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EL 3266 / 4439

DECEPTION HILL

ANNUAL REPORTS AND FINAL REPORT TO LICENCE SURRENDER, FOR THE PERIOD 26/10/2004 TO 9/10/2013

Submitted by
Minotaur Exploration Ltd and Tunkillia Gold Pty Ltd
2013

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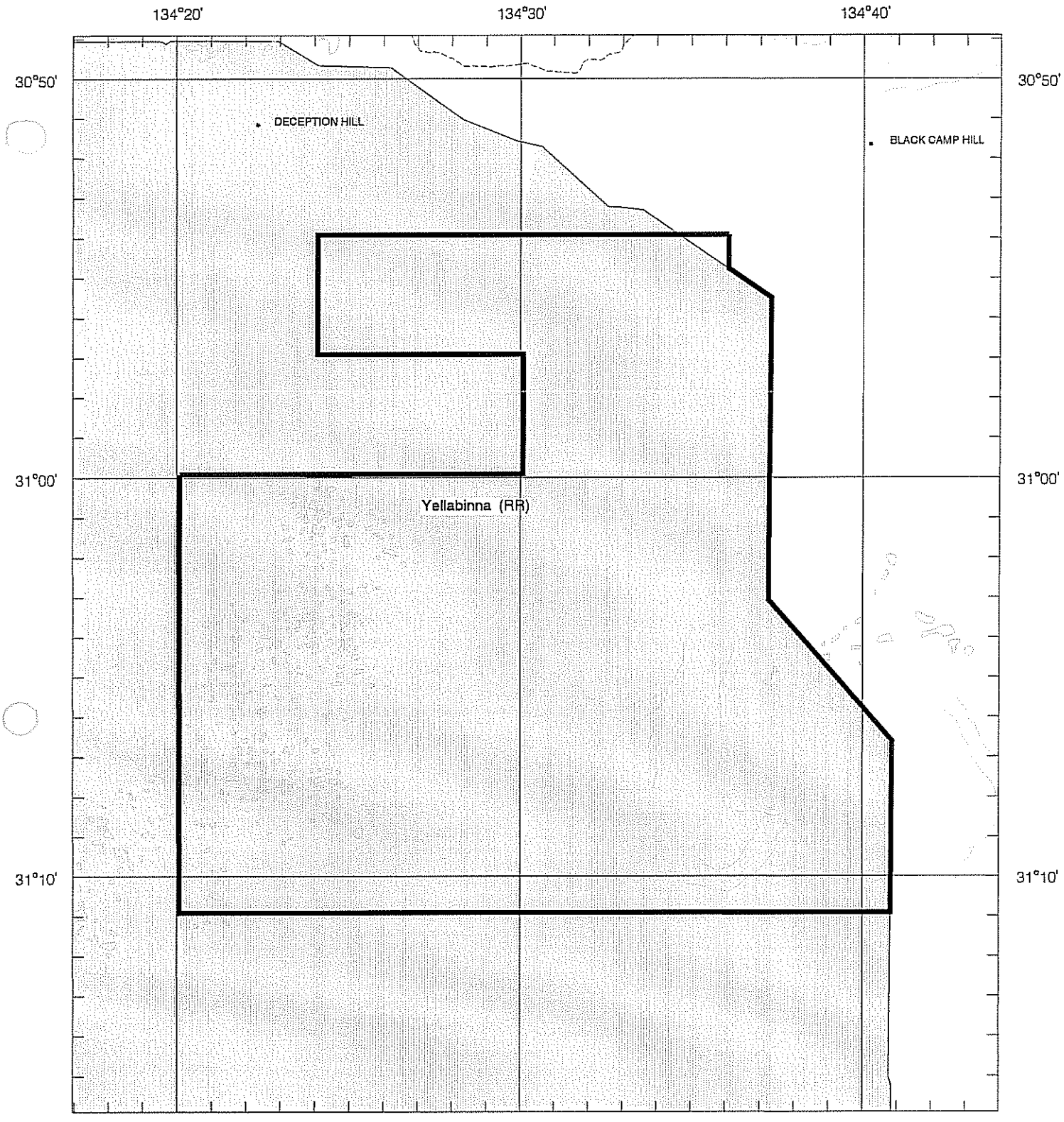
Government of South Australia
Department for Manufacturing, Innovation, Trade, Resources and Energy

SCHEDULE A



SCALE 1: 250 000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

LICENCE GRANTED IN : DATUM AGD66

GDA GEOCENTRIC DATUM OF AUSTRALIA

APPLICANT : **MINEX (SA) PTY LTD**

FILE REF : **146/02** TYPE : **MINERAL ONLY** AREA : **795** km² (approx.)

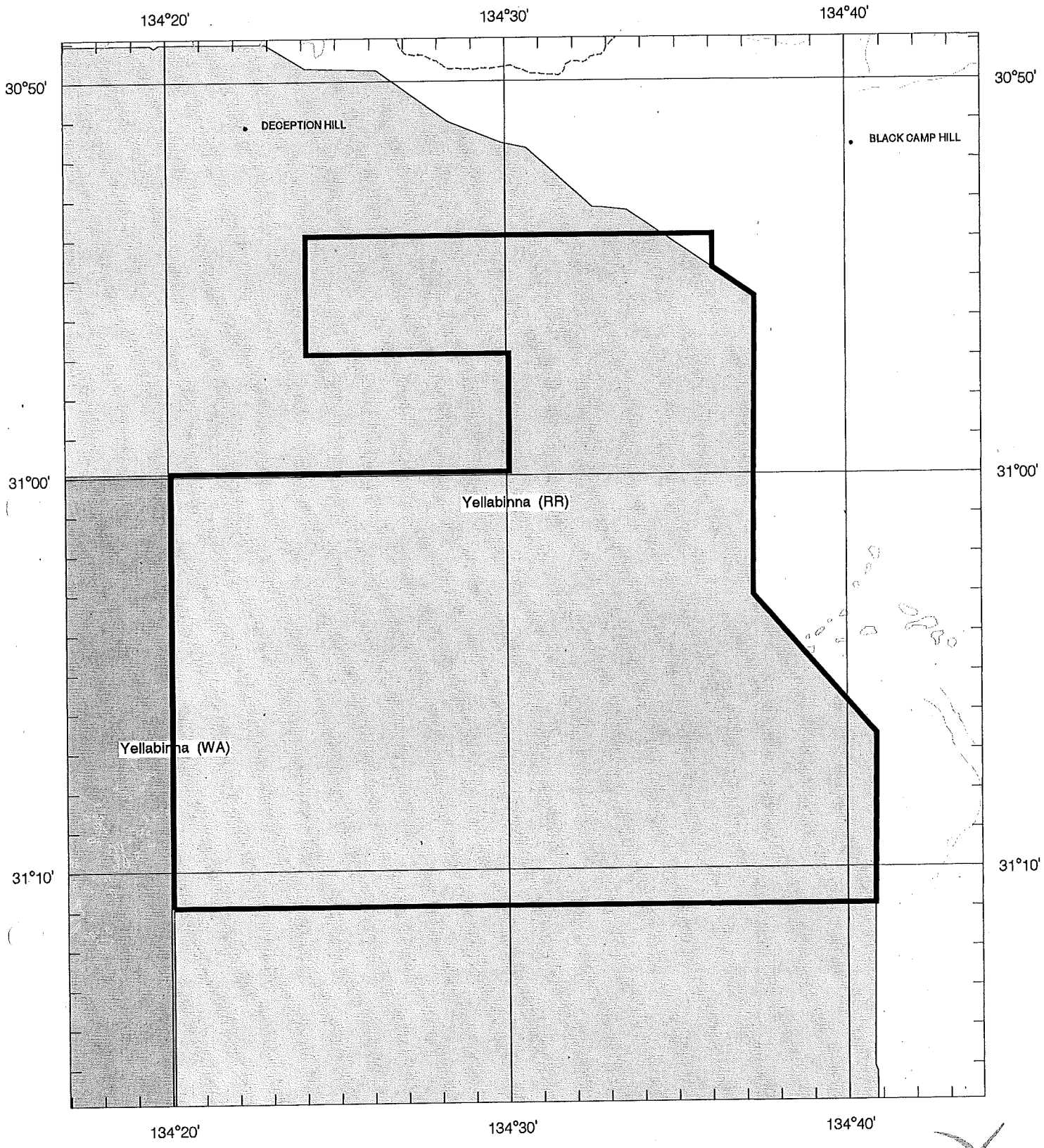
1:250000 MAPSHEETS : **TARCOOLA CHILDARA**

LOCALITY : **DECEPTION HILL AREA - Approximately 30 km south of Tarcoola**

DATE GRANTED : **26-Oct-2004** DATE EXPIRED : **25-Oct-~~2005~~** 2006

EL NO : **3266**

SCHEDULE A



SCALE 1 : 250 000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

LICENCE GRANTED IN : DATUM AGD66

GDA GEOCENTRIC DATUM OF AUSTRALIA

APPLICANT : **MINOTAUR OPERATIONS PTY LTD**

FILE REF : **313/09** TYPE : **MINERAL ONLY** AREA : **795** km² (approx.)

1:250000 MAPSHEETS : **TARCOOLA CHILDARA**

LOCALITY : **DECEPTION HILL AREA - Approximately 30 km south of Tarcoola**

DATE GRANTED : **09-Mar-2010** DATE EXPIRED : **08-Mar-2011** EL NO : **4439**

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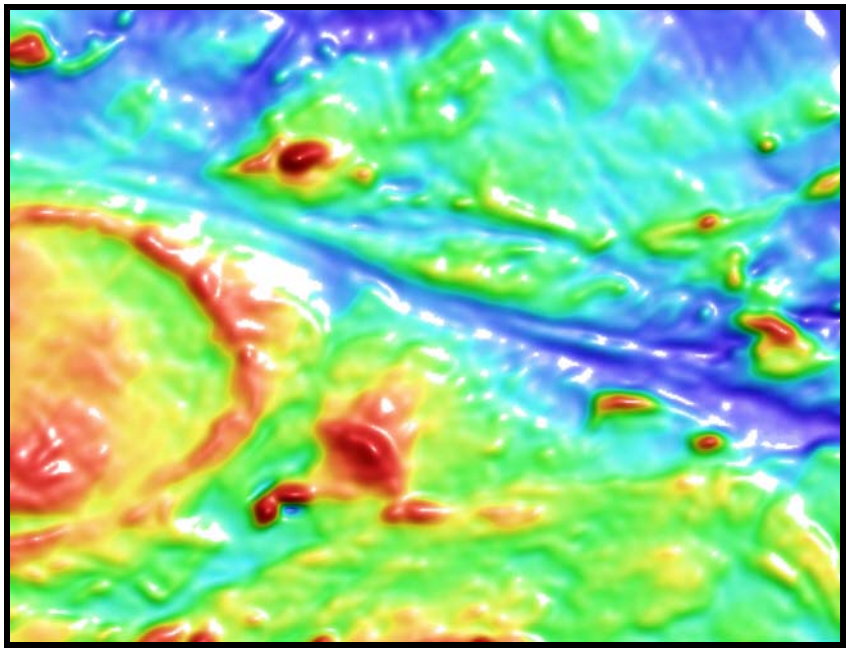
ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th OCTOBER 2005



R.B. Flint and A.D. Thompson

June 2006

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ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th OCTOBER 2005

R.B. Flint and A.D. Thompson
(Senior Geologist and Senior Geophysicist)

June 2006

SUMMARY

- A comprehensive gravity survey over the entire tenement and incorporating 532 stations has delineated several anomalies that may be related to IOCG-style mineralisation. One pronounced gravity complex has an amplitude of 10 mGals, dimensions of 7 x 1.8 km and consists of a main anomaly along with several peripheral smaller anomalies.
- Ground magnetic surveys indicate both normal and reversely polarised magnetic bodies are coincident with part of the main gravity complex.
- A calcrete survey incorporating 564 samples has revealed elevated Au (maximum of 36 ppb) over an area of ~750 x 750 m where gold content exceeds 10 ppb. Samples over an interpreted Tertiary palaeochannel contain elevated U (partly) but depleted Ag and Cu.

