

# Montezuma is now Element 25 Limited



Note: From Thursday 17 May, the Company's ASX ticker will change from **MZM** to **E25**.

# Element 25 Limited Investor Update

Transitioning from a diversified explorer to the developer of a world class high purity manganese project to supply the battery revolution.

- May 2018



# Disclaimer

This presentation contains only a brief overview of Element 25 Limited and its associated entities ("Element 25") and their respective activities and operations. The contents of this presentation, including matters relating to the geology of Element 25's projects, may rely on various assumptions and subjective interpretations which it is not possible to detail in this presentation and which have not been subject to any independent verification.

This presentation contains a number of forward-looking statements. Known and unknown risks and uncertainties, and factors outside of Element 25's control, may cause the actual results, performance and achievements of Element 25 to differ materially from those expressed or implied in this presentation.

To the maximum extent permitted by law, Element 25 does not warrant the accuracy, currency or completeness of the information in this presentation, nor the future performance of Element 25, and will not be responsible for any loss or damage arising from the use of the information.

The information contained in this presentation is not a substitute for detailed investigation or analysis of any particular issue. Current and potential investors and shareholders should seek independent advice before making any investment decision in regard to Element 25 or its activities.

# Corporate Overview

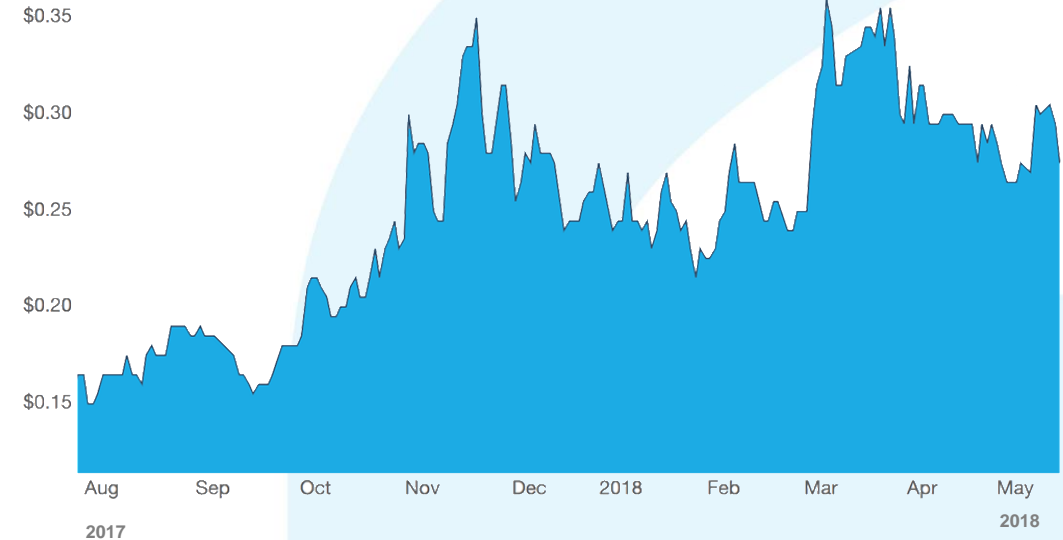
## Financial Information

ASX Ticker (effective 17 May 2018)	E25
Shares on Issue	83.5M
Share Price	\$0.26
Market Capitalisation	\$21.7M
Cash & Investments (31 March 18)	~10M
Debt	Nil
Enterprise Value	~\$11.71M
Top 20 Shareholders	~67%

## Board and Management

Seamus Cornelius	Chairman
Justin Brown	Executive Director
John Ribbons	Non Executive Director
Dave O'Neill	Exploration Manager

## Share Price Performance



## Major Shareholders

Top 20 Shareholders	67%
Board and Management	8.2%
JP Morgan Nominees Australia	11.4%
Duketon Mining Ltd	6.5%



