



# Neometals

All the right elements<sup>®</sup>

AGM Presentation – November 2019  
ASX Code: NMT OTC/Nasdaq Intl: RDRUY

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## Compliance Statement:

The information in this document that relates to Mt Edwards Nickel – Mineral Resource Estimates, “Barrambie Vanadium DFS Results, Start of Titanium Pilot” and “Mt Edwards Nickel – Drill Results” has been extracted from ASX Releases set out below. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX Releases set out below:

19/4/2018	Mt Edwards Nickel – Mineral Resource Estimate
22/05/2019	Barrambie Vanadium DFS Results and Start of Titanium Pilot
5/08/2019	Mt Edwards Nickel – Drill Results
13/11/2019	Additional Nickel Mineral Resource at Mt Edwards

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.

# Corporate Video



# Executive Summary

Nm

- ASX listed project developer (ticker 'NMT')
- Focus on integrated mineral/materials for the EV and ESS sectors
- Established in 2003, team of 20, Perth HQ and research laboratory in Montreal
- Team with growing track record in delivering project outcomes:
  - Developed Mt Marion into world's 2<sup>nd</sup> largest spodumene production site
  - Staged sell-down with total project returns to ~A\$200M on outlay of A\$3M
- Returned A\$45M to shareholders in last 4 consecutive financial years\*
- Cash of ~A\$107.1M\* plus ~A\$9.4M in investments vs current mkt cap of A\$109M
- Current focus on 3 advanced development projects amongst diversified suite of opportunities

# Who we are



NE Board Members

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## Management Team



Chris Reed  
Managing Director /  
CEO



Jason Carone  
Company Secretary / CFO



Michael Tamlin  
COO



Darren  
Townsend  
CDO



Paul Wallwork  
GM – Marketing and  
Product Development



Jeremy Mcmanus  
GM – Commercial and  
Investor Relations



Gavin Beer  
GM – Lithium  
Processing



Matthew Read  
GM – Lithium Projects



Andy Robb  
GM – Battery Recycling



David Robinson  
GM – Metallurgy and  
R&D



Greg Hudson  
GM – Geology

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# Neometals



# What we do – clear growth strategy

Nm

- Neometals is pursuing multiple opportunities - strategy is clear
- Story is not complicated, but approach is different:
  - We **identify** value – organic (Li refinery/battery recycling) and M&A (Mt Edwards)
  - We **build** value – with the drill bit/in laboratory then evaluation studies
  - We **realise** value – with **partners** to achieve optimum scale, risk and return
  - We **return** value – dividends and buy backs
- First-class **balance sheet** to fund a pipeline of **advanced projects** (pilot/DFS stage)
- Assembled a first-rate team with relevant industry experience to develop an ecosystem to deliver technical and economic solutions – **pathways to cashflow**
- We align our project development activities with that of underlying markets

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**Neometals**

Li + Ti/V = Nm

# What we have

Nm

- **Core projects** (final stages of evaluation):
  1. Lithium-Ion Battery Recycling Project (Pilot-stage, 100% NMT, MOU for 50:50 JV);
  2. Lithium Refinery Project (DFS Stage, MOU 50:50 JV); and
  3. Barrambie Titanium and Vanadium Project (DFS Stage, 100% NMT, MOU for 50:50 Operating JV).
- **Exploration and long-term projects** include:
  - Mt Edwards lithium and nickel exploration project (WA); and
  - Suite of mineral/material processing technologies at various stages of maturity.

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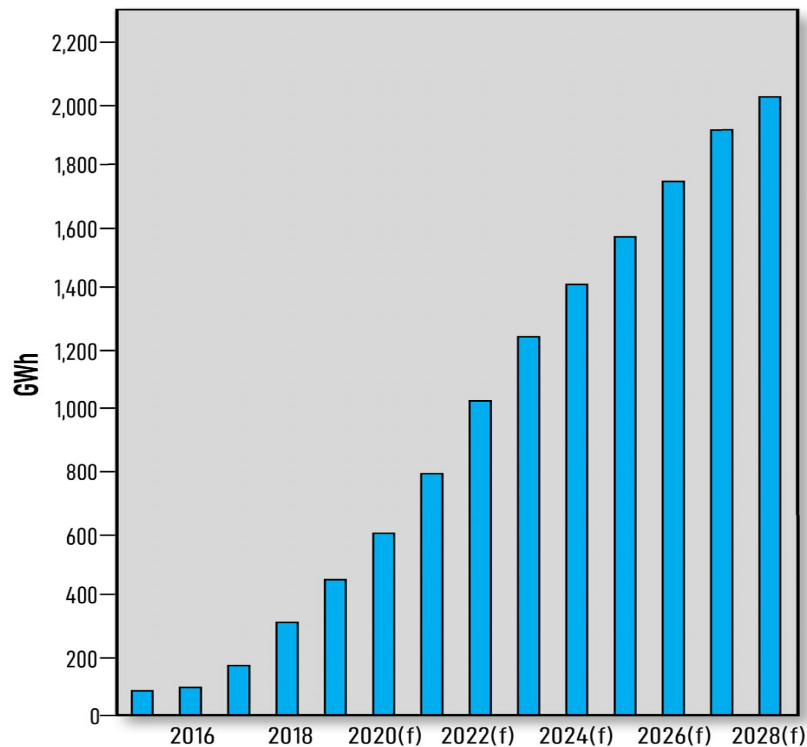
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# Serving the Raw Materials Supply Chains for the EV & ESS Revolution is a once in a lifetime opportunity



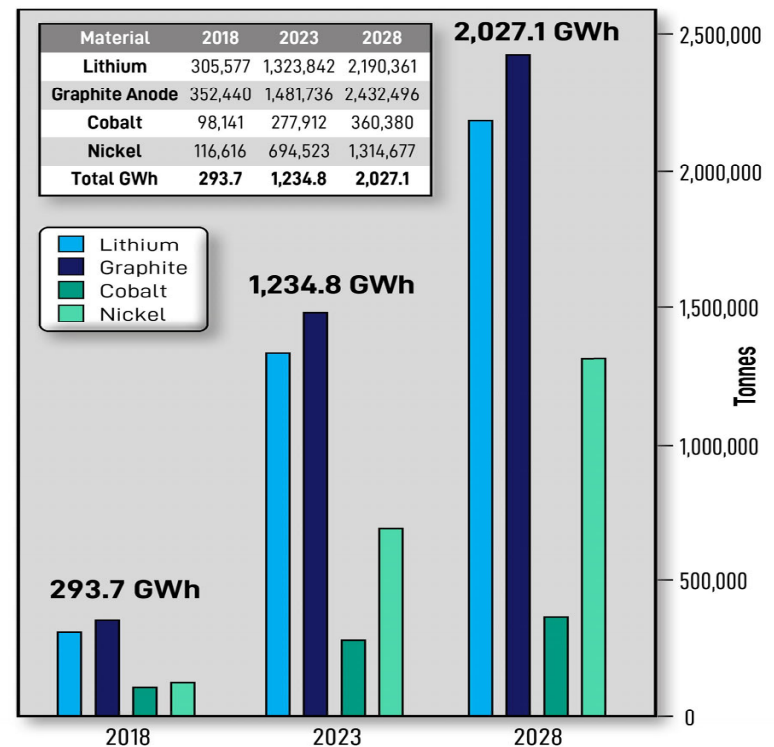
## World Lithium Ion Megafactory Capacity 2010-2020



Source: Benchmark Minerals Intelligence

## Megafactory Impact on Raw Materials

### Raw Materials Demand vs Global Lithium Ion Cell/Megafactory Capacity



The data in this chart does not constitute a forecast, and assumes 100% utilisation rates

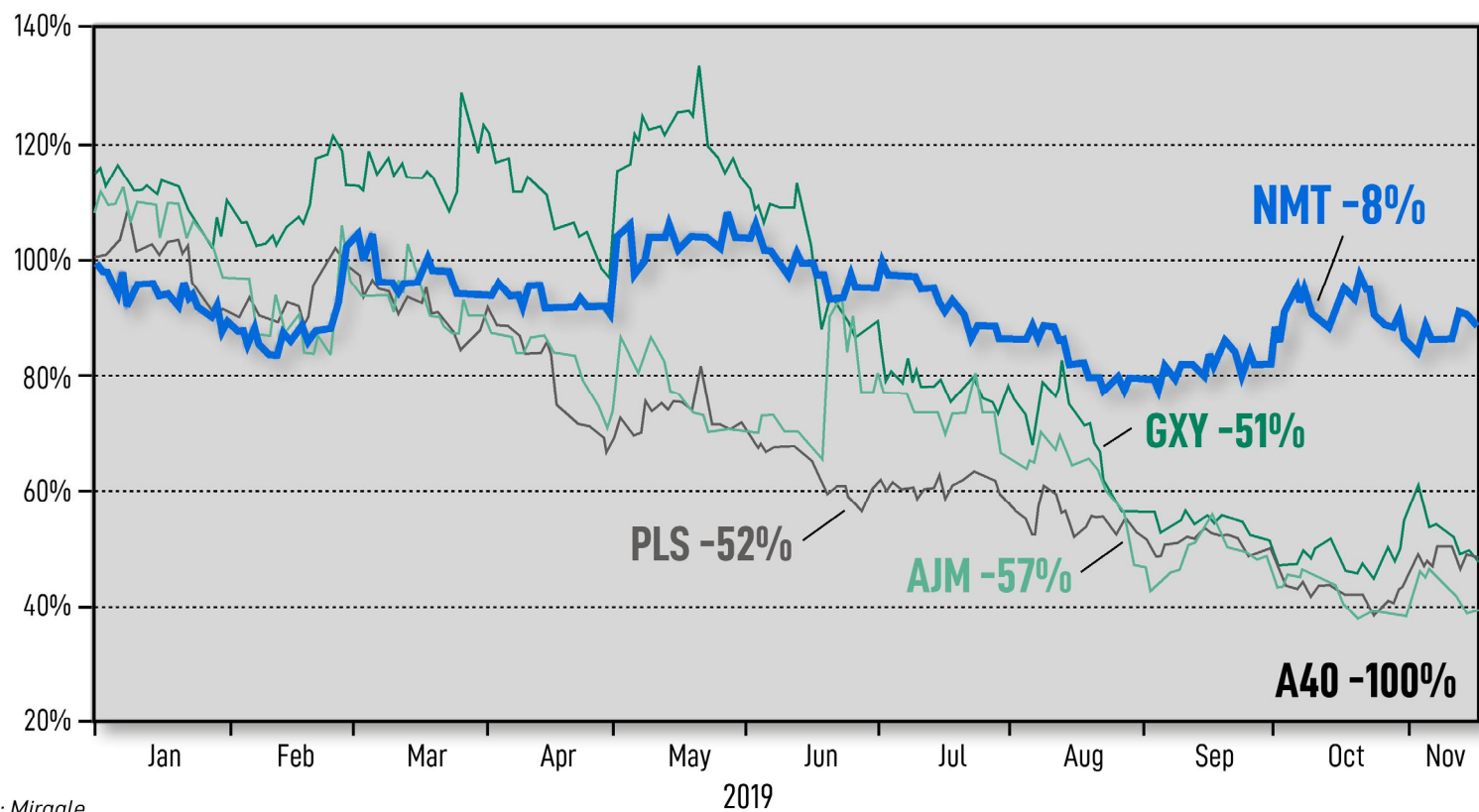
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# Peer Comparisons



