

## QUARTERLY REPORT



### Three Months Ending: 30 September 2012

ASX CODE: MZM  
ISSUED SHARES: 67.66M  
52 WEEK HIGH: \$0.80  
52 WEEK LOW: \$0.16  
CASH ON HAND: \$6.13M

#### CONTACT:

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#### 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 MANGANESE LTD  
3,750,000 FPO Shares

BUXTON RESOURCES LTD  
4,762,500 FPO Shares

LITHEX RESOURCES LTD  
1,525,000 FPO Shares

EXTERRA RESOURCES LTD  
2,000,000 FPO Shares

## HIGHLIGHTS

### BUTCHERBIRD MANGANESE:

- Commencement of next round of metallurgical test work at Nagrom Laboratories on 34 surface bulk samples excavated from Bindi Bindi Hill and Cadgies Flats.
- Native Title negotiations have commenced with two meetings having been conducted in August 2012 with a final meeting expected to be held in November 2012.
- Finalised flora and fauna reports received from specialists consultants and the initiation of the long term groundwater monitoring program.

### BUTCHERBIRD COPPER:

- Copper sulphide mineralisation has been defined by drilling to date over a strike length of 600 metres.
- Structural interpretation underway to underpin the next round of drill testing of the mineralised corridor.
- Regional review underway to define further copper targets in a regional context.

### PEAK HILL GOLD:

- The Company has entered into 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.

## BUTCHERBIRD (100%)

The Butcherbird Project straddles the Great North 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. These zones are often overlain by a cap of high grade ore which is being targeted as potential DSO material.

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.

Feasibility Studies have commenced with the aim of confirming the viability of the deposits to provide sufficient tonnes of commercial grade manganese oxide ore for export. Production is envisaged in two stages; Stage 1 will look to exploit the surface material identified at several areas within the project, with an initial focus on Bindi Bindi Hill. Work to date has demonstrated that the surface material can produce a high grade concentrate in excess of 40% Mn. Stage 2 will target larger scale production (0.5-1.0Mt p/a) from the larger beneficiable zones of mineralisation at the various resource areas.



## **Metallurgical Test Work**

The test work program undertaken at Nagrom Laboratories for the 34 bulk samples obtained from test pits at Bindi Bindi Hill and Cadgies Flats was devised by Dr. Tony Mason from Mineral Processors WA. Dr. Mason has been engaged by the Company to provide consultancy assistance and process engineering support for the Butcherbird manganese project.

The processing protocol was designed as follows:

- Stage crush to p100 32mm;
- RSD split 2kg head assay, 4kg wet screening test work and 4kg dry screening test work;
- Scrub 4kg wet sizing charge at 50% solids and wet screen at 16, 8, 6.3, 4.0, 2.0, 1.0 and 0.5mm.;
- Dry, weigh and analyse each size fraction;
- Dry size 4kg dry sizing charge at 16, 8, 6.3, 4.0, 2.0, 1.0 and 0.5mm and;
- Weigh and analyse each size fraction.

All products analysed for the Manganese Suite: Mn, Fe, Al<sub>2</sub>O<sub>3</sub>, CaO, Cr<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, SiO<sub>2</sub>, Ba, K<sub>2</sub>O, MgO, Na<sub>2</sub>O, S, TiO<sub>2</sub>, Cu, Pb and Zn, LOI(371), LOI(650) and LOI(1000).

The test work program has been designed to evaluate the surface and near surface manganese mineralisation as well as provide valuable data for the PFS and DFS for the main Butcherbird project. Seven sites were selected as priority targets for the full suite of tests as these best represented the various mineralisation styles identified.

In addition to the work being undertaken at Nagrom Laboratories Dr. Mason has devised a further program of test work to be completed by Ammtec which will seek to establish if the mineralised surface and near surface material is amenable to autogenous and charged scrubbing techniques.

