED AS CORNERSTONE SHAREHOLDER AS PART OF \$20M PLACEMENT – 23 SEPTEMBER 2021

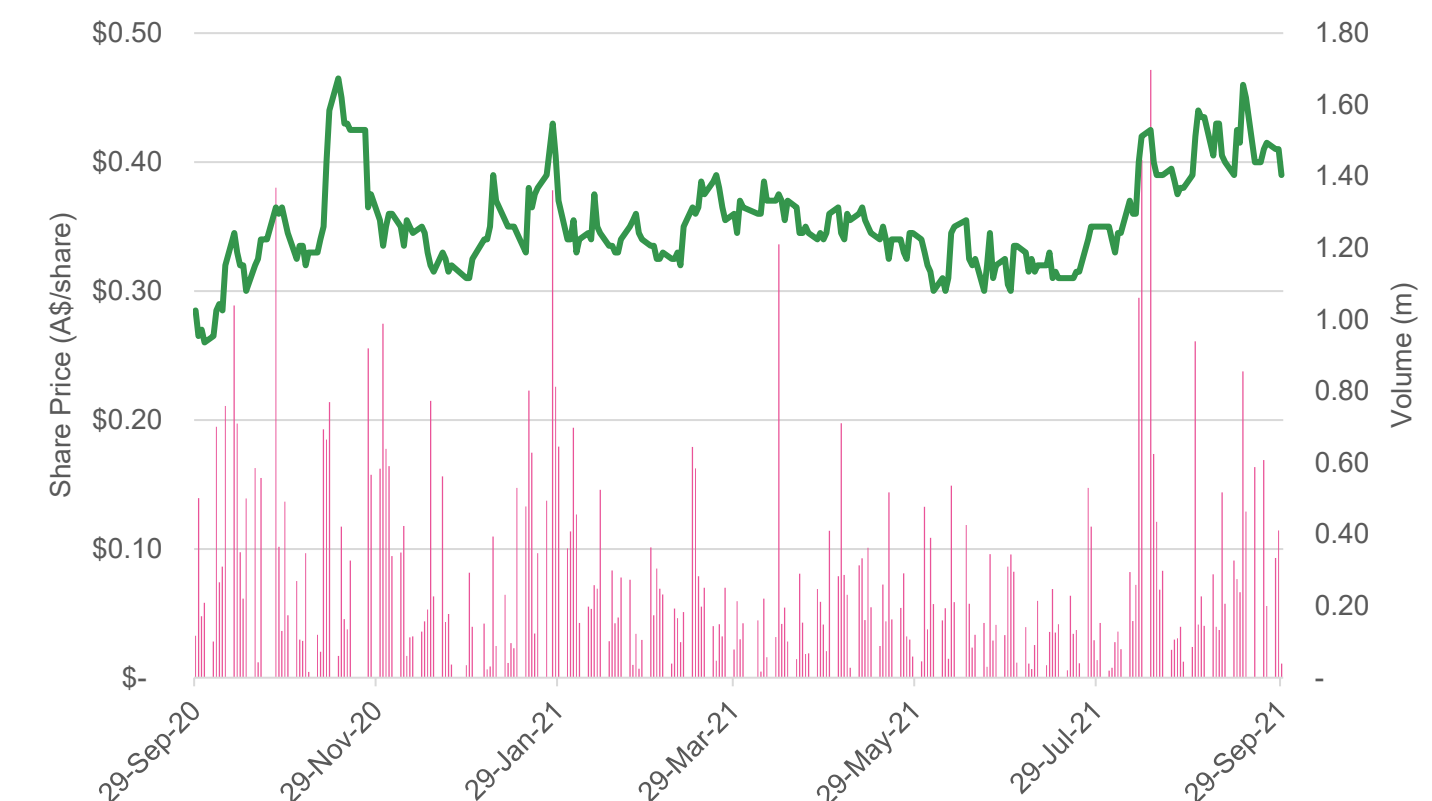
Binding subscription agreement with RCF VII for a \$13.5m investment – RCF VII to become a ~18% shareholder.

TMT is extremely pleased to have secured the support of RCF, a highly regarded mining alternative investment firm.

The investment further endorses the high-quality nature of our vanadium assets and provides us with a platform to focus on the integration of Yarrabubba into the development of the Gabanintha Vanadium Project.



Share Price Chart



EXPERIENCED BOARD AND MANAGEMENT

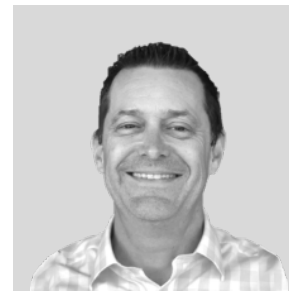


Michael Fry
Non-Exec Chairman

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

Mr Fry is currently Non-Executive Chairman of ASX listed Brookside Energy Limited with a focus on oil and gas exploration and production onshore mid-continent region of USA.

Mr Fry was a board member of Precious Metals Australia Limited which owned and operated the Windamurra Vanadium operation in Western Australia.



Ian Prentice
Managing Director

Ian 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. Ian is a Member of the Australasian Institute of Mining and Metallurgy.

Ian 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 gold production in Australia.

Ian is the founding Executive Director of Technology Metals Australia Limited.



Sonu Cheema
Non-Exec Dir/CoSec

Sonu is a Partner at Cicero Group with over 10 years' experience working with public and private companies in Australia and abroad. Roles and responsibilities held by Mr Cheema include 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.

Currently Mr Cheema is Company Secretary for eMetals Limited (ASX: EMT), Avira Resources Limited (ASX: AVW), Yojee Limited (ASX: YOJ) and Comet Resources Limited (ASX: CRL).

Mr Cheema has completed a Bachelor of Commerce majoring in Accounting at Curtin University and is a CPA member.



Michael Bourke
Project Director

Michael holds a Master of Business Administration, Bachelor Economics and Bachelor Engineering (Chemical) degrees and worked in the minerals and metals industry for over 30 years.