## ASX Peer Comparison 2019 YTD



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# Corporate Overview

Nm

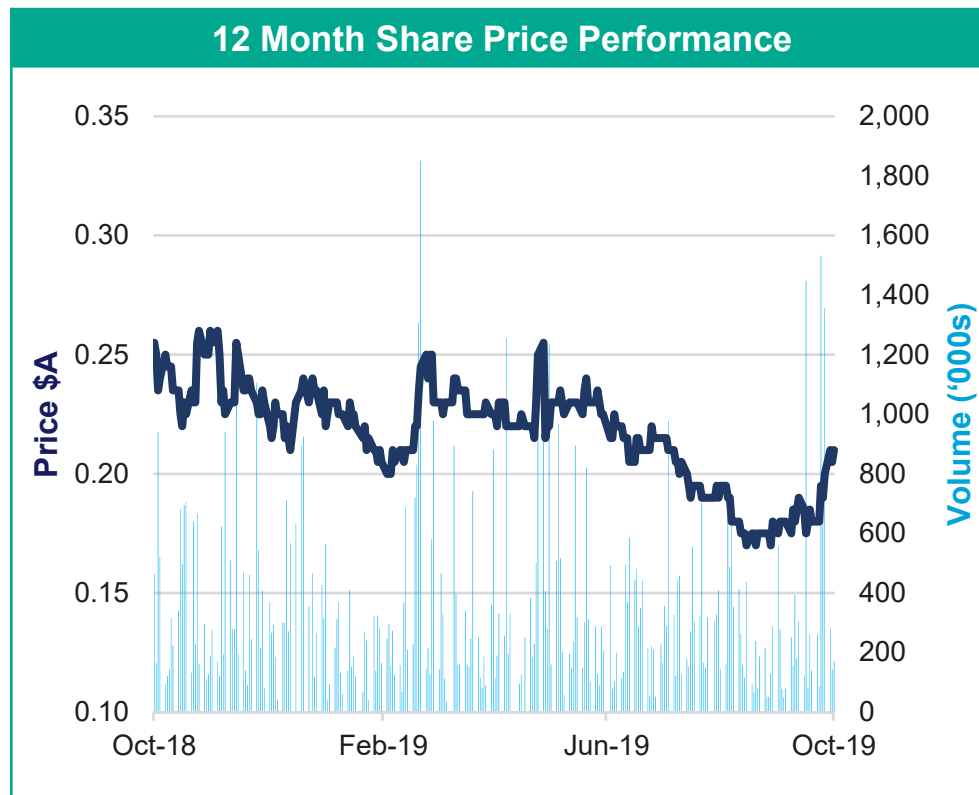
	ASX: NMT	OTC:RDRUY
Shares on Issue <sup>1</sup>	m	544.44
Share Price (8-Nov-19)	A\$	0.19
Market capitalisation (8-Nov-19)	A\$m	103.4
Cash (30-Sept-19)	A\$m	107.1
Debt (30-Sept-19)	A\$m	-
Investments (30-Sept-19)	A\$m	9.4

Major Shareholders (30-Sept-2019)	
David Reed (Non-Executive Director)	9.0%
Westoz Funds Management	3.0%
Global X Lithium ETF	1.7%
Top 20	37.1%
No of Shareholders	~7,800

Note 1: Excludes 11.13m performance rights.

Note 2: Loan receivables and investments

Source: Neometals



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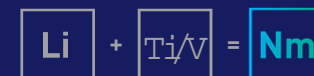
# Recycling and Recovery

## Li Ion Battery Recycling Project

Neometals 100%

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# Video

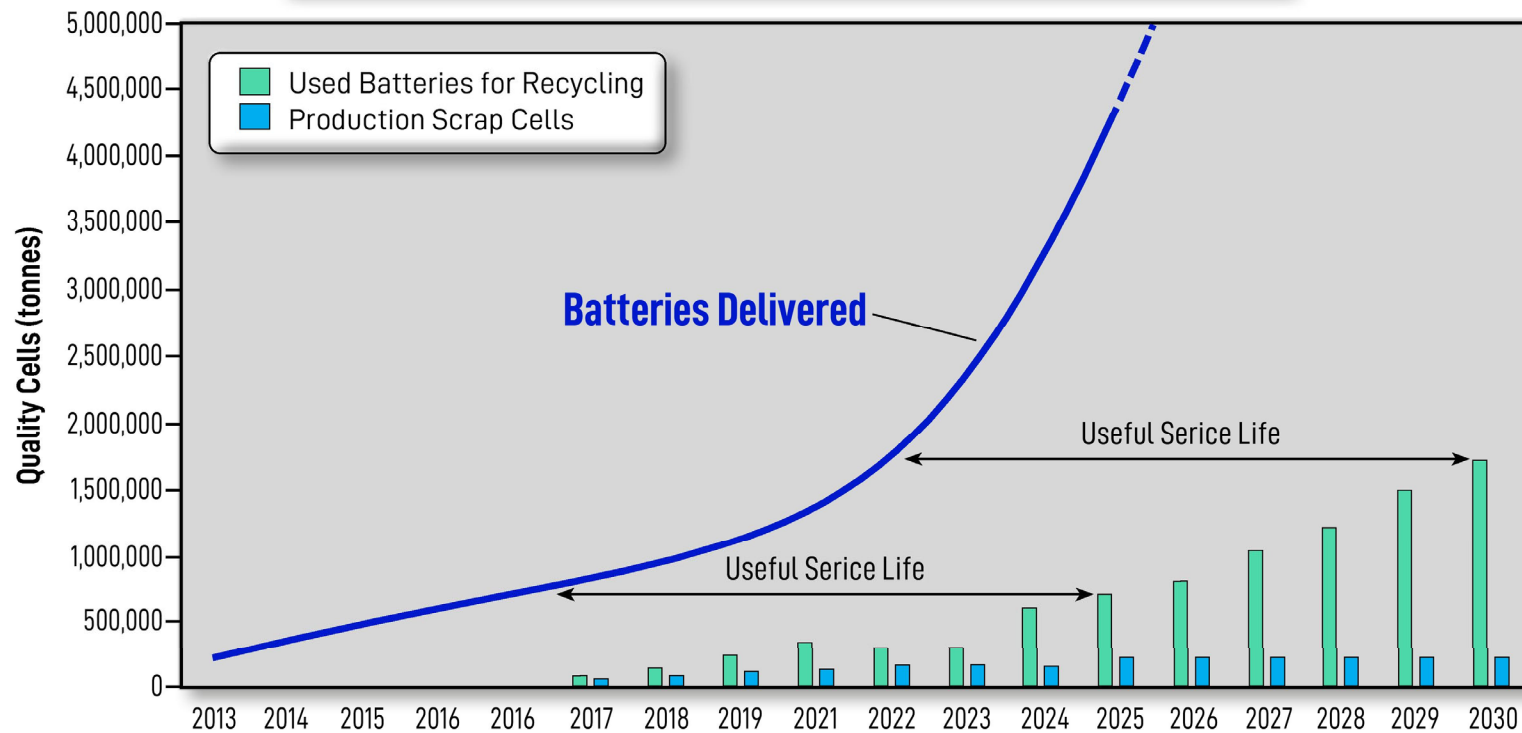


# Opportunity



We have strong conviction in the long-term EV/ESS thematic and that the batteries wear out!