MAP REFERENCE: 1:250 000:	TARCOOLA (SH 53-10) & CHILDARA (SH 53-14)
MAP REFERENCE: 1:100 000:	5735 (Tolmer), 5736 (Malbooma), 5835 (Meelera) & 5836 (Tarcoola)
DISTRIBUTION:	PIRSA

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INTRODUCTION

EL 3266 (Deception Hill) is located ~20 km S of Tarcoola on the E–W transcontinental railway line and encompasses an area of 795 km^2 that is predominantly within Yellabinna Regional Reserve thus requiring special environmental considerations and approvals (Figure 1). The tenement was granted to Minotaur Operations Pty Ltd on 26th October 2004 and the operator is Minex (SA) Pty Ltd. This is the first annual technical report and summarises exploration activities undertaken by Minotaur Exploration on the tenement for the 12 month period up to 25th October 2005. The tenement is considered to have potential for Fe-oxide Cu-Au style mineralisation.

LICENCE	AREA (km^2)	GRANTED	EXPIRES
EL 3266 Deception Hill	795	26/10/2004	25/10/2006

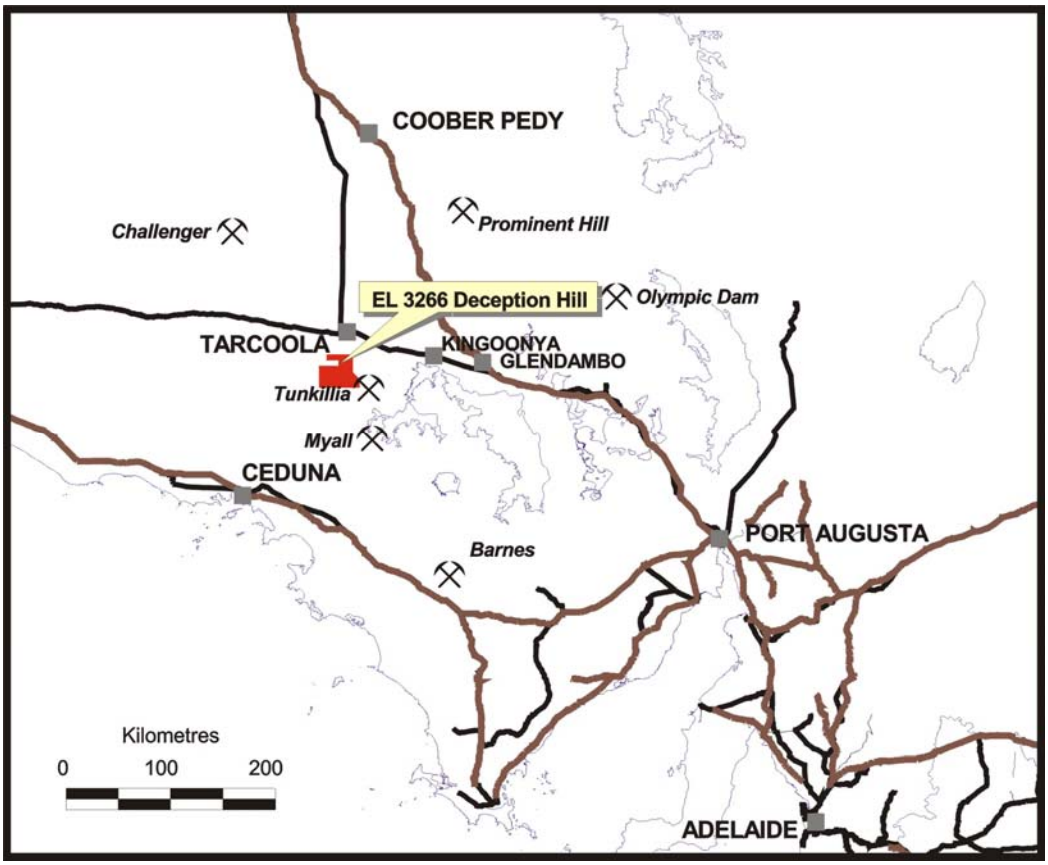

Figure 1: Location plan for EL 3266, South Australia

Basement rock exposures in the region are very scarce (<1%) and restricted to Mesoproterozoic Hiltaba Suite granite, otherwise the terrain is characterised by extensive veneers of aeolian sand dunes and spreads with dunes having an average height of 10 m (Figure 2) (Blissett, 1980; Daly, 1985).

The Tarcoola area of the central Gawler Craton has long been an area of considerable exploration interest, in part due to the predominantly historical Tarcoola Goldfield that was operational during the period 1901–1986 yielding 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

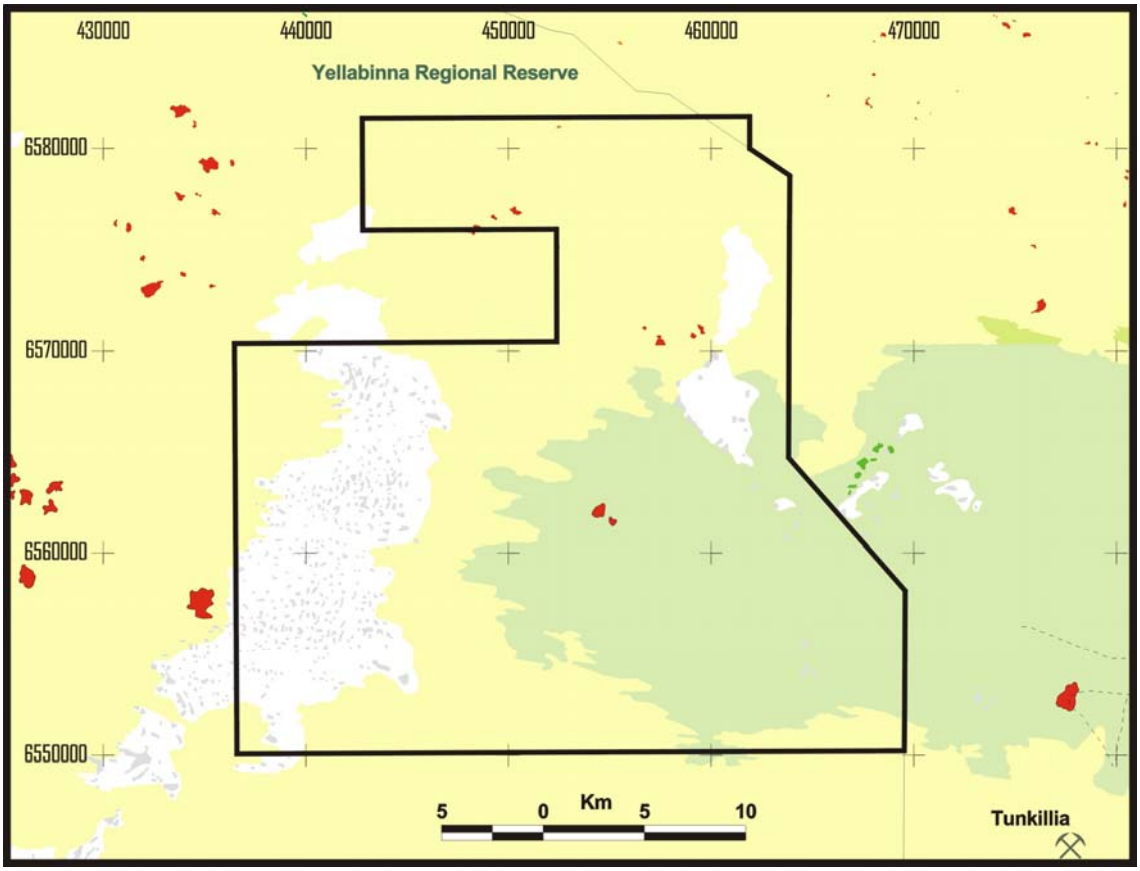

Figure 2: Outcrop geology for EL3266 (Deception Hill) of the central Gawler Craton (Blissett, 1980; Daly, 1985)

REGIONAL GEOLOGY

A great variety of Archaean, Palaeoproterozoic and Mesoproterozoic units are present in the Tarcoola and Kingoonya areas of the central Gawler Craton. Archaean units of the Mulgathing Complex are predominantly leucocratic quartz+feldspar and quartz+feldspar +garnet+biotite gneisses (e.g. Kennella Gneiss) and granite (Glenloth Granite) though basaltic and ultramafic flows (Hopeful Hill Basalt and Lake Harris Komatiite) are also present within the ENE-trending Lake Harris Greenstone Belt east of Tarcoola (Figure 3) (Daly and Fanning, 1993; Daly et al., 1998).

During the Palaeoproterozoic, various volcanosedimentary sequences, including the Wilgena Hill Jaspilite, Eba Formation, Labyrinth Formation and Tarcoola Formation were deposited within localized basins that were variously deformed during late stages of the Kimban and Kararan Orogenies. Associated plutonism includes the Muckanippie Anorthosite and granitoids of the Tunkillia Suite and St Peter Suite. During these deformational episodes, major shear zones developed, including the E-trending Yerda and Oolabinnia Shear Zones and N-trending Yarlbrinda Shear Zone that are up to several kilometers wide with ductile shearing and deformation occurring before ~1600 Ma (Daly et al., 1998; McLean and Betts, 2003).

During the Mesoproterozoic, widespread anorogenic magmatism across the central portion of the craton resulted in voluminous outpourings of the Gawler Range Volcanics, intrusion of Hiltaba Suite granite, emplacement of minor gabbroic plugs and development of Cu-Au +/- U mineralisation at Olympic Dam and Prominent Hill and Au-only mineralization at Tunkillia and Tarcoola (Blissett et al, 1993; Flint, 1993). Displacements along NE-trending faults (e.g. Bulgunnia and Koonibba Faults) were predominantly vertical and of brittle character (Figures 3–4).

