

10 August 2010

ASX CODE: MZM  
ISSUED SHARES: 42.33M  
52 WEEK HIGH: \$0.40  
52 WEEK LOW: \$0.12

**CONTACT:**

JUSTIN BROWN  
Managing Director  
+61 438 745 675

**BOARD:**

Denis O'Meara: Chairman  
Justin Brown: MD  
John Ribbons: Non-Exec

**KEY PROJECTS:**

PEAK HILL (85-100%)  
Gold

DURACK (earning 85%)  
Gold, Copper

BUTCHERBIRD (100%)  
Manganese, Copper

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

**KEY SHARE POSITIONS:**

AUVEX RESOURCES LTD  
7,500,000 FPO Shares

BUXTON RESOURCES LTD  
3,010,000 FPO Shares

## BUTCHERBIRD MANGANESE EXPLORATION UPDATE

- Assay data received for first two holes confirms significant tonnage potential for Bindi Bindi Hill. Results include:
  - 10BB067:** 30m @ 9.19% manganese from 1m
  - 10BB054:** 15m @ 11.61% manganese from 0m  
5m @ 7.84% manganese from 19m
- Results suggest deposit extends over approximately 2km X 0.5km to depths of up to 30m.
- First pass size analysis of six bulk composites suggest that screening can **beneficiate bulk material to grades of up to 27.7% Mn** with recoveries of up to 71.6% in >1mm fraction.
- Heavy media separation test results pending.** Results will provide guidance as to how easily commercial grades of manganese ore (>35% Mn) can be produced.
- Results support **\*\*Exploration Target of 10-20 million tonnes @ 8-12% manganese.** Excellent potential to exceed this if other target areas return positive results.
- Further rock chip **assays up to 48.9% Mn** extends Bindi Bindi Hill target area.
- Drill rig expected to start in approximately 2 weeks to follow up additional targets and to commence infill drilling at Bindi Bindi Hill to support **maiden JORC Mineral Resource Estimate.**

*\*\*It should be noted that 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.*



HOLE ID: 10BB067

## BUTCHERBIRD MANGANESE

The Butcherbird manganese and copper project comprises one granted exploration lease straddling the Great North Highway approximately 120km south of Newman. Earlier reconnaissance surface sampling highlighted extensive surface manganese enrichment associated with supergene weathering processes. A recently completed RC drilling programme represents the first drill testing of these mineralised areas.



The drilling to date has targeted four initial targets; Bindi Bindi Hill, Mungajerry, Alcoa Hole and Cadgies Flats. At Bindi Bindi Hill, visible manganese mineralisation was observed from surface, to a depth of up to 37m. Average thicknesses of mineralisation appear to be 10-15m from surface. The thickest zone of mineralisation identified to date, as defined by field reconnaissance and drilling, occurs on the down slope area of Bindi Bindi Hill, over an area approximately 2km long by 500m wide.

All samples from the drilling have been submitted for assay to determine bulk grades of the material, and two holes (10BB067 and 10BB054) have been selected for metallurgical/beneficiation testing, with 6 X approx. 10m composites being tested to determine first pass indicative beneficiation parameters.

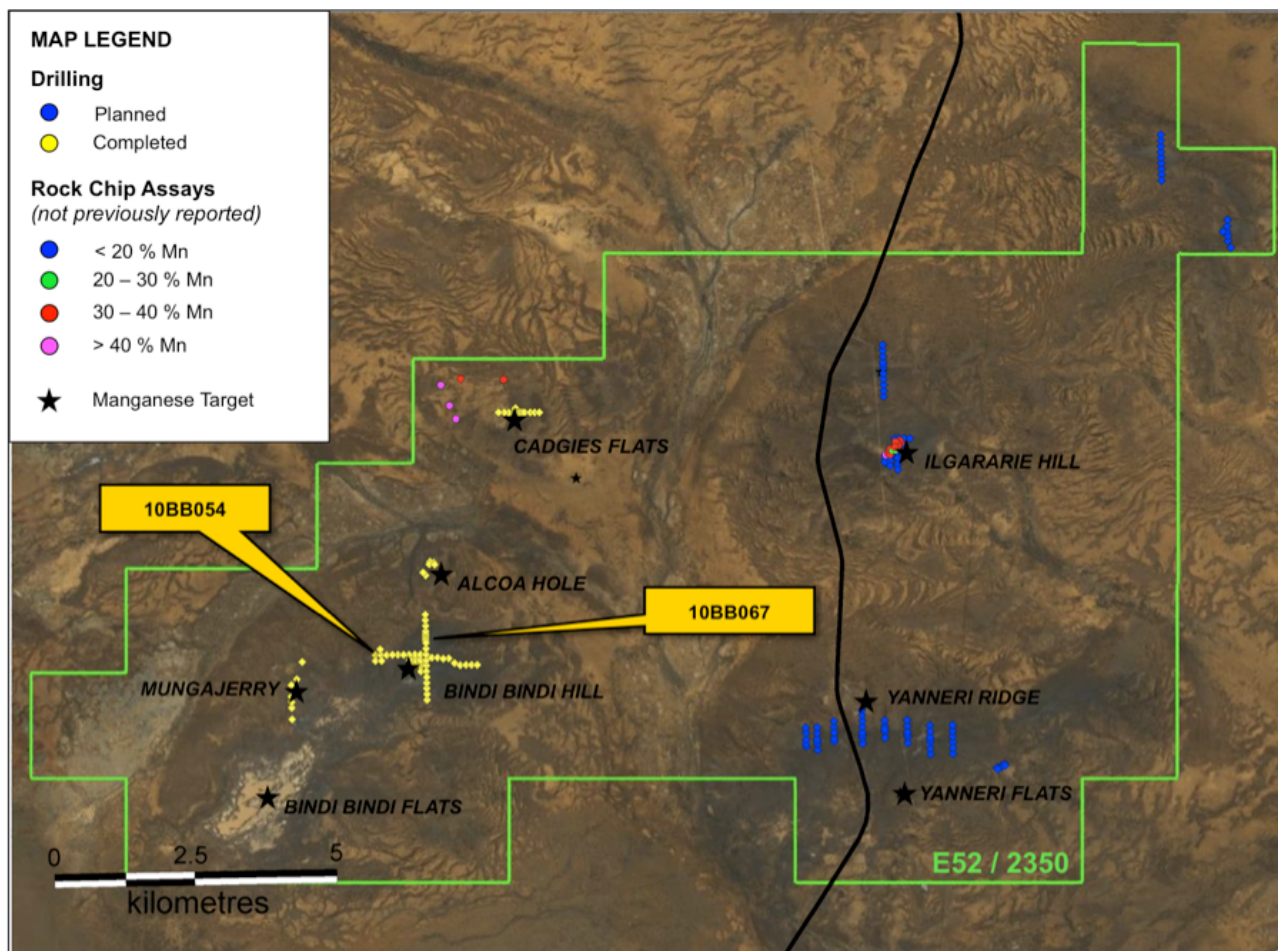
Bulk assays have now been received for the first two holes (10BB054 and 10BB067) which are interpreted as having intersected the central part of the deposit. The size analysis data for the 6 composite samples from these holes have also been received. Heavy media separation data is pending.