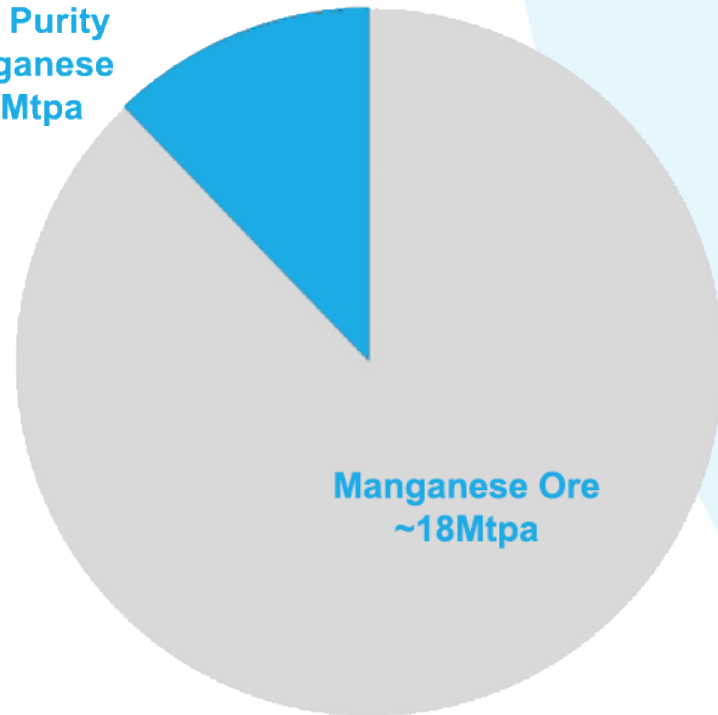
# High Purity Manganese

A hidden opportunity within the world's fourth largest metal commodity segment.

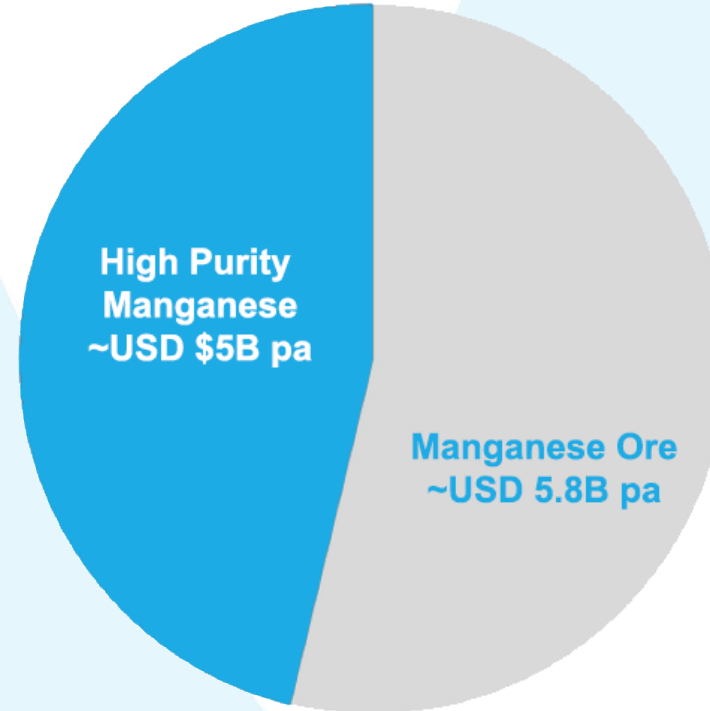
# What is High Purity Manganese?

- High purity manganese is a premium product segment.
- It makes up about 10% of the global manganese market by volume; but
- It makes up about 40% of the global manganese market by value.

High Purity  
Manganese  
~2.5 Mtpa



High Purity  
Manganese  
~USD \$5B pa



Three main products:

- Electrolytic Manganese Metal (“EMM”)
- Electrolytic Manganese Dioxide (“EMD”)
- Manganese Sulphate

