

# **Open File Envelope**

## **No. 11,698**

**EL 3394 AND EL 3788**

**DINGO HILL AND DINGO HILL WEST**

**COMBINED ANNUAL REPORTS, AND SEPARATE FINAL  
REPORTS AT LICENCES' RESPECTIVE SURRENDERS,  
FOR THE PERIOD 15/8/2006 TO 14/8/2010**

Submitted by  
Monax Mining Ltd  
2010

© 23/12/2010

This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.  
PIRSA accepts no responsibility for statements made, or conclusions drawn, in the report or for the quality of text or drawings.  
This report is subject to copyright. Apart from fair dealing for the purposes of study, research, criticism or review as permitted under the Copyright Act, no part may be reproduced without written permission of the Chief Executive of Primary Industries and Resources South Australia, GPO Box 1671, Adelaide, SA 5001.

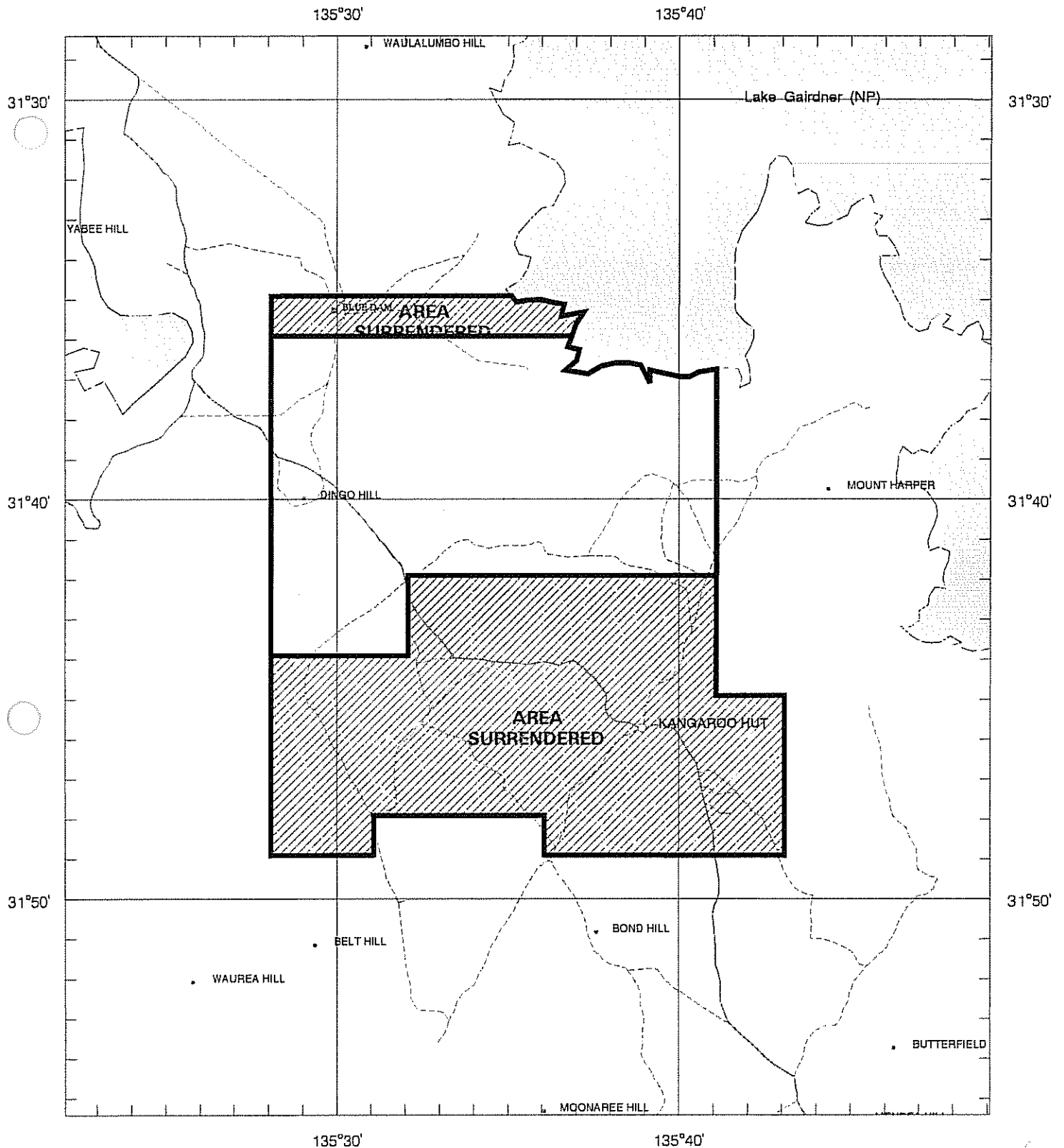
**Enquiries:** Customer Services Branch  
Minerals and Energy Resources  
7th Floor  
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000  
Facsimile: (08) 8204 1880



**Government of South Australia**  
Primary Industries and Resources SA

# SCHEDULE A



APPLICANT : **MONAX MINING LTD**

FILE REF : **55/05**

TYPE : **MINERAL ONLY**

AREA : **240 km<sup>2</sup> (approx.)**

1:250000 MAPSHEETS : **GAIRDNER**

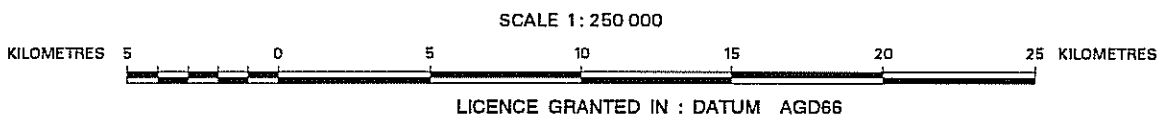
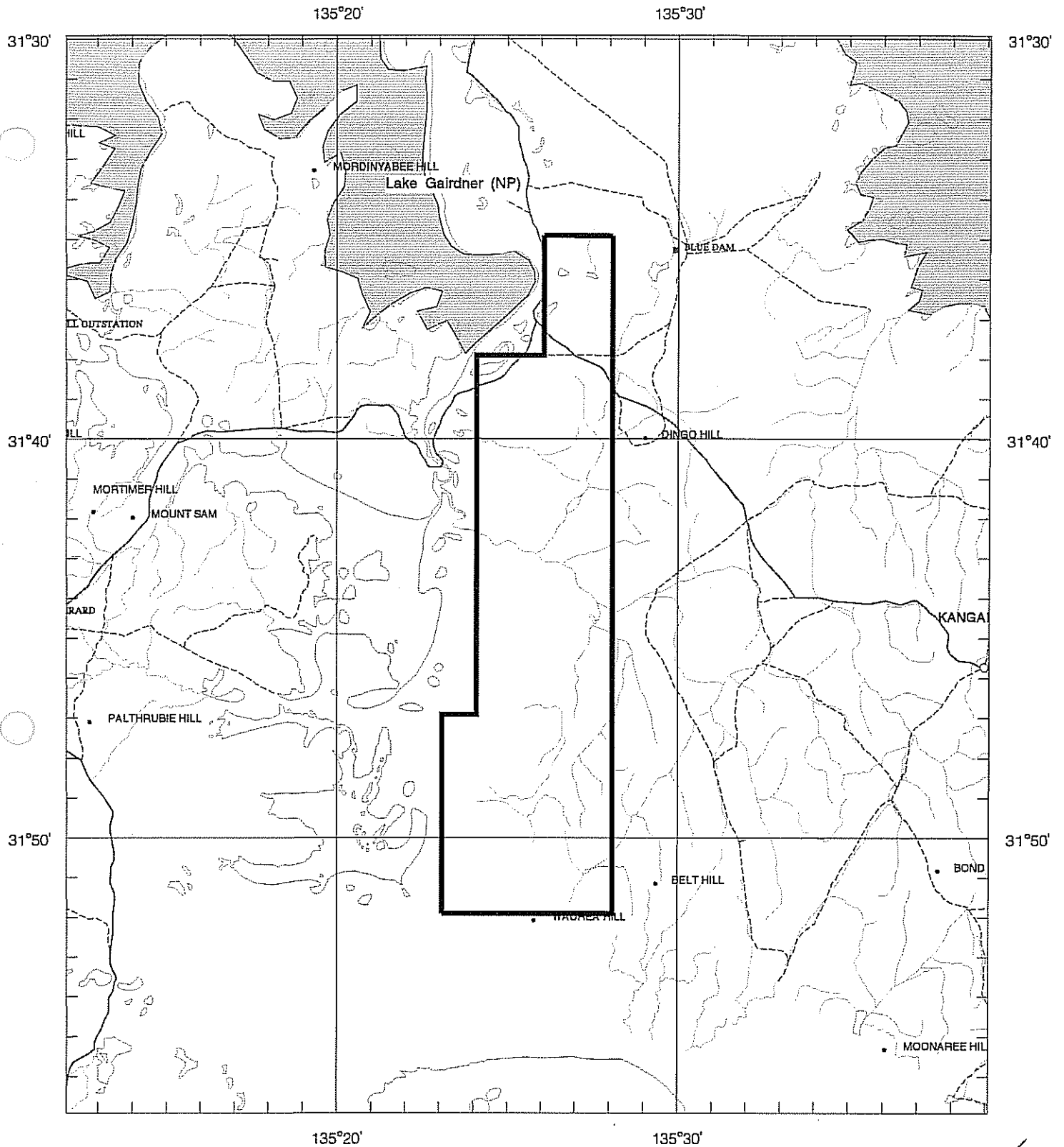
LOCALITY : **DINGO HILL AREA - Approximately 130 km southwest of Woomera**

DATE GRANTED : **15-Aug-2005**

DATE EXPIRED : **14-Aug-2009**

EL NO : **3394**

# SCHEDULE A



APPLICANT : **MONAX MINING LTD**

FILE REF : **173/06** TYPE : **MINERAL ONLY**

AREA : **195 km<sup>2</sup> (approx.)**

1:250000 MAPSHEETS : **GAIRDNER**

LOCALITY : **DINGO HILL AREA - Approximately 130 km southeast of Tarcoola**

DATE GRANTED : **28-May-2007** DATE EXPIRED : **27-May-2008**

EL NO : **3788**

ABN 96 110 336 733  
Exploration Office  
11A Croydon Road  
Keswick SA 5035  
T) +61 8 8375 3900  
F) +61 8 8375 3999



# **MONAX MINING LIMITED**

---

## **Annual Technical Report**

**EL 3394 Dingo Hill  
EL 3788 Dingo Hill West**

**For the period 15 August 2006 – 14 August 2007**

**Tenure holder | Monax Mining Limited  
Compiled by | Carolyn Grant, Greg Swain**

**Tenement operator | Monax Mining Limited  
Report date | 30 January 2008**

**Distribution:     Primary Industries & Resources South Australia (digital)  
                         Monax Mining Limited (digital copy + hard copy)**

This report and its contents are confidential. All rights to the report and its contents including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report remain the property of Monax Mining Limited. No part of this report nor the information contained in it may be disclosed to any person without the consent of Monax Mining Limited. No Part of this report nor of the information contained in it may be reproduced (including by being stored in any form), transmitted, published or used for any purpose without the consent of Monax Mining Limited.

## **Summary**

This second annual report details the work undertaken by Monax Mining Limited on EL 3394 (Dingo Hill) during the period 15 August 2006 – 14 August 2007. This report is now a joint report with EL 3788 (Dingo Hill West), which was granted on 28 May 2007.

EL 3394 is located in the Gawler Ranges in the central Gawler Craton, 450km northwest of Adelaide and covers an area of 517 km<sup>2</sup>. The target in this area is primarily Epithermal-Gold/Polymetallic style mineralisation. EL 3788, which covers an area of 195km<sup>2</sup> adjacent to the west of EL 3394, was granted on 28 May 2007 for an initial one year period and was acquired to further consolidate the tenement holding over an area of interpreted hydrothermal alteration prospective for epithermal style mineralisation.

Work conducted during this period included a detailed aeromagnetic and radiometric survey flown over EL 3394 on 100m line spacing, totalling 4,292 line km. The airborne survey was completed in late October-early November 2006.

Monax Mining Limited commenced operations on 21 September 2005.

## **Keywords**

EL3394, EL3788, Dingo Hill, Epithermal Gold/Polymetallic, Gawler Range Volcanics

## Table of Contents

	Page
1. Introduction.....	4
2. Tenure .....	4
3. Geology .....	4
4. Exploration Rationale .....	4
5. Previous Exploration.....	5
6. Exploration Conducted .....	6
7. Expenditure .....	7
8. Conclusions .....	7

## List of Figures

Figure 1	EL3394_3788_2007_Figure1_Tenement_Location.pdf
Figure 2	EL3394_3788_2007_Figure2_TotalMagneticIntensity.pdf
Figure 3	EL3394_3788_2007_Figure3_BougerGravity.pdf
Figure 4	EL3394_3788_2007_Figure4_SoilChemistryAnomaly.pdf
Figure 5	EL3394_3788_2007_Figure5_DetailedTMI.pdf
Figure 6	EL3394_3788_2007_Figure6_RadiometricsRGB.pdf

## List of Tables

Table 1	Tenement Details
Table 2	Expenditure for EL 3394 – Dingo Hill
Table 3	Expenditure for EL 3788 – Dingo Hill West

## List of Appendices

Appendix 1	Magnetics Radiometrics fGi fj YmXUJ!gYY; cj Yfba YbhcZG5`A]bYfU`FYgci fWg`K YVgJhZ
Appendix 2	Magnetics Logistics Report

## Digital File List

	File size & type
EL3394_3788_2007_A_01_ReportBody.pdf	127KB
EL3394_3788_2007_Figure1_Tenement_Location.pdf	177KB
EL3394_3788_2007_Figure2_TotalMagneticIntensity.pdf	411KB
EL3394_3788_2007_Figure3_BougerGravity.pdf	124KB
EL3394_3788_2007_Figure4_SoilChemistryAnomaly.pdf	174KB
EL3394_3788_2007_Figure5_DetailedTMI.pdf	315KB
EL3394_3788_2007_Figure6_RadiometricsRGB.pdf	148KB
EL3394_2007_Appendix1_MagneticsRadiometrics	159MB
EL3394_2007_Appendix2_MagneticsLogisticsReport.pdf	619KB

## 1. Introduction

EL 3394 (Dingo Hill) and EL 3788 (Dingo Hill West) occupy a combined area of 711km<sup>2</sup> within the Gawler Ranges, approximately 90 km south of Kingoonya and 230km northwest of Pt Augusta in the central Gawler Craton, South Australia (**Figure 1**). The most prominent geological feature crossing EL 3394 and EL 3788 is a volcanic flow front of upper Gawler Range Volcanics (GRV) over older lower GRV. This volcanic flow front is evident in both the Total Magnetic Intensity (TMI) and Gravity data (**Figures 2 & 3**). A zone of low magnetic intensity to the northwest of the volcanic flow front is interpreted as the focus of fluid flow and alteration of the host GRV. This zone of alteration has minor anomalous soil geochemistry and is prospective for Epithermal-Gold/Poly-metallic style mineralisation, however remains inadequately tested.

## 2. Tenure

Tenure details for ELs 3394 & 3788 are detailed below in **Table 1**

EL	Name	Area (m <sup>2</sup> )	Grant Date	Expiry Date
3394	Dingo Hill	516	15 August 2005	14 August 2008
3788	Dingo Hill West	195	28 May 2007	27 May 2008

## 3. Geology

Outcropping and sub-cropping basement geology at Dingo Hill is comprised of Gawler Range Volcanics (GRV). Upper GRV in the southeast of the tenement overlies lower GRV, which crop out in the northwest section. Outcrop is relatively good, with only a thin veneer of Quaternary sediments covering bedrock in most places.

A notable feature in both the geology and geophysics is the presence of a prominent northeast trending volcanic flow boundary. Outcropping upper GRV in the southeast of the tenement is relatively fresh and unaltered, while lower GRV to the northwest is more deeply weathered, preserving evidence of hydrothermal chlorite-sericite alteration and minor quartz veining, including primary lithophysae volcanic textures. The zone of low magnetic intensity in the central north region of the tenement (**Figure 2**) is interpreted as the focus of hydrothermal fluid flow and alteration, and is conceivably controlled by subtle northwest-southeast trending fault/shear structures.

## 4. Exploration Rationale

Iron Oxide Copper-Gold-Uranium mineralisation in the Olympic Copper Gold province, and Gold mineralisation within the Central Gawler Gold province, is associated with the ca. 1595-1575 Ma Gawler Range Volcanics and Hiltaba Suite igneous event. Traditionally, exploration has been focused on the eastern and western margins of the GRV where potentially mineralised basement rocks are not covered by thick piles of unaltered GRV. However, interpretation of new geophysical data suggests that alteration zones exist in the central regions of the Gawler Range Volcanic Domain.

The pervasive zone of low magnetic intensity potentially represents hydrothermal fluid flow alteration and destruction of magnetite in the host lower GRV lithology. It is interpreted that the unaltered upper GRV acted as an impermeable cap to rising fluids which then migrated laterally. Remnant northwest fault/shear zone traces (which trend toward the Yerda Shear Zone) in the magnetics (**Figure 2**) conceivably acted as fluid conduits, representing targets for mineralisation. A subtle poly-metallic geochemical anomaly identified from a grid soil sampling survey over the zone of alteration also represents a drill target for mineralisation (**Figure 4**).

## 5. Previous Exploration

Relatively little intensive exploration has been conducted in the Dingo Hill area, which began in 1971 with a reconnaissance by K.K. Euler. The targets for explorers were uranium, diamonds, base metals or gold.

Afmeco Pty Ltd (Afmeco) searched for uranium in the western sector of the tenement from 1980 to 1983, drilling 11 percussion and diamond core holes. A further 13 percussion holes tested ground magnetic anomalies for the presence of kimberlites, but encountered magnetic Gawler Range Volcanics. Utah Development Company (Utah) explored the eastern sector of Dingo Hill from 1980 to 1982, analysing samples for base metals, arsenic and nickel. Utah also examined stream gravel samples for kimberlite indicators.

From 1988 to 1990, BHP Gold Mines Ltd (BHP) explored the entire tenement area for gold, undertaking regional bulk leach extractable gold (BLEG) stream sediment surveys. Some low-order gold anomalies were followed up in the northern sector. Western Mining Corporation Ltd (WMC) explored the southern sector of Dingo Hill for base and precious metals between 1992 and 1995. Follow-up drilling included three RC holes and one diamond core hole. Helix Resources NL targeted gold and base metals in the northern part of the tenement in 1995-96. Earlier-reported geochemical anomalies could not be substantiated.

Homestake Gold of Australia Ltd undertook regional calcrete sampling in a search for gold in the southern part of the tenement from 1996 to 1999. Aurora Gold (WA) Pty Ltd explored for gold and base metals in 1997-98. Calcrete sampling indicated low-order gold, arsenic and base metal anomalies, but these did not generate targets worthy of further work.

Previous exploration conducted on EL 3394 by Monax Mining comprised a helicopter based ground gravity survey. The survey was conducted to improve the resolution of the existing PIRSA Bouger Gravity data. A total of 328 stations were taken on a 1000x1000m spaced grid. The survey was conducted by Daishsat Geodetic Surveyors.

During 2006, 10 altered volcanic rock chips (DH01-DH10) were sampled around an area of increased radiometrics in the northeast area of the Exploration Licence. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. A geochemical soil sample survey was completed on a grid covering the general area of the interpreted low magnetic intensity alteration zone. This area is characterised by a general cover of Quaternary sediments and suggests that basement is more deeply eroded and/or weathered. Subtle anomalies were reported from elements including Au, Co, Cu, Pt, As, Ag, in the central region of the survey (e.g. **Figure 4**). This subtle chemical anomaly may be representative of epithermal poly-metallic mineralisation below cover. A further 11 rock chip samples (DHR01-DHR11) were taken in conjunction with this geochemistry soil survey program. No significant results were reported.



Petrology of 4 rock chip samples (DH2, 5, 9, 10) of altered volcanics was completed by Pontifex & Associates. Samples were confirmed to be altered acid volcanics, characteristic of GRV. DH2 and DH9 reported sericite alteration and limonite staining. Sample DH10 was interpreted to represent a crystal-vitric tuff. There was no report of sulphide mineralisation.

## 6. Exploration Conducted

### 6.1 EL 3394

#### 6.1.1 Aeromagnetic and Radiometric Survey

Work carried out on EL 3394 during the reporting period comprised an aeromagnetic and radiometric survey completed in December 2006. The survey was conducted by UTS Geophysics on 100m line spacing. The line directions were 090 – 270 and the sensor height was 50m. The survey comprised a total of 4,292 line kilometres. The magnetic and radiometric data is included in **Appendix 1** as a digital file (see digital files on CD), and the magnetics logistics report from UTS Geophysics is given in **Appendix 2**.

**fGi fj YmXUHJ!gYY; cj Yfba YbhcZG5`A]bYfU`F Ygci fWg`K YVg]HXL**

#### 6.1.2 Geophysical Interpretation

The newly acquired detailed aeromagnetic data is shown in **Figure 5**. The new data has greatly improved the resolution of the magnetic features within the survey area. The central zone of low magnetic intensity is interpreted to represent a zone of increased hydrothermal fluid flow. Field investigations have identified quartz veining and patches of moderate chlorite-sericite altered volcanics within this zone of low magnetic intensity. The new data highlights the major northwest-southeast and northeast-southwest fault structures which represent primary targets for exploration drilling. The most intensely demagnetised zone corresponds to an area covered by alluvium associated with palaeodrainage.

The Radiometrics\_RGB in **Figure 6** shows a generally high radiometric response over much of the tenement. Outcropping GRV is predominantly shown up as areas of white and pink radiometric responses. White represents overall high response, while pink is representative of potassium dominant response. There is some moderate thorium responses represented by the greenish tones in the south and southeast areas. The main uranium responses are represented in blue and correspond to the dominant palaeodrainage channels which flow towards the northeast into Lake Gairdner. There is also an anomalous uranium response at the edge of the lake. The anomalous uranium is interpreted to be sourced from weathering of outcropping GRV over much of the tenement.

### 6.2 EL 3788

No field exploration has been conducted on EL 3788 up to the current report date. EL 3788 was granted on the 28 May 2007, and exploration has only involved investigation of historic exploration.

## 7. Expenditure

Expenditure for the period 15 August 2006 – 14 August 2007 is detailed in **Tables 2 & 3**

**Table 2** Expenditure for EL 3394 – Dingo Hill

<b>Operations</b>	<b>Cost \$</b>
Depreciation	798
Geophysics	28,429
Legal fees	222
Rent - tenement	2,146
Travel	107
Tenement administration	24,192
<b>Total expenditure for the period</b>	<b>55,894</b>
	+ previous expenditure 81,293
<b>Total cumulative expenditure for the licence</b>	<b>\$137,187</b>

**Table 3** Expenditure for EL 3788 – Dingo Hill West

There was no expenditure for Dingo Hill West for period ending 14 August 2007, as the EL was only granted on 28 May 2007.

## 8. Conclusions

The new detailed magnetic data combined with the 1 x 1 km gravity survey conducted over EL 3394 by Monax Mining has successfully delineated the northeast-southwest trending volcanic flow front between interpreted upper and lower GRV. The data has also highlighted northwest trending fault structures which are key zones for hydrothermal fluid flow and represent exploration drill targets.

The anomalous polymetallic geochemistry reported from the soil sampling program still remains encouraging. The anomaly is coincident with the zone of most intense demagnetisation within the central region interpreted alteration zone. This particular area corresponds to palaeodrainage alluvium and may represent a subtle surface expression of epithermal gold/poly-metallic mineralisation under cover.

At the time of this report Monax Mining has a submission for cooperative drill funding with PIRSA through the PACE Round 5 scheme. The outcome of this submission will be announced by PIRSA on the 8<sup>th</sup> February 2008. The aim of the drilling is to test the demagnetised zone and coincident soil geochemical anomaly. The proposed drilling will comprise three to four diamond holes to depths around 300 metres.

A reconnaissance field trip is planned for February 2008 to investigate access to the proposed drilling areas in consultation with the pastoralist. This will be followed by Aboriginal heritage clearances and EWA submission to PIRSA for drilling approval.

