



6 JUNE 2017

INITIAL TEST RESULTS CONFIRM BATTERY GRADE ELECTROLYTIC MANGANESE DIOXIDE POTENTIAL AT BUTCHERBIRD

- First phase of leach tests to produce Electrolytic Manganese Dioxide (“EMD”) from the Butcherbird Manganese Deposit ore a success.
- Initial leaching results achieve **>95% Mn extraction** with rapid leach kinetics and impressive leach selectivity before any flowsheet optimisation.
- The test work **confirms the potential for on site hydrometallurgical options to add significant value to the Butcherbird Project**.
- Butcherbird is Australia’s largest onshore manganese resource with in situ resources of over 170 million tonnes of manganiferous ore⁴.
- EMD is an important technology metal with over 90% of global consumption used in battery manufacturing.
- Lithium-Ion battery¹ cathodes contain up to 60% manganese, which is ~5 times the contained value and ~15 times the amount of contained lithium^{2,3}.

Montezuma Mining Company Ltd (“Montezuma” or “Company”) is pleased to announce that the Commonwealth Scientific and Industrial Research Organisation (“CSIRO”) Process Science and Technology Group has successfully completed the first phase of the research and development studies into the production of high purity Electrolytic Manganese Dioxide from manganese ores sourced from the Company’s 100% owned, infrastructure endowed Butcherbird Project in Western Australia.

In addition to the production of EMD, the investigations also focused on improving the primary beneficiation grades achieved from the Butcherbird ores as a feedstock into the EMD process flow sheet(s) and as a potential marketable product for sale to the manganese alloy markets. Previous work achieved consistent grades of ~33% Mn, with the current work aimed at further increasing that⁵ to add value to the end product prior to haulage and shipping costs to get the product to market.

ABOUT MONTEZUMA MINING

Listed in 2006, Montezuma Mining Company Ltd (ASX: MZM) is a diversified explorer primarily focused on gold and manganese. The Company’s primary objective is to achieve returns for shareholders through selected strategic acquisitions and targeted exploration.

Montezuma has 100% interests in the Yamarna Gold Project in the Yamarna Greenstone Belt, the Holleton Gold Project in the Wheat Belt region and the Butcherbird Manganese/Copper Project in the Murchison region, all located in Western Australia.

MARKET DATA

ASX code:	MZM
Share price:	\$0.14
Shares on issue:	83.5M
Market capitalisation:	\$11.7M
Cash (at 31 March):	~\$4.3M
Listed Investments:	~\$7.9M

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

¹ <http://www.visualcapitalist.com/manganese-powering-the-next-generation-of-lithium-ion-batteries/>

² http://batteryuniversity.com/learn/article/types_of_lithium_ion

³ <https://www.metalary.com/lithium-price/>

⁴ http://batteryuniversity.com/learn/article/types_of_lithium_ion

⁵ <https://www.metalary.com/lithium-price/>

CSIRO HYDROMETALLURGICAL FLOWSHEET DESIGN PROGRAMME

As previously announced, Montezuma recently commissioned some initial work within the Mineral Resources, Processing Group of CSIRO to consider beneficiation and hydrometallurgical options for the Butcherbird Project.

HYDROMETALLURGICAL LEACH TEST WORK

A core focus of the of the programme involved investigating a range of hydrometallurgical options aimed at direct leaching of manganese from the Butcherbird ores as a precursor to EMD production. The work to date has showed very encouraging results. In particular, first tests using selected reductive leaching protocols designed by CSIRO scientists, yielded excellent manganese leaching results, rapid leach kinetics (**>95% Mn extraction in 30 minutes**) and impressive selectivity over key impurities.

There remains significant potential for further work to optimise this process in terms of efficiency / kinetics, and / or selectivity with a range of variables such as, particle size, temperature, reagent concentration, reductant choice and ratio, residence times, etc. **Further work is planned to optimise** these direct leach methods to further improve leach solution purity whilst maintaining the **rapid, high level of manganese extraction achieved so far**.

The company is eager to begin this next phase of test work in conjunction with the CSIRO, with further updates to come.

ORE BENEFICIATION TEST WORK

In addition to the hydrometallurgical work, the scope of the test programme also involved looking at innovative ways to increase the primary beneficiation grades over and above the 33% Mn concentrates achieved to date in order to produce a higher value product stream for sale into the ferro-alloy markets.

Building on advanced mineralogical characterisation work at CSIRO a range of selected samples and beneficiation strategies were trialled, however the limited potential to further improve concentrate grades from this ore (as demonstrated in previous work) was reconfirmed. Business development work on this aspect of the project will use the existing specification of 33% Mn, high silica and low impurities to explore development and marketing options.