## Lithium Ion Battery Cell, Production & End of Life



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# Opportunity



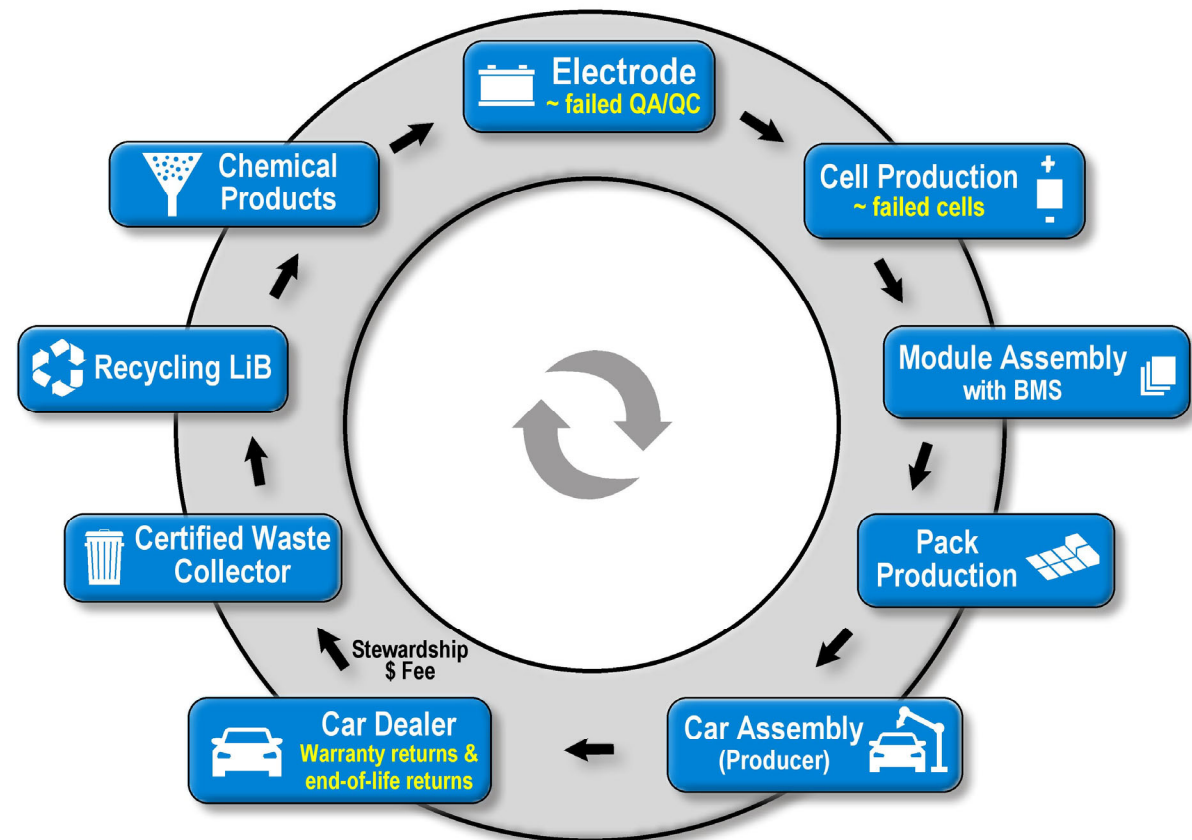
## Pressure on companies:

- Regulatory requirement (CA, EU)
- Fire/Environmental safety
- Stakeholder sustainability (ethical sourcing) pressure
- Mineral/material scarcity

## Pressure on Governments:

- Domestic sovereignty
- Critical minerals
- Circular economy

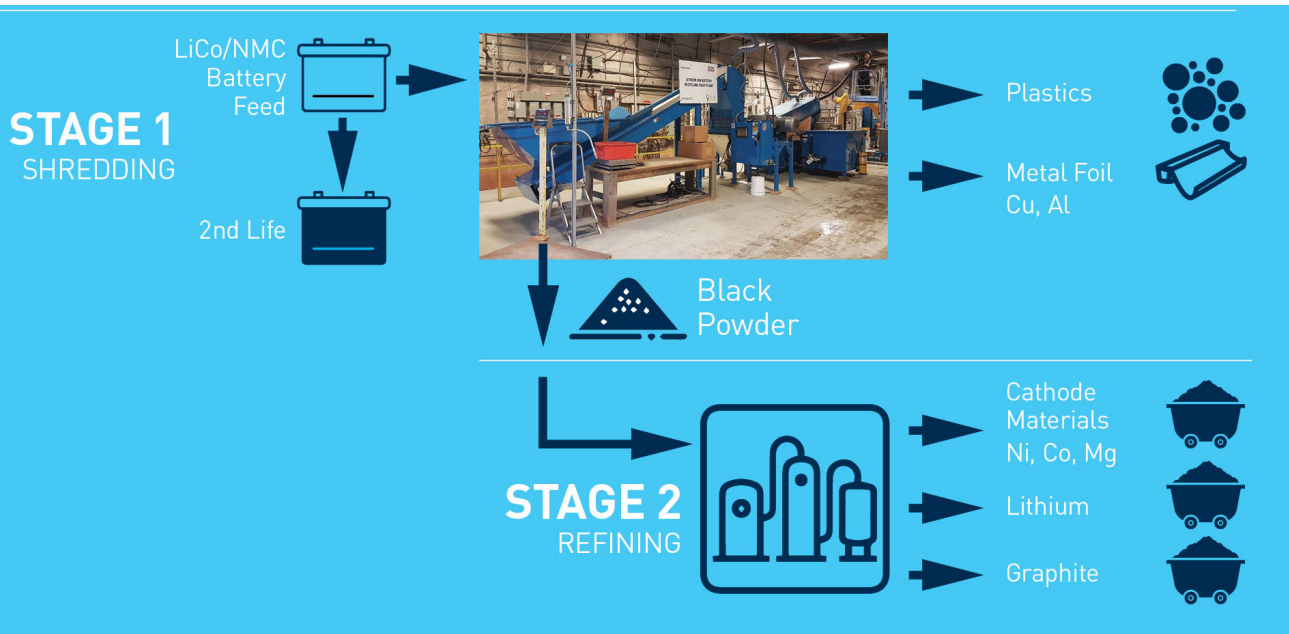
## Typical Value Chain for Automotive LiB's



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# Solution



- STAGE 1 - Feed preparation
- STAGE 2 - Hydrometallurgical Processing & Refining
- SMS JV - Demonstration sites
- Current and proposed cell manufacturers

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# Strong financial metrics



## RECYCLING PLANT FEED RATE



**50tpd**  
**18,263tpa**

## EV & CONSUMER BATTERY FEED



**Products**  
Inc. high purity  
Co, Ni, Cu, Li

## OPEX



**US<\$7/lb\***  
contained cobalt  
excluding co-products

## CAPITAL COSTS



**US\$66M\***  
**A\$92M**

## PAYBACK



**<2 years**

## PRE TAX NPV<sub>12</sub>



**US\$220M\***  
**A\$308M**  
**IRR 72%**

*\* 1 USD: 1.4 AUD at US\$6.15/kg Cobalt Sulphate (~20% cobalt contained in CoSO<sub>4</sub>),  
US\$5/kg Lithium Sulphate, US\$3.30/kg Nickel Sulphate, US\$2/kg Copper Sulphate*

# MOU for 50:50 JV with global EPC house



- SMS Group leading manufacturer of metallurgical plants (2600 new plants and modernisations since 2000), +13,000 employees in 95 sites around the world, operating successfully for +140 years.
- Neometals to complete current pilot-scale test work, aim to complete December 2019.
- Neometals and SMS can then form 50:50 German JV Company, aim end of January 2020 to co-fund demonstration plant and Class 3 Engineering Cost Study
- Post FID, SMS will engineer, construct and operate plants on behalf of JV and on a best endeavours basis procure not less than 50% of the financing required as debt – SMS on of largest largest initiators of German government ExIm financings.
- **Consistent strategy – obtain strong partner to optimize value realisation**



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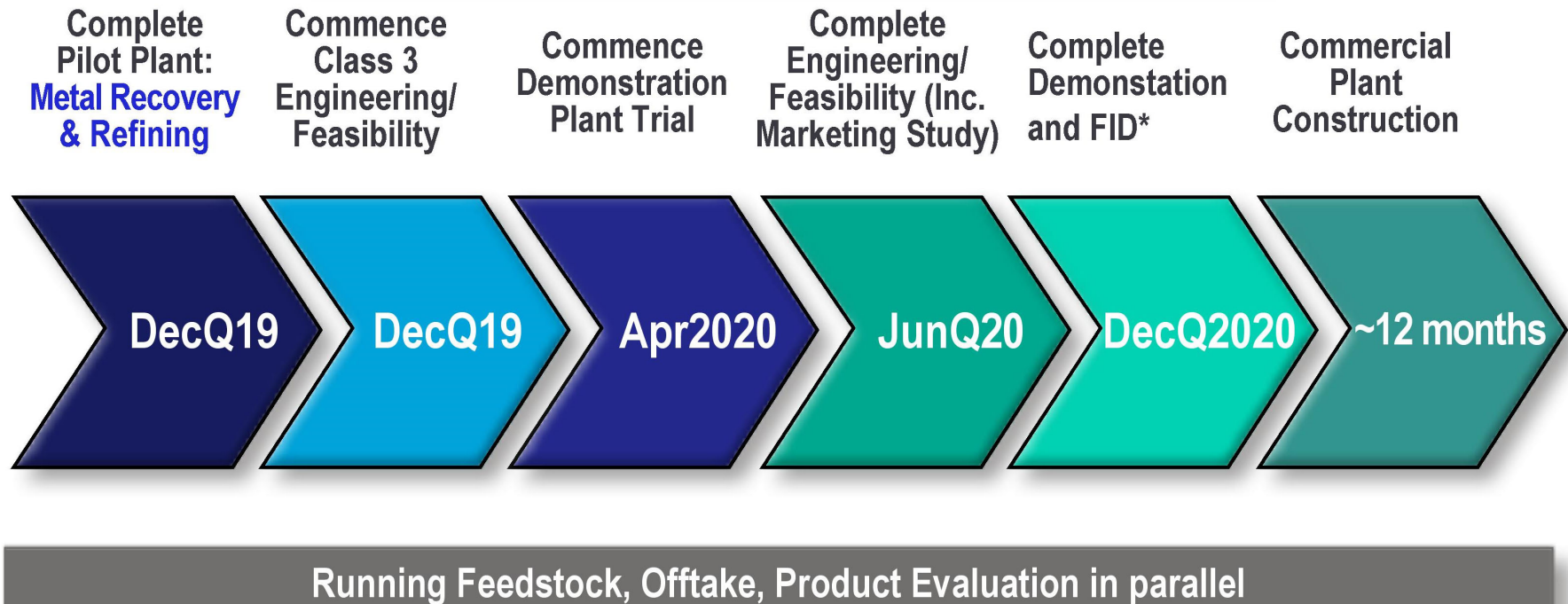
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# Recycling Project Status



## Indicative Project Timeline - LiB Recycling



\* Subject to NMT and JV Board Approval.