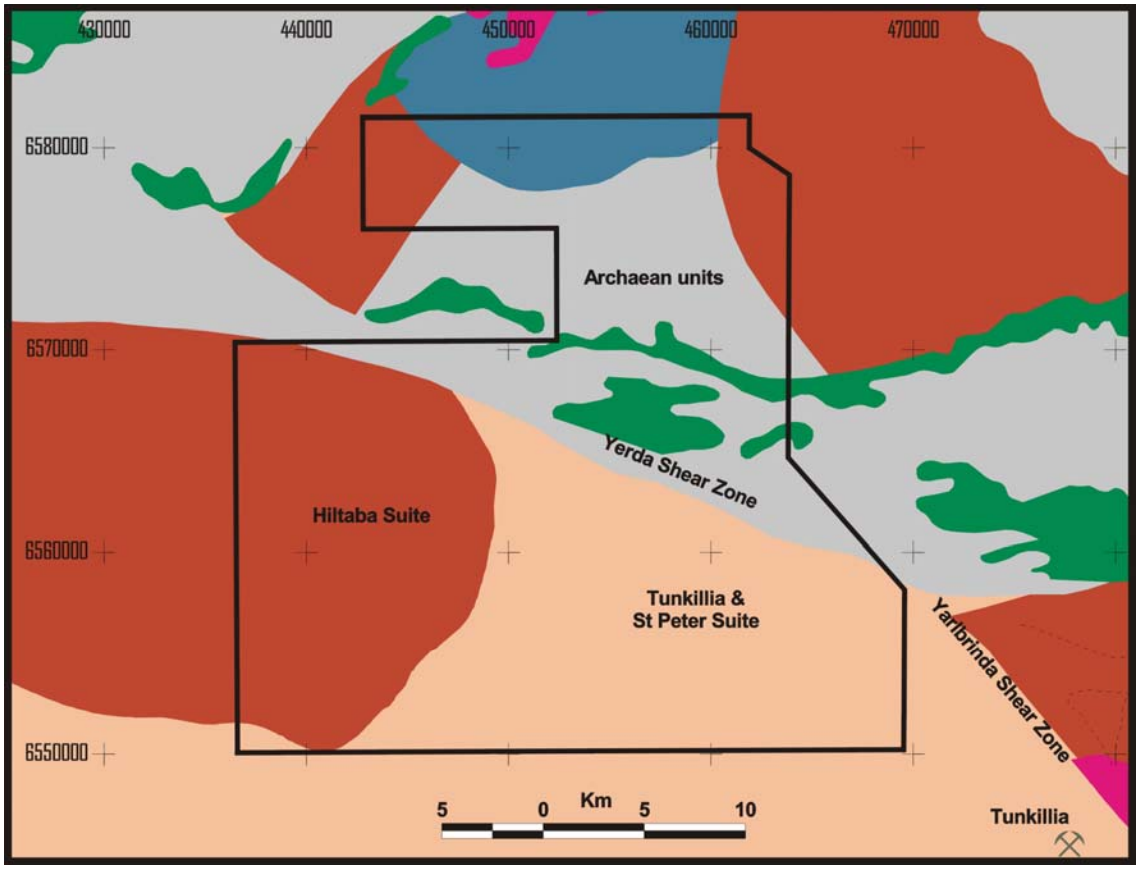

Figure 3: Tectonic interpretation for EL 3266 (Fairclough et al., 2003)

REGIONAL MINERALISATION

No gold mineralisation is known within EL 3266, but it is present regionally at various localities.

The historical Tarcoola Goldfield (~20 km N of EL 3266) during the period 1901–1986 yielded 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

The Glenloth Goldfield (~45 km E of EL 3266) was worked during 1893–1901 and again during the 1930's for a total recorded production of 315.4 kg from 14 620 t of ore yielding an average grade of 21.6 g/t Au (Daly in Flint, 1993). Auriferous quartz veins and sets up to

1 m wide occur within sheared Archaean Glenloth Granite and Kenella Gneiss (Mulgathing Complex) though are believed to have been derived from a shallow, but concealed, Hiltaba Suite granite batholith (Blissett, 1985).

Quartz-vein hosted gold mineralisation is known from several prospects along the Yarlbrinda Shear Zone (Tunkillia, Myall and Sheoak) west of the Gawler Ranges. Helix Resources have defined a total JORC resource for the Tunkillia Prospect on the Yarlbrinda Shear Zone (~15 km E of EL 3266) of 10.5 Mt at 2.2 g/t Au for 730 000 oz of contained gold (Ferris and Wilson, 2004). Host rocks within the Yarlbrinda Shear Zone are sheared Palaeoproterozoic Tunkillia Suite lithologies with gold and associated pyrite occurring in steeply-dipping quartz veins within an alteration zone comprising sericite and chlorite, with mineralisation most likely related to fluids emanating from a Hiltaba Suite granite and preferentially focused along the Yarlbrinda Shear Zone.

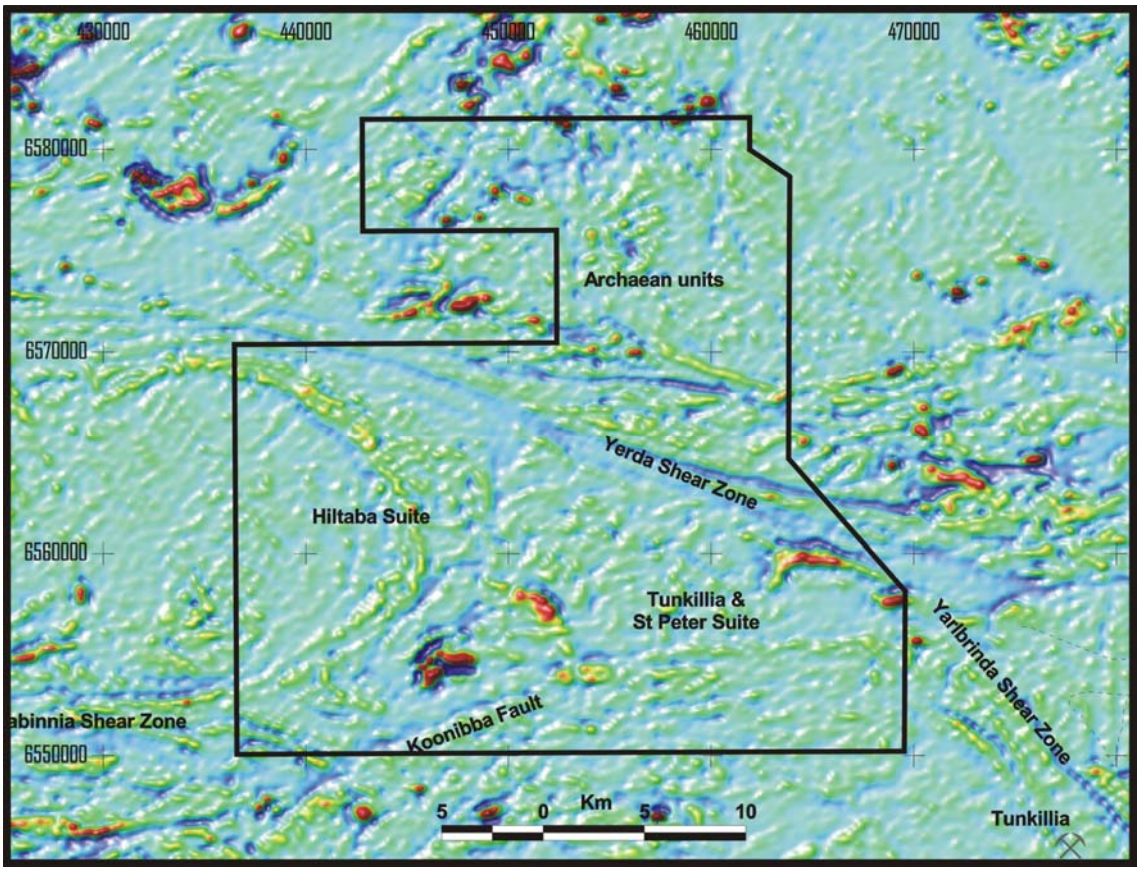

Figure 4: Total Magnetic Intensity image 1VD-TMI-RTP for EL 3266 (PIRSA data)

PREVIOUS MINERAL EXPLORATION

Six previous exploration companies have explored the Deception Hill area over the past 23 years (Table 1). Of these, significant fieldwork was undertaken by Afmeco Pty Ltd who, in the early 80's, conducted a drill program over two N–S traverses and Aurelius Resources who, in joint venture with PIMA, conducted a large-scale soil (calcrete) sampling program during 1997–98.

EL		Granted	Expiry	References	
580	Afmeco Pty Ltd	16/01/80	15/01/82	ENV3778	ENV5234
618	Afmeco Pty Ltd	21/04/80	28/05/81	ENV3836	ENV4074
684	Afmeco Pty Ltd	11/08/80	29/05/81	ENV4074	
868	Afmeco Pty Ltd	11/08/81	10/08/82	ENV4074	
1017	Amoco Minerals Australia Co	28/07/82	27/01/84	ENV4896	
1171	Amoco Minerals Australia Co	2/09/83	1/09/84	ENV5323	
1390	CSR Ltd	13/03/87	12/03/89	ENV6859	
1414	Tarcoola Gold Ltd	17/07/87	16/07/88	ENV6921	
1447	Tarcoola Gold Ltd	27/11/87	26/05/88	ENV6975	
1525	Tarcoola Gold Ltd	29/09/88	28/09/89	ENV6844	
1859	Aurelius Resources and partners	30/08/93	29/08/98	-	
2202	Goldstream Mining NL	27/09/96	16/08/00	ENV9522	

Table 1: Summary of previous mineral exploration activity on EL 3266

Afmeco (1980–1982) targeted uranium and base metals associated with magnetic anomalies in the Gawler Range Volcanics. Within EL0868, Afmeco conducted a small aeromagnetic survey, two ground gravity and magnetic traverses and a drill program totalling 1 124 m and 24 holes. Five holes intersected sulphides and the nature of host lithologies causing some magnetic anomalies were not adequately explained.

Amoco (1982–1984) acquired ground in the Deception Hill area to assess the base and precious metal potential of Archaean to Middle Proterozoic volcanics, granites and sediments. Amoco mainly carried out office studies and reconnaissance field work.

CSR (1987–1989) focused on gold mineralisation in the Deception Hill area. A drill program totaling 3 547 m was completed with hole TUN7 returning an assay of 33 ppb gold.

Tarcoola Gold (1987–1989) targeted gold mineralisation in the western part of the area. A ground magnetic survey and an extensive RAB drilling program were carried out of which three drill holes lie within the current Deception Hill tenement. Hiltaba granite was reached around 55 m in each hole with assay results indicating a wide area of low-level gold anomalism, with peak values only reaching 0.03 ppm Au.

Gold and nickel targets were the focus for Aurelius Resources during 1993–98. An extensive calcrete survey was completed, with 1 384 samples collected and assays revealed two broad zones of anomalism with a peak value of 52 ppb, but results were never pursued. Subsequently Minotaur Resources selected 13 pulps to be re-assayed by the BLEG technique, confirming that the original assays were accurate.

