

## QUARTERLY REPORT



### Three Months Ending: 31 December 2012

ASX CODE: MZM  
ISSUED SHARES: 70.46M  
52 WEEK HIGH: \$0.39  
52 WEEK LOW: \$0.14  
CASH ON HAND: \$6.76M

#### CONTACT:

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Chief Executive Officer  
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#### BOARD:

Seamus Cornelius: Chairman  
Justin Brown: Exec Dir  
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 MANGANESE LTD  
3,750,000 FPO Shares  
BUXTON RESOURCES LTD  
3,262,500 FPO Shares  
LITHEX RESOURCES LTD  
1,525,000 FPO Shares  
EXTERRA RESOURCES LTD  
12,000,000 FPO Shares

## HIGHLIGHTS

### Butcherbird Manganese:

- Native Title Mining Agreement signed with the Ngarlawangga people in relation to the Butcherbird Project Area.
- Installation of environmental monitoring on site.
- Scrubbing test work completed on Manganese ore.
- Completion of reconnaissance geological mapping at Butcherbird where Montezuma Mining Company Ltd ("Montezuma") is targeting further manganese mineralisation hosted within prospective bedrock.

### Butcherbird Copper

- Tenure E52/2727 was granted during the quarter.
- Montezuma now has access to approximately 15 km of strike length of the prospective, copper-cobalt mineralised, Butcherbird shear.
- Currently undertaking geochemistry orientation surveys at the Butcherbird prospect to determine the most cost effective exploration strategy.

### PEAK HILL GOLD:

- Subject to an Option Agreement with Resource and Investment NL ("RNI").
- RNI has an exclusive option to purchase Montezuma's interest in the Peak Hill Project by paying \$2.8M in cash and issuing Montezuma with 8.4M RNI shares and 2.1M 75c RNI options.
- Initial option fee of \$100K has been received.

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## BUTCHERBIRD (100%)

The Butcherbird Project straddles the Great Northern Highway approximately 120km south of Newman. Work to date has identified both copper and manganese mineralisation and work is ongoing to assess the commercial potential of these discoveries and to explore for additional deposits within the province.

## BUTCHERBIRD MANGANESE

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.

The manganese mineralisation at Butcherbird occurs in shallow flat lying zones with the ore occurring as discrete high grade bands interbedded with clay waste. The style of the mineralisation at Butcherbird is amenable to relatively low cost beneficiation which contributed to the positive outcome of a Scoping Study completed in 2011. Studies have commenced with aim of confirming the viability of the deposits to provide substantial tonnes of commercial grade manganese oxide ore for export.

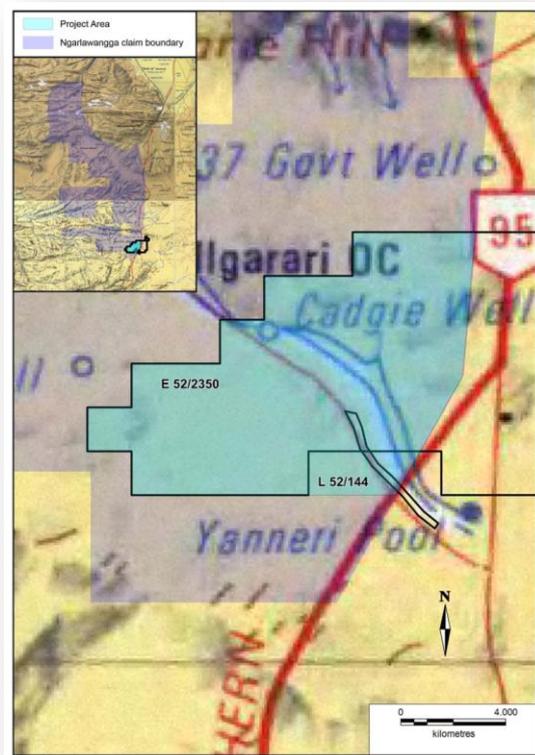


## NATIVE TITLE AGREEMENT

In December 2012 Montezuma signed The Butcherbird Mining Agreement with the Ngarlawangga people in relation to the Butcherbird Project Area. The Agreement was reached following four months of constructive consultation and negotiation with the Ngarlawangga people and reflects the strong relationship that the parties have developed since Montezuma commenced exploration for manganese in the region almost four years ago.