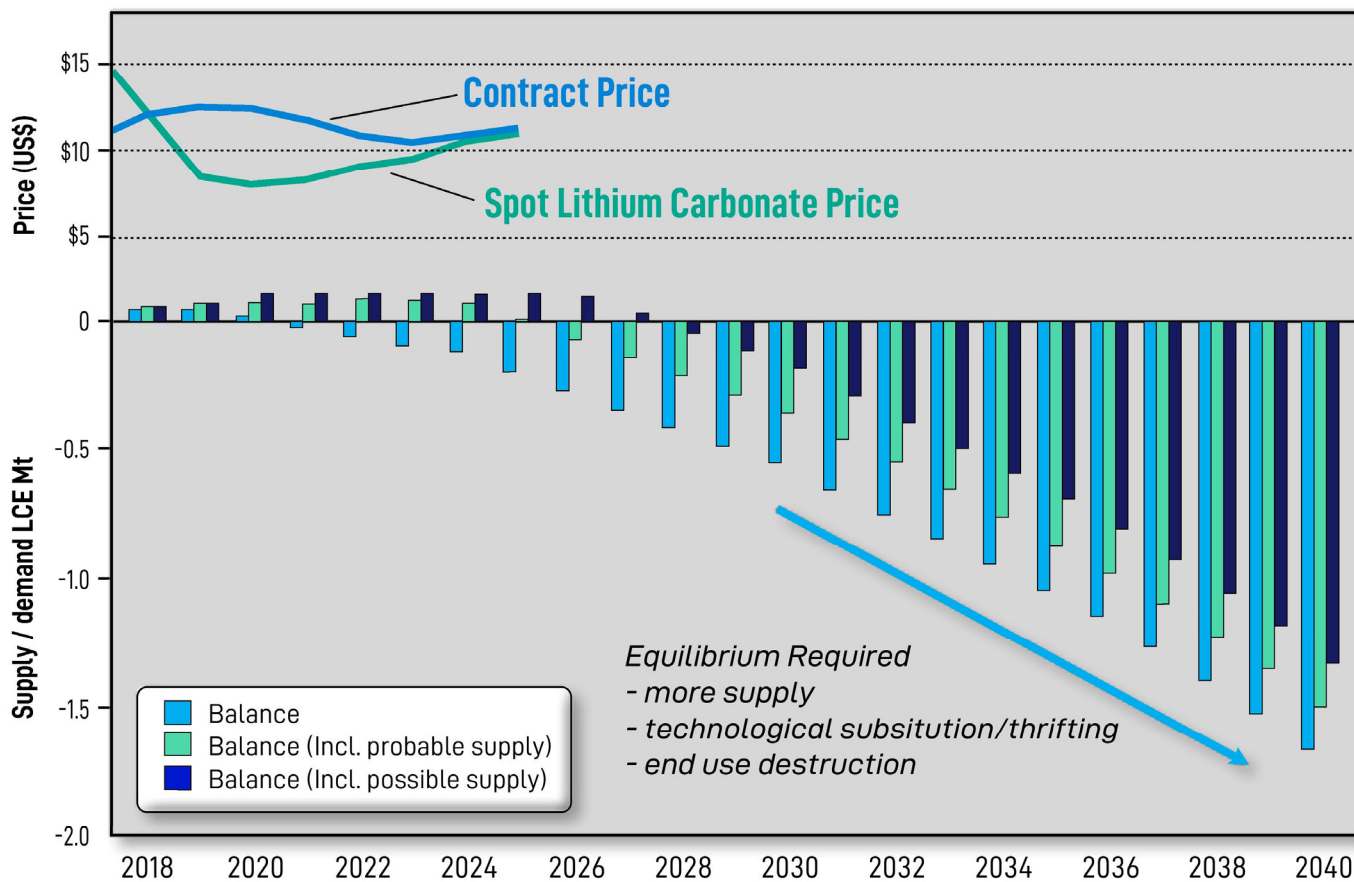
# Downstream processing Lithium Refinery Project

Neometals MoU for 50:50 JV with Manikaran Power

# Opportunity – Massive supply shortage will emerge in mid-2020's



**Lithium Supply & Demand Balance**



Source: SFA (Oxford)

# Solution - MOU for India's first Lithium Refinery



- MOU in place with Manikaran Power (50 Hertz) for jointly funded feasibility evaluation of first lithium refinery in India
- Manikaran the 3<sup>rd</sup> largest Indian power trading company. Has extensive renewable interests
- A positive FID will trigger 50:50 JV to develop refinery using NMT Mt Marion offtake option as baseload feed, market validated feedstock
- Engineering and Feasibility studies targeted for completion by end 2020
- FID consideration in first half 2021 timed to deliver production into a strong lithium market in structural deficit
- Important to have local partner with equity stake at project level, rather than just offtake



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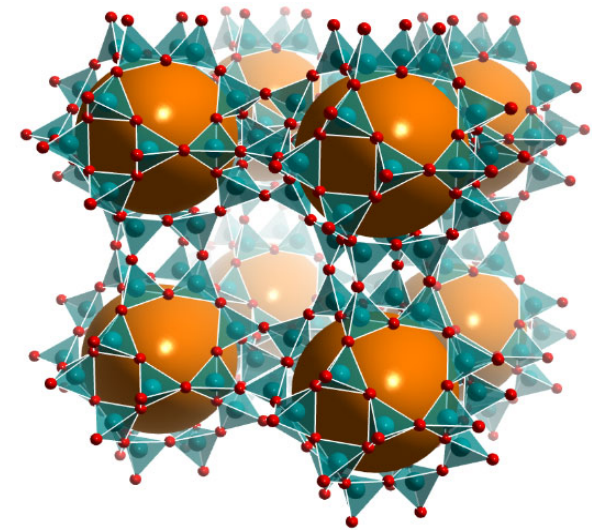
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# Potential for significant co-product revenue



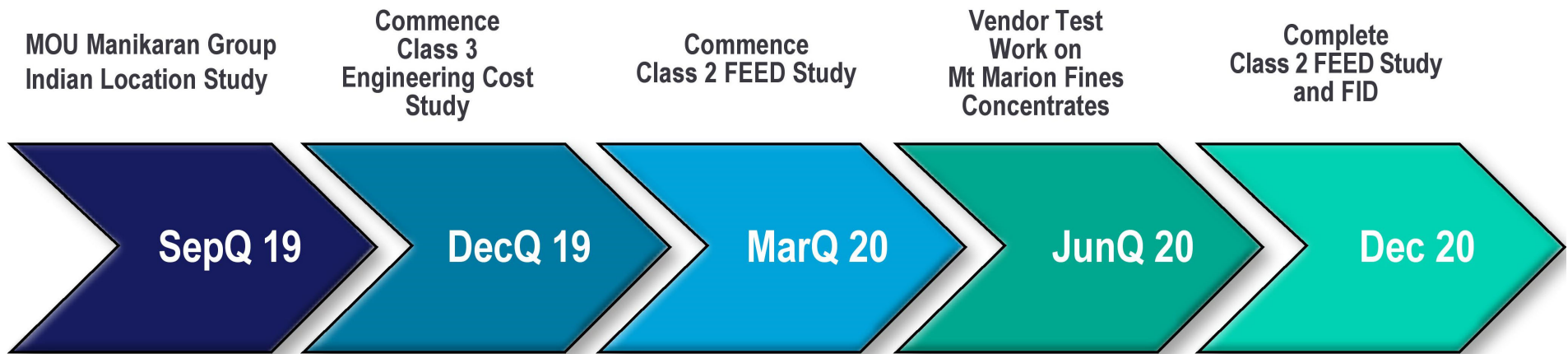
- Developed patent pending process to synthesize zeolite from LR residue rather than traditional chemical precursors
- Zeolite used as molecular sieve in gas purification, water treatment and green chemistry applications. Large +US\$13B market
- LR waste disposal is costly and can present environmental challenge
- Converting LR to zeolite solves above and creates opportunity for significant additional revenue to enhance project economics
- Success in manufacturing two types of commercial synthetic zeolites from Mt Marion and other WA sourced mine feed
- Early product evaluation shows the specification is close to commercial targets even before optimization from planned piloting
- Class 4 PFS study has commenced in parallel with product marketing studies and qualification
- **Can be developed with refinery or as stand-alone opportunity**



# Refinery Project Status



## Indicative Project Timeline - Lithium Refinery



“Synthetic Zeolite from Refinery Waste” pilot and evaluation activitie running in parallel.