# Figures

**Monax Mining Limited**

**Combined Annual Technical Report**

**ELs 3394 Dingo Hill & 3788 Dingo Hill West**

**15 August 2006 – 14 August 2007**

**Table of Contents - Figures**

<b>Figure 1</b>	Tenement Location
<b>Figure 2</b>	Total Magnetic Intensity
<b>Figure 3</b>	Bouger Gravity
<b>Figure 4</b>	Soil Chemistry Anomaly
<b>Figure 5</b>	Detailed TMI
<b>Figure 6</b>	Radiometrics RGB

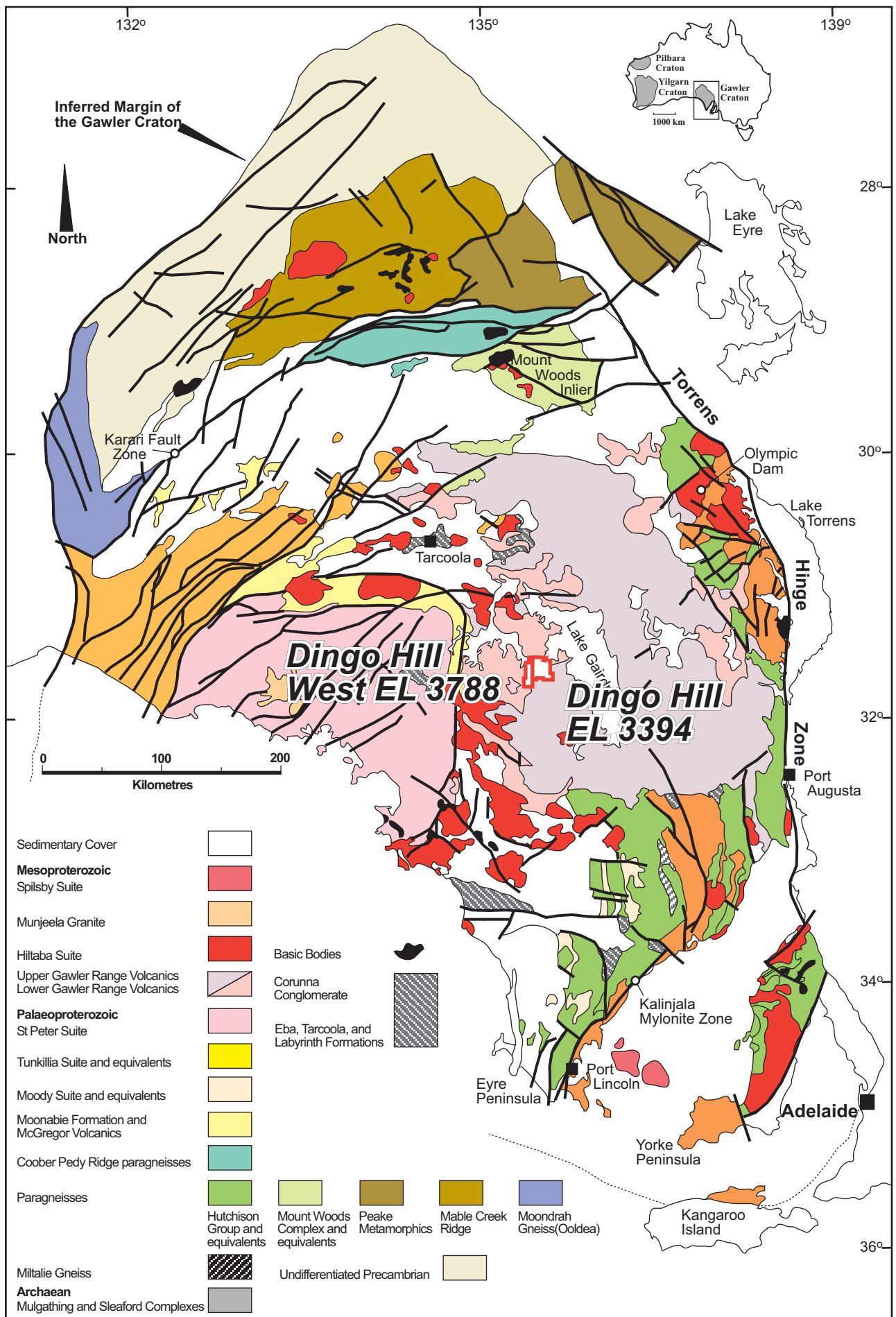
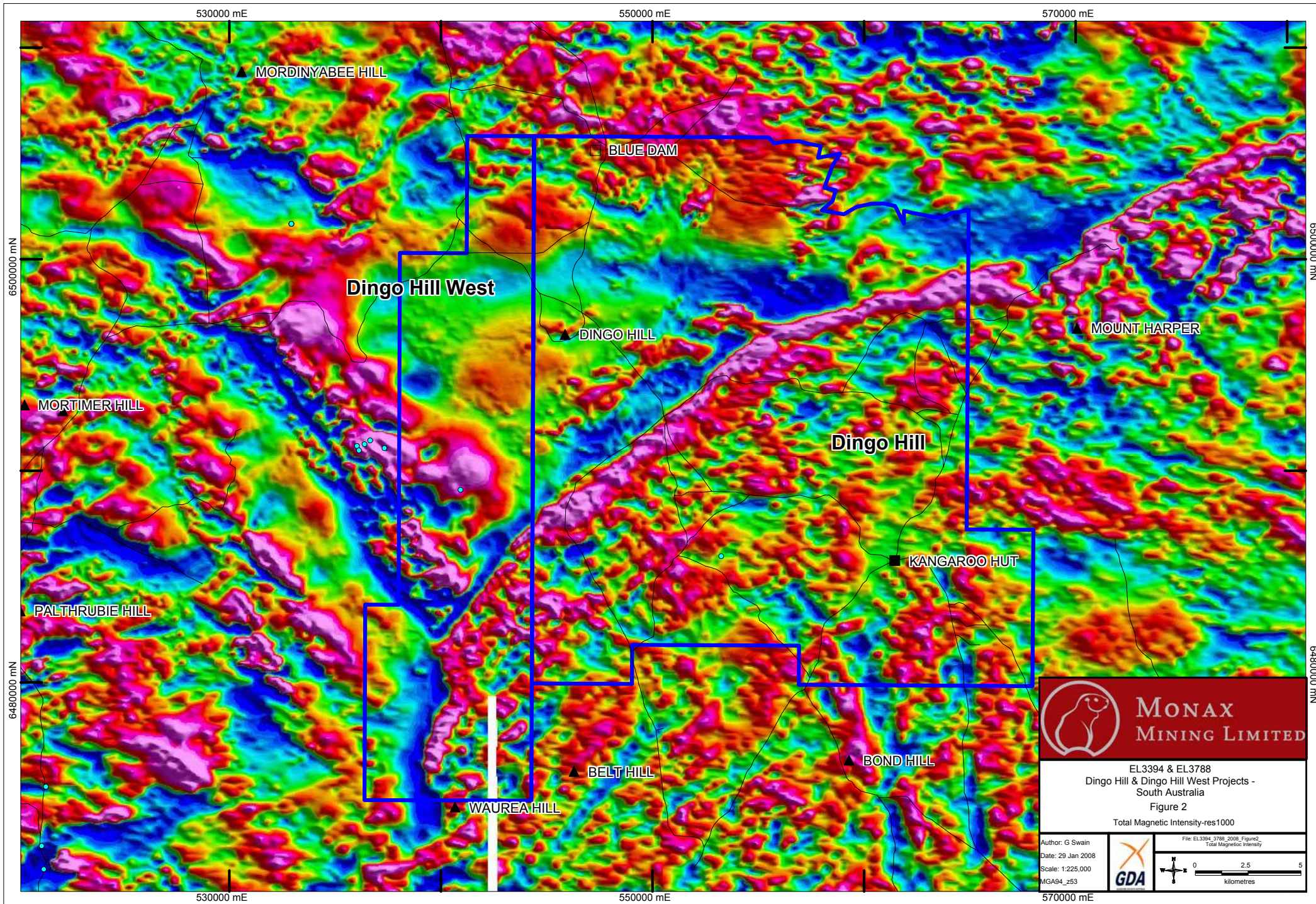
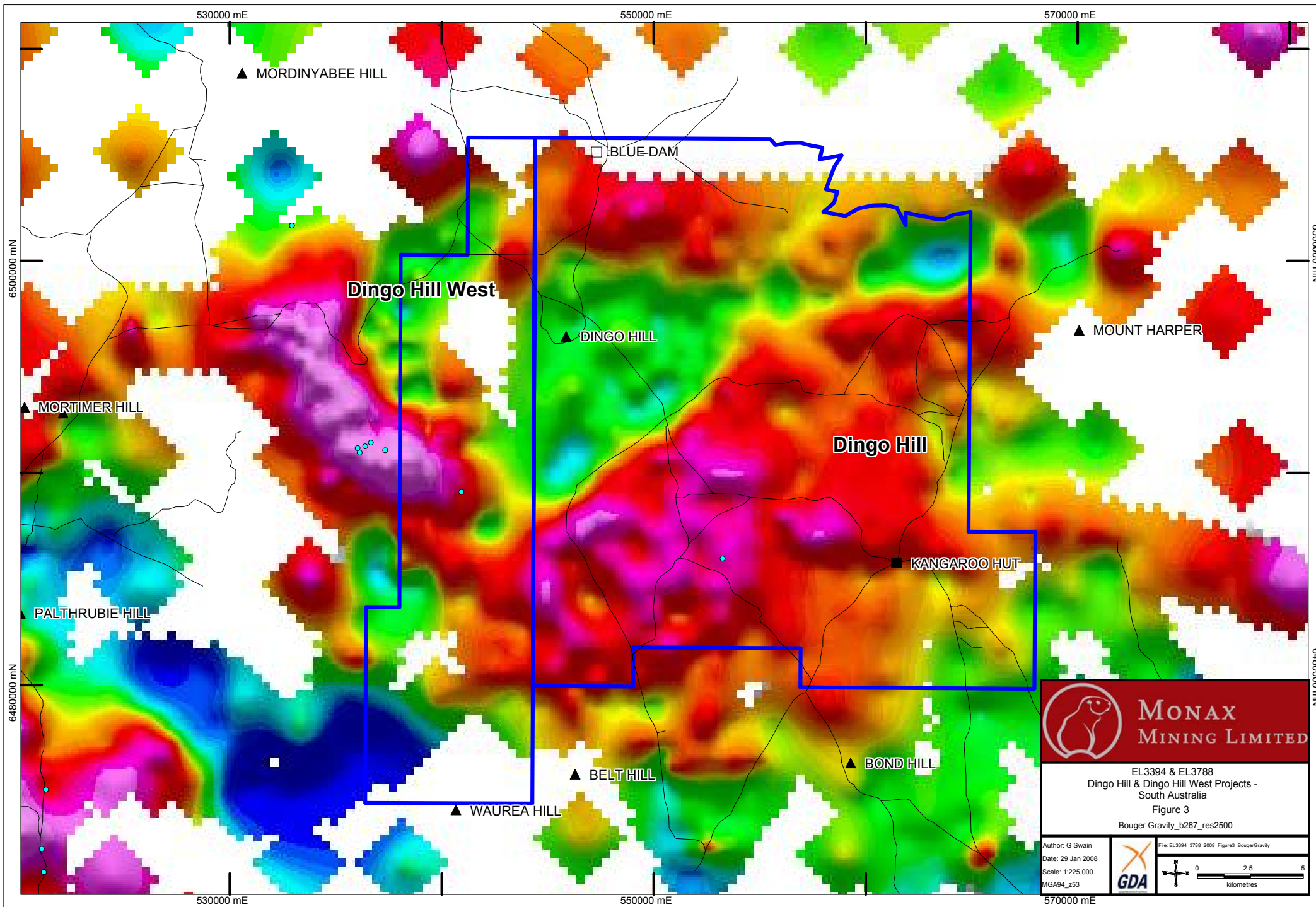


Figure 1.









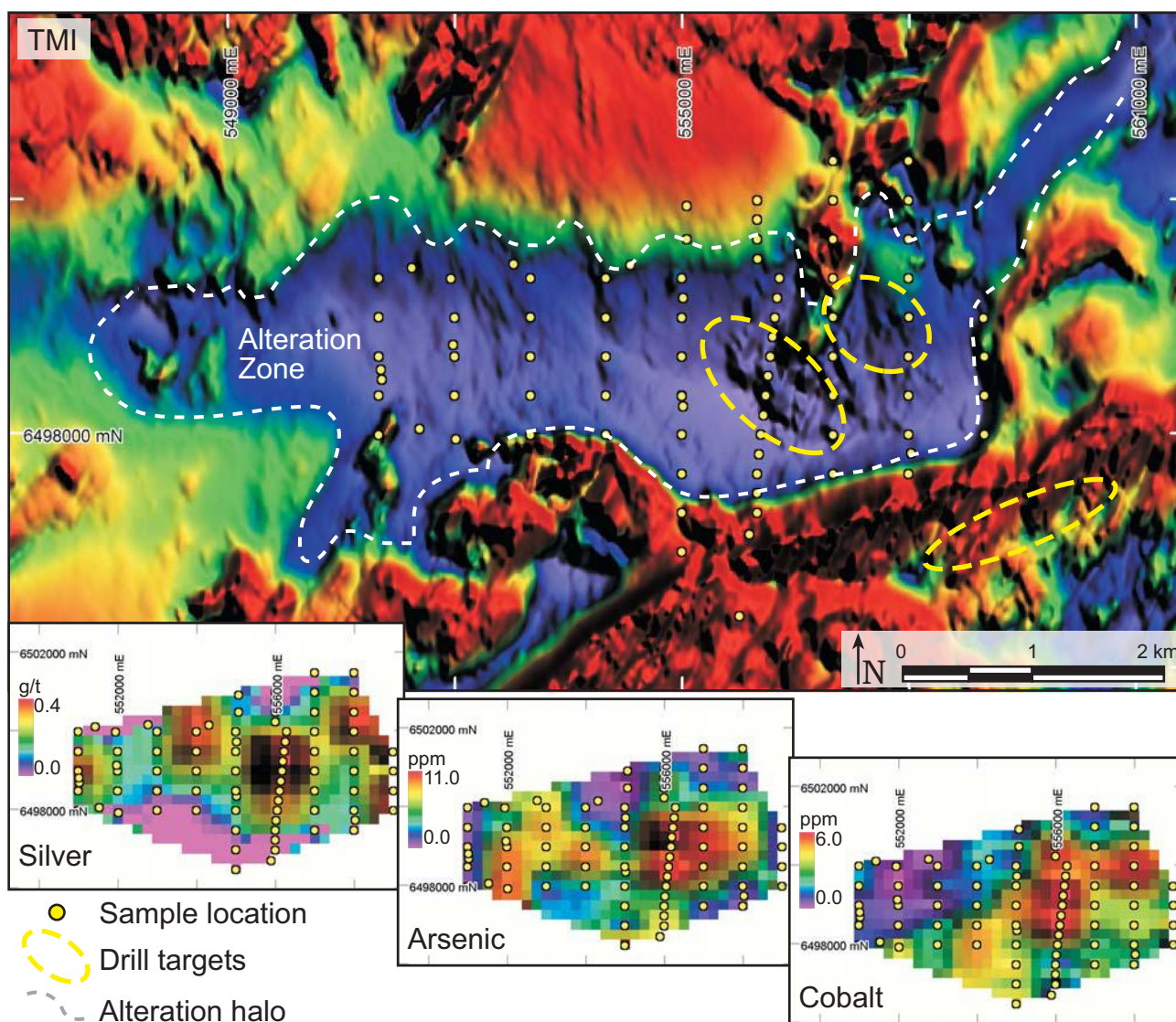
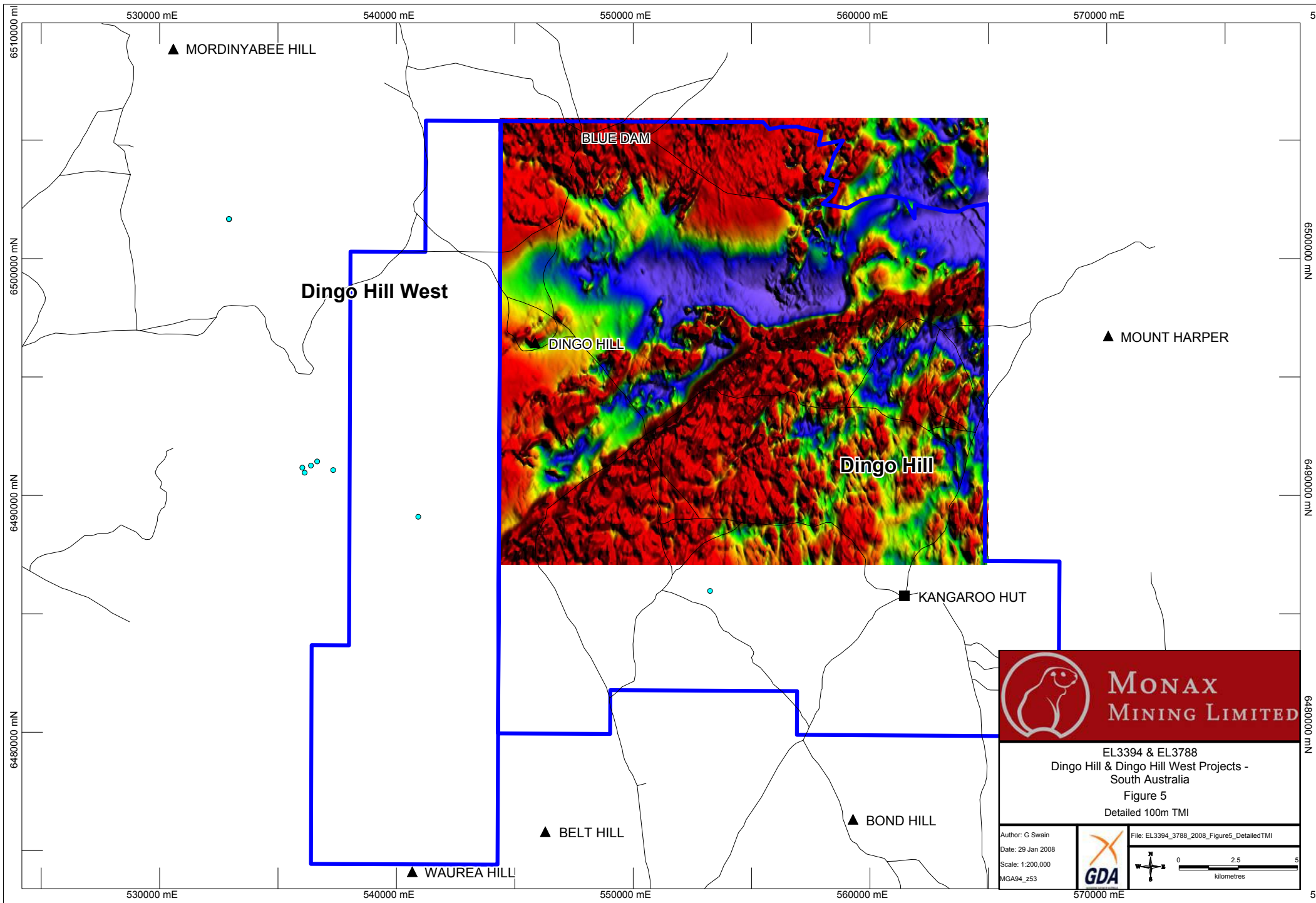


Figure 4. Polymetallic low level geochemical anomaly from soil sampling over demagnetised zone of interpreted hydrothermal fluid flow and alteration.





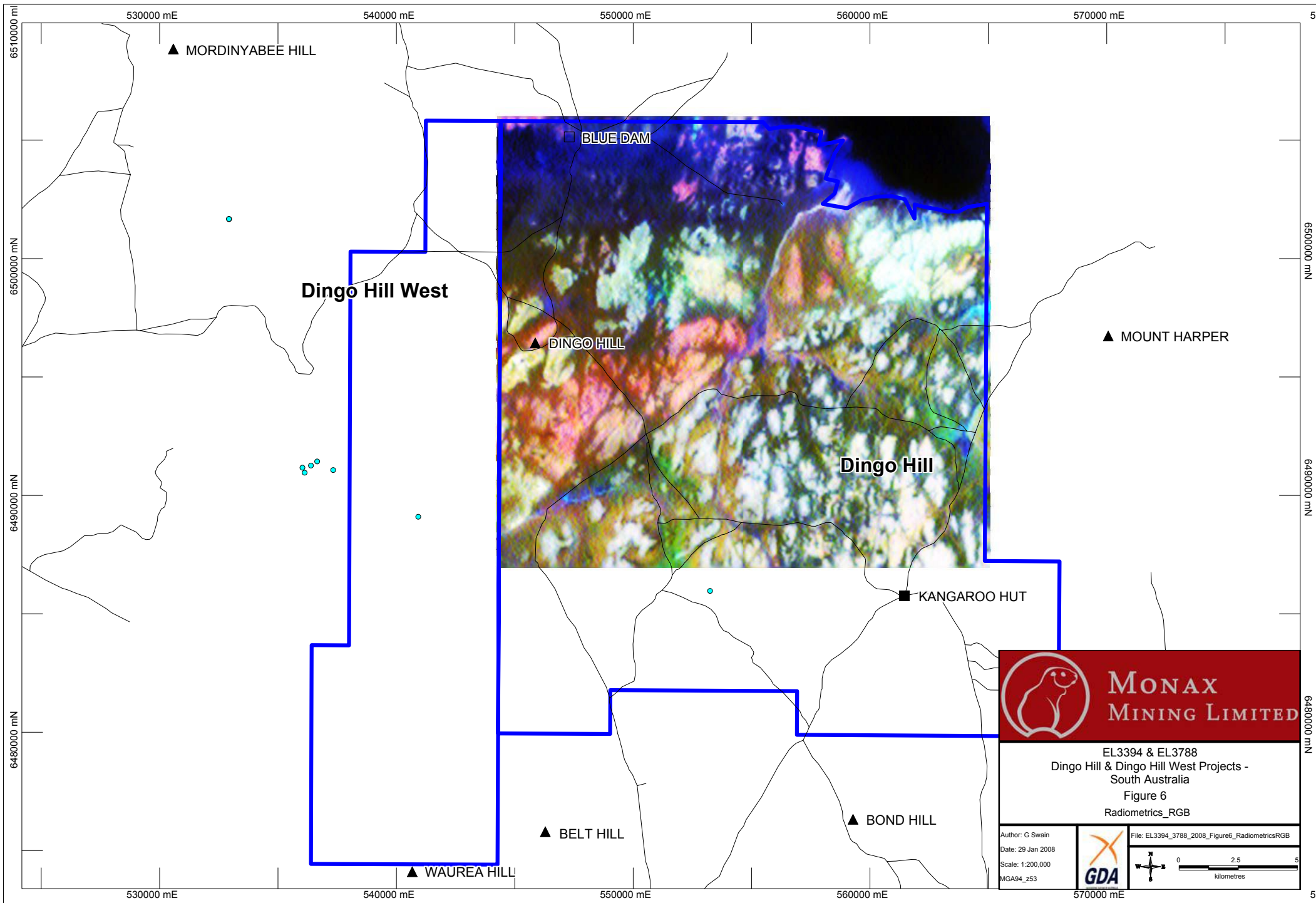
EL3394 & EL3788  
Dingo Hill & Dingo Hill West Projects -  
South Australia  
Figure 5  
Detailed 100m TMI

Author: G Swain  
Date: 29 Jan 2008  
Scale: 1:200,000  
MGA94\_z53



File: EL3394\_3788\_2008\_Figure5\_DetailedTMI





**Monax Mining Limited**

**Combined Annual Technical Report**

**ELs 3394 Dingo Hill & 3788 Dingo Hill West**

**15 August 2006 – 14 August 2007**

**Table of Contents - Appendices**

**Appendix 1** Magnetism Radiometrics

**Appendix 2** Magnetism Logistics Report

# **Appendix 1**

## **Magnetics Radiometrics**

(Survey data - see Government of SA Mineral Resources Website)

## **Appendix 2**

### **Magnetics Logistics Report**

**Logistics Report**

for a

**DETAILED AIRBORNE  
MAGNETIC, RADIOMETRIC AND  
DIGITAL TERRAIN SURVEY**

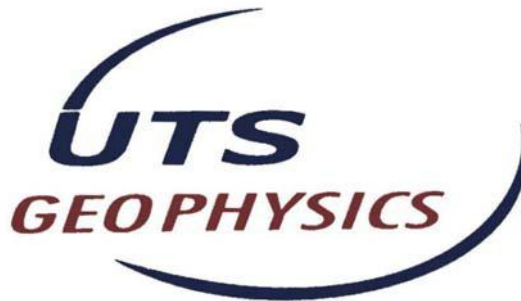
for the

**AMBROSIA, WYNBRING AND  
DINGO HILL PROJECTS**

carried out on behalf of

**MONAX MINING LIMITED**

by



(UTS Job #A763)

FAUNTLEROY AVENUE, PERTH AIRPORT  
PO BOX 126, BELMONT WA 6984  
Telephone +61 8 9479 4232 Facsimile +61 8 9479 7361  
A.B.N. 31 058 054 603

## TABLE OF CONTENTS

<b>1</b>	<b>GENERAL SURVEY INFORMATION .....</b>	<b>3</b>
<b>2</b>	<b>SURVEY SPECIFICATIONS.....</b>	<b>3</b>
<b>3</b>	<b>AIRCRAFT AND SURVEY EQUIPMENT .....</b>	<b>4</b>
3.1	SURVEY AIRCRAFT .....	5
3.2	DATA POSITIONING AND FLIGHT NAVIGATION.....	5
3.3	UTS DATA ACQUISITION SYSTEM AND DIGITAL RECORDING .....	6
3.4	ALTITUDE READINGS .....	6
3.5	UTS STINGER MOUNTED MAGNETOMETER SYSTEM .....	6
3.6	TOTAL FIELD MAGNETOMETER .....	7
3.7	THREE COMPONENT VECTOR MAGNETOMETER .....	7
3.8	AIRCRAFT MAGNETIC COMPENSATION.....	7
3.9	DIURNAL MONITORING MAGNETOMETER .....	8
3.10	BAROMETRIC ALTITUDE.....	8
3.11	TEMPERATURE AND HUMIDITY .....	9
3.12	RADIOMETRIC DATA ACQUISITION .....	9
<b>4</b>	<b>PROJECT MANAGEMENT .....</b>	<b>10</b>
<b>5</b>	<b>DATA PROCESSING PROCEDURES .....</b>	<b>11</b>
5.1	DATA PRE-PROCESSING.....	11
5.2	MAGNETIC DATA PROCESSING.....	12
5.3	RADIOMETRIC DATA PROCESSING.....	13
5.4	DIGITAL TERRAIN MODEL DATA PROCESSING .....	14
	<b>APPENDIX A - LOCATED DATA FORMATS .....</b>	<b>15</b>
	<b>APPENDIX B - COORDINATE SYSTEM DETAILS.....</b>	<b>17</b>
	<b>APPENDIX C - SURVEY BOUNDARY DETAILS .....</b>	<b>18</b>
	<b>APPENDIX D - PROJECT DATA OVERVIEW.....</b>	<b>21</b>
	<b>APPENDIX E – ACQUISITION AND PROCESSING PARAMETERS.....</b>	<b>24</b>

## 1 GENERAL SURVEY INFORMATION

UTS Geophysics conducted a low level airborne geophysical survey for the following company:

Monax Mining Limited  
140 Greenhill Road  
Unley, South Australia 5061

Acquisition for the surveys commenced on the 6<sup>th</sup> December 2006 and was completed on the 30<sup>th</sup> December 2006. The base location used for operating the aircraft and performing in-field quality control was Tarcoola and Dingo Hill, South Australia.