The assays received from 10BB054 and 10BB067 have confirmed that the deposit hosts significant thicknesses of mineralised material. Correlating this with the visual information seen in the remainder of the drilling provides confidence that Bindi Bindi Hill is a significant manganese discovery with a potential Exploration Target of 10 – 20 million tonnes at 8-12% Mn.

*\*\*It should be noted that 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 manganese mineralisation appears to occur as high grade lump within low grade or non-mineralised clay rich colluvium. This suggests that the material is likely to be amenable to standard beneficiation techniques to yield a marketable and potentially high grade product.

To test this, two key types of testing are being undertaken on the composite samples; size analysis and heavy media separation. The first tests whether the material from the deposit can be upgraded via screening and the second by density separation. Both are 'real world' techniques and currently in use at operating manganese mines.



**Figure 1: Drilled holes in yellow, planned holes in blue and recent grab sample locations.**

The size analysis data from the composite samples suggests that screening can beneficiate bulk material to grades of up to 27.7% Mn with recoveries of up to 71.6% in >1mm fraction. This result is highly encouraging, demonstrating that the manganese distribution is clearly bimodal and that a large proportion of the non-mineralised material can be removed by screening and washing the bulk material. Complete, tabulated results from the size analysis work are appended as Appendix 1.

This data should be regarded as preliminary; the work was done on RC chips, which have been partially pulverised by the drilling process and hence manganese will have been lost to the fine fraction. Follow up work on bulk samples collected in a manner more reflective of mining processes may be likely to yield higher recoveries than seen here.

The next key question is what further upgrade can be achieved by heavy media separation. This work is currently underway and results are pending.

The results received to date, however have provided strong encouragement from two perspectives. The broad width of the manganese intersections provides encouragement that the deposit at Bindi Bindi Hill has a large tonnage potential while the first pass size analysis shows that significant beneficiation can be achieved through simple size separation of the material.

| Hole ID | From | To | Sample ID | Bulk Comp ID | Fe %  | Mn %  | Al % | Si %  | Ca %  | Mg % | S %  | P %  | Na % | K %  | Cr % | Ti % | LOI % |
|---------|------|----|-----------|--------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|-------|
| 10BB067 | 0    | 1  | BBRC0781  | 1            | 6.09  | 4.07  | 5.56 | 22.62 | 3.53  | 2.32 | 0.63 | 0.04 | 0.21 | 1.89 | 0.01 | 0.31 | 13.90 |
|         | 1    | 2  | BBRC0782  | 1            | 6.21  | 9.22  | 4.30 | 15.99 | 7.15  | 1.61 | 4.29 | 0.03 | 0.23 | 2.13 | 0.01 | 0.20 | 15.80 |
|         | 2    | 3  | BBRC0783  | 1            | 5.56  | 9.14  | 3.99 | 14.12 | 8.43  | 1.99 | 4.36 | 0.03 | 0.24 | 2.27 | 0.01 | 0.16 | 22.30 |
|         | 3    | 4  | BBRC0784  | 1            | 5.03  | 10.69 | 3.39 | 12.57 | 9.36  | 3.60 | 0.78 | 0.02 | 0.18 | 2.05 | 0.00 | 0.16 | 21.50 |
|         | 4    | 5  | BBRC0785  | 1            | 7.27  | 3.91  | 5.09 | 17.81 | 10.08 | 1.25 | 0.07 | 0.03 | 0.07 | 2.22 | 0.01 | 0.23 | 16.60 |
|         | 5    | 6  | BBRC0786  | 1            | 7.55  | 8.05  | 5.24 | 17.67 | 7.29  | 1.04 | 0.23 | 0.09 | 0.09 | 2.53 | 0.01 | 0.23 | 14.50 |
|         | 6    | 7  | BBRC0787  | 1            | 9.30  | 12.31 | 6.25 | 20.66 | 0.57  | 0.50 | 0.05 | 0.10 | 0.13 | 3.13 | 0.01 | 0.27 | 7.58  |
|         | 7    | 8  | BBRC0788  | 1            | 7.13  | 6.06  | 7.78 | 25.48 | 0.30  | 0.48 | 0.02 | 0.06 | 0.09 | 3.25 | 0.01 | 0.36 | 6.04  |