GRAVITY SURVEYS

From the 8–16th of April 2005, the South Australian government, through PIRSA and as part of a regional gravity survey over a large area of the Gawler Craton, incorporated the entire Deception Hill tenement at a station spacing of 2 x 1 km. Within EL 3266 a total of 451 gravity stations were collected by the Daishsat gravity contractors (Figure 5). The PIRSA gravity survey was successful in identifying a significant positive anomaly of interest which was subsequently surveyed by Minotaur Exploration in greater detail from 21st June to 4th July 2005 utilising a station spacing of 500 x 500 m. Two detailed N–S and E–W traverses at 100 m station intervals were also undertaken over the peak of the anomaly. A smaller target located near the Yerda Shear Zone was also identified and followed up with a more detailed survey. All infill areas were also conducted by Daishsat gravity contractors and totaled a further 532 gravity stations.

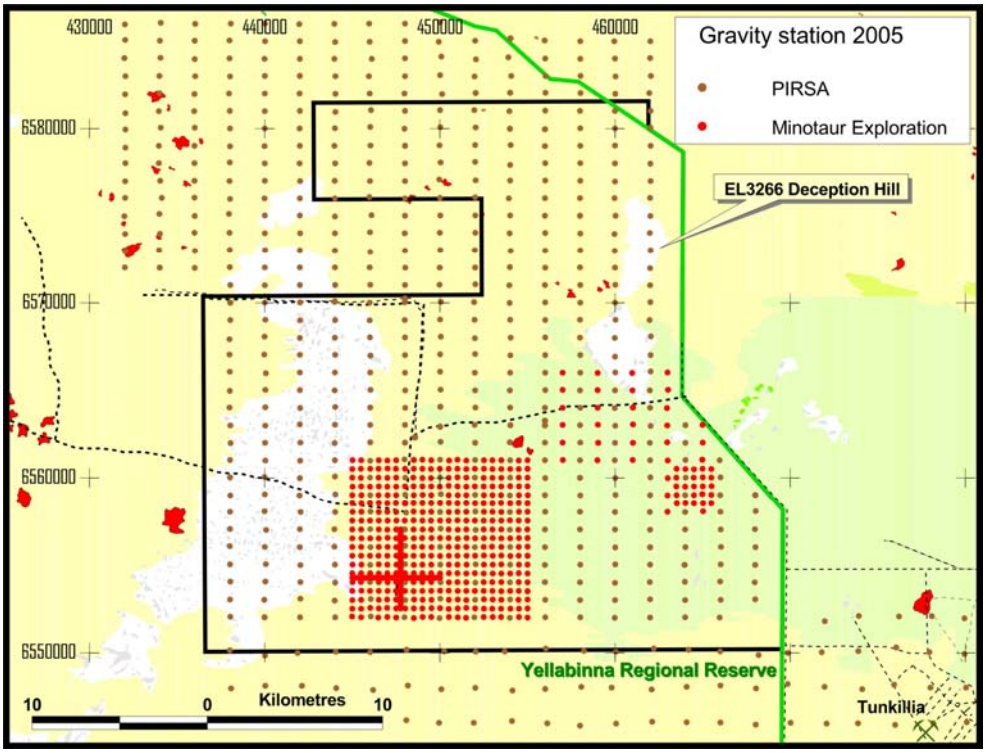

Figure 5: Gravity station localities for 2005 on EL 3266

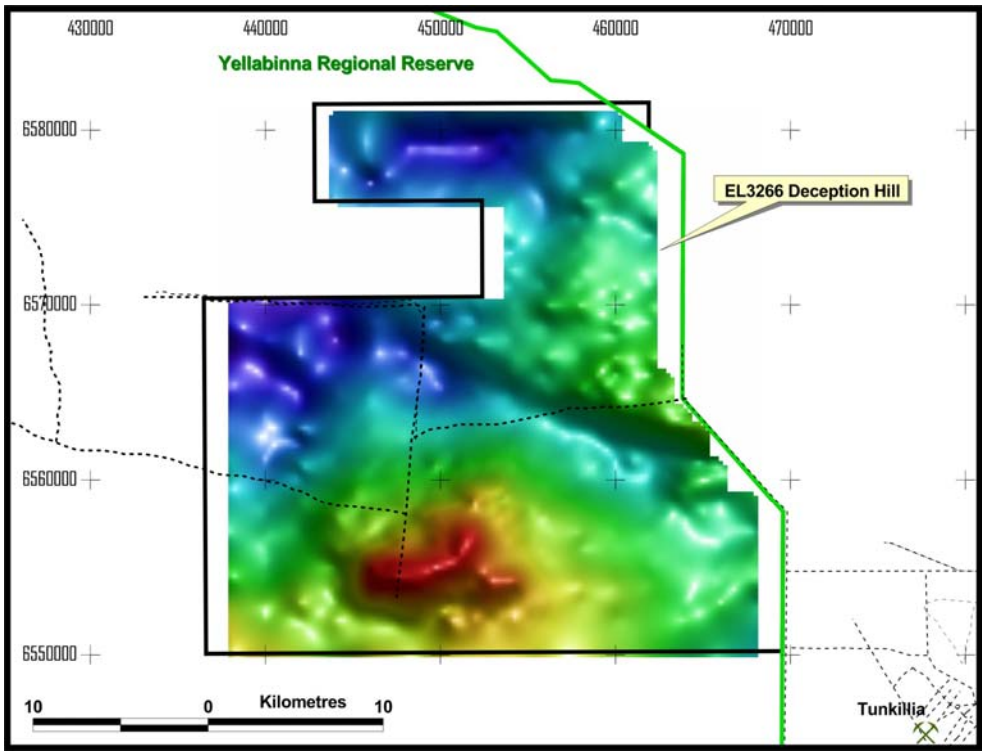

Figure 6: Bouguer gravity anomaly image for EL 3266

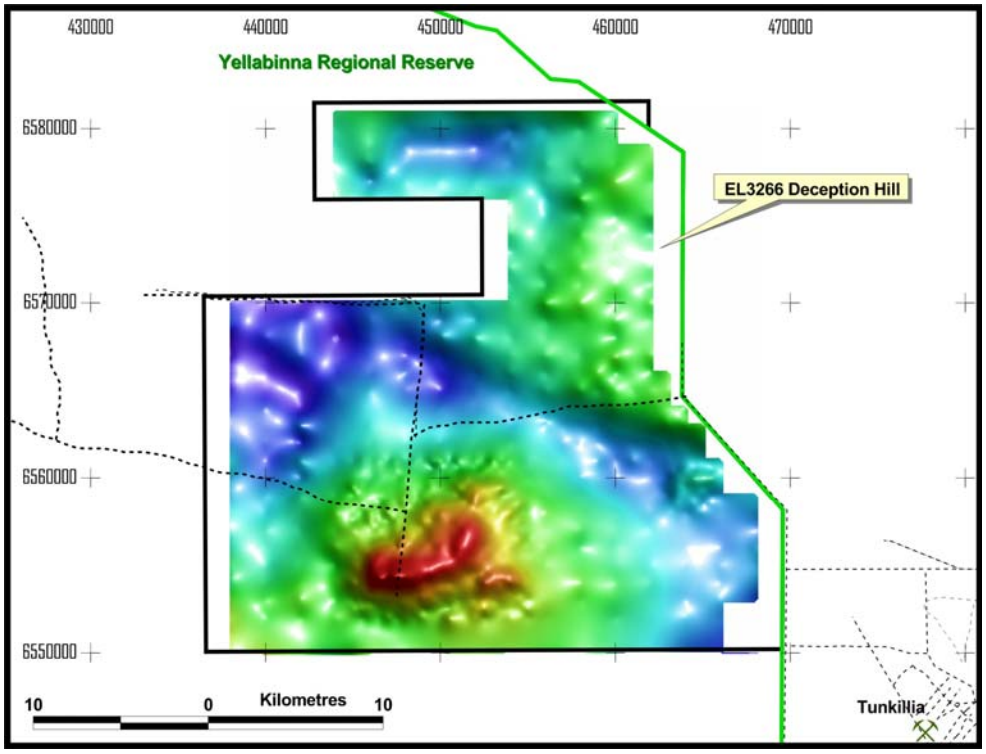

Figure 7: Residual gravity image for EL 3266

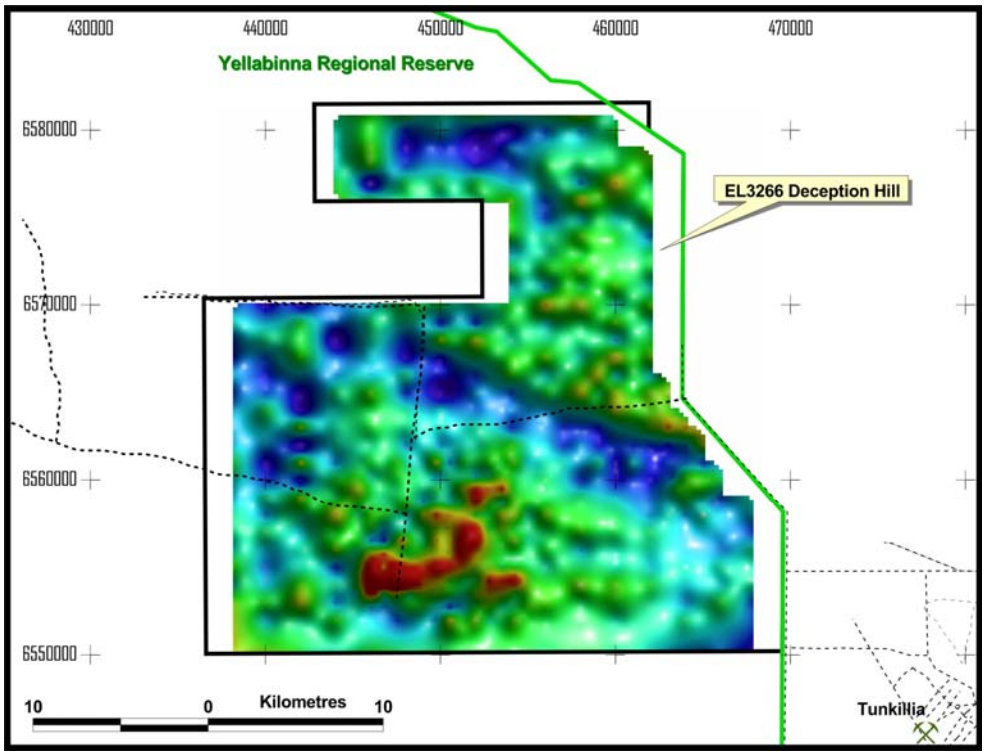

Figure 8: 1VD gravity image for EL 3266

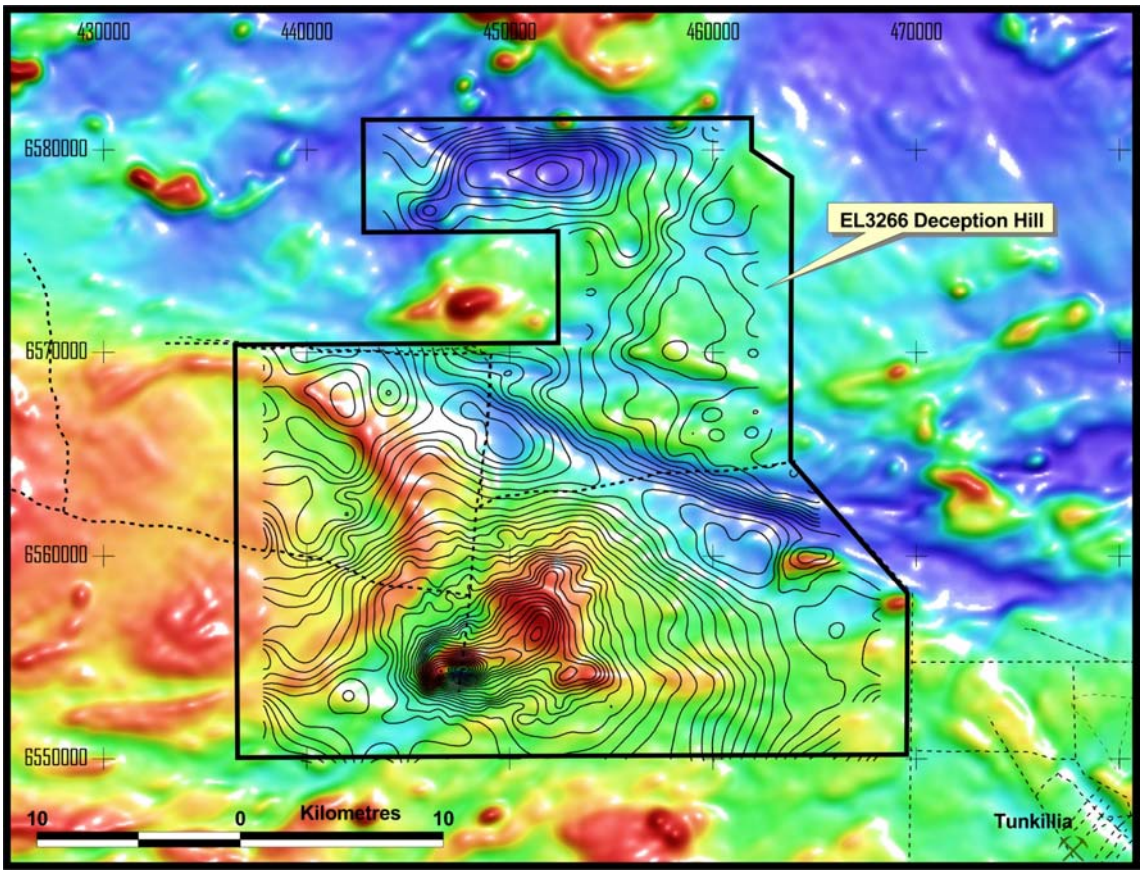

Figure 9: Residual gravity contours over Total Magnetic Intensity (TMI) image for EL3266

GRAVITY DATA AND INTERPRETATION

The Deception Hill tenement area is characterised by several regionally significant gravity features including a prominent WNW-trending linear gravity low, pronounced low (in the southwest) and pronounced high-amplitude anomaly in the south (Figures 6–9).

A WNW-trending linear gravity low (and coincident magnetic feature) delineates the WNW–ESE Yerda Shear Zone, a major crustal weakness separating a predominantly Archaean terrane (Harris Greenstone Belt) to the north and juvenile Palaeoproterozoic granitic suites (Tunkillia and St Peter Suites) to the south. McLean and Betts (2003) geophysically modeled this region (gravity and magnetic data) and interpreted the Yerda Shear Zone to be south-dipping and with predominantly dextral strike-slip displacement during emplacement of Hiltaba Suite granitic plutons (Figures 6–9).

