

## QUARTERLY REPORT



### Three Months Ending: 30 September 2011

ASX CODE: MZM

ISSUED SHARES: 67.24M

52 WEEK HIGH: \$0.95

52 WEEK LOW: \$0.25

CASH ON HAND: \$9.90M

### CONTACT:

JUSTIN BROWN  
Managing Director  
+61 8 6315 1400

### BOARD:

Seamus Cornelius: Chairman  
Justin Brown: MD  
John Ribbons: Non-Exec

### KEY PROJECTS:

BUTCHERBIRD (100%)  
Manganese, Copper

PEAK HILL (85-100%)  
Gold

DURACK (85%)  
Gold, Copper (VMS)

MT PADBURY (100% of gold)  
Gold, Manganese, Iron

### KEY SHARE HOLDINGS:

AUVEX RESOURCES LTD  
7,500,000 FPO Shares

BUXTON RESOURCES LTD  
3,010,000 FPO Shares

LITHEX RESOURCES LTD  
1,525,000 FPO Shares

EXTERRA RESOURCES LTD  
2,000,000 FPO Shares

## HIGHLIGHTS

### INDEPENDENT BUTCHERBIRD MANGANESE SCOPING STUDY:

- Scoping Study positive based on production of 0.5 Mt to 1 Mt per annum.
- Projected NPV<sub>10</sub> of up to AUD\$376M with IRR of up to 59%.
- Feasibility Study to proceed immediately.

Production	Capex \$M	Sales Mt	NPV \$M	IRR %
<b>10 YEAR MINE LIFE</b>				
0.5 Mtpa	127	5.0	<b>\$79M</b>	31%
1.0 Mtpa	163	10.0	<b>\$241M</b>	59%
<b>20 YEAR MINE LIFE</b>				
0.5 Mtpa	127	10.0	<b>\$148M</b>	33%
1.0 Mtpa	163	20.0	<b>\$376M</b>	59%

Table 1. Financial Analysis Summary

### BUTCHERBIRD COPPER:

- Ground IP gradient array survey completed over **6km of strike** along the Butcherbird shear zone.
- Survey identifies **multiple priority targets**, comprising coincident resistivity, chargeability and magnetic anomalies.
- Ground IP dipole-dipole surveys commenced to better define the anomalies.
- RC Drilling programme completed, assays pending.

### CORPORATE:

- Divestment of Mineral Resources Limited ("MIN") shares received as part of the Scheme of Arrangement between MIN and Auvex Resources Limited returned \$2.88M cash.
- Option Underwriting Agreement with Dragon Gas Limited ("Dragon") maximised capital inflows from expiring options.

## **BUTCHERBIRD (100%)**

The Butcherbird Manganese and Copper project straddles the Great North Highway approximately 120km south of Newman. Work to date has successfully identified both copper and manganese mineralisation within the Project and work is ongoing to assess the commercial potential of the deposits discovered to date as well as to explore for further discoveries within the province.

## **BUTCHERBIRD MANGANESE**

The work to date has identified ten key target areas, with a Maiden Resource Estimate for the first of these at Yanneri Ridge having been completed and announced in the previous Quarterly Report.



In addition to the JORC Resource at Yanneri Ridge, substantial drilling has been completed at a number of other deposits and Mineral Resource Estimates for these are currently being prepared.

## **Scoping Study**

Montezuma Mining Company Ltd (“Montezuma” or “Company”) is pleased to advise that a Scoping Study in relation to the development of the extensive manganese mineralisation at the Company’s 100% owned Butcherbird Project has been completed by independent consultancy Engenium Pty Ltd (Engenium).

The study investigated the development of a mine producing between 0.5 Mt and 1 Mt per annum of lump and chip ore grading a nominal 36% Mn with a mine life of at least 10 years.

Production	Capex \$M	Sales Mt	NPV \$M	IRR %
<b>10 YEAR MINE LIFE</b>				
0.5 Mtpa	127	5.0	<b>\$79M</b>	31%
1.0 Mtpa	163	10.0	<b>\$241M</b>	59%
<b>20 YEAR MINE LIFE</b>				
0.5 Mtpa	127	10.0	<b>\$148M</b>	33%
1.0 Mtpa	163	20.0	<b>\$376M</b>	59%

**Table 2.** Financial Analysis Summary

The initial study was based on the JORC compliant Yanneri Ridge Inferred Resource of 64.7 Mt @ 11.2% Mn (8% Mn cut off). A yield of 20% of extractable product @ 36% Mn was assumed based on the DMS studies, underpinning potential production of over 12 Mt of lump and chip product with a 1:1 stripping ratio from this deposit alone.