|         | 8    | 9  | BBRC0789  | 1            | 9.86  | 5.89  | 7.46 | 24.35 | 0.19  | 0.42 | 0.02 | 0.08 | 0.08 | 3.18 | 0.01 | 0.31 | 5.81  |
|         | 9    | 10 | BBRC0790  | 2            | 6.80  | 3.33  | 8.15 | 27.49 | 0.21  | 0.42 | 0.01 | 0.09 | 0.07 | 3.15 | 0.01 | 0.38 | 5.36  |
|         | 10   | 11 | BBRC0791  | 2            | 9.16  | 5.60  | 7.36 | 24.91 | 0.27  | 0.45 | 0.03 | 0.08 | 0.08 | 3.05 | 0.01 | 0.34 | 6.09  |
|         | 11   | 12 | BBRC0792  | 2            | 10.42 | 7.98  | 6.72 | 23.14 | 0.35  | 0.37 | 0.02 | 0.17 | 0.06 | 3.05 | 0.01 | 0.28 | 6.17  |
|         | 12   | 13 | BBRC0793  | 2            | 6.22  | 18.66 | 5.98 | 18.98 | 0.21  | 0.31 | 0.01 | 0.08 | 0.10 | 3.41 | 0.01 | 0.26 | 7.64  |
|         | 13   | 14 | BBRC0794  | 2            | 12.31 | 2.56  | 7.62 | 24.91 | 0.14  | 0.40 | 0.01 | 0.19 | 0.04 | 2.87 | 0.01 | 0.32 | 5.74  |
|         | 14   | 15 | BBRC0795  | 2            | 12.87 | 6.26  | 6.77 | 23.04 | 0.16  | 0.36 | 0.01 | 0.14 | 0.06 | 2.71 | 0.01 | 0.28 | 6.09  |
|         | 15   | 16 | BBRC0796  | 2            | 8.25  | 22.54 | 4.86 | 15.94 | 0.18  | 0.24 | 0.02 | 0.12 | 0.13 | 2.77 | 0.00 | 0.20 | 8.72  |
|         | 16   | 17 | BBRC0797  | 2            | 8.60  | 18.82 | 5.66 | 17.86 | 0.07  | 0.24 | 0.19 | 0.07 | 0.11 | 2.76 | 0.01 | 0.23 | 8.33  |
|         | 17   | 18 | BBRC0798  | 2            | 15.18 | 9.68  | 5.93 | 19.59 | 0.06  | 0.27 | 0.04 | 0.12 | 0.06 | 2.27 | 0.01 | 0.25 | 7.93  |
|         | 18   | 19 | BBRC0799  | 2            | 13.29 | 8.13  | 6.46 | 21.46 | 0.06  | 0.31 | 0.26 | 0.12 | 0.05 | 2.45 | 0.01 | 0.27 | 7.31  |
|         | 19   | 20 | BBRC0800  | 2            | 10.07 | 7.74  | 6.67 | 21.36 | 0.64  | 0.37 | 1.21 | 0.33 | 0.05 | 2.56 | 0.01 | 0.28 | 10.60 |
|         | 20   | 21 | BBRC0803  |              | 13.01 | 13.79 | 4.35 | 15.33 | 0.61  | 0.41 | 0.51 | 0.10 | 0.04 | 1.72 | 0.01 | 0.19 | 17.00 |
|         | 21   | 22 | BBRC0804  |              | 9.86  | 10.84 | 5.28 | 17.48 | 0.85  | 0.71 | 0.60 | 0.07 | 0.02 | 2.00 | 0.01 | 0.22 | 18.40 |
|         | 22   | 23 | BBRC0805  |              | 10.21 | 9.45  | 5.45 | 18.14 | 1.11  | 0.77 | 0.39 | 0.19 | 0.05 | 2.03 | 0.01 | 0.24 | 17.20 |
|         | 23   | 24 | BBRC0806  |              | 11.26 | 10.30 | 4.92 | 17.01 | 1.02  | 0.83 | 0.49 | 0.09 | 0.03 | 1.84 | 0.01 | 0.21 | 18.50 |
|         | 24   | 25 | BBRC0807  |              | 10.21 | 9.76  | 5.17 | 17.67 | 1.48  | 0.87 | 0.69 | 0.22 | 0.04 | 1.94 | 0.01 | 0.22 | 17.70 |
|         | 25   | 26 | BBRC0808  |              | 8.74  | 9.06  | 5.35 | 17.81 | 2.75  | 0.93 | 0.64 | 0.08 | 0.04 | 2.03 | 0.01 | 0.23 | 17.90 |
|         | 26   | 27 | BBRC0809  |              | 7.69  | 7.82  | 6.03 | 19.77 | 2.20  | 0.96 | 0.88 | 0.13 | 0.04 | 2.32 | 0.01 | 0.26 | 16.40 |
|         | 27   | 28 | BBRC0810  |              | 7.83  | 6.46  | 6.25 | 20.47 | 2.44  | 0.97 | 1.21 | 0.06 | 0.04 | 2.39 | 0.01 | 0.28 | 15.80 |
|         | 28   | 29 | BBRC0811  |              | 7.55  | 7.09  | 6.19 | 19.96 | 2.79  | 1.00 | 1.16 | 0.06 | 0.04 | 2.37 | 0.01 | 0.26 | 15.90 |
|         | 29   | 30 | BBRC0812  |              | 8.04  | 8.91  | 5.24 | 17.53 | 3.52  | 0.97 | 0.95 | 0.18 | 0.04 | 2.01 | 0.01 | 0.23 | 18.40 |
|         | 30   | 31 | BBRC0813  |              | 7.55  | 5.75  | 6.56 | 21.08 | 2.52  | 1.01 | 1.39 | 0.17 | 0.05 | 2.52 | 0.01 | 0.29 | 14.70 |
|         | 31   | 32 | BBRC0814  |              | 7.20  | 4.30  | 7.20 | 22.95 | 1.86  | 1.05 | 1.12 | 0.06 | 0.06 | 2.73 | 0.01 | 0.31 | 12.80 |
|         | 32   | 33 | BBRC0815  |              | 6.73  | 2.21  | 7.99 | 24.73 | 1.26  | 1.04 | 1.14 | 0.08 | 0.06 | 3.05 | 0.01 | 0.34 | 10.20 |
|         | 33   | 34 | BBRC0816  |              | 6.43  | 1.61  | 7.99 | 26.08 | 0.98  | 1.04 | 1.44 | 0.08 | 0.06 | 3.03 | 0.01 | 0.35 | 8.92  |
|         | 34   | 35 | BBRC0817  |              | 6.24  | 1.64  | 8.26 | 26.04 | 0.91  | 1.08 | 1.00 | 0.05 | 0.06 | 3.12 | 0.01 | 0.35 | 8.79  |

