

16 January 2018

**MONTEZUMA INITIATES SCOPING STUDY INTO  
HIGH PURITY MANGANESE PRODUCTION AT BUTCHERBIRD**

**HIGHLIGHTS**

- As previously announced, work by CSIRO has **achieved industry specification** to produce high purity manganese products<sup>1</sup>.
- Success to date underpins the decision to initiate a **Scoping Study** to assess potential development options and provide guidance on capital and operating costs.
- Scoping Study expected to take 3-6 months to complete.
- Experienced **mining consultant Ian Huitson appointed** to manage the Scoping Study.
- Experienced **mining engineers Asia Pacific Mining Solutions** have completed preliminary pit optimisations for the study.

In late 2017, Montezuma Mining Company Ltd (“Montezuma” or “Company”) advised that test work on the hydrometallurgical processing of ores from the Butcherbird Manganese Project had **exceeded expectations** and achieved the required specification to produce high **purity manganese products**.

An internal review of the potential for the project to produce a range of **high value manganese products** on a commercial scale has triggered the decision to **immediately commence a Scoping Study**. The Study will assess the options for project development and provide an assessment of the potential **capital and operating cost** requirements for project development.

In the event that a successful Scoping Study is delivered, a decision to proceed to a **Preliminary Feasibility Study** will be considered by the Company.

It is the Company’s intention to expedite this process to take advantage of strong market conditions around commodity markets and more specifically in relation to those metals required for Lithium Ion battery production which includes **high purity manganese**.

**Executive Director Justin Brown** said *“The low cost chemical processes required to process our ore have been established and we are excited to now move into the commercial assessment phase to show the market the real potential that this project offers”*.

<sup>1</sup> Reference: Company announcement dated 22 November 2017

**ABOUT MONTEZUMA MINING**

Montezuma Mining Company Ltd (ASX: MZM) is a diversified explorer focused on manganese, cobalt, lithium and gold. The Company’s objective is to achieve returns for shareholders through selected strategic acquisitions and targeted exploration.

Montezuma is currently working to develop a flowsheet to produce high purity manganese products for use in the Li-Ion battery industry.

Montezuma also has 100% interests in the Holleton and Green Dam Gold Projects, the Pinnacles Cobalt Project and the Lake Johnson Lithium Project, all in Western Australia.

**MARKET DATA**

ASX code:	MZM
Share price:	\$0.255
Shares on issue:	83.5M
Market capitalisation:	\$21.3M
Cash (at 30 September):	~\$3.8M
Listed Investments (at 30 Sept):	~\$6.7M

**BOARD AND MANAGEMENT**

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



Company information, ASX announcements, investor presentations, corporate videos and other investor material on the Company’s projects can be viewed at [www.montezuma.com.au](http://www.montezuma.com.au)



LARGE MANGANESE RESOURCE



INNOVATIVE PROCESSING



HIGH PURITY MANGANESE PRODUCTS

To expedite the initial study phase, the Company has appointed experienced mining consultant Mr Ian Huitson to manage the Scoping Study. Mr Huitson has a Mining Engineering degree and is currently consulting to the mining industry based in Perth and has over thirty years experience in the mining industry working in operations and project development.

Previously Mr Huitson was the Project Manager of Gulf Manganese Corporation Limited, responsible for developing the Kupang Manganese Smelter hub in Indonesia. He started his career working with WMC at Kambalda and later with Dominion Mining Limited. He joined Consolidated Minerals Limited in 1999 until 2007 initially as the Resident Manager at the Woodie Woodie Manganese Mine and then as the Technical Services Manager in Perth. Also, he worked for Shaw River Manganese Limited on their manganese mine in Namibia.