While the details of the Native Title Mining Area Agreement are confidential, Montezuma believes it has created an innovative agreement structure that will provide the Ngarlawangga people with the appropriate incentives and support to establish and build community businesses.

The execution of the Native Title Agreement and associated State Deed provides consent from the Ngarlawangga People for the grant of mining leases and subsequent mining operations over the Project area, which subject to other regulatory approvals allows the Butcherbird Manganese Project to be advanced toward production.



**Figure 1.** Project Area Agreement with Ngarlawangga People.

## ENVIRONMENTAL

While mining area definition is still ongoing the following monitoring will be conducted in the areas surrounding Yanneri Ridge, Richies Find and Bindi Bindi Hill (focussing on important surface water and groundwater features in the region) to gain information that will be critical for environmental approvals:

- Baseline surface water monitoring in key creeks/lakes.
- Baseline groundwater monitoring in available bores accessing key groundwater features.

For surface water monitoring nine key sites were selected and during December 2012 a team from Montezuma in conjunction with a consultant from Water Technology installed the monitoring equipment. Baseline groundwater monitoring will also be conducted from twenty specially constructed monitoring bores located throughout the southern portion of the Butcherbird tenement (Figure 2).



**Figure 2.** Installation of water monitoring bore at Butcherbird.

A significant number of environmental studies have now been completed (Figure 3). The completion of these critical studies provides a foundation from which to progress environmental approvals for manganese extraction at Butcherbird.

| Study                      | Project Areas Covered   | Consultant                      |
|----------------------------|---|---------------------------------|
| Surface Water (Hydrology)  | <ul style="list-style-type: none"> <li>• Yanneri Ridge</li> <li>• Bindi Bindi</li> </ul>  | Water Technology                |
| Flora                      | Very Detailed: <ul style="list-style-type: none"> <li>• Yanneri Ridge</li> <li>• Bindi Bindi</li> </ul> Medium Detail: <ul style="list-style-type: none"> <li>• Cagee flats</li> <li>• Illgarri Ridge and Hill</li> <li>• Munda Windi</li> <li>• Butcherbird</li> <li>• Munga Jerry</li> <li>• Budgie Hill</li> </ul> | EnviroWorks Consulting          |
| Vertebrate Fauna           | <ul style="list-style-type: none"> <li>• Yanneri Ridge</li> <li>• Bindi Bindi</li> </ul>  | Phoenix Sciences Environmental  |
| Short Range Endemic Fauna  | <ul style="list-style-type: none"> <li>• Yanneri Ridge</li> <li>• Bindi Bindi (desktop only)</li> </ul>   | Phoenix Sciences Environmental  |
| Groundwater (Hydrogeology) | <ul style="list-style-type: none"> <li>• Preliminary advice only on general area and commencement of monitoring internally</li> </ul>   | Groundwater Consulting Services |

**Figure 3.** Summary of Completed Environmental Studies.

## METALLURGICAL TEST WORK

Metallurgical test work has recently been undertaken to determine the benefit of high energy input scrubber attritioning. There is a capital cost constraint on the energy that can be imparted during traditional autogenous rotary drum scrubbing. With the intention to overcome this capital cost problem “medium assisted” scrubbing was tested in a batch ISO standard scrubber at ALS Metallurgy in Perth WA. The medium used was intended to preferentially attrition the softer gangue materials of the test sample whilst minimising the breakage of slightly harder, product, minerals.

Medium selection for the single set of tests conducted was 6.3 mm diameter steel balls. The medium in a full scale optimisation test program would be of various sizes from about 6.3 mm diameter up to perhaps 20 mm diameter. The larger the size of the assisting medium the more gangue will be attritioned but also the more breakage, and loss, of product mineral will occur.

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The tests were also performed on the same samples by traditional scrubbing as a comparison. The results were encouraging: The best result demonstrated a grade increase of 2.63 % Mn, being nearly 9% better grade, with no loss of recovery (actually a recovery increase of 0.14%) when compared to the autogenous “control” tests.

