



MARANOA RESOURCES PTY. LTD.  
ACN 110 759 512

**EPM: 14261**  
**Mt Tabor**

**ANNUAL REPORT**

**29 September 2009 to 28 September 2010**

**MARANOA RESOURCES PTY LTD**

**P Daven**

**October 2010**

## **TABLE OF CONTENTS**

	<b>PAGE.</b>
<b>1. BACKGROUND</b>	<b>3</b>
<b>2. LOCATION AND ACCESS</b>	<b>3</b>
<b>3. TENEMENT DETAILS</b>	<b>4</b>
<b>4. GEOLOGY AND REGIONAL SETTING</b>	<b>5</b>
<b>5. PAST EXPLORATION</b>	<b>8</b>
<b>6. EXPLORATION ACTIVITIES BY MARANOA TO 28.09.2010</b>	<b>9</b>
<b>7. RECOMMENDATIONS</b>	<b>13</b>
<b>8. REFERENCES</b>	<b>15</b>

## **FIGURES**

- Figure 1** Regional Setting of Maranoa Tenements
- Figure 2** EPM 14261 Block Identification
- Figure 3** EPM 14261 Local Setting
- Figure 4** EPM 14261 Geology
- Figure 5** Outcrop photo showing manganese mineralisation along joints within sandstone
- Figure 6** Plan showing previous drill hole collars and outcrop
- Figure 7** Location of the MN-Co deposits overlain on the aeromagnetic data
- Figure 8** Assay Results of Cobalt in soil samples
- Figure 9** Assay Results of Manganese in soil samples
- Figure 10** Assay Results of Cobalt in rock chip samples
- Figure 11** Simplified geological plan of the Mt Manganese prospect
- Figure 12** Mt Manganese Geological Model

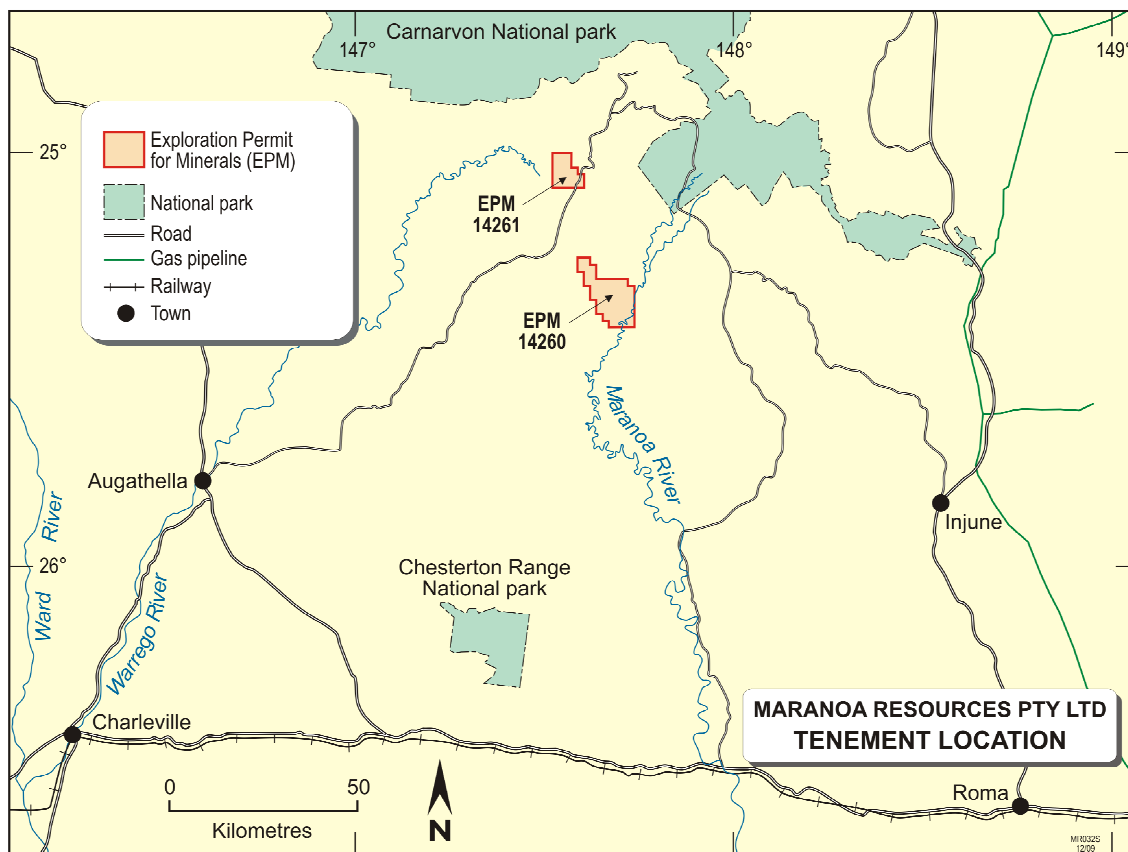
## **APPENDICES**

- Appendix 1** Geophysical Consultant's Report on Aeromagnetic Survey
- Appendix 2** Assay Results from Regional Petroleum Wells - Zilmere Core Library
- Appendix 3** Soil sample assay results Mt Managanese
- Appendix 4** Rock Chip assay results all prospects

## 1. BACKGROUND

Maranoa Resources Pty Ltd (ACN 110 759 512) (“Maranoa”) is a wholly-owned subsidiary of International Base Metals Limited (“IBML”), an Australian-registered unlisted public company.

Maranoa was originally established to acquire an interest in tenements covering a number of cobaltiferous manganese deposits as well as a series of mafic intrusive bodies, in the area of south-central Queensland. Apart from the exploration targets of nickel-platinum group metals (“PGM”) deposits in the Darkwater area a broader search for base metal deposits has been adopted over the Mt Tabor area.



**Figure 1** Regional Setting of Maranoa’s tenements

## 2. LOCATION AND ACCESS

EPM 14261 lies to the east north east of Augathella and to the west north west of Injune and is approximately about 130 km directly north of Mitchell. The tenement is located within the Eddystone (SG/55-7) 1:250,000 geological map sheet.

A regional Access Agreement was finally concluded with the Bidjara #3 and Bidjara #4 claimants in August 2008. The Bidjara people have carried out a regional cultural heritage survey which identified no features of cultural significance which could hinder ongoing exploration of the project area.