His commodity experience covers mineral sands, nickel, cobalt, vanadium, tin, LNG and oil sands. His work includes contracting and project experience, fabrication for LNG projects and operational responsibility for facilities in WA and Singapore.

He was Business Planning Manager for WMC Nickel, Executive General Manager for Iluka Resources, President Emeco Canada and Operations Manager AGC-Ausgroup.



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 is a Member of the Australian Institute of Geoscientists. John has previously served as Exploration Manager for an ASX-listed iron ore resource company and has relevant consulting experience in Western Australia and Tasmania.

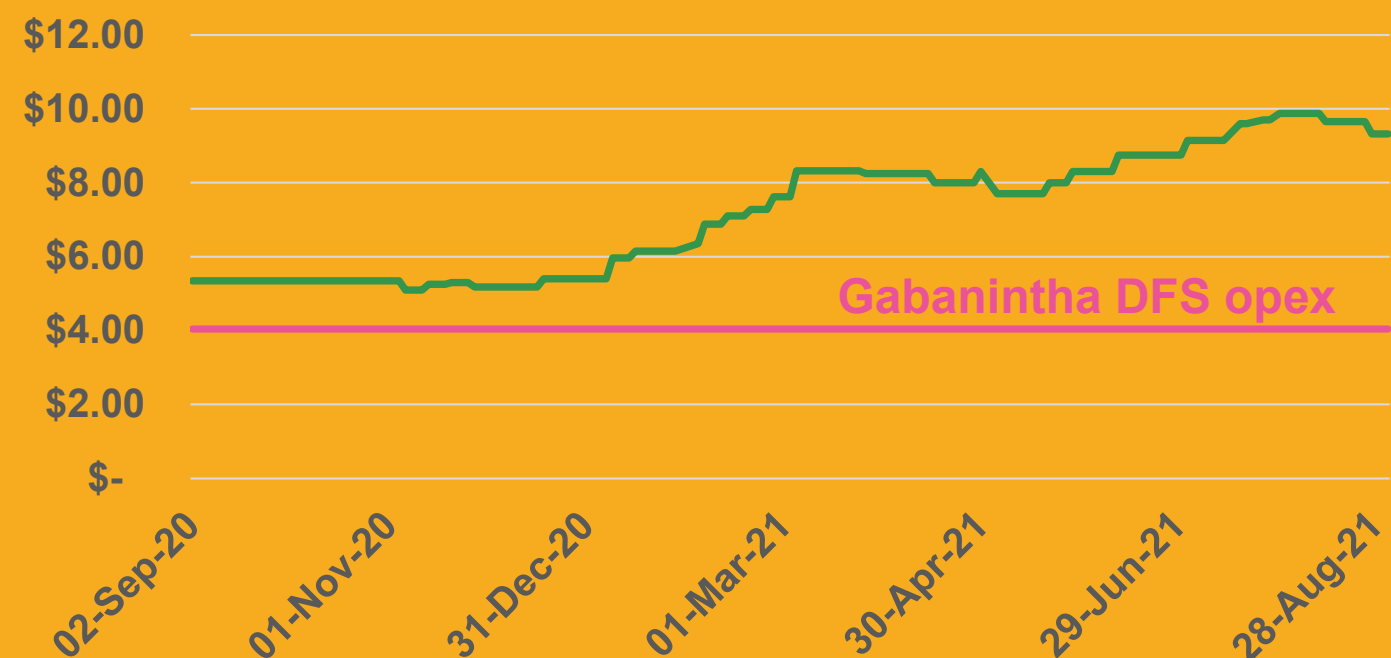
John has been managing the geological data acquisition at Gabanintha and Yarrabubba since February 2017.

VANADIUM

A CRITICAL MINERAL SUPPORTING NET ZERO

- Vanadium has an important role to play strengthening steel, enabling higher quality steel, lowering emissions.
- It is also used in very large-scale batteries (VRFB) that don't degrade over time, ideal for support of renewable energy.
- Tightening market with consumption in steel in China and improving demand in Europe and North America.
- COVID-19 impacts – stimulus spending on infrastructure and focus on renewable energy / storage.

V₂O₅ Vanadium Pentoxide Flake 98% Price USD / lb



“We see significant growth in demand for vanadium - which we foresee due to its growing use in high grade steel and flow batteries.”