| Hole ID | From | To | Sample ID | Bulk<br>Comp ID | Fe<br>% | Mn<br>% | Al<br>% | Si<br>% | Ca<br>% | Mg<br>% | S<br>% | P<br>% | Na<br>% | K<br>% | Cr<br>% | Ti<br>% | LOI<br>% |
|---------|------|----|-----------|-----------------|---------|---------|---------|---------|---------|---------|--------|--------|---------|--------|---------|---------|----------|
| 10BB054 | 0    | 1  | BBRC1799  | 3               | 8.46    | 20.83   | 5.28    | 16.45   | 0.07    | 0.24    | 0.05   | 0.06   | 0.21    | 2.26   | 0.00    | 0.20    | 9.65     |
|         | 1    | 2  | BBRC1800  | 3               | 6.62    | 2.35    | 8.04    | 28.84   | 0.07    | 0.37    | 0.05   | 0.04   | 0.05    | 2.46   | 0.01    | 0.33    | 5.80     |
|         | 2    | 3  | BBRC1801  | 3               | 11.19   | 1.75    | 7.30    | 26.97   | 0.06    | 0.36    | 0.03   | 0.04   | 0.04    | 2.34   | 0.01    | 0.31    | 5.74     |
|         | 3    | 4  | BBRC1802  | 3               | 9.23    | 12.47   | 6.09    | 21.50   | 0.06    | 0.30    | 0.02   | 0.08   | 0.14    | 2.57   | 0.01    | 0.25    | 7.67     |
|         | 4    | 5  | BBRC1803  | 3               | 6.78    | 20.76   | 5.15    | 18.09   | 0.08    | 0.25    | 0.02   | 0.06   | 0.21    | 2.58   | 0.00    | 0.22    | 8.77     |
|         | 5    | 6  | BBRC1804  | 3               | 6.95    | 24.63   | 4.69    | 15.43   | 0.10    | 0.25    | 0.03   | 0.08   | 0.20    | 2.57   | 0.00    | 0.20    | 9.66     |
|         | 6    | 7  | BBRC1805  | 3               | 12.24   | 8.60    | 6.35    | 21.64   | 0.07    | 0.34    | 0.02   | 0.11   | 0.09    | 2.57   | 0.01    | 0.26    | 7.66     |
|         | 7    | 8  | BBRC1806  | 3               | 10.00   | 13.48   | 5.82    | 20.19   | 0.09    | 0.33    | 0.02   | 0.09   | 0.14    | 2.61   | 0.01    | 0.24    | 8.17     |
|         | 8    | 9  | BBRC1807  | 4               | 7.34    | 10.77   | 6.56    | 23.33   | 0.09    | 0.36    | 0.01   | 0.07   | 0.13    | 2.82   | 0.01    | 0.28    | 7.32     |
|         | 9    | 10 | BBRC1808  | 4               | 9.93    | 10.84   | 6.19    | 21.83   | 0.09    | 0.34    | 0.01   | 0.10   | 0.10    | 2.68   | 0.01    | 0.26    | 7.75     |
|         | 10   | 11 | BBRC1809  | 4               | 12.38   | 14.25   | 5.35    | 18.14   | 0.11    | 0.31    | 0.01   | 0.13   | 0.11    | 2.54   | 0.01    | 0.23    | 8.92     |
|         | 11   | 12 | BBRC1810  | 4               | 5.25    | 4.42    | 8.20    | 27.77   | 0.07    | 0.45    | 0.02   | 0.06   | 0.07    | 3.28   | 0.01    | 0.35    | 5.77     |
|         | 12   | 13 | BBRC1811  | 4               | 9.16    | 10.46   | 6.56    | 21.92   | 0.09    | 0.37    | 0.01   | 0.06   | 0.08    | 2.78   | 0.01    | 0.28    | 7.57     |
|         | 13   | 14 | BBRC1812  | 4               | 9.30    | 10.15   | 6.46    | 22.16   | 0.11    | 0.36    | 0.01   | 0.11   | 0.08    | 2.74   | 0.01    | 0.28    | 7.55     |
|         | 14   | 15 | BBRC1813  | 4               | 10.56   | 8.36    | 6.62    | 22.62   | 0.11    | 0.36    | 0.03   | 0.15   | 0.10    | 2.82   | 0.01    | 0.28    | 7.34     |
|         | 15   | 16 | BBRC1814  | 5               | 6.23    | 4.55    | 8.31    | 26.97   | 0.06    | 0.40    | 0.18   | 0.05   | 0.10    | 3.35   | 0.01    | 0.34    | 5.71     |
|         | 16   | 17 | BBRC1815  | 5               | 4.29    | 0.19    | 9.00    | 30.90   | 0.08    | 0.45    | 0.22   | 0.07   | 0.07    | 3.49   | 0.01    | 0.40    | 4.72     |
|         | 17   | 18 | BBRC1816  | 5               | 8.11    | 2.83    | 7.83    | 27.02   | 0.06    | 0.38    | 0.39   | 0.08   | 0.08    | 3.15   | 0.01    | 0.34    | 6.22     |
|         | 18   | 19 | BBRC1817  | 5               | 5.90    | 2.90    | 8.31    | 28.00   | 0.06    | 0.41    | 0.43   | 0.07   | 0.09    | 3.38   | 0.01    | 0.36    | 6.11     |
|         | 19   | 20 | BBRC1818  | 5               | 11.54   | 10.30   | 6.46    | 20.75   | 0.11    | 0.36    | 0.11   | 0.11   | 0.18    | 2.90   | 0.01    | 0.27    | 7.17     |
|         | 20   | 21 | BBRC1819  | 5               | 7.76    | 5.75    | 7.67    | 25.52   | 0.14    | 0.43    | 0.03   | 0.12   | 0.11    | 3.25   | 0.01    | 0.33    | 5.86     |
|         | 21   | 22 | BBRC1820  | 5               | 11.96   | 3.96    | 7.30    | 24.54   | 0.19    | 0.43    | 0.03   | 0.15   | 0.07    | 2.86   | 0.01    | 0.29    | 5.49     |
|         | 22   | 23 | BBRC1821  | 5               | 9.58    | 10.61   | 6.67    | 22.02   | 0.11    | 0.37    | 0.03   | 0.07   | 0.13    | 2.95   | 0.01    | 0.26    | 6.81     |
|         | 23   | 24 | BBRC1822  | 5               | 11.12   | 8.60    | 6.93    | 22.06   | 0.09    | 0.37    | 0.04   | 0.07   | 0.10    | 3.05   | 0.01    | 0.29    | 6.62     |
|         | 24   | 25 | BBRC1823  | 5               | 11.54   | 2.89    | 7.57    | 25.66   | 0.09    | 0.38    | 0.03   | 0.11   | 0.06    | 2.97   | 0.02    | 0.33    | 5.26     |
|         | 25   | 26 | BBRC1824  | 5               | 10.42   | 4.81    | 7.30    | 25.01   | 0.11    | 0.36    | 0.04   | 0.16   | 0.06    | 2.93   | 0.01    | 0.31    | 5.71     |
|         | 26   | 27 | BBRC1825  | 5               | 4.75    | 1.82    | 9.42    | 28.65   | 0.05    | 0.45    | 0.21   | 0.04   | 0.06    | 3.59   | 0.01    | 0.38    | 5.62     |
|         | 27   | 28 | BBRC1826  | 6               | 9.72    | 3.86    | 8.26    | 25.10   | 0.06    | 0.38    | 0.11   | 0.10   | 0.05    | 3.20   | 0.01    | 0.34    | 5.99     |
|         | 28   | 29 | BBRC1827  | 6               | 8.60    | 3.14    | 8.52    | 26.08   | 0.06    | 0.38    | 0.02   | 0.11   | 0.06    | 3.17   | 0.01    | 0.35    | 6.13     |
|         | 29   | 30 | BBRC1828  | 6               | 8.60    | 3.80    | 8.52    | 25.57   | 0.04    | 0.39    | 0.02   | 0.08   | 0.05    | 3.24   | 0.01    | 0.35    | 6.18     |
|         | 30   | 31 | BBRC1829  | 6               | 8.60    | 3.43    | 8.41    | 26.08   | 0.04    | 0.39    | 0.01   | 0.10   | 0.05    | 3.18   | 0.01    | 0.34    | 6.08     |
|         | 31   | 32 | BBRC1830  | 6               | 6.14    | 1.38    | 9.26    | 28.19   | 0.04    | 0.43    | 0.16   | 0.04   | 0.06    | 3.45   | 0.01    | 0.38    | 5.65     |
|         | 32   | 33 | BBRC1831  | 6               | 6.37    | 1.89    | 8.73    | 28.51   | 0.04    | 0.41    | 0.04   | 0.05   | 0.06    | 3.28   | 0.01    | 0.37    | 5.52     |
|         | 33   | 34 | BBRC1832  | 6               | 8.60    | 2.41    | 7.94    | 27.35   | 0.04    | 0.37    | 0.01   | 0.08   | 0.06    | 2.97   | 0.01    | 0.34    | 5.62     |