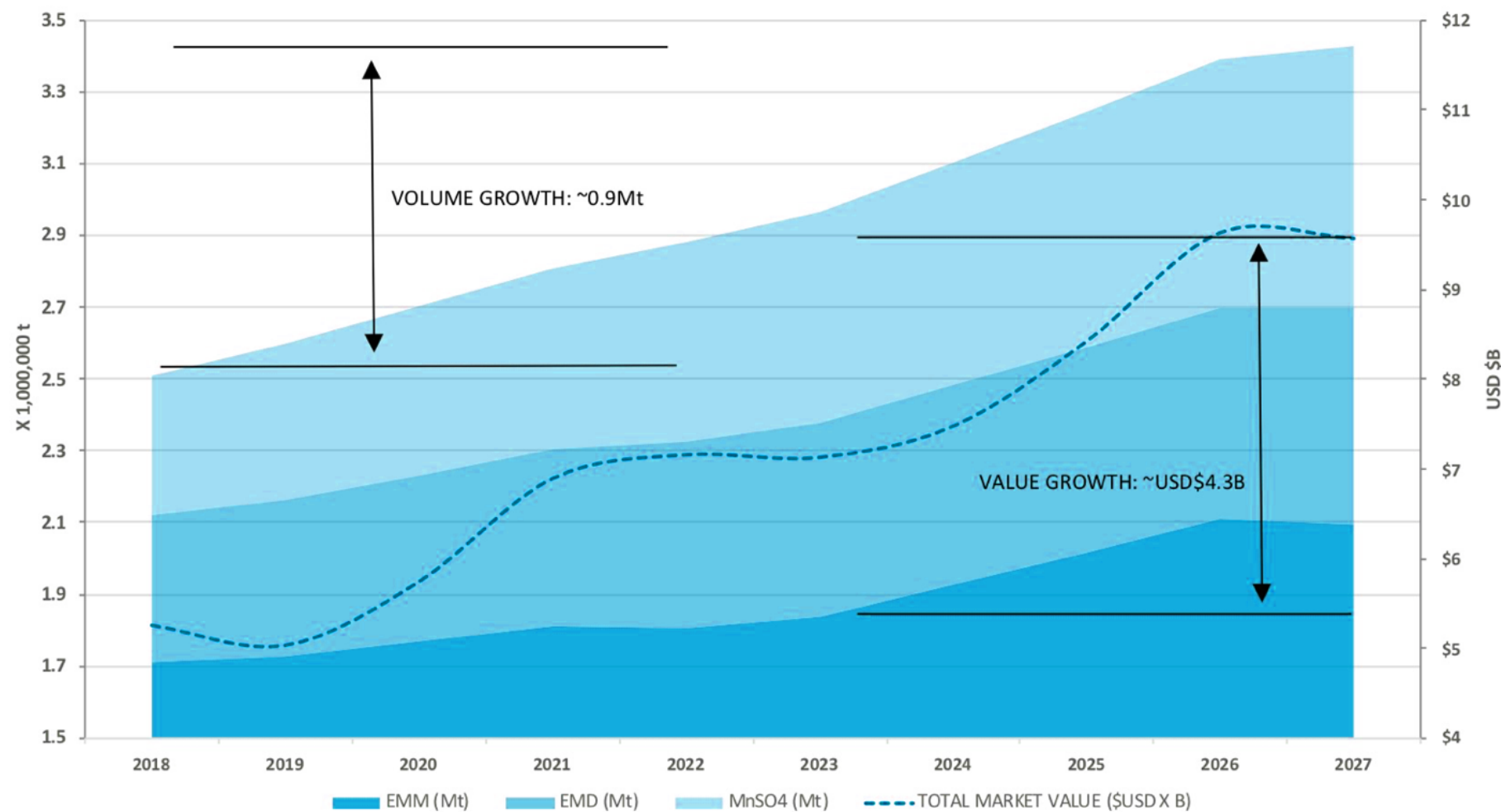
Main uses:

- Li-ion batteries
- Series 200 stainless steel
- Specialty alloys
- Fertiliser and trace nutrient



# High Purity Manganese Market Forecast

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Reference: Metal Bulletin Commissioned Manganese Market Report April 2018



# World Class Manganese Resource

Australia's largest onshore manganese resource is ripe for development



# The Butcherbird Manganese Project

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- Australia's largest onshore manganese deposit.
- >180 Mt of manganese ore\*.
- Excellent local infrastructure.
- 100% owned by Element 25 Limited.
- Low risk mining jurisdiction.
- Mining Lease Application lodged February 2018.
- Scoping Study completed.
- Pre Feasibility Study Commenced.