| SAMPLE                           | TP212 B1 | TP212 B6 | TP047 B1 | TP047 B5 | TP114 B1 | TP114 B5 |
|----------------------------------|----------|----------|----------|----------|----------|----------|
| Mn %                             | 37.339   | 38.220   | 43.134   | 41.237   | 40.945   | 30.943   |
| Fe %                             | 8.773    | 5.633    | 3.237    | 5.190    | 4.910    | 14.557   |
| Al <sub>2</sub> O <sub>3</sub> % | 5.202    | 5.317    | 4.246    | 4.326    | 4.889    | 5.011    |
| CaO %                            | 0.133    | 0.232    | 0.123    | 0.097    | 0.144    | 0.180    |
| Cr <sub>2</sub> O <sub>3</sub> % | 0.0091   | 0.0086   | 0.0091   | 0.0090   | 0.0096   | 0.0115   |
| P <sub>2</sub> O <sub>5</sub> %  | 0.1364   | 0.0920   | 0.1163   | 0.1037   | 0.1250   | 0.1253   |
| SiO <sub>2</sub> %               | 15.517   | 17.932   | 15.842   | 15.864   | 16.420   | 16.781   |
| Ba %                             | 0.084    | 0.094    | 0.074    | 0.055    | 0.070    | 0.061    |
| K <sub>2</sub> O %               | 3.449    | 3.579    | 3.671    | 3.573    | 3.164    | 3.283    |
| MgO %                            | 0.185    | 0.294    | 0.200    | 0.196    | 0.221    | 0.256    |
| Na <sub>2</sub> O %              | 0.283    | 0.432    | 0.525    | 0.583    | 0.215    | 0.187    |
| S %                              | 0.047    | 0.041    | 0.054    | 0.051    | 0.022    | 0.037    |
| TiO <sub>2</sub> %               | 0.175    | 0.211    | 0.140    | 0.146    | 0.146    | 0.170    |
| LOI <sub>1000</sub> %            | 10.12    | 10.32    | 10.16    | 10.01    | 10.46    | 9.85     |
| Cu %                             | 0.010    | 0.015    | 0.015    | 0.016    | 0.019    | 0.009    |
| Pb %                             | 0.017    | 0.016    | 0.016    | 0.017    | 0.017    | 0.019    |
| Zn %                             | 0.020    | 0.023    | 0.041    | 0.039    | 0.025    | 0.024    |

**Table 1.** Assay results from the wet screened +8mm product from 3 test pits at BBH.



**Figure 1.** Screened +8mm material and assay samples selected from Bindi Bindi Hill screening test work.

## **Native Title and Heritage**

The first Native Title negotiation meeting was held in Karratha on the 2<sup>nd</sup> of August 2012 and Montezuma presented to the Ngarlawangga people and YMAC on its plans for the Butcherbird project. A second Native Title meeting was held in Tom Price on the 16<sup>th</sup> of August 2012 where formal negotiation commenced with the Ngarlawangga people and YMAC. A number of key points were agreed in principal and it was resolved that the remaining issues would be worked through by Montezuma and YMAC with the aim of presenting a deal structure at the final meeting to be held in November 2012.

## **Environmental**

During September 2012 a number of key reports were finalised in relation to the Butcherbird project:

- Vertebrate and short-range endemic invertebrate fauna survey of the Bindi Bindi study area;
- Terrestrial fauna survey of the Yanneri study area; and
- Level 2 flora and vegetation survey Yanneri study area.

The Company has also sought to fast track the establishment of 20 water monitoring bores on the southern portion of the lease covering Mungajerry Lake, Bindi Bindi Hill, Richies Find and Yanneri Ridge.

Soil Water Consultants have also been commissioned to undertake a geochemical characterisation for the proposed first stage of mining which will involve stripping of surface and near surface high-grade, manganese rubble rich material. This geochemical characterisation was undertaken to identify the presence or absence of potential acid rock or metalliferous drainage materials.

The findings from the desk top study suggest that there is a low risk of sulfidic material in the surface outcrop with the sulphur content in the surface 1 m of all drill holes being less than 0.3 %. As such there was found to be low potential for acid rock and metalliferous drainage occurring in response to mining activities on this site.