Pending resource upgrades based on further drilling are expected to add to the potential product inventory and may support a longer mine life and/or increased production rates.

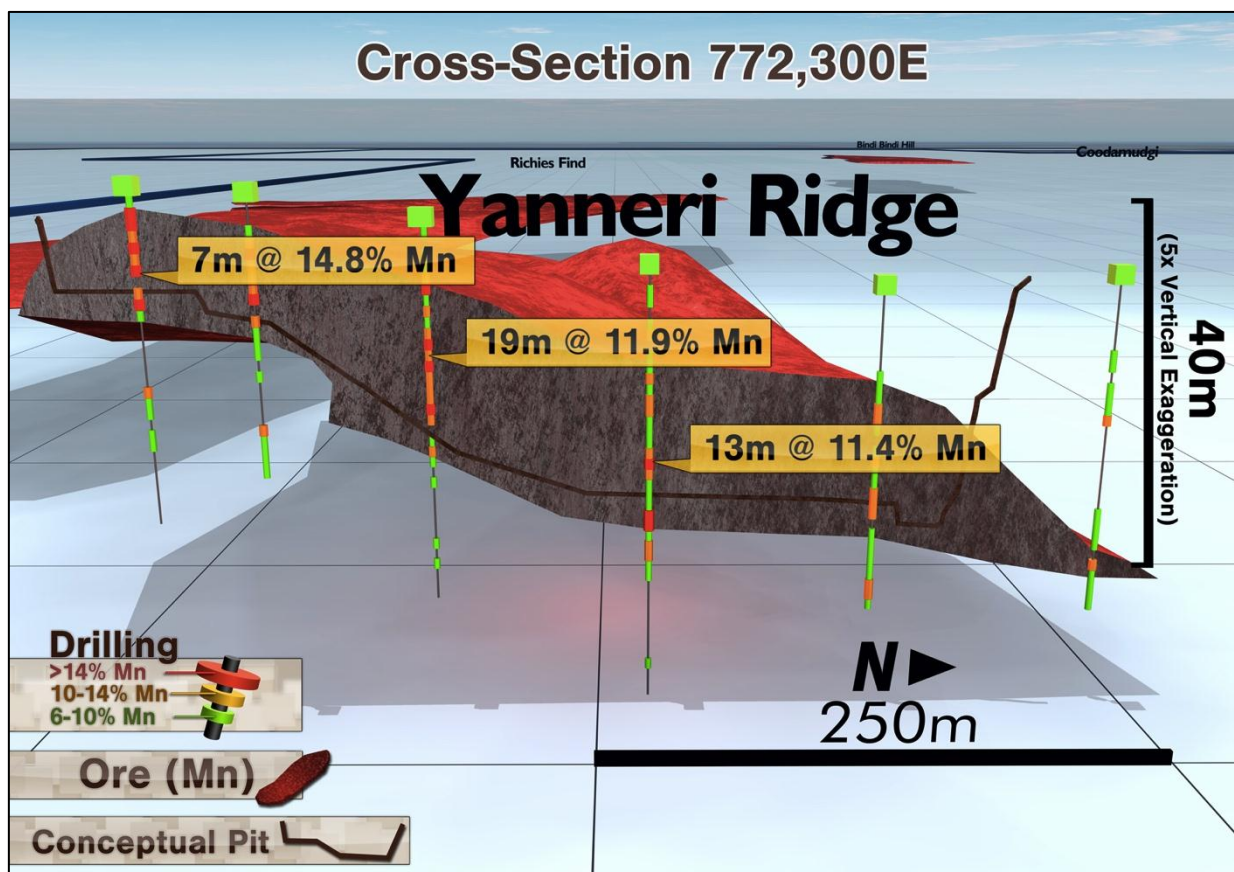
The Scoping Study was commissioned to investigate the commercial viability of the Butcherbird Manganese Province and to form the basis for subsequent feasibility studies. The work was undertaken by Engenium and assumed the following:

- Conventional open pit mining with a 1:1 waste to ore ratio.
- Extractable Mn product of 12.8 Mt @ 36% Mn.
- Mine life of 10 years with options to expand to 20 years with further resources.
- Rate of production of either 0.5 Mt per annum or 1.0 Mt per annum.
- Production of lump and chip products as determined from DMS studies.
- Transport of product via the Great Northern Highway to Port Hedland for a total distance of 580 km.
- Camp size of either 125 persons for 0.5 Mtpa or 150 persons for 1.0 Mtpa scenarios.
- Mining to be undertaken by a contractor.
- Processing to be undertaken by Montezuma Mining Company Ltd.
- Long term manganese price of USD \$5.40/dmtu.
- Long term exchange rate of \$0.80 USD/AUD.
- CAPEX including all direct and indirect costs of building the mine and start-up operations.

