

## **PROJECT UPDATE**

*Developing Australia's Largest Onshore Manganese Resource*  
*Producing Low Cost, Low Emissions, High Purity Manganese*



**WORLD CLASS  
MANGANESE RESOURCE**



**INNOVATIVE  
PROCESSING**



**HIGH PURITY HIGH VALUE  
MANGANESE PRODUCTS**



**MONTEZUMA**  
MINING COMPANY LTD

# Disclaimer

This presentation contains only a brief overview of Montezuma Mining Company Ltd and its associated entities ("Montezuma") and their respective activities and operations. The contents of this presentation, including matters relating to the geology of Montezuma'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 Montezuma's control, may cause the actual results, performance and achievements of Montezuma to differ materially from those expressed or implied in this presentation.

To the maximum extent permitted by law, Montezuma does not warrant the accuracy, currency or completeness of the information in this presentation, nor the future performance of Montezuma, 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 Montezuma or its activities.



## Tight Capital Structure Strong Balance Sheet

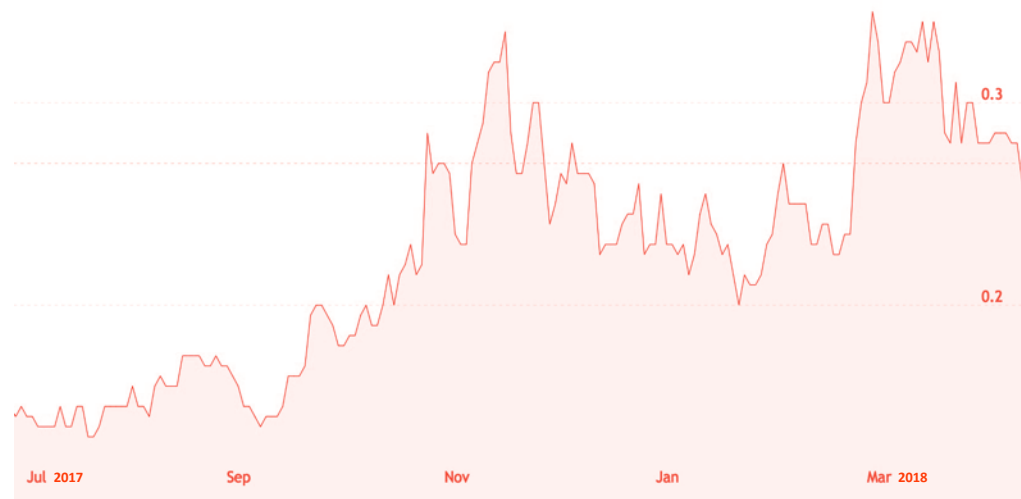
### Financial Information

ASX Ticker	MZM
Shares on Issue	83.5M
Share Price	\$0.28
Market Capitalisation	\$23.4M
Cash & Investments (31 March 18) ~10M	
Debt	Nil
Enterprise Value	~\$13.4M
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%



