# QUARTERLY ACTIVITIES REPORT

*for the quarter ended 31 March 2015*

## HIGHLIGHTS

### AUSTRALIAN EXPLORATION

- **JORC 2012 compliant mineral resource completed. Scoping study parameters being reviewed**
- **Exploration targeting identifies new high priority targets with the potential to significantly increase the mineral resource**
- **Global zinc supply and LME stockpile continuing to decline**
- **Market and ongoing review work provide compelling case for increased exploration at Manindi**

## BASE METAL PROJECTS, WESTERN AUSTRALIA

Metals Australia holds an interest in two base metals projects in Western Australia (Figure 1).

The Manindi zinc-copper project is located around 500 km northeast of Perth, and is being explored by Metals with a view to expanding the existing resources and examining the project's potential.

The Sherlock Bay base metal joint venture project is located in the Pilbara region and is being managed and explored by Australasian Resources Ltd (ARH). The project surrounds ARH's Sherlock Bay nickel deposit.


**Figure 1 –** Location of the Western Australian base metals projects.

## MANINDI ZINC PROJECT

The Manindi Project is a significant unmined zinc deposit located in the Murchison District of Western Australia, 20 km southwest of the defunct Youanmi gold mine. The project is located on three granted mining licences.

The Manindi base metal deposit is considered to be a volcanogenic massive sulphide (VMS) zinc deposit, comprising a series of lenses of zinc-dominated mineralisation that have been folded, sheared, faulted, and possibly intruded by later dolerite and gabbro. The style of mineralisation is similar to other base metal sulphide deposits in the Yilgarn Craton, particularly Golden Grove at Yalgoo to the west of Manindi, and Teutonic Bore-Jaguar in the Eastern Goldfields.

### *JORC 2012 MINERAL RESOURCE ESTIMATE*

Updates to and interrogation of the geological database, reinterpretation of 3D geological models, and a review of the deposit geostatistics have allowed the upgrading of the mineral resource estimate for Manindi to JORC 2012 standard. The new resource model is a significant improvement on the JORC 2004 resource model and will form the basis of a new scoping study.

There were slight reductions in tonnages and grades from the JORC 2004 mineral resource estimate and downgrading of the resource categories, but these are far outweighed by the significant improvement in the understanding of metal distributions within the deposit. Future economic evaluations will be far more reliable as a result.

**Table 1** - Manindi JORC 2012 Mineral Resource Estimate.

| **Resources** | | | **Metal Grade** | | | **Contained Metal** | | |
|---|---|---|---|---|---|---|---|---|
| *Category* | *Cut off (Zn%)* | *Tonnage (t)* | *Zinc (%)* | *Copper (%)* | *Silver (g/t)* | *Zinc (t)* | *Copper (t)* | *Silver (oz)* |
| Measured | 0.5 | 48,785 | 8.20 | 0.34 | 7.22 | 3,999 | 166 | 11,320 |
| Indicated | 0.5 | 172,347 | 6.26 | 0.28 | 4.30 | 10,781 | 483 | 23,805 |
| Inferred | 0.5 | 1,447,039 | 4.27 | 0.22 | 2.77 | 61,774 | 3126 | 128,795 |
| Total | 0.5 | 1,668,172 | 4.59 | 0.23 | 3.06 | 76,553 | 3775 | 163,920 |
| Measured | 2.0 | 37,697 | 10.22 | 0.39 | 6.24 | 3,855 | 149 | 7,565 |
| Indicated | 2.0 | 131,472 | 7.84 | 0.32 | 4.60 | 10,309 | 421 | 19,439 |
| Inferred | 2.0 | 906,690 | 6.17 | 0.25 | 2.86 | 55,939 | 2267 | 83,316 |
| Total | 2.0 | 1,075,859 | 6.52 | 0.26 | 3.19 | 70,102 | 2837 | 110,321 |

Note figures may not add up precisely due to rounding.

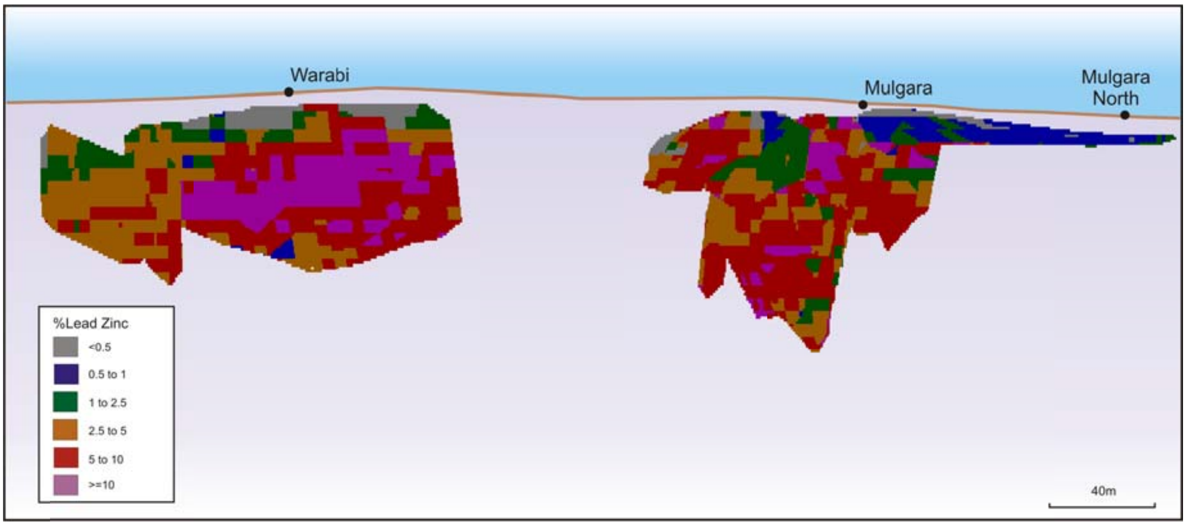


**Figure 2** - Long section view of the Warabi (left) and Mulgara (right) mineral resource block models looking south west

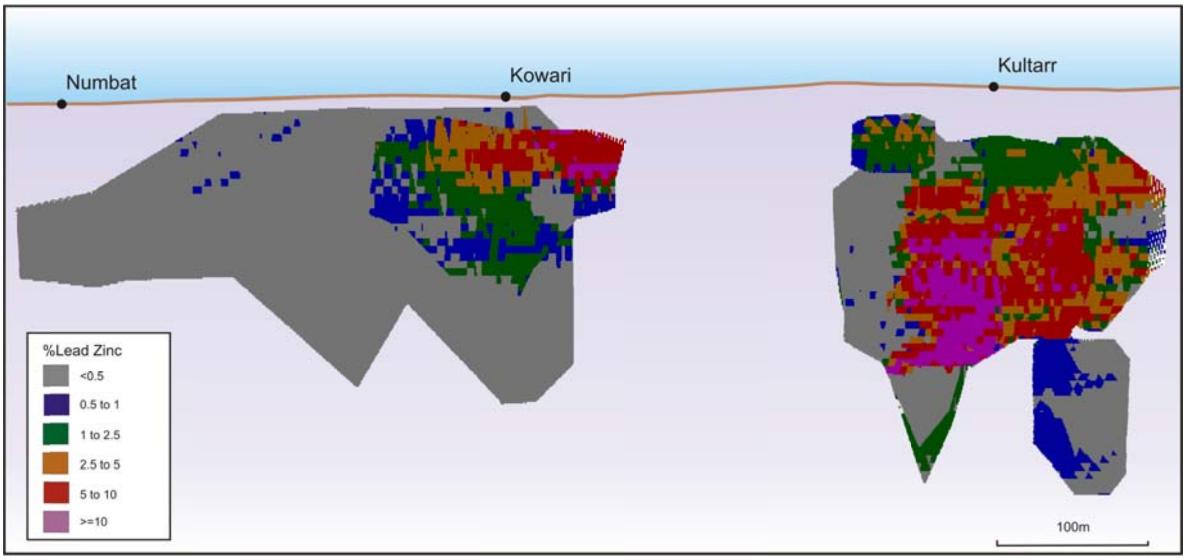


**Figure 3** - Long section view of the Kowari (left) and Kultarr (right) mineral resource block models looking south west

## *DATABASE UPGRADES*

The following upgrades were completed on the Manindi data in preparation for the new mineral resource estimate:

- Validation of all of the drilling completed and available for inclusion in the database, being 104 diamond drillholes, 105 RC drillholes, 169 RAB drillholes and 8 percussion holes. This included 17 RC holes and 52 diamond holes completed by Metals Australia in 2006 (Figure 2).
- Addition of 21 historical geological logs.
- Addition of important geotechnical and core recovery information for 24 holes.
- Validation and addition of 408 Specific Gravity (SG) measurements.