Vehicle access within the tenement area is limited to a few poorly maintained tracks and the often steep and scrubby topography make access away from tracks difficult. A field camp and storage

facility have been established on Mt Tabor station which is owned and operated by the Bidjara people. Power and water are available at the camp. The Bidjara people have also been employed as field assistants during the company's exploration programmes.

### 3. TENEMENT DETAILS

EPM 14261, covering 20 sub-blocks was granted on 29<sup>th</sup> September 2009 for a period of 5 years.

The 20 sub-blocks held are:-

BIM	Block	Sub-block	No
CHAR	907	C D E H J K N O P S T U X Y Z	15
CHAR	908	J Q R V W	5
			<b>20</b>

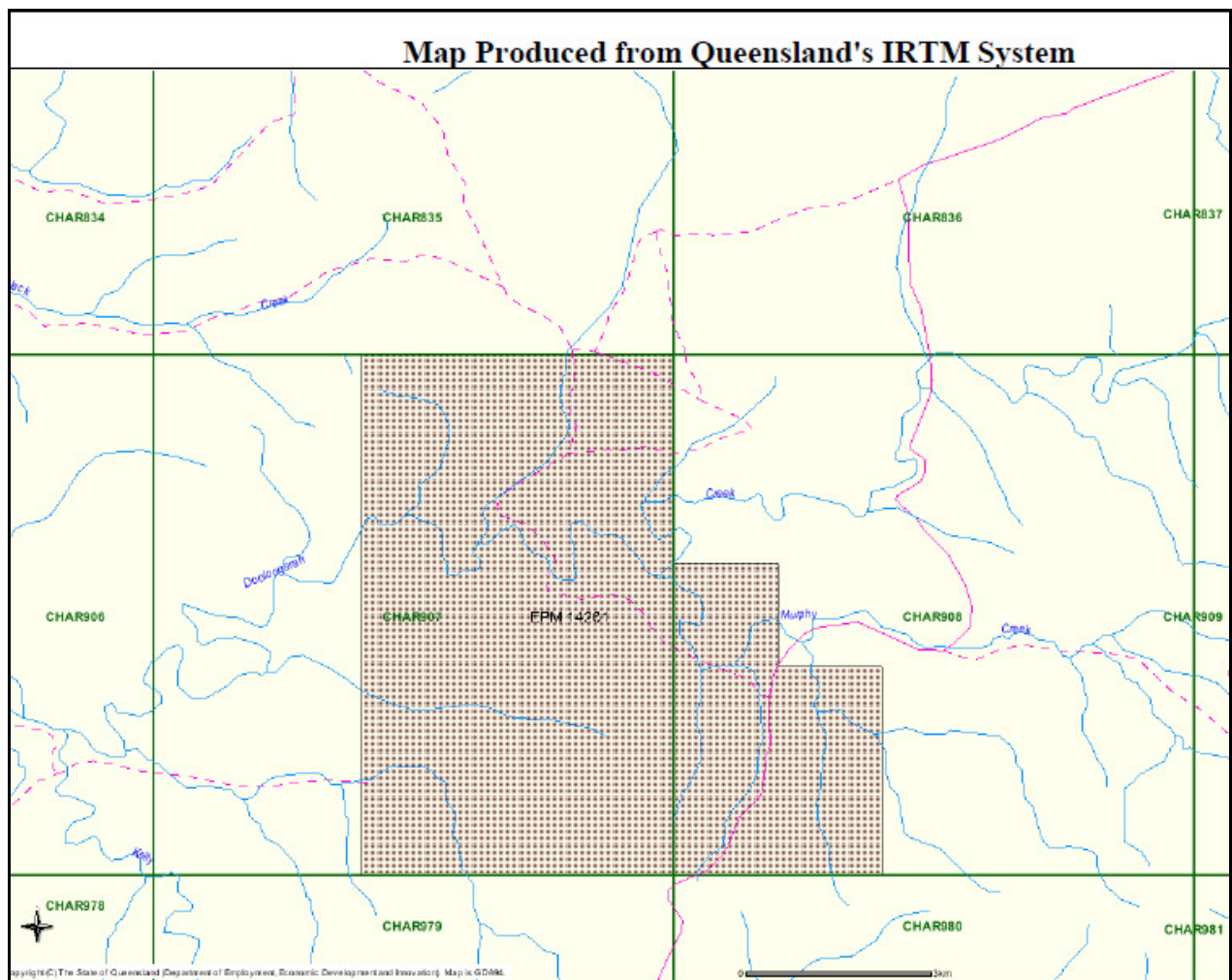
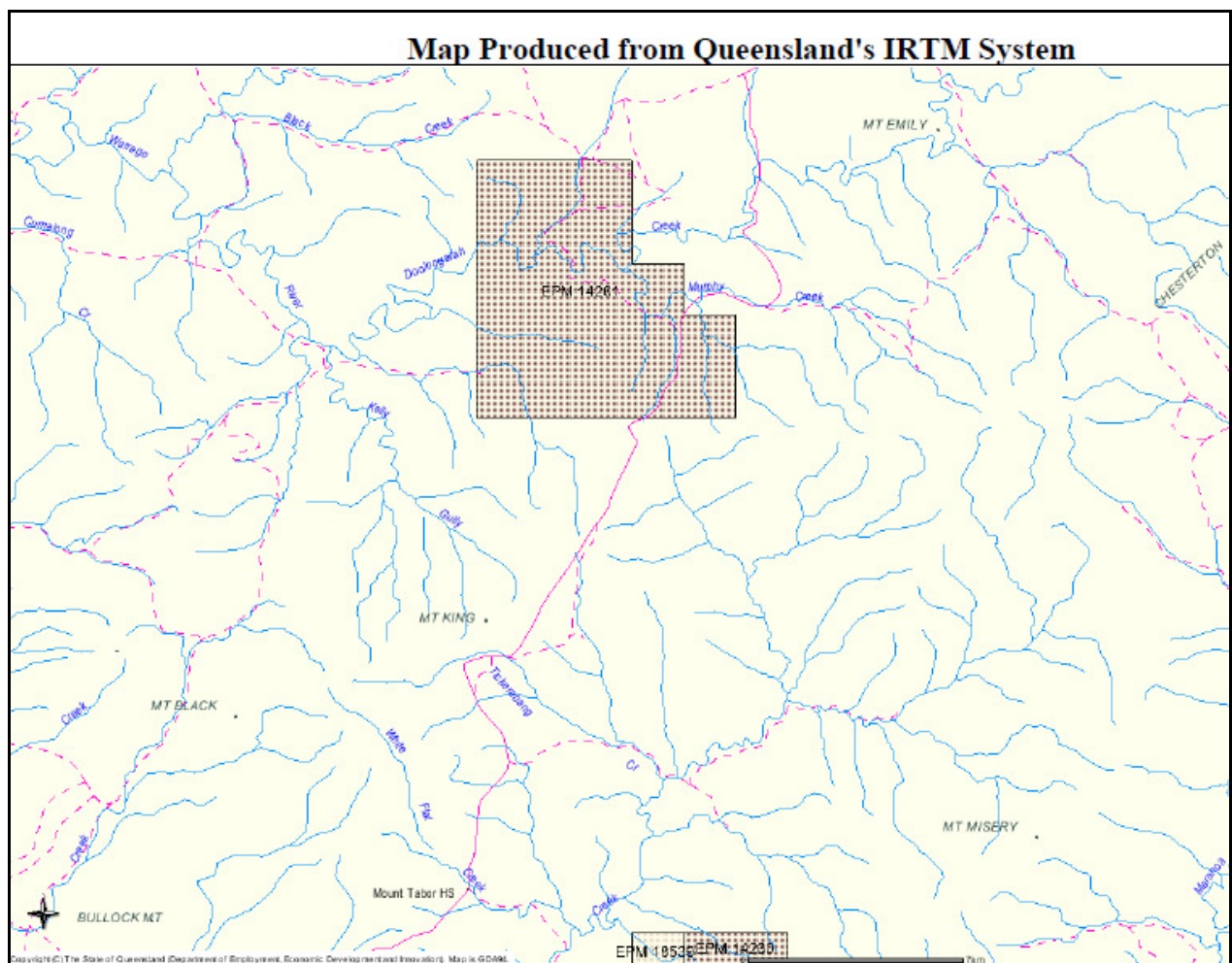


