

12 February 2018

## KEY CONSULTANTS APPOINTED TO HIGH PURITY MANGANESE SCOPING STUDY TEAM

#### **HIGHLIGHTS**

- Simulus Engineering appointed to undertake hydrometallurgical process plant design study.
- Metal Bulletin appointed to provide global high purity manganese market assessment including battery grade manganese.
- Study timeline targeting completion mid April 2018.

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**.

In January of 2018, the Company announced the commencement of a Scoping Study into the production of high purity manganese from the Butcherbird Manganese ores using the **innovative hydrometallurgical processing route** developed by the Company in conjunction with CSIRO during 2017.

The Company is pleased to advise that two industry leading consulting groups have now been appointed to undertake key workstreams that are critical to the ongoing commercial studies.

**Simulus Engineers** will be completing the initial study into the hydrometallurgical plant design which will assess the commercial and engineering parameters around the scale up of the hydrometallurgical flowsheet.

**Metal Bulletin** have been appointed to provide a study of the high purity manganese markets including price and volume assessments both presently and projected future trends. The study will look at EMM, EMD and manganese sulphate for Li-Ion batteries.







HIGH PURITY MANGANESE PRODUCTS

## 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-lon 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: \$0.25
Shares on issue: 83.5M
Market capitalisation: \$20.8M
Cash (at 30 Dec): ~\$3.3M
Listed Investments (at 30 Dec): ~\$7.1M

### **BOARD AND MANAGEMENT**

Chairman
Executive Director
Non-Executive Director
Exploration Manager

Seamus Cornelius Justin Brown John Ribbons 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

#### **ABOUT SIMULUS ENGINEERS**



Simulus was founded in 2004 as a specialist process engineering and simulation business. Simulus are leaders in the development of innovative hydrometallurgical flowsheets to help the minerals industry meet the growing need for specialty, high purity and premium products. Their integrated engineering offering and in house piloting facilities enables rapid

project development for their clients. They work with global partners to provide modular and skid mounted plant designs, enabling them to assist clients from initial scoping stages through to construction and commissioning.

#### **ABOUT METAL BULLETIN**

# MetalBulletin

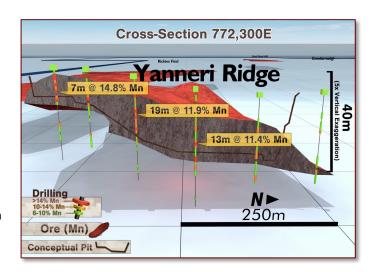
Metal Bulletin Group aims to provide leading pricing intelligence, including independent industry benchmarks, for the metal and mining industry. The

group's global portfolio of news, analysis, conferences and insight services complement these price benchmarks. They are a completely impartial and independent price reporting agency and engage with all sides of the market, including sellers, buyers and traders, during the price discovery process.

#### **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> (%)
Yanneri Ridge						
Inferred	48.0	10.7	43.0	11.1	0.262	10.7
Indicated	22.5	12.0	43.8	11.6	0.297	10.6
Additional Deposits						
Inferred	110.3	10.6	44.4	11.9	0.3	11.0
Total	180.8	10.8	43.9	11.7	0.3	10.9

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

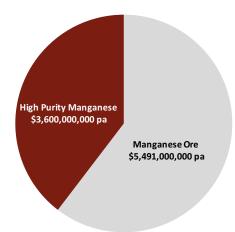
There are no material changes to the assumptions used to provide the JORC 2012 Butcherbird Resource Estimate.

<sup>&</sup>lt;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 attemting 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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#### **Executive Director**

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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.

<sup>&</sup>lt;sup>3 1</sup>UBS Global Research May 2017