\*Reference: Montezuma Mining Company Ltd ASX release dated 12 October 2017

# World Class Manganese Resource



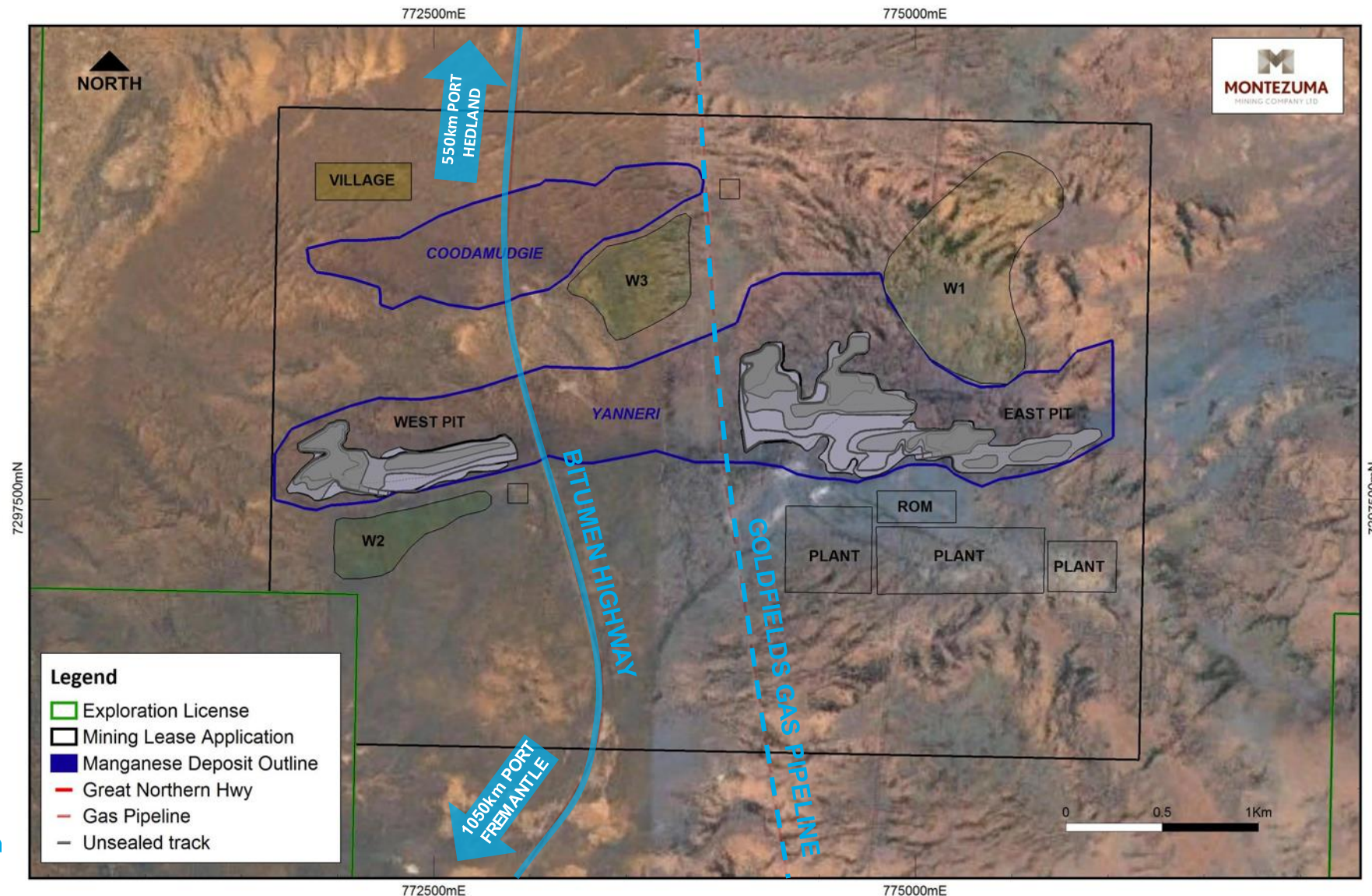
Prospect	Tonnes (Mt)	Mn (%)	SiO <sub>2</sub> (%)	Fe (%)	P <sub>2</sub> O <sub>5</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)
<b>Yanneri Ridge</b>						
Inferred	48.0	10.7	43.0	11.1	0.262	10.7
Indicated	<b>22.5</b>	<b>12.0</b>	<b>43.8</b>	<b>11.6</b>	<b>0.297</b>	<b>10.6</b>
<b>Additional Deposits</b>						
Inferred	110.3	10.6	44.4	11.9	0.3	11.0
<b>Total</b>	<b>180.8</b>	<b>10.8</b>	<b>43.9</b>	<b>11.7</b>	<b>0.3</b>	<b>10.9</b>