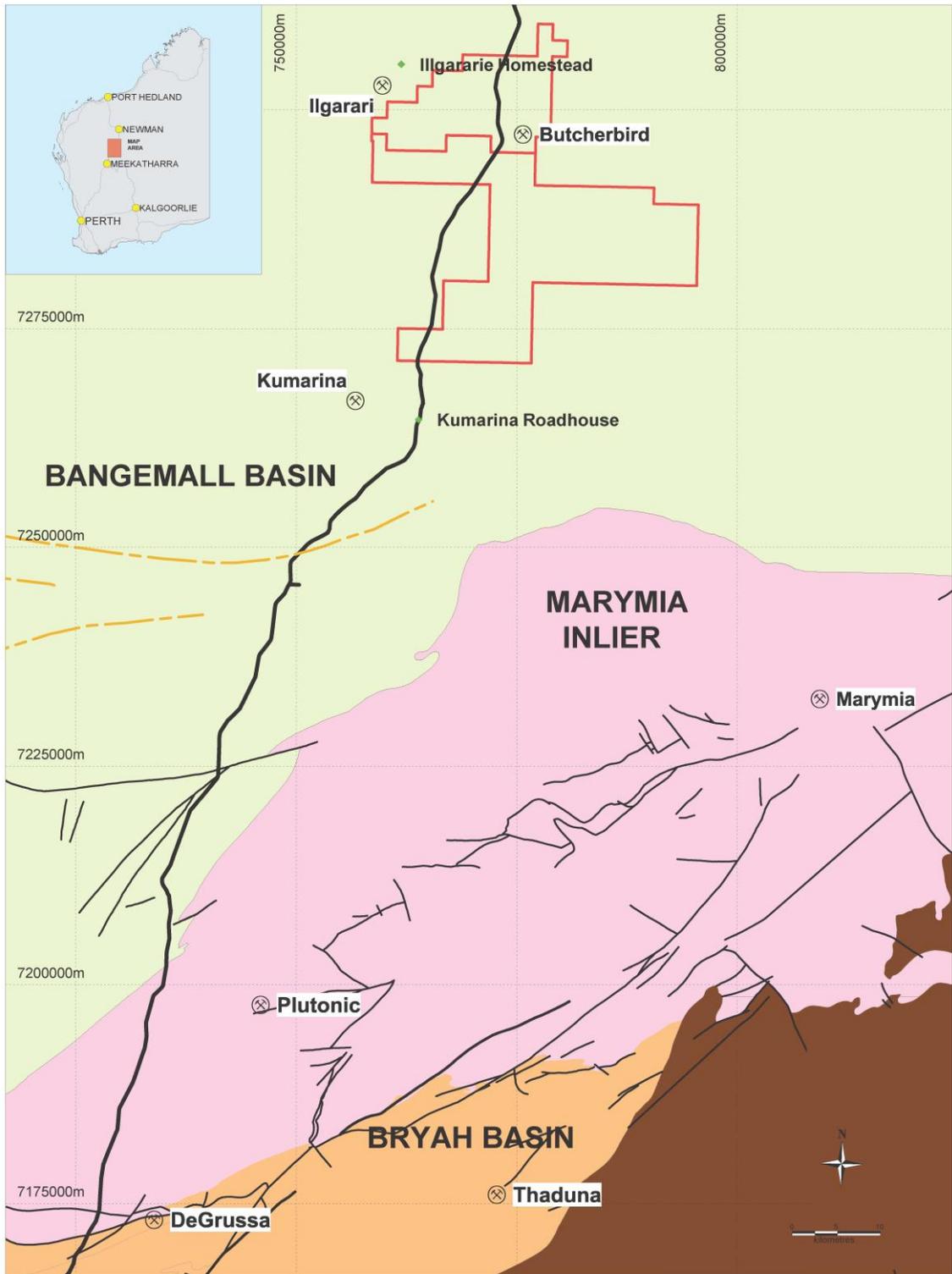
## **BUTCHERBIRD COPPER**

To date 67 RC holes for 10,995 metres have been drilled at the Company's 100% owned Butcherbird Copper Project within the Bangemall Basin. Structurally controlled copper mineralisation is well known in the eastern side of the basin. In addition to the Butcherbird deposit the main known localities of copper mineralisation occur in the Ilgarari and Kumarina deposit areas. Both these areas are sites of current exploration activity by other companies. Copper production has been sporadic from all deposit areas since the early 1900's through to the 1970's. Mineralisation is associated with steeply dipping, east-northeast trending major shears/faults.