## MANGANESE EXPLORATION

During the quarter reconnaissance geological mapping at 1:25,000 scale was completed over tenement E52/2350 within Montezuma’s Butcherbird Project. The dominant aim of mapping was to identify and interpret the location of potential manganese hosting horizons within bedrock, and in particular under cover. At the Butcherbird Project manganese mineralisation is interpreted as strata bound with ore forming as supergene enriched bodies in the weathering profile within 20 to 40 metres beneath the top of bedrock. Bedrock comprises manganese-rich horizons or rock units within a thick package of dominantly fine-grained sediments called the Ilgarari Formation, Bangemall Basin.

The Butcherbird Project and specifically tenement E52/2350 contains eight defined manganese deposits with a global resource inventory of 119 Million tonnes @ 11.6% Mn (ASX release dated 7<sup>th</sup> December 2011).

| Classification      | Inferred Resource |             |
|---------------------|-------------------|-------------|
|                     | 10% Mn            |             |
| Cut-off             |                   |             |
| 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       |
| <b>SUBTOTAL</b>     | <b>70.2</b>       | <b>11.4</b> |
| Yanneri Ridge       | 48.8              | 11.8        |
| <b>GLOBAL TOTAL</b> | <b>119.0</b>      | <b>11.6</b> |

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

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Additional Resources have been estimated at an 8% Mn cut for a beneficiated Mn product grading under 35% Mn. These Resources add another 55.9 Million tonnes @ 9.3% Mn to the global estimate. These additional tonnages are expected to provide additional flexibility with respect to blending during future production.

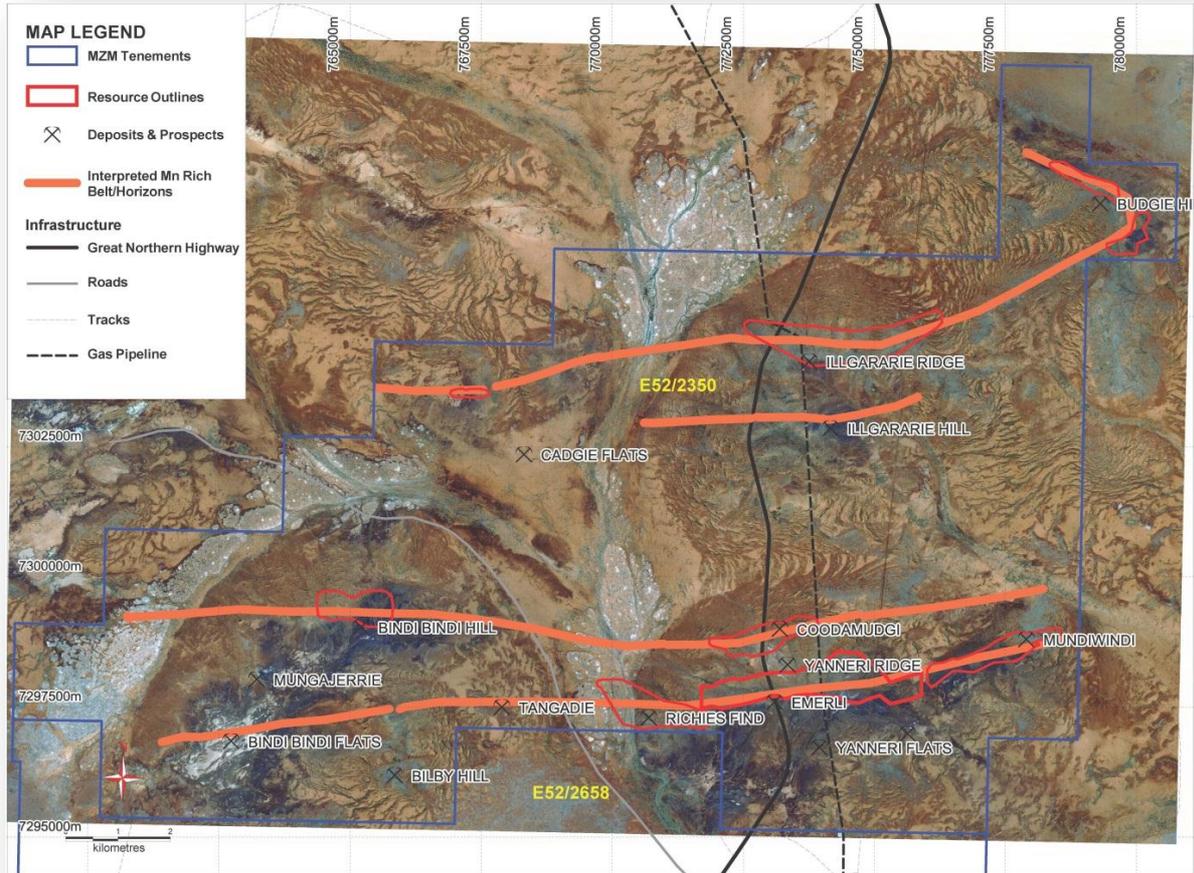
| Classification        | Inferred Resource |            |
|-----------------------|-------------------|------------|
| Cut-off               | 8-10% Mn          |            |
| Deposit               | Tonnes (Mt)       | Mn (%)     |
| Bindi Bindi Hill      | 5.7               | 9.2        |
| Budgie 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        |
| <b>SUBTOTAL</b>       | <b>40.1</b>       | <b>9.3</b> |
| <i>Yanneri Ridge*</i> | 15.8              | 9.4        |
| <b>GLOBAL TOTAL</b>   | <b>55.9</b>       | <b>9.3</b> |