The manganese mineralisation at Butcherbird occurs in shallow flat lying zones with the ore occurring as discrete high grade bands interbedded with clay waste.

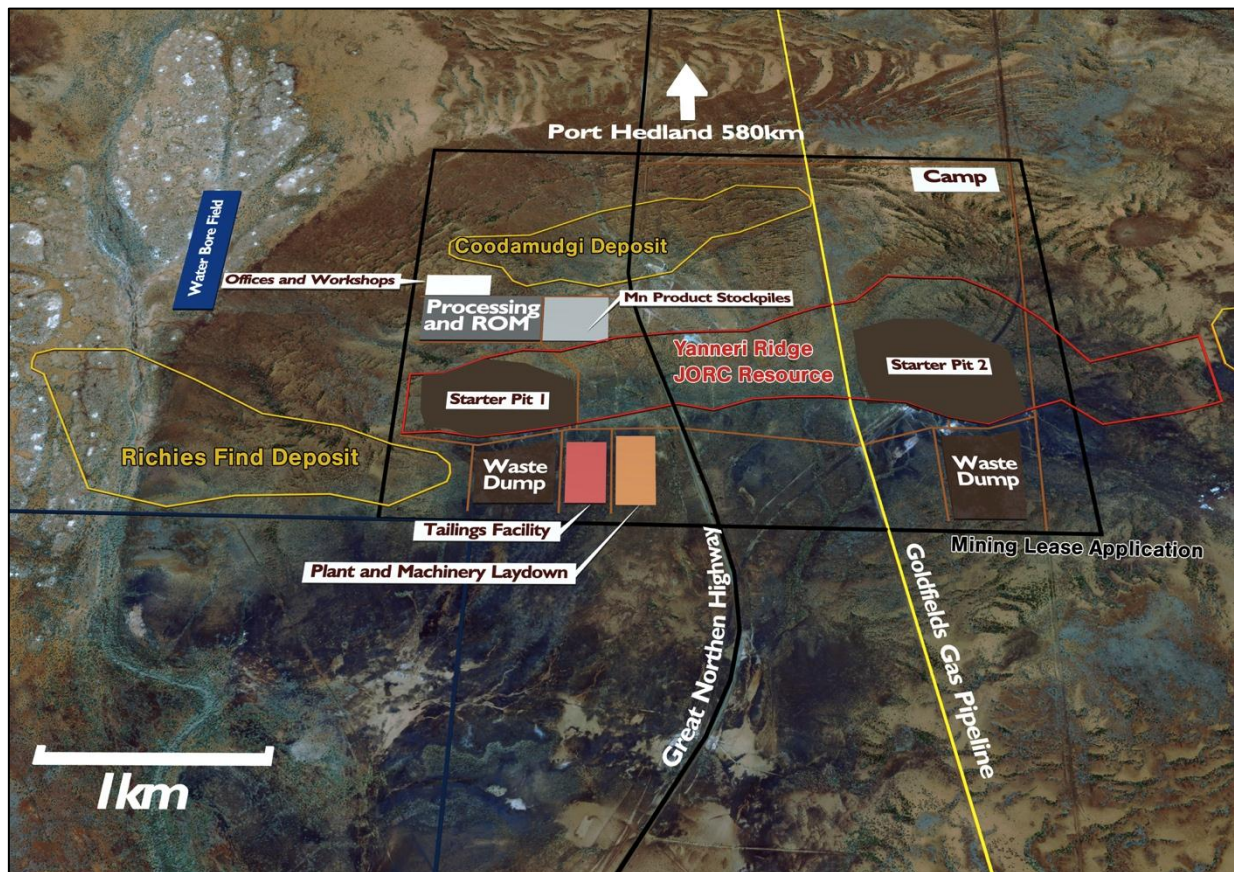
This style of mineralisation is amenable to relatively low cost beneficiation which has contributed to the positive outcome of the study.

The Butcherbird Project hosts the largest onshore manganese occurrence in Australia and is further enhanced by its location which straddles the Great Northern Highway and the Goldfields Gas Pipeline.