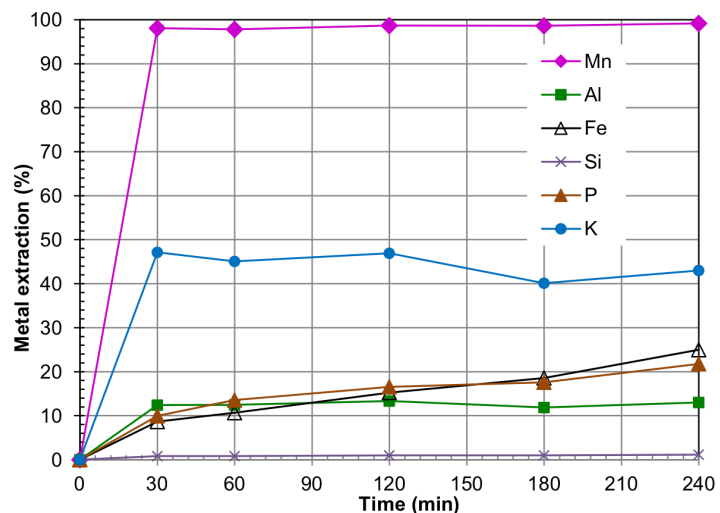


Figure 1: First pass manganese leach test results showing metal extraction over time.

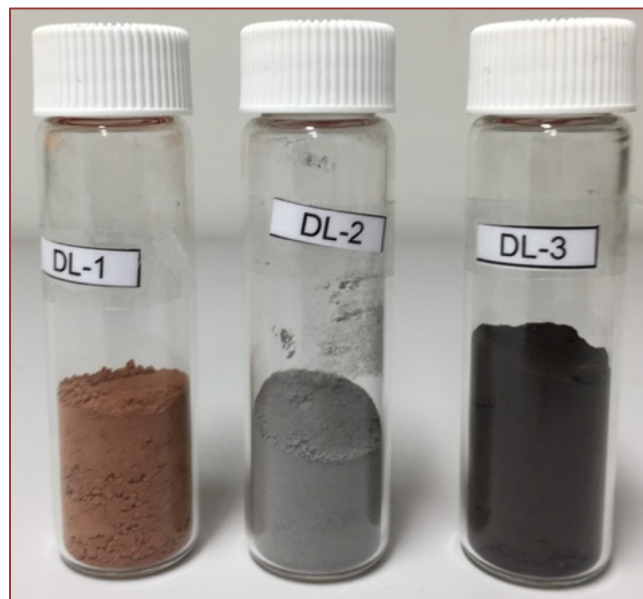


Figure 2: Selected manganese ore samples after various leaching test protocols. Figure 1 shows leach results from sample DL-1.

ABOUT THE BUTCHERBIRD PROJECT

The Butcherbird Manganese Deposit is Australia's **largest onshore manganese resource**⁴ comprising large tonnages of near surface manganese oxide ore in seven deposits.

The project also has some **excellent infrastructure advantages** with a gas pipeline and main bitumen highway passing directly adjacent to and through the Project.

The mineralisation occurs as supergene enrichment of a regional scale basal manganese shale which underlies much of the Project area. The shale beds are gently folded and where the folds approach the surface topography, supergene processes have significantly upgraded the manganese content to form a potential feedstock for further upstream processing.

ABOUT EMD

Industry observers expect the global electrolytic manganese dioxide market to reach USD 635.7 million by 2022 with a **projected compound annual growth rate of 4.9%** from 2015 to 2022.⁵

Growth in demand from the battery manufacturing industry is expected to drive projected demand curves as technological advancements in **wind and solar power generation** and the need for associated grid electrical storage systems expands.

Battery production is the leading EMD consumer with market share estimated to exceed 90% of global consumption. This demand is expected to continue to grow due to the current and expected future growth in the global electric vehicle

industry, which in turn has a strong impact on battery demand. Manganese in the form of **EMD is a key ingredient in several types of widely used battery technologies including Li-ion, alkaline and zinc-carbon, and the next generation lithiated manganese dioxide batteries, with cathodes comprising over 60% Mn compared to approximately 4% lithium**

Classification	Inferred Resource	
Cut-off	10% Mn	
Deposit	Tonnes (Mt)	Mn (%)
Bindi Bindi Hill	8.75	11.09
Budgie Hills	1.03	10.82
Cadgies Flats	0.25	11.08
Coodamudgi	12.9	11.48
Illgararie Ridge	17.0	10.71
Mundawindi	14.2	12.23
Richies Find	16.1	11.56
SUBTOTAL	70.2	11.4
Yanneri Ridge	48.8	11.8
GLOBAL TOTAL	119.0	11.6

Table 1. Inferred Mineral Resource Estimates at the Butcherbird Manganese Project are reported at a 10% Mn cut.

Classification	Inferred Resource	
Cut-off	8-10% Mn	
Deposit	Tonnes (Mt)	Mn (%)
Bindi Bindi Hill	5.7	9.2
Budgie Hills	3.5	8.9
Cadgies Flats	0.2	9.1
Coodamudgi	3.6	9.5
Illgararie Ridge	18.5	9.2
Mundawindi	2.1	9.4
Richies Find	6.6	9.4
SUBTOTAL	40.1	9.3
Yanneri Ridge	15.8	9.4
GLOBAL TOTAL	55.9	9.3

Table 2. Inferred Mineral Resource Estimates at the Butcherbird Manganese Project are reported at 8-10% Mn.