## 2 SURVEY SPECIFICATIONS

The areas surveyed for the Ambrosia, Wynbring and Dingo Hill projects are located approximately 52km northwest, 75km west and 145km southeast of Tarcoola in South Australia. The surveys were flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia and were contained within zone 53 with a central meridian of 135 degrees. Details of the datum and projection system are provided in Appendix B of this report. Survey boundary coordinates are listed in Appendix C.

The survey data acquisition specifications for each area flown are specified in the following table:

PROJECT NAME	LINE SPACING	LINE DIRECTION	TIE LINE SPACING	TIE LINE DIRECTION	SENSOR HEIGHT	TOTAL LINE KM
Ambrosia	100m	000 - 180	1000m	090 - 270	50m	9,799
Wynbring	100m	090 - 270	1000m	000 - 180	50m	2,858
Dingo Hill	100m	090 - 270	1000m	000 - 180	50m	4,292
<b>TOTAL</b>						<b>16,949</b>

The specified sensor height for the magnetic samples is as stated in the above table. This sensor height may be varied where topographic relief or laws pertaining to built up areas do not allow this altitude to be maintained, or where the safety of the aircraft and equipment is endangered.



### 3 AIRCRAFT AND SURVEY EQUIPMENT

The UTS navigation flight control computer, data acquisition system and geophysical sensors were installed into a specialised geophysical survey aircraft.

The list of geophysical and navigation equipment used for the survey is as follows:

#### **General Survey Equipment**

- FU24 – 954 fixed wing survey aircraft.
- UTS proprietary flight planning and survey navigation system.
- UTS proprietary high speed digital data acquisition system.
- Novatel 3951R, 12 channel precision navigation GPS.
- OMNILITE 132 real time differential GPS system.
- UTS LCD pilot navigation display and external track guidance display.
- UTS post mission data verification and processing system.
- Bendix King KRA-405 radar altimeter.

#### **Magnetic Data Acquisition Equipment**

- UTS tail stinger magnetometer installation.
- Scintrex Cesium Vapour CS-2 total field magnetometer.
- Fluxgate three component vector magnetometer.
- RMS Aeromagnetic Automatic Digital Compensator (AADC II).
- Diurnal monitoring magnetometer (Scintrex Envimag).

#### **Radiometric Data Acquisition Equipment**

- Exploranium GR-820 gamma ray spectrometer.
- Exploranium gamma ray detectors.
- Barometric altimeter (height and pressure measurements).
- Temperature and humidity sensor.

### 3.1 **Survey Aircraft**

The aircraft used for the surveys were FU24 – 950 series fixed wing survey aircraft, owned and operated by UTS Geophysics, registrations VH-CYU and VH-UTR. The specifications are as follows:

#### **Power Plant**

- Engine Type Single engine, Lycoming, IO-720
- Brake Horse Power 400 bhp
- Fuel Type AV-GAS

#### **Performance**

- Cruise speed 105 Kn
- Survey speed 100 Kn
- Stall speed 45 Kn
- Range 970 Km
- Endurance (no reserves) 5.6 hours
- Fuel tank capacity 490 litres



### 3.2 **Data Positioning and Flight Navigation**

Survey data positioning and flight line navigation was derived using real-time differential GPS (Global Positioning System).

Navigation was performed using a UTS designed and built electronic pilot navigation system providing computer controlled digital navigation instrumentation mounted in the cockpit as well as an externally mounted track guidance system.

GPS derived positions were used to provide both aircraft navigation and survey data location information.

The GPS systems used for the survey were:

- Aircraft GPS Model Novatel 3951R
- Sample rate 0.5 Seconds (2 Hz)
- GPS satellite tracking channels 12 parallel
- Typical differentially corrected accuracy 1-2 metres (horizontal)  
3-5 metres (vertical)

### 3.3 *UTS Data Acquisition System and Digital Recording*

All geophysical sensor data and positional information measured during the surveys was recorded using a UTS developed, high speed, precision data acquisition system. Survey data was downloaded onto magnetic tape on completion of each survey flight.

Instrument synchronisation times were measured and removed in real-time by the UTS data acquisition system.

### 3.4 *Altitude Readings*

Accurate survey heights above the terrain were measured using a King radar altimeter installed in the aircraft. The height of each survey data point was measured by the radar altimeter and stored by the UTS data acquisition system.

- Radar altimeter models                      King KRA- 405 twin antenna altimeter
- Accuracy    0.3 metres
- Resolution    0.1 metres
- Range    0 - 500 metres
- Sample rate    0.1 Seconds (10Hz)

The digital terrain model is calculated by subtracting the terrain clearance (radar altimeter) from the GPS height (interpolated to 0.1 Hz), and as such the accuracy is constrained by the differentially corrected GPS position.

### 3.5 *UTS Stinger Mounted Magnetometer System*

The installation platform used for the acquisition of magnetic data was a tail mounted stinger. This proprietary stinger system was constructed of carbon fibre and designed for maximum rigidity and stability.

Both the total field magnetometer and three component vector magnetometer were located within the tail stinger.



### 3.6 *Total Field Magnetometer*

Total field magnetic data readings for the surveys were made using a Scintrex Cesium Vapour CS-2 Magnetometer. This precision sensor has the following specifications:



- Model Scintrex Cesium Vapour CS-2 Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.001nT
- Operating Range 15,000nT to 100,000nT

### 3.7 *Three Component Vector Magnetometer*

Three component vector magnetic data readings for the survey were made using a Develco Fluxgate Magnetometer. This precision sensor has the following specifications:

- Model Develco Fluxgate Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.1nT
- Operating Range -100,000nT to 100,000nT

### 3.8 *Aircraft Magnetic Compensation*

At the start of the survey, the system was calibrated for reduction of magnetic heading error. The heading and manoeuvre effects of the aircraft on the magnetic data was removed using an RMS Automatic Airborne Digital Compensator (AADC II).

Calibration of the aircraft heading effects were measured by flying a series of pitch, roll and yaw manoeuvres at high altitude while monitoring changes in the three axis magnetometer and the effect on total field readings. A 26 term model of the aircraft magnetic noise covering permanent, induced and eddy current fields was determined. These coefficients were then applied to the data collected during the survey in real-time.

UTS static compensation techniques were also employed to reduce the initial magnetic effects of the aircraft upon the survey data.

### 3.9 Diurnal Monitoring Magnetometer

A base station magnetometer was located in a low gradient area beyond the region of influence of any man made interference to monitor diurnal variations during the survey.

The specifications for the magnetometer used are as follows:

- Model Scintrex Envimag
- Resolution 0.1 nT
- Sample interval 5 seconds (0.2 Hz)
- Operating range 20,000nT to 90,000nT
- Temperature -20°C to +50°C



### 3.10 Barometric Altitude

An Air DB barometric altimeter was installed in the aircraft so as to record and monitor barometric height and pressure. The data was recorded at 0.10 second intervals and is used for the reduction of the radiometric data.

- Model Air DB barometric altimeter
- Accuracy 2 metres
- Height resolution 0.1 metres
- Height range 0 - 3500 metres
- Maximum operating pressure: 1,300 mb
- Pressure resolution: 0.01 mb
- Sample rate 10 Hz

### 3.11 *Temperature and Humidity*

Temperature and humidity measurements were made during the survey at a sample rate of 10Hz. Ambient temperature was measured with a resolution of 0.1 degree Celsius and ambient humidity to a resolution of 0.1 percent.

### 3.12 *Radiometric Data Acquisition*

The gamma ray spectrometer used for the survey was capable of recording 256 channels and was self stabilising in order to minimise spectral drift. The detectors used contain thallium activated sodium iodide crystals.

Thorium source measurements were made each survey day to monitor system resolution and sensitivity. A calibration line was also flown at the start and end of each survey day to monitor ground moisture levels and system performance.

Spectrometer model                      Exploranium GR820

- Detector volume                      32 litres
- Sample rate                              1 Hz



## **4 PROJECT MANAGEMENT**

Monax Mining Limited

M. Schwarz

UTS Geophysics Perth Office

Nino Tuffili  
David Abbott  
Barrett Cameron  
Rebecca Steadman

## **5 DATA PROCESSING PROCEDURES**

### **5.1 *Data Pre-processing***

The raw survey data was loaded from the field tapes and the recorded data trimmed to the correct survey boundary extents. Any survey lines subsequently re flown were removed from the dataset.

At the commencement of each acquisition flight, all the instrumentation clocks were synchronized to local time, and the error and latency of each instrument in providing its data measurement calculated. The results of these latency measurements were recorded into a synchronisation file, and the results used to assign GPS positions to the magnetic, radiometric and elevation data. As a result of the physical separation of the sensors, a small residual offset still exists between instrument timings.

To compensate for this residual parallax error, an adjustment was made to the instrument clocks. The magnetic and radar altimeter data was adjusted by 0.600 seconds, and the radiometric data was adjusted by 1.375 seconds for each flight.

The synchronized, parallax corrected data was then exported as located ASCII data.



## **5.2 Magnetic Data Processing**

The diurnal base station data was checked for spikes and steps, and suitably filtered prior to the removal of diurnal variations from the aircraft magnetic data.

The filtered diurnal measurements were subtracted from the diurnal base field and the residual corrections applied to the survey data by synchronising the diurnal data time and the aircraft survey time. The average diurnal base station value was added to the survey data.

The X and Y positioning of the data was then checked for spikes before applying the IGRF correction. Any spikes in the positions were manually edited. The updated IGRF 2005 correction was calculated at each data point (taking into account the height above sea level).

This regional magnetic gradient was subtracted from the survey data points.

Tie line levelling was applied to the data by least squares minimisation, using a polynomial fit of order 0, of the differences in magnetic values at the crossover points of the survey traverse and tie line data.

In order to remove any residual long wavelength variations in the tie line levelled data along the traverse lines, polynomial levelling was then applied.

Final micro-levelling techniques were then selectively applied to the tie line levelled data to remove minor residual variations in profile intensity

Located and gridded data were generated from the final processed magnetic data.

### **5.3 Radiometric Data Processing**

Statistical noise reduction of the 256 channel data was performed using the Maximum Noise Fraction (MNF) method described by Dickson and Taylor (1998). This method constructs a noise covariance model from the survey data, which is then decorrelated and re-scaled so that the model has unit variance and no channel-to-channel correlation.

A principal component transformation of the noise-whitened data is performed, and the number of components to be saved is determined by ranking the eigenvectors by signal-to-noise ratio. The signal-rich components are retained, and the spectral data reconstructed without the noise fraction.

Channels 30-250 only are noise-cleaned, as these contain the regions of interest and are not dominated by the lower end of the Compton continuum. The energy spectrum between the potassium and thorium peaks was recalibrated from the noise-cleaned 256 channel measurements.

The aircraft background spectrum and the scaled unit cosmic spectrum were then subtracted from the 256 channel data. This 256 channel data was then windowed to the 5 primary channels of total count, potassium, uranium, thorium and low-energy uranium. Dead time corrections were then applied to the data. Radon background removal was performed using the Minty Spectral Ratio method (1992).

The radar altimeter data was corrected to standard temperature and pressure, and height corrected spectral stripping was then applied to the windowed data. Height attenuation corrections based on the STP radar altimeter were then performed to remove any altitude variation effects from the data.

The corrected count rate data was then converted to ground concentrations for potassium, uranium and thorium (sensitivity coefficients are supplied in Appendix E).

Final micro-levelling techniques were then selectively applied to the tie line levelled data to remove minor residual variations in profile intensities. Located and gridded data were generated from the final processed radiometric data.

#### **5.4    *Digital Terrain Model Data Processing***

The radar altimeter data was subtracted from the GPS altimeter data. The separation distance between the GPS antenna and the radar altimeter of 1.4 metres was subtracted from the digital terrain data.

The digital terrain data thus derived was tie line levelled and gridded. Tie line levelled data was then examined and selectively microlevelled to produce a grid without line dependent artifacts.

**For further information concerning the survey flown, please contact the following office:**

**Head Office Address:**

UTS Geophysics  
Fauntleroy Avenue, Perth Airport  
REDCLIFFE WA 6104

Tel:    +61 8 9479 4232  
Fax:    +61 8 9479 7361

**Postal Address:**

UTS Geophysics  
P.O. Box 126  
BELMONT WA 6984

**Quoting reference number: A763**

## APPENDIX A - LOCATED DATA FORMATS

### MAGNETIC LOCATED DATA

FIELD	FORMAT	DESCRIPTION	UNITS
1	I8	LINE NUMBER	
2	I4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (WGS84)	degrees
8	F12.6	LONGITUDE (WGS84)	degrees
9	F12.2	EASTING (MGA94)	metres
10	F12.2	NORTHING (MGA94)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	F8.1	TERRAIN HEIGHT (WGS84)	metres
14	F10.2	RAW MAGNETIC INTENSITY	nT
15	F10.2	DIURNAL CORRECTION	nT
16	F10.2	IGRF CORRECTION	nT
17	F10.2	DRN AND IGRF CORRECTED TMI	nT
18	F10.2	FINAL TOTAL MAGNETIC INTENSITY	nT

### RADIOMETRIC LOCATED DATA

FIELD	FORMAT	DESCRIPTION	UNITS
1	I8	LINE NUMBER	
2	I4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (WGS84)	degrees
8	F12.6	LONGITUDE (WGS84)	degrees
9	F12.2	EASTING (MGA94)	metres
10	F12.2	NORTHING (MGA94)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	I5	LIVE TIME	milli sec
14	F8.1	PRESSURE	hPa
15	F6.1	TEMPERATURE	Degrees Celcius
16	F6.1	HUMIDITY	percent
17	I6	TOTAL COUNT (RAW)	Counts/sec
18	I6	POTASSIUM (RAW)	Counts/sec
19	I6	URANIUM (RAW)	Counts/sec
20	I6	THORIUM (RAW)	Counts/sec
21	I6	COSMIC (RAW)	Counts/sec
22	F8.1	TOTAL COUNT (CORRECTED)	Counts/sec
23	F8.1	POTASSIUM (CORRECTED)	Counts/sec
24	F8.1	URANIUM (CORRECTED)	Counts/sec
25	F8.1	THORIUM (CORRECTED)	Counts/sec
26	F9.4	DOSE RATE	nGy/hr
27	F9.4	POTASSIUM GRND CONCENTRATION	%
28	F9.4	URANIUM GRND CONCENTRATION	ppm
29	F9.4	THORIUM GRND CONCENTRATION	ppm

## GRIDDED DATASET FORMATS

Gridding was performed using a bicubic spline algorithm.

The following grid formats have been provided:

- ER-Mapper format

## LINE NUMBER FORMATS

Line numbers are identified with a six digit composite line number and have the following format - ALLLLB, where:

A	Survey area number
LLLL	Survey line number 0001-8999 reserved for traverse lines 9001-9999 reserved for tie lines
B	Line attempt number, 0 is attempt 1, 1 is attempt 2 etc..

## UTS FILE NAMING FORMATS

Located and gridded data provided by UTS Geophysics uses the following 8 character file naming convention to be compatible with PC DOS based systems.

File names have the following general format - JJJAABB.EEE, where:

JJJJ	UTS Job number
AA	Area number if the survey is broken into blocks
BB	M     Magnetic data R     Radiometric data TC    Total count data K     Potassium counts U     Uranium counts Th    Thorium counts DT    Digital terrain data
EEE	File name extension LDT   Located digital data file FMT   Located data format definition file ERS   Ermapper gridded data header file Ermapper data portion has no extension GRD   Geosoft gridded data file

## APPENDIX B - COORDINATE SYSTEM DETAILS

Locations for the survey data are provided in both geographical latitude and longitude and Universal Transverse Mercator metric projection coordinate systems.

<b>WGS84</b>	World Geodetic System 1984
Coordinate Type	Geographical
Semi Major Axis	6378137m
Flattening	1/298.257223563
<b>MGA94</b>	Map Grid of Australia 1994
Coordinate type	Universal Transverse Mercator Projection Grid
Geodetic datum	Geocentric Datum of Australia
Semi major axis	6378137m
Flattening	1/298.257222101

## Dingo Hill Project

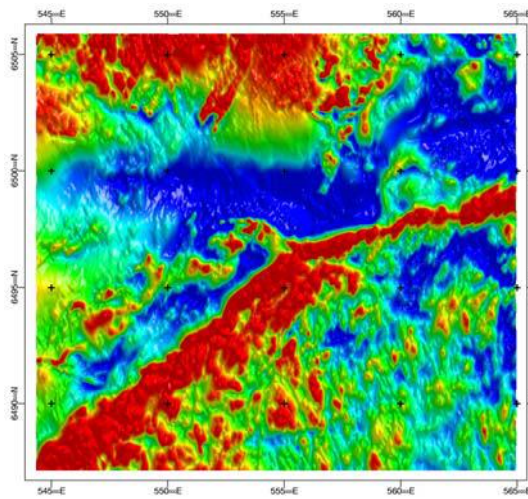
### COORDINATES REPORT

Job ID code: A76303  
Client: Monax Mining Limited  
Job: Dingo Hill  
Coordinates MGA94 Zone: 53  
Include Point: 0.0 0.00

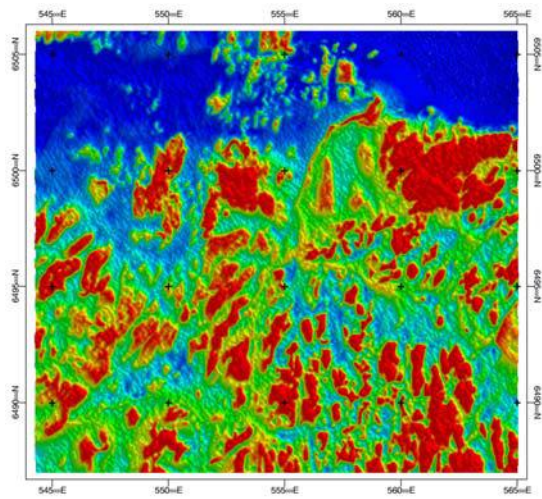
#### Surround

544400.000	6505900.000
564900.000	6505900.000
564900.000	6487100.000
544400.000	6487100.000

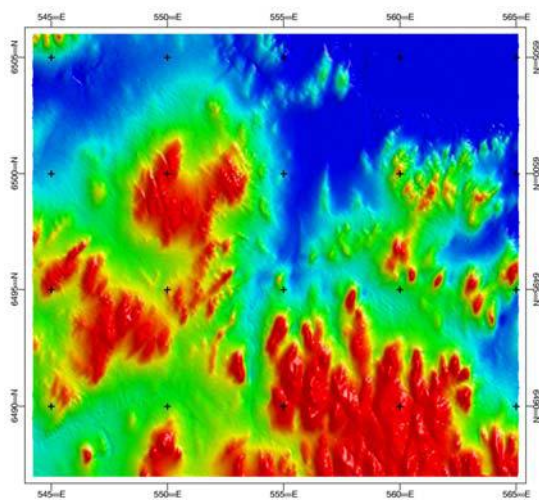
## Dingo Hill Project



Total Magnetic Intensity



Radiometric Total Count



Digital Terrain Model



## Dingo Hill Project

### VH-CYU

#### Magnetic Processing Parameters

IGRF date - 2006.98  
IGRF mean value - 57946.35 nT  
Magnetic inclination - -64.21 deg  
Magnetic declination - 6.56 deg  
Diurnal base value - 58540.00 nT

#### Radiometric Processing Parameters

##### Height Attenuation Coefficients

Total Count: -0.0074  
Potassium: -0.0094  
Uranium: -0.0084  
Thorium: -0.0074

##### Cosmic Correction Coefficients

Total Count: 1.051  
Potassium: 0.047  
Uranium: 0.046  
Thorium: 0.055

##### Aircraft Background Coefficients

Total Count: 62.96  
Potassium: 8.34  
Uranium: 2.57  
Thorium: 1.11

##### Sensitivity Coefficients

Total Count: 39.0 cps/dose rate  
Potassium: 154.0 cps/%k  
Uranium: 16.3 cps/ppm  
Thorium: 7.8 cps/ppm

**Final Reduction** - All data reduced to STP height datum 50m

**Exploration Office**  
PO Box 247  
Export Park SA 5950

T) +61 8 8375 3900  
F) +61 8 8375 3999

ABN 96 110 336 733



# **MONAX MINING LIMITED**

---

## **Combined Annual Technical Report**

**EL 3394 Dingo Hill  
EL 3788 Dingo Hill West**

**For the period 15 August 2007 – 14 August 2008**

**Tenure holder | Monax Mining Limited  
Compiled by | Greg Swain, Carolyn Grant**

**Tenement operator | Monax Mining Limited  
Report date | 16 February 2009**

**Distribution:     Primary Industries & Resources South Australia (digital)  
                         Monax Mining Limited (digital copy + hard copy)**

This report and its contents are confidential. All rights to the report and its contents including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report remain the property of Monax Mining Limited. No part of this report nor the information contained in it may be disclosed to any person without the consent of Monax Mining Limited. No Part of this report nor any of the information contained in it may be reproduced (including by being stored in any form), transmitted, published or used for any purpose without the consent of Monax Mining Limited.

## Summary

This third annual report details the work undertaken by Monax Mining Limited on EL 3394 (Dingo Hill) & EL 3788 (Dingo Hill West) during the period 15 August 2007 – 14 August 2008.

EL 3394 is located in the Gawler Ranges in the central Gawler Craton, 450km northwest of Adelaide and covers an area of 517 km<sup>2</sup>. The target in this area is primarily Epithermal-Gold/Polymetallic style mineralisation. EL 3788, which covers an area of 195km<sup>2</sup> adjacent to the west of EL 3394, was granted on 28 May 2007 for an initial one year period and was acquired to further consolidate the tenement holding over an area of interpreted hydrothermal alteration prospective for epithermal style mineralisation.

No field based exploration was conducted during the reporting period. Work conducted during this period included the submission of a Round 5 PACE collaborative drilling proposal which was accepted for a funding amount of \$75,000 in February 2008.

## Keywords

EL3394, EL3788, Dingo Hill, Epithermal Gold/Polymetallic, Gawler Range Volcanics

## Table of Contents

	Page
1. Introduction .....	4
2. Tenure.....	4
3. Geology.....	4
4. Exploration Rationale.....	4
5. Previous Exploration .....	5
6. Exploration Conducted.....	6
7. Expenditure.....	7
8. Conclusions .....	7

## List of Figures

Figure 1	EL3394_3788_2008_Figure1_Tenement Location
Figure 2	EL3394_3788_2008_Figure2_Total Magnetic Intensity
Figure 3	EL3394_3788_2008_Figure3_Bouger Gravity
Figure 4	EL3394_3788_2008_Figure4_Soil Chemistry Anomaly
Figure 5	EL3394_3788_2008_Figure5_Detailed TMI

## List of Tables

Table 1	Tenement Details
Table 2	Expenditure for EL 3394 – Dingo Hill
Table 3	Expenditure for EL 3788 – Dingo Hill West

## List of Appendices

Appendix 1	PACE Proposal	EL3394_2008_Appendix1_PACE Proposal
------------	---------------	-------------------------------------

## Digital File List

## File size & type

EL3394_3788_2008_A_01_ReportBody.pdf	80KB
EL3394_3788_2008_Figure1_Tenement Location.pdf	177KB
EL3394_3788_2008_Figure2_Total Magnetic Intensity.pdf	411KB
EL3394_3788_2008_Figure3_Bouger Gravity.pdf	124KB
EL3394_3788_2008_Figure4_Soil Chemistry Anomaly.pdf	174KB
EL3394_3788_2008_Figure5_Detailed TMI.pdf	315KB
EL3394_2008_Appendix1_PACE Proposal .pdf	10MB

## 1. Introduction

EL 3394 (Dingo Hill) and EL 3788 (Dingo Hill West) occupy a combined area of 711km<sup>2</sup> within the Gawler Ranges, approximately 90 km south of Kingoonya and 230km northwest of Pt Augusta in the central Gawler Craton, South Australia (**Figure 1**). The most prominent geological feature crossing EL 3394 and EL 3788 is a volcanic flow front of upper Gawler Range Volcanics (GRV) over older lower GRV. This volcanic flow front is evident in both the Total Magnetic Intensity (TMI) and Gravity data (**Figures 2 & 3**). A zone of low magnetic intensity to the northwest of the volcanic flow front is interpreted as the focus of fluid flow and alteration of the host GRV. This zone of alteration has minor anomalous soil geochemistry and is prospective for Epithermal-Gold/Poly-metallic style mineralisation, however remains inadequately tested.