- The raw assay data for all drilling was re-loaded into the Company's industry standard Database Management Software (Datashed) to minimise unmerged assays and to accurately load missing QAQC (Quality Assurance, Quality Control) samples.
- A detailed QAQC report was run on the database

This ensured that the datasets were up to a suitable standard to be used for the JORC 2012 mineral resource estimate.

The resource estimate was completed as follows:

- Interpretation and resource estimation was carried out using UTM GDA94 grid.
- The resource estimate used all available drillhole data.
- Diamond holes were sampled selectively through mineralised zones on a nominal 1m composite. Sample intervals ranged from 0.2m to 1.2m. RC holes were sampled by 4m composites within non mineralised sections and 2m composites within mineralised sections
- Diamond core samples submitted for analysis were predominantly half core and NQ2 diameter. Intervals for sampling were selected on the basis of geology and mineralisation.
- Surface RC drilling was 5 1/4 inch diameter.
- 95% of the holes used in this mineral resource estimate were surveyed downhole by an Eastman single shot survey tool. The remainder were not surveyed downhole.
- Geological features were interpreted from drillhole geology logs and multi-element assay data.
- Interpretations were snapped to drill holes at all times.
- A nominal 1% Zn cut-off and maximum internal dilution of 5m was used for the wireframe interpretation.
- For the mineralised domains, samples within the wireframes were composited to 1m intersection length.
- A Micromine block model was used for the estimate with a parent block size of 5m NS x 5m EW x 5m vertical with sub-cells down to 1m x 1m x 1m (optimised).
- Grades were interpolated into the block model by ordinary kriging
- Bulk densities were calculated by the weight in air/weight in water method and values were assigned to the block model by regression analysis.
- Resource classification of each block was assigned based on the grade interpolation run for zinc. Blocks interpolated in the first run were assigned measured, second run indicated and all other runs inferred.

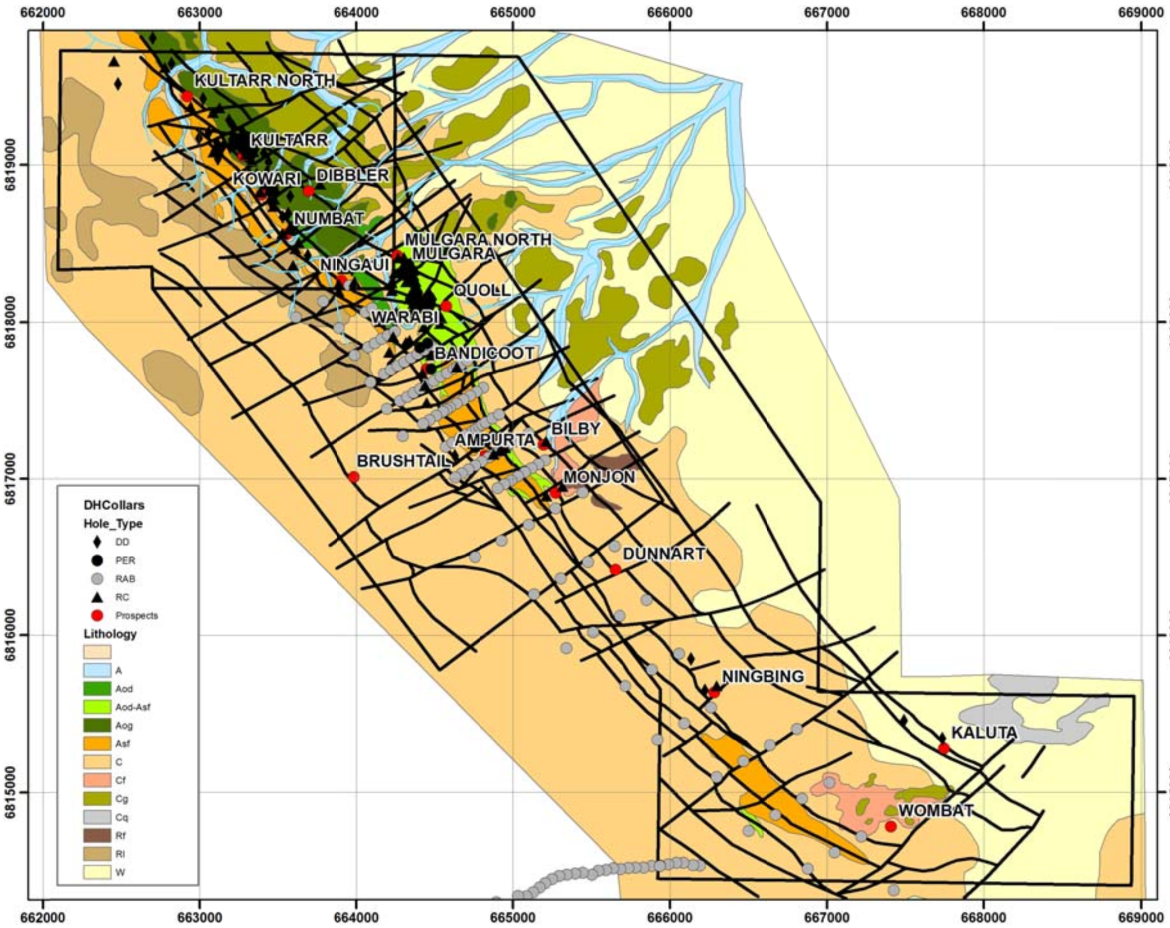


**Figure 4** - Drillholes by type over mapped geology and structure at Manindi

## *SIGNIFICANT HISTORIC DRILLING INTERSECTIONS*

Drilling at Manindi to date has identified four zones of high grade zinc mineralisation. The four main zones from north to south are Kultarr, Kowari, Mulgara and Warabi.

A number of factors are believed to control the mineralisation at Manindi:

- The mineralisation occurs within multiple stratigraphic horizons, which extend discontinuously over a strike length of 4 km (See Figure 4).
- The gabbro footwall does not appear to intrude and remove the mineralisation, but rather forms a 'marker' unit within the stratigraphy above which is potentially prospective for mineralisation.

Table 2 shows significant drill results from the four mineralised zones at Manindi. The high tenor and significant thickness of the zinc mineralisation are important positive attributes of Manindi. The presence of intersections such as **52m* at 5.96% Zn and 0.25% Cu in FWD0053 from 137.60m** and **10m* at 12.61% Zn and 0.42%Cu from 172.36m in MND005** in the northern Kultarr zone can be compared to intersections in the southern Warabi zone of **24m* at 11.41% and 0.33% Cu from 43m* in MNRC014** and **13.97m* at 11.61% Zn and 0.39% Cu from 38.70m in MND007.** These mineralised areas are separated by 1.7km of strike which is poorly tested by drilling.

**Table 2** - Significant drill Intersections in mineralised wireframes at Manindi using a 0.5% Zn cut-off. Internal intersections over 5% are shown within each hole. A full listing of all intersections used for the creation of the current wireframe interpretation is show in Appendix A. Intersections in Table 1 do not represent true widths of the mineralisation.