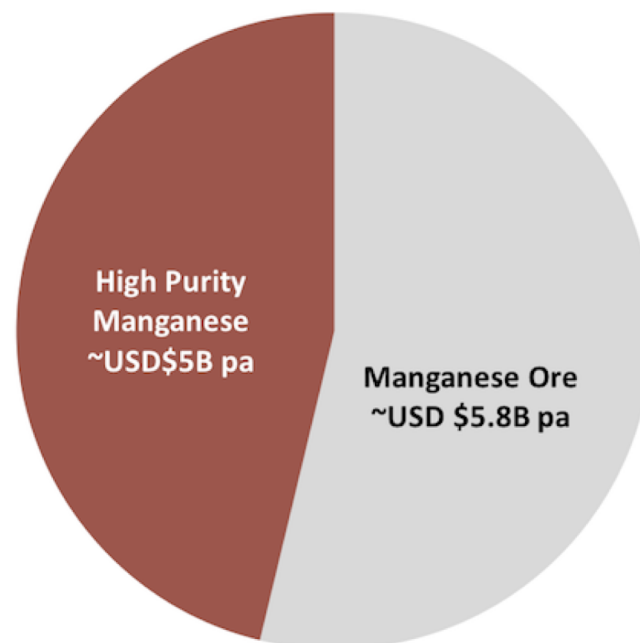
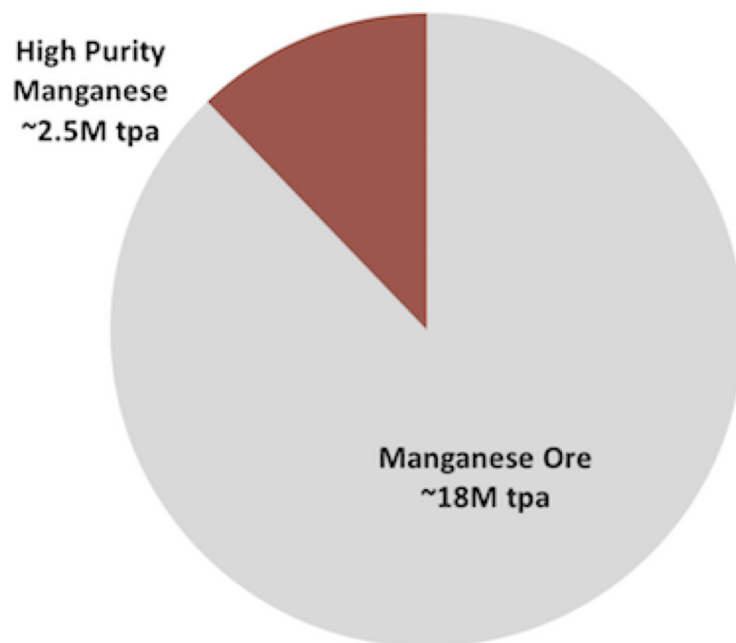
## A premium product

High purity manganese makes up;

- ~10% of the global manganese market by volume; but
- ~40% of the global manganese market by value.

### Main Products:

- Electrolytic Manganese Metal (EMM)
- Electrolytic Manganese Dioxide (EMD)
- Manganese Sulphate ( $\text{MnSO}_4$ )