## 2. Tenure

Tenure details for ELs 3394 & 3788 are detailed below in **Table 1**

EL	Name	Area (m <sup>2</sup> )	Grant Date	Expiry Date
3394	Dingo Hill	516	15 August 2005	14 August 2009
3788	Dingo Hill West	195	28 May 2007	27 May 2009

## 3. Geology

Outcropping and sub-cropping basement geology at Dingo Hill is comprised of Gawler Range Volcanics (GRV). Upper GRV in the southeast of the tenement overlies lower GRV, which crop out in the northwest section. Outcrop is relatively good, with only a thin veneer of Quaternary sediments covering bedrock in most places.

A notable feature in both the geology and geophysics is the presence of a prominent northeast trending volcanic flow boundary. Outcropping upper GRV in the southeast of the tenement is relatively fresh and unaltered, while lower GRV to the northwest is more deeply weathered, preserving evidence of hydrothermal chlorite-sericite alteration and minor quartz veining, including primary lithophysae volcanic textures. The zone of low magnetic intensity in the central north region of the tenement (**Figure 2**) is interpreted as the focus of hydrothermal fluid flow and alteration, and is conceivably controlled by subtle northwest-southeast trending fault/shear structures.

## 4. Exploration Rationale

Iron Oxide Copper-Gold-Uranium mineralisation in the Olympic Copper Gold province, and Gold mineralisation within the Central Gawler Gold province, is associated with the ca. 1595-1575 Ma Gawler Range Volcanics and Hiltaba Suite igneous event. Traditionally, exploration has been focused on the eastern and western margins of the GRV where potentially mineralised basement rocks are not covered by thick piles of unaltered GRV. However, interpretation of new geophysical data suggests that alteration zones exist in the central regions of the Gawler Range Volcanic Domain.

The pervasive zone of low magnetic intensity potentially represents hydrothermal fluid flow alteration and destruction of magnetite in the host lower GRV lithology. It is interpreted that the unaltered upper GRV acted as an impermeable cap to rising fluids which then migrated laterally. Remnant northwest fault/shear zone traces (which trend toward the Yerda Shear Zone) in the magnetics (**Figure 2**) conceivably acted as fluid conduits, representing targets for mineralisation. A subtle poly-metallic geochemical anomaly identified from a grid soil sampling survey over the zone of alteration also represents a drill target for mineralisation (**Figure 4**).

## 5. Previous Exploration

Relatively little intensive exploration has been conducted in the Dingo Hill area, which began in 1971 with a reconnaissance by K.K. Euler. The targets for explorers were uranium, diamonds, base metals or gold.

Afmeco Pty Ltd (Afmeco) searched for uranium in the western sector of the tenement from 1980 to 1983, drilling 11 percussion and diamond core holes. A further 13 percussion holes tested ground magnetic anomalies for the presence of kimberlites, but encountered magnetic Gawler Range Volcanics. Utah Development Company (Utah) explored the eastern sector of Dingo Hill from 1980 to 1982, analysing samples for base metals, arsenic and nickel. Utah also examined stream gravel samples for kimberlite indicators.

From 1988 to 1990, BHP Gold Mines Ltd (BHP) explored the entire tenement area for gold, undertaking regional bulk leach extractable gold (BLEG) stream sediment surveys. Some low-order gold anomalies were followed up in the northern sector. Western Mining Corporation Ltd (WMC) explored the southern sector of Dingo Hill for base and precious metals between 1992 and 1995. Follow-up drilling included three RC holes and one diamond core hole. Helix Resources NL targeted gold and base metals in the northern part of the tenement in 1995-96. Earlier-reported geochemical anomalies could not be substantiated.

Homestake Gold of Australia Ltd undertook regional calcrete sampling in a search for gold in the southern part of the tenement from 1996 to 1999. Aurora Gold (WA) Pty Ltd explored for gold and base metals in 1997-98. Calcrete sampling indicated low-order gold, arsenic and base metal anomalies, but these did not generate targets worthy of further work.

Previous exploration conducted on EL 3394 by Monax Mining comprised a helicopter based ground gravity survey. The survey was conducted to improve the resolution of the existing PIRSA Bouger Gravity data. A total of 328 stations were taken on a 1000x1000m spaced grid. The survey was conducted by Daishsat Geodetic Surveyors. During late October-early November 2006, a detailed aeromagnetic and radiometric survey was flown over EL 3394 on 100m line spacing, totalling 4,292 line km.

During 2006, 10 altered volcanic rock chips (DH01-DH10) were sampled around an area of increased radiometrics in the northeast area of the Exploration Licence. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. A geochemical soil sample survey was completed on a grid covering the general area of the interpreted low magnetic intensity alteration zone. This area is characterised by a general cover of Quaternary sediments and suggests that basement is more deeply eroded and/or weathered. Subtle anomalies were reported from elements including Au, Co, Cu, Pt, As, Ag, in the central region of the survey (e.g. **Figure 4**). This subtle chemical anomaly may be representative of epithermal poly-metallic mineralisation below cover. A further 11 rock chip

samples (DHR01-DHR11) were taken in conjunction with this geochemistry soil survey program. No significant results were reported.

Petrology of 4 rock chip samples (DH2, 5, 9, 10) of altered volcanics was completed by Pontifex & Associates. Samples were confirmed to be altered acid volcanics, characteristic of GRV. DH2 and DH9 reported sericite alteration and limonite staining. Sample DH10 was interpreted to represent a crystal-vitric tuff. There was no report of sulphide mineralisation.

## **6. Exploration Conducted**

No field based exploration was conducted during the reporting period. A Round 5 PACE collaborative drilling proposal was accepted to the funding amount of \$75,000 in February 2008. Monax has continued to review historical geological information and detailed geophysics. The detailed 100m line spaced airborne magnetics has greatly improved resolution (**Figure 5**) and aided geological interpretations. Planned field exploration was unable to be completed due to field exploration commitments on other licences. A copy of the Round 5 PACE proposal is included in **Appendix 1**.

## 7. Expenditure

Expenditure for the period 15 August 2007 – 14 August 2008 is detailed in **Tables 2 & 3**

**Table 2** Expenditure for EL 3394 – Dingo Hill

<b>Operations</b>	<b>Cost \$</b>
Consumables	317
Data mapping	118
Depreciation	1,453
Licence renewal - tenement	80
Legal fees	330
Insurance - field equipment	278
Aboriginal heritage	201
OH&S	201
Rent - Tenement	3,186
Tenement administration	33,624
<b>Total</b>	<b>39,788</b>
+ previous expenditure	\$143,296
<b>Total cumulative expenditure for Licence</b>	<b>\$183,084</b>

**Table 3** Expenditure for EL 3788 – Dingo Hill West

<b>Operations</b>	<b>Cost \$</b>
Data mapping	118
Depreciation	1,143
Licence renewal - tenement	80
Insurance - field equipment	278
Aboriginal heritage	201
OH&S	201
Rent - tenement	1,211
Tenement administration	13,161
<b>Total</b>	<b>16,393</b>
+ previous expenditure	0
<b>Total cumulative expenditure for Licence</b>	<b>\$16,393</b>

## 8. Conclusions

Exploration planned for the next six month period includes detailed geological mapping. Understanding the geological context of the regional outcropping quartz vein systems is required to accurately plan PACE diamond drilling program. The PACE drilling is required to be completed before June 2009. While the proposed epithermal mineralisation model is relatively conceptual, Monax maintains a positive focus on this project.



# Figures

**Monax Mining Limited**

**Combined Annual Technical Report**

**ELs 3394 Dingo Hill & 3788 Dingo Hill West**

**15 August 2007 – 14 August 2008**

**Table of Contents - Figures**

<b>Figure 1</b>	Tenement Location
<b>Figure 2</b>	Total Magnetic Intensity
<b>Figure 3</b>	Bouger Gravity
<b>Figure 4</b>	Soil Chemistry Anomaly
<b>Figure 5</b>	Detailed TMI

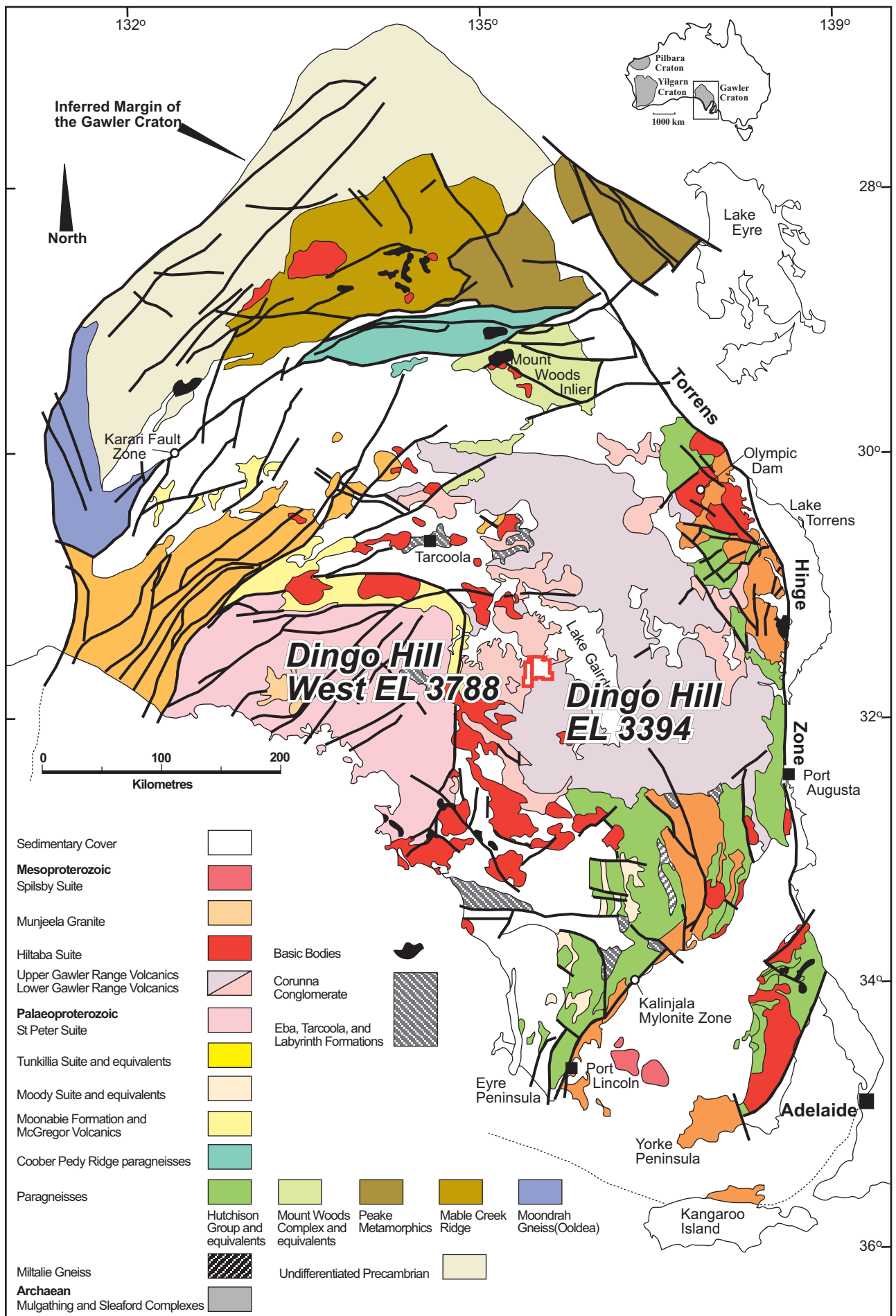
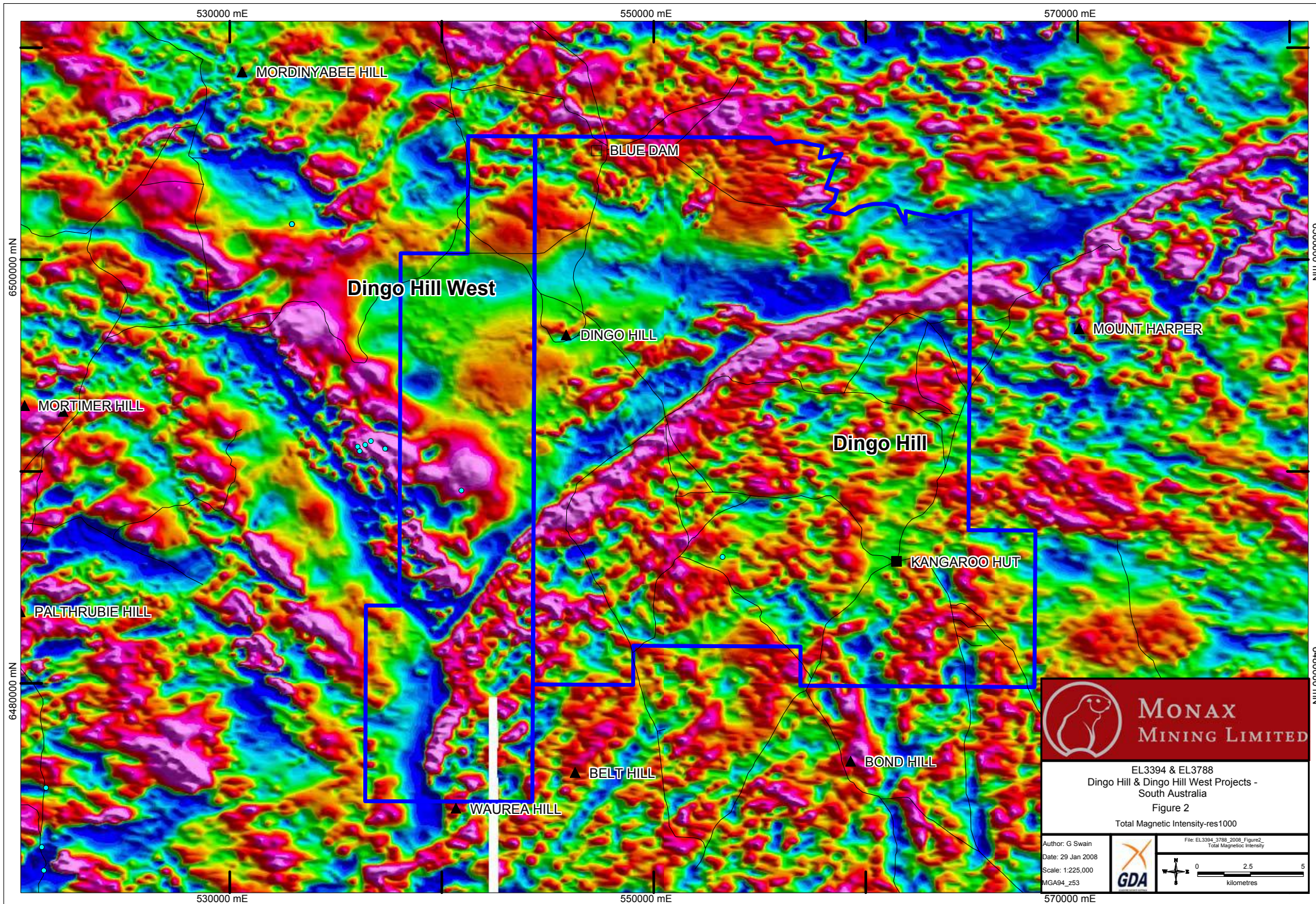
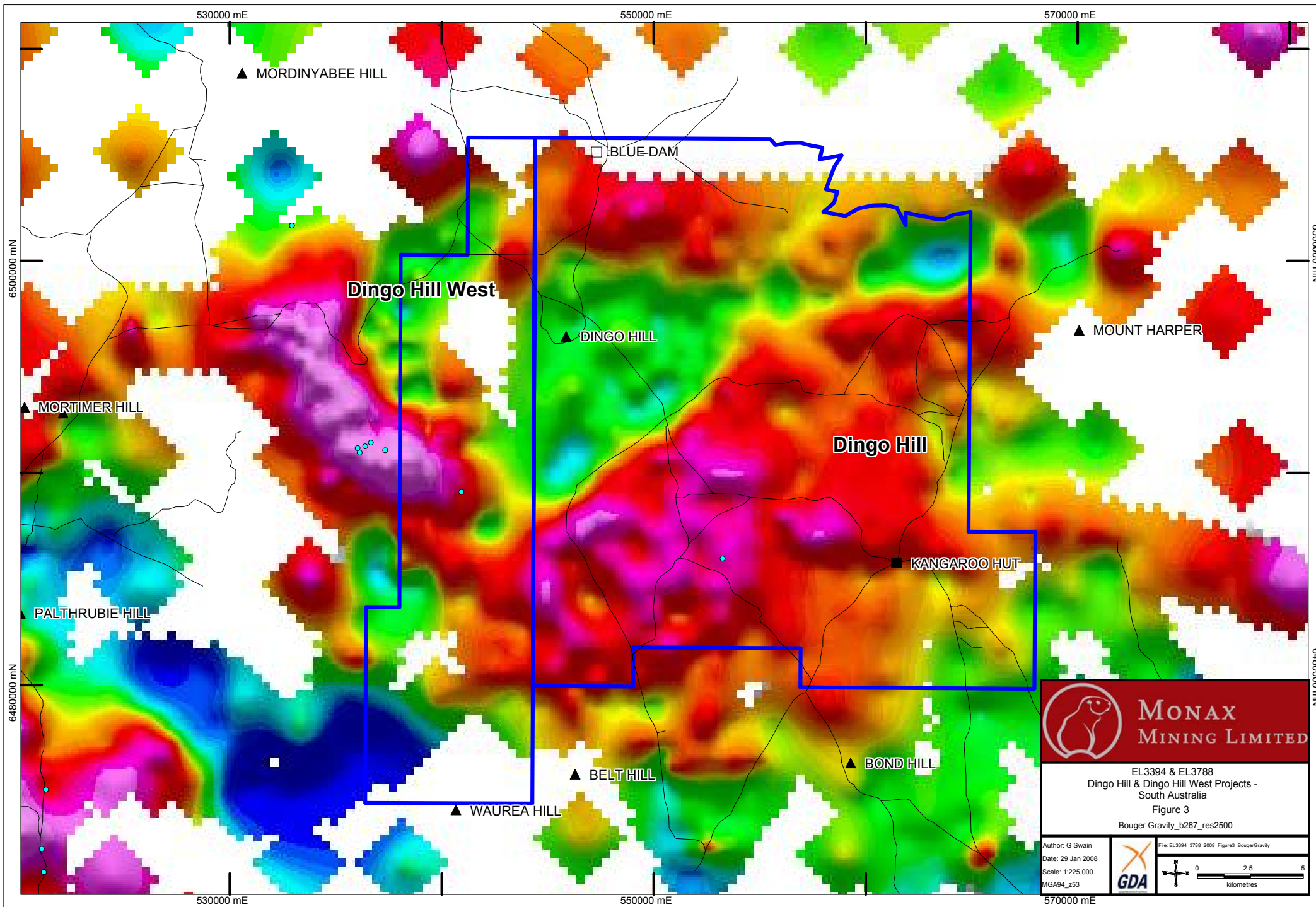


Figure 1.









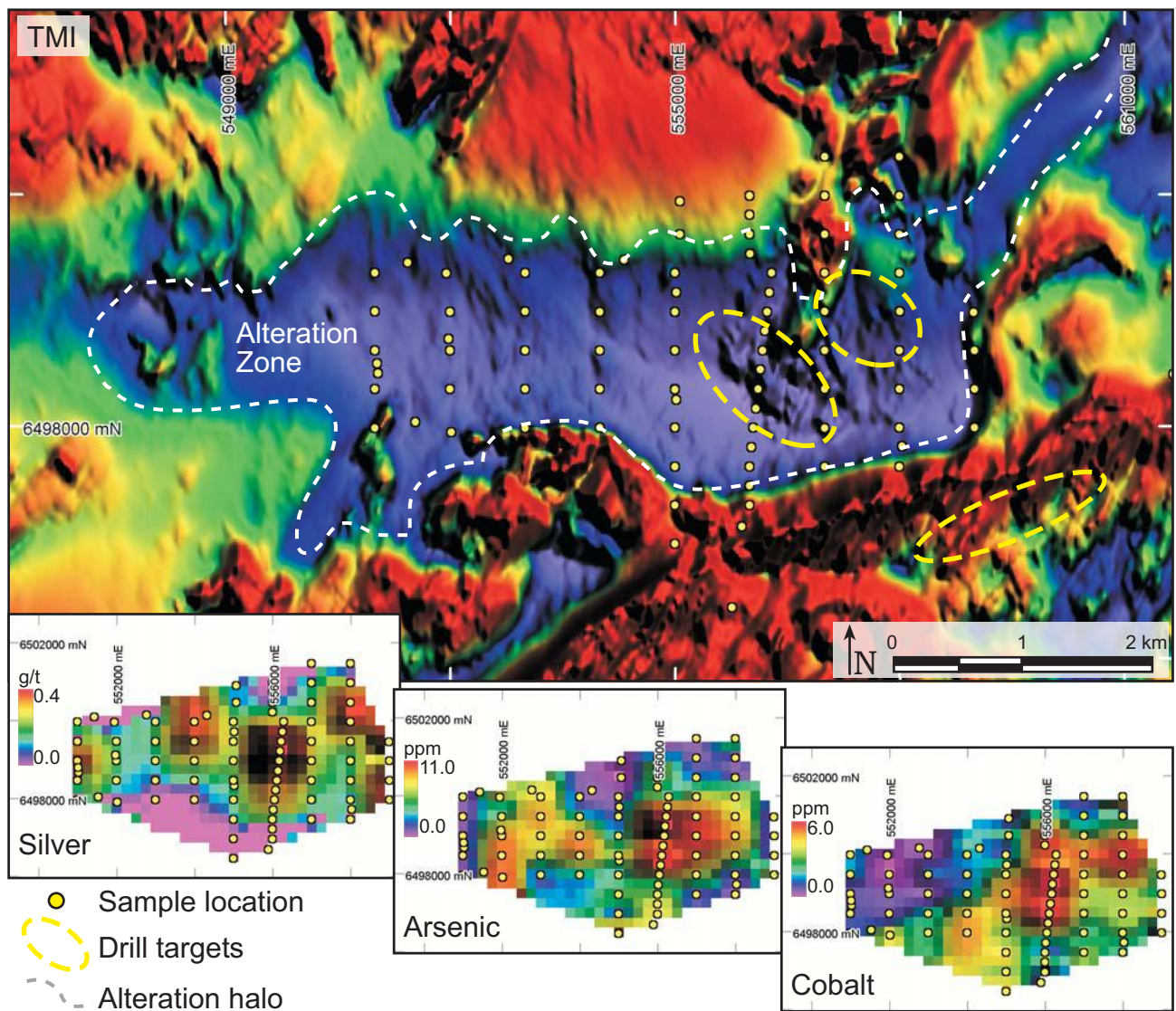
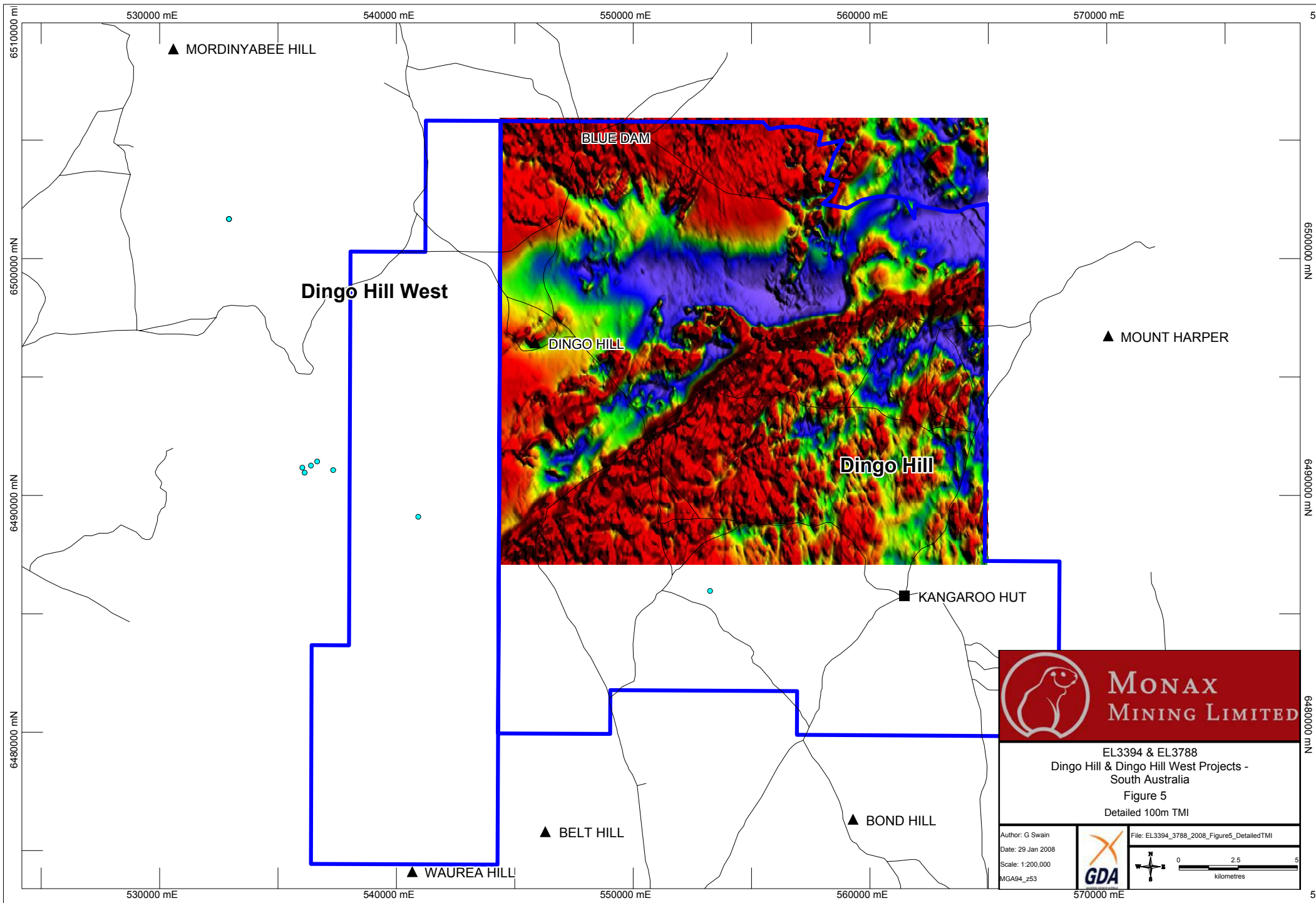


Figure 4. Polymetallic low level geochemical anomaly from soil sampling over demagnetised zone of interpreted hydrothermal fluid flow and alteration.