Figure 2 EPM 14261 Block Identification



**Figure 3** EPM 14261 showing local area.

#### **4. GEOLOGY AND REGIONAL SETTING**

The region is covered by Jurassic sediments of the Surat and Eromanga Basins where they lap over the Nebine Ridge, a basement feature that separates the two basins and which appears to be a subsurface ridge of older Palaeozoic rocks that extends to the north and outcrops at the Anakie Inlier. Relatively thin sequences of Triassic and Permian rocks of the Bowen Basin unconformably underlie the Jurassic to the north and the tenements straddle the postulated south-western limit of the Bowen Basin in Queensland.

Tertiary basalts and gabbros have intruded the sediments along marked lineations evident on recent aeromagnetic surveys. The pronounced northwesterly alignment of igneous bodies suggests a deep crustal structure controlling the intrusive flow.

The basal unit of the Surat Basin is the Jurassic Precipice Sandstone. The Precipice is overlain in turn by the Evergreen Formation and the Hutton Sandstone. In the Maranoa area, the Evergreen Formation consists of a lower unit, the Boxvale Sandstone and an upper unit, the Westgrove Ironstone.

Regionally the Precipice sandstone has been bleached white with most of its matrix cement removed. It contains blebs and patches of pyrite.

The Precipice Sandstone is reported to have a maximum thickness of 150 metres in petroleum exploration wells in the northern Surat Basin but averages 60-80 metres thick. It is dominantly quartzose, fine- to coarse-grained sandstone, locally it has been bleached white with most of its matrix cement removed, and contains blebs of pyrite. Siltstone and shale are common in the upper parts of the formation which grades upwards into the finer grained Boxvale Sandstone and Westgrove Ironstone Member of the Evergreen Formation.

Detailed evaluation of the radiometric data from Maranoa's airborne survey reveals that the contact between the Boxvale Sandstone and the underlying Precipice Sandstone may differ quite significantly from the published maps. Together with the interpretation by Maranoa geologists that ironstone nodules in the region are considered representative of the Precipice Sandstone has helped map the boundary between the Precipice and Boxvale Sandstones with the result that the Boxvale Sandstone in the local area is less extensive than indicated on published maps.

The Westgrove Ironstone Member forms ribbons of outcrop around the tablelands. It consists of a soft iron rich oolitic rock (as seen in drill-core) but weathers to a hard concretionary ironstone. The Hutton Sandstone is considered to conformably overlie the Evergreen Formation in some localities but is interpreted to be unconformable on the Roma Shelf to the east of the project area. It caps the tableland to the south of Mt Tabor but underlies the Tertiary basalts of the Murphy Tableland to the east.