**Figure 1.** Cross Section through the Yanneri Ridge Resource showing conceptual pit design.





**Figure 2.** Conceptual mine layout plan showing key infrastructure within the Butcherbird Mining Lease Application surrounded by the Company's exploration tenure.

There are a number of key areas where the Company believes the already robust economics can be improved as we progress the Feasibility Study phase of development:

- Any increase in the market price of manganese ore from current cyclical lows prior to commencement of production.
- A reduction in the capital cost required, given the significant contingency built into this analysis.
- An improvement in the delivered product grade above 36% Mn will improve both the unit price and per tonne revenue stream. Work is ongoing in this area and a number of avenues are being investigated.

The Company is very pleased with the outcome of this phase one study and expect to aggressively push towards production with further engineering investigations and a more detailed Feasibility Study.

In parallel with these additional investigations, the Company will now actively investigate potential financing avenues to fund the capital requirements of a manganese mine at Butcherbird.

## BUTCHERBIRD COPPER

During the Quarter, a ground IP survey was completed at the Company's 100% owned Butcherbird Manganese/Copper Project.

The survey was completed to follow up copper sulphide mineralisation intersected in drill testing beneath the Butcherbird copper mine including 18m @ 0.63% Cu and 859ppm Co from 154m (including 1m @ 2.43% Cu and

0.55% Co) and 10m @ 0.82% Cu and 581ppm Co from 180m (including 3m @ 1.94% Cu and 0.12% Co) in hole 10BBC0014.



The survey incorporated two IP methodologies targeting potential copper mineralisation along the Butcherbird shear zone:

- a) A first-pass gradient array survey over the projected strike of the host structure to identify prospective zones along the strike length of the shear.
- b) Second-pass dipole-dipole lines over anomalies generated in a) to provide better spatial control for drill targeting.

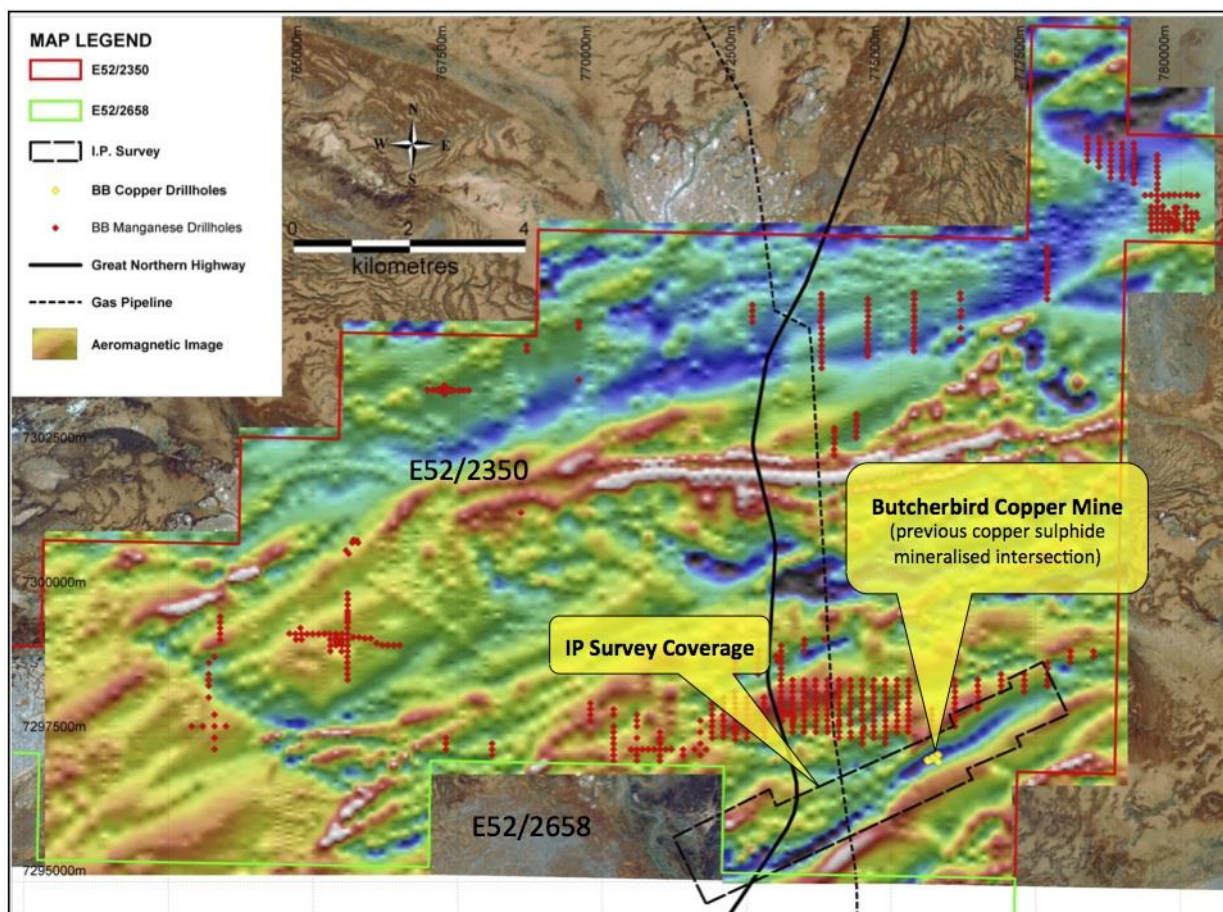
The gradient array survey covers approximately six kilometres of strike along the Butcherbird shear zone, the regional scale structure that hosts the copper mineralisation identified to date. The survey was conducted over an average width of 1km with a 200m line spacing and readings taken every 100m along each line.