**Monax Mining Limited**

**Combined Annual Technical Report**

**ELs 3394 Dingo Hill & 3788 Dingo Hill West**

**15 August 2007 – 14 August 2008**

**Table of Contents – Appendices**

**Appendix 1** PACE Proposal

EL3394\_2008\_Appendix1\_PACE Proposal



# DRILLING COLLABORATION BETWEEN PIRSA AND INDUSTRY

Round 5 - 2008

## PROJECT PROPOSAL MINERAL EXPLORATION

<b>PROJECT TITLE</b>	Dingo Hill Epithermal Gold System
<b>PROJECT PROPONENT</b>	Monax Mining Limited
<b>ADDRESS AND REGISTERED OFFICE OF PROJECT PROPONENT</b>	Exploration Office: 11 A Croydon Rd, Keswick, 5035 Registered Office: 140 Greenhill Road, Unley, 5061
<b>PROJECT PROPONENT ACN</b>	<b>110 336 733</b>
<b>PROJECT PROPONENT ABN</b>	<b>96 110 336 733</b>
<b>PROJECT PROPONENT REGISTERED FOR GST? Yes/No</b>	Yes
<b>EXPLORATION LICENCE NO.</b>	<b>EL 3394</b>
<b>EXPLORATION LICENCE OPERATOR</b>	<b>Monax Mining Limited</b>
<b>EXPLORATION LICENCE HOLDER</b>	<b>Monax Mining Limited</b>
<b>SUMMARY PROJECT DESCRIPTION</b>	
<p>The Central Gawler Gold Province contains a variety of gold mineralisation styles varying from structural-lithological traps (e.g. Tarcoola), to shear zone hosted (e.g. Tunkillia). However, there is mounting evidence that a new style of epithermal gold mineralisation may occur around the margins of the Gawler Range Volcanics and at the contact between the Upper and Lower units. Examples include epithermal textures and alteration from the Kolendo Vent (Crooks et al., 1996), Weednanna (Ferris and Daly, 2002) and Parkinson Dam prospects (Smith, 2006). Previously suggested epithermal style alteration has been confined to the southern margin of the GRV and within the Yarlbirinda Shear Zone within the Central Gawler Gold Province. However, the same lithological, structural setting and crustal level occurs around the entire margin suggesting further potential for this style of alteration and mineral deposition.</p> <p>The Dingo Hill tenement lies on the western shores of Lake Gairdner, close to the western margin of the Gawler Range Volcanics (Figure 1). The tenement covers the contact between the Upper and Lower Gawler Range Volcanics. The flow margin of the Upper Gawler Range Volcanics can be clearly seen as a NE trending arcuate magnetic high (Figure 1). It appears as though this flow unit, a densely welded massive dacite, has acted as an impermeable barrier to hydrothermal fluids which have passed through the more permeable Lower Gawler Range Volcanics, a vuggy rhyolite with abundant lithophysa. An extensive alteration zone some 14km by 3km has been mapped on the ground within this unit and is represented by a zone of demagnetisation within the regional magnetics. Preliminary petrology from rock chip samples indicates strong silica-sericite-albite alteration grading to strong sericite-chlorite alteration. Soil sampling over the demagnetised zone has revealed coincident low level anomalous silver-arsenic-cobalt within the most intense zone of</p>	

demagnetisation and alteration, pointing to the polymetallic potential of the prospect.

Since granting of EL 3394 in August 2005, Monax Mining has completed a detailed 1x1km gravity survey and flown a detailed 100m spaced aeromagnetic/radiometric survey. Under a PACE project, this data will be made available to PIRSA with no confidentiality period.

In the event of successful identification of epithermal alteration/mineralisation, this project will likely form part of a joint PMD-CRC, PIRSA, Monax Mining Limited project with the following aims:

- Identify the most likely trap sites (structural and/or chemical) for gold mineralisation through a combination of numerical fluid flow modeling and chemical modeling.
- Determine if the boundary between the Upper and Lower Gawler Range Volcanics is a prospective horizon on a regional scale.
- Determine if regional and/or local structures have a control on localising fluid flow at this boundary.

The three proposed drill holes will provide valuable information in the modelling process and allow targets from the model to be tested.

<b>NUMBER OF HOLES PROPOSED</b>	<b>4</b>
<b>ESTIMATED METRES TO BE DRILLED</b>	<b>1200m (4x300m)</b>
<b>DRILLING METHODS</b>	<b>RC Pre-collar, Diamond</b>
<b>ESTIMATED TOTAL DRILLING COSTS</b> <i>(Direct drilling costs only; specify if exclusive or inclusive of GST)</i>	<b>\$250,000 inc. GST</b>
<b>FUNDING GRANT REQUESTED FROM PIRSA</b>	<b>\$75,000</b>
<b>ESTIMATED PROJECT START DATE AND DURATION</b> <i>(Note: projects should be completed by 30<sup>th</sup> June 2009)</i> Start: May 2008 Duration: 4 weeks	
<b>WHAT OUTPUTS WILL BE DELIVERED?</b>  Drill logs including lithology and stratigraphy All geochemical analyses A comprehensive report on all geological aspects of the drilling program Data from Monax's 1x1 km gravity survey for upload into the PIRSA gravity database Data from Monax's 100m aeromagnetic/radiometric survey for upload into the PIRSA database	
<b>WILL A SHORT PERIOD OF CONFIDENTIALITY BE REQUIRED FOR DRILLING RESULTS &amp; PROPOSAL CONTENTS</b>  No	

#### **FULL PROJECT DESCRIPTION**

See included Project Proposal documentation

## LAND ACCESS

- **Native Title and heritage issues:** An Aboriginal heritage clearance has been conducted and approval has been given to explore in identified areas.
- **Landowner issues:** The landholder has been contacted and has given verbal approval of Monax's planned exploration program.
- **Exploration Work Approval (EWA) or Declaration of Environmental Factors (DEF):** An EWA is currently being prepared for this drill program and will be submitted prior to drilling commencement.

## RISK ANALYSIS

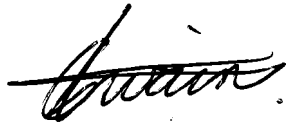
Risk: Lack of available drill rig

Management: Plans are in place to offer a larger contract to the drilling operator, involving other Monax exploration projects.

## PROPONENT CONTACT DETAILS FOR CORRESPONDENCE

Greg Swain  
11A Croydon Rd Keswick 5035  
08 8375 3900  
[gswain@monaxmining.com.au](mailto:gswain@monaxmining.com.au)

## SIGNATURE OF PROPONENT



**DATE: 25 September 2007**

---

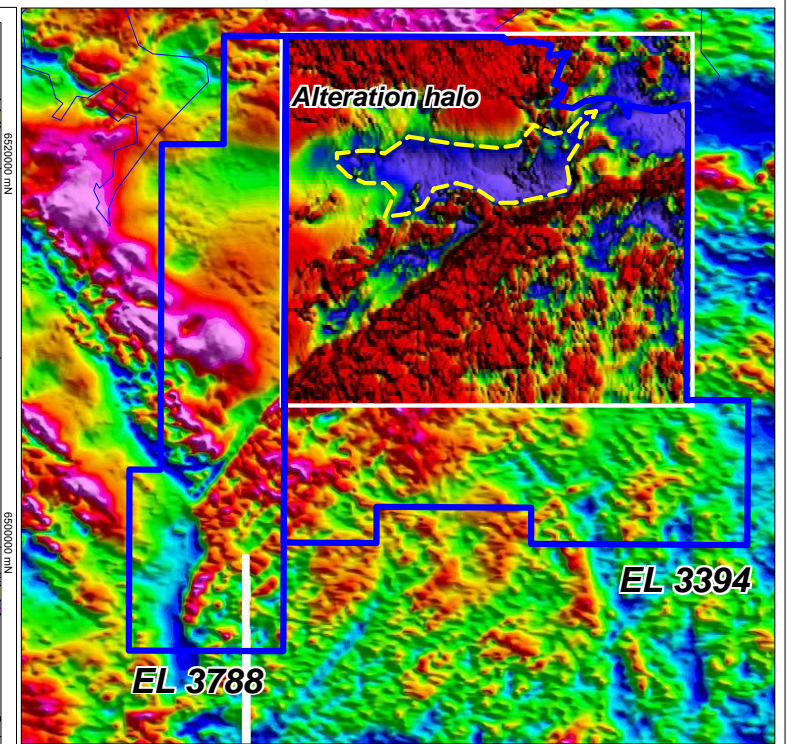
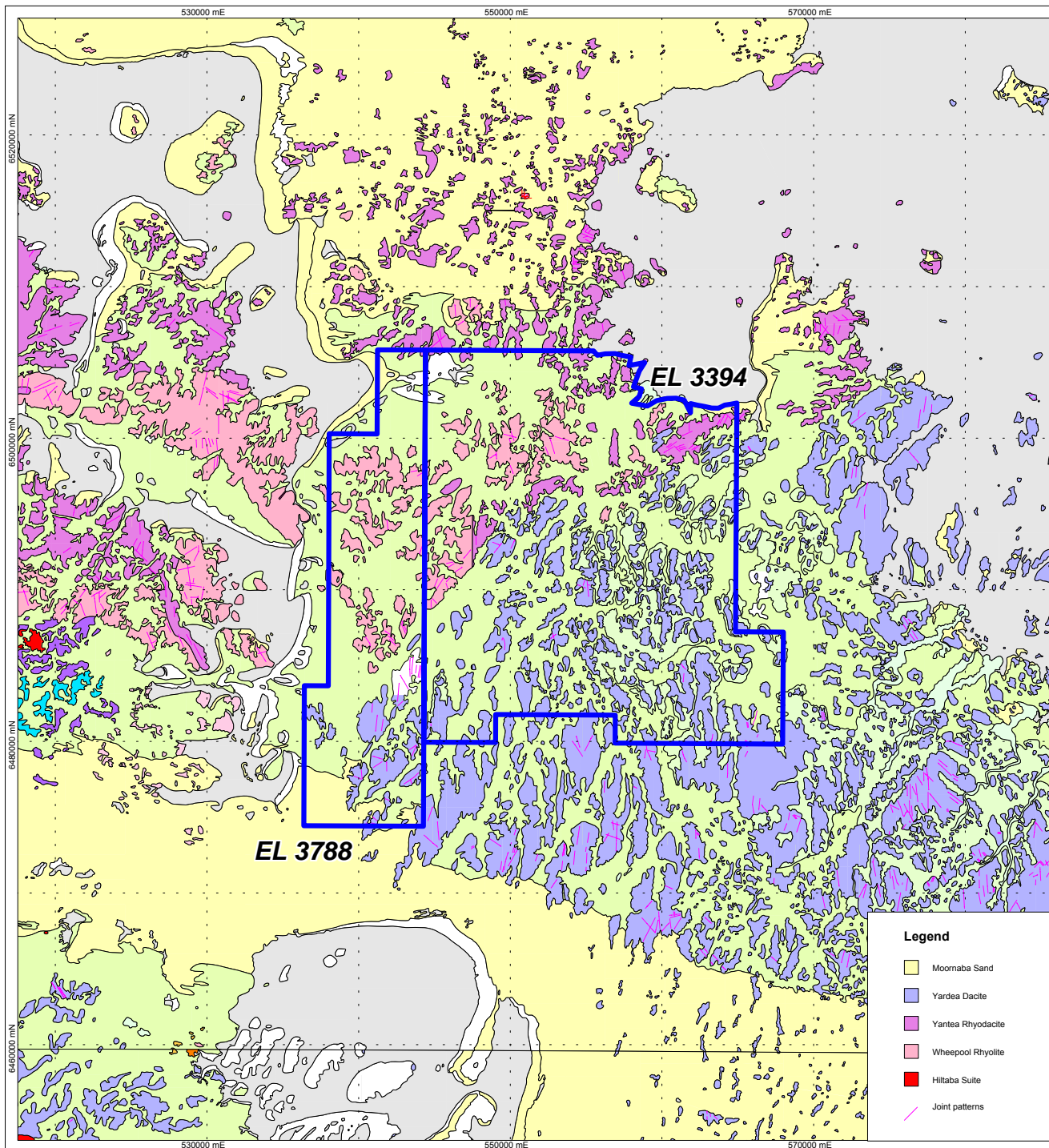
## PIRSA Use Only

**DATE RECEIVED** \_\_\_\_\_

**RECEIVED BY** \_\_\_\_\_

**DATED CONFIRMATION OF RECEIPT BY PROJECT COORDINATOR**

**PROPOSAL NO.** \_\_\_\_\_



EL 3394 - Dingo Hill Project - South Australia  
EL 3788 - Dingo Hill West

Figure 1  
Tenement Location, Geology  
& Total Magnetic Intensity

Author: G Swain

Date: 24 October 2007

Scale:

MGA94\_z53



File: EL3394\_2007\_Tenement Location & TMI







# **MONAX MINING LIMITED**

ABN 96 110 336 733  
Exploration Office  
11A Croydon Road  
Keswick SA 5035  
T) +61 8 8375 3900  
F) +61 8 8375 3999

---

## **PACE Theme 2 – Drilling Collaboration Round 5 - Project Description**

**EL 3394 – Dingo Hill**

**For the period 1 July 2008 – 30 June 2009**

Tenure holder | Monax Mining Limited  
Compiled by | Greg Swain

Tenement operator | Monax Mining Limited  
Report date | 9 November, 2007

Distribution: Primary Industries & Resources South Australia (digital + hard copy)  
Monax Mining Limited (digital + hard copy)

This report and its contents are confidential. All rights to the report and its contents including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report remain the property of Monax Mining Limited. No part of this report nor the information contained in it may be disclosed to any person without the consent of Monax Mining Limited. No Part of this report nor of the information contained in it may be reproduced (including by being stored in any form), transmitted, published or used for any purpose without the consent of Monax Mining Ltd

# **PACE Theme 2 – Drilling Collaboration**

## **Round 5 Project Description**

### **EL 3394 - Dingo Hill Epithermal Gold System**

#### **Introduction**

The Dingo Hill Epithermal Gold project is located within the Central Gawler Gold Province. The Central Gawler Gold Province contains a variety of gold mineralisation styles varying from structural-lithological traps (e.g. Tarcoola), to shear zone hosted (e.g. Tunkillia). There is mounting evidence that a new style of epithermal gold mineralisation may occur around the margins of the Gawler Range Volcanics, and at the contact between the Upper and Lower units. Examples include epithermal textures and alteration from the Kolendo Vent (Crooks et al., 1996), Weednanna (Ferris and Daly, 2002) and Parkinson Dam prospects (Smith, 2006). Previously suggested epithermal style alteration has been confined to the southern margin of the GRV and within the Yarlbirinda Shear Zone within the Central Gawler Gold Province. However, the same lithological, structural setting and crustal level occurs around the entire margin suggesting further potential for this style of alteration and mineral deposition.

#### **Mineralisation Model**

The Dingo Hill tenement lies on the western shores of Lake Gairdner, close to the western margin of the Gawler Range Volcanics (GRV) (Figure 1). The tenement covers the contact between the Upper and Lower GRV (Figure 2). The flow margin of the Upper GRV can be clearly seen as a NE trending arcuate feature. It appears as though this flow unit, a densely welded massive dacite, has acted as an impermeable aquiclude to hydrothermal fluids which have subsequently passed laterally through the more permeable Lower GRV, a vuggy rhyolite with abundant lithophysa. An extensive alteration zone some 14km by 3km has been mapped on the ground within this unit and is represented by a zone of demagnetisation within the regional magnetics (Figure 3). A schematic three-dimensional mineralisation model highlighting the exploration concept is presented in Figure 4. Preliminary petrology from rock chip samples indicates strong silica-sericite-albite alteration grading to strong sericite-chlorite alteration (Figure 5). Soil sampling over the demagnetized zone has revealed coincident low level anomalous silver-arsenic-cobalt within the most intense zone of demagnetization and alteration (Figure 6), pointing to the epithermal polymetallic potential of the prospect.

Since granting of EL 3394 in August 2005, Monax Mining has completed a detailed 1x1km gravity survey and flown a detailed 100m spaced aeromagnetic/radiometric survey (Figure 3). Under a PACE project, this data will be made available to PIRSA with no confidentiality period.

#### **Previous Exploration**

Relatively little historic exploration has been conducted in the Dingo Hill area. K.K. Euler conducted reconnaissance investigations in 1971. The targets for explorers were uranium,

diamonds, base metals or gold.

Afmeco Pty Ltd (Afmeco) searched for uranium in the western sector of the tenement from 1980 to 1983, drilling 11 percussion and diamond core holes. A further 13 percussion holes tested ground magnetic anomalies for the presence of kimberlites, but encountered magnetic GRV. Utah Development Company (Utah) explored the eastern sector of Dingo Hill from 1980 to 1982, analysing samples for base metals, arsenic and nickel. Utah also examined stream gravel samples for kimberlite indicators.

From 1988 to 1990, BHP Gold Mines Ltd (BHP) explored the entire tenement area for gold, undertaking regional bulk leach extractable gold (BLEG) stream sediment surveys. Some low-order gold anomalies were followed up in the northern sector. Western Mining Corporation Ltd (WMC) explored the southern sector of Dingo Hill for base and precious metals between 1992 and 1995. Follow-up drilling included three RC holes and one diamond core hole. Helix Resources NL targeted gold and base metals in the northern part of the tenement in 1995-96. Earlier-reported geochemical anomalies could not be substantiated.

Homestake Gold of Australia Ltd undertook regional calcrete sampling in a search for gold in the southern part of the tenement from 1996 to 1999. Aurora Gold (WA) Pty Ltd explored for gold and base metals in 1997-98. Calcrete sampling indicated low-order gold, arsenic and base metal anomalies, but these did not generate targets worthy of further work.

## **Economic and technical merit**

### **a. Regional geology**

The ca. 1595-1575 Ma Hiltaba Suite/Gawler Range Volcanics igneous event represents a major tectonic/tectonothermal pulse which affected much of the Gawler Craton. Geochemistry and Sm-Nd isotope analysis of the Hiltaba Suite shows that it is highly variable across the Gawler Craton. The suite is dominantly felsic, but intermediate and mafic lithologies are known from the northern Gawler Craton (Andamooka and Olympic Dam areas) and the Moonta-Wallaroo region. Epsilon ( $\epsilon$ ) Nd values for Hiltaba Suite granites within the Nuyts Domain record positive values including +0.11 (Nunyah Rockhole) and +1.19 (Wallala Rock) (Stewart and Foden, 2001), suggesting a depleted mantle source (Rollinson, 1993). Hiltaba Suite samples to the east of the Nuyts Domain record a range of negative  $\epsilon$ Nd values indicating interaction with continental crust. Hiltaba Suite granites forming a convex plutonic belt located close to the margin of the Nuyts Domain (and St Peters Suite) (Central Gawler Gold Province), record positive  $\epsilon$ Nd values, indicative of a juvenile magmatic source.

The eastern belt of Hiltaba Suite granites, in the Olympic Domain (Iron-oxide copper-gold province), have dominantly negative  $\epsilon$ Nd values suggesting derivation from, or interaction with, pre-existing older crust. Forward modeling of potential field data and warming suggest an extensional environment for intrusion of Hiltaba Suite granites within the Olympic Dam region (Direen et al., 2002). Back-arc environments are characterized by extension and crustal thinning, resulting in increased geothermal gradients and the formation of Iron-oxide copper-gold and epithermal style mineralisation. The eastern belt conceivably formed in an extensional back arc environment, while the western belt of Hiltaba Suite potentially formed the western margin of the back arc spreading centre, likewise prospective for epithermal style mineralisation. This region was then later reactivated into a

compressional/transpressional tectonic environment. The Gawler Range Volcanics–Corunna Conglomerate may form the volcano-sedimentary fill to this early spreading centre and acted as a stable block to later orogenesis, preserving the earlier epithermal mineralisation styles.

**b. *Geological plan, geophysics, and schematic mineralisation model***

Outcrop geology comprising the Yardea Dacite, Yantea Rhyodacite and Wheelpool Rhyolite is presented in Figure 2. Existing and new detailed 100m line spaced magnetics and 1x1 km gravity data, with proposed drill hole locations is presented in Figure 3. The conceptual schematic mineralisation model is presented in Figure 4. In this model, interpreted deeper sourced magmatic fluids have migrated up through undifferentiated Archaean to Proterozoic basement, followed by lateral migration through the Lower GRV. The Yardea Dacite conceivably acted as an aquiclude to the hydrothermal fluids.

**c. *Discovery potential***

The geology and alteration within the Dingo Hill target fits many of the criteria of epithermal gold style mineralisation. It consists of distal chlorite altered volcanics ranging to more proximal silica-sericite-albite altered hydrothermal breccia (Figure 5). The zone of demagnetisation also contains a silver-arsenic-cobalt soil anomaly, highlighting the polymetallic mineralisation potential of the epithermal system (Figure 6).

**d. *Strong likelihood of development if discovery made***

The licence area is only 75 km south of Glendambo. The main Kimba to Kingoonya road which runs through the Gawler Ranges, cuts right through the tenement. The target area is surrounded by outcrop, so the target should be well within economic depths of the surface. The area is within a pastoral lease, is outside of any parks or reserves and also outside the Woomera Prohibited Area.

## **Greenfield's merit**

**a. *Potential to increase prospectivity in areas not adequately tested***

Drilling has been limited within the Dingo Hill tenement with only one historical exploration drill hole south of the proposed target. Figure 7 shows the distribution and density of exploration drill holes within and peripheral to the GRV (PIRSA data). Much of the previous exploration drilling has been focused outboard or immediately adjacent to the margins of the GRV. Any discovery of an epithermal gold system within the Central Gawler Gold Province, either on the margins of, or internal to the GRV, will have significant positive repercussions on exploration for this mineralisation concept

**b. *Innovative and sound mineralisation model***

Epithermal style gold/polymetallic mineralisation is a less favored mineralisation model for the western margin of the GRV. Traditionally exploration has been confined to the Yarlbrinda Shear zone, within the Central Gawler Gold Province. However, there is mounting evidence that the entire margin of the GRV may be prospective for this style. The same lithological, structural setting and crustal level occurs around the entire margin. Increasingly, zones of demagnetisation within the GRV are showing epithermal style alteration systems. This proposal aims to test this potential for epithermal mineralisation in the context of the schematic model presented in Figure 4.



**c. Stratigraphy, age and structural information**

The proposed diamond drill holes will provide valuable information on the stratigraphy within the GRV. One drill hole will be specifically designed to drill test the extent of the alteration underneath the Upper GRV. This hole will pass through the Yardea Dacite into the Yantea Rhyodacite and Wheelpool Rhyolite. This drill hole will provide geological information on the contacts between the volcanic units.

**d. Resolves depth to geophysical target or economic basement.**

Any major epithermal gold systems are likely to occur at the base of the GRV or at the interface between the upper and lower units considering that the Upper GRV is likely to have acted as an aquiclude to any hydrothermal systems. Therefore the target depth in the region of the outlined alteration zone is near surface under relatively shallow cover. The depth to target outside of this area is poorly known due to the lack of understanding of the thicknesses of GRV. The drill holes in this program will attempt to define the depth of the alteration system and the target depth for mineralisation.