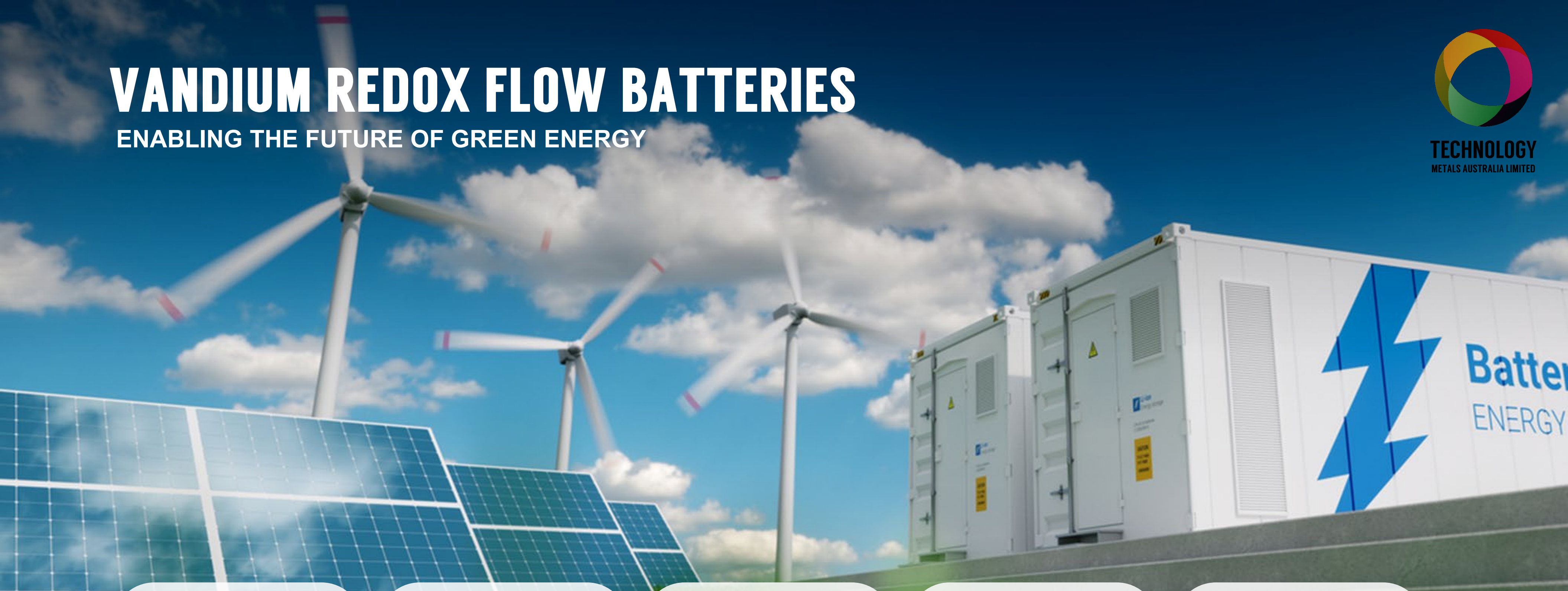
Sir Mick Davis, former Xstrata plc CEO

VANDIUM REDOX FLOW BATTERIES

ENABLING THE FUTURE OF GREEN ENERGY



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No Degradation

Performance remains constant with excellent long term charge retention



Low Energy Cost

Over its 20+ year lifespan, VRFB technology offers the lowest cost per kWh stored (LCOE)



Safety

The vanadium electrolyte is water based and is totally non-flammable



Sustainability

The vanadium is fully reusable and recyclable at end of the battery life

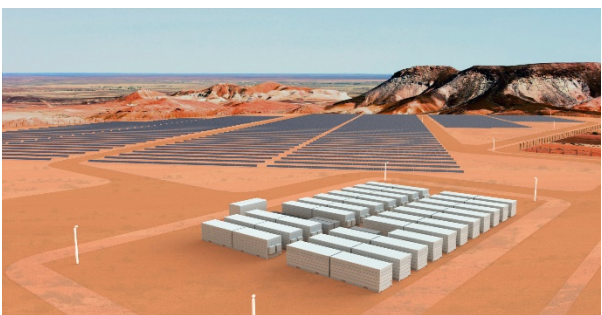


Long Life

VRFB's can easily last more than 20 years with very high cycle life (up to 20,000 cycles)

VRFB DEPLOYMENTS

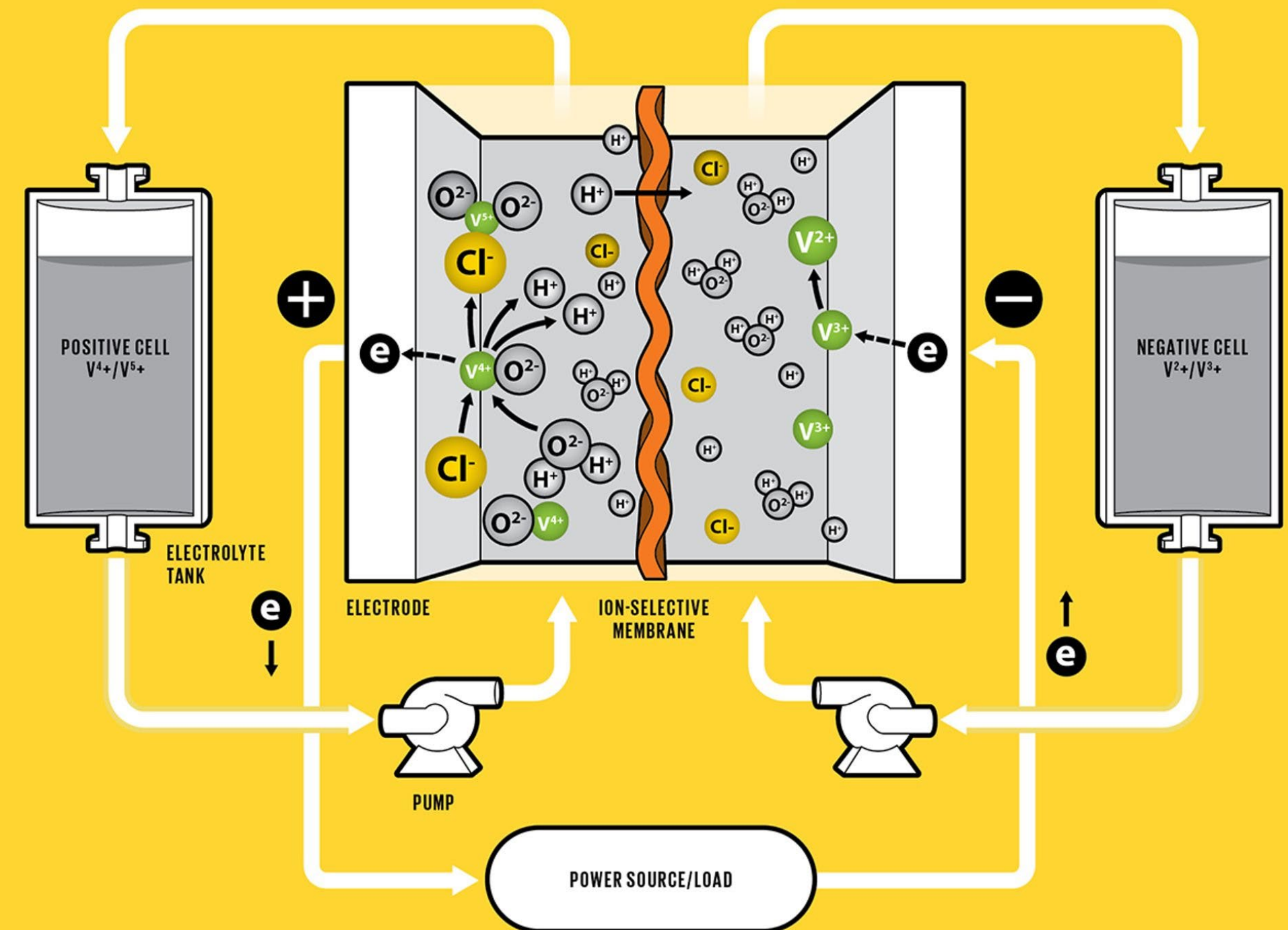
Superior technical and economic fundamentals are leading to massive deployment of VRFBs, especially in Asia - large scale VRFB projects being delivered in Japan and China.