A small anomaly near the eastern boundary of the tenement has an aerial extent of ~1.5 x 2 km, is coincident with a magnetic anomaly and is located immediately adjacent to the Yerda Shear Zone. The anomaly has an amplitude of 1 mGal and its centre is located at 464500E, 6559950N. Source units causing the anomaly are expected to be shallow (<100 m) and nature and age of lithologies are unknown (Figures 6–9, 10).

The pronounced anomaly of low amplitude in the southwest portion of the tenement corresponds with a Hiltaba Suite granitic pluton which is better defined in the airborne magnetic data with a rim of material of higher magnetic susceptibilities surrounding a central zone of low average susceptibility. The pluton is 15–20 km in diameter and was modeled by McLean and Betts (2003) using regional gravity data as having a depth extent of 4–5 km (Figures 6–9).

The pronounced gravity high (up to 10 mGals) southeast of this granitic pluton and between the Oolabinna Shear Zone, Yerda Shear Zone and Koonibba Fault is of considerable interest in possibly representing hematite and/or magnetite-hosted IOCG-style mineralisation. The gravity anomaly has a length of 7 km and a width of 1.8 km, though is a complex gravity feature consisting of a main anomaly along with a number of smaller anomalies. The highest-amplitude portion of the anomaly occurs on the western margin of the gravity complex, is 3 km in length and coincides with a magnetic anomaly (Figures 6–9, 11–13).

At the eastern margin of the main gravity feature is a second, lower-order anomaly of ~5 mGals (451300mE 6556100mN). This anomaly is not directly coincident with any pronounced magnetic feature, however there is a magnetic anomaly on the northern margin of this gravity anomaly. The third gravity feature is a satellite anomaly to the southeast of the main gravity anomaly. This anomaly, centered at 452850mE 6554150mN, has an amplitude of 2 mGals, aerial extent of ~1.5 km x 2 km and has a coincident magnetic anomaly (Figures 12–13).

Previous mineral exploration drilling near the main gravity anomaly is restricted to four drill holes by Afmeco Pty Ltd in 1981 (holes CHL 21–24) (Figure 13). The thickness of Quaternary sediments ranges between 10–15 m with fresh basement at 30–60 m consisting of

granite, gneiss and amphibole +feldspar schist with no significant anomalous geochemistry. Recent field checking of GPS coordinates for these drill holes indicate that their positions differ by ~500 m from those recorded in PIRSA's digital database, and it appears that the drill holes did not adequately evaluate either the gravity or magnetic anomalies. Further drilling is warranted.