- Inferred and Indicated Resource Estimates completed for eight deposits.
- Significant potential remains to increase the resource with further drilling.
- Scale of development not resource constrained.

Reference: Element 25 Limited ASX release dated 12 October 2017 (originally released under the MZM ticker code)

# Simple Geology and Great Infrastructure

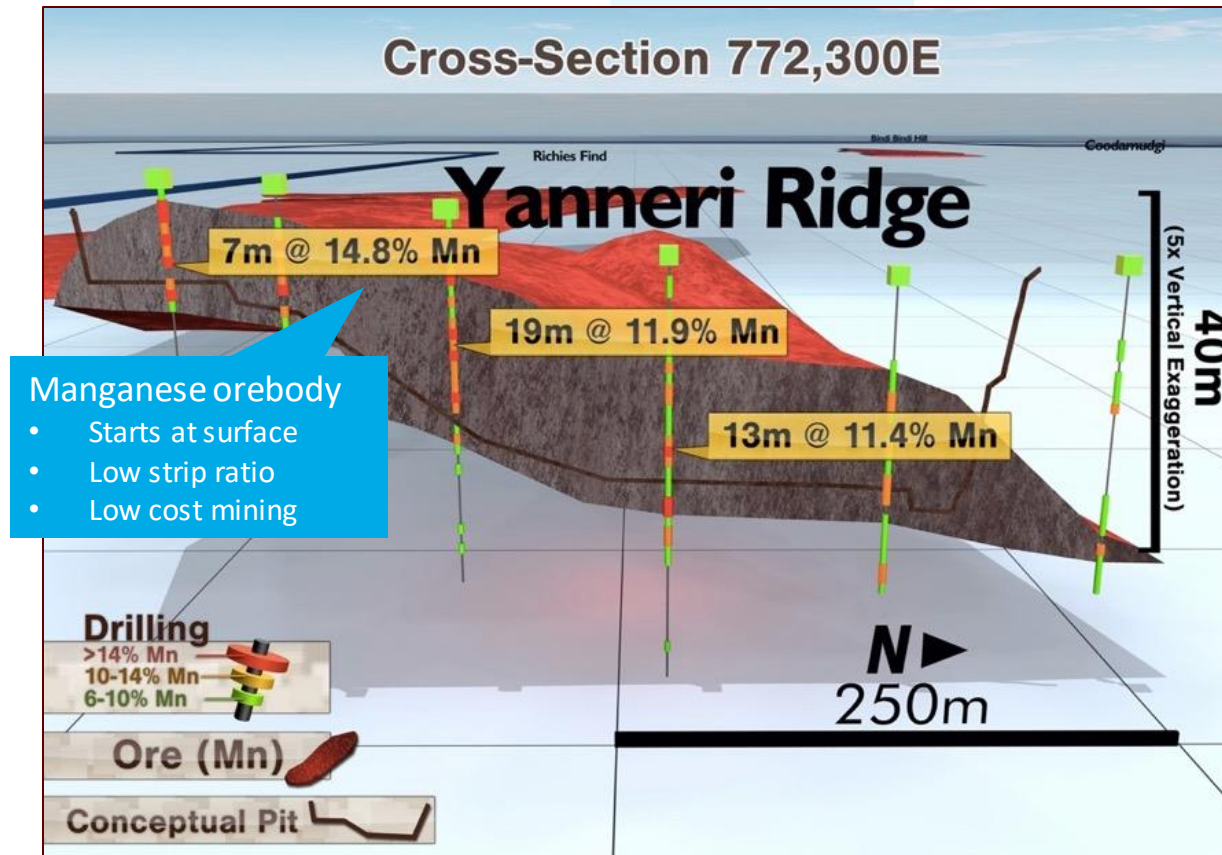
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# Simple Geology and Great Infrastructure

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- Flat lying stratiform ore body, very simple geology.
- Ore zone starts at surface and is laterally continuous.
- No selective mining required.
- Low strip ratio of 0.2:1 based on preliminary pit optimisations.
- Ore zone is above the water table.