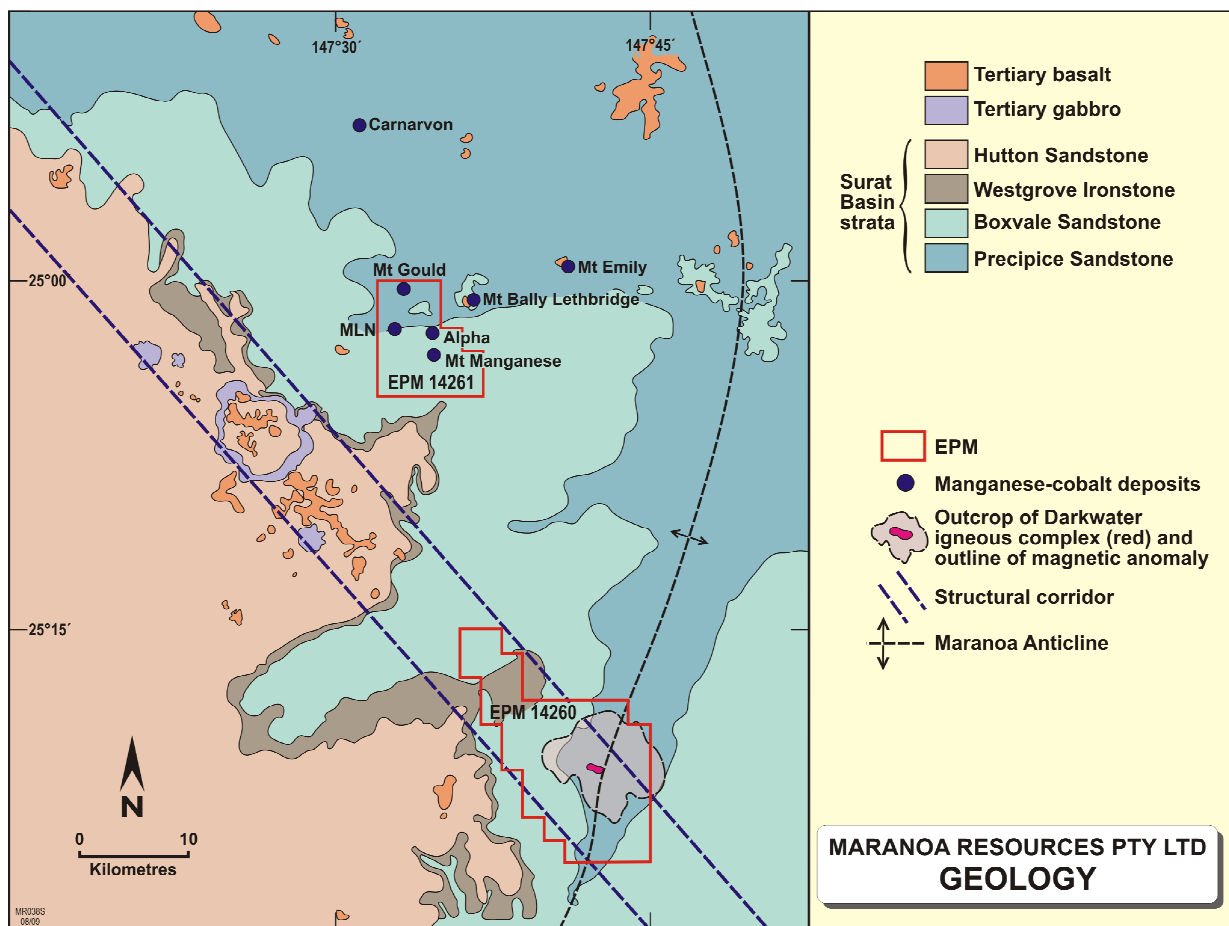


Figure 4 EPM 14261 Geology

Within the EPM manganese wads occur as scattered and numerous small outcrops, mainly on the northern side of the Tertiary basalt plug of Mt Manganese. The manganese outcrops at Mt Manganese appear to occur at the Precipice - Boxvale Sandstone boundary.

Previous company exploration has concentrated on the potential for cobalt mineralisation associated with manganese. Five prospects have been identified within EPM 14261 – namely, Mt Managanese, Mt Gould, Mt Bally-Lethbridge Alpha and MLN (Little Brother). Although sampling and drilling was undertaken at these prospects only Mt Manganese was considered to have potential for economic resources of cobalt.

The Mount Manganese cobalt mineralisation occurs as a massive manganese wad and as a manganiferous matrix in coarse sandstone and grits. The manganese-cobalt mineralisation is mainly confined to joint-bounded, diatreme-like structures containing brecciated coarse sandstone blocks as shown in photo below.



**Figure 5** - Outcrop of manganese mineralisation along joints within sandstone.

Detailed analysis of bulk samples (by Mineral Deposits Ltd) from 6 outcrops was carried out for a range of elements as shown:

Sample No	Co ppm	Ni ppm	Cu ppm	Mn ppm	Ba ppm	Zn ppm
O/C1	11,000	740	1,700	22,000		400
O/C2	16,300	1,200	1,500	21,000	36,100	600
O/C3	13,400	900	2,800	24,000	43,400	600
O/C4	28,900	2,500	3,600	23,000	40,400	2,300
O/C5	8,100	500	1,600	21,000		1,000
O/C6	1,100	140	3,900	20,000		24,400

## **5. PAST EXPLORATION**

Two main periods of exploration were undertaken by Mineral Deposits Limited (MDL) and Cobalt Resources NL (CRNL) within EPM 14261.

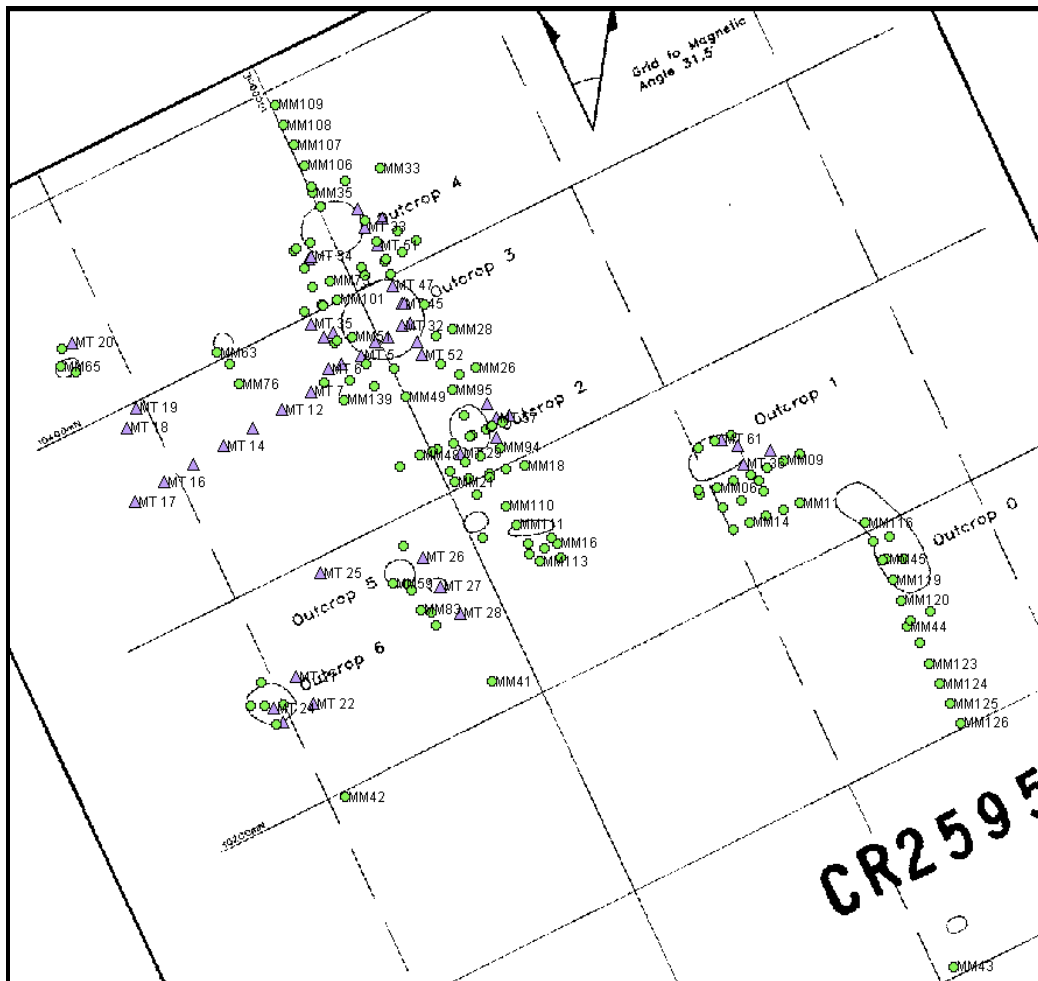
### **Exploration by MDL from 1979 to 1982**