**Table 2:** Inferred Mineral Resource Estimates at the Butcherbird Manganese/Copper Project at a 8-10% Mn.

Most of the deposits defined to date have been delineated under sub-cropping to outcropping manganese mineralisation. A significant number of these deposits are also open along strike as they extend out under relatively shallow cover. Sub-cropping to outcropping bedrock would comprise only approximately 2% of the area with the remaining surface consisting of relatively shallow cover. This cover is dominantly colluvium and alluvium with minor remnant veneers of laterite.

Montezuma believe there is significant potential for further delineation of manganese mineralisation hosted within prospective bedrock beneath these expansive areas of shallow cover. Based on defined open mineralisation to date, coupled with information collected during the recent reconnaissance mapping, at least four approximate east to west trending, prospective horizons or belts have been interpreted (Figure 4).

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**Figure 4.** Interpreted Prospective Mn-rich Horizons/Trends.

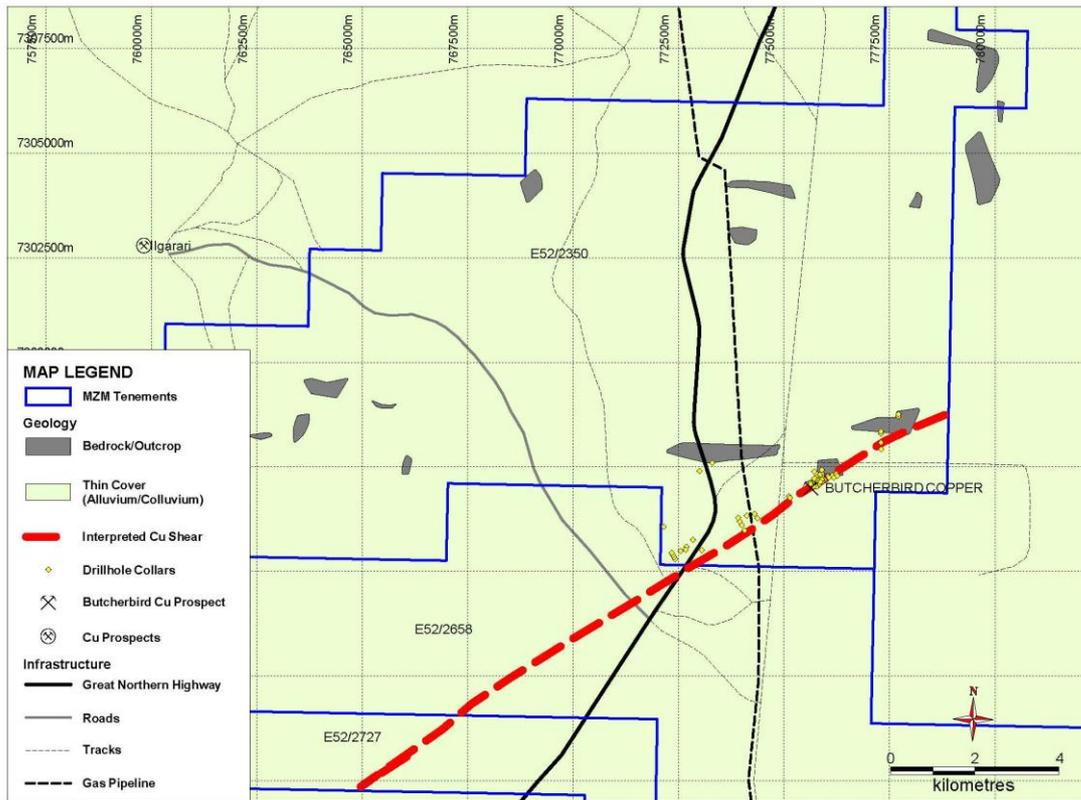
During the next quarter a more detailed and comprehensive project scale geological mapping program will be undertaken by geological consultant Mr John Crossing of Compass Geological. This planned mapping will improve the delineation and confidence level in the interpreted exploration target horizons/trends and aid in the planning of subsequent drill testing.