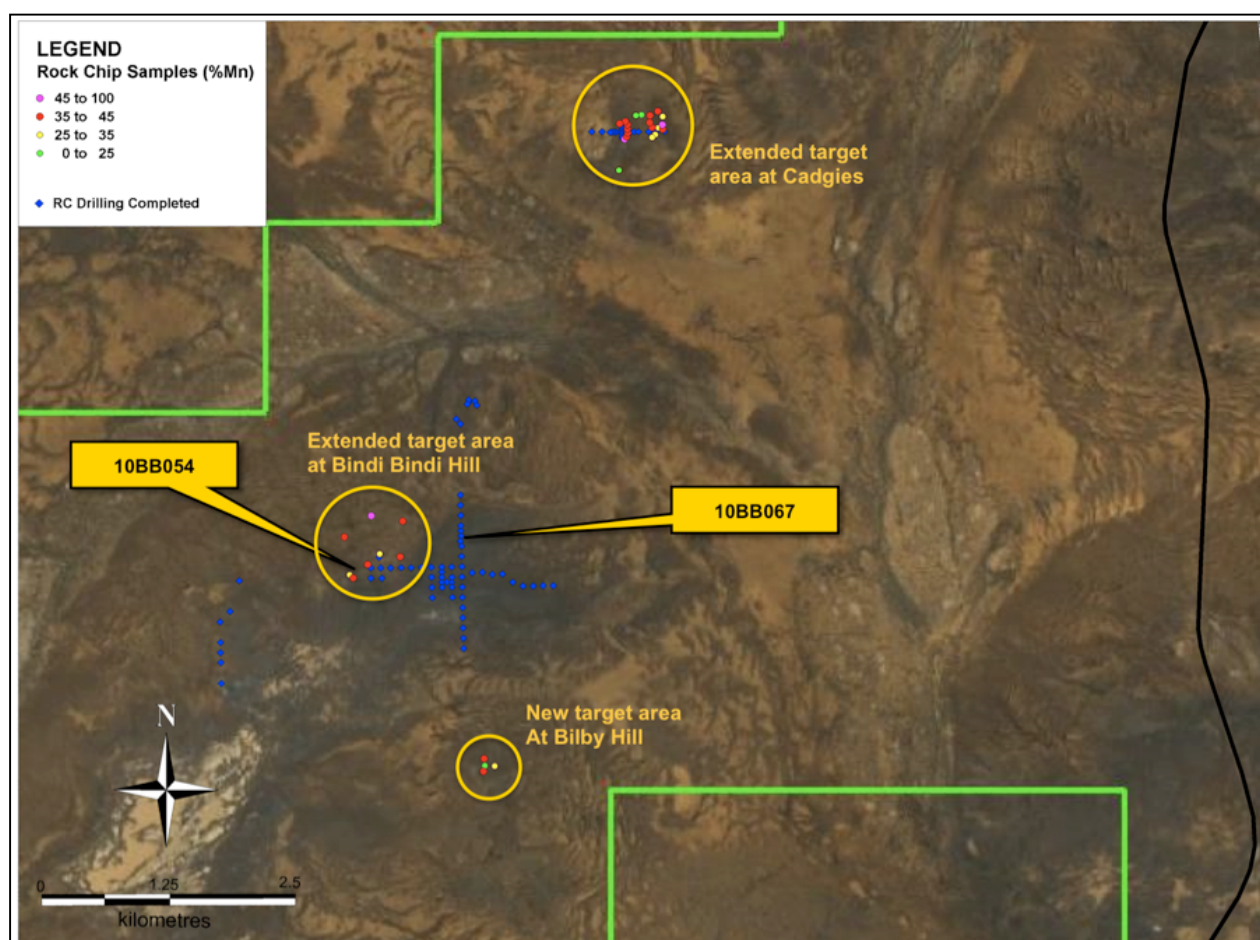
| Hole ID | From | To | Sample ID | Bulk<br>Comp ID | Fe<br>% | Mn<br>% | Al<br>% | Si<br>% | Ca<br>% | Mg<br>% | S<br>% | P<br>% | Na<br>% | K<br>% | Cr<br>% | Ti<br>% | LOI<br>% |
|---------|------|----|-----------|-----------------|---------|---------|---------|---------|---------|---------|--------|--------|---------|--------|---------|---------|----------|
| 10BB054 | 34   | 35 | BBRC1833  | 6               | 8.11    | 0.09    | 9.00    | 28.28   | 0.04    | 0.43    | 0.02   | 0.07   | 0.06    | 3.35   | 0.01    | 0.38    | 5.36     |
|         | 35   | 36 | BBRC1834  | 6               | 7.83    | 1.79    | 8.52    | 27.30   | 0.18    | 0.48    | 0.20   | 0.07   | 0.07    | 3.20   | 0.01    | 0.36    | 5.96     |
|         | 36   | 37 | BBRC1835  | 6               | 8.18    | 3.43    | 8.20    | 25.76   | 0.14    | 0.52    | 0.06   | 0.13   | 0.07    | 3.12   | 0.01    | 0.35    | 7.17     |
|         | 37   | 38 | BBRC1836  |                 | 7.83    | 4.17    | 7.99    | 24.59   | 0.19    | 0.90    | 0.24   | 0.07   | 0.04    | 3.02   | 0.01    | 0.34    | 9.25     |
|         | 38   | 39 | BBRC1837  |                 | 7.20    | 3.48    | 7.94    | 25.24   | 0.31    | 1.14    | 0.22   | 0.06   | 0.05    | 3.01   | 0.01    | 0.34    | 9.31     |
|         | 39   | 40 | BBRC1838  |                 | 6.27    | 1.60    | 8.84    | 26.50   | 0.52    | 1.19    | 0.67   | 0.19   | 0.07    | 3.36   | 0.01    | 0.37    | 7.41     |
|         | 40   | 41 | BBRC1839  |                 | 6.96    | 1.83    | 8.52    | 25.80   | 0.64    | 1.19    | 0.66   | 0.24   | 0.07    | 3.23   | 0.01    | 0.36    | 7.98     |
|         | 41   | 42 | BBRC1840  |                 | 8.18    | 3.88    | 7.67    | 24.21   | 0.36    | 1.18    | 0.25   | 0.05   | 0.05    | 2.90   | 0.01    | 0.33    | 10.20    |
|         | 42   | 43 | BBRC1841  |                 | 8.18    | 3.80    | 7.57    | 23.84   | 0.66    | 1.21    | 0.30   | 0.12   | 0.06    | 2.86   | 0.01    | 0.32    | 10.50    |
|         | 43   | 44 | BBRC1842  |                 | 8.25    | 3.46    | 7.73    | 23.79   | 0.76    | 1.21    | 0.33   | 0.05   | 0.05    | 2.93   | 0.01    | 0.32    | 10.50    |
|         | 44   | 45 | BBRC1843  |                 | 7.90    | 3.04    | 7.83    | 24.49   | 0.79    | 1.25    | 0.26   | 0.04   | 0.06    | 2.97   | 0.01    | 0.33    | 9.80     |
|         | 45   | 46 | BBRC1844  |                 | 8.18    | 3.43    | 7.62    | 23.70   | 1.17    | 1.25    | 0.24   | 0.10   | 0.06    | 2.89   | 0.01    | 0.32    | 10.50    |
|         | 46   | 47 | BBRC1845  |                 | 8.53    | 3.54    | 7.62    | 23.37   | 1.06    | 1.24    | 0.35   | 0.05   | 0.07    | 2.88   | 0.01    | 0.32    | 10.90    |