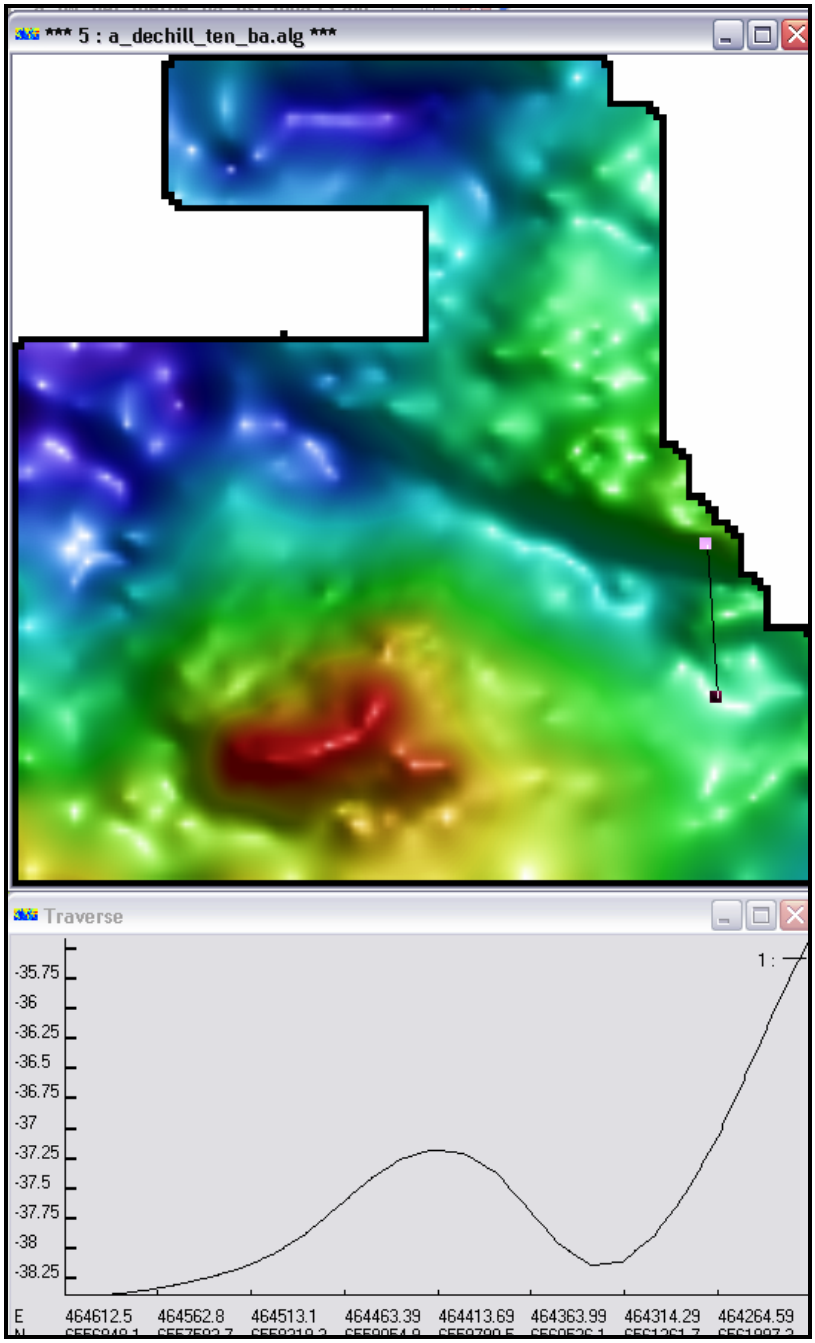

Figure 10: Gravity profile across small anomaly on eastern EL 3266

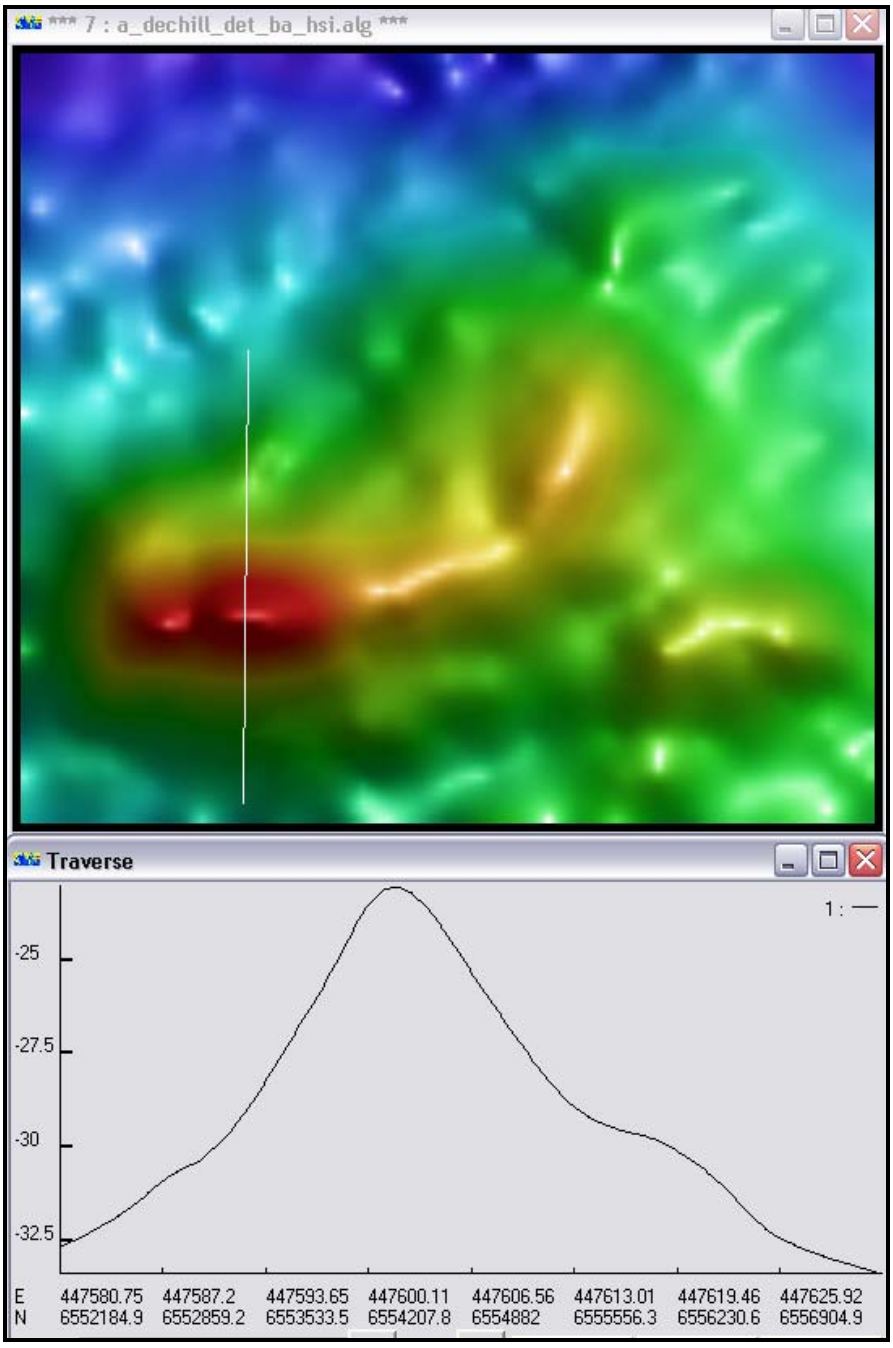

Figure 11: Gravity profile across main anomaly on southern EL 3266

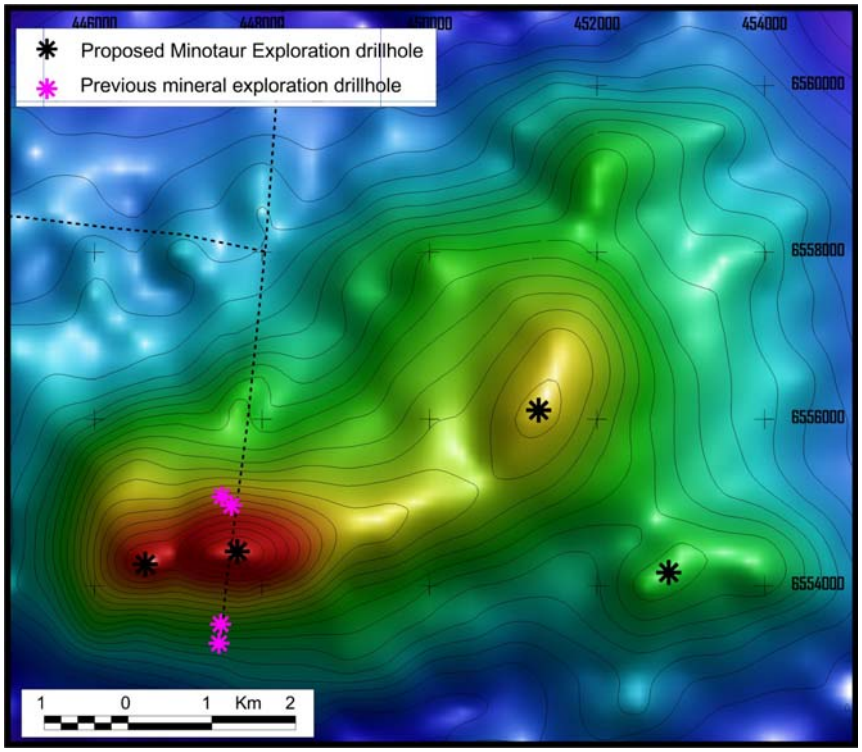

Figure 12: Residual gravity contours and image for the main anomaly on southern EL 3266

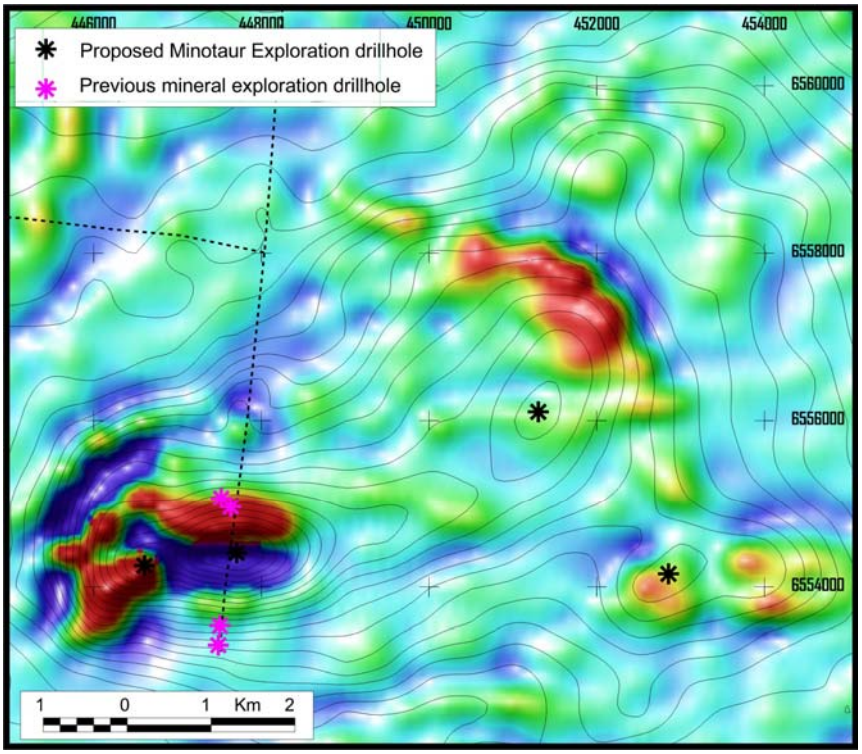

Figure 13: Residual gravity contours on TMI-RTP image for the main gravity anomaly on southern EL 3266

GRAVITY MODELING

2D modeling along the E–W detailed gravity profile (Line 6554250mN) reveals two separate gravity peaks. Modeling utilising a SG of 3.3 g/cc (a reasonable assumption for IOCG-style mineralisation) puts the depth at ~120 m beneath the surface. The N–S profile (Line 447750mE) indicates a single peak of ~10 mGals and which correlates with the eastern peak on the E–W traverse. The locations of the centre of the bodies are 446500mE & 6554250mN (western body) and 447700mE & 6554400mN (eastern body) (Figure 14).

3D modeling suggests an SG of 3.2 g/cc and a depth to top of ~200–300 m, however, the depth to top using the 2D models is thought to be more accurate (Figures 15–16).

2D modeling of the northeastern and lower-amplitude target using the 500 m resolution data indicates a deeper source of ~240 m and modeled SG of 2.85 g/cc. However, the lower resolution 500 m data may result in a deeper computed depth to source body and a preferred depth of ~200 m is considered more plausible.

2D modeling of the satellite anomaly southeast of the main gravity anomaly indicates a relatively shallow source of ~100 m and theoretical SG of 2.8 g/cc suggesting a possible mafic intrusive body for the source lithology. The modeled body dips steeply north.

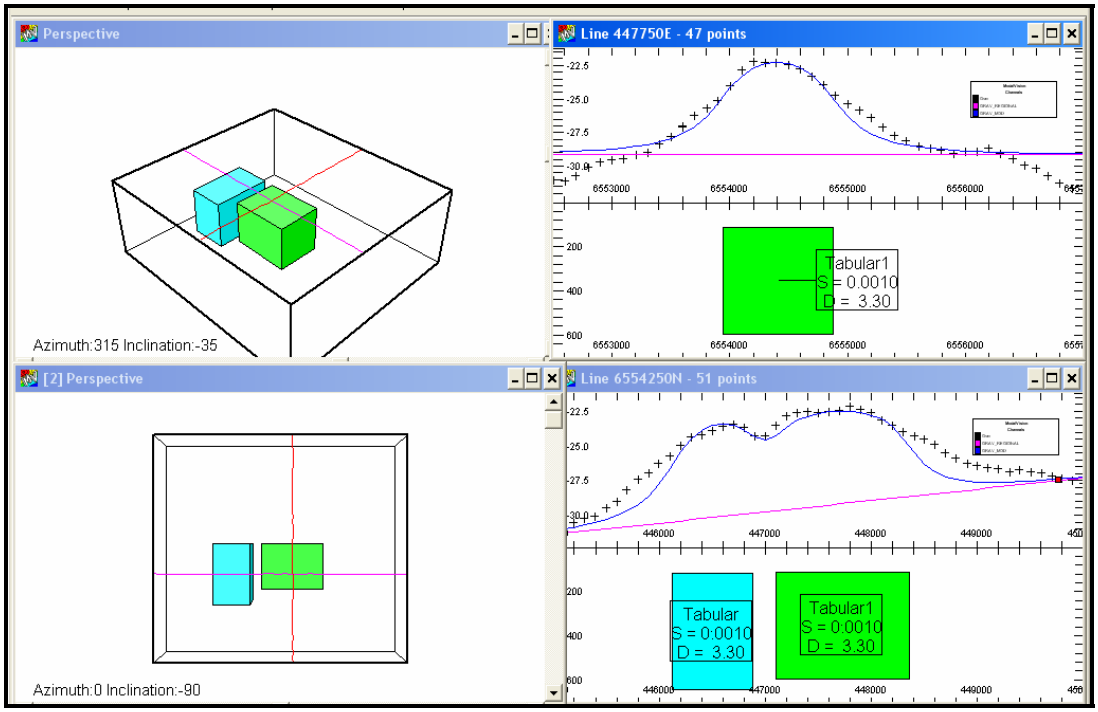

Figure 14: 2D gravity modeling along Lines 447750mE (S–N) and 6554250mN (W–E)