Details	Sumitomo	Rongke Power	VRB Energy	Shanghai Electric	Yadlamalka Energy
Image			n/a	n/a	
Project Location	Hokkaido, Japan	Dalian City, China	Hubei province, China	Jiangsu province, China	South Australia
Stage	Commenced operations in 2015	Operational	Construction	Public plans	Construction
Developer					
Scale	60MWh (15MW for 4h)	800MWh (200MW)	500MWh (100MW)	400MWh (100MW)	8MWh (2MW)
Application	Stabilise the flow of wind and solar power on the northern island of Hokkaido	Project will provide peak-shaving as well as form another load center for the Dalian peninsula, enhancing grid stabilisation	Energy storage solution paired with wind power and solar PV generation	n/a	The project will supply a combination of solar power and battery storage services to the grid

Source: Company announcements.

VANADIUM REDOX FLOW BATTERIES

- The positive and negative sides of a vanadium redox-flow battery are separated by a membrane that selectively allows protons to go through.
- During charging, an applied voltage causes vanadium ions to each lose an electron on the positive side.
- The freed electrons flow through the outside circuit to the negative side, where they are stored.
- During discharging, the stored electrons are released, flowing back through the outside circuit to the positive side.
- VRFB's only contain vanadium electrolytes, with no contamination.
- VRFB's can be fully recycled after 20+ years usage with no degradation.



MURCHISON TECHNOLOGY METALS PROJECT

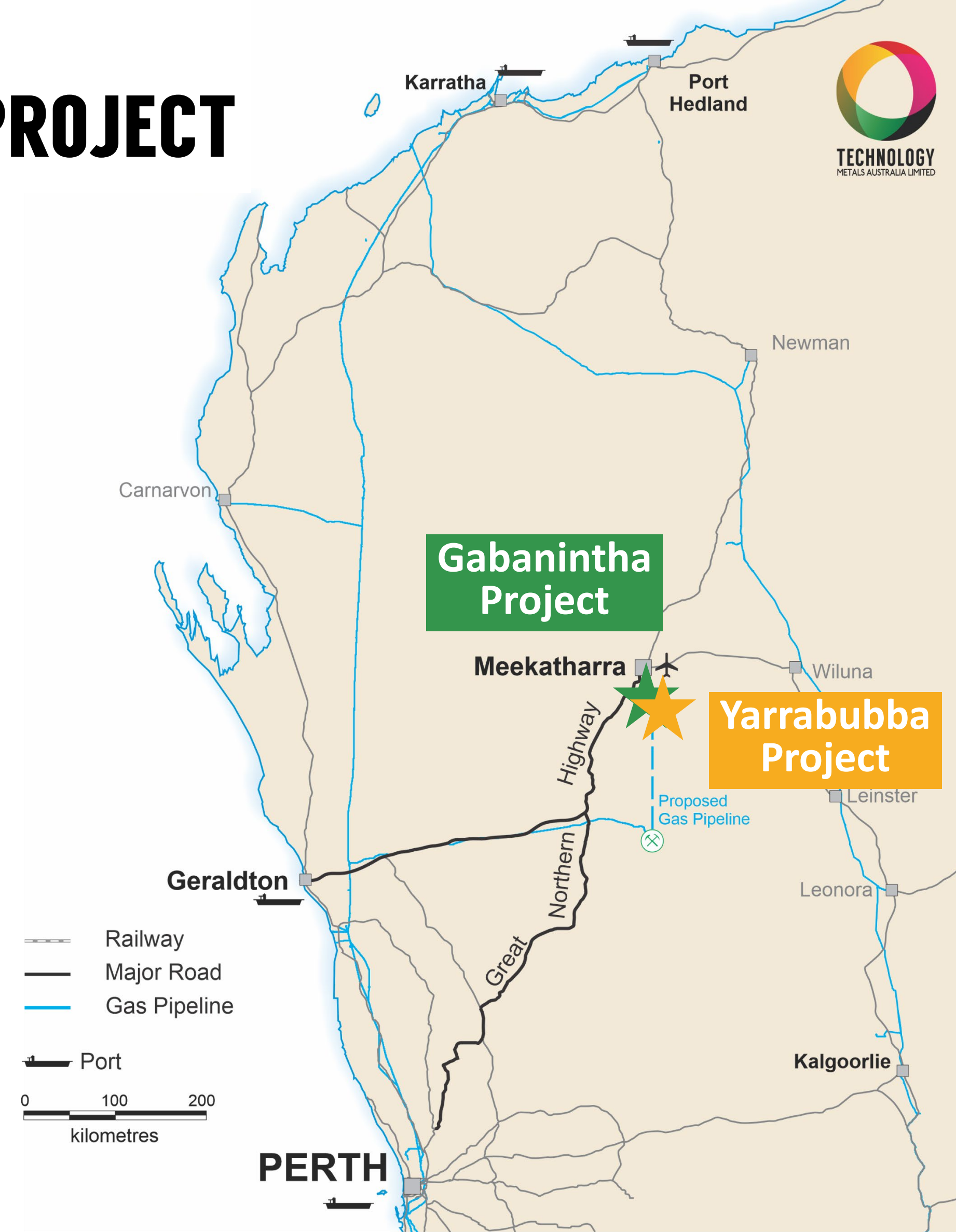


GABANINTHA VANADIUM PROJECT

- DFS Completed
- Large, long-life high purity vanadium project
- Lowest cost quartile at US\$4.04/lb V₂O₅
- Pre-tax NPV₈ A\$663, IRR 21% (@US\$8.78/lb V₂O₅ pricing)
- Pre-production capex: US\$318M
- Offtake for 75% of average annual output