\* Subject to NMT and JV Board Approval



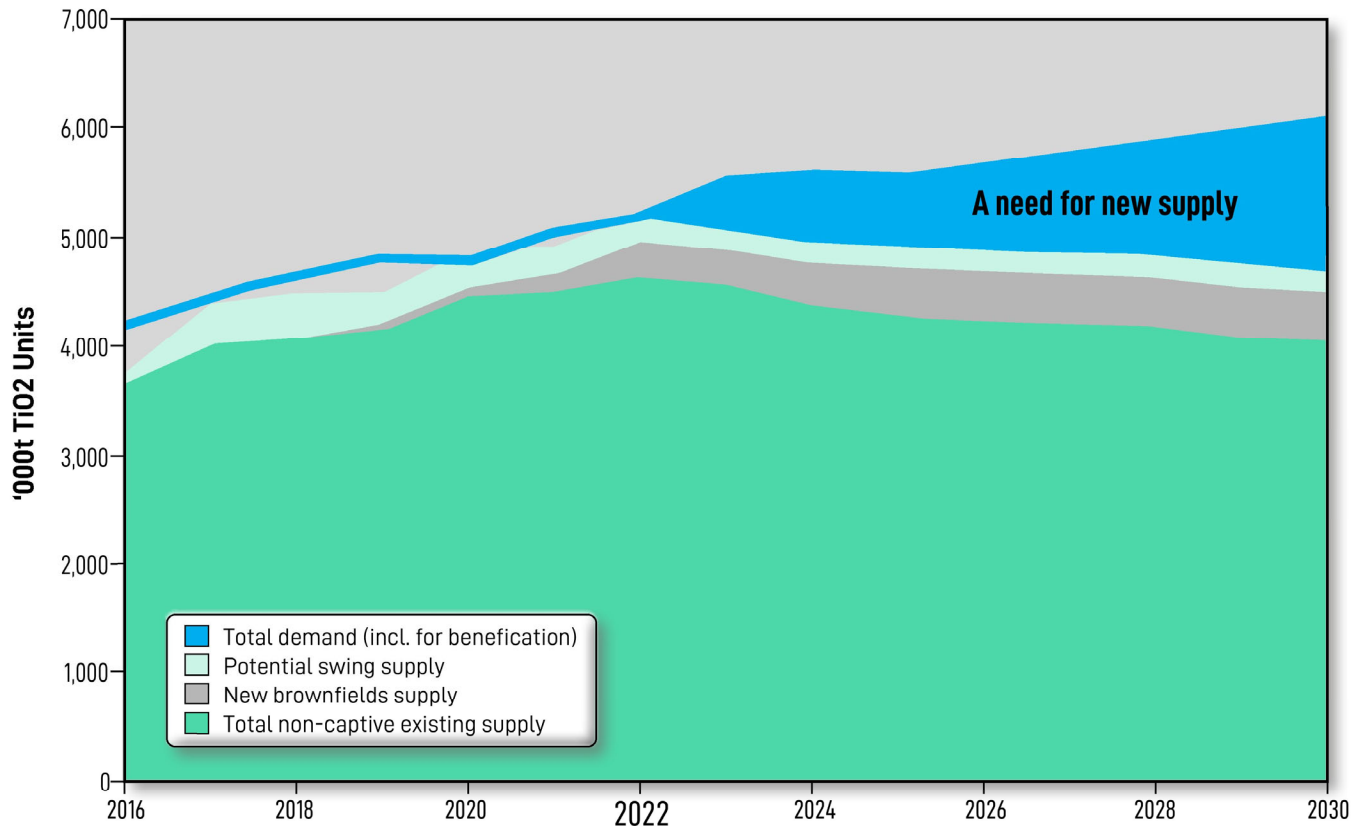
# Titanium and Vanadium Barrambie

Neometals 100%

# Opportunity

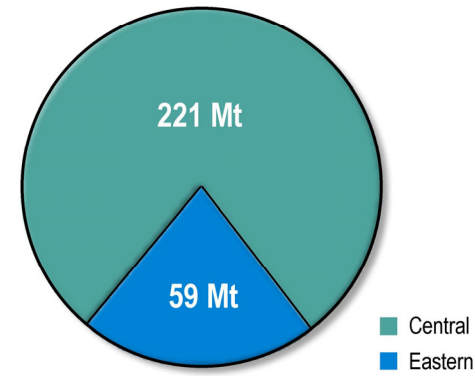


## An Emerging Supply Gap for Sulphate Feedstocks

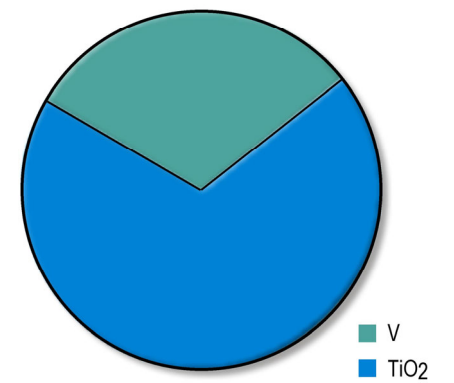


Source: Base Resources

## Barrambie by Ore Body Size (Mt)



## Barrambie by Metal Value (%)



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$$\boxed{\text{Li}} + \boxed{\text{Ti/V}} = \boxed{\text{Nm}}$$

# Barrambie VTM Project

Ti/V

One of the highest-grade hard-rock Titanium assets  
and one of the largest Vanadium projects globally

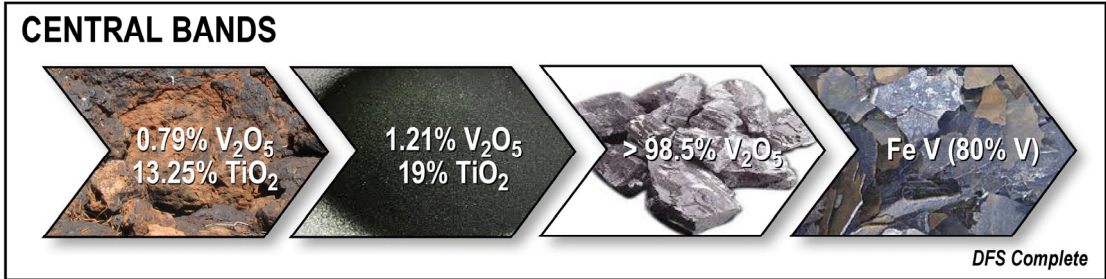
- 100% Owned
- A\$30M spent to date in exploration/evaluation (inc. 55,000m of drilling)
- Granted mining lease
- Completed DFS on primary vanadium only operation, too capital insense
- Piloting a 'Whole of Deposit' solution to produce both high purity titanium and vanadium chemicals
- Enable right-sizing of scale to deliver best economics at acceptable capital intensity
- **Consistent strategy – obtained strong partner to optimize value realisation**



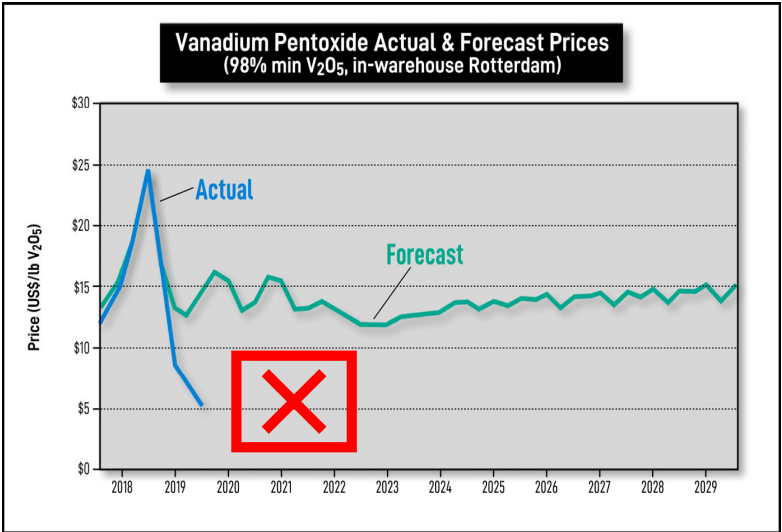
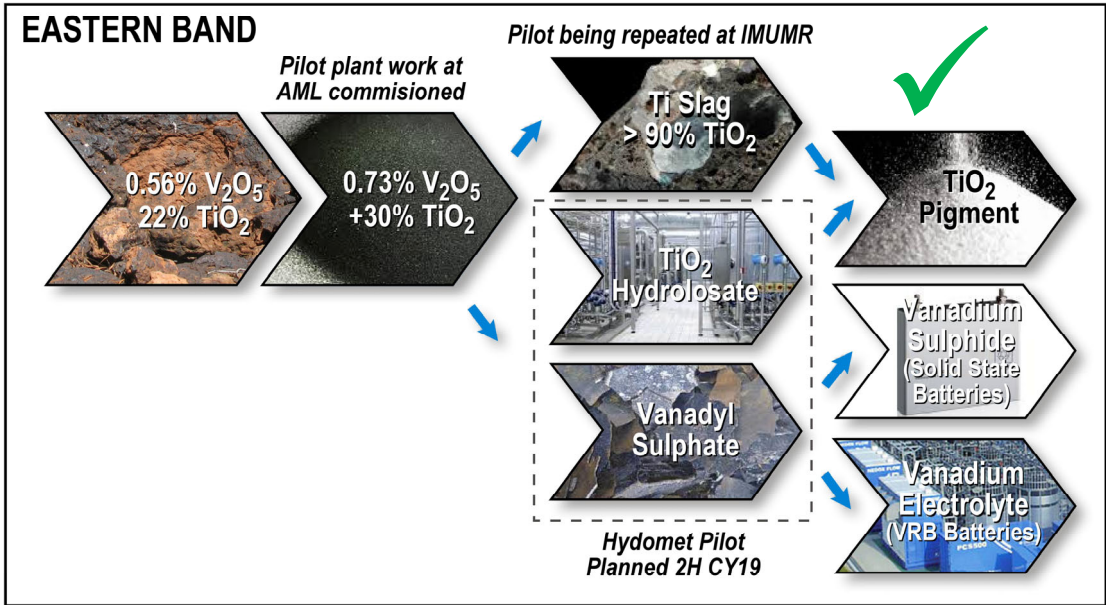
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# Solution: Unlocking titanium