| Prospect | Hole No. | From (m) | To (m) | Length (m) | Zn % | Ag g/t | Cu % |
|---|---|---|---|---|---|---|---|
| **Warabi** | MNRC014 | 43.00 | 67.00 | 24.00 | 11.41 | 7.02 | 0.33 |
| | MNRC008 | 44.00 | 54.00 | 10.00 | 6.80 | 6.00 | 0.40 |
| | MND049 | 24.00 | 40.90 | 16.90 | 12.00 | 10.44 | 0.55 |
| | MND048 | 20.50 | 29.80 | 9.30 | 4.70 | 6.90 | 0.29 |
| | MND048 | 48.65 | 55.00 | 6.35 | 4.95 | 5.97 | 0.49 |
| | MND047 | 48.00 | 52.78 | 4.78 | 5.66 | 1.17 | 0.08 |
| | MND013 | 42.00 | 44.63 | 2.63 | 7.84 | 10.56 | 0.58 |
| | MND011 | 56.00 | 63.50 | 7.50 | 11.13 | 2.73 | 0.15 |
| | MND009 | 30.50 | 35.00 | 4.50 | 5.42 | 6.11 | 0.30 |
| | MND008 | 19.33 | 28.00 | 8.67 | 3.75 | 1.40 | 0.15 |
| | MND007 | 38.70 | 52.67 | 13.97 | 11.56 | 8.30 | 0.48 |
| | FWD0005 | 44.29 | 63.61 | 19.32 | 12.01 | 4.29 | 0.54 |
| | FWD0002 | 40.80 | 44.65 | 3.85 | 17.70 | 0.25 | 0.56 |
| | FWD0001 | 42.37 | 48.07 | 5.70 | 12.11 | 11.60 | 0.61 |
| | FRC0007 | 1.00 | 28.00 | 27.00 | 4.20 | 7.31 | 0.81 |
| **Mulgara North** | FRC0011 | 1.00 | 20.00 | 19.00 | 5.00 | 2.66 | 0.14 |
| **Mulgara** | MND052 | 24.18 | 28.30 | 4.12 | 8.06 | 2.18 | 0.05 |
| | MND021 | 38.50 | 39.88 | 1.38 | 7.83 | 6.51 | 0.55 |
| | MND020 | 14.25 | 20.17 | 5.92 | 17.67 | 10.56 | 0.73 |
| | MND015 | 59.00 | 65.00 | 6.00 | 3.99 | 4.50 | 0.30 |
| | MND023 | 38.70 | 40.50 | 1.80 | 14.36 | 8.61 | 0.54 |
| | MNRC013 | 89.00 | 92.00 | 3.00 | 16.87 | 10.67 | 0.74 |
| | MNRC012 | 22.00 | 39.00 | 17.00 | 7.04 | 6.53 | 0.33 |
| | MND023 | 21.00 | 28.00 | 7.00 | 10.75 | 2.83 | 0.22 |
| | MND020 | 38.60 | 44.80 | 6.20 | 3.94 | 3.03 | 0.21 |
| | MND019 | 82.20 | 91.60 | 9.40 | 7.79 | 13.72 | 0.51 |
| | MND017 | 68.90 | 70.50 | 1.60 | 4.24 | 3.16 | 0.08 |
| | MND016 | 48.00 | 53.50 | 5.50 | 3.03 | 10.18 | 0.90 |
| | FRC0044 | 20.00 | 36.00 | 16.00 | 6.05 | 2.53 | 0.17 |
| | FRC0034 | 28.00 | 39.00 | 11.00 | 8.29 | 6.37 | 0.65 |
| | FRC0033 | 71.00 | 92.00 | 21.00 | 8.64 | 11.50 | 0.76 |
| | FRC0012 | 77.00 | 101.00 | 24.00 | 7.53 | 7.06 | 0.47 |
| | MNRC013 | 32.00 | 39.00 | 7.00 | 5.09 | 1.36 | 0.07 |
| | MND017 | 24.00 | 25.90 | 1.90 | 3.12 | 6.07 | 0.29 |
| | MND016 | 19.00 | 23.00 | 4.00 | 19.76 | 6.38 | 0.24 |
| | FRC0013 | 21.00 | 32.00 | 11.00 | 5.99 | 3.77 | 0.25 |
| **Kultarr** | MND043 | 55.73 | 72.00 | 16.27 | 4.45 | 4.80 | 0.34 |
| | FWD0050 | 129.00 | 141.70 | 12.70 | 5.98 | 4.11 | 0.20 |
| | FWD0023 | 47.70 | 62.09 | 14.39 | 4.63 | 0.25 | 0.18 |
| | MND042 | 180.50 | 184.80 | 4.30 | 7.54 | 1.00 | 0.07 |
| | MND041 | 69.65 | 83.00 | 13.35 | 5.89 | 2.49 | 0.12 |
| | MND038 | 155.00 | 168.40 | 13.40 | 13.04 | 2.13 | 0.24 |
| | MND037 | 128.70 | 149.00 | 20.30 | 2.82 | 2.35 | 0.38 |
| | MND036 | 64.00 | 164.40 | 100.40 | 2.15 | 2.93 | 0.17 |
| | MND033 | 198.00 | 207.00 | 9.00 | 11.79 | 1.00 | 0.04 |
| | MND032 | 122.00 | 181.70 | 59.70 | 3.54 | 1.15 | 0.15 |
| | MND005 | 162.72 | 186.00 | 23.28 | 7.15 | 4.54 | 0.23 |
| | FWD0053 | 137.60 | 190.40 | 49.02 | 5.96 | 2.59 | 0.25 |
| | FWD0022 | 118.96 | 135.64 | 16.68 | 8.69 | 0.25 | 0.18 |
| | FWD0020 | 149.87 | 183.46 | 33.59 | 6.95 | 0.25 | 0.24 |
| | FWD0019 | 157.03 | 193.39 | 36.36 | 6.95 | 0.25 | 0.26 |
| | FWD0017 | 92.90 | 106.65 | 13.75 | 5.79 | 0.25 | 0.06 |
| | FWD0015 | 103.36 | 138.17 | 34.81 | 4.19 | 0.25 | 0.24 |
| **Kowari** | FRC0004 | 44.00 | 54.00 | 10.00 | 7.81 | 2.50 | 0.16 |

*Not indicative of true width due to holes being drilled at a low angle to the mineralised structure

## *SCOPING STUDY*

The Company is conducting a strategic review of Manindi in the light of improving supply and demand fundamentals for zinc, and potentially improved economics for the project. The rapidly declining London Metal Exchange (LME) stockpile was 476,250t at 28 April 2015, from a high of over 1.2Mt in January 2013 (source: lme.co.uk). The LME zinc stockpile has dropped by 214,575t (31.1%) since January 1 2015. In addition several of the world's major zinc producing mines are in the process of closing, which will put more pressure on zinc supply. This is expected to translate into an increase in the zinc price in the medium term.

A scoping study was previously completed at Manindi in 2009. A number of the parameters and assumptions of the study are still valid, but others require updating. A new scoping study will be initiated using the new JORC 2012 mineral resource block model as the input for Whittle optimisations. New price forecasts for the metals in the mineral resource will be used as well as updates to capital, consumable, and labour costs. The results of the detailed metallurgical work carried out in 2009 remain valid and will be used in the new scoping study.

The development studies completed in 2009 included:

- Metallurgical test work
- Plant design and costings
- Mining study

Each of these studies are summarised below.

**Metallurgical Test Work**

Metallurgical testing of the Manindi ores indicated that both conventional flotation and specialised bacterial leaching could be effective extractive metallurgical processes. Preliminary test work showed good recoveries from both processes. The company preferred the use of conventional flotation. Therefore all subsequent test work focused on optimising this processing route.

Quantities of high-grade and theoretical 'run of mine' (ROM) grade material were tested using conventional flotation. Both low grade and high grade mineralisation responded well to the test work. More work is recommended to optimise the extraction and achieved concentrate grades from the ROM grade mineralisation. The key findings of the various phases of detailed metallurgical work undertaken by the Company are summarised in Table 3 below.

**Table 3** - Summary of Metallurgical test work and results conducted between 2007 and 2009 on samples of Manindi zinc mineralisation

| Flotation Phase | Key Observations | Concentrate grade achieved | Concentrate yield achieved |
|---|---|---|---|
| 1 | • Zone D sample used (Kultarr), 14.5% Zn, 0.28% Cu.<br>• At 80% passing 75 microns, sphalerite grains show 80% liberation, excellent liberation overall.<br>• Gangue minerals pyrite and pyrrhotite exhibit excellent liberation.<br>• Flotation results confirm QEMSCAN liberation characteristics.<br>• High dosage of copper sulphate activator (1kg/t), required to selectively float sphalerite from other sulphides.<br>• Sphalerite flotation is more sensitive to sodium cyanide depressant than gangue sulphides | • Rougher concentrate of 30.9% Zn.<br>• Preliminary cleaning test produced 50.1% Zn concentrate. | • Rougher recovery of 94.3% after 3 mins flotation time.<br>• Preliminary cleaning test stage recovery of 85%. |
| 2 | • Zone D sample used (Kultarr), 14.5% Zn, 0.28% Cu.<br>• Further cleaning tests and a cycle test undertaken.<br>• A combination of copper sulphate activation of sphalerite, S7261A depression of gangue sulphides and high pH employed. None of these alone could achieve satisfactory results.<br>• Using the Zone D sample, the batch and cycle test show an acceptable grade can be achieved, but the flow sheet needs to be further refined to confirm. | • Batch cleaning tests achieved a concentrate grade of 50.5% Zn.<br>• Single (unoptimised) cycle test produced a concentrate of 48.3% Zn. | • Batch cleaning tests achieved a concentrate recovery of 90.3%.<br>• Single (unoptimised) cycle test produced a concentrate recovery of 89.3%. |
| 3 | • Zone D sample used (Kultarr), 14.5% Zn, 0.28% Cu.<br>• Testing focused on refining rougher conditions and | • Rougher concentrate using | • Rougher concentrate using |

| | | | |
|---|---|---|---|
| | assessing site water (for potential processing use).<br>• Site water had no effect on the rougher phase, had a marginal effect on the first cleaning phase and significant negative effect on the second cleaning phase.<br>• The reduction of A5100 collector to 25g/t from previous tests produced a step change improvement in rougher grade.<br>• The fact the process must run at pH11 or higher was firmly established. | 25% of collector compared to previous tests yielded 31.7% Zn in Perth tap water and 29.6% Zn in site water | 25% of collector compared to previous tests yielded 98.1% Zn recovery in Perth tap water and 97.3% Zn recovery in site water |
| 4 | • New, more representative samples used for test work using parameters established in earlier tests.<br>• Samples from Zone A (Warabi, 8.68% Zn, 0.39% Cu), Zone B (Mulgara, 7.29% Zn, 0.42% Cu) and Zone D (Kultarr, 7.06% Zn, 0.24% Cu) selected from drillholes.<br>• For Zone A, acceptable rougher conditions could be achieved by control of pH, copper sulphate and A5100 collector.<br>• For Zone D, a significant increase in copper sulphate was needed to produce a suitable rougher concentrate.<br>• Test repeatability was difficult to achieve but results are encouraging for conditions to be optimised.<br>• Tests suspended prior to completion of cleaner tests for Zone D. | • Zone A rougher results yielded 24-27% Zinc concentrates.<br>• Zone A first stage cleaner yielded 40.3-43.5% Zn concentrates.<br>• Zone D rougher results yielded 23.3-24.9% Zn concentrates. | • Zone A rougher recovery of 93.3-99% was achieved.<br>• Zone A first stage cleaner recovery of 81.4-87.5% was achieved.<br>• Zone D rougher recovery of 95.7-97.4 % was achieved. |