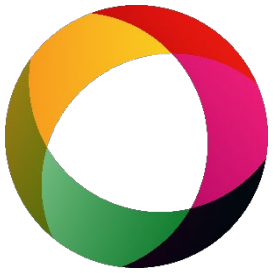
YARRABUBBA VANADIUM DEPOSIT

- Higher grade vanadium concentrate expected to materially impact Gabanintha processing efficiency
- Potential to materially enhance Gabanintha economics
- Retain optionality for lower capital development project
- Likely to extend Gabanintha mine life beyond 25 years



ENVIRONMENT, SOCIAL & GOVERNANCE

BUILDING A GLOBALLY RELEVANT RESOURCES COMPANY



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Environment

Constructive consultation with WA EPA supporting progress on the GVP ERD.

Early engagement with Traditional Owners and Pastoralists to minimise impacts.

Promote energy efficiency and minimise water usage.

Policy of mitigation, minimisation and rehabilitation.



Social / Community

Policy in place to support local procurement and employment wherever practical.

Support community events and activities – developing a social licence to operate.

Generate training, business and work opportunities for Traditional Owners.

Pursue downstream processing options to ensure value add and skills development.



Governance

Instilling a culture of high ethical standards throughout the group and its activities.

Aim to always operate in a safe and respectful manner.

Focus on active risk management throughout the business.

Develop, nurture and maintain our people.

GABANINTHA VANADIUM PROJECT

WORLD-CLASS DEVELOPMENT READY PROJECT

MINING RESERVE

29.6Mt
@ 0.88% V₂O₅

MINE LIFE

+16years

PROCESSING PLANT

27.9Mlb
V₂O₅ pa

HIGH PURITY PRODUCT

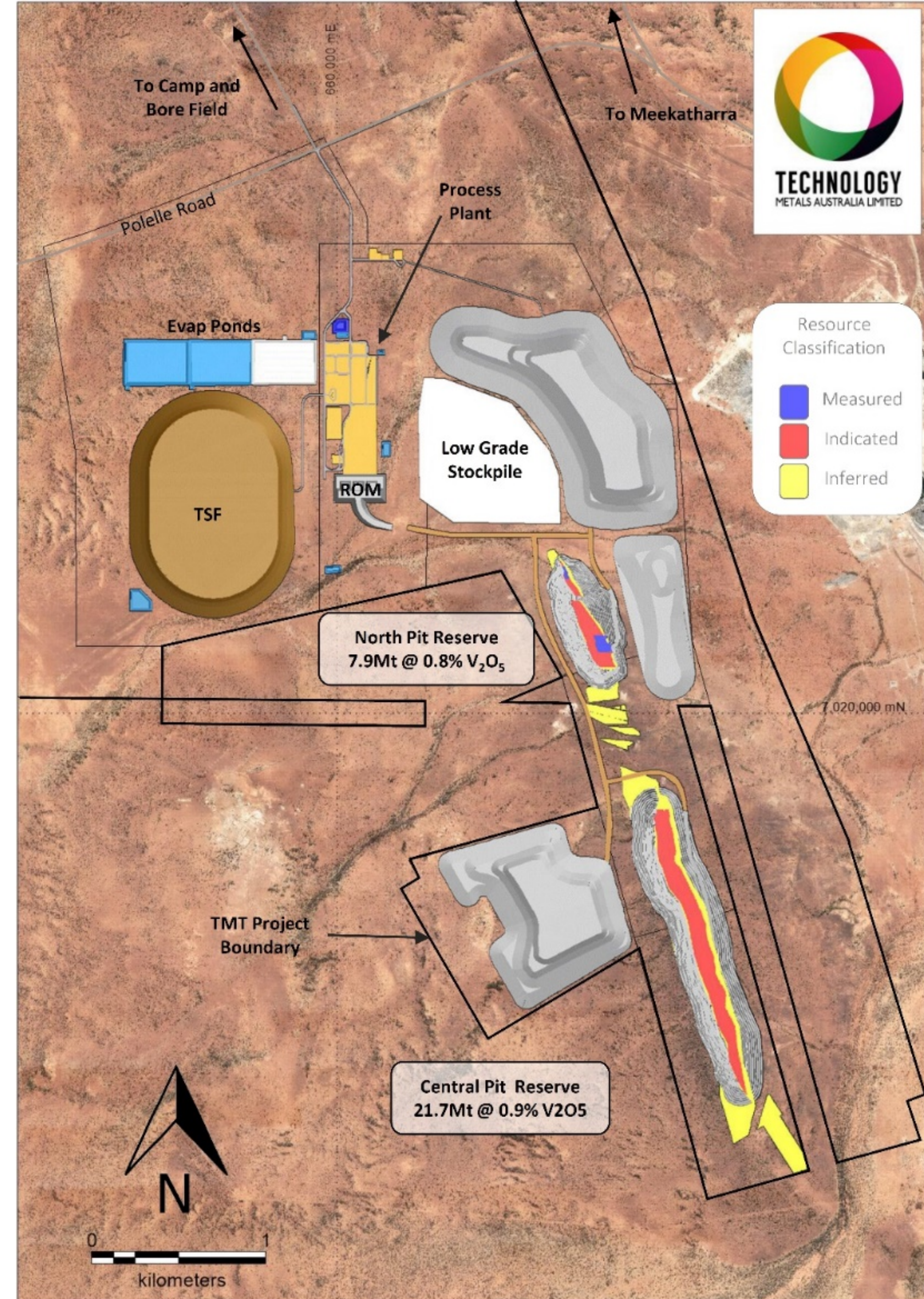
>99% V₂O₅

OPEX

US\$4.04
/ lb V₂O₅

- One of the highest grade undeveloped vanadium deposits in the world.
- Life of mine¹ **revenue of A\$5.7Bn** at US\$8.78/lb V₂O₅.
- Average annual EBITDA of A\$175 million.
- Lowest cost quartile **operating costs at US\$4.04/lb V₂O₅**.
- Premium purity product feeding the green revolution.
- Ore body characterised by very shallow oxidation profile.
- Mining licences granted, environmental approvals nearing completion.
- Gas supply MoU in place

1 - TMT ASX announcement 21 August 2019 for full details of the DFS: Financial Metrics at long term historical average price of US\$8.78/lb V₂O₅



GABANINTHA VANADIUM PROJECT

KEY PROJECT PARTNERS



WA Government

Lead Agency Support
Future Battery Industry
Supporting downstream processing.