The resistivity data is interpreted to map strong quartz/carbonate alteration known to occur with copper mineralisation within the shear at the Butcherbird copper mine. The previously completed EM survey and aeromagnetic data support this interpretation.

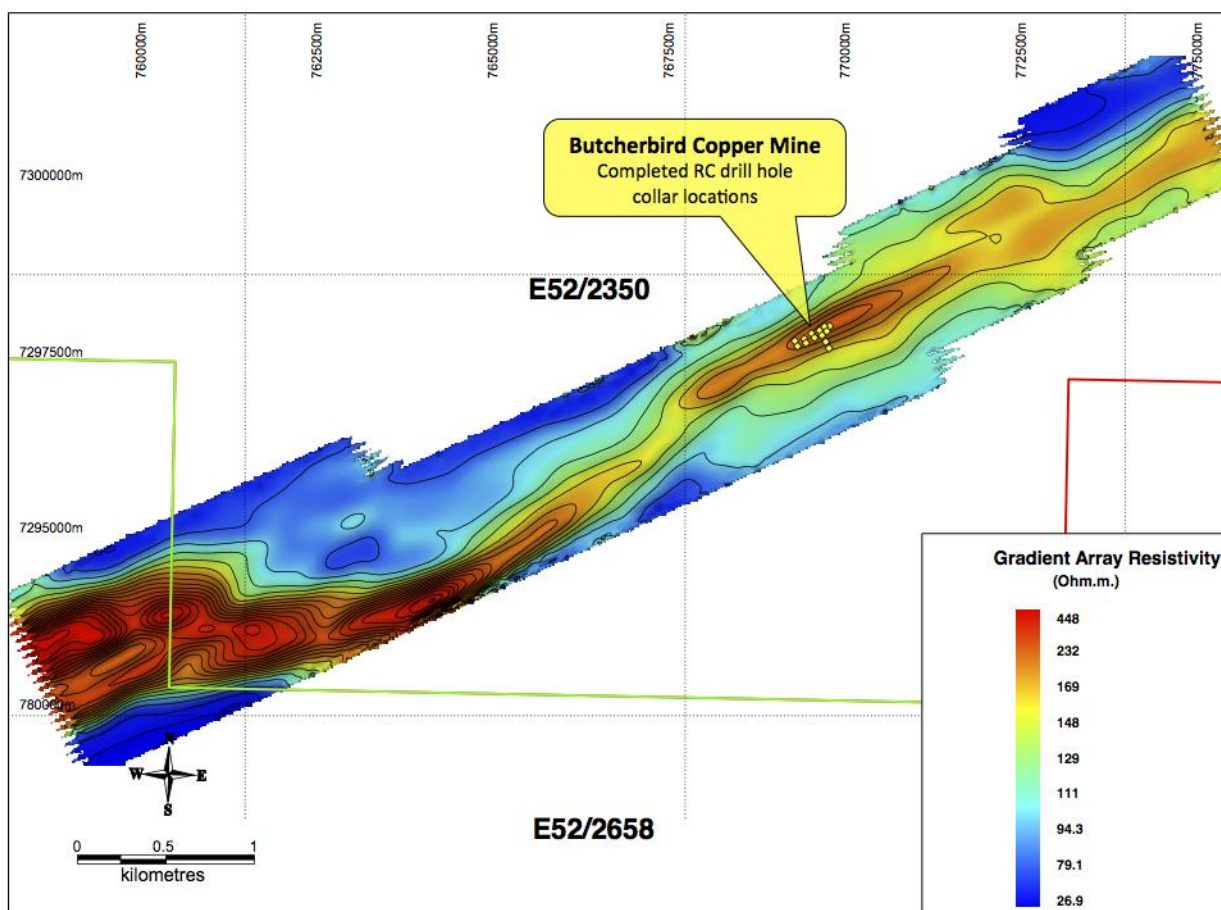
The chargeability component of the IP survey (Figure 3) is a tool for detecting disseminated sulphides, and in this case has identified a number of chargeability anomalies up to 5 times background which occur in geologically favourable positions relative to the interpreted strike extension of the main host structure. In addition, a number of strong chargeability anomalies in positions away from the main target zone have been identified. Both target types will be drill tested in the upcoming programme.