⁴ Montezuma Mining Company Ltd ASX release dated 7 December 2012

⁵ <http://www.grandviewresearch.com/press-release/global-electrolytic-manganese-dioxide-market>

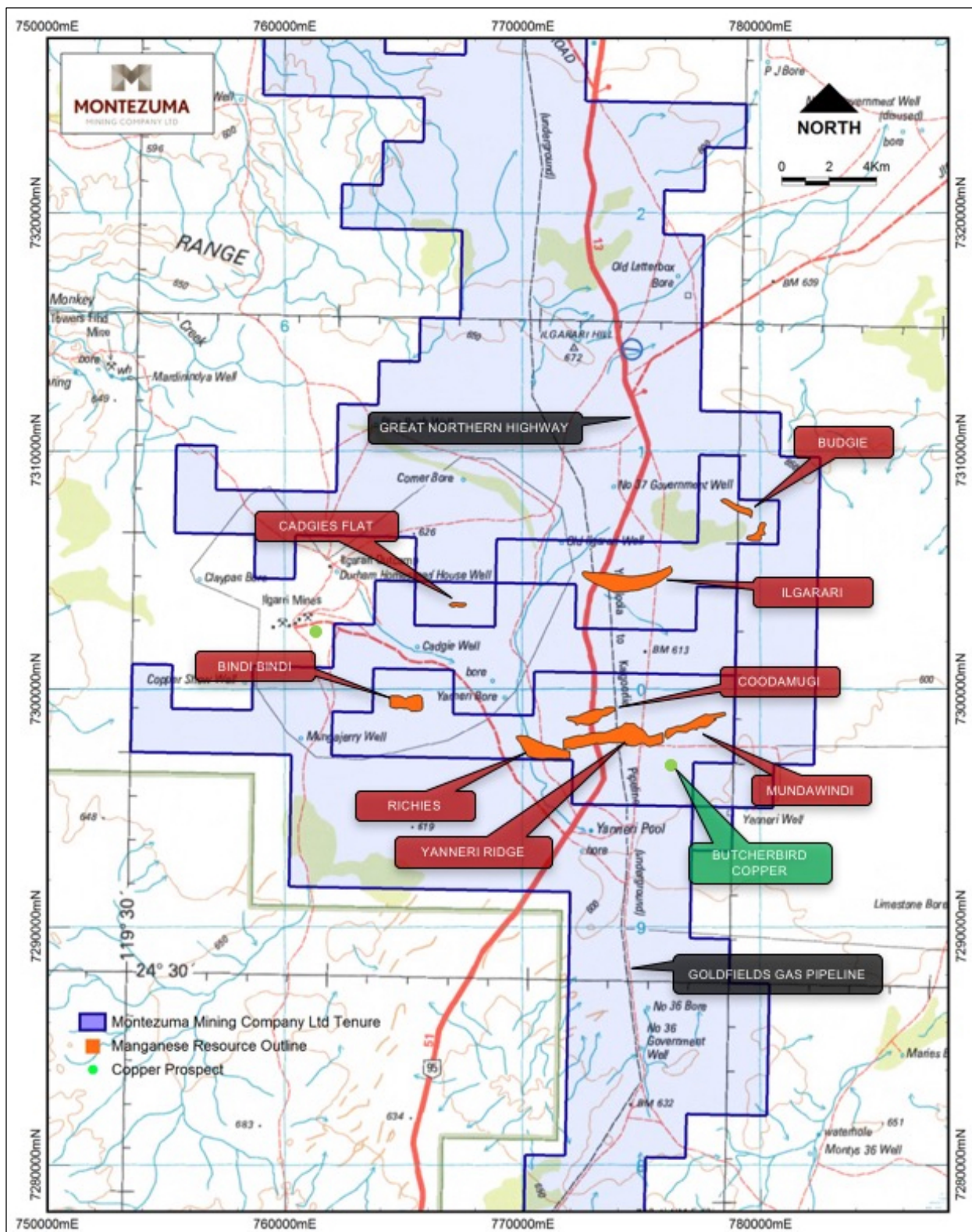


Figure 3: Butcherbird Manganese Project location plan including resource outlines.

FOR MORE INFORMATION...

Justin Brown

Executive Director

Phone: +61 8 6315 1400

Email: jbrown@montezuma.com.au Company information, ASX announcements, investor presentations, corporate videos and other investor material on the Company's projects can be viewed at <http://www.montezuma.com.au>.

The information in this report that relates to Exploration Results, Mineral Resources and Mineral Reserves is based on information compiled by Mr Justin Brown who is a member of the Australasian Institute of Mining and Metallurgy. At the time that the Exploration Results, Mineral Resources and Mineral Reserves were compiled, Mr Brown was an employee of Montezuma Mining Company Ltd. Mr Brown 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 Brown 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.

The information in the announcement that relates to Mineral Resources for the Butcherbird Project is extracted from ASX announcement of 7 December 2012. 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 relevant 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 announcement. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.