MONTEZUMA
MINING COMPANY LTD

22 NOVEMBER 2017

MONTEZUMA ACHIEVES TARGET PURITY LEVELS FOR BATTERY GRADE EMD PRODUCTION

HIGHLIGHTS

- PLS purification testwork **achieves industry specification** for producing Electrolytic Manganese Dioxide ("**EMD**").
- Leaching step completed using a coarse 6mm particle size.
- Next step is to produce a crystalline product for final assay to underpin discussions with **battery cathode** manufacturers.
- Discussions initiated with key consultants to commence work on **process optimisation, up-scaling and piloting studies**.
- Discussions initiated with CSIRO to negotiate the terms of a collaboration framework to **commercialise the process**.

Montezuma Mining Company Ltd ("Montezuma" or "Company") is pleased to advise that the results of the recent round of test work on the design of a hydrometallurgical flowsheet for the Company's 100% owned Butcherbird Manganese Project have exceeded expectations.

In July of this year, the Company reported results from the successful test work on the leaching of the Butcherbird manganese ores into solution which produced a pregnant leach solution ("PLS") with in excess of 90% manganese purity[1].

This led to the immediate commencement of investigations to establish the optimal method for purifying the PLS to allow the production of marketable manganese products including **battery grade manganese sulphate, Electrolytic Manganese Metal ("EMM") and Electrolytic Manganese Dioxide ("EMD")**.

The Company is pleased to advise that the testwork has successfully produced a PLS which exceeds industry specifications for the production of a high purity EMM or EMD product. The impurity levels for all key contaminants are well below their respective limits.

Executive Director Justin Brown said "*The process flowsheet design work conducted this year has been a resounding success and positions Montezuma for a potentially company making phase as we transition this technology breakthrough into a real world commercial setting to unlock the value of this very large manganese resource* ".

[1] http://mzm.live.irmau.com/irm/PDF/1664_0/TestWorkExceedsExpectations

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:	$0.265
Shares on issue:	83.5M
Market capitalisation:	$22.1M
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

LARGE MANGANESE RESOURCE

INNOVATIVE PROCESSING

HIGH PURITY MANGANESE PRODUCTS

Work is now focussed on the production of a crystalline manganese sulphate product that meets the specifications of Li-Ion battery cathode manufacturers.

The work on the Butcherbird manganese ore has been conducted in collaboration with the Commonwealth Scientific and Industrial Research Organisation ("CSIRO") Process Science and Technology Group. Following the success of the investigations, the Company and CSIRO have initiated discussions to enter into a collaborative framework to pursue opportunities to commercialise the technology outside of the Butcherbird Project. To this end, the Company has engaged legal advisers to confirm the best IP protection strategy to underpin commercialisation efforts.

Although there remain a number of avenues to further optimise the process flowsheet, the Company believes it is now in a position to accelerate the development of the Butcherbird Project and has initiated discussions with a number of key consulting groups with a view to moving quickly toward feasibility work in the new year. In parallel with the finalisation of the purification studies which are currently being undertaken, the expectation is that the first stages of the feasibility work will include detailed flowsheet modelling and optimisation, followed by a piloting phase in Q1 of 2018 to take the process from a lab scale batch process to a scaled up, continuous process more in line with a commercial scale implementation.

The assay results from the purified PLS are shown in Table 1, normalised to 100 g/l Mn content and benchmarked against a widely used, industry accepted North American specification. The results exceed expectations and are comfortably below the requisite contaminant levels, meaning the PLS is compatible with the production of both EMM and EMD.

Element	Mn g/l	Cu ppm	Co ppm	Ni ppm	Fe ppm	K ppm	Li ppm	Na ppm	Ca ppm	Mg ppm	P ppm	Cl ppm	Al ppm	Cr ppm	Ti ppm	B ppm
Industry Standard PLS (normalised to 100g/l Mn)	100	1	3	3	3	41	41	407	1222	4072	2	2036	204	2	2	2
Purified Butcherbird PLS (normalised to 100 g/l Mn)	100	0.2	1.5	0.2	0.3	17.3	-1	44	536	585	-1	*	0.9	0.3	0.2	-1
		As ppm	**V ppm**	**Ba ppm**	**Bi ppm**	**Cd ppm**	**Tl ppm**	**Ga ppm**	**Se ppm**	**Te ppm**	**Mo ppm**	**Sb ppm**	**Ge ppm**	**Pb ppm**	**Hg ppm**	**Zn ppm**
Industry Standard PLS (normalised to 100g/l Mn)		2	2	2	2	0.2	0.2	10	2	2	2	0.2	0.2	0.2	0.2	0.2
Purified Butcherbird PLS (normalised to 100 g/l Mn)		0.1	0.2	0.3	0	-1	0.057	8.1	-1	-1	-1	-1	-1	-1	-1	0.4

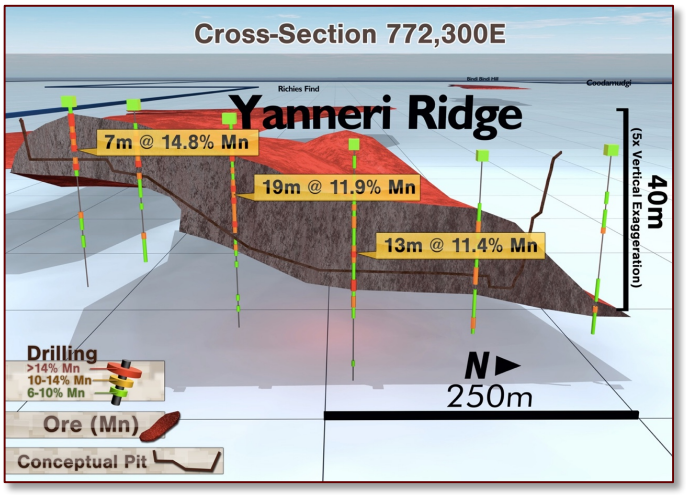
Table 1. Assay of the purified PLS from the leaching of Butcherbird manganese ores showing levels of key contaminants important in the production of EMM and EMD. Assays undertaken by Bureau Veritas using the ICP-AES method. -1 indicates assay is below detection.* indicates assay value pending.