**Drilling Difficulties**

The cover of Upper GRV is a difficult drilling substrate due to its hard and abrasive nature. Due to this, very little drilling has been undertaken within this geological domain. A diamond drill program, as outlined in this proposal will adequately penetrate the Upper GRV and test the mineralisation model. Diamond drill core is the best sampling media to maximize information gain.

**Exploration techniques**

This project utilizes surface soil geochemistry, magnetics and gravity. The soil geochemistry highlights a polymetallic anomaly within the vicinity of the most intensely demagnetised area within the centre of the alteration zone. Unlike Iron-oxide copper-gold systems however, epithermal systems are not characterised by large positive gravity and magnetic anomalies. Conversely, we interpret the magnetic low as the zone of hydrothermal fluid flow and potential economic mineralisation. The magnetic and gravity data provides a tool for interpreting the structural complexities of the basement and potential zones of fluid flow focus.

**Access requirements****a. Native title and heritage issues**

Aboriginal heritage clearances have been obtained for the proposed drill sites.

**b. Landowner Issues**

"Notice of entry" and "use of declared equipment" notices will be served on the landholders prior to commencement of the drilling program. A working relationship has already been established with the landholder.

**c. An Exploration Work Approval (EWA) or Declaration of Environmental Factors (DEF)**

Closer in time prior to drilling, an Exploration Work Approval program will be submitted to PIRSA.

## Percentage contributions

The company contribution for the proposed PACE Dingo Hill – Epithermal Gold System project is 70%.

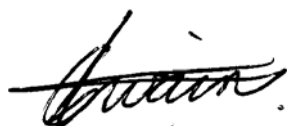
## Confidentiality

Monax Mining does not require any confidentiality period upon completion of the proposed PACE project, provided all corporate ASX regulations are adhered to.

## Project timelines

Realistic start dates for this drilling will be determined by drill rig availability, however a start date for May 2008 is anticipated which will allow adequate time for drill hole completion, analyses and report generation prior to 30<sup>th</sup> June 2009.

Regards



Greg Swain  
**Exploration Geologist**  
**Monax Mining Limited**

## References

Crooks, A.F.; Hill, P.W.; Polito, P.; Abbot, P.J.; Crettenden, P.P.; Gray, N.; Major, R.B. 1996. South Australia. Department of Mines and Energy. Report Book, 96/00024.

Direen, N., Lyons, P., Jagodzinski, E., Milligan, P., Skirrow, R., Lane, R. and Collins, D., 2002. Observable crustal controls on hydrothermal activity in the Olympic Cu-Au province. In: Ferris, G.M. (compiler). Gawler Craton 2002: State of Play. Department of Primary Industries and Resources SA. Exploration Data Package 10.

Ferris and Daly, 2002. South Australia. Department of Primary Industries and Resources. Report Book, 2002/00028.

Rollinson, H.R., 1993. Using geochemical data: evaluation, presentation, interpretation. Longman Scientific & Technical, Ney York, 352 p.

Smith, R.N. 2006. South Australia. Department of Primary Industries and Resources. Open file Envelope, 11121.

Stewart, K., Foden, J., 2001. Mesoproterozoic Granites of South Australia. Mines Department of South Australia, (Unpublished Report).

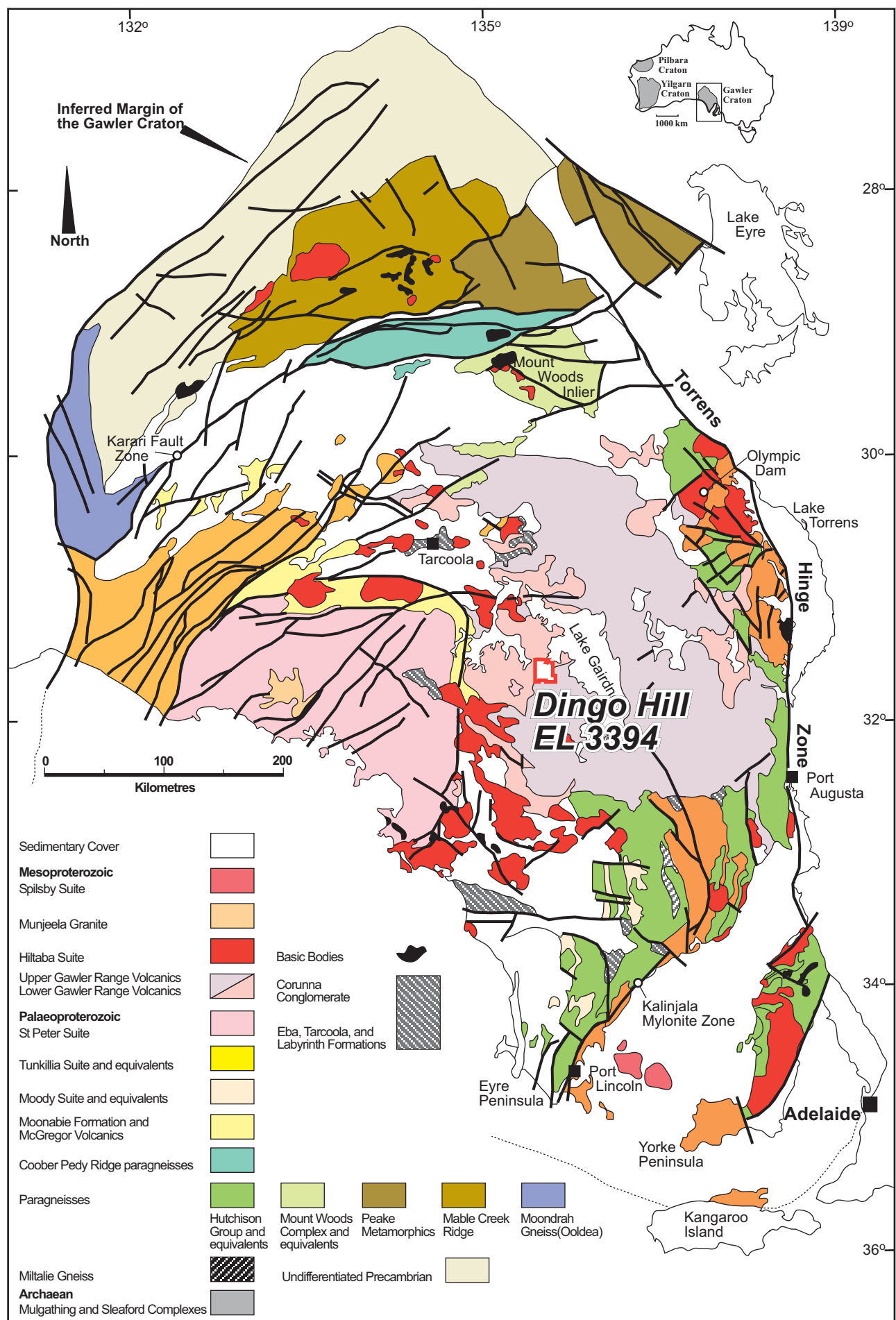
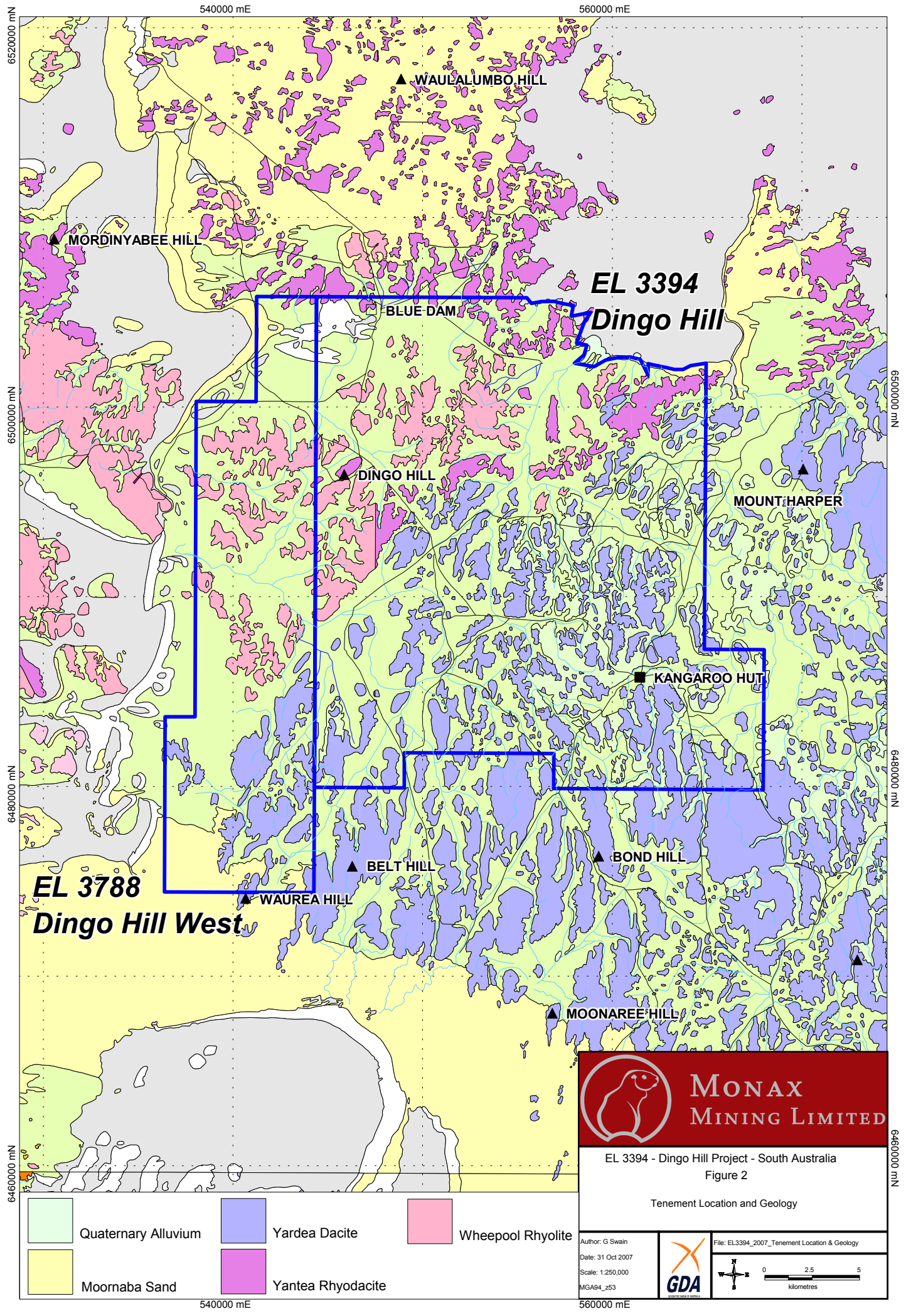
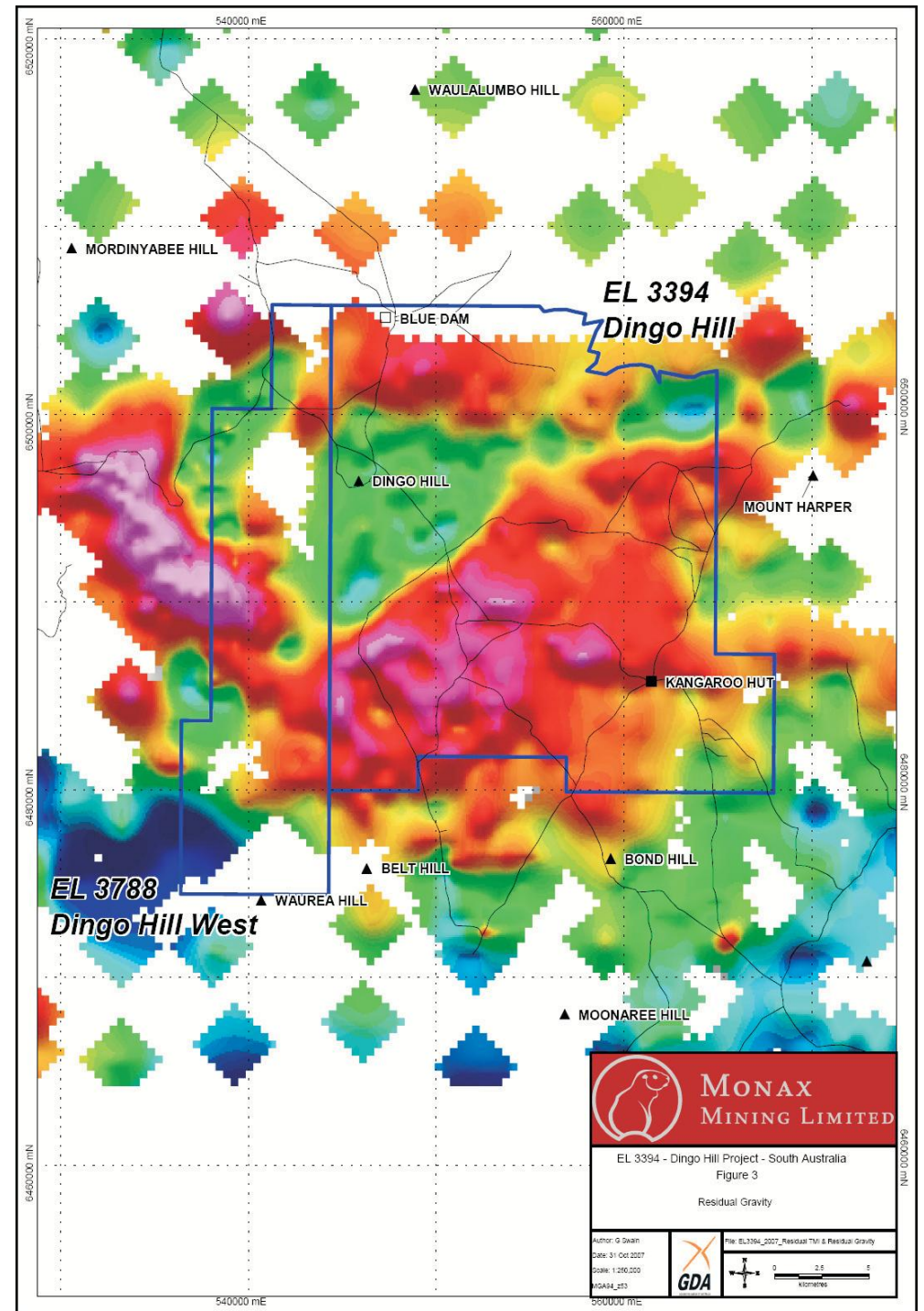
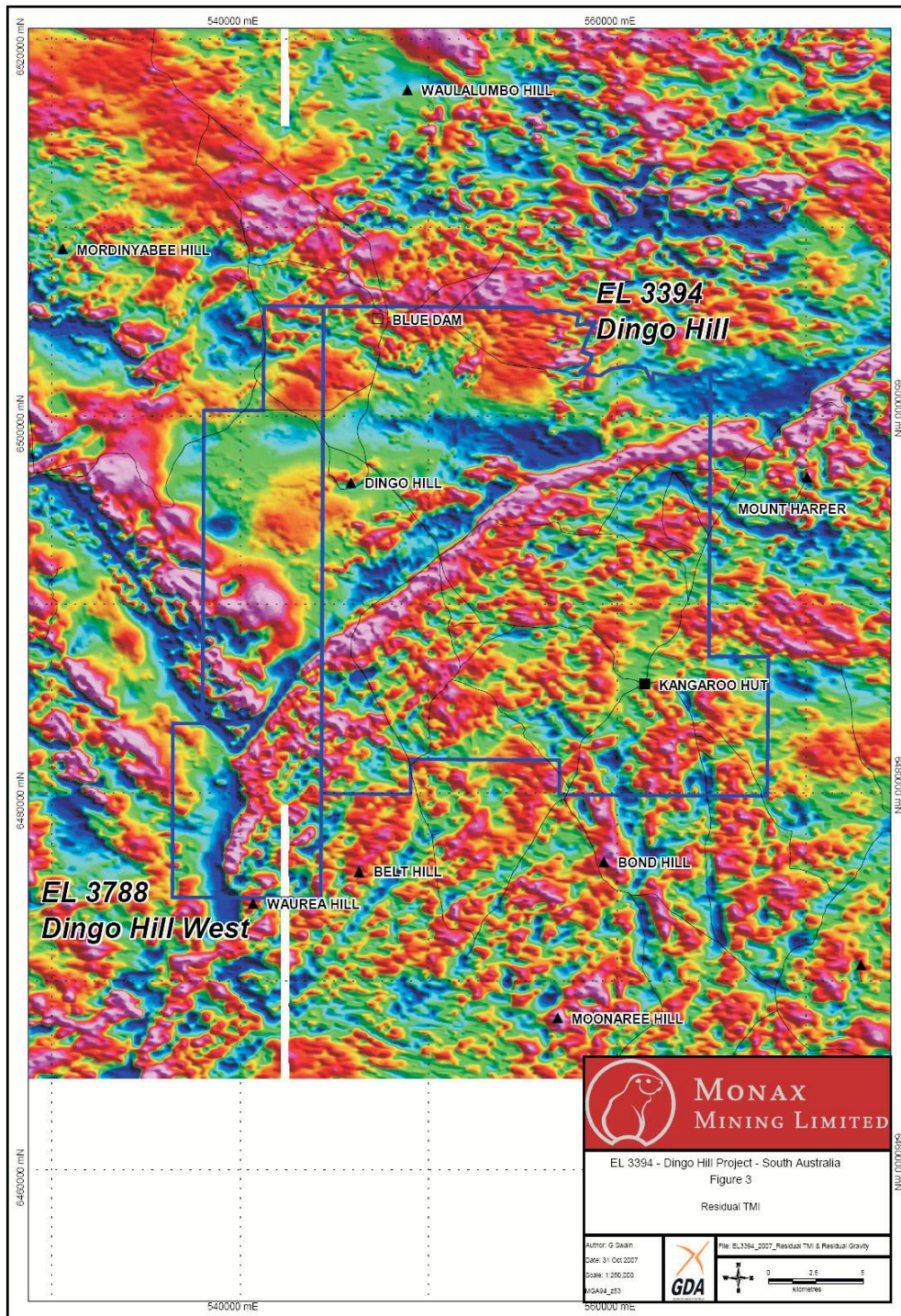


Figure 1.









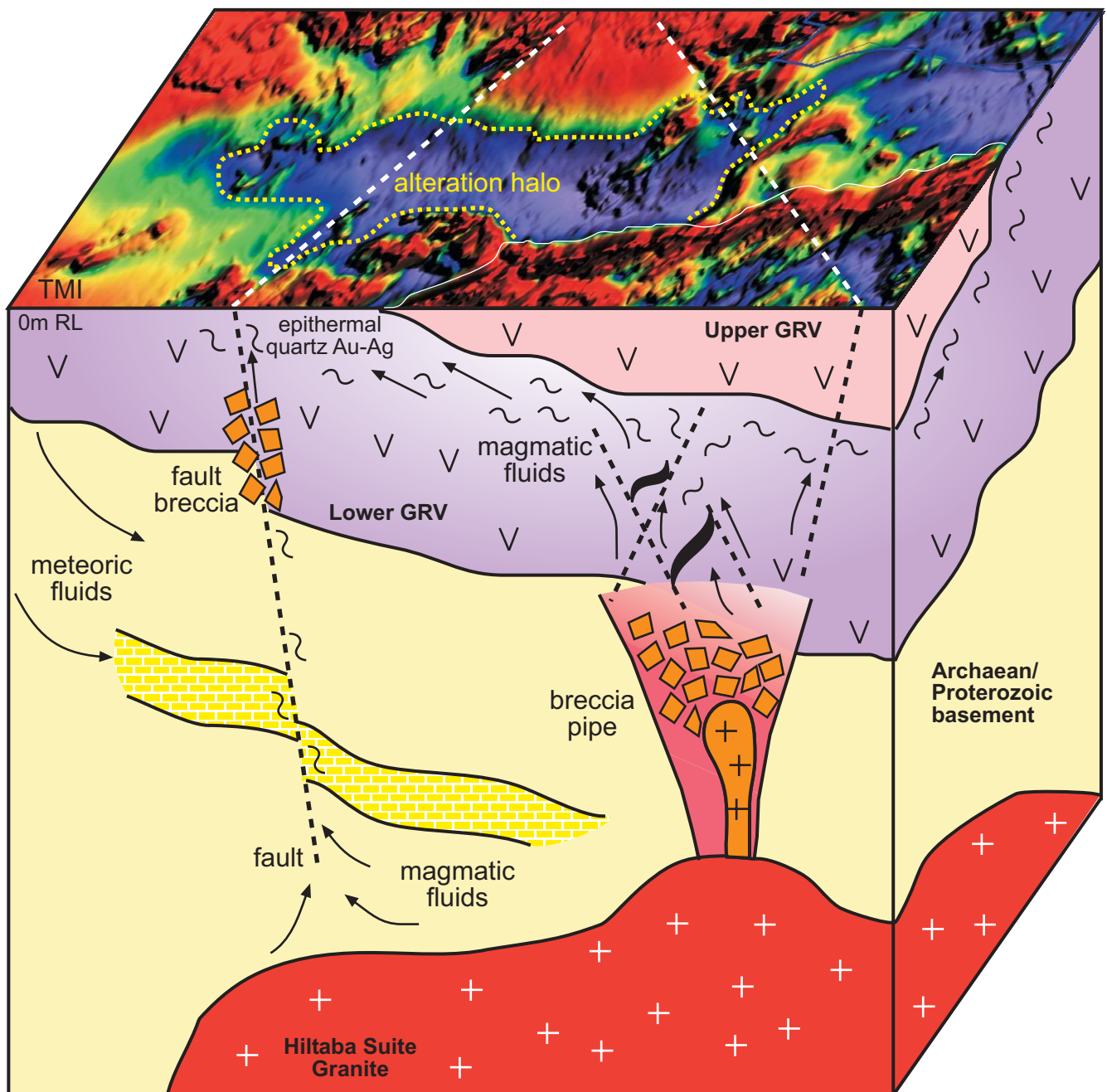


Figure 4. Digo Hill schematic 3D epithermal Au/polymetallic mineralisation model. Including detailed 100m line spaced aeromagnetic data.

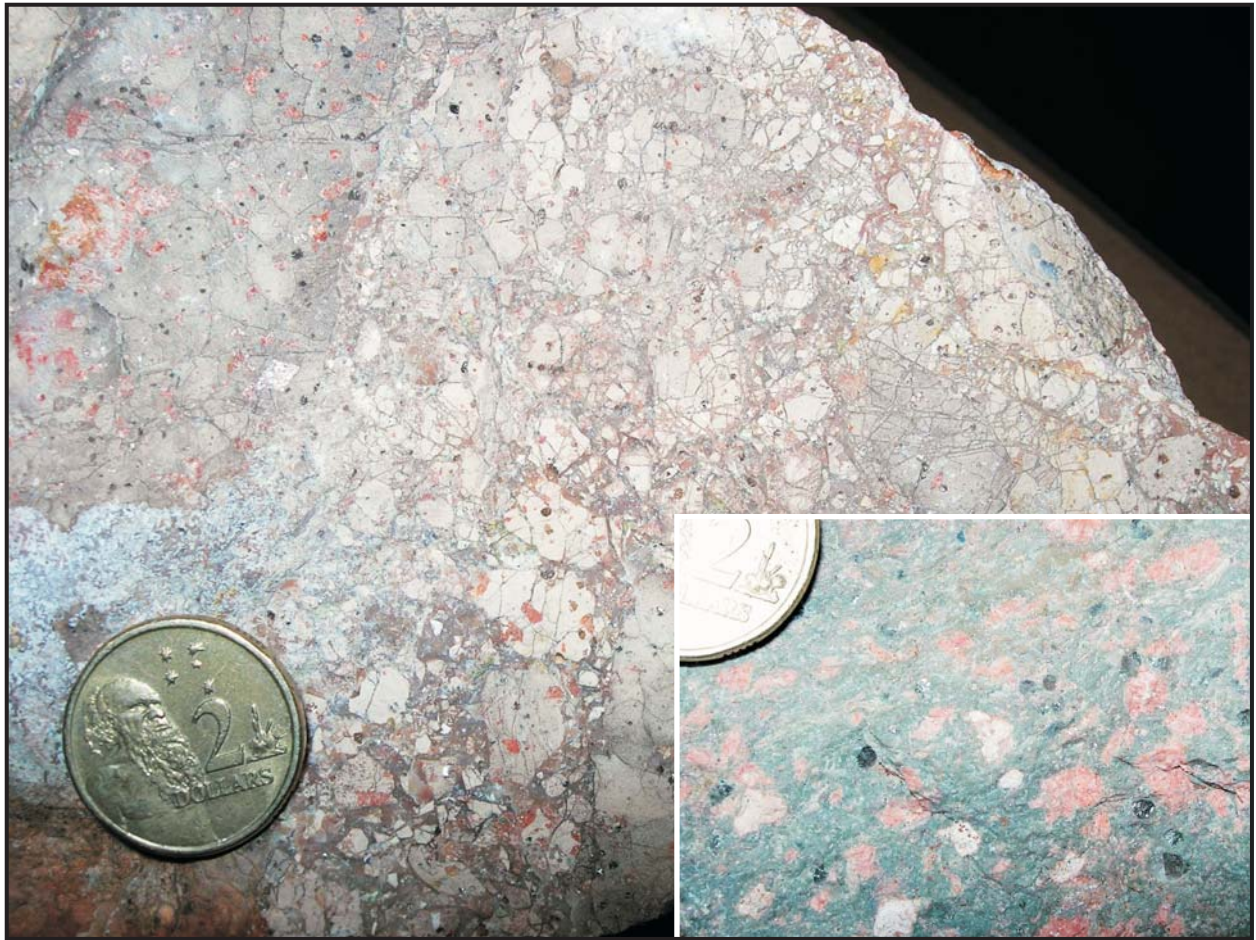


Figure 5. Silica-sericite-albite alteration in GRV breccia. Insert: Chlorite altered rhyolite.