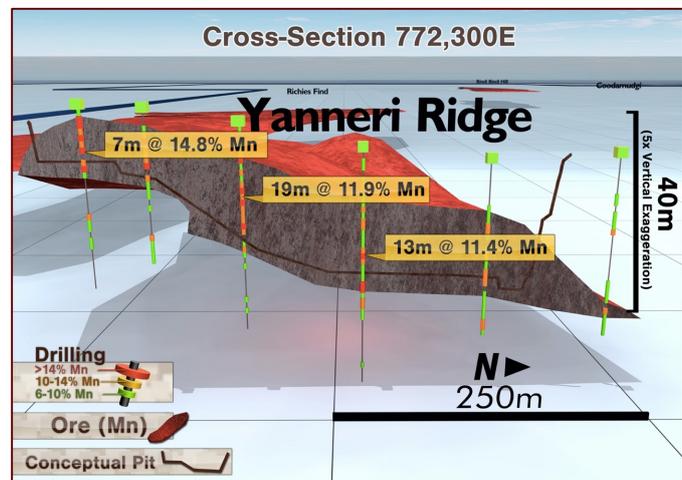
Ian's extensive study, projects and operations management experience in manganese make him the ideal candidate to manage this critical phase of project development at Butcherbird.

Mr Jim Moore is a mining engineer with more than 20 years experience. His work has taken him to Africa, Asia, Europe and Australia with the focus being on open cut hard rock mining. Operationally he has worked to the level of Mine Manager and on the planning side is engaged as a Principal Engineer for a range of companies completing life of mine work and feasibility studies. He is a member of the AUSIMM.

### ABOUT THE BUTCHERBIRD PROJECT

Montezuma's 100% owned Butcherbird Manganese Project host Australia's largest onshore manganese resource in multiple outcropping deposits.

The work that has been completed by CSIRO has successfully developed a hydrometallurgical flowsheet which can unlock the large volume of manganese metal contained within these deposits and positions Montezuma to be a producer of **high purity, high value manganese products**.



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>

Table 1. JORC 2012 Butcherbird Mineral Resource Estimate<sup>2</sup>

There are no material changes to the assumptions used to provide the JORC 2012 Butcherbird Resource Estimate.

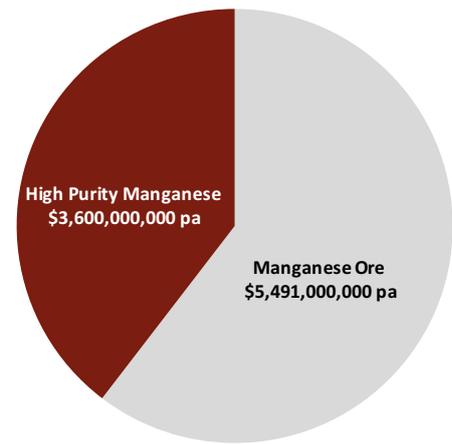
<sup>2</sup> Reference: Montezuma Mining Company Ltd ASX release dated 12 October 2017

## ABOUT HIGH PURITY MANGANESE

Whilst high purity manganese makes up only 10% of the manganese market by volume, **it accounts for an estimated 40% of the total value** in sales of the market<sup>3</sup>.

The production of high purity products from Butcherbird ores allows the Company to initiate commercial studies into becoming a producer of high value products rather than attempting to compete in the traditional bulk commodity manganese markets. This represents a transition from a large tonnage, low margin business opportunity, to a lower risk **low tonnage high margin business** in a strongly growing market.

The flowsheet developed for Butcherbird is unique in that it is conducted at **atmospheric pressure, ambient temperature and at a coarse grind size**, all of which reduce costs over traditional approaches.



## FOR MORE INFORMATION...

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The information in this report that relates to Exploration Results, Exploration Targets, Mineral Resources and Mineral Reserves is based on information compiled by Mr David O'Neill who is a member of the Australasian Institute of Mining and Metallurgy. At the time that the Exploration Results, Exploration Targets, Mineral Resources and Mineral Reserves were compiled, Mr O'Neill was an employee of Montezuma Mining Company Ltd. Mr O'Neill is a geologist 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'. Mr O'Neill consents to the inclusion of this information in the form and context in which it appears in this report

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

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<sup>3</sup> UBS Global Research May 2017

Assumes EMM price of USD\$2,000/t Ref: <https://www.metalbulletin.com/My-price-book.html?price=34473>

Assumes manganese price of USD\$3.23/dmtu Ref: <https://www.south32.net/docs/default-source/all-financial-results/reports-and-presentations/mamatwan-site-tour-2016.pdf>