**Barrambie Ore**      **Barrambie Mineral Concentrates**      **Intermediate Product**      **Final Product**



Complete  
Demonstration  
Plant 2020

# MOU for 50:50 Operating JV with leading Ti-V research institute

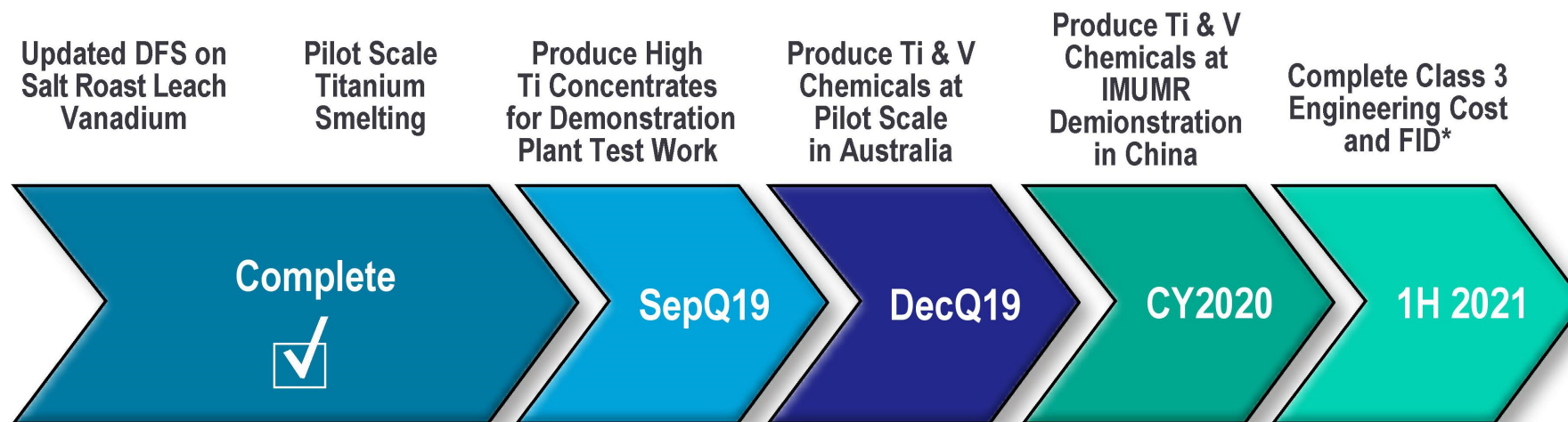


- IMUMR has national mandate to develop upstream supply chains for strategic industries. China is half of global titanium pigment production.
- Neometals to complete current pilot-scale test work, aim to complete Jan 20.
- IMUMR (China Geological Survey) can then elect to fund Demonstration Plant
- Neometals and IMUMR will jointly fund Class 3 Engineering Cost Study on developing mine and concentrator in Australia and downstream processing in China
- Consider FID and proceed to negotiate 50:50 JV.
- JV will have right to mine Barrambie for commercial consideration payable to Neometals subsidiary holding mining lease.
- **Consistent strategy – obtain strong partner to optimize value realisation**

# Barrambie Project Status



## Indicative Project Timeline - Barrambie Project



Product evaluation and offtake activities running in parallel

\* Subject to NMT and JV Board Approval

Ni

# Exploration

## Mt Edwards Project

Neometals 100%

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Li + Ti/V = Nm

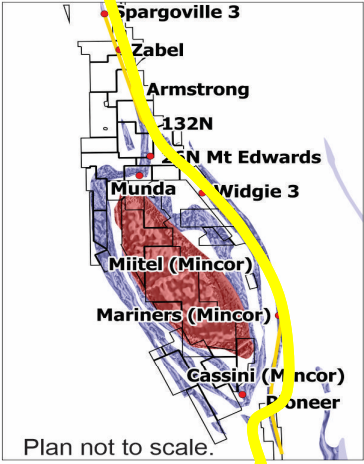
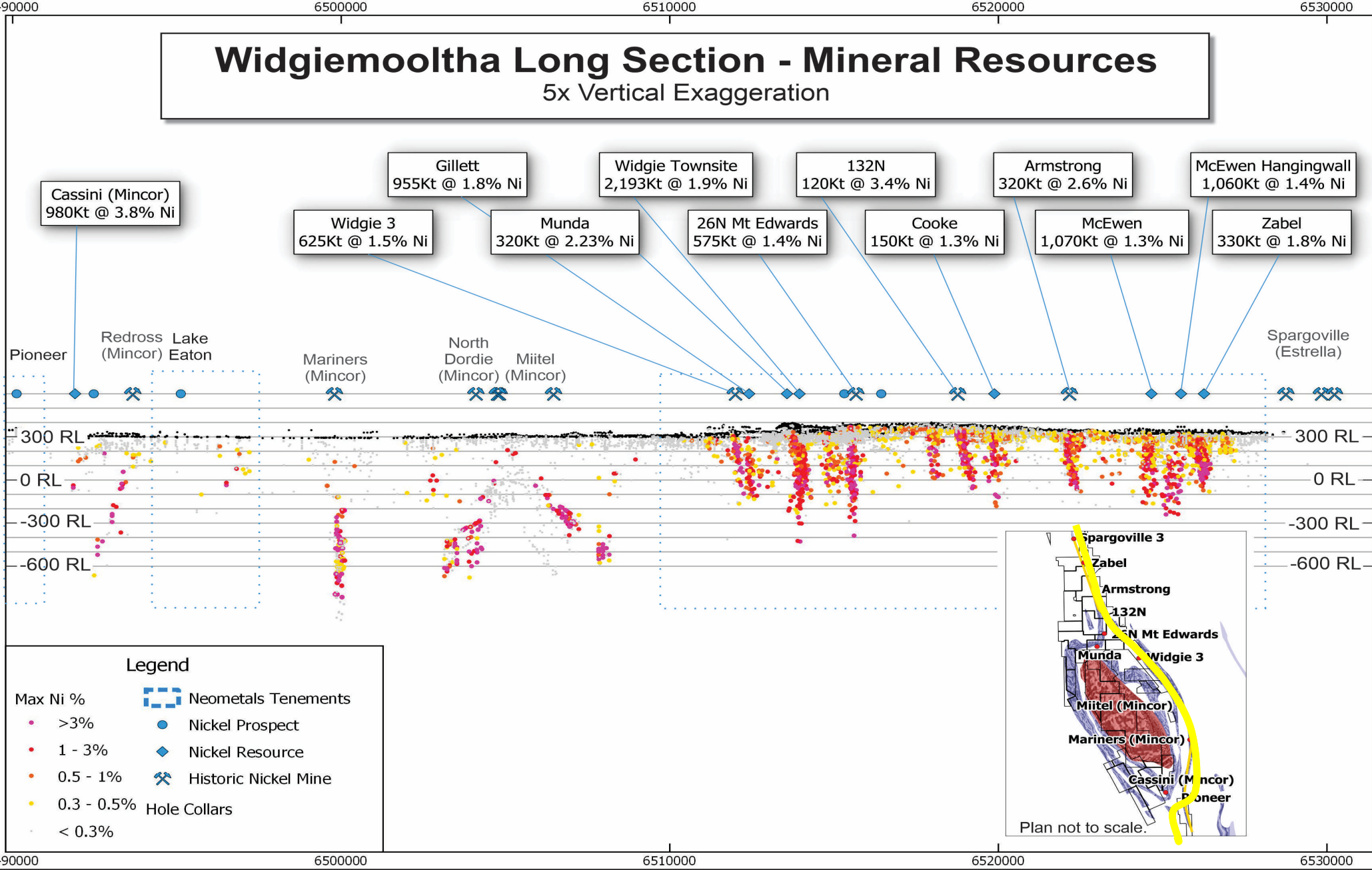
# Project Flythrough