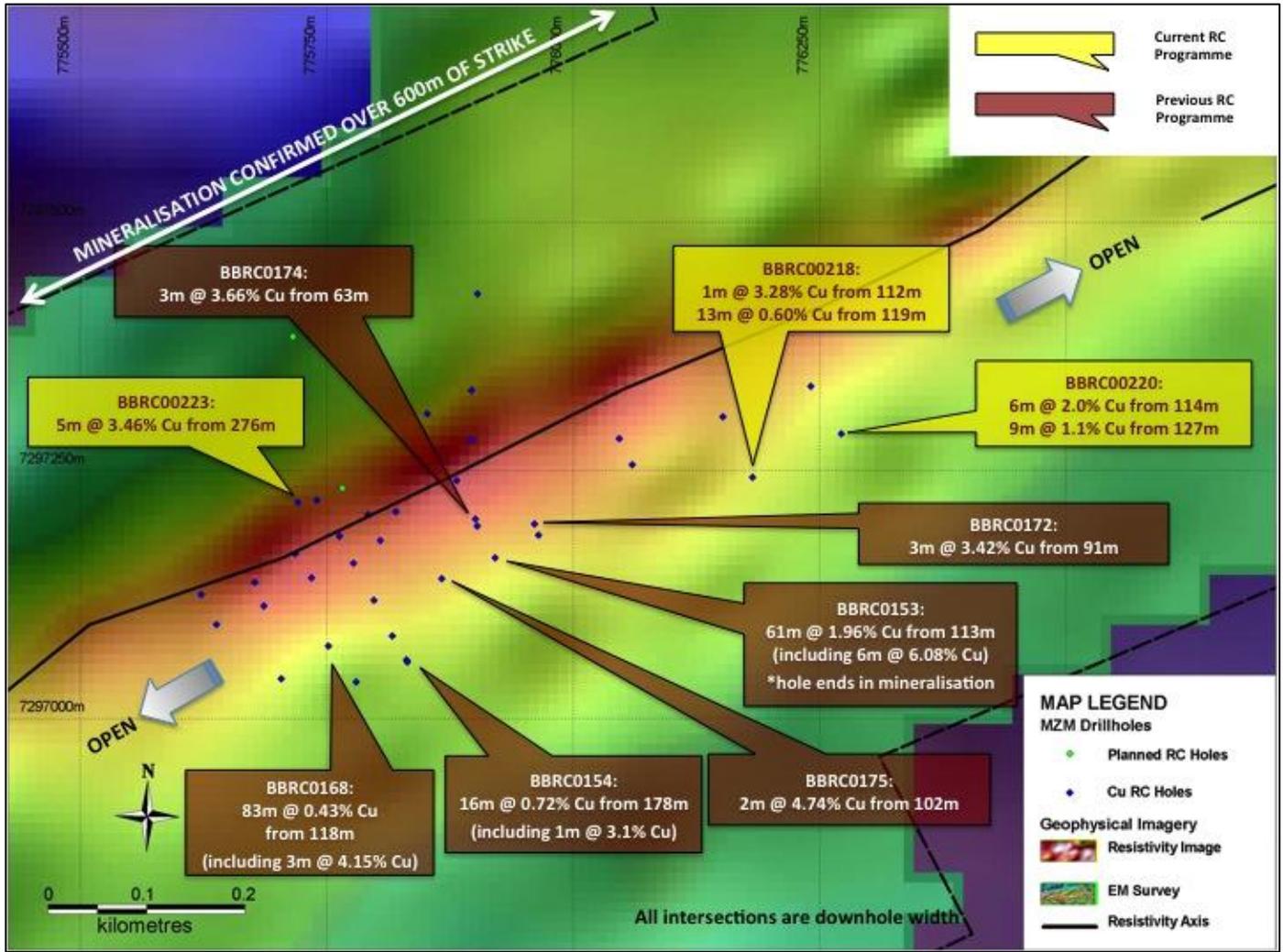
A total of 37 RC holes have been drilled to test copper mineralisation hosted within the east-northeast trending Butcherbird shear. Open mineralisation has been defined over a strike length of 600 metres. Remaining 30 RC holes in the area have been drilled to test geophysical electromagnetic (EM) anomalies. Best results to date have been returned from testing the shear hosted mineralisation. The thickest mineralised zones have been intercepted within the central and east end of drilling to date with best results returned of;

- 61 m @ 1.96% Cu from 113 m in BBRC0153 (includes 6 m @ 6.08% Cu); and
- 6 m @ 2.0% Cu from 114m and 9 m @ 1.1% Cu from 127 m in BBRC0220 respectively (MZM, ASX 18 April 2012).

Utilising drill hole data work in the coming quarter will include 3D modelling of structure, geology and mineralisation. Modelling and subsequent interpretation shall enhance understanding of the geometry, controls and nature of the shear hosted copper mineralisation facilitating the targeting of follow up infill and extension drilling around the broader mineralised zones and along strike on the Butcherbird shear. Within granted tenure E52/2350 Montezuma has a total of a further 6 kilometres of prospective strike outside the 600 metres strike length drill tested to date. In addition to the utilisation of EM and aeromagnetic imagery, regolith geological mapping over the shear zone will also be undertaken in the next quarter to determine the appropriateness or type of surface geochemical sampling that could assist with initial drill targeting. Statutory requirements of meeting native title heritage clearance and program of works (POW) approvals will be address upon completion of targeting.



**Figure 2.** Location Plan of Butcherbird Copper Project



**Figure 3.** Selected downhole intersections from RC drilling programmes at the Butcherbird Copper Prospect.

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

During the quarter, the Company entered into an option agreement with Grosvenor Gold Pty Ltd ("Grosvenor"), a wholly owned subsidiary of Resource and Investment NL (ASX: RNI) ("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; and
- 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.

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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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.