- Grab samples from 6 outcrops at Mt Manganese by Mineral Deposits Ltd (MDL) returned up to 2.89% Co, 0.25% Ni, 0.39% Cu, 2.4% Mn, 2.7% Zn and 4.34% Ba.
- MDL drilled 62 percussion holes (1,091 m) at Mt Manganese; the average depth per hole was just under 18 m with the deepest hole reaching 36.5 metres. Samples were selected for analysis on the presence of manganese in panned cuttings and submitted for analysis for Co, Ni, Cu, Mn and Fe. Barren samples were discarded.
- MDL estimated a resource of:-
  - 24,100 tonnes averaging 0.6% Co at a cut-off of 0.25% Co or
  - 73,000 tonnes averaging 0.3% Co at a cut off of 0.05% Co.
- Sulphuric acid leach tests by CSIRO showed that a high grade stable sulphide could be precipitated from typical pregnant leach liquors with hydrogen sulphide at relatively moderate temperatures and pressures.

### **Exploration by CRNL from 1992 to 1998**

- CRNL et al drilled 139 holes (4,978 m) and estimated a resource of 175,000 tonnes grading 0.15% Co to a depth of 50 metres from surface.
- Holes below 30 m encountered cavernous weathered material resulting in poor sample recoveries but with low grade mineralisation and CRNL considered that the zone below 30m was not adequately tested.
- A high resolution aeromagnetic and radiometric survey (100m line spacing) identified basaltic eruptive centres and northwest trending magnetic linear trends but did not assist with identifying zones of cobaltiferous manganese.
- Leach studies supported earlier studies on behalf of MDL that several leachants, including sulphurous acid, alkaline cyanide and ammonia may be suitable for treating the oxide-cobalt mineralisation.
- CRNL concluded that although Mt Gould, Mt Bally-Lethbridge and Mt Emily contain geochemically anomalous Co values, they did not exhibit economic grades with depth and are dominated by iron oxides.





**Figure 6** Plan showing approximate locations of MDL drill collars (triangles) and CTNL drill collars (circles) and outcrop.

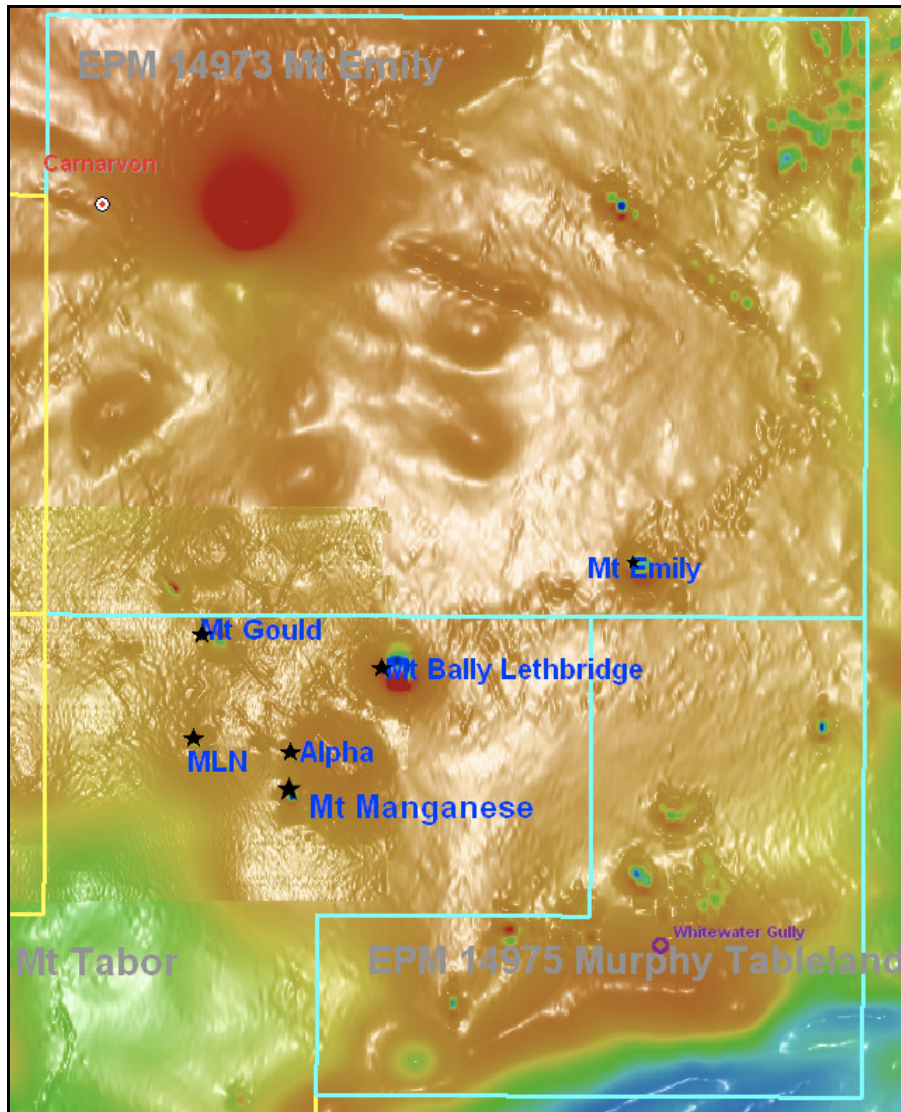
## 6. EXPLORATION ACTIVITIES BY MARANO TO 28.09.2010

Marano's exploration activities to date have covered:-

- Review of regional data - geophysical data, water bores, oil wells
- Review of previous exploration
- Structural and alteration study using air photos and satellite imagery
- High resolution airborne geophysical survey
- Field reconnaissance and target generation
- Cultural heritage clearance survey
- Preliminary geological reconnaissance, geochemical soil sampling and rock chip sampling

A high-resolution aeromagnetic survey was flown by Fugro for Marano in the last quarter of 2007 and data was reviewed by the company's geophysical consultant in March 2008. A written report is

attached as Appendix 1. Initial analysis of the magnetic data outlined a number of targets for field investigation and sampling.