Ni

# Eastern Dome Resources



## Widgiemooltha Long Section - Mineral Resources 5x Vertical Exaggeration



# FY19 Exploration – Zabel & 132N Deposits



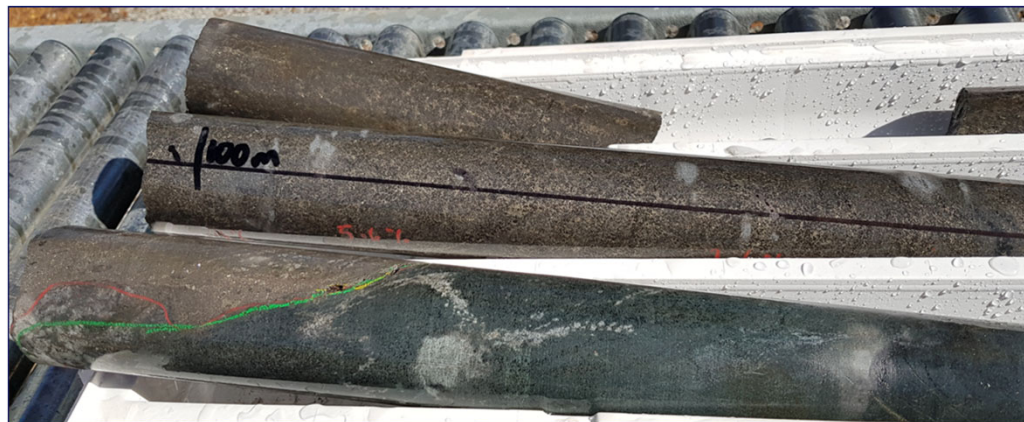
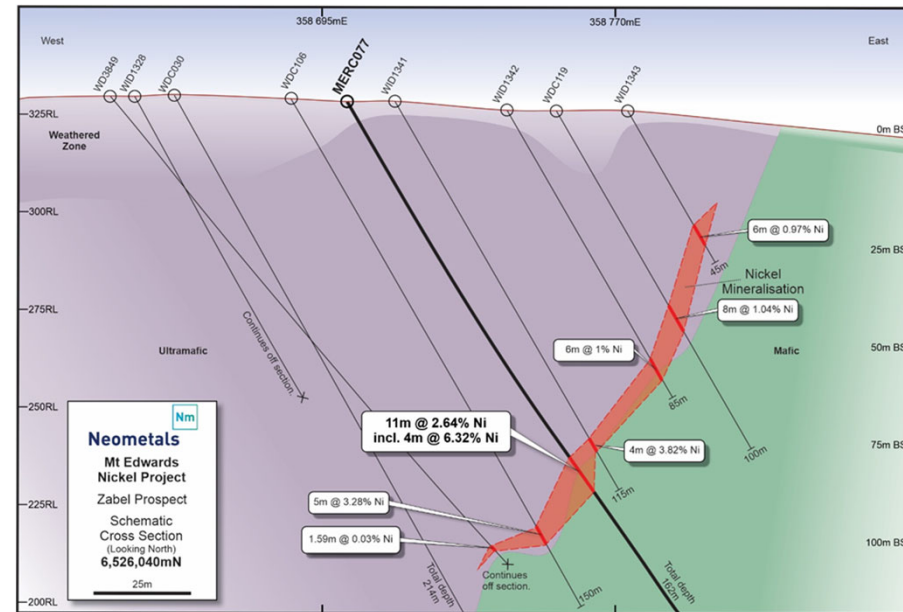
- Small, considered drill programs to confirm and increase confidence in the Mineral Resources, and identify high-grade mineralisation.
- FY19 drilled the 132N, Zabel deposits
- Recently Widgie 3 and Gillet, results pending
- Significant intercepts\*:

## 132N

15.6 m @ 1.24% Ni from 269m

## Zabel

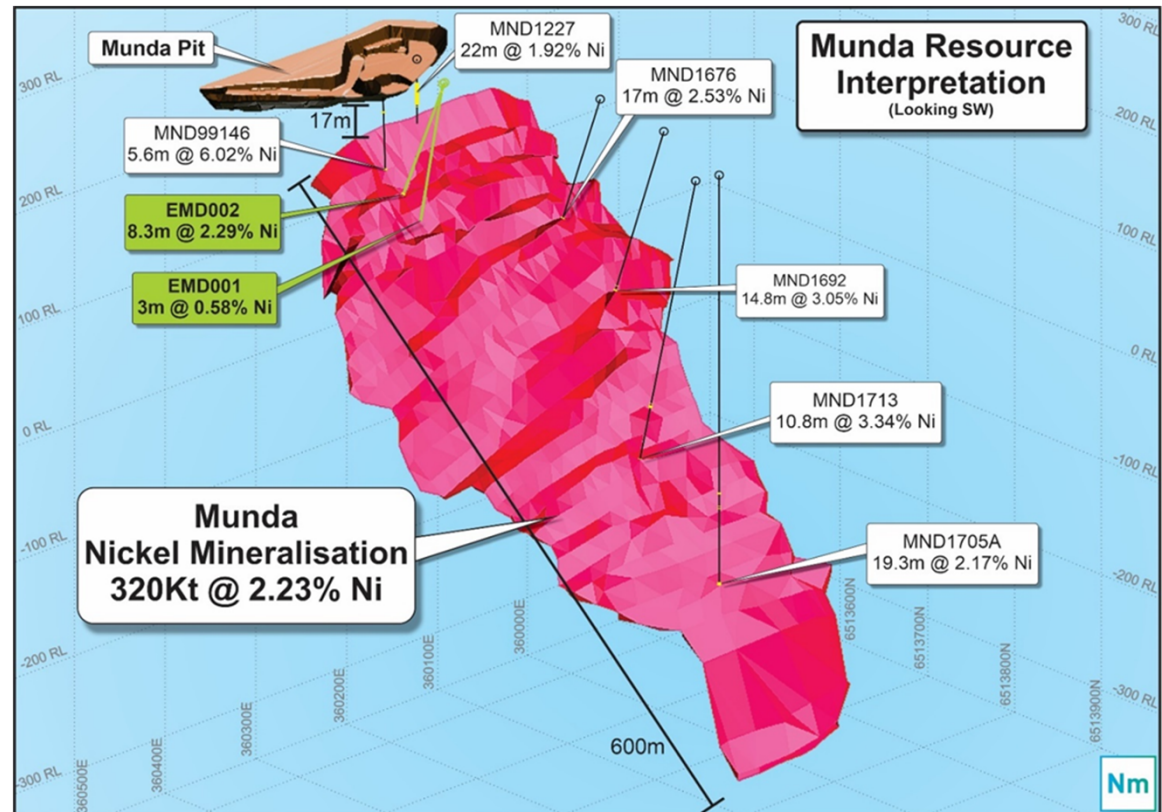
11 metres @ 2.64% Ni from 108m including **4 metres @ 6.23% Ni**  
 3 metres @ 2.0% Nickel from 88m including **1 metre @ 5.1% Ni**



# SepQ19 Exploration – Munda Deposit

Ni

- Nickel Mineral rights to the Munda Project, M15/87
- Located right in the middle of the tenement package.
- Diamond Core drilling here (8.2m @ 2.5% including 2.3m @ 6.11% Ni)\*
- Maiden Nickel Resource containing 7,140 t Ni \*\*

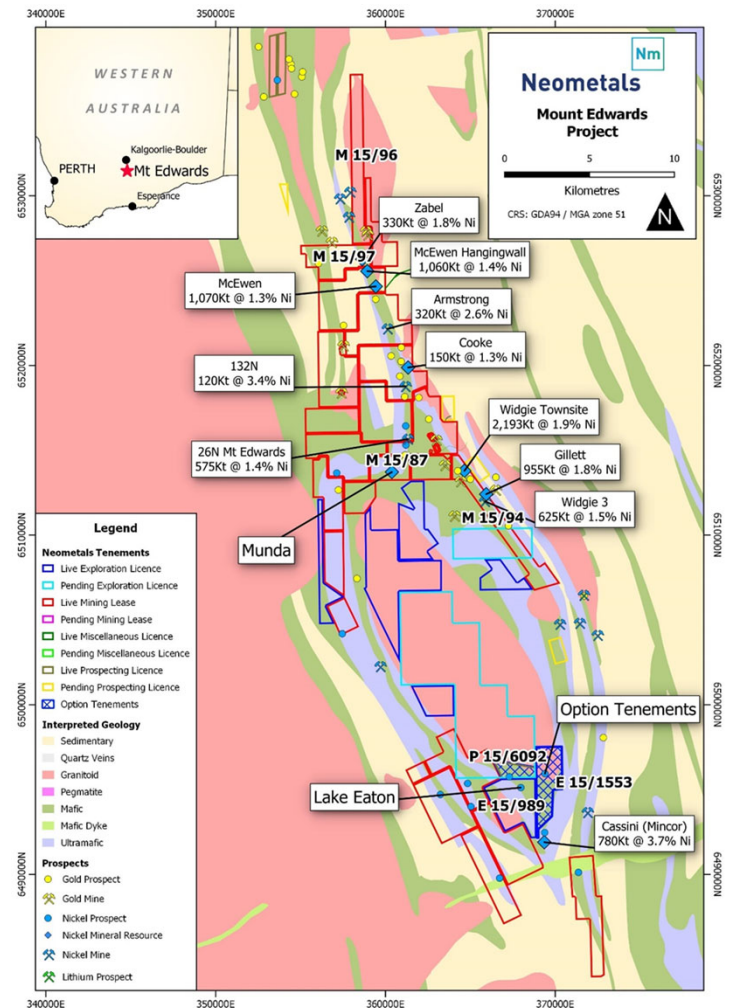


The nickel mineralised zone at Munda extends approximately 600m down plunge below the open-pit mined for gold in the 1990's. Recent diamond core drill holes EMD001 & EMD002 are in green, representative historical holes are shown in black.