Table 1: Assay results for RC Drillholes 10BB054 and 10BB067. All samples are 1m downhole intervals submitted to SGS Laboratories in Perth for assay by XRF.

Further surface sampling has also been undertaken over potential new areas and the results continue to highlight the extensive surface manganese at Butcherbird. The data show a potential extension to the target area at Bindi Bindi Hill and have also identified a new target area at Bilby Hill to the southeast.

| Sample ID | East (GDA) | North (GDA) | Fe (%) | Mn (%)       | Al (%) | Si (%) | Ca (%) | Mg (%) | S (%) | P (%) | Ti (%) | LOI (%) |
|-----------|------------|-------------|--------|--------------|--------|--------|--------|--------|-------|-------|--------|---------|
| BBG040    | 767597     | 7303489     | 11.89  | <b>33.22</b> | 2.63   | 8.18   | 0.07   | 0.08   | 0.04  | 0.10  | 0.10   | 11.30   |
| BBG041    | 767564     | 7303463     | 13.78  | <b>31.52</b> | 2.63   | 8.46   | 0.09   | 0.10   | 0.05  | 0.10  | 0.10   | 10.50   |
| BBG042    | 767629     | 7303555     | 9.58   | <b>34.54</b> | 3.78   | 7.15   | 0.04   | 0.07   | 0.04  | 0.05  | 0.12   | 11.80   |
| BBG043    | 767671     | 7303541     | 11.75  | <b>35.16</b> | 2.51   | 6.92   | 0.05   | 0.06   | 0.04  | 0.10  | 0.09   | 11.50   |
| BBG044    | 767568     | 7303561     | 6.83   | <b>43.29</b> | 3.55   | 3.11   | 0.07   | 0.07   | 0.03  | 0.08  | 0.11   | 13.00   |
| BBG045    | 767668     | 7303586     | 6.78   | <b>45.85</b> | 2.60   | 2.54   | 0.04   | 0.06   | 0.01  | 0.03  | 0.09   | 12.70   |
| BBG046    | 767675     | 7303665     | 10.91  | <b>34.62</b> | 2.88   | 7.53   | 0.04   | 0.07   | 0.02  | 0.14  | 0.09   | 11.50   |
| BBG047    | 767626     | 7303719     | 4.94   | <b>40.97</b> | 2.68   | 7.57   | 0.04   | 0.06   | 0.01  | 0.07  | 0.11   | 10.90   |
| BBG048    | 767548     | 7303677     | 5.52   | <b>41.20</b> | 2.93   | 6.78   | 0.05   | 0.07   | 0.02  | 0.07  | 0.11   | 11.20   |
| BBG049    | 767464     | 7303685     | 40.99  | <b>0.56</b>  | 3.23   | 10.42  | 0.05   | 0.07   | 0.07  | 0.58  | 0.11   | 9.35    |
| BBG050    | 767409     | 7303679     | 19.65  | <b>24.47</b> | 2.73   | 9.26   | 0.10   | 0.08   | 0.04  | 0.21  | 0.11   | 10.50   |
| BBG051    | 767546     | 7303608     | 5.41   | <b>40.74</b> | 2.55   | 7.39   | 0.06   | 0.06   | 0.01  | 0.10  | 0.10   | 11.00   |
| BBG052    | 767294     | 7303451     | 3.22   | <b>45.07</b> | 2.11   | 6.08   | 0.11   | 0.11   | 0.04  | 0.11  | 0.09   | 10.40   |
| BBG053    | 767315     | 7303473     | 5.77   | <b>41.98</b> | 2.07   | 6.78   | 0.13   | 0.16   | 0.03  | 0.07  | 0.09   | 10.40   |
| BBG054    | 767327     | 7303512     | 3.57   | <b>42.13</b> | 2.65   | 7.48   | 0.09   | 0.11   | 0.03  | 0.05  | 0.11   | 10.20   |
| BBG055    | 767323     | 7303551     | 3.48   | <b>44.45</b> | 2.30   | 6.26   | 0.14   | 0.11   | 0.03  | 0.10  | 0.10   | 10.40   |
| BBG056    | 767324     | 7303590     | 5.13   | <b>42.83</b> | 2.00   | 6.82   | 0.09   | 0.11   | 0.03  | 0.07  | 0.08   | 10.20   |
| BBG057    | 767302     | 7303623     | 4.67   | <b>41.67</b> | 2.63   | 7.06   | 0.11   | 0.13   | 0.12  | 0.05  | 0.10   | 10.50   |
| BBG058    | 767246     | 7303602     | 7.34   | <b>39.73</b> | 2.35   | 6.87   | 0.11   | 0.08   | 0.07  | 0.16  | 0.08   | 10.30   |
| BBG059    | 767231     | 7303148     | 13.78  | <b>23.85</b> | 4.40   | 11.73  | 0.04   | 0.05   | 0.04  | 0.10  | 0.31   | 10.60   |
| BBG063    | 764993     | 7299406     | 7.13   | <b>43.22</b> | 2.21   | 4.77   | 0.06   | 0.07   | 0.02  | 0.07  | 0.08   | 11.70   |
| BBG064    | 764790     | 7299437     | 9.72   | <b>32.68</b> | 3.32   | 8.93   | 0.05   | 0.11   | 0.02  | 0.14  | 0.11   | 11.00   |
| BBG065    | 765025     | 7299755     | 4.74   | <b>40.43</b> | 2.51   | 8.09   | 0.08   | 0.13   | 0.02  | 0.04  | 0.11   | 9.98    |
| BBG066    | 764715     | 7299812     | 5.46   | <b>48.95</b> | 2.34   | 1.58   | 0.06   | 0.02   | 0.06  | 0.03  | 0.10   | 13.00   |
| BBG067    | 764447     | 7299608     | 7.69   | <b>36.71</b> | 4.96   | 5.61   | 0.04   | 0.04   | 0.02  | 0.02  | 0.24   | 13.20   |
| BBG068    | 764671     | 7299336     | 8.88   | <b>41.28</b> | 2.58   | 4.35   | 0.04   | 0.05   | 0.02  | 0.02  | 0.08   | 12.00   |
| BBG069    | 764490     | 7299239     | 9.51   | <b>34.85</b> | 4.37   | 6.26   | 0.02   | 0.10   | 0.02  | 0.03  | 0.14   | 12.00   |
| BBG070    | 764526     | 7299208     | 6.26   | <b>35.55</b> | 4.20   | 8.88   | 0.03   | 0.11   | 0.02  | 0.03  | 0.16   | 11.20   |
| BBG072    | 765782     | 7297418     | 10.28  | <b>39.03</b> | 2.12   | 4.77   | 0.05   | 0.04   | 0.02  | 0.08  | 0.10   | 11.80   |
| BBG073    | 765788     | 7297350     | 20.14  | <b>23.08</b> | 2.58   | 8.97   | 0.06   | 0.02   | 0.05  | 0.21  | 0.13   | 11.50   |
| BBG074    | 765772     | 7297294     | 7.20   | <b>40.20</b> | 4.17   | 4.34   | 0.04   | 0.02   | 0.02  | 0.02  | 0.15   | 13.20   |
| BBG075    | 765885     | 7297343     | 10.70  | <b>34.70</b> | 4.56   | 5.61   | 0.04   | 0.03   | 0.02  | 0.03  | 0.17   | 13.00   |

**Table 2: Rock chip samples from Butcherbird.**



**Figure 2: Latest rock chip sampling showing new and extended target areas.**

The majority of the drilling to date has been at Bindi Bindi Hill, however minor work at both Alcoa Hole and Cadgies Flats also intersected significant visible manganese mineralisation confirming the potential for these two targets.

A number of other priority targets were not drilled in the current programme due to access issues, however clearances have now been received and these target areas will be included in the next round of drilling. These target areas include the 2km long Yanneri Ridge, the 1.5km long Illgararie Ridge, the outlying Illgararie Hill, and two areas at Budgie Hill.

Drilling is expected to commence on these areas in approximately two weeks, and subject to receiving appropriate approvals and Heritage clearances, the rig will then be moved back to Bindi Bindi Hill to start infill drilling to provide data to support a maiden Mineral Resource Estimate for this new discovery.

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## More Information

**Justin Brown**  
Managing Director

Phone: +61 (8) 9228 4833  
Mobile: 0438 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 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.