Follow up dipole-dipole IP survey lines were conducted over selected chargeability anomalies to define sectional profiles for geological modeling, to assist in drill hole design.





**Figure 3.** Location plan showing IP survey area over TMI aeromagnetic data.



**Figure 4.** Gridded IP Resistivity data (Ohm.m.) highlighting strong resistivity anomaly coincident with the interpreted strike extension of the Butcherbird shear zone.

Several factors provide encouragement going forward; the coincident anomalies generated by the various geophysical targeting tools, the copper sulphide and cobalt mineralisation intersected by the reconnaissance drilling at the Butcherbird mine, the shallow alluvial cover preventing mineralisation outcrop and the lack of any previous exploration.

Independent service provider GPX surveys undertook the ground IP geophysical surveys at E52/2350 using a modern GDD 16 channel transmitter, applying a 50Kv charge to the ground.

### **RC Drilling Programme**

At the completion of the IP survey a first pass RC drilling programme comprising 19 holes for 2,677m was completed over several key target areas. Results are pending.

## **CORPORATE**

### **Auvex Resources Limited and Auvex Manganese Limited**

During the Quarter, the Company received 238,636 Mineral Resources Limited ("MIN") fully paid ordinary shares in accordance with the commercial terms of the MIN scheme of arrangement with Auvex Resources Limited "Auvex" to acquire 100% of its issued capital. Montezuma held 7,500,000 fully paid ordinary shares in the capital of Auvex.

The holding in MIN represented an opportunity to inject further funds into Montezuma and this non-core investment has subsequently been disposed for \$2.88M.

The additional funding will provide cash reserves to further advance exploration activity at the Company's Projects.

### **Change of Registered Office**

The registered office for Montezuma Mining Company Limited has changed to:

Ground Floor  
20 Kings Park Road  
WEST PERTH WA 6005



## **Option Underwriting Agreement**

During the Quarter the bulk of options over shares in the Company expired. To ensure that the maximum potential capital was received by the Company, Underwriting Agreements (“Agreements”) were entered into with Hong Kong based investment group Dragon Gas Limited (“Dragon”) in relation to two classes of options with respective strike prices of 20c and 35c and an expiry date of 31 August 2011.

The Agreements provided for Dragon to subscribe for, or arrange for the subscription for all 20c and 35c options which remained unexercised at the expiry date.

The additional funding of approximately \$1.35M available to the Company by virtue of these Agreements will provide important cash reserves to further advance activity at Montezuma’s Projects.

## **Investor Coverage**

Recent investor relations, corporate videos and broker/media coverage on the Company’s projects can be viewed on the Company’s website at <http://www.montezumamining.com.au>.

## **About Montezuma Mining Company Ltd**

Listed in 2006, Montezuma (ASX: MZM) is a diversified explorer primarily focused on manganese, copper and gold. Montezuma has a 100% interest in the Butcherbird Manganese/Copper Project and an 85-100% interest in the Peak Hill and Durack Gold Projects in the Murchison region of Western Australia.

---

### **More Information**

**Justin Brown**  
Managing Director

Phone: +61 (8) 6315 1400  
Mobile: +61 438 745 675

The Information in this report that relates to exploration results is based on information compiled by Justin Brown, who is a member of the Australian Institute of Mining & Metallurgy. Mr Brown is a geologist who is a full time employee of Montezuma Mining Company Ltd. 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 2004 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.