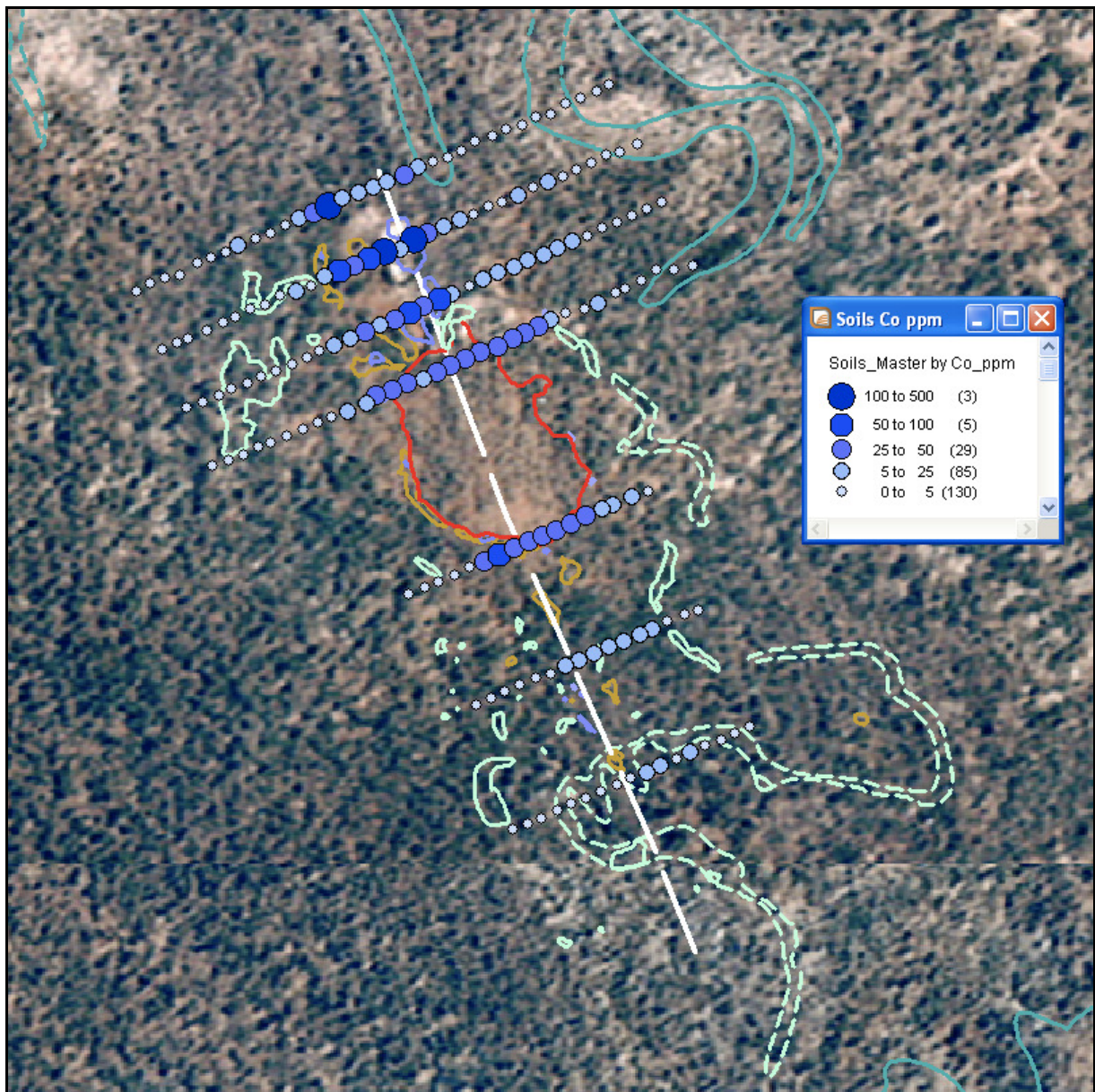


**Figure 7** Location of the Mn-Co deposits overlain on aeromagnetic data

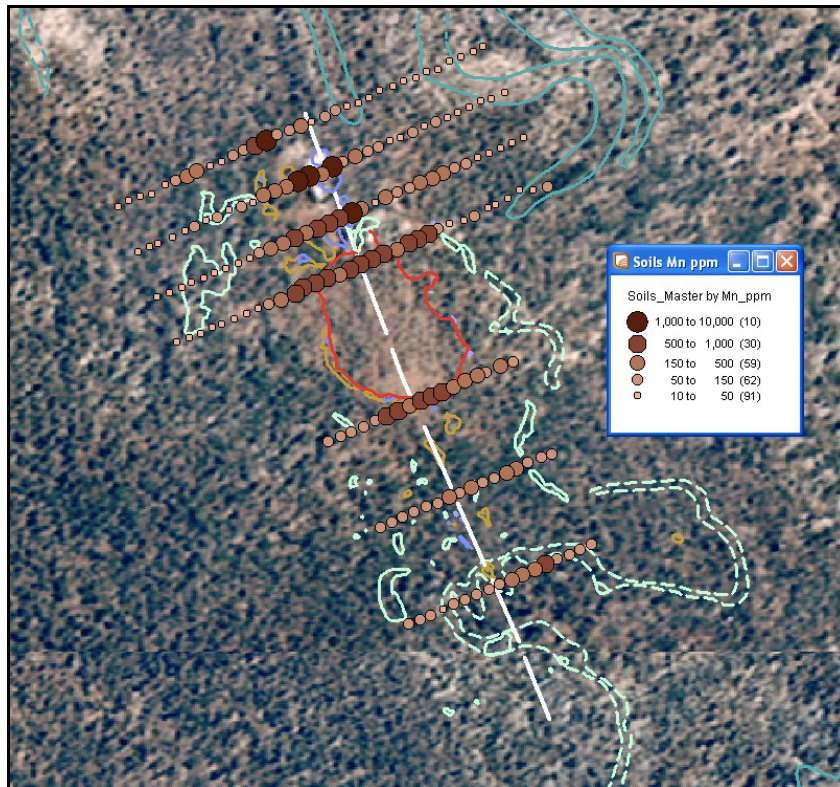
Four visits to the QDME Data Exploration Centre at Zillmere were made to inspect cuttings and core from regional drill holes to gain an understanding of the geology, stratigraphic correlation and structural framework of the area. A total of 230 samples were submitted to ALS for broad-spectrum analysis and 20 samples were sent to Paul Ashley at the University of New England for petrological appraisal. See Appendix 2

Prior to field visits native title heritage clearance surveys were carried out by the Bidjara People. No items of cultural significance were identified.