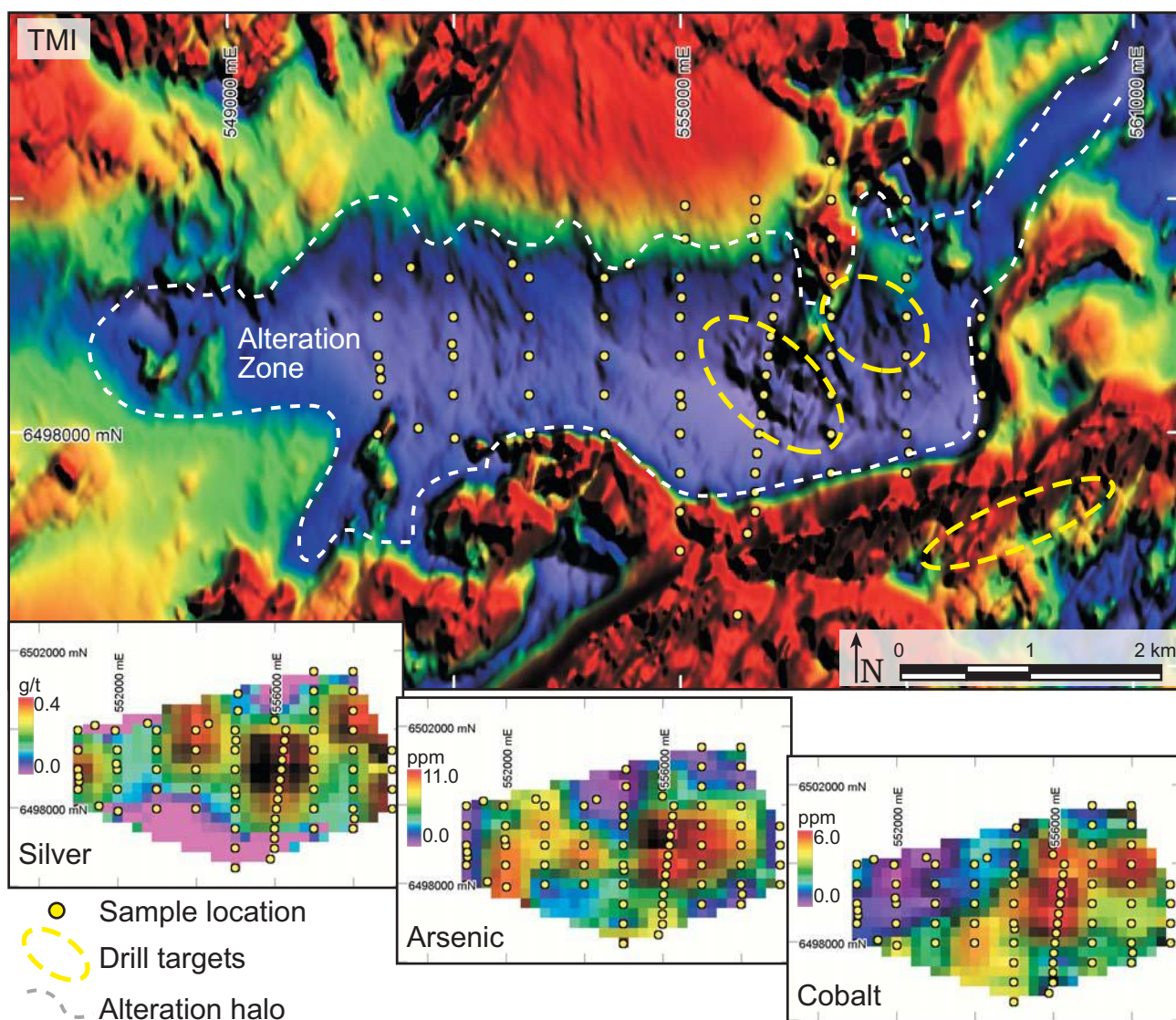
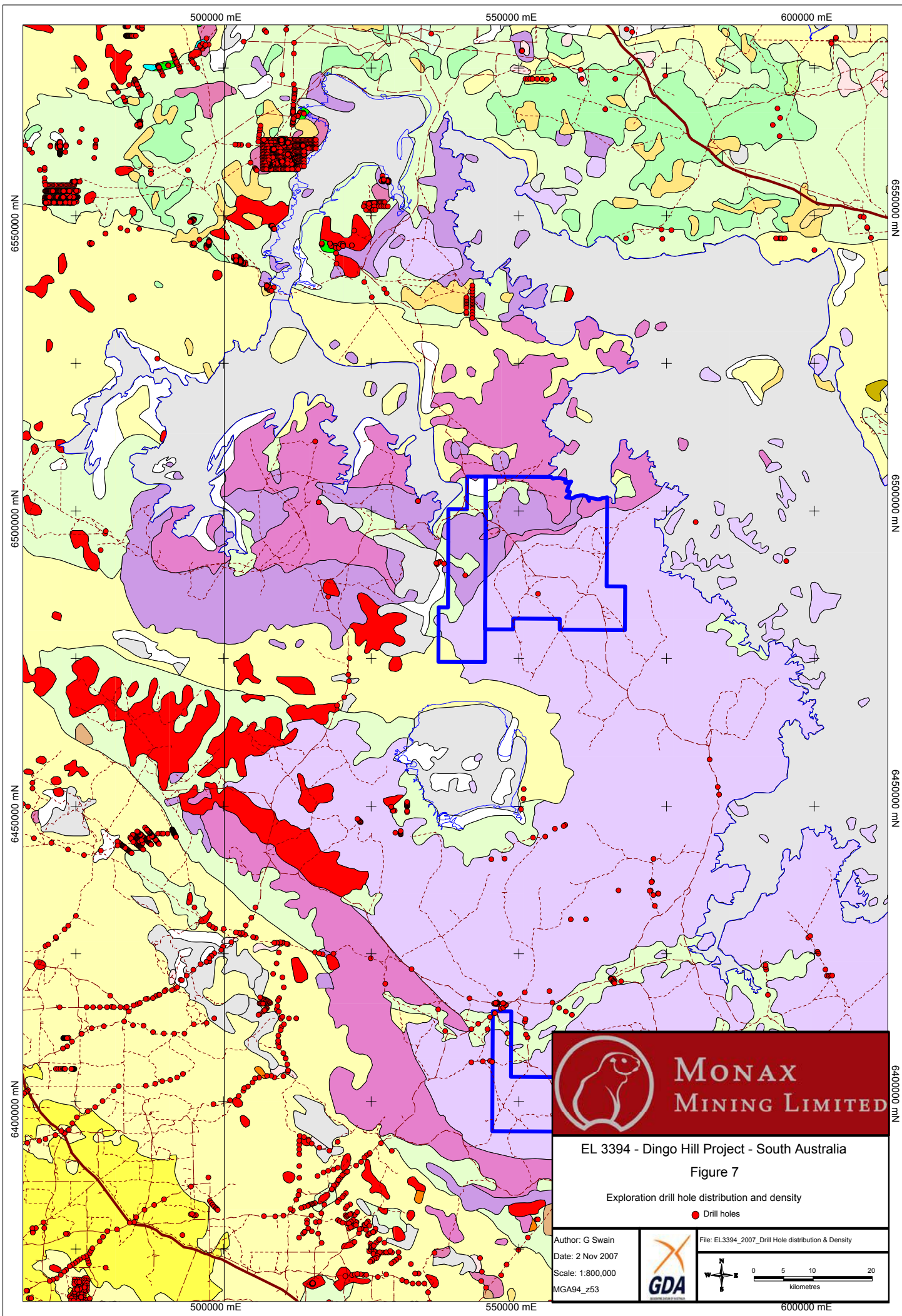


Figure 6. Polymetallic low level geochemical anomaly from soil sampling over demagnetised zone of interpreted hydrothermal fluid flow and alteration.





**MONAX  
MINING LIMITED**

ABN: 96 110 336 733

Exploration Office  
Warehouse I, 5 Butler Blvd  
Burbridge Business Park  
Adelaide Airport SA 5950  
Postal Address  
PO Box 247 Export Park SA 5950

Tel: +61 8 8375 3900  
Fax: +61 8 8375 3999  
[www.monaxmining.com.au](http://www.monaxmining.com.au)

Our refs: ELs 3394 & 3788

3394

24 September 2010

Nella Pettruzzella  
MRG Records Officer  
Mineral Resources Group, PIRSA  
Minerals & Energy Division  
GPO Box 1671  
Adelaide SA 5001

Dear Nella

**Combined Annual Technical Report for ELs 3394 & 3788**

In reference to the Combined Annual Technical Report for ELs 3394 (Dingo Hill) and 3788 (Dingo Hill West), for the period 15 August 2008 – 14 August 2009, please be advised that no work was conducted on these tenements during this term.

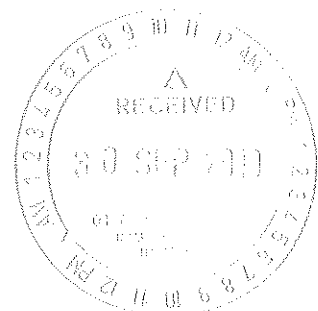
Monax relinquished a portion of EL3394, effective at the licence anniversary date of 14 August 2009. The remainder of EL3394 was fully relinquished as at this year's licence expiry date of 14 August 2010. No partial relinquishment report was submitted for 2009, as the licence has now been fully relinquished. Monax authorises that all data for EL3394 may be released to open file. A Final Annual Technical Report for EL3394 will be submitted in as per the reporting requirements.

EL3788 was fully relinquished on 26 March 2010, and a final annual technical report for this tenement was submitted to PIRSA on 14 September 2010.

If you have any queries regarding the above, please contact me on 8375 3900.

Kind regards

  
Carolyn Grant  
Tenement Manager



**Exploration Office**  
PO Box 247  
Export Park SA 5950

T) +61 8 8375 3900  
F) +61 8 8375 3999

ABN 96 110 336 733



# **MONAX MINING LIMITED**

---

## **Final Annual Technical Report**

**EL 3788 Dingo Hill West**

**For the period 28 May 2007 – 26 March 2010**

Tenure holder | Monax Mining Limited  
Compiled by | Greg Swain, Carolyn Grant

Tenement operator | Monax Mining Limited  
Report date | 10 September 2010

Distribution: Primary Industries & Resources South Australia (digital)  
Monax Mining Limited (digital copy + hard copy)

This report and its contents are confidential. All rights to the report and its contents including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report remain the property of Monax Mining Limited. No part of this report nor the information contained in it may be disclosed to any person without the consent of Monax Mining Limited. No Part of this report nor any of the information contained in it may be reproduced (including by being stored in any form), transmitted, published or used for any purpose without the consent of Monax Mining Limited.

## **Summary**

This final annual technical report details the work undertaken by Monax Mining Limited on EL 3788 (Dingo Hill West) during the period 28 May 2007 – 26 March 2010. EL 3788 was relinquished by Monax Mining on 26 March 2010. This tenement has previously been included in Combined Annual Technical Reports with EL3394, Dingo Hill.

EL 3788 covers an area of 195km<sup>2</sup> adjacent to the west of Monax's EL 3394, and was granted on 28 May 2007. This EL was acquired to further consolidate the tenement holding over an area of interpreted hydrothermal alteration prospective for epithermal style mineralisation.

The Dingo Hill tenements (ELs 3394 & 3788) were applied for to explore for iron oxide copper-gold (IOCG) style mineralisation and epithermal style gold mineralisation associated with the Gawler Range Volcanics. Initial exploration on EL3394 comprised detailed aeromagnetic and radiometric surveys. Follow up work on the adjacent EL3788 was planned but did not occur.

During the life of the tenement, a regional review of historic exploration and geophysics was conducted on EL 3788 in conjunction with EL3394, however, no field work was undertaken on EL 3788.

## **Keywords**

EL3788, Dingo Hill, Epithermal Gold/Polymetallic, Gawler Range Volcanics



## Table of Contents

	<b>Page</b>
1. Introduction.....	4
2. Tenure.....	4
3. Geology.....	4
4. Exploration Rationale.....	4
5. Previous Exploration.....	5
6. Exploration Conducted.....	5
7. Expenditure.....	6
8. Conclusions.....	6

## List of Figures

Figure 1	Tenement Location
Figure 2	Total Magnetic Intensity
Figure 3	Bouguer Gravity

## List of Tables

Table 1	Tenement Details
Table 2	Expenditure for EL 3788 - 28 May 2009 – 26 March 2010
Table 3	Summary expenditure for EL 3788 - 28 May 2007 – 26 March 2010

## Digital File List

	<b>File size</b>
EL3788_2010_F_01_ReportBody.pdf	93KB
EL3788_2010_Figure1_Tenement Location.pdf	177KB
EL3788_2010_Figure2_Total_Magnetic_Intensity.pdf	407KB
EL3788_2010_Figure3_Bouguer_Gravity.pdf	120KB

## 1. Introduction

EL 3788 (Dingo Hill West) occupies an area of 195 km<sup>2</sup> within the Gawler Ranges, approximately 90 km south of Kingoonya and 230km northwest of Pt Augusta in the central Gawler Craton, South Australia (**Figure 1**). The most prominent geological feature crossing EL 3788 is a volcanic flow front of upper Gawler Range Volcanics (GRV) over older lower GRV. This volcanic flow front is evident in both the Total Magnetic Intensity (TMI) and Gravity data (**Figures 2 & 3**). A zone of low magnetic intensity to the northwest of the volcanic flow front is interpreted as the focus of fluid flow and alteration of the host GRV. This zone of alteration has minor anomalous soil geochemistry and is prospective for Epithermal-Gold/Poly-metallic style mineralisation, however remains inadequately tested.

## 2. Tenure

Tenure details for EL 3788 are detailed below in **Table 1**

EL	Name	Area (km <sup>2</sup> )	Licence holder & operator	Grant Date	Relinquishment Date
3788	Dingo Hill West	195	Monax Mining Limited	28 May 2007	26 March 2010

## 3. Geology

Outcropping and sub-cropping basement geology at Dingo Hill West is comprised of Gawler Range Volcanics (GRV). Upper GRV in the southeast of the tenement overlies lower GRV, which crop out in the northwest section. Outcrop is relatively good, with only a thin veneer of Quaternary sediments covering bedrock in most places.

A notable feature in both the geology and geophysics is the presence of a prominent northeast trending volcanic flow boundary. Outcropping upper GRV in the southeast of the tenement is relatively fresh and unaltered, while lower GRV to the northwest is more deeply weathered, preserving evidence of hydrothermal chlorite-sericite alteration and minor quartz veining, including primary lithophysae volcanic textures. The zone of low magnetic intensity in the central north region of the tenement (**Figure 2**) is interpreted as the focus of hydrothermal fluid flow and alteration, and is conceivably controlled by subtle northwest-southeast trending fault/shear structures.

## 4. Exploration Rationale

Iron Oxide Copper-Gold-Uranium mineralisation in the Olympic Copper Gold province, and Gold mineralisation within the Central Gawler Gold province, is associated with the ca. 1595-1575 Ma Gawler Range Volcanics and Hiltaba Suite igneous event. Traditionally, exploration has been focused on the eastern and western margins of the GRV where potentially mineralised basement rocks are not covered by thick piles of unaltered GRV. However, interpretation of new geophysical data suggests that alteration zones exist in the central regions of the Gawler Range Volcanic Domain.

The pervasive zone of low magnetic intensity potentially represents hydrothermal fluid flow alteration and destruction of magnetite in the host lower GRV lithology. It is interpreted that the unaltered upper GRV acted as an impermeable cap to rising fluids which then migrated laterally. Remnant northwest fault/shear zone traces (which trend toward the Yerda Shear Zone) in the magnetics (**Figure 2**) conceivably acted as fluid conduits, representing targets for mineralisation.

## 5. Previous Exploration

Relatively little intensive exploration has been conducted in the Dingo Hill area, which began in 1971 with a reconnaissance by K.K. Euler. The targets for explorers were uranium, diamonds, base metals or gold.

Afmeco Pty Ltd (Afmeco) searched for uranium in the western sector of the tenement from 1980 to 1983, drilling 11 percussion and diamond core holes. A further 13 percussion holes tested ground magnetic anomalies for the presence of kimberlites, but encountered magnetic Gawler Range Volcanics. Utah Development Company (Utah) explored the eastern sector of Dingo Hill from 1980 to 1982, analysing samples for base metals, arsenic and nickel. Utah also examined stream gravel samples for kimberlite indicators.

From 1988 to 1990, BHP Gold Mines Ltd (BHP) explored the entire tenement area for gold, undertaking regional bulk leach extractable gold (BLEG) stream sediment surveys. Some low-order gold anomalies were followed up in the northern sector. Western Mining Corporation Ltd (WMC) explored the southern sector of Dingo Hill for base and precious metals between 1992 and 1995. Follow-up drilling included three RC holes and one diamond core hole. Helix Resources NL targeted gold and base metals in the northern part of the tenement in 1995-96. Earlier-reported geochemical anomalies could not be substantiated.

Homestake Gold of Australia Ltd undertook regional calcrete sampling in a search for gold in the southern part of the tenement from 1996 to 1999. Aurora Gold (WA) Pty Ltd explored for gold and base metals in 1997-98. Calcrete sampling indicated low-order gold, arsenic and base metal anomalies, but these did not generate targets worthy of further work.

## 6. Exploration Conducted

### 6.1 Current reporting period

No exploration was undertaken on the licence during the current period 28 May 2009 – 26 March 2010.

### 6.2 Term of the licence

Exploration undertaken by Monax on Dingo Hill West during the term of the licence comprised a review of regional historical data and geophysics. No field work was conducted on the tenement during the term of the licence.

Rock chip results and soil geochemistry on the adjoining EL 3394 were generally low with no significant anomalies defined. Based on the poor results and the lack of geophysical targets, Monax has decided to relinquish EL3788.



## 7. Expenditure

Expenditure for the period 27 May 2007 – 26 March 2010 detailed in **Tables 2 & 3**

**Table 2** Expenditure for EL 3788 for the current period 28 May 2009 – 26 March 2010

<b>Operations</b>	<b>Cost \$</b>
Depreciation	1,751
Insurance - field equipment	854
Rent - Tenement	171
Tenement administration	20,679
<b>Total</b>	<b>23,455</b>
+ previous expenditure	\$36,762
Total cumulative expenditure for Licence	<b>\$60,217</b>

**Table 3** Expenditure for EL 3788 for the term of the licence 28 May 2007 – 26 March 2010

<b>Operations</b>	<b>Cost \$</b>
Data mapping	118
Depreciation	3,952
Licence renewal - tenement	80
Insurance - field equipment	1,901
Aboriginal heritage	201
OH&S	201
Rent - tenement	1,382
Tenement administration	52,382
<b>Total expenditure for the licence</b>	<b>\$60,217</b>

## 8. Conclusions

Monax investigated the Dingo Hill West area for IOCG style mineralisation and possible epithermal style gold mineralisation related to the Mesoproterozoic Gawler Range Volcanics.

No sampling or drilling was undertaken on EL 3788, hence no rehabilitation is required.