Work is now being undertaken to produce a crystalline manganese sulphate product from the PLS which can be benchmarked against industry specifications for use in the manufacture of **lithium ion battery cathodes**. Very low levels of certain impurities such as arsenic, lead and cadmium suggest good potential to also explore product options in the agricultural sector.

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 prodcuts**.



Prospect	Tonnes (Mt)	Mn (%)	SiO_2 (%)	Fe (%)	P_2O_5 (%)	Al_2O_3 (%)
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 2. JORC 2012 Butcherbird Mineral Resource Estimate[2]

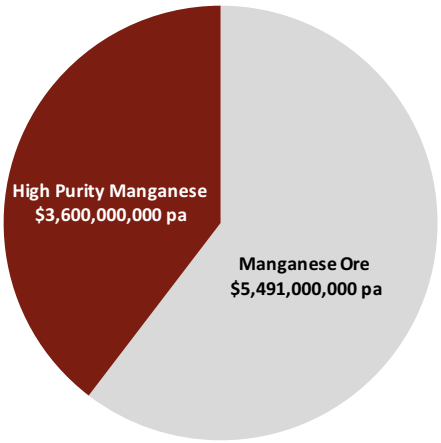
There are no material changes to the assumptions used to provide the JORC 2012 Butcherbird Resource Estimate.

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[3].

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.

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.



[2] Reference: Montezuma Mining Company Ltd ASX release dated 12 October 2017
[3] [1]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

FOR MORE INFORMATION…

Justin Brown

Executive Director

Phone: +61 8 6315 1400

Email: jbrown@montezuma.com.au

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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.

JORC Table 1

JORC Code, 2012 Edition – Table 1 – Butcherbird Project Hydrometallurgical Test Work

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems.*	• The samples for metallurgical test work were selected from contiguous lengths of core that were considered to be typical in character to the bulk of the ore zones at Yanneri Ridge. • Whole core was used to maximise the volume of sample. • The drill core was combined into two bulk samples. • The bulk test work samples were then beneficiated using a 950mm rotary drum scrubber.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• A Diamond Drill Rig was used for the metallurgical program with PQ sized core (85mm diameter). • 9 holes were drilled into key areas of the Yanneri Ridge orebody to twin historical RC drill holes.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade*	• Recoveries are noted at the time of drilling and recorded in the MZM database. • Triple tubing was used within the weathered zones to maximise ore recovery. • Close to 100% of core was recovered.

Criteria	JORC Code explanation	Commentary
	and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All samples have been logged to a level of detail to support the mineral resource estimations. • Qualitative: Lithology, alteration, mineralisation. • Quantitative: Sample assays. • The entire length of the hole is geologically logged. • All drill core is photographed.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All hydro-metallurgy samples are prepared by the CSIRO laboratory, Waterford, Western Australia. • The initial beneficiated ore sample material is further prepared using simple physical separation techniques including size reduction and gravity. • Sample sizes are considered appropriate for the nature of the test work.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The metallurgical samples were assayed at the CSIRO and Bureau Veritas laboratories using the ICP-AES/MS technique. • The samples have been assayed for Au, Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pd, Pr, Pt, Rb, Re, S, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• All data has been checked for accuracy by Bureau Veritas and CSIRO staff. • No adjustments have been made to assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All collar coordinates were collected using handheld GPS in MGA 94 – Zone 51.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The metallurgical test work drill holes have been selected based on their representivity of the Yanneri Ridge Orebody. • The metallurgical samples have been composited to produce two bulk samples.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• All drill holes are drilled vertically as the stratigraphy is generally sub-horizontal. • There is no known sample biasing.
Sample security	• *The measures taken to ensure sample security.*	• NA
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The data and sampling techniques are reviewed internally. • Audits have also been completed by Mineral Processors WA, Snowdens and CSIRO.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Butcherbird Project consists of a single granted exploration license – E52/2350. • The tenure is 100% owned by Montezuma Mining Corporation Ltd.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The historical exploration data has been collected by various parties and has been reported to high standards. • The methods of exploration and techniques used are considered appropriate for the deposit types sought (Mn, Cu)
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Butcherbird is a stratiform sedimentary manganese deposit. • The deposits are hosted within the Ilgarari Formation which is generally flat lying with gentle open folding in places. • The manganese mineralisation within the ore zones is divided into three distinctive units – a high grade manganiferous cap, supergene enriched manganiferous laterite and basal shale.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
		• See historical ASX releases regarding the Butcherbird Mineral Resources.

Criteria	JORC Code explanation	Commentary
	○ *hole length.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• NA
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• NA
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• NA
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• NA
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• NA

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The next phase of work will focus on finalising a processing flowsheet, and potential pliot plant and mining scoping studies.