## **BUTCHERBIRD COPPER**

### **COPPER EXPLORATION**

Tenure E52/2727 was granted during the quarter giving Montezuma access to approximately 15 km of strike length of the prospective, copper-cobalt hosting, Butcherbird shear. The Butcherbird Project now comprises of three contiguous granted exploration licences totalling 687 km<sup>2</sup>. Montezuma has defined copper-cobalt mineralisation over approximately 700 m of strike at the Butcherbird prospect. High-grade copper intercepts have been returned from the Butcherbird Prospect with mineralisation intersected to date appearing to be confined and discontinuous particularly at shallow depths. However mineralisation is still open along strike and at depth. Further infill and extension drilling at Butcherbird is warranted with applications for appropriate government approvals and heritage clearance being submitted this coming quarter.

Outside the Butcherbird prospect limited drill testing has been completed on the 15 km of prospective, northeast striking, copper hosting Butcherbird shear (Figure 5). Bedrock in the area is interpreted to be predominantly 1 to 2 metres beneath a veneer of cover comprising unconsolidated sandy-gravelly loam and hardpan. Montezuma is currently undertaking geochemical orientation surveys at the Butcherbird prospect to determine an efficient and effective method for delineating drill targets along the shear. Orientation surveys have been reviewing the use of various sampling media, assaying methods and sample collection techniques. Although the cover is thin the hardpan has been posing both a physical and chemical barrier to the effective detection of copper-cobalt anomalism hosted within the underlying bedrock. Montezuma is confident of ultimately determining an effective technique in the coming quarter and subsequently employing that method to complete geochemical survey coverage over the Butcherbird shear.



**Figure 5.** Location Plan of Copper hosting Butcherbird Shear

### **PEAK HILL/DURACK (85-100%)**

During the September 2012 quarter, the Company entered into an option agreement with Grosvenor Gold Pty Ltd ("Grosvenor"), a wholly owned subsidiary of RNI whereby Grosvenor may acquire 100% of Montezuma's interest in the Peak Hill Project by the acquisition of Peak Hill Metals Pty Ltd (a wholly owned subsidiary of Montezuma). The key terms of the agreement are as follows:

- Grosvenor has paid an initial option fee of \$100,000 for an exclusive option until 29 March 2013.
- Grosvenor may exercise the option at any time prior to expiry by paying to the Company \$2.8M in cash and issuing 8,400,000 fully paid ordinary shares and 2.1M 75 cent options in RNI.
- If it exercises the option, Grosvenor must also grant the Company a 1% Gross Royalty, capped at \$1M, on all revenue it receives from production from the Peak Hill Project.

- Grosvenor must meet minimum expenditure commitments on the project during the option period.
- Grosvenor may extend the option period to 28 June 2013 by paying Montezuma an additional \$50,000.

The combined cash and script structure of the deal will, subject to Grosvenor electing to exercise their option, not only provide an up front return for the Company but will also allow Montezuma to maintain exposure to future upside as RNI realises their ambitions to recommence gold production in the region, centred around their processing plant at Fortnum.

Shareholders of Montezuma approved the disposal of Peak Hill Metals Pty Ltd as its Annual General Meeting held in November 2012.

The additional capital provided from the disposal of the Peak Hill asset will support Montezuma's ambition of bringing its 100% owned Butcherbird manganese and copper project into production

## **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.

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## **More Information**

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Executive Director

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The Information in this report that relates to exploration results is based on information compiled by Mr Justin Brown, who is a member of the Australian Institute of Mining and 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. Mr Brown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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