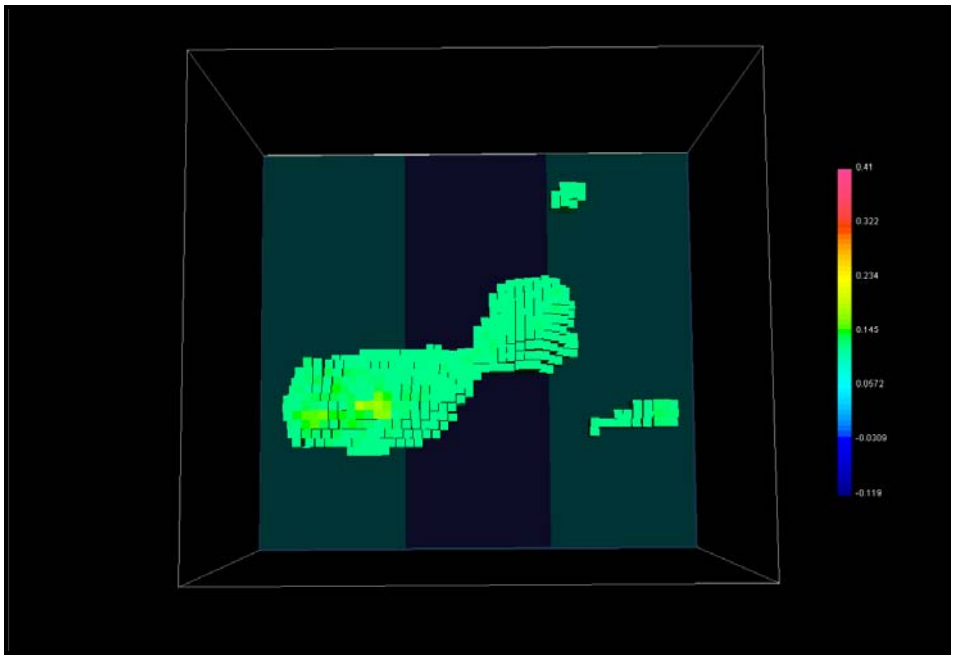

Figure 15: 3D gravity model of main gravity anomaly, southern EL 3266 (plan view)

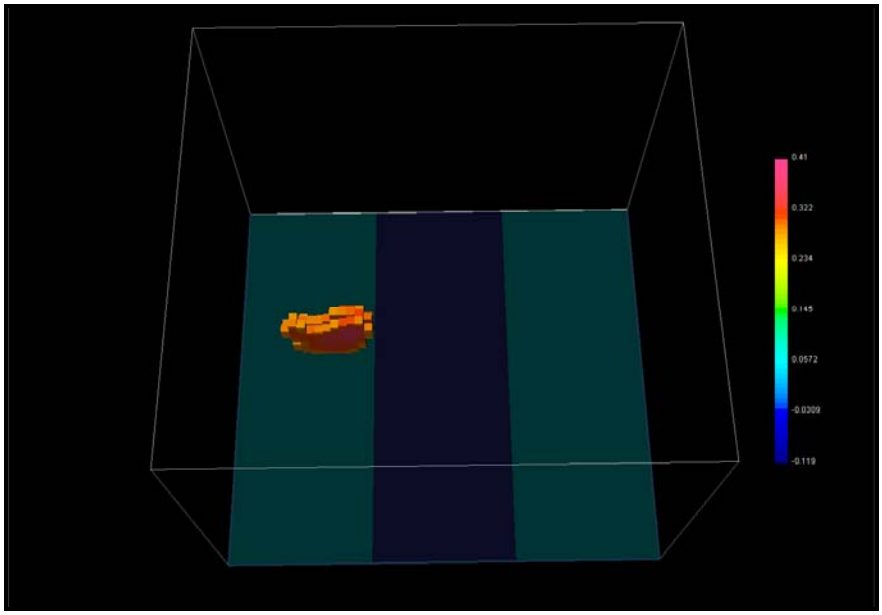

Figure 16: 3D gravity model of main gravity anomaly, southern EL 3266 (view northwards)

MAGNETIC DATA AND MODELING

A ground magnetic survey was conducted in order to determine the relationship between the main complex gravity anomaly and various airborne magnetic features on southern EL 3266. A total of ten 3.5 km long, N–S oriented lines were surveyed at 400 m line spacing and 10 m station spacing (Figures 17–18).

The ground magnetic survey reveals that the main gravity anomaly is associated with contrasting magnetic features. The western peak of the main gravity anomaly correlates with a magnetic high and the eastern peak correlates with a reversely polarised magnetic feature. Modeling of the magnetic data indicates a high magnetic susceptibility of ~0.13 cgs consistent with pyrrhotite or magnetite mineralisation rather than a mafic intrusive. Modeling of line 446300mE shows that the western magnetic body has a southerly dip of 60^{o} and is modeled at a depth of ~60 m (Figure 19). There is also a second magnetic response further to the north at 6555000mN, which has a similar modeled dip, depth and magnetic susceptibility. These bodies continue through to 446900mE where there is a marked change in the magnetic character.

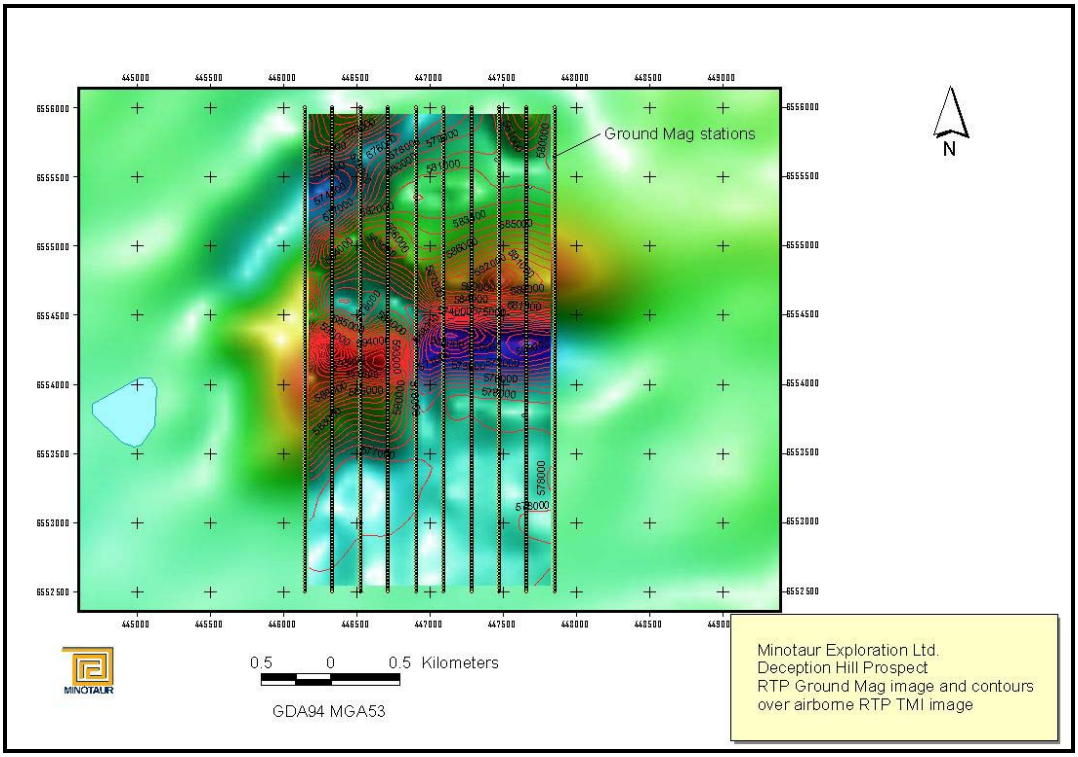

Figure 17: Inset ground magnetic image (RTP) over regional airborne TMI-RTP image for region incorporating the main gravity on southern EL 3266

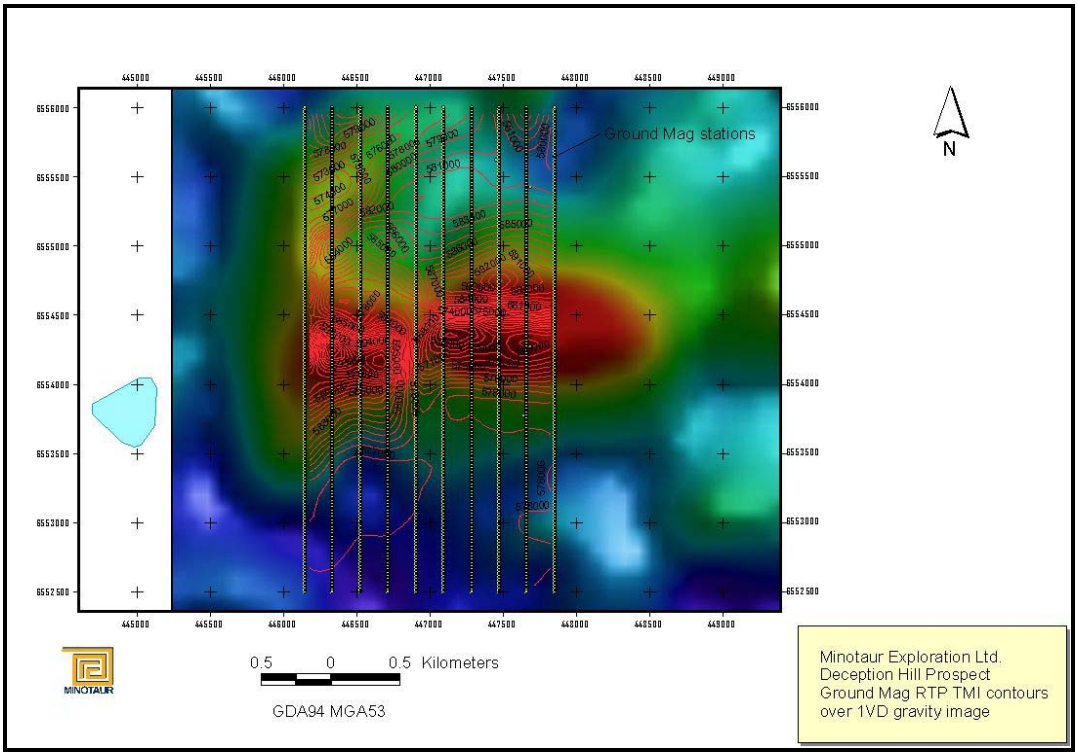

Figure 18: Inset ground magnetic contours (TMI-RTP) over detailed 1VD gravity image for region incorporating the main gravity on southern EL 3266