### Plant Design & Costings

A significant time has passed since plant design and costings were completed in 2009. Additional metallurgical sampling is required from the variety of mineralisation types, as well as the completion of optimisation testing before detailed processing circuits, plant requirements and costings can be finalised. The company intends to conduct some more detailed work in this area in the coming months.

### Mining Study

In 2009, mining studies indicated that Zones A & B (Mulgara and Warabi) were amenable to open pit mining operations, while Zone D (Kultarr and Kowari) were more likely to be mined by a combination of open pit and underground methods. The Company intends to complete Whittle optimisations using the JORC 2012 mineral resource model, 2009 metallurgical test work, with updated cost and revenue inputs. A conceptual underground mining study may follow the Whittle open pit optimisation work.

## *EXPLORATION TARGETS*

A detailed exploration targeting exercise was completed to complement the JORC 2012 mineral resource estimate at Manindi. The aim was to identify robust exploration targets with the potential to host significant tonnages of additional mineralisation and improve the economics of the project. Any increase in the mineral resource estimate will improve the project economics at Manindi.

Some time ago, the Company flew a VTEM[1] survey over the Manindi project. The survey confirmed existing anomalies from historic MLTEM[2], FLTEM[3] and DHTEM[4] surveys and the EM[5] response of the existing deposits, as well as identifying several new untested anomalies. The mineralisation at Manindi consists of massive sulphides with very high pyrrhotite content. Pyrrhotite is highly conductive, making TEM[6] a particularly effective targeting technique for Manindi-style mineralisation.

All EM data, historic and new, were reprocessed and modelled using modern 3D modelling software. The resultant 3D models were combined with existing aeromagnetic, geochemical and geological datasets to generate and rank exploration targets in order of priority (Figure 1).

3D inversion modelling[7] of the aeromagnetic dataset was particularly useful in ranking the TEM conductors. The mineralisation at Manindi is located on the western side of a deep-rooted, strongly magnetic body. TEM conductors located in similar positions either along strike from Manindi, or associated with other similar magnetic bodies received higher rankings (Figure 2).

Drilling at the current Manindi mineral resource has identified four mineralised positions, all of which are open in at least one direction. Most importantly, drilling at the current mineral resource has only tested the mineralisation to a maximum depth of 300m below surface. Recent EM modelling indicates that the conductive bodies extend much deeper than this, particularly beneath Kowari, Kultarr and Numbat where the 2012 FLTEM models extend to over 500m below surface, and are open at depth. These are referred to as “resource extension” targets.

In addition to the resource extension targets, a number of other high priority targets such as Kaluta, Dibbler and Brushtail (see points 1, 4 and 5 below) have not yet been drill tested (Figure 1). These are referred to as “greenfields” targets. Should any of these high-quality targets contain mineralisation, they would substantially increase the Manindi mineral resource estimate and therefore improve project economics.

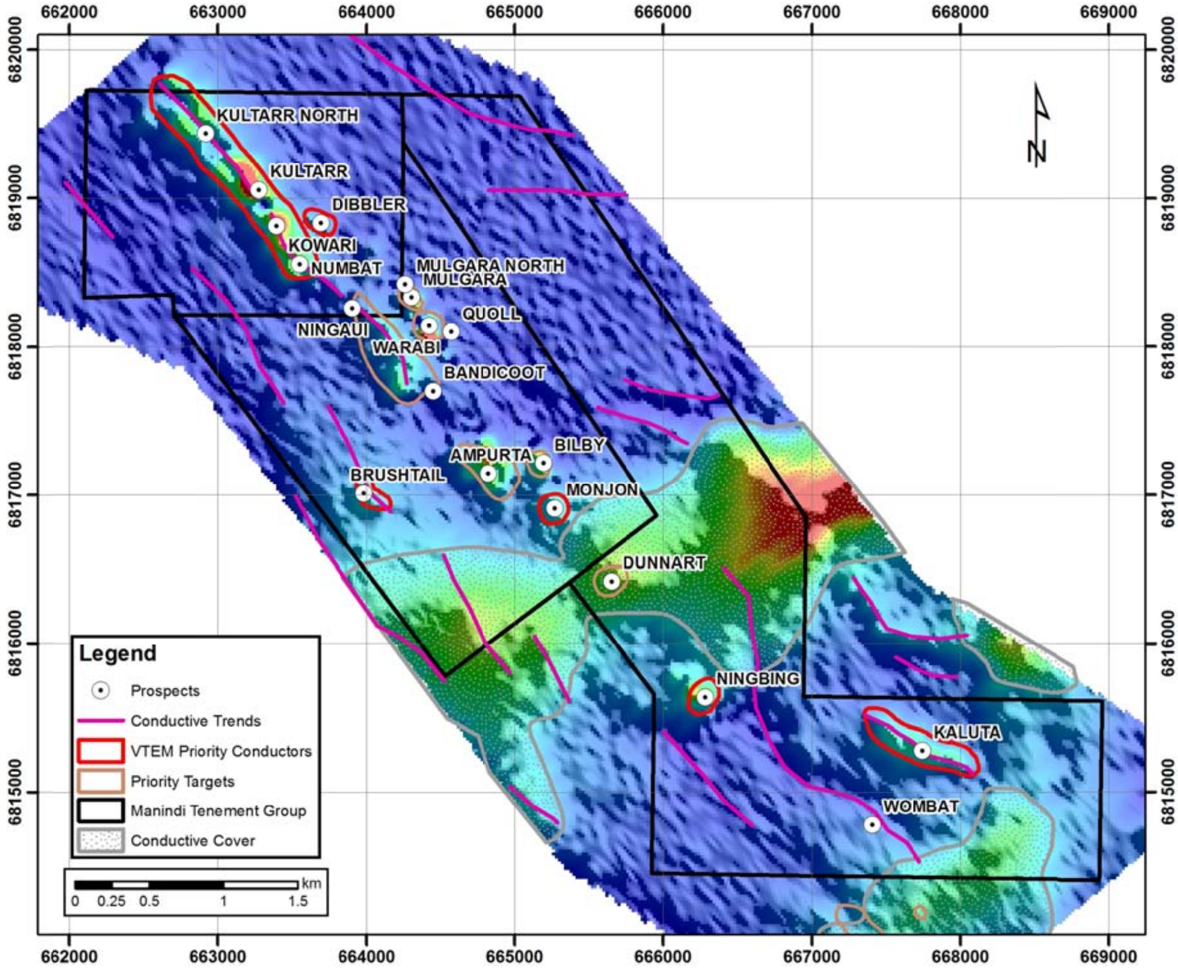


**Figure 5** - Manindi VTEM imagery and target map showing highest priority targets in red polygons, other targets in beige polygons, conductive trends in pink lines and areas of conductive overburden in grey hatching

The high priority targets in order of ranking (with the highest ranking on top) are as follows:

1. Kaluta (greenfields)
2. Kultarr Deeps and Kultarr North (resource extension)
3. Kowari Deeps (resource extension)
4. Dibbler (greenfields)
5. Brushtail (greenfields)
6. Ningbing (greenfields)
7. Monjon (greenfields)