Note: All intersections are approximately true width

The background of the slide is a close-up photograph of a marbled surface, possibly stone or marble, with various shades of grey, white, and blue. A semi-transparent blue rectangular overlay is positioned on the left side of the image, containing the title text.

# A Unique Processing Pathway

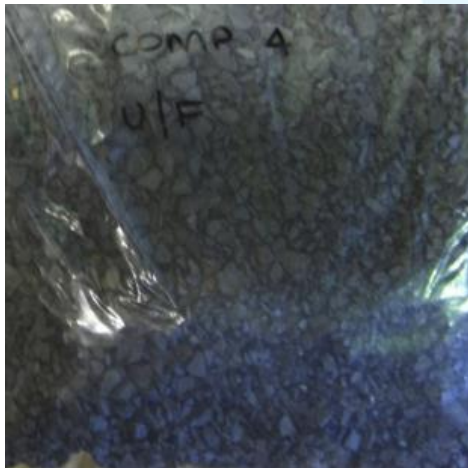
“Every once in a while, a new technology, an old problem, and a big idea turn into an innovation.”

Dean Kamen, Inventor.



# Breakthrough Technology

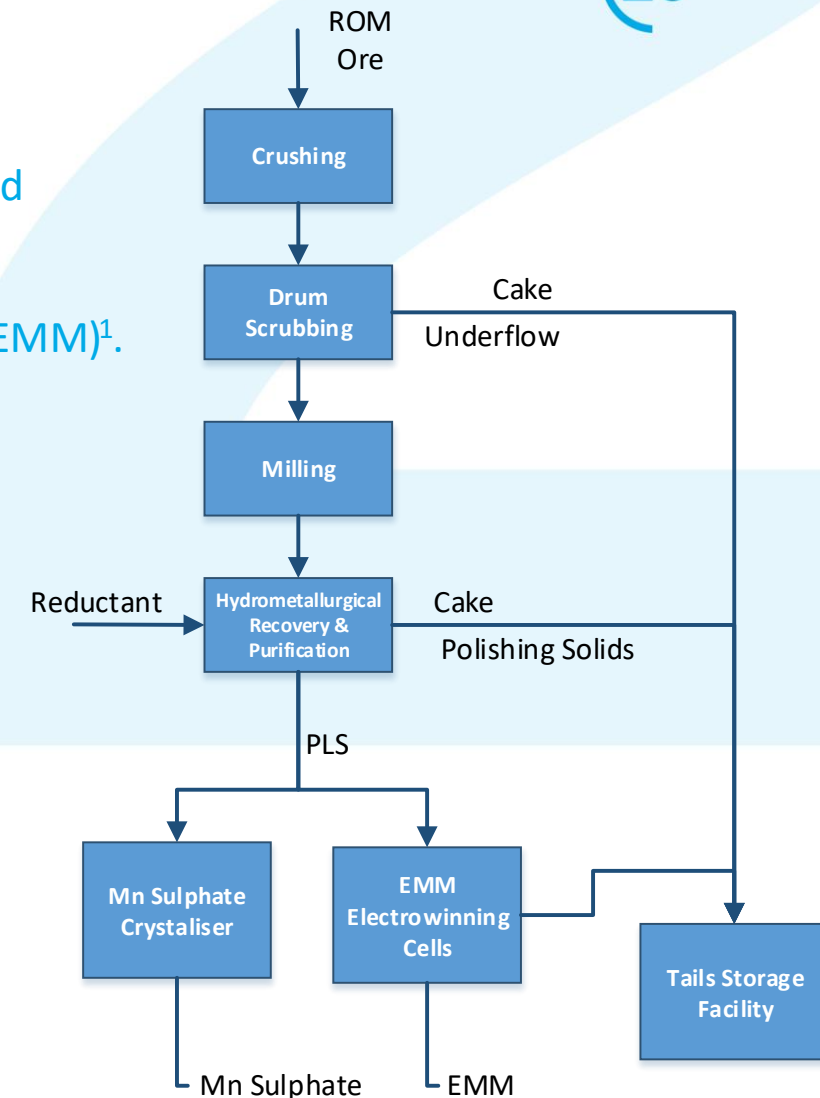
- CSIRO-developed flowsheet produces high purity battery grade manganese.
- Products include Electrolytic Manganese Dioxide (“EMD”), Metal (“EMM”), and manganese sulphate (batteries and fertiliser).
- High purity manganese is a high value product which sells for ~USD\$2,250/t (EMM)<sup>1</sup>.