**APPENDIX 1:** Butcherbird size analysis of composite bulk samples from drillholes 10BB054 and 10BB067. Downhole intervals for each bulk sample are listed in Table 1 of this report.

| Composite 1            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        |              | U/S          |             | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        | g            | %            |             |       | %           | %            | U/S       | U/S      |
|                        |              |              |             |       |             |              | %         | %        |
| +4.75                  | 51.9         | 5.89         | 94.1        | 5.89  | 25.5        | 21.2         | 5.94      | 78.8     |
| -4.75 +2.80            | 70.8         | 8.04         | 86.1        | 13.9  | 23.5        | 26.6         | 4.30      | 52.2     |
| -2.80 +2.00            | 30.6         | 3.47         | 82.6        | 17.4  | 17.8        | 8.72         | 3.73      | 43.5     |
| -2.00 +1.40            | 35.7         | 4.05         | 78.5        | 21.5  | 15.8        | 9.03         | 3.11      | 34.4     |
| -1.40 +1.00            | 30.4         | 3.45         | 75.1        | 24.9  | 12.3        | 5.99         | 2.69      | 28.4     |
| -1.00 +0.710           | 26.3         | 2.99         | 72.1        | 27.9  | 10.4        | 4.38         | 2.37      | 24.1     |
| -0.710 +0.500          | 26.8         | 3.04         | 69.1        | 30.9  | 9.10        | 3.90         | 2.07      | 20.2     |
| -0.500 +0.355          | 26.5         | 3.01         | 66.1        | 33.9  | 7.66        | 3.25         | 1.82      | 16.9     |
| -0.355 +0.250          | 20.8         | 2.36         | 63.7        | 36.3  | 6.28        | 2.09         | 1.65      | 14.8     |
| -0.250 +0.180          | 20.3         | 2.30         | 61.4        | 38.6  | 5.07        | 1.65         | 1.52      | 13.2     |
| -0.180 +0.125          | 18.5         | 2.10         | 59.3        | 40.7  | 4.41        | 1.31         | 1.42      | 11.9     |
| -0.125 +0.090          | 16.8         | 1.91         | 57.4        | 42.6  | 3.97        | 1.07         | 1.34      | 10.8     |
| -0.090 +0.063          | 16.7         | 1.90         | 55.5        | 44.5  | 3.47        | 0.93         | 1.26      | 9.88     |
| -0.063 +0.045          | 14.9         | 1.69         | 53.8        | 46.2  | 2.92        | 0.70         | 1.21      | 9.18     |
| -0.045                 | 474.0        | 53.8         | 0.00        | 100.0 | 1.21        | 9.18         |           |          |
| <b>Total</b>           | <b>881.0</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>7.09</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>7.43</b> |              |           |          |

| Composite 2            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        | g            | %            | U/S         | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        |              |              |             |       | %           | %            | U/S<br>%  | U/S<br>% |
| +4.75                  | 62.7         | 7.15         | 92.9        | 7.15  | 27.7        | 19.6         | 8.77      | 80.4     |
| -4.75 +2.80            | 80.7         | 9.20         | 83.7        | 16.3  | 27.2        | 24.7         | 6.75      | 55.7     |
| -2.80 +2.00            | 34.3         | 3.91         | 79.7        | 20.3  | 25.6        | 9.89         | 5.82      | 45.8     |
| -2.00 +1.40            | 35.8         | 4.08         | 75.7        | 24.3  | 24.4        | 9.83         | 4.82      | 36.0     |
| -1.40 +1.00            | 25.7         | 2.93         | 72.7        | 27.3  | 23.8        | 6.89         | 4.05      | 29.1     |
| -1.00 +0.710           | 18.8         | 2.14         | 70.6        | 29.4  | 23.3        | 4.93         | 3.47      | 24.2     |
| -0.710 +0.500          | 16.6         | 1.89         | 68.7        | 31.3  | 23.1        | 4.32         | 2.93      | 19.9     |
| -0.500 +0.355          | 14.2         | 1.62         | 67.1        | 32.9  | 22.6        | 3.61         | 2.45      | 16.3     |
| -0.355 +0.250          | 9.80         | 1.12         | 66.0        | 34.0  | 21.9        | 2.42         | 2.13      | 13.8     |
| -0.250 +0.180          | 8.10         | 0.92         | 65.0        | 35.0  | 20.8        | 1.90         | 1.86      | 11.9     |
| -0.180 +0.125          | 7.40         | 0.84         | 64.2        | 35.8  | 18.9        | 1.57         | 1.64      | 10.4     |
| -0.125 +0.090          | 7.10         | 0.81         | 63.4        | 36.6  | 15.9        | 1.27         | 1.45      | 9.10     |
| -0.090 +0.063          | 8.60         | 0.98         | 62.4        | 37.6  | 11.1        | 1.07         | 1.30      | 8.03     |
| -0.063 +0.045          | 10.0         | 1.14         | 61.3        | 38.7  | 6.28        | 0.71         | 1.21      | 7.32     |
| -0.045                 | 537.3        | 61.3         | 0.00        | 100.0 | 1.21        | 7.32         |           |          |
| <b>Total</b>           | <b>877.1</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>10.1</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>10.5</b> |              |           |          |

| Composite 3            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        |              |              | U/S         | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        | g            | %            |             |       | %           | %            | U/S<br>%  | U/S<br>% |
| 4.750                  | 80.6         | 8.57         | 91.4        | 8.57  | 21.3        | 12.89        | 13.5      | 87.1     |
| -1.950                 | 124.9        | 13.3         | 78.1        | 21.9  | 19.6        | 18.4         | 12.5      | 68.7     |
| -0.800                 | 65.8         | 7.00         | 71.1        | 28.9  | 20.1        | 9.93         | 11.7      | 58.8     |
| -0.600                 | 71.1         | 7.56         | 63.6        | 36.4  | 19.8        | 10.6         | 10.8      | 48.2     |
| -0.400                 | 58.3         | 6.20         | 57.4        | 42.6  | 19.4        | 8.49         | 9.82      | 39.8     |
| -0.290                 | 45.6         | 4.85         | 52.5        | 47.5  | 19.3        | 6.61         | 8.94      | 33.2     |
| -0.210                 | 43.4         | 4.62         | 47.9        | 52.1  | 18.8        | 6.12         | 7.99      | 27.0     |
| -0.145                 | 39.3         | 4.18         | 43.7        | 56.3  | 18.7        | 5.52         | 6.97      | 21.5     |
| -0.105                 | 27.0         | 2.87         | 40.9        | 59.1  | 18.4        | 3.73         | 6.16      | 17.8     |
| -0.070                 | 22.5         | 2.39         | 38.5        | 61.5  | 18.4        | 3.11         | 5.40      | 14.7     |
| -0.055                 | 18.9         | 2.01         | 36.5        | 63.5  | 17.9        | 2.54         | 4.72      | 12.1     |
| -0.035                 | 15.8         | 1.68         | 34.8        | 65.2  | 16.8        | 1.99         | 4.13      | 10.1     |
| -0.027                 | 14.5         | 1.54         | 33.2        | 66.8  | 15.5        | 1.69         | 3.60      | 8.46     |
| -0.018                 | 11.4         | 1.21         | 32.0        | 68.0  | 11.9        | 1.02         | 3.29      | 7.44     |
| -0.045                 | 301.2        | 32.0         | 0.00        | 100.0 | 3.3         | 7.44         |           |          |
| <b>Total</b>           | <b>940.3</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>14.2</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>14.3</b> |              |           |          |