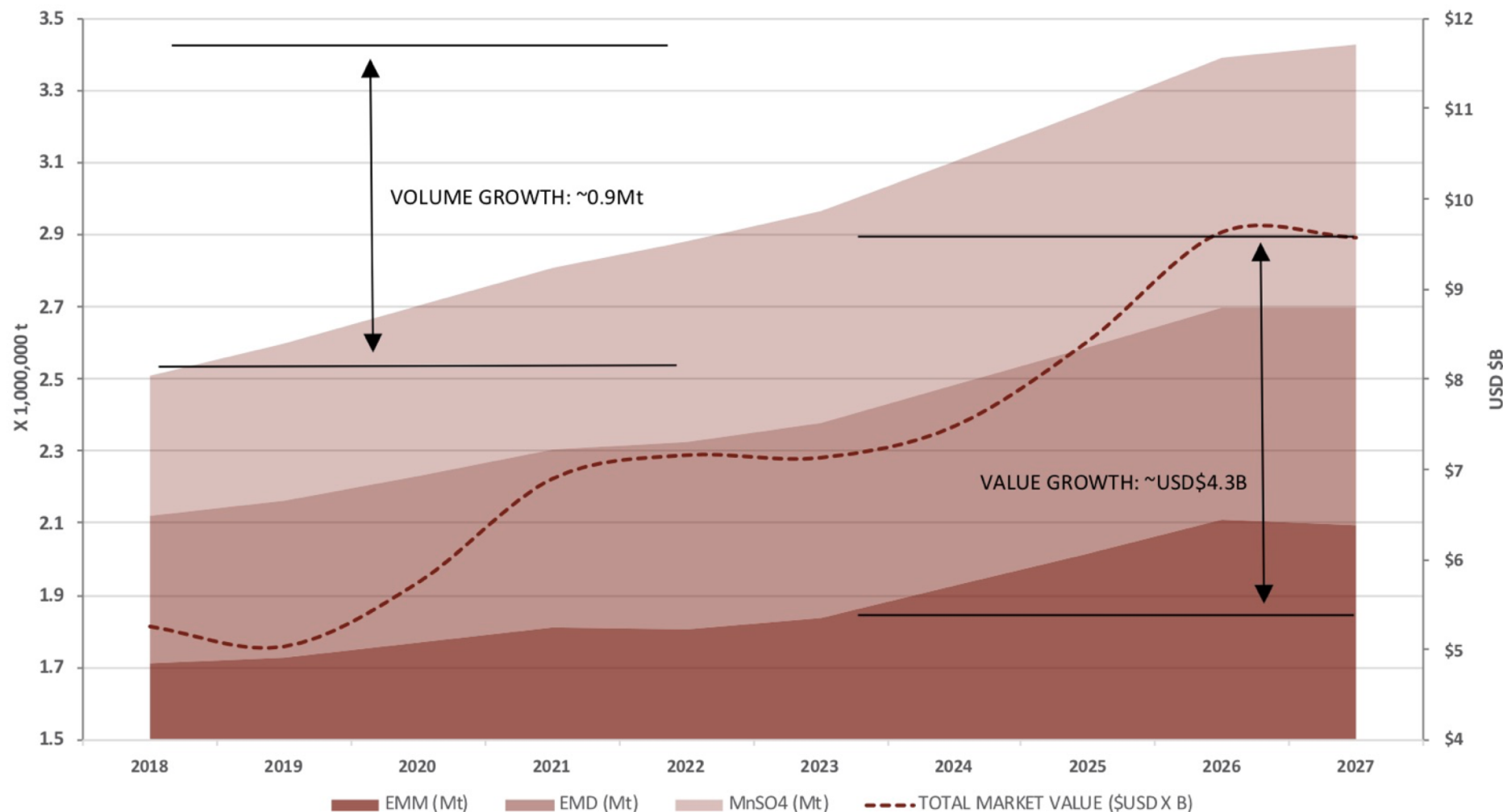


# MANGANESE MARKET – STRONG GROWTH EXPECTED



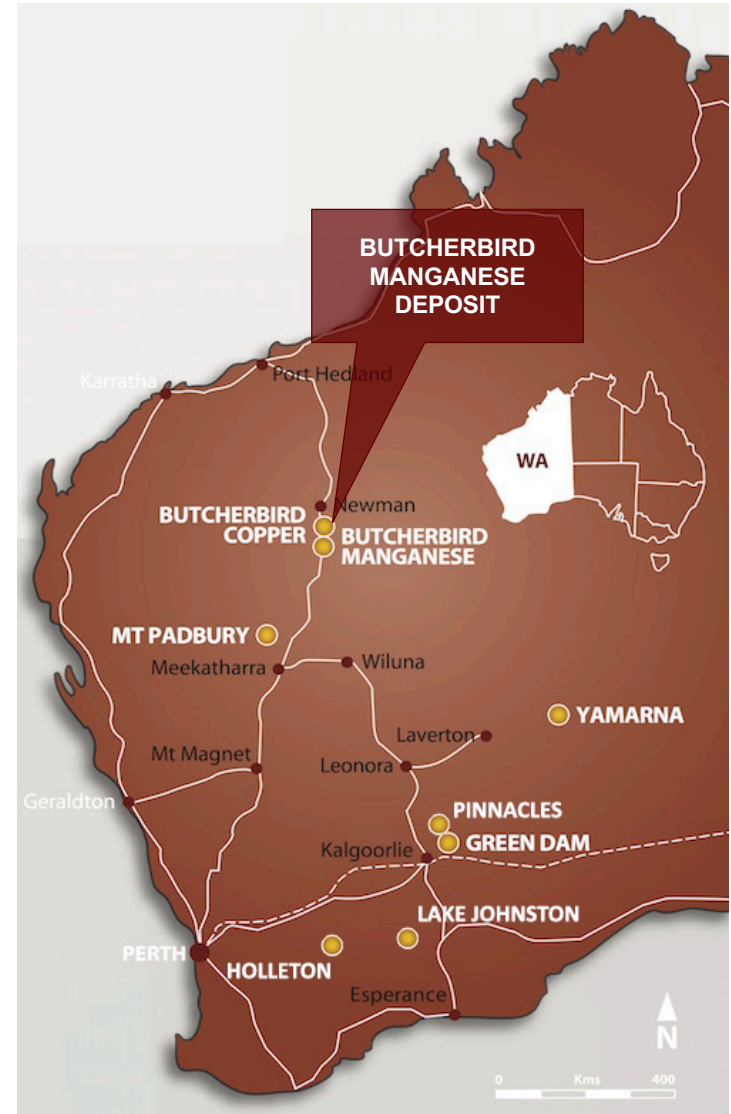
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## Forecast High Purity Manganese Market Growth