# Figures

**Monax Mining Limited**

**Final Annual Technical Report**

**EL 3788 Dingo Hill West**

**28 May 2007 – 26 March 2010**

**Table of Contents - Figures**

**Figure 1**      Tenement Location

**Figure 2**      Total Magnetic Intensity

**Figure 3**      Bouguer Gravity

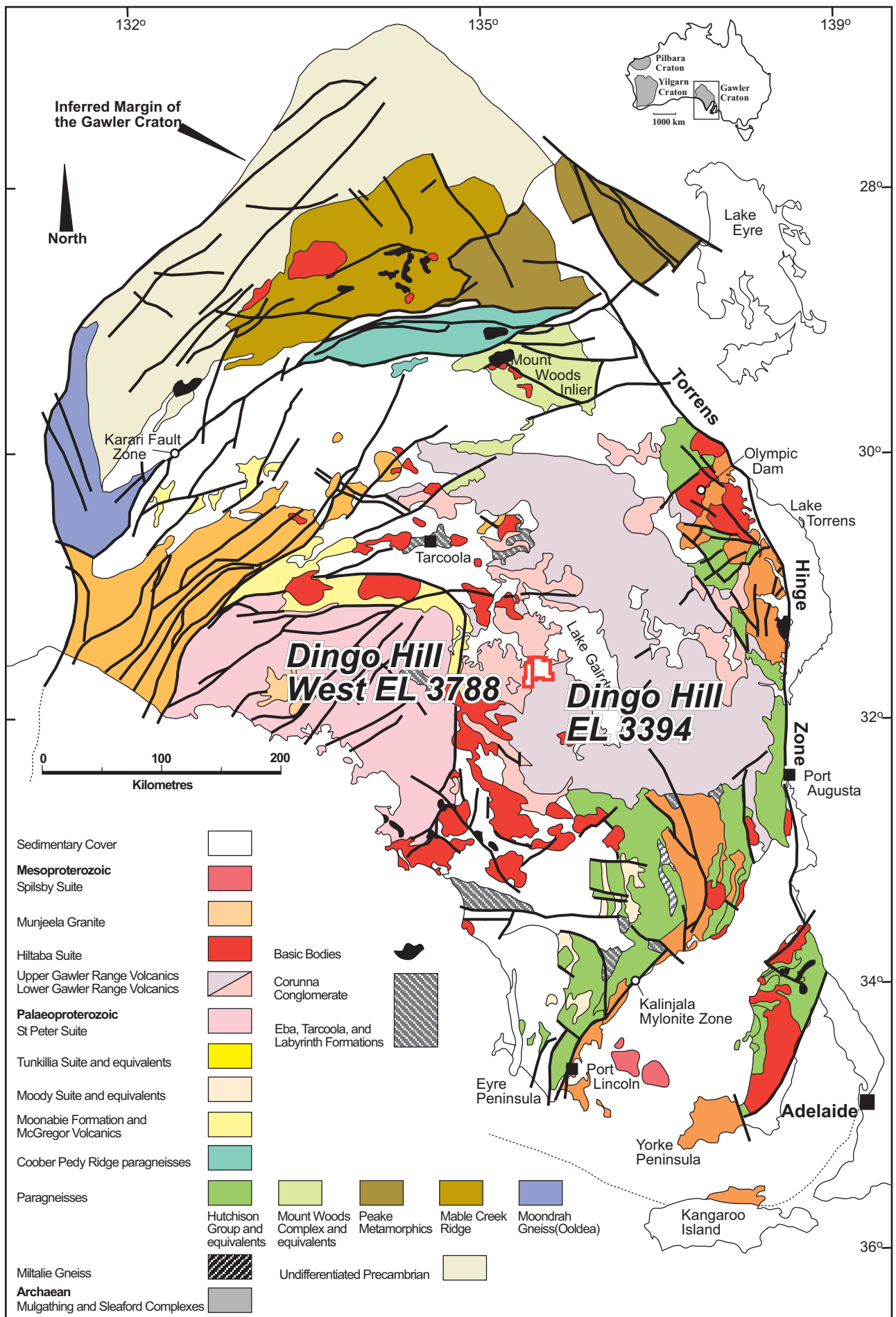
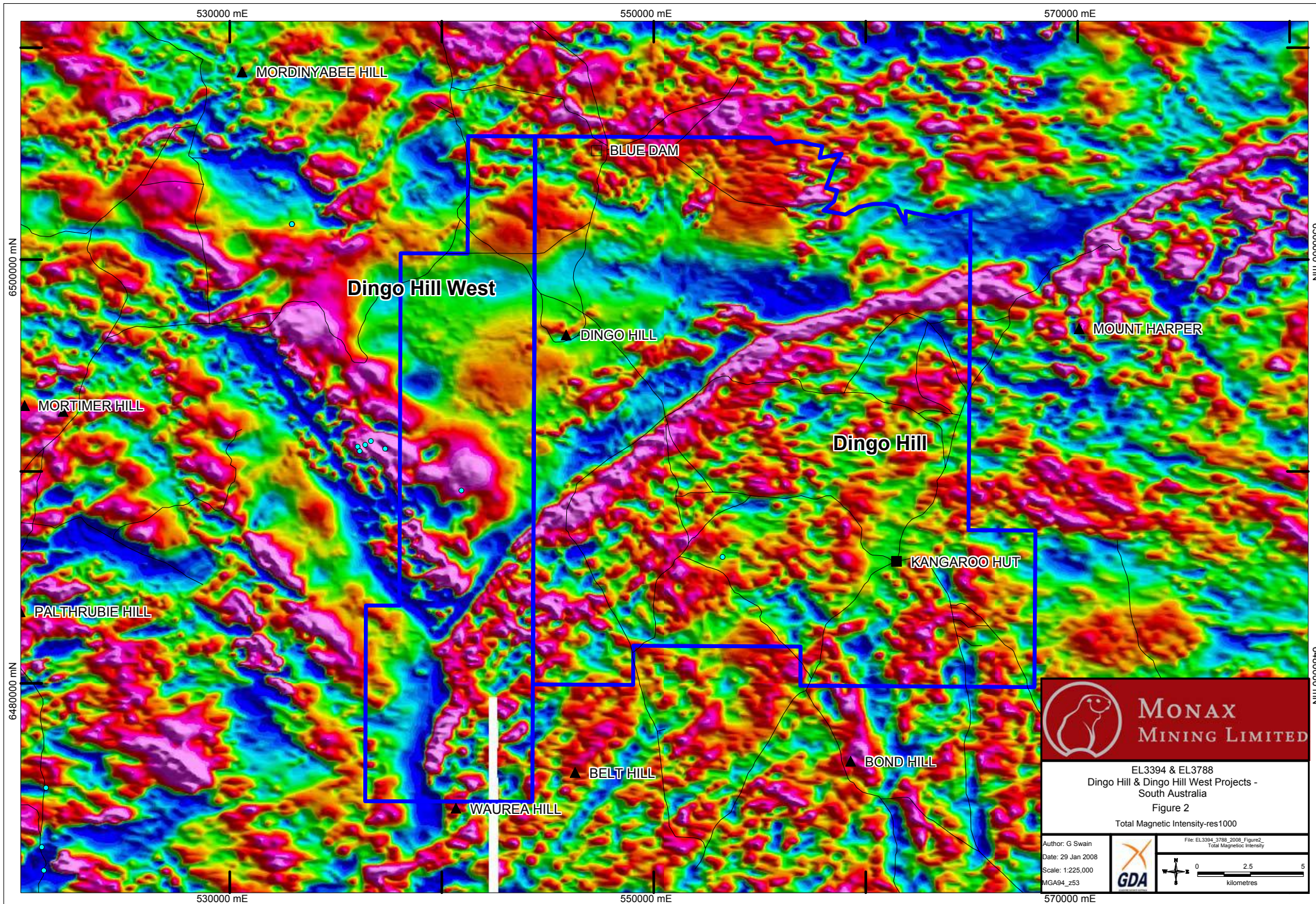
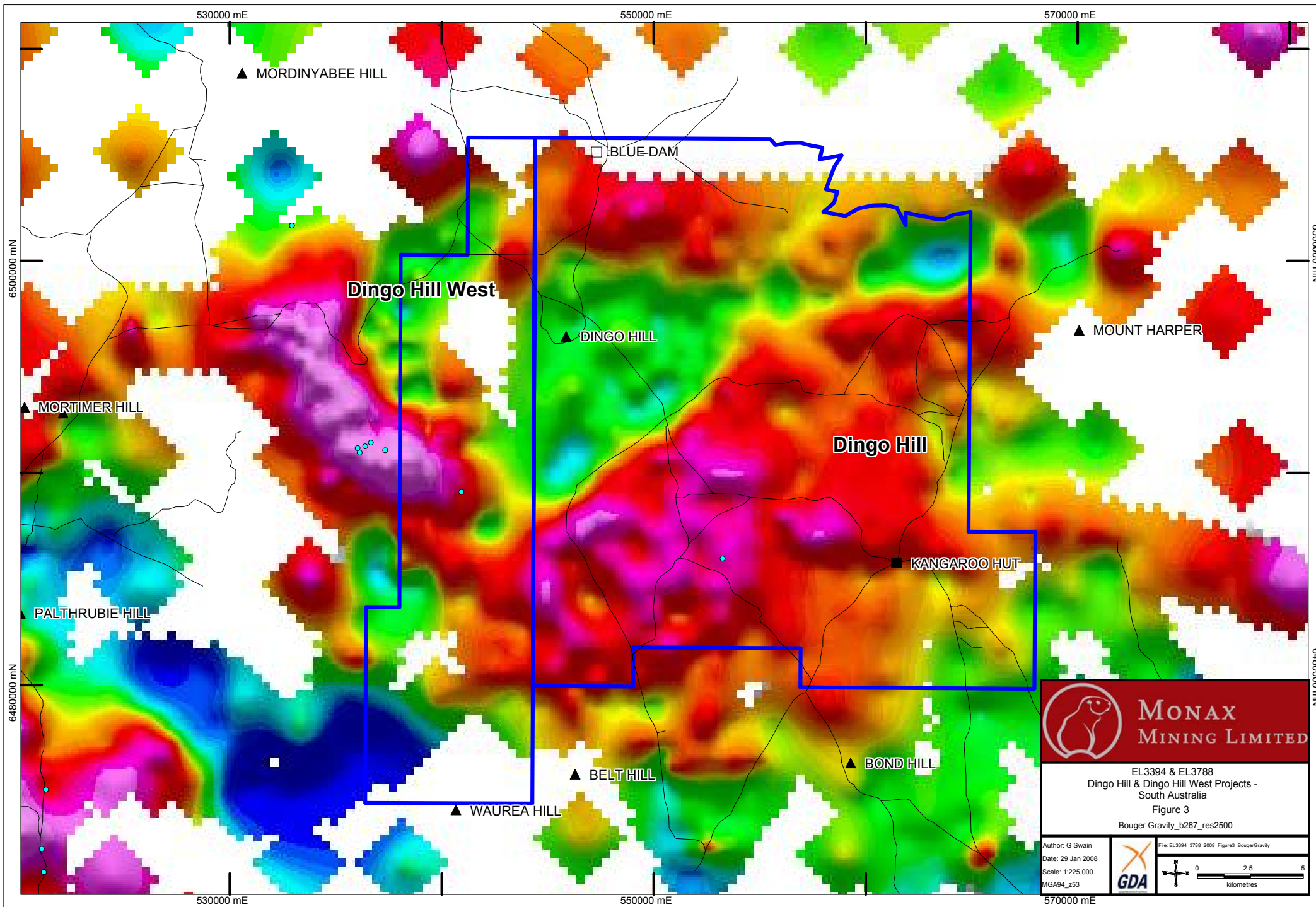


Figure 1.









**Exploration Office**  
PO Box 247  
Export Park SA 5950

T) +61 8 8375 3900  
F) +61 8 8375 3999

ABN 96 110 336 733



# **MONAX MINING LIMITED**

---

## **Final Annual Technical Report**

**EL 3394 Dingo Hill**

**For the period 15 August 2005 – 14 August 2010**

Tenure holder | Monax Mining Limited  
Author | Gary Ferris

Tenement operator | Monax Mining Limited  
Report date | 13 December 2010

Distribution: Primary Industries & Resources South Australia (digital)  
Monax Mining Limited (digital copy + hard copy)

This report and its contents are confidential. All rights to the report and its contents including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report remain the property of Monax Mining Limited. No part of this report nor the information contained in it may be disclosed to any person without the consent of Monax Mining Limited. No Part of this report nor any of the information contained in it may be reproduced (including by being stored in any form), transmitted, published or used for any purpose without the consent of Monax Mining Limited.



## **Summary**

This final annual technical report details the work undertaken by Monax Mining Limited on EL 3394 (Dingo Hill) during the term of the licence – 15 August 2005 – 14 August 2010.

A partial relinquishment of EL3394, totalling 276 km<sup>2</sup> was undertaken to coincide with the anniversary of the licence date on 14 August 2009. No partial relinquishment report was submitted at this time as the remainder of the licence is now being relinquished as at the current licence expiry of 14 August 2010.

EL 3394 is located in the Gawler Ranges in the central Gawler Craton, 450km northwest of Adelaide and covers a total of 517 km<sup>2</sup>. The target in this area is primarily Epithermal-Gold/Polymetallic style mineralisation.

Monax undertook the following exploration on EL 3394:

- Detailed aeromagnetic and radiometric survey
- Ground gravity survey
- Soil sampling
- Rock chip sampling

The results of the exploration did not provide any drilling targets and the tenement has been subsequently relinquished.

## **Keywords**

EL3394, Dingo Hill, Epithermal Gold/Polymetallic, Gawler Range Volcanics

## Table of Contents

	<b>Page</b>
1. Introduction .....	4
2. Tenure.....	4
3. Geology.....	4
4. Exploration Rationale .....	4
5. Previous Exploration .....	5
6. Exploration Conducted.....	6
6.2.1 Gravity Survey .....	6
6.2.2 Rock Chip Geochemistry .....	6
6.2.3 Soil Survey Sample Geochemistry .....	6
6.2.4 Petrology.....	7
6.2.5 Aeromagnetic and Radiometric Survey .....	7
7. Expenditure .....	7
8. Conclusions .....	8

## List of Figures

Figure 1	Tenement Location
Figure 2	2009 Relinquished Area

## List of Tables

Table 1	Tenement Details
Table 2	Expenditure for EL 3394 – current reporting period
Table 3	Expenditure for EL 3394 – term of the licence

## Digital File List

	<b>File size &amp; type</b>
EL3394_2010_F_01_ReportBody.pdf	93KB
EL3394_2010_Figure1_Tenement Location.pdf	177KB
EL3394_2010_Figure2_2009_Relinquished area.pdf	672KB

## 1. Introduction

EL 3394 (Dingo Hill) occupies an area of 516 km<sup>2</sup> within the Gawler Ranges, approximately 90 km south of Kingoonya and 230km northwest of Pt Augusta in the central Gawler Craton, South Australia (**Figure 1**). The most prominent geological feature crossing EL 3394 is a volcanic flow front of upper Gawler Range Volcanics (GRV) over older lower GRV. A zone of low magnetic intensity to the northwest of the volcanic flow front is interpreted as the focus of fluid flow and alteration of the host GRV. This zone of alteration has minor anomalous soil geochemistry and is prospective for Epithermal-Gold/Poly-metallic style mineralisation, however remains inadequately tested.

## 2. Tenure

Tenure details for EL 3394 are detailed below in **Table 1**

EL	Name	Area (km <sup>2</sup> )	Grant Date	Expiry Date	Relinquishment Date
3394	Dingo Hill	276	15 August 2005	14 August 2009	14 August 2009 partial - 276km <sup>2</sup> )
3394	Dingo Hill	240	15 August 2005	14 August 2010	14 August 2010

## 3. Geology

Outcropping and sub-cropping basement geology at Dingo Hill is comprised of Gawler Range Volcanics (GRV). Upper GRV in the southeast of the tenement overlies lower GRV, which crop out in the northwest section. Outcrop is relatively good, with only a thin veneer of Quaternary sediments covering bedrock in most places.

A notable feature in both the geology and geophysics is the presence of a prominent northeast trending volcanic flow boundary. Outcropping upper GRV in the southeast of the tenement is relatively fresh and unaltered, while lower GRV to the northwest is more deeply weathered, preserving evidence of hydrothermal chlorite-sericite alteration and minor quartz veining, including primary lithophysae volcanic textures. The zone of low magnetic intensity in the central north region of the tenement is interpreted as the focus of hydrothermal fluid flow and alteration, and is conceivably controlled by subtle northwest-southeast trending fault/shear structures.

## 4. Exploration Rationale

Iron Oxide Copper-Gold-Uranium mineralisation in the Olympic Copper Gold province, and Gold mineralisation within the Central Gawler Gold province, is associated with the ca. 1595-1575 Ma Gawler Range Volcanics and Hiltaba Suite igneous event. Traditionally, exploration has been focused on the eastern and western margins of the GRV where potentially mineralised basement rocks are not covered by thick piles of unaltered GRV. However, interpretation of new geophysical data suggests that alteration zones exist in the central regions of the Gawler Range Volcanic Domain.

The pervasive zone of low magnetic intensity potentially represents hydrothermal fluid flow alteration and destruction of magnetite in the host lower GRV lithology. It is interpreted that the unaltered upper GRV acted as an impermeable cap to rising fluids which then migrated laterally. Remnant northwest fault/shear zone traces (which trend toward the Yerda Shear Zone) in the magnetics conceivably acted as fluid conduits, representing targets for mineralisation. A subtle poly-metallic geochemical anomaly identified from a grid soil sampling survey over the zone of alteration also represents a drill target for mineralisation.

## 5. Previous Exploration

Relatively little intensive exploration has been conducted in the Dingo Hill area, which began in 1971 with a reconnaissance by K.K. Euler. The targets for explorers were uranium, diamonds, base metals or gold.

Afmeco Pty Ltd (Afmeco) searched for uranium in the western sector of the tenement from 1980 to 1983, drilling 11 percussion and diamond core holes. A further 13 percussion holes tested ground magnetic anomalies for the presence of kimberlites, but encountered magnetic Gawler Range Volcanics. Utah Development Company (Utah) explored the eastern sector of Dingo Hill from 1980 to 1982, analysing samples for base metals, arsenic and nickel. Utah also examined stream gravel samples for kimberlite indicators.

From 1988 to 1990, BHP Gold Mines Ltd (BHP) explored the entire tenement area for gold, undertaking regional bulk leach extractable gold (BLEG) stream sediment surveys. Some low-order gold anomalies were followed up in the northern sector. Western Mining Corporation Ltd (WMC) explored the southern sector of Dingo Hill for base and precious metals between 1992 and 1995. Follow-up drilling included three RC holes and one diamond core hole. Helix Resources NL targeted gold and base metals in the northern part of the tenement in 1995-96. Earlier-reported geochemical anomalies could not be substantiated.

Homestake Gold of Australia Ltd undertook regional calcrete sampling in a search for gold in the southern part of the tenement from 1996 to 1999. Aurora Gold (WA) Pty Ltd explored for gold and base metals in 1997-98. Calcrete sampling indicated low-order gold, arsenic and base metal anomalies, but these did not generate targets worthy of further work.

Previous exploration conducted on EL 3394 by Monax Mining comprised a helicopter based ground gravity survey. The survey was conducted to improve the resolution of the existing PIRSA Bouger Gravity data. A total of 328 stations were taken on a 1000x1000m spaced grid. The survey was conducted by Daishsat Geodetic Surveyors. During late October-early November 2006, a detailed aeromagnetic and radiometric survey was flown over EL 3394 on 100m line spacing, totalling 4,292 line km.

During 2006, 10 altered volcanic rock chips (DH01-DH10) were sampled around an area of increased radiometrics in the northeast area of the Exploration Licence. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. A geochemical soil sample survey was completed on a grid covering the general area of the interpreted low magnetic intensity alteration zone. This area is characterised by a general cover of Quaternary sediments and suggests that basement is more deeply eroded and/or weathered. Subtle anomalies were reported from elements including Au, Co, Cu, Pt, As, Ag, in the central region of the survey. This subtle chemical anomaly may be representative of epithermal poly-metallic mineralisation below cover. A further 11 rock chip samples (DHR01-DHR11) were taken in conjunction with this geochemistry soil survey program. No significant results were reported.

Petrology of 4 rock chip samples (DH2, 5, 9, 10) of altered volcanics was completed by Pontifex & Associates. Samples were confirmed to be altered acid volcanics, characteristic of GRV. DH2 and DH9 reported sericite alteration and limonite staining. Sample DH10 was interpreted to represent a crystal-vitric tuff. There was no report of sulphide mineralisation.

## **6. Exploration Conducted**

### **6.1 Current reporting period 15 August 2009 – 14 August 2010**

No work was conducted on the tenement during the current reporting period.

### **6.2 Term of the licence 15 August 2005 – 14 August 2010**

#### ***6.2.1 Gravity Survey***

Work carried out on EL 3394 since the lease was granted has comprised of a helicopter based ground gravity survey. The survey was conducted to improve the resolution of the existing PIRSA Bouguer Gravity data. A total of 328 stations were taken on a 1000x1000m spaced grid. The survey was conducted by Daishsat Geodetic Surveyors.

The acquired gravity data clearly defines the northeast-southwest trending volcanic flow front between upper GRV and lower GRV. The upper GRV gives a more intense gravity response, while the lower GRV to the northwest of the flow front is characterised by less intense gravity response.

Features in the gravity is dominated by lithological control, however there is a subtle gravity anomaly in the northern region of the survey. The gravity anomaly may be associated with hematite and/or sulphide accumulation consistent with IOCG style mineralisation. This gravity anomaly is also flanked by a number of subtle lineaments in the gravity (and magnetic) data, which may represent fault/shear zones. The gravity anomaly and regional structures represent good targets for drill testing.

#### ***6.2.2 Rock Chip Geochemistry***

During an initial reconnaissance field trip, 10 altered volcanic rock chips (DH01-DH10) were sampled around an area of increased radiometrics in the northeast area of the Exploration Licence. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. No significant results were reported.

A further 11 rock chip samples (DHR01-DHR11) were taken in conjunction with the geochemistry soil survey program. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. Sample DHR02 returned minor anomalous gold, however generally no significant results were reported. Results have been reported previously.

#### ***6.2.3 Soil Survey Sample Geochemistry***

A geochemical soil sample survey was completed on a grid covering the general area of the interpreted low magnetic intensity alteration zone. This area is characterised by a general cover of Quaternary sediments and suggests that basement is more deeply eroded and/or weathered. Elements analysed included Au, Ag, As, Ce, Co, Cr, Cu, Mo, Nd, Ni, Pb, Pd, Pt, Sn, U, W, Zn. Subtle anomalies were reported from elements including Au, Co, Cu, Pt, As,

Ag, in the central region of the survey area. This subtle chemical anomaly may be representative of epithermal poly-metallic mineralisation

#### 6.2.4 Petrology

Petrology of 4 rock chip samples (DH2, 5, 9, 10) of altered volcanics was completed by Pontifex & Associates. The Mineralogical Report No. 8805 (Pervis, A.C., 2006) has been reported previously. Samples were confirmed to be altered acid volcanics, characteristic of GRV. DH2 and DH9 reported sericite alteration and limonite staining. Sample DH10 was interpreted to represent a crystal-vitric tuff. There was no report of sulphide mineralisation.

#### 6.2.5 Aeromagnetic and Radiometric Survey

Work carried out on EL 3394 during the reporting period comprised an aeromagnetic and radiometric survey completed in December 2006. The survey was conducted by UTS Geophysics on 100m line spacing. The line directions were 090 – 270 and the sensor height was 50m. The survey comprised a total of 4,292 line kilometres.

The new data has greatly improved the resolution of the magnetic features within the survey area. The central zone of low magnetic intensity is interpreted to represent a zone of increased hydrothermal fluid flow. Field investigations have identified quartz veining and patches of moderate chlorite-sericite altered volcanics within this zone of low magnetic intensity. The new data highlights the major northwest-southeast and northeast-southwest fault structures which represent primary targets for exploration drilling. The most intensely demagnetised zone corresponds to an area covered by alluvium associated with palaeodrainage.

The Radiometrics\_RGB shows a generally high radiometric response over much of the tenement. Outcropping GRV is predominantly shown up as areas of white and pink radiometric responses. White represents overall high response, while pink is representative of potassium dominant response. There is some moderate thorium responses represented by the greenish tones in the south and southeast areas. The main uranium responses are represented in blue and correspond to the dominant palaeodrainage channels which flow towards the northeast into Lake Gairdner. There is also an anomalous uranium response at the edge of the lake. The anomalous uranium is interpreted to be sourced from weathering of outcropping GRV over much of the tenement.

## 7. Expenditure

### 7.1 Current reporting period – 15 August 2009 – 14 August 2010

<b>Operations</b>	<b>Cost \$</b>
Consumables	39
Depreciation	814
Insurance - field equipment	1,398
Rent - Tenement	2,000
Telephone - satellite/mobile	20
Tenement administration	20,633
<b>Total</b>	<b>24,904</b>
+ previous expenditure	\$232,325
<b>Total cumulative expenditure for Licence</b>	<b>\$257,230</b>

**Table 2 – Expenditure for the current reporting period**

**7.2 Term of the licence – 15 August 2005 – 14 August 2010**

<b>Operations</b>	<b>Cost \$</b>
Advertising	205
Aeromagnetic data	11004
Consumables	1,077
Data copying/scanning	11
Data mapping	118
Depreciation	5,361
Equipment hire	696
Evaluation costs	23,296
Geophysics	28,429
Insurance - field equipment	2,593
Laboratory analysis	3,519
Legal fees	1,424
Licence renewal - tenement	4,102
Maps & cartographic	327
Minor plant	230
Motor vehicle expenses	905
Aboriginal heritage	14,114
OHS	201
Rent - Tenement	7,409
Telephone - satellite/mobile	60
Travel	7,542
Tenement administration	144,607
<b>Total expenditure for the term of the licence</b>	<b>\$257,230</b>

**Table 3 – Expenditure for the term of the licence****8. Conclusions**

The Dingo Hill area is located within the Mesoproterozoic Gawler Range Volcanic Domain and is considered prospective for IOCG and epithermal style mineralisation. Monax undertook a detailed aeromagnetic and radiometric survey, ground gravity survey, soil sampling and rock chip sampling. No anomalous results were returned and no significant geophysical targets were identified as potential IOCG targets, hence the tenement has been relinquished.



# Figures

**Monax Mining Limited**

**Final Annual Technical Report - EL 3394 Dingo Hill**

**15 August 2005 – 14 August 2010**

**Table of Contents - Figures**

**Figure 1**      Tenement Location

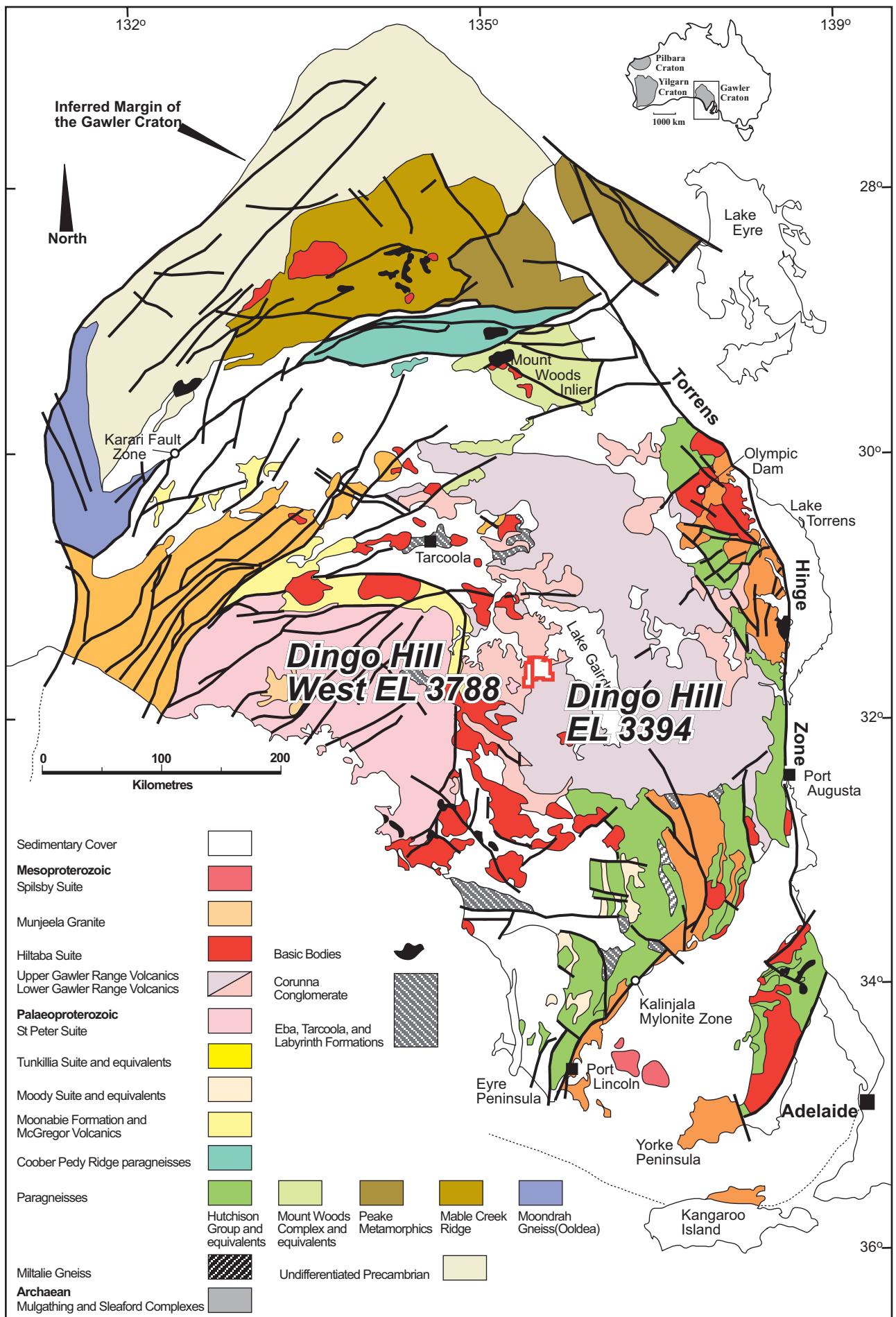


Figure 1.