NAIF

Engagement with Federal Government agency

Part of strategic funding approach.

WA EPA

Environmental approvals

Constructive consultation underway

APA

Gas transportation agreement

Lower gas transportation costs; access to emerging Perth Basin gas fields.

FLSmidth

Equipment vendor engagement

Kiln supply agreement executed.

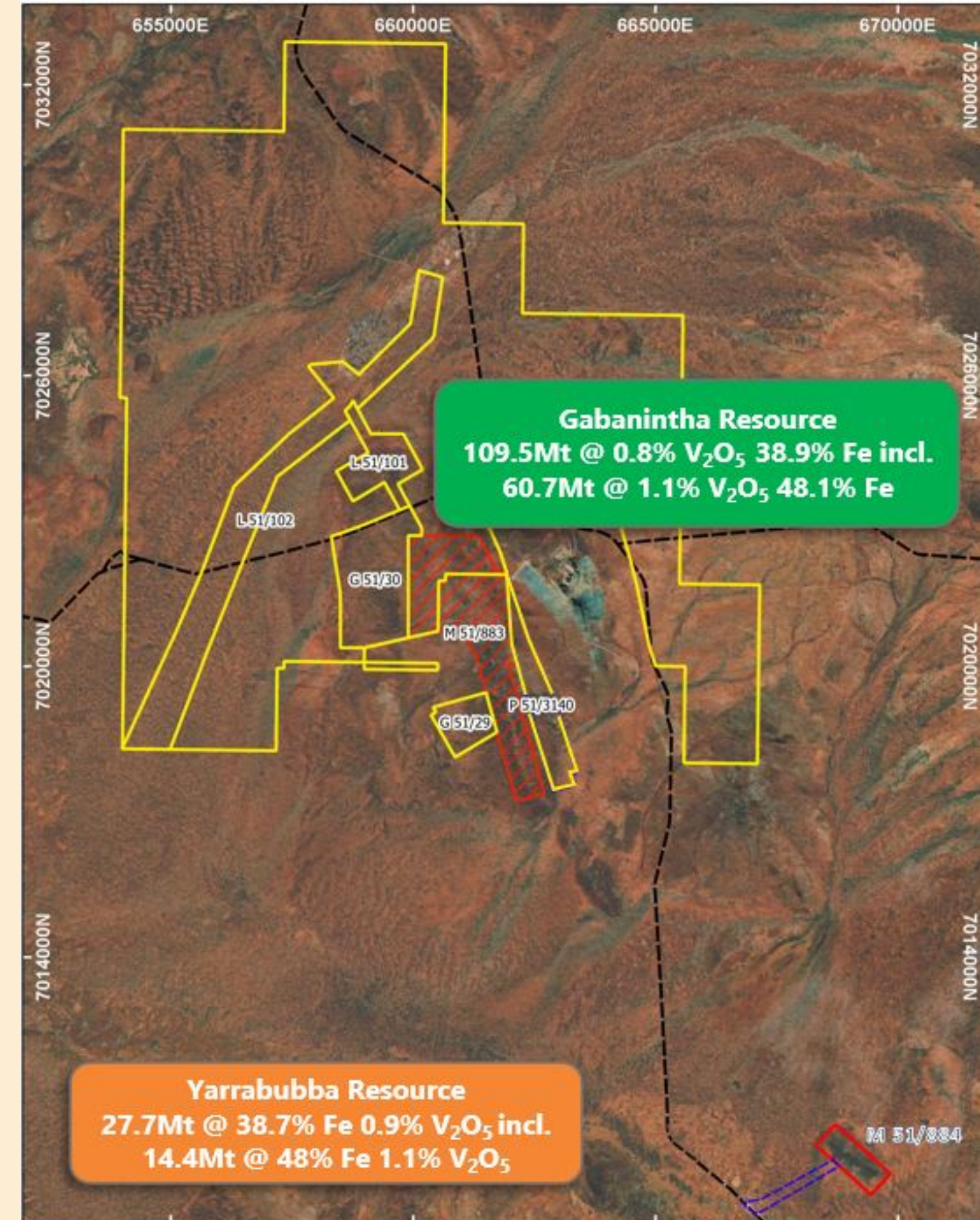
Ongoing market engagement for product offtake / funding options

Sinosteel, CNMNC, Shaanxi Fengyuan, Big Power, LE System.

YARRABUBBA PROJECT

OVERVIEW

- Original work positioned Yarrabubba as a high grade, high purity iron ore (+ vanadium) magnetite product.
- Analysis indicated **62.8% Fe and 1.66% V_2O_5** product with **mass recovery of 49.6%**.
- Strategic review indicates higher returns for Yarrabubba as a vanadium feedstock to Gabanintha.
- The vanadium grade in concentrate at Yarrabubba is ~25% higher than at Gabanintha.
- Concentrate grade is a key economic driver for high purity salt roast / water leach vanadium projects such as Gabanintha.
- Opportunity to lower life of mine operating costs, reduce the payback period & lower the overall development risk of an integrated project.
- The DFS scope has been revised, with completion expected in mid-2022.