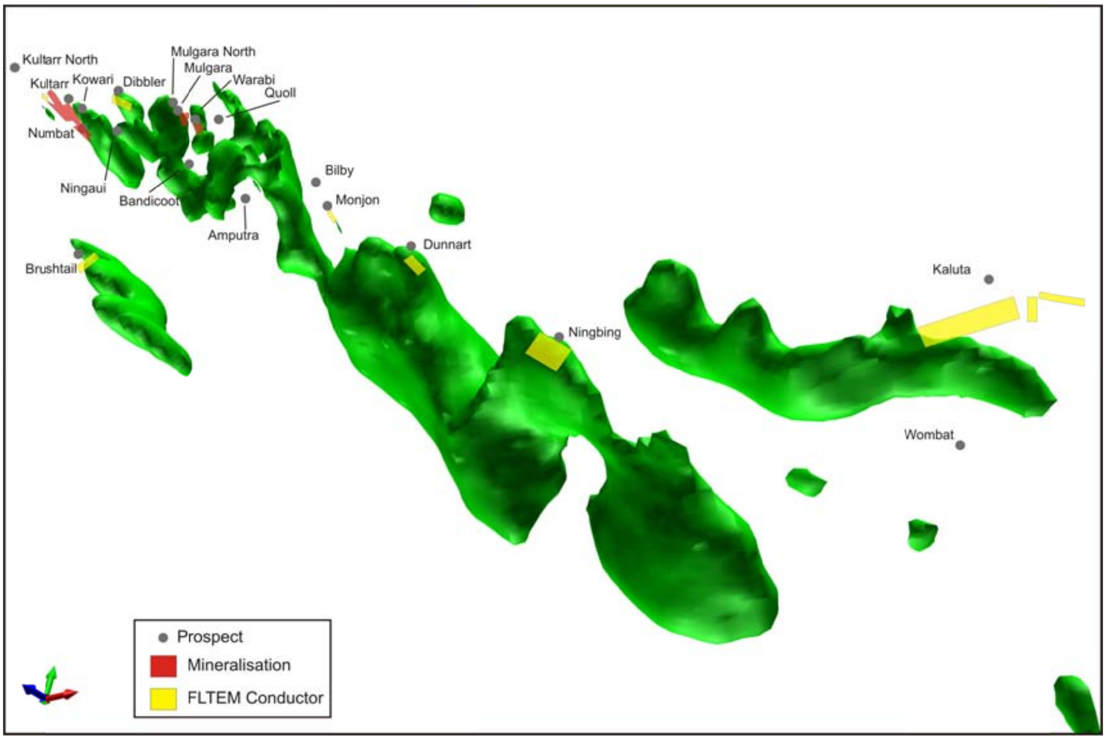


**Figure 6** - 3D oblique view showing 3D magnetic inversion models in green with mineralisation wireframes in black and FLTEM conductor models in yellow. Note the favourable positions of the highest priority EM conductor models.

Descriptions and proposed follow-up programs for the highest priority exploration targets in order of priority are as follows:

1. Kaluta

   This target was identified by the 2012 VTEM survey, and refined by fllow-up FLTEM in the same year. Kaluta is a relatively large untested highly conductive body. The 3D model is at least 70m by 600m in surface area. Potential thickness is unknown at this stage, but the tonnage potential is significant. The target starts at just 30m below surface, where it resolves into several discrete bodies then plunges shallowly, at approximately 25 degrees at an azimuth of 290 degrees. It is located close to the Wombat Cu-Ni soil anomaly and is coincident with a deep-rooted magnetic body comparable to the setting of the Manindi mineralisation.

   The Kaluta EM anomaly was first identified by Western Mining Corporation (WMC) in 1974. Drill testing was attempted, but modern TEM surveying and 3D processing have confirmed that the conductor was not effectively drill tested at the time.

   Follow-up will involve diamond drill testing followed by DHTEM surveying. DHTEM surveying will be used to determine whether or not the conductor has been effectively intersected, to refine the 3D conductor models, and to provide a vector for future phases of drilling. Future phases of drilling would depend on the discovery of significant mineralisation.

   Kaluta is the highest ranked target because it is highly conductive, is potentially large in size, is coincident with a strongly magnetic body with a similar geological setting to the existing Manindi mineral resource, and is completely untested by drilling.

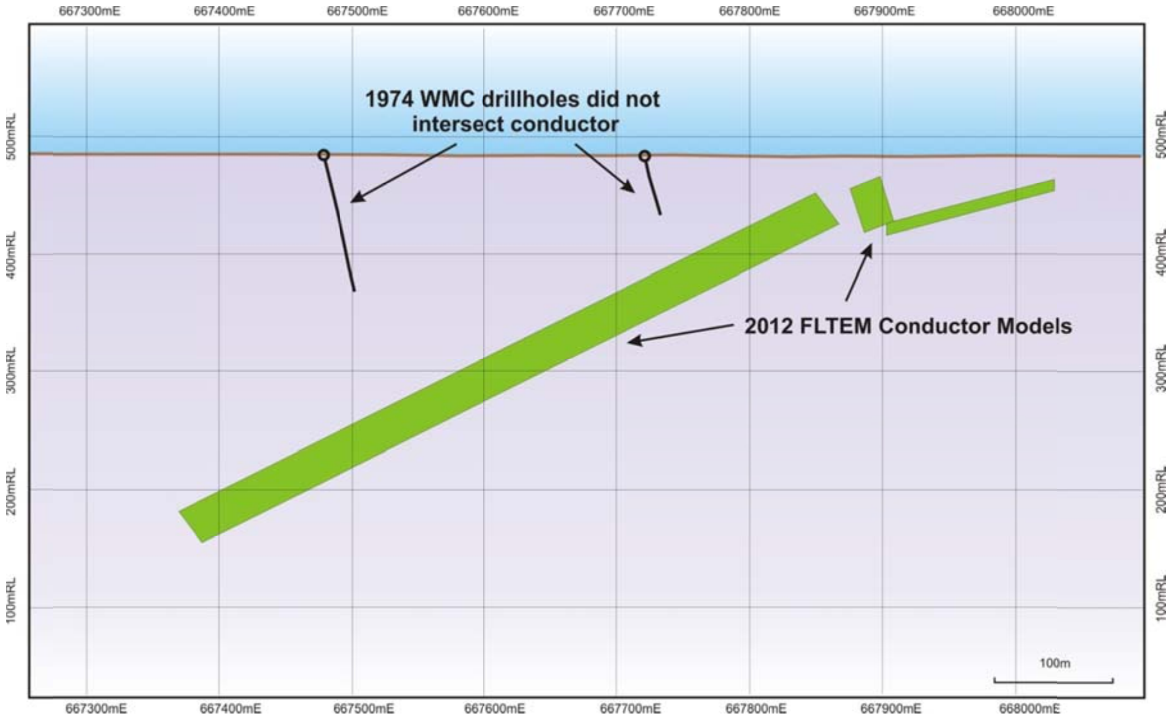


**Figure 7** - Cross section of the Kaluta TEM conductor model showing the 1974 WMC holes which did not intersect the target

2. Kultarr Deeps and Kultarr North

   Various phases of TEM surveying dating back as far as the 1970s have identified this highly conductive zone, which hosts the Kultarr mineralisation. The 2012 VTEM survey and follow-up FLTEM surveying showed that this zone extends to at least 1,000m vertically below surface. The deepest drilling only tests to a maximum of 300m vertical from surface.

   Given its location directly below and along strike from the Kultarr mineralisation, which is also highly conductive, this is a very high priority drill target.

   Follow-up will involve a program of deeper drilling followed by DHTEM surveying. The DHTEM surveying will be used to map out the sulphide mineralisation in detail and target future drilling. This target alone has the potential to greatly increase the Manindi mineral resource.

3. Kowari Deeps

   This target is similar to Kultarr Deeps but ranks lower because the Kowari and Numbat mineralisation are both of a lower grade than Kultarr. However, given the generally highly segregated and zoned nature of VMS style mineralisation, **there is a good chance this conductor represents higher grade zinc and/or copper mineralisation than the adjacent drilled portions of the deposit. The highest grade copper intersected by drilling in the Manindi area, up to 1.27% Cu, occurs at the Kowari prospect.**

   Follow-up will involve a program of drilling followed by DHTEM surveying. The DHTEM surveying will be used to map out the sulphide mineralisation in detail and target future drilling.