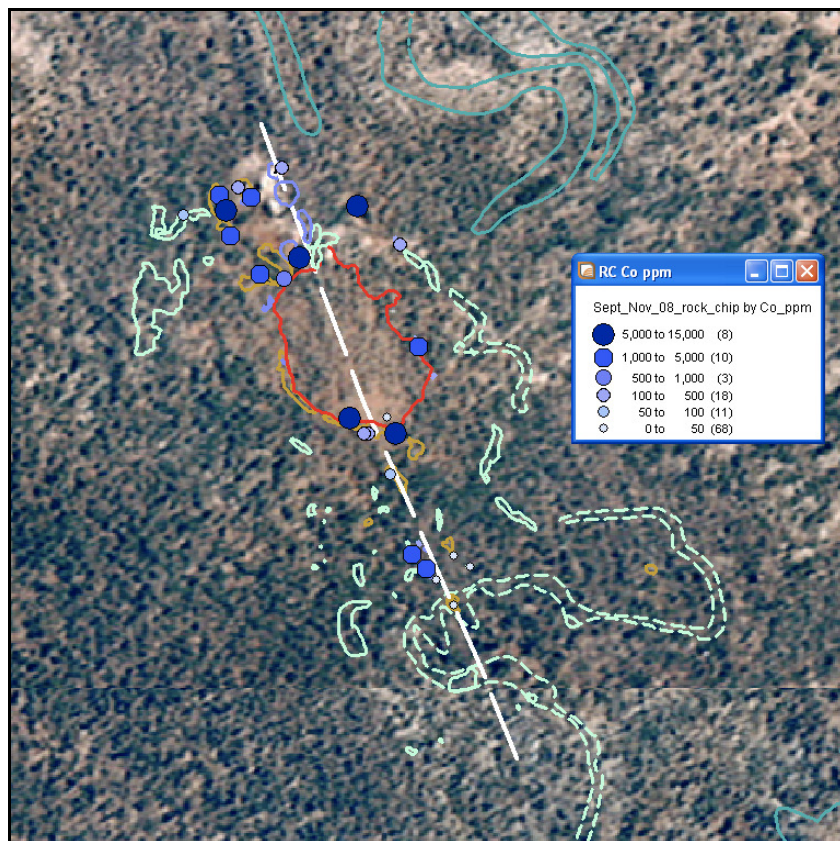
Mapping and sampling by Maranoa has identified anomalous cobalt concentrations in small outcrops of manganese and iron rich sandstones up to 650 metres south of the area previously drilled. Evidence from mapping and aerial photographs indicates that the structure, which may have acted as the feeder for the cobalt, extends for at least another few hundred metres and potentially several kilometres to the southeast beneath impermeable Boxvale Sandstone.



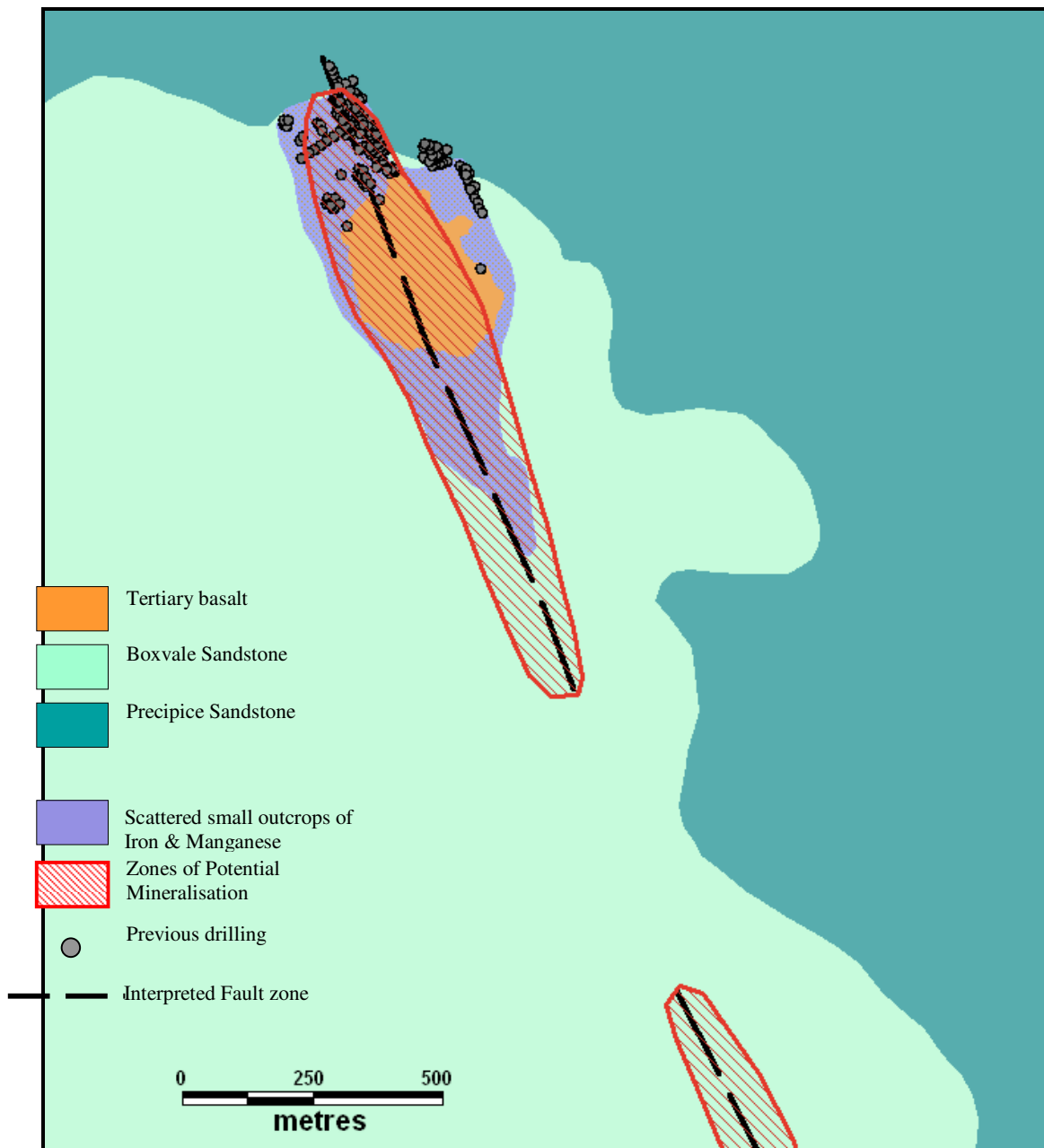
**Figure 8** Results of Cobalt in soil samples.  
 Red - basalt outcrop boundary; Orange - Mn-Fe rich outcrops  
 Light blue - outcrop of Boxvale Sandstone; Medium blue -outcrop of Precipice Sandstone