| Composite 4            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        | g            | %            | U/S         | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        |              |              |             |       | %           | %            | U/S<br>%  | U/S<br>% |
| 4.750                  | 69.1         | 7.78         | 92.2        | 7.78  | 23.3        | 18.2         | 8.82      | 81.8     |
| -1.950                 | 77.0         | 8.67         | 83.6        | 16.4  | 22.4        | 19.5         | 7.41      | 62.2     |
| -0.800                 | 39.0         | 4.39         | 79.2        | 20.8  | 22.6        | 10.0         | 6.56      | 52.3     |
| -0.600                 | 38.1         | 4.29         | 74.9        | 25.1  | 22.1        | 9.53         | 5.67      | 42.7     |
| -0.400                 | 29.0         | 3.26         | 71.6        | 28.4  | 22.5        | 7.39         | 4.91      | 35.3     |
| -0.290                 | 22.4         | 2.52         | 69.1        | 30.9  | 22.4        | 5.68         | 4.27      | 29.7     |
| -0.210                 | 20.5         | 2.31         | 66.8        | 33.2  | 22.4        | 5.20         | 3.64      | 24.5     |
| -0.145                 | 18.2         | 2.05         | 64.7        | 35.3  | 22.3        | 4.59         | 3.05      | 19.9     |
| -0.105                 | 12.6         | 1.42         | 63.3        | 36.7  | 21.8        | 3.11         | 2.63      | 16.8     |
| -0.070                 | 10.7         | 1.20         | 62.1        | 37.9  | 21.3        | 2.58         | 2.27      | 14.2     |
| -0.055                 | 9.40         | 1.06         | 61.1        | 38.9  | 20.0        | 2.13         | 1.96      | 12.1     |
| -0.035                 | 8.60         | 0.97         | 60.1        | 39.9  | 17.7        | 1.72         | 1.71      | 10.3     |
| -0.027                 | 10.0         | 1.13         | 59.0        | 41.0  | 13.2        | 1.49         | 1.49      | 8.83     |
| -0.018                 | 12.1         | 1.36         | 57.6        | 42.4  | 6.98        | 0.96         | 1.36      | 7.88     |
| -0.045                 | 511.7        | 57.6         | 0.00        | 100.0 | 1.36        | 7.88         |           |          |
| <b>Total</b>           | <b>888.4</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>9.94</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>10.1</b> |              |           |          |

| Composite 5            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        |              |              | U/S         | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        | g            | %            |             |       | %           | %            | U/S<br>%  | U/S<br>% |
| 4.750                  | 23.1         | 2.64         | 97.4        | 2.64  | 21.1        | 13.3         | 3.74      | 86.7     |
| -1.950                 | 46.9         | 5.36         | 92.0        | 8.0   | 16.2        | 20.7         | 3.02      | 66.1     |
| -0.800                 | 27.9         | 3.19         | 88.8        | 11.2  | 15.7        | 11.9         | 2.56      | 54.1     |
| -0.600                 | 26.2         | 3.00         | 85.8        | 14.2  | 15.0        | 10.7         | 2.13      | 43.4     |
| -0.400                 | 20.4         | 2.33         | 83.5        | 16.5  | 14.3        | 7.94         | 1.79      | 35.5     |
| -0.290                 | 15.6         | 1.78         | 81.7        | 18.3  | 13.9        | 5.90         | 1.52      | 29.6     |
| -0.210                 | 14.3         | 1.63         | 80.1        | 19.9  | 13.7        | 5.33         | 1.27      | 24.3     |
| -0.145                 | 12.6         | 1.44         | 78.6        | 21.4  | 13.5        | 4.63         | 1.05      | 19.6     |
| -0.105                 | 8.50         | 0.97         | 77.6        | 22.4  | 13.1        | 3.03         | 0.90      | 16.6     |
| -0.070                 | 6.90         | 0.79         | 76.9        | 23.1  | 12.5        | 2.35         | 0.78      | 14.3     |
| -0.055                 | 6.20         | 0.71         | 76.2        | 23.8  | 11.1        | 1.87         | 0.68      | 12.4     |
| -0.035                 | 6.10         | 0.70         | 75.5        | 24.5  | 8.57        | 1.42         | 0.61      | 11.0     |
| -0.027                 | 8.20         | 0.94         | 74.5        | 25.5  | 5.65        | 1.26         | 0.55      | 9.71     |
| -0.018                 | 11.0         | 1.26         | 73.3        | 26.7  | 2.74        | 0.82         | 0.51      | 8.89     |
| -0.045                 | 640.8        | 73.3         | 0.00        | 100.0 | 0.51        | 8.89         |           |          |
| <b>Total</b>           | <b>874.7</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>4.20</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>4.60</b> |              |           |          |

| Composite 6            |              |              |             |       |             |              |           |          |
|------------------------|--------------|--------------|-------------|-------|-------------|--------------|-----------|----------|
| SIZE, mm               | Mass         |              | Cum. % Mass |       | Mn          |              |           |          |
|                        | g            | %            | U/S         | O/S   | Assay       | Dist         | Cum Grade | Cum Rec. |
|                        |              |              |             |       | %           | %            | U/S<br>%  | U/S<br>% |
| 4.750                  | 35.3         | 4.00         | 96.0        | 4.00  | 14.5        | 24.2         | 1.90      | 75.8     |
| -1.950                 | 39.0         | 4.42         | 91.6        | 8.4   | 10.1        | 18.6         | 1.50      | 57.2     |
| -0.800                 | 22.8         | 2.59         | 89.0        | 11.0  | 8.92        | 9.61         | 1.29      | 47.6     |
| -0.600                 | 22.4         | 2.54         | 86.4        | 13.6  | 8.70        | 9.20         | 1.07      | 38.4     |
| -0.400                 | 17.5         | 1.99         | 84.5        | 15.5  | 8.49        | 7.02         | 0.89      | 31.4     |
| -0.290                 | 13.5         | 1.53         | 82.9        | 17.1  | 8.11        | 5.17         | 0.76      | 26.2     |
| -0.210                 | 12.1         | 1.37         | 81.6        | 18.4  | 7.67        | 4.38         | 0.64      | 21.8     |
| -0.145                 | 10.6         | 1.20         | 80.3        | 19.7  | 7.36        | 3.68         | 0.54      | 18.2     |
| -0.105                 | 7.30         | 0.83         | 79.5        | 20.5  | 6.87        | 2.37         | 0.48      | 15.8     |
| -0.070                 | 6.00         | 0.68         | 78.8        | 21.2  | 6.34        | 1.80         | 0.43      | 14.0     |
| -0.055                 | 5.50         | 0.62         | 78.2        | 21.8  | 5.70        | 1.48         | 0.38      | 12.5     |
| -0.035                 | 5.30         | 0.60         | 77.6        | 22.4  | 4.65        | 1.16         | 0.35      | 11.3     |
| -0.027                 | 6.10         | 0.69         | 76.9        | 23.1  | 3.76        | 1.08         | 0.32      | 10.3     |
| -0.018                 | 7.50         | 0.85         | 76.1        | 23.9  | 2.15        | 0.76         | 0.30      | 9.50     |
| -0.045                 | 670.5        | 76.1         | 0.00        | 100.0 | 0.30        | 9.50         |           |          |
| <b>Total</b>           | <b>881.4</b> | <b>100.0</b> |             |       |             | <b>100.0</b> |           |          |
| <b>Calculated Head</b> |              |              |             |       | <b>2.40</b> |              |           |          |
| <b>Assayed Head</b>    |              |              |             |       | <b>2.31</b> |              |           |          |