- Australia's largest onshore manganese deposit.
- >180 Mt of manganese ore<sup>1</sup>.
- Excellent local infrastructure.
- 100% owned by Montezuma.
- Low risk mining jurisdiction.
- Mining Lease Application lodged February 2018.
- Scoping Study completion imminent.
- PFS in the planning phase.



<sup>1</sup>Reference: Montezuma Mining Company Ltd ASX release dated 12 October 2017

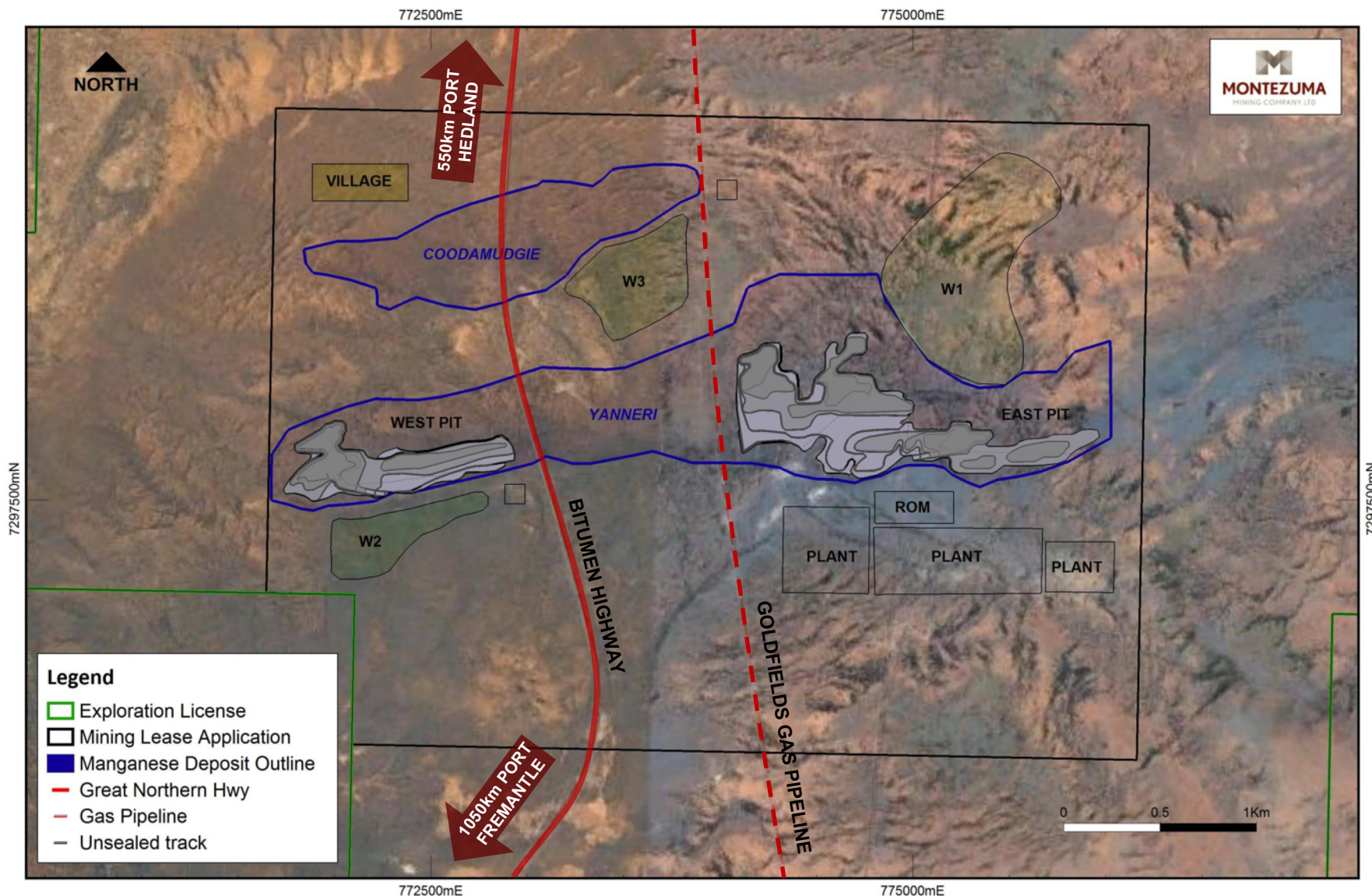


## World Class Manganese Resource

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>

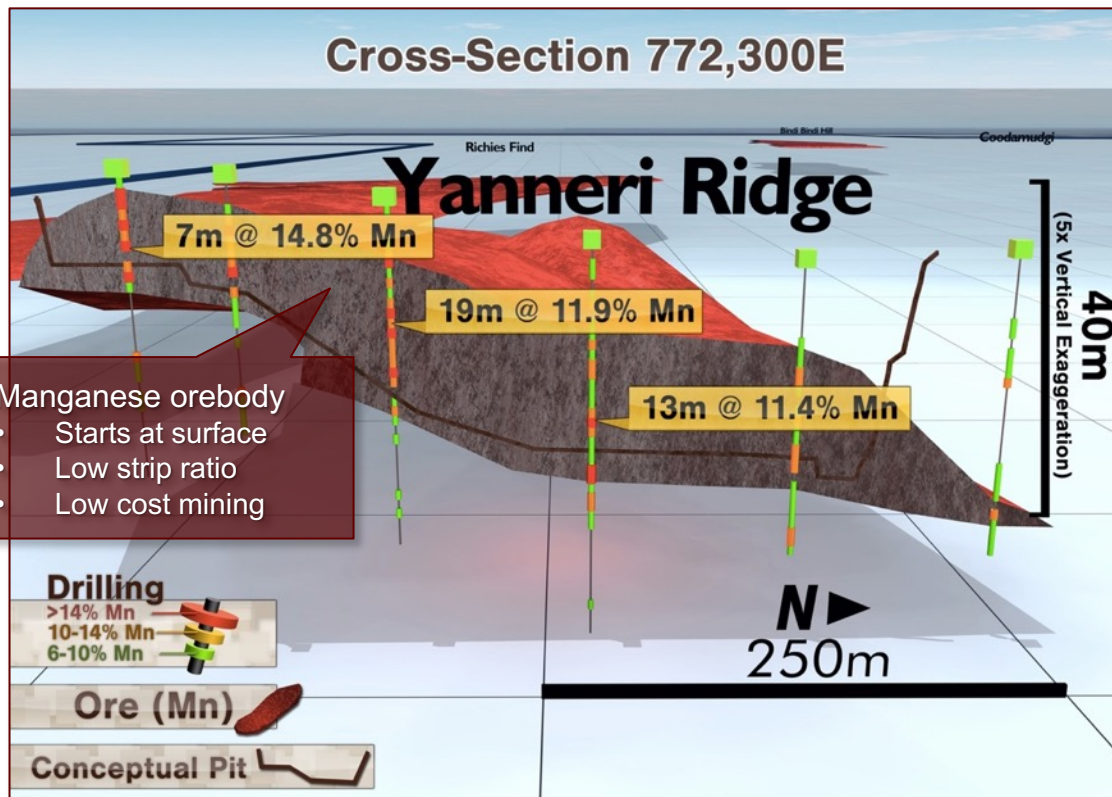
- Inferred and Indicated Resource Estimates completed for eight deposits.
- Significant potential remains to increase the resource with further drilling.
- Scale of development not resource constrained.