**Figure 9** Assay Results of Manganese in soil samples



**Figure 10** Assay Results of Co in rock chip samples



**Figure 11** Simplified geological plan of the Mt Manganese prospect showing past drill holes and possible extensions to mineralisation south of the Mt Manganese basalt

## 7. RECOMMENDATIONS

Previous companies considered that interaction of hydrothermal fluids generated from gabbro/basaltic intrusives are interpreted to have scavenged manganese and cobalt from Evergreen Formation sediments and deposited them in the joint/breccia zones. Later Tertiary weathering is interpreted to have enriched the mineralisation.

Maranoa has been appraising a new conceptual exploration model related to basin brines and potential associated mineralisation. The company considers that there is a strong possibility that previously interpreted surficial lateritic deposits could represent the surface expression of brine-sourced mineralisation in 'chimneys' created along prominent northwest-southeast structural

features. Brines escaping through these chimneys may have migrated laterally along the strongly leached Precipice Sandstone and mineralisation deposited along a redox boundary at the contact of this unit and less permeable overlying Evergreen Formation (Boxvale Sandstone).

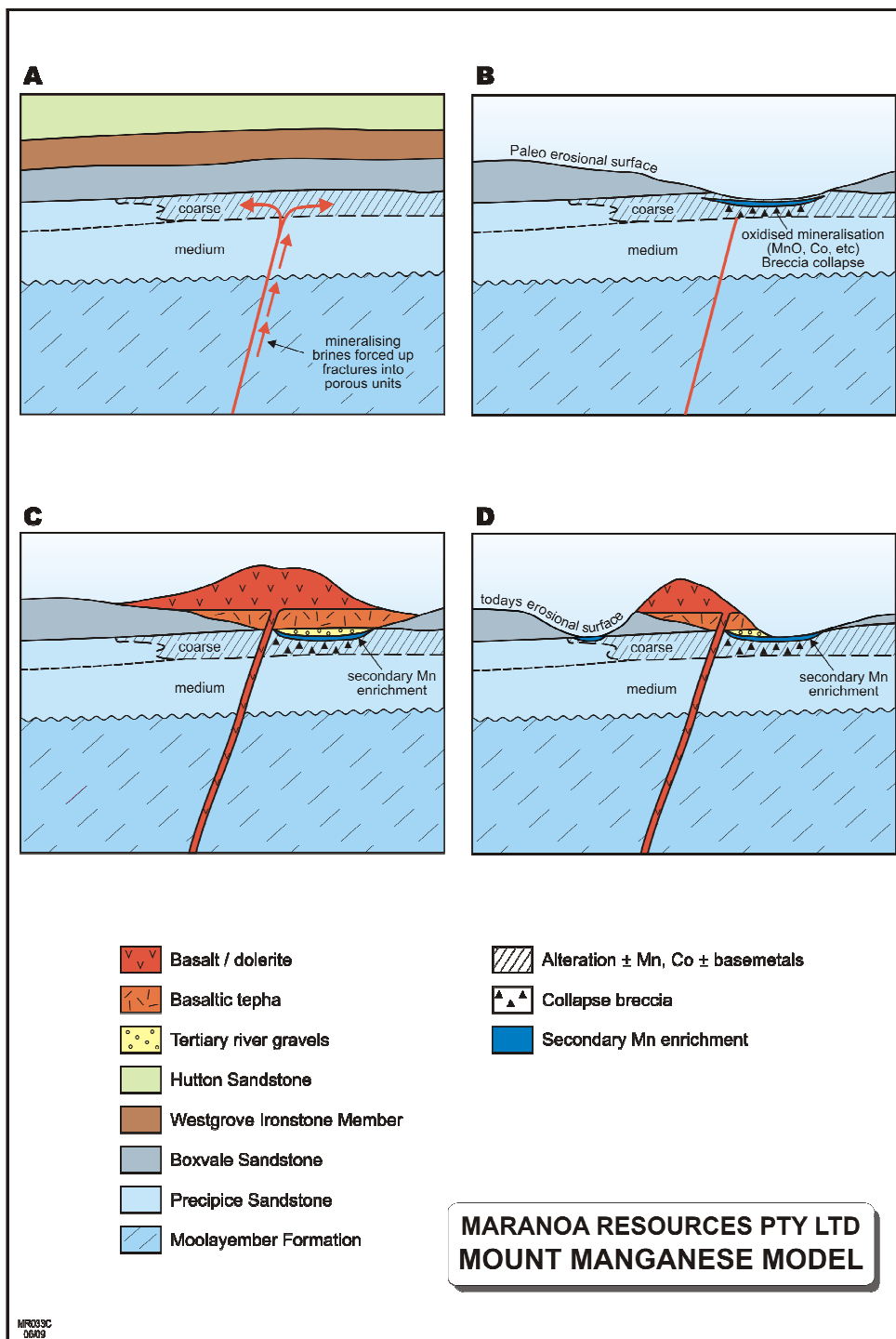


Figure 12 Mt Manganese Geological Model

The results of geological reconnaissance and soil sampling have identified extensions of the known mineralisation to the south and southeast of Mt Manganese that support the proposed model.

Maranoa considers that potential exists for cobalt mineralisation to extend over 1,200m along strike. Exploration data is being reviewed by a geological consultant for the company to determine and prioritise follow-up exploration activities to be carried out in the second year.

## **8. REFERENCES**

DAVEN P May 2009 EPM 14260 Darkwater Annual Report for the period 13 April 2008 to 12 April 2009