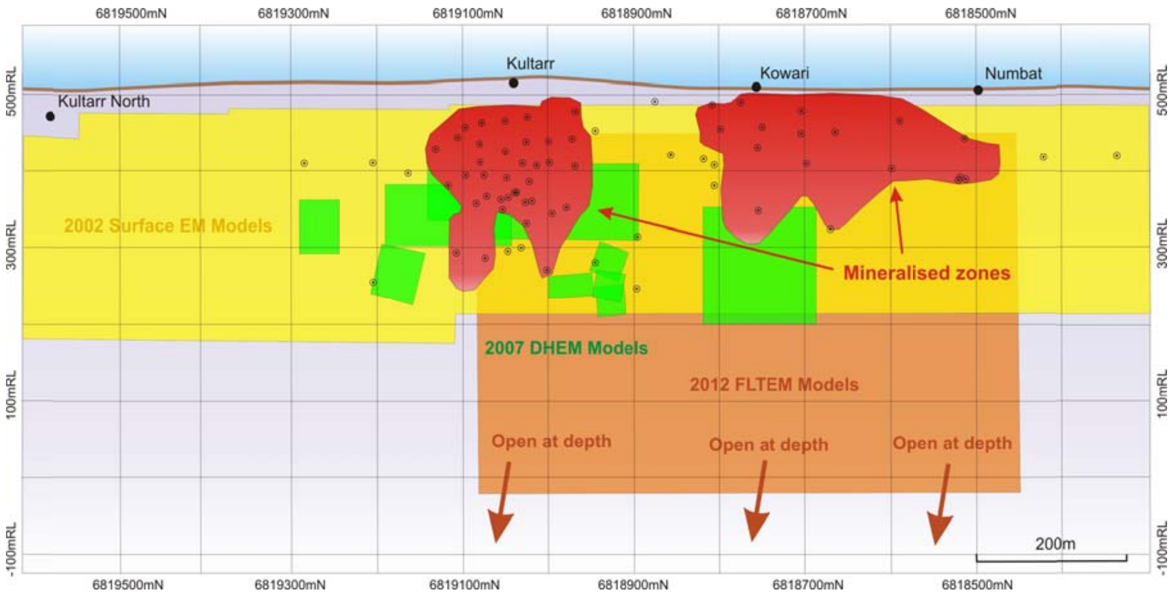


**Figure 8** - Long Section of Kowari and Kultarr showing the high priority target areas. Newexco 2007 DHTEM models are in green, 2002 surface EM models are in yellow, 2012 FLTEM models are in light brown and drillhole pierce points are in black dots.

4. Dibbler

This TEM conductor is located 300m east of Kowari, coincident with a magnetic trend similar to, and parallel to the Manindi trend. It may represent a new mineralised horizon lower down in the volcanic sequence to the main Manindi position, or possibly mineralisation remobilised into the footwall gabbro. This would be expected in a typical VMS target model. Although this conductor is relatively small at its top, it may represent the top of a larger body, which develops at depth.

Dibbler was identified by historic EM surveys. A shallow percussion hole was drilled by Esso Exploration and Production Australia INC (Esso) in 1984 over this conductor but modern 3D modelling indicates that the hole failed to intersect its target (Figure 9). The hole was terminated at 39m in +300ppm copper. The Manindi deposits are typically surrounded by an alteration halo containing +250ppm copper, so this is a very positive sign for Dibbler.

Follow-up will involve drilling one hole to intersect the conductor followed by DHTEM surveying. If significant mineralisation is intersected, a second phase of drilling will follow.

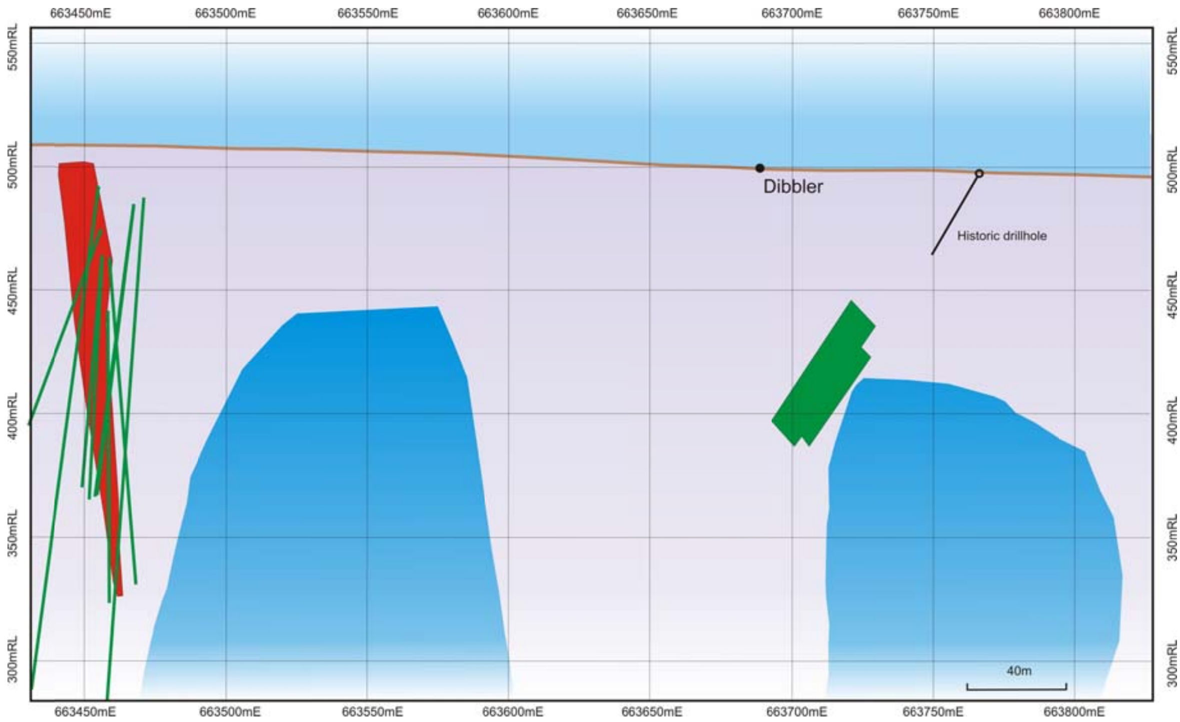


**Figure 9** - Cross section of the Dibbler TEM 3D model, looking northwest, showing the hole drilled by Esso in 1984, which failed to intersect the target, EM models in green, magnetic inversion models in blue and mineralisation in red. Note the Dibbler position on the 3D magnetic inversion models in comparison to the Kowari-Numbat mineralised position on the left

5. Brushtail

Identified by the 2012 VTEM survey and refined by follow-up FLTEM in the same year. This conductor is coincident with a strongly magnetic trend similar to the Manindi trend, the area is undercover and completely unexplored, and may represent a mineralised position higher up in the volcanic sequence to Manindi.

Although the conductor appears to be relatively small at its top, it could represent the top of something larger developing at depth, particularly given the coincidence with a magnetic body. This needs to be confirmed by drilling and DHTEM surveying can determine this.

The fact that this area has never been explored for Manindi-style mineralisation makes Brushtail a very high priority target.

Follow-up will involve drilling of one or two diamond holes followed by DHTEM surveying. If mineralisation is encountered, further drilling and DHTEM surveying may be proposed.

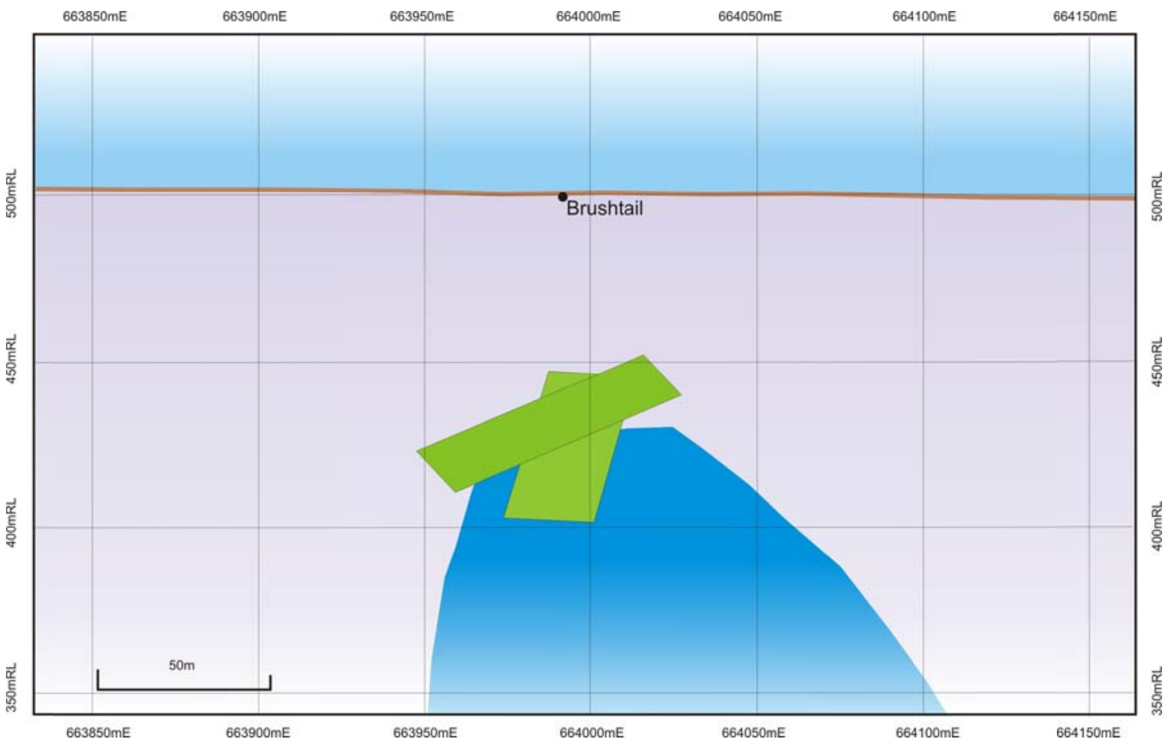


**Figure 10** - Cross section of Brushtail showing the 2012 FLTEM 3D models in green and the 3D magnetic inversion model in blue

6. Ningbing

The Ningbing EM conductor is located on the Manindi magnetic trend in a similar stratigraphic position to the Manindi deposits. The 2012 VTEM survey identified the anomaly and FLTEM surveying refined it in the same year. Historic EM had already identified the anomaly but modern 3D modelling indicates that drilling failed to effectively test it.