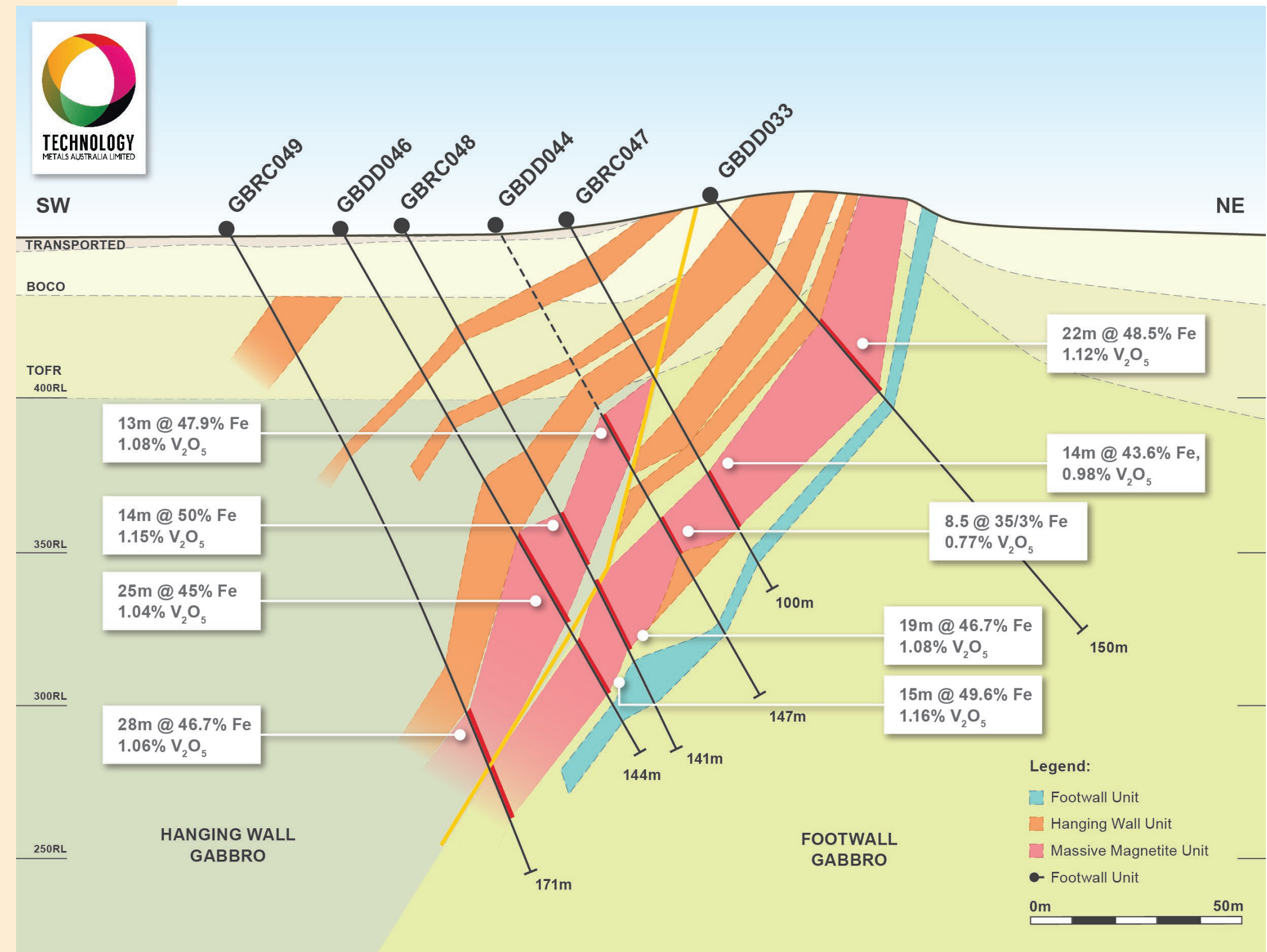


YARRABUBBA PROJECT

REDUCING THE DEVELOPMENT RISK AT GABANINTHA



- Yarrabubba is in the same geological horizon as Gabanintha but produces higher V_2O_5 concentrate.
- Beneficiation to deliver superior magnetite concentrate for Gabanintha kiln feed (or high purity iron ore).
- Key differentiators for Yarrabubba
 - High insitu grades with very high mass recoveries
 - Ability to separate large portion of titanium from mag con
 - Very shallow oxidation profile
 - Simple open pit mining
 - Thick high-grade zones near surface
- Resource drilling completed H1 2021 – defined significant structural thickening of high-grade zones.
- Resource / Reserve upgrade underway – expect material reserve growth.
- Titanium by - product (+48% TiO_2) generated from gravity separation of non-magnetic tails.



STRATEGIC PLAN

To produce strategic technology metals that reduce emissions and produce emissions free power



GVP – YARRABUBBA INTEGRATION STRATEGIC RATIONALE



Improved Plant Operating Efficiency

- Yarrabubba V_2O_5 in concentrate grade is ~25% higher than Gabanintha
- Expect significantly improved plant efficiency for roast / leach circuit
- Early review work highlights potential for value enhancements, particularly in early years of operation, via trade-off studies – Capex vs Throughput vs Output

Increased Project Mine Life

- Increases Project Reserves* by at least 35% from 260kt to 350kt contained V_2O_5 – additional infill Resource drilling completed H1 2021
- Targeting >25 year mine life

Speed to Market

- GVP DFS completed in August 2019 – Yarrabubba metallurgical testwork confirms applicability - expect round of larger / pilot scale testwork to integrate into GVP DFS – significant bulk sample available for processing
- Clearer path to financing with support of RCF VII as strategic industry investor
- Key industry alliances and partnerships in place – offtake, financing, equipment vendors, gas supply & Government
- No change in environmental (EPA) approvals – which are expected Q1 2022

Market Relevance

- Timing matches with recent increases in V_2O_5 prices alongside increasing focus on the green energy battery market – MOU for vanadium electrolyte development in place with Japanese industry leader
- One of the most advanced undeveloped high purity, high grade vanadium projects globally – one of the few to have successfully completed bulk pilot scale continuous roast / leach testwork