LOW COST PLANT FEED FROM 100% OWNED MANGANESE RESOURCE



HIGH PURITY PRODUCTS FOR Li-Ion BATTERIES, HIGH VALUE: >US\$2000/t<sup>1</sup>



<sup>1</sup><https://www.metalbulletin.com/My-price-book.html?price=34473>

# Key Differentiators



Current Production Methods (China & SA)	Element 25 Flowsheet
<ul style="list-style-type: none"><li>• Requires high grade imported manganese ore or very low grade domestic ore – both expensive.</li><li>• Reduction Roasting to 800-1,000°C (for oxide ores) consumes energy.</li><li>• Sulphuric acid leach.</li><li>• Potentially more complex purification.</li><li>• Production of final products using toxic selenium.</li></ul>	<ul style="list-style-type: none"><li>• Lower cost ore mined at surface.</li><li>• Fast leach at ambient temperature and atmospheric pressure.</li><li>• Exothermic reaction produces energy.</li><li>• No sulphuric acid plant.</li><li>• Simple, novel purification pathway.</li><li>• Purified solution can produce EMM, EMD or manganese sulfate for Li-Ion batteries.</li></ul>
High emission, high energy, high cost, old technology	Lower emissions, lower energy, lower cost disruptive new technology



# Next Steps for Element 25?

Scoping Study complete and positive. What is the pathway to development...

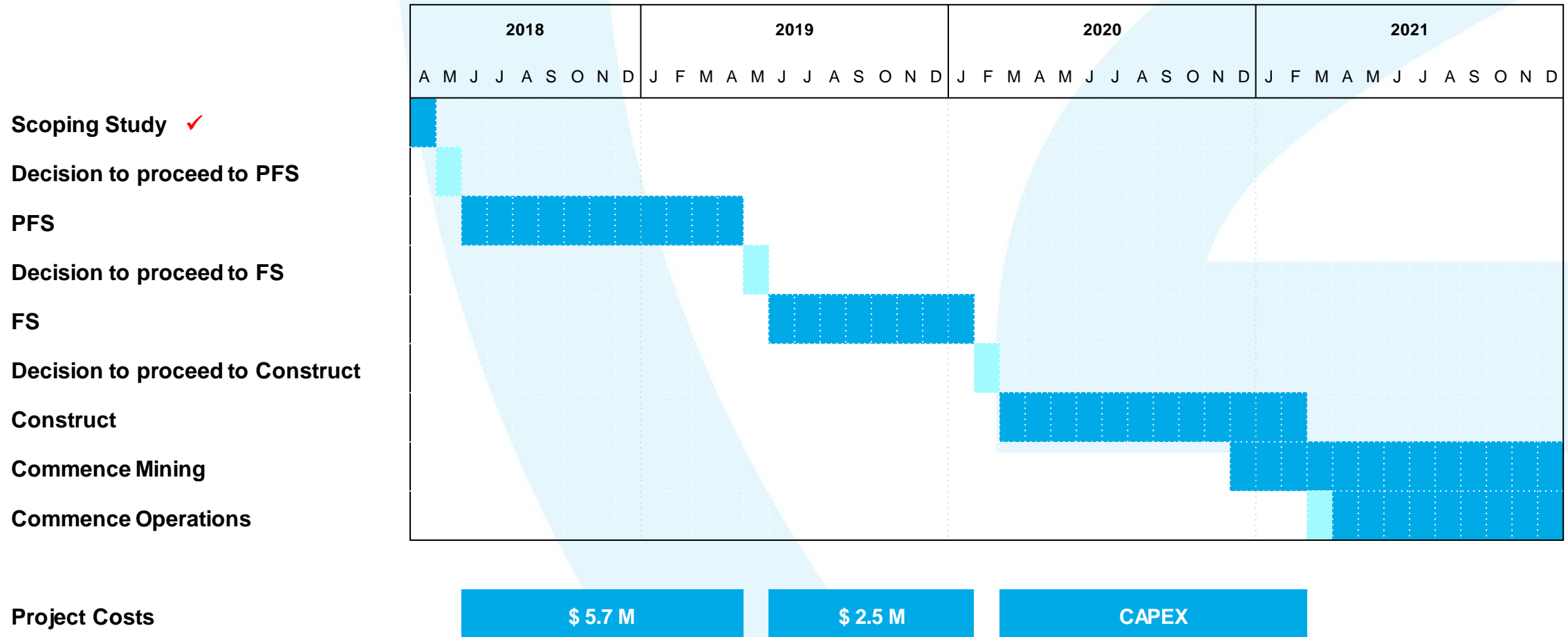
# Scoping Study Completed, PFS Initiated