**WMC drilled a single hole over the conductor in 1974 but missed it by about 60m.** A second hole was drilled by Plutonic Resources in 1997; this hole was very close to the conductor, but was drilled at a low angle to it and failed to effectively test it. The Plutonic hole intersected a **broad zone of +250ppm copper which typically surrounds the Manindi deposits.**

Although not particularly large in size at 200m by 50m in extent, this conductor is only 80m from surface and has the potential to add a significant tonnage to the Manindi mineral resource. For comparison Warrabi measures approximately 150m by 65m by 10m thick and contains approximately 152,000t (14%) of the JORC 2012 mineral resource estimate.

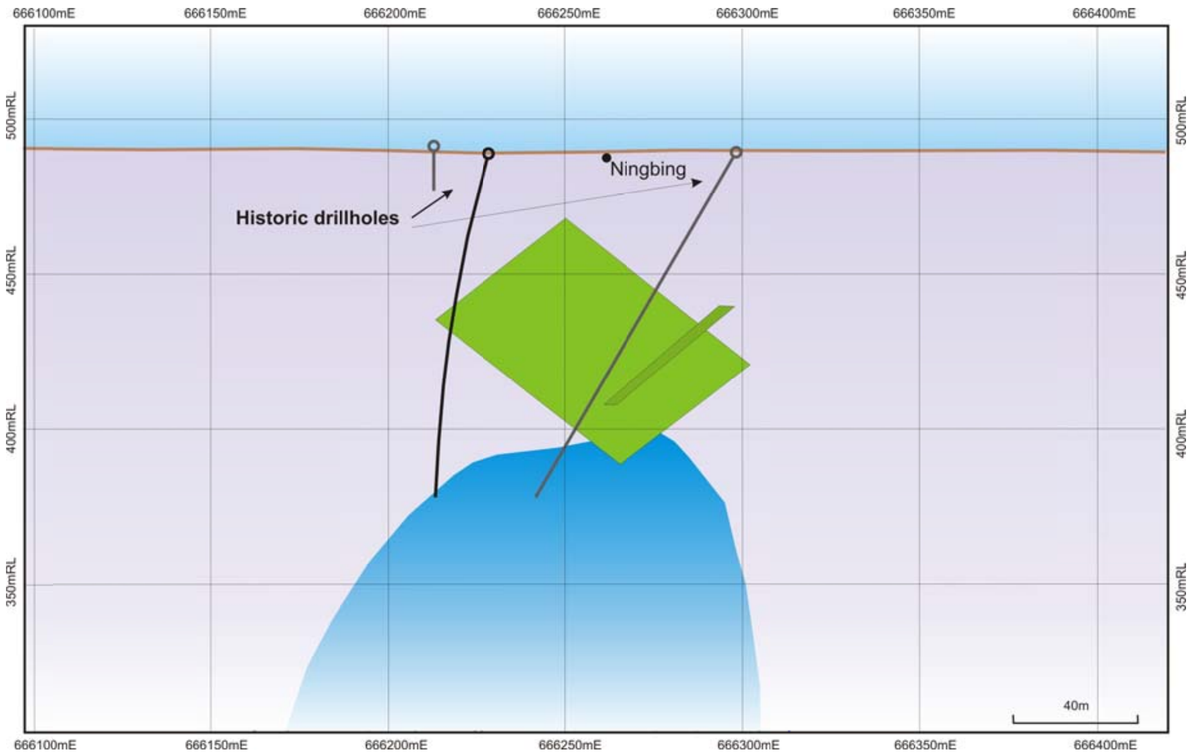


**Figure 11 -** Cross section of the Ningbing TEM anomaly. The 2002 3D conductor model is edge on in the foreground in darker green and the 2012 FLTEM model is located oblique to section at the back in lighter green. The WMC hole from 1974 is in black on the left and the Plutonic Resources hole from 1997 is in grey on the right. Neither hole effectively intersected either conductor model. Note the association with the magnetic inversion model in blue.

7. Monjon

The Monjon EM conductor is similar in style, stratigraphic position and history to Ningbing. The 2012 VTEM and FLTEM surveys identified and refined the target. The anomaly was identified and targeted from historic EM surveys but modern 3D modelling indices that drilling was ineffective at the time.

Plutonic drilled two holes here in 1997. Drillhole orientation and positioning was not optimal and the conductor was not effectively tested. Narrow zones of weakly anomalous copper up to 480ppm were intersected by the drilling.

Follow-up will involve the drilling of a single hole to intersect the conductor at the correct orientation followed by DHTEM surveying. If significant mineralisation is intersected and DHTEM provides a vector to more conductive material, a second phase of drilling will be carried out.

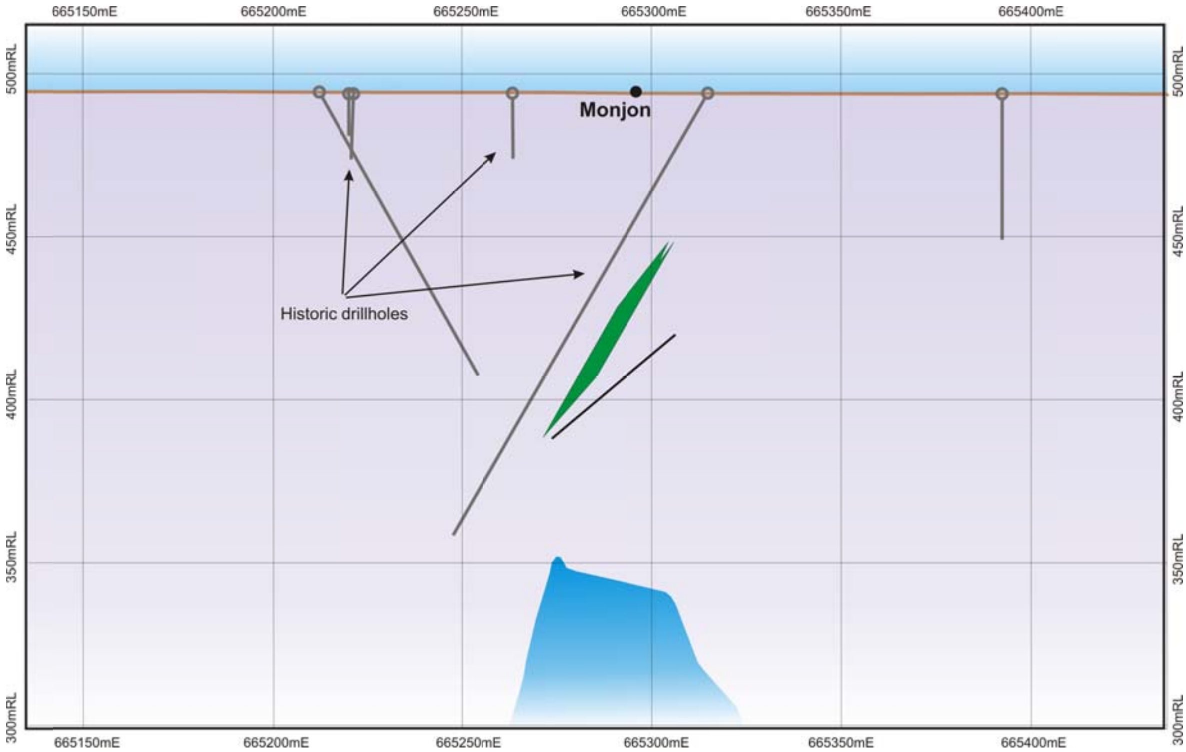


**Figure 12** - Cross section through the Monjon TEM conductor shown in green, with the historic drilling that failed to intersect it in grey and the 3D magnetic inversion model in blue

8. Other targets

There are several other lower ranking targets at Manindi with the potential to add to the mineral resource. These include:

- Mulgara/Warabi: Resource extension opportunities. Pre 2002 EM models extend to at least 150m below deepest drilling at Warabi.
- Ningaui/Bandicoot: Large EM conductor, only partially tested by drilling. This target needs more systematic drilling on an optimised grid direction.
- Ampurta: Medium to large EM conductor only partially tested by drilling. Historic drilling is not systematic and copper grades reach up to 0.8% in places. This target needs further systematic drilling.
- Dunnart: Small untested EM conductor on the Manindi magnetic trend. The anomaly is located beneath conductive overburden so it could be larger than EM modelling indicates.
- Bilby: Small EM conductor intersected near its edge at a low angle by a single drillhole. No significant mineralisation intersected, but anomalous copper up to 486ppm in the drillhole.