* Yarrabubba Resource and Reserve upgrade underway to include 2021 drilling

TIMETABLE AND NEWS

Mining leases - granted



Bulk sample generation



Infill Resource drilling



ERD – Update lodged for approval

Q3/Q4 2021

Mineral Resource update

Q3/Q4 2021

Ore Reserve estimation

Q3/Q4 2021

Pilot roast / leach testwork

Q4 2021 / Q1 2022

Process plant design refinement

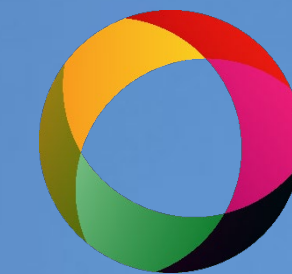
H1 2022

GVP DFS completion

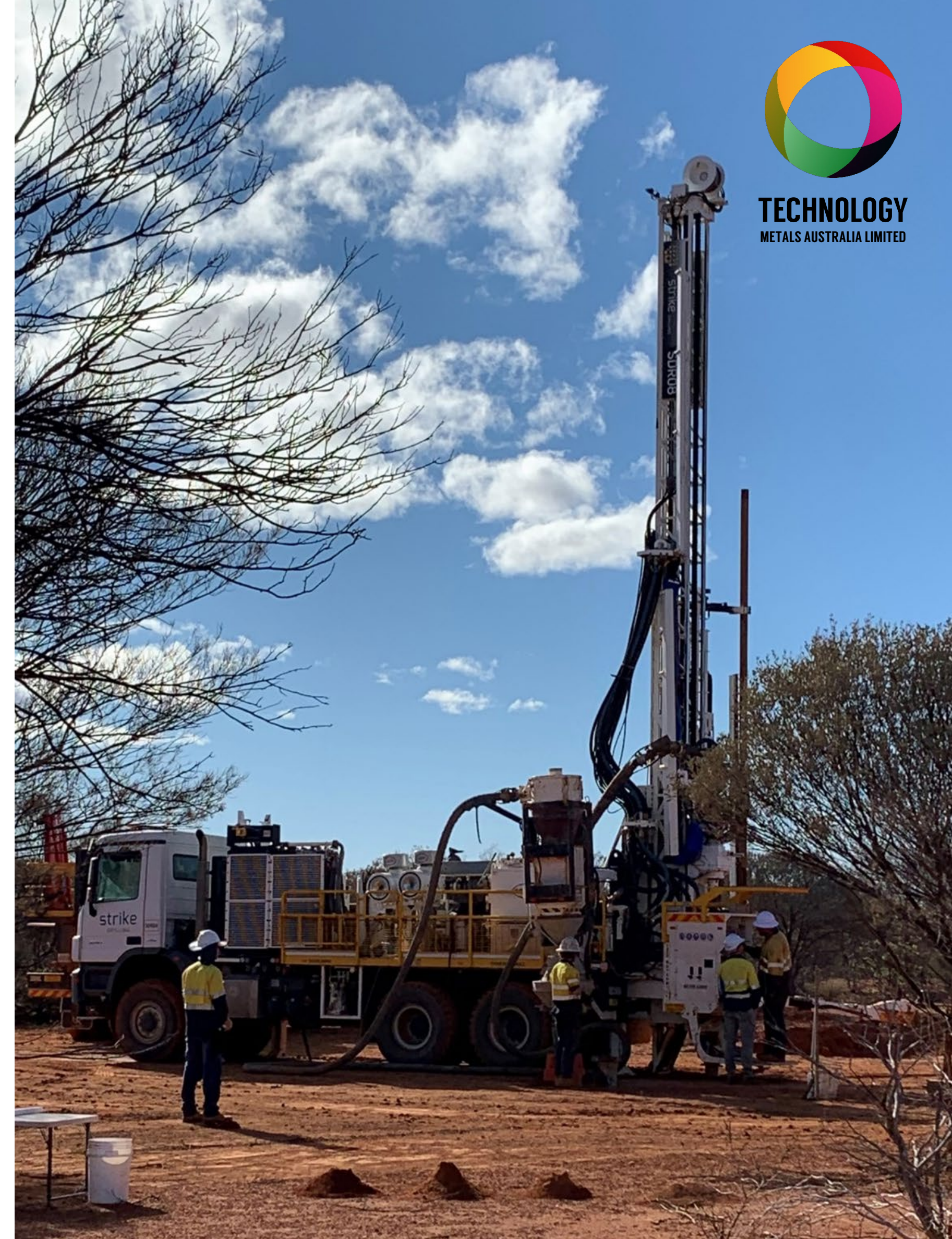
Q2/Q3 2022

Yarrabubba mining approvals

Progressing



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VRFB AND ELECTROLYTE STRATEGY

PART OF THE ENERGY SOLUTION



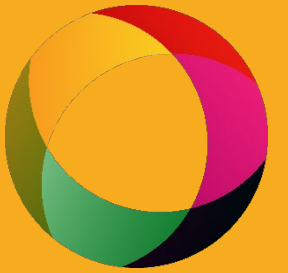
- MoU signed with Japanese electrolyte producer, LE System, to investigate the potential local production of vanadium electrolytes using Technology Metals' products.
- Concurrently, the Company has initiated discussions with VRFB manufacturers with regards to the establishment of an Australian VRFB production facility.
- The evolution of the Murchison Technology Metals Project from a V_2O_5 flake producer into downstream applications forms part of our sustainability strategy.



LE SYSTEM CO., Ltd.

LE SYSTEM Co., Ltd.

A COMPELLING INVESTMENT



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Globally Significant

projects with robust economics and scope to stage funding.

Strategic Investor

RCF VII with long-term focus on supporting project development

Critical Metals

deliver critical minerals that support emissions reduction goals.

Delivering

on project development underpinned by high quality technical work.

Team in place

focused on a development strategy to maximise shareholder value.

Stable

operating environment with excellent infrastructure and access.

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