## Simple Geology/Favourable Infrastructure





## Very Simple Geology, Favourable Infrastructure



Ore starts at surface, low strip ratio of 0.2:1

► Low mining cost.

Gas pipeline;

► Low energy cost

Bitumen highway;

► Low infrastructure cost

Containerised products;

► Simple logistics



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*“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



INNOVATIVE, NOVEL PROCESS TO PURIFY ORE AND ADD VALUE



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

### Butcherbird Project<sup>1</sup>

- Lower cost ore mined at surface
- Fast leach at ambient temperature and atmospheric pressure.
- Exothermic reaction produces energy.
- No sulphuric acid plant.
- Simple, novel purification pathway.
- Purified solution can produce EMM, EMD or manganese sulfate for Li-Ion batteries.

**Lower emissions, lower energy, lower cost  
disruptive new technology**

### Current Producers (China/South Africa)

- Requires high grade imported manganese ore or very low grade domestic ore – both expensive.
- Reduction Roasting to 800-1,000°C (for oxide ores) consumes energy.
- Sulphuric acid leach.
- Potentially more complex purification.
- Production of final products using toxic selenium.

**High emission, high energy,  
high cost, old technology**

<sup>1</sup> Reference: Montezuma Mining Company Ltd ASX releases dated 31 July 2017 and 22 November 2017





## Key Project Variables/Sensitivities

### ■ 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:

- Products to be shipped in containers via Port Hedland or Fremantle

### ■ MINING:

- Simple geology expected to mean low cost and low sensitivity to overall opex.

### ■ MARKETING:

- Product selection (EMM, EMD and  $\text{MnSO}_4$ ) and price forecasts are key inputs.

### ■ CAPEX/OPEX:

- Capital intensity should reduce with increasing plant size.

**STUDY  
COMPLETION  
IMMINENT**



## Investment Case Summary

- World class, very large manganese deposit makes the project eminently scalable.
- Technology breakthrough on processing.
- Simple geology and flowsheet.
- 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 nearing completion.
- Strong balance sheet, low market capitalisation and enterprise value, tight capital structure.
- The only current ASX listed exposure to this sector.



WORLD CLASS  
RESOURCE



INNOVATIVE  
PROCESSING



HIGH PURITY HIGH  
VALUE PRODUCTS



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# Montezuma to become “Element 25 Limited”

- Subject to shareholder approval at a general meeting scheduled for 4 May 2018, Montezuma Mining Company Ltd will change its name to “Element 25 Limited”
- New ASX code proposed to be “e25”.
- New website address to be “element25.com.au”.
- Pending shareholder approval, changes to take effect during May 2018.
- Rebranding exercise is to reflect the Company’s focus on the 25<sup>th</sup> element of the periodic table, manganese.
- In parallel, we are actively looking at strategies to add value to the Company’s non-manganese assets.



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 Montezuma Mining Company Limited and its Projects please visit its website at [www.montezuma.com.au](http://www.montezuma.com.au) which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.