# Neometals Regional Exploration Strategy

Ni

- May 2019 engaged Newexco to assist in future discoveries
- Many targets left untested (+50 historical targets)
- Newexco have noted that previously many inferior geophysics techniques were used (DHEM - coil sensors not fluxgate / Squid)
- Several targets generated from ground EM (Moving and Fixed loop) remain untested



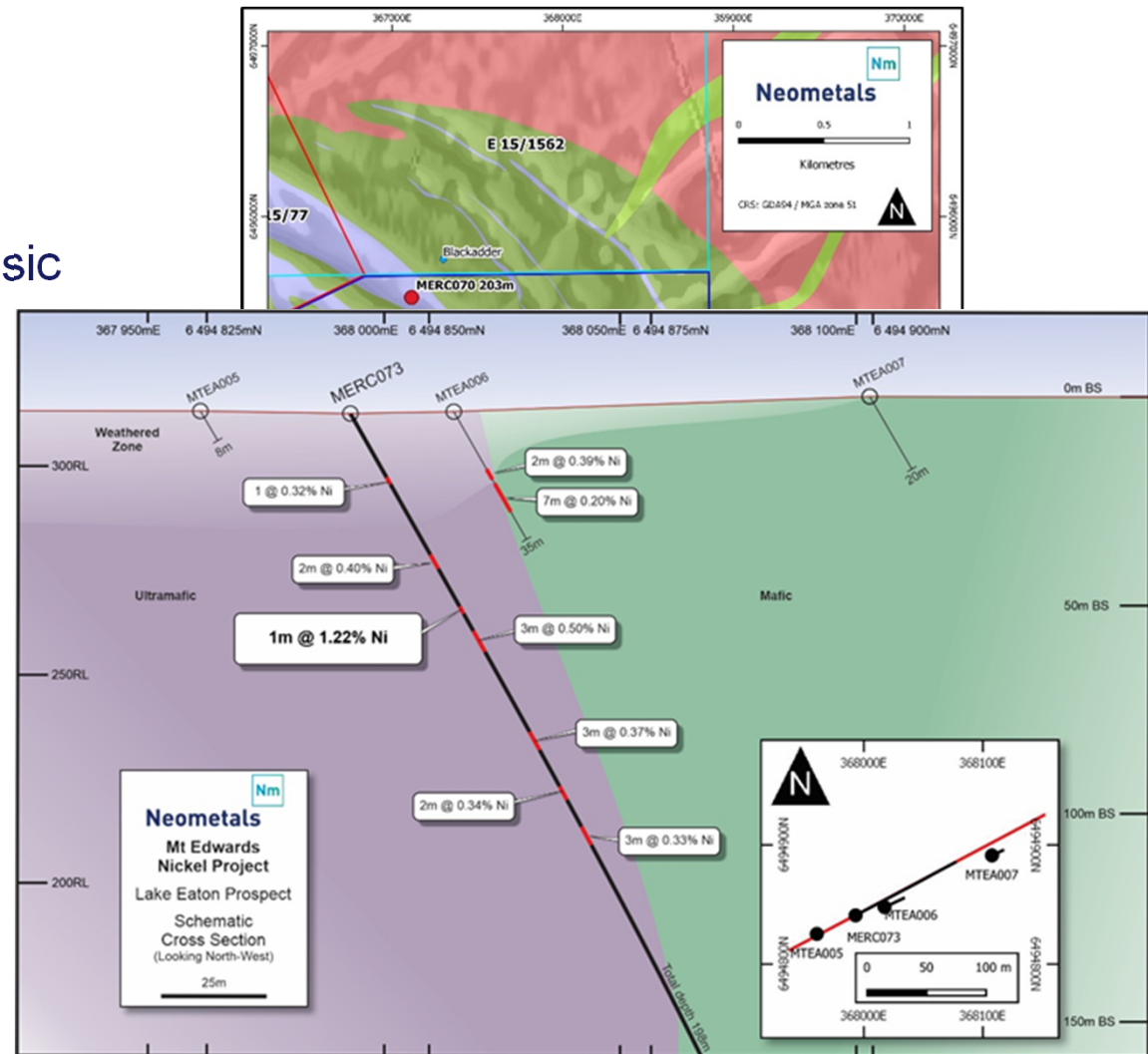
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# Lake Eaton Prospect

Ni

- Neometals conducted exploration at Lake Eaton prospect Directly NW of Cassini
- Geochemical analysis indicates classic Kambalda style komatiite channel
- Anomalous nickel in ultramafic in MERC073
- Encouraging sniffs including 1m at 1.22% Nickel at 55 metres



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Please refer to ASX announcement 5 August 2019 titled "Mt Edwards Nickel – Drill Results"



# Company Highlights

Nm

## SECURITY

- ✓ Strong balance sheet A\$107.1\* plus \$9.4M investments, no debt
- ✓ Strong board and management team, collectively the largest shareholders
- ✓ Consistent approach - history of partnering to collate expertise and achieve optimum scale, risk and return
- ✓ Disciplined capital allocation, value realisation and sharing with shareholders

## OPPORTUNITY

- ✓ Advanced and diversified portfolio of mineral and advanced material opportunities
- ✓ Means to fund clear growth strategy
- ✓ Track record means we understand commercial realities
- ✓ Investments in R&D to move down the value chain
- ✓ MCAP discrepancy – value crystallisation as already mature projects secure validation catalysts

# Thank you

[www.neometals.com.au](http://www.neometals.com.au)



# Neometals

SUPPORTING INFORMATION

# Barrambie Mineral Resource Estimate



## Global Resource as at 17 April 2018<sup>1</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	187.1	9.61	0.46
Inferred	93.0	8.31	0.40
<b>Total</b>	<b>280.1</b>	<b>9.18</b>	<b>0.44</b>

## High Grade V<sub>2</sub>O<sub>5</sub> Resource (at 0.5% V<sub>2</sub>O<sub>5</sub> cut-off)<sup>2</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	49.0	16.93	0.82
Inferred	15.9	16.81	0.81
<b>Total</b>	<b>64.9</b>	<b>16.90</b>	<b>0.82</b>

## High TiO<sub>2</sub> Resource (14% TiO<sub>2</sub> cut-off)<sup>2</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	39.3	21.18	0.65
Inferred	14.3	21.15	0.58
<b>Total</b>	<b>53.6</b>	<b>21.17</b>	<b>0.63</b>

(1) Based on Cut-off grades of ≥0% TiO<sub>2</sub> or ≥.2% V<sub>2</sub>O<sub>5</sub>

(2) The high-grade titanium and vanadium figures are a sub-set of the total Mineral Resource. These figures are not additive and are reporting the same block mode volume but using different cut-off grades.

Refer to Neometals' ASX release dated 17 April 2018 titled 'Updated Barrambie Mineral Resource Estimate' available at [www.neometals.com.au/reports/2018-04-17-5645-BarrambieP.pdf](http://www.neometals.com.au/reports/2018-04-17-5645-BarrambieP.pdf)

# Mt Edwards Mineral Resource Estimate

as at 13 November 2019, for a block cut-off grade of 1% Ni, except Munda Mineral Resource uses a 1.5% Ni Ni block cut-off.

Ni

Deposit	Measured		Indicated		Inferred		TOTAL Mineral Resources		
	Tonne (Kt)	Nickel (%)	Tonne (Kt)	Nickel (%)	Tonne (Kt)	Nickel (%)	Tonne (Kt)	Nickel (%)	Nickel Tonnes
132N <sup>1</sup>			110	3.5	10	1.8	120	3.4	4,070
Armstrong <sup>1</sup>	10	2.1	280	2.3	30	4.9	320	2.6	8,180
Munda <sup>3</sup>					320	2.2	320	2.23	7,140
Widgie Townsite <sup>2</sup>			2,190	1.9			2,193	1.9	40,720
Cooke <sup>1</sup>					150	1.3	150	1.3	1,950
McEwen <sup>1</sup>					1,070	1.3	1,070	1.3	13,380
McEwen Hangingwall <sup>1</sup>					1,060	1.4	1,060	1.4	14,840
Zabel <sup>1</sup>					330	1.8	330	1.8	5,780
Mt Edwards <sup>2</sup>					575	1.4	575	1.4	8,210
Gillett <sup>2</sup>					955	1.8	955	1.8	17,050
Widgie <sup>3</sup>					625	1.5	625	1.5	9,160
<b>TOTAL</b>	10	2.1	2,580	2	5,125	1.6	7,718	1.7	130,480

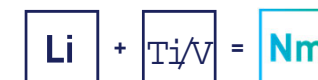
*Small discrepancies may occur due to rounding*

Note: 1 refer announcement ASX: NMT 19 April 2018 titled: Mt Edwards JORC Code (2012 Edition) Mineral Resource 48,200 Nickel Tonnes

Note: 2 refer announcement ASX: NMT 25 June 2018 titled: Mt Edwards Project Mineral Resource Over 120,000 Nickel Tonnes

Note: 3 refer announcement ASX: NMT 13 November 2019 titled Additional Nickel Mineral Resource at Mt Edwards

Neometals



# Mt Edwards Mineral Resource Estimate

as at 13 November 2019, for a block cut-off grade of 1% Ni, except Munda Mineral Resource uses a 1.5% Ni Ni block cut-off.

Ni

## Competent Person Attribution

*The information in this report that relates to Exploration Results is based on information compiled by Gregory Hudson, who is a member of the Australian Institute of Geoscientists. Gregory Hudson is an employee of Neometals Ltd.*

*The information in this Annual Statement for Mt Edwards that relates to Widgie Townsite, Widgie 3 and Gillet Mineral Resources is based on, and fairly represents, information and supporting documentation compiled and prepared by Mr Luke Marshall. Mr Marshall is a sole trader and independent contractor to Neometals Ltd.*

*The information in this Annual Statement for Mt Edwards that relates to the Mt Edwards Mineral Resources is based on, and fairly represents, information and supporting documentation compiled and prepared by Mr Andrew Bewsher. Mr Bewsher is an employee of BM Geological Services who provides consulting services to Neometals Ltd.*

*Messrs Hudson, Marshall and Bewsher are Members of The Australasian Institute of Geoscientists have sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code.*

*The information in this report that relates to the Munda Nickel Mineral Resource is based on, and fairly represents, information and supporting documentation compiled by Richard Maddocks; MSc in Mineral Economics, BAppSc in Applied Geology and Grad Dip in Applied Finance and Investment. Mr. Maddocks is a consultant to Auralia and is a Fellow of the Australasian Institute of Mining and Metallurgy (member no. 111714) with over 30 years of experience. Mr. Maddocks 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 JORC Code. Mr. Maddocks consents to the inclusion in this Report of the matters based on his information in the form and content in which it appears.*