Glossary of geological/geophysical terms:

**VTEM[1]** : Versatile Transient (time domain) Electromagnetics, a modern airborne EM technique.
**MLTEM[2] :** Moving Loop Transient Electromagnetics, a ground EM technique.
**FLTEM[3] :** Fixed Loop Transient Electromagnetics, a ground EM technique.
**DHTEM[4] :**Down Hole Transient Electromagnetics, a technique using a downhole electromagnetic probe.
**EM[5]:** Electromagnetics, an electrical exploration technique based on the measurement of alternating magnetic fields associated with currents induced in the sub surface.
**TEM[6]:** Transient Electromagnetics, a generalised term.
**3D inversion modelling[7]:** a modern technique of magnetic data processing and interpretation.

**Pyrrhotite:** An iron sulphide mineral.

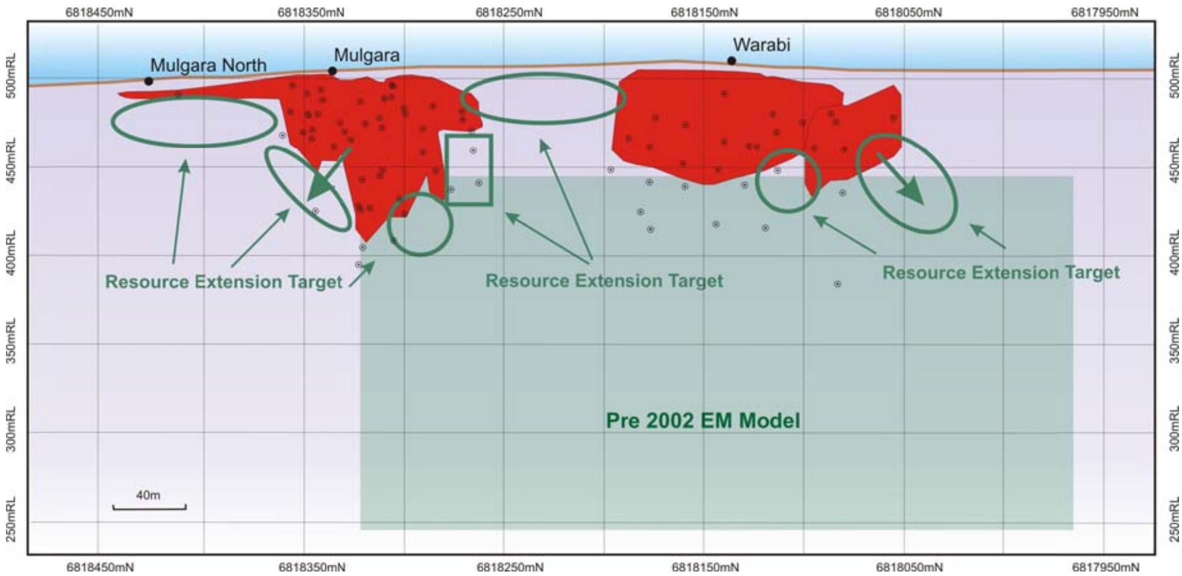


**Figure 13 -** Long section of Warabi and Mulgara showing areas for potential resource extensions and the Pre 2002 TEM conductor target. Drillhole pierce points are shown in black dots. Note some holes appear more than once as they intersect multiple discrete mineralised horizons

## SHERLOCK BAY EXTENDED BASE METAL PROJECT

The Sherlock Bay Extended project is composed of two Exploration Licences (E47/1769 and E47/1770), which surround the main Sherlock Bay nickel deposit (wholly owned by Australasian Resources Ltd - 'ARH'). The project is prospective for nickel, copper, silver and gold mineralisation.

The project is a joint venture between ARH (70% interest) and Metals (30% interest). ARH are the managers of the project, with Metals being 'free-carried' through to the completion of a bankable feasibility study and the decision to commence commercial mining.

During the quarter, ARH received a five year extension of tenure over the Sherlock Bay Extended Project from the Department of Mines and Petroleum (DMP).

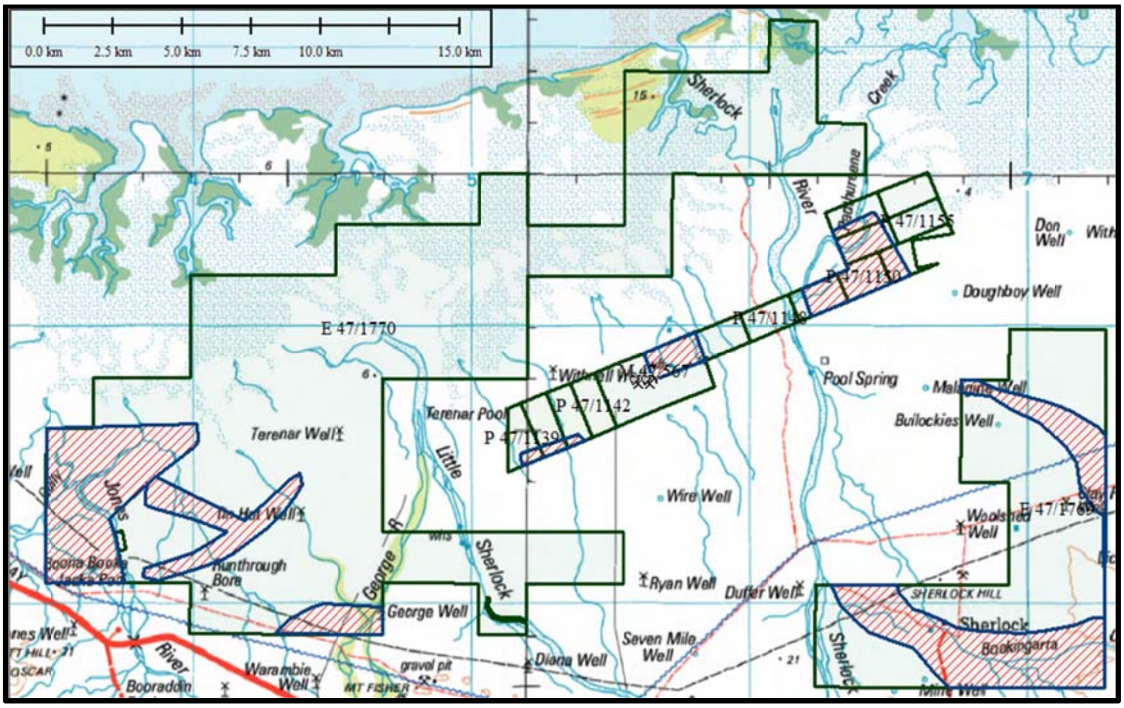


**Figure 14** - Areas of exploratory interest set against 1:250,000 topography data

## URANIUM EXPLORATION NAMIBIA

No significant work was undertaken on uranium exploration during the quarter.

## MINERAL AND EXPLORATION LICENCES

| Country | State/ Region | Project | Tenement ID | Area $km^2$ | Grant Date | Expiry Date | Interest % | Company |
|---|---|---|---|---|---|---|---|---|
| Namibia | | Mile 72 | EPL 3308 | 73 | 19/05/2005 | 17/5/2015 | 100 | Metals Namibia (Pty) Ltd |
| Australia | WA | Manindi | M57/227 | 4.64 | 3/09/1992 | 2/09/2034 | 80 | Karrilea Holdings Pty Ltd |
| | | | M57/240 | 3.15 | 10/11/1993 | 9/11/2035 | 80 | |
| | | | M57/533 | 8.01 | 17/01/2008 | 16/01/2029 | 80 | |
| Australia | WA | Sherlock Bay | E47/1769 | 76.7 | 7/09/2009 | Pending | 30 | Metals Australia Ltd |
| | | | E47/1770 | 223 | 7/09/2009 | Pending | 30 | |

**For further information please contact:**

**Luke Marshall** +61 8 9481 7833

**Or consult our website:** www.metalsaustralia.com.au

**Competent Person Declaration**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Luke Marshall, who is a full time employee of Golden Deeps Limited, a consultant to Metals Australia Ltd, and a member of The Australasian Institute of Geoscientists. Mr Marshall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Dr Painter consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

**Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Metals Australia Ltd's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Metals Australia Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.