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## KEY FACTORS FOR OPTIMISATION:

- **SCALE:** Very large resource means optimal scale is not limited by resource size. Study will assess production volumes from 100Kt (potential mine life ~180 years) to 1Mt (potential mine life ~18 years).
- **POWER SOLUTION:** Electro-winning is a heavy power consumer so power cost is a significant input. Gas pipeline provides robust base case. Renewable penetration and optimisation to drive costs down.
- **LOGISTICS:** Scoping Study assumes products to be shipped in containers via Fremantle. PFS work will investigate Port Hedland to reduce haulage costs.
- **MINING:** Simple geology expected to mean low cost and low sensitivity to overall opex.
- **MARKETING:** Product selection (EMM, EMD and MnSO<sub>4</sub>) and price forecasts are key factors.
- **CAPEX/OPEX:** Capital intensity will reduce at larger scales. Optimal startup size to be worked out.

# Project Timeline Estimate





# PFS Budget Estimate



		2018								2019				
Work Area		May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Resource Upgrade	800		8	336	386	50	20							
Mine Design - Reserve	125				50			50	25					
Met Test Work	1,000		17	17	142	125	125	125	83	150	150	67		
Pilot Plant	1,500						375	375	375	375				
Geotechnical	50					50								
Water	220			20	75	75	50							
Environmental	740		110	136	136	133	22	22	22	47	47	47	19	
Market	250			63	63	63	63							
Power	250						36	36	36	36	36	36	36	
Infrastructure	5								3	3				
Logistics	100			17	24	14	14	31						
Financial/Tax	100								25	25	25	25		
PFS Management	560		58	23	58	23	58	23	58	23	78	78	78	
Total (\$'000)	5,700		192	611	934	532	763	662	627	657	336	252	133	

# Conclusion – why invest?

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- World class, very large manganese deposit makes the project eminently scalable.
- Technology breakthrough on processing.
- Simple geology and flowsheet reduces technical risk.
- Strong demand growth forecast from conventional end users and the battery revolution.
- Multiple competitive advantages including low cost, long mine life, scalability and environmental credentials.
- Scoping Study to assess project economics positive and robust.
- Strong balance sheet, low market capitalisation and enterprise value, tight capital structure.
- The only current ASX listed opportunity in this sector...



# Thank you.

For more information, please contact Element 25 Limited:

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Element<sup>(25)</sup>

# Competent Person's Statement

Note: The information in this presentation that relates to Exploration Results, Exploration Targets and Mineral Resources is based on information compiled by Mr Justin Brown who is a full-time employee of the Company and is a member of the Australasian Institute of Mining and Metallurgy.

Justin Brown 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'. Justin Brown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Please note with regard to exploration targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

All references to Mineral Resources pertain to the ASX release dated 12 October 2017. The Company confirms that all material assumptions, underpinning the estimations continue to apply and have not materially changed.

For further information on Element 25 Limited and its Projects please visit its website at [www.element25.com.au](http://www.element25.com.au) which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies. ...