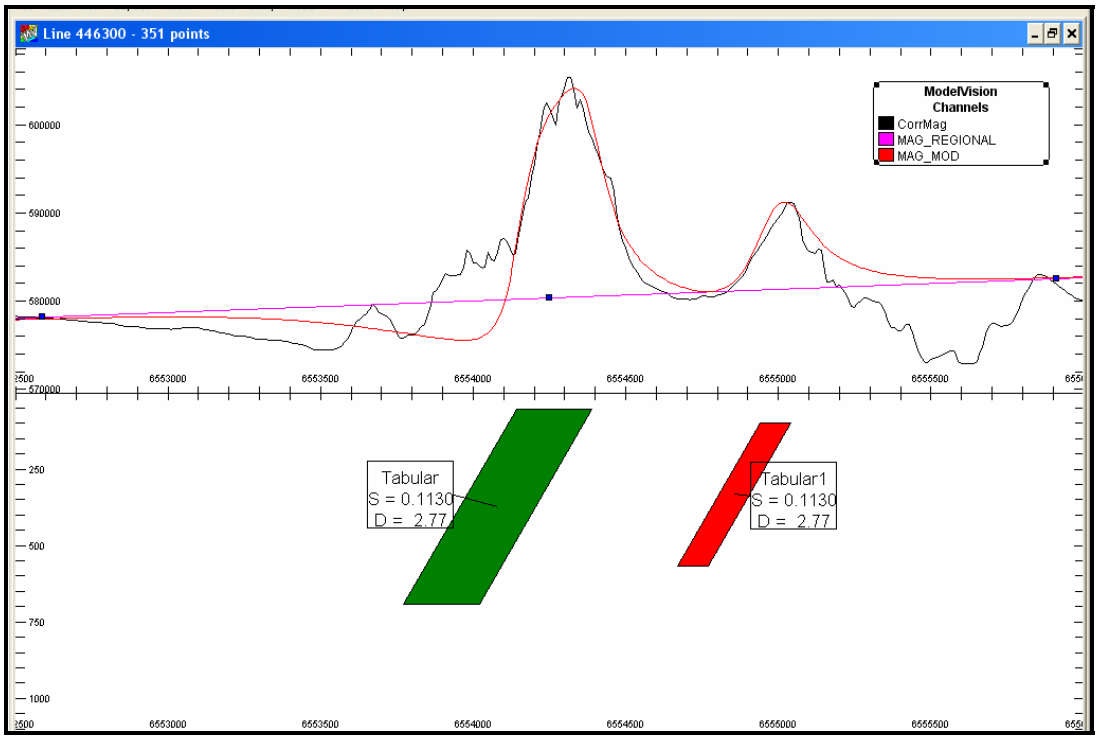

Figure 19: 2D magnetic model along Line 446300mE

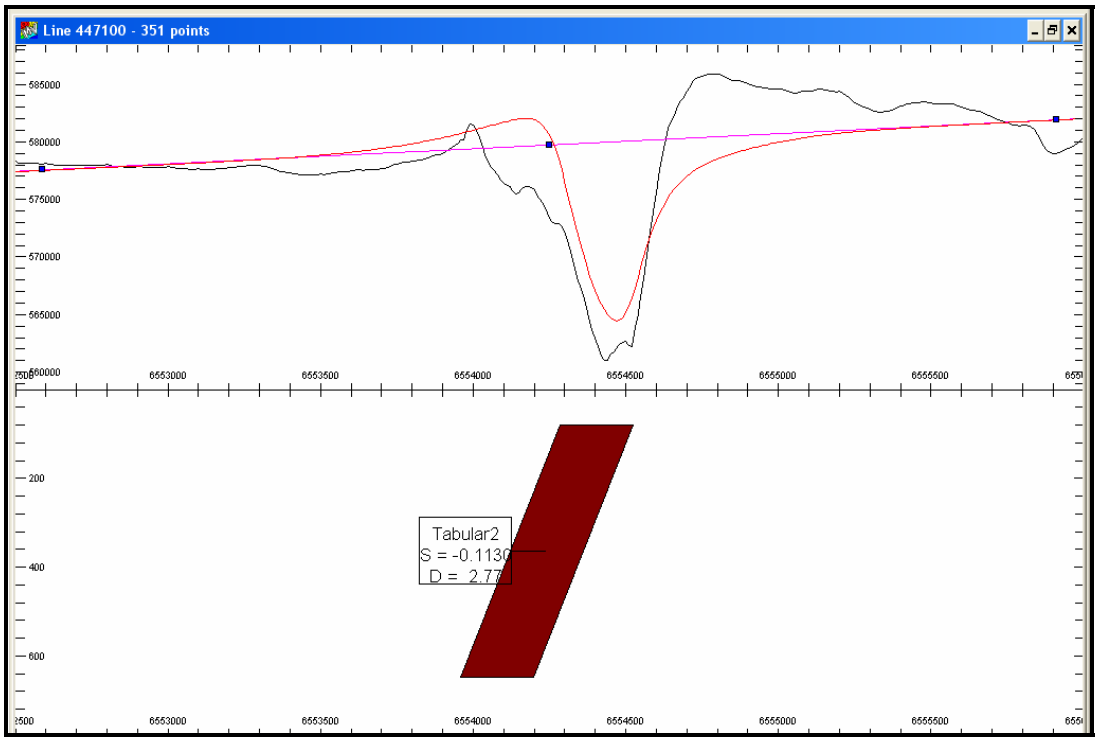

Figure 20: 2D magnetic model along Line 447100mE with only one body

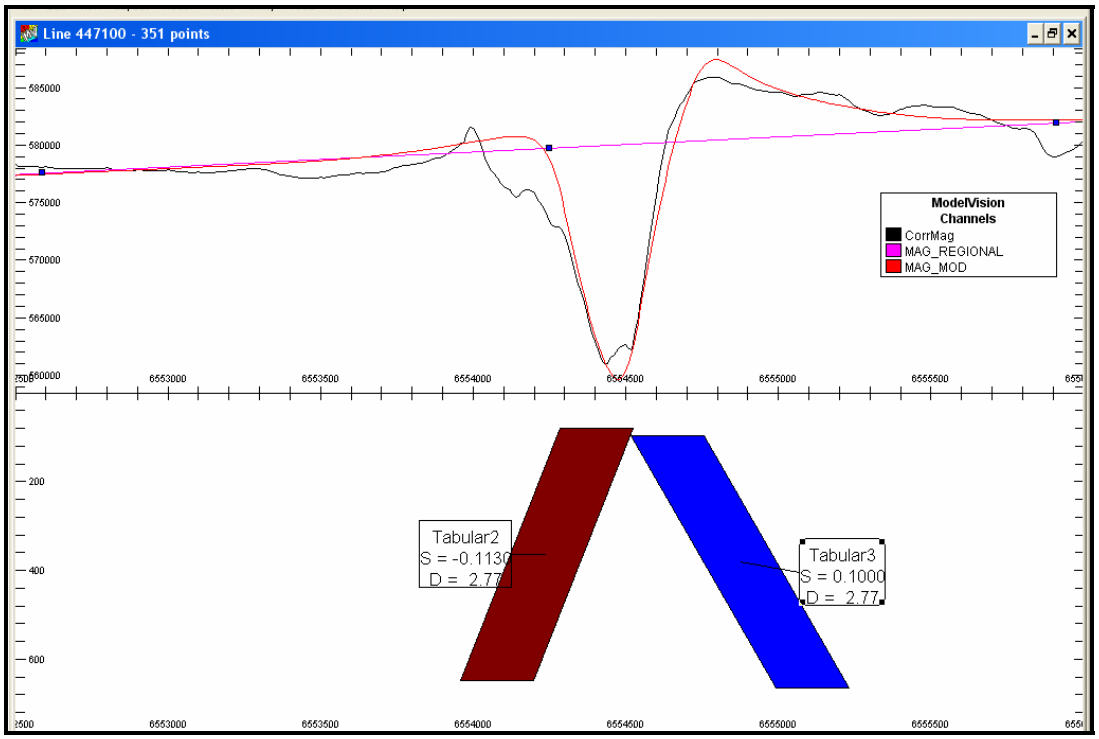

Figure 21: 2D magnetic model along Line 447100mE with two bodies

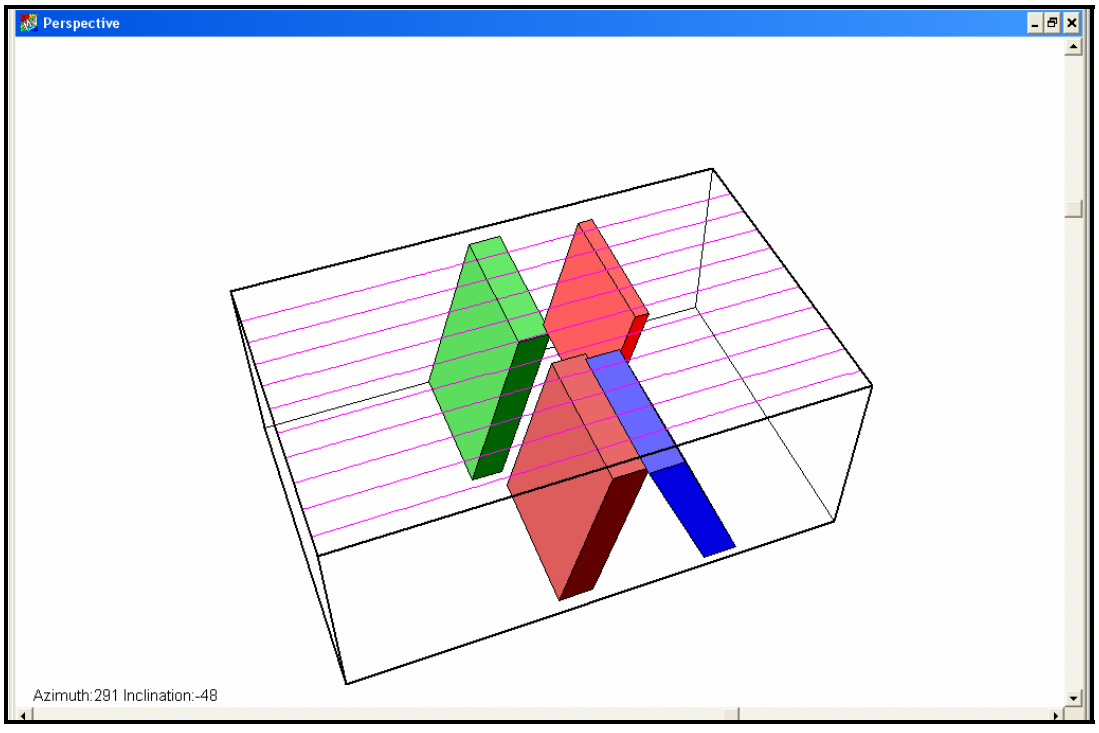

Figure 22: Perspective view from southeast of 2D magnetic modeling results

The reversely polarised anomaly can also be modeled as a south dipping body with a similar but negative magnetic susceptibility of -0.13 cgs. The reversely polarised anomaly has a positive shoulder on its eastern margin which cannot be modeled using a single reversely polarised body. A second body with opposite polarity was therefore inserted to the north of the existing body in order to fit the data. Due to the long wavelength of the positive shoulder, this second body was given a northerly dip in order to fit the data. The overall model along this line (447100mE) was therefore an anticlinal shape with the southerly, reversely polarised magnetic body dipping to the south at 60^{o} and northerly, positively polarised magnetic body (0.1 cgs) dipping to the north at 50^{o}. Both bodies are modeled at depths of ~80-90 m (Figures 20–22).

CALCRETE DATA

Aurelius Resources during 1993–98 undertook an extensive calcrete survey collecting 1 384 samples and assays revealed two broad zones of gold anomalism with a peak value of 52 ppb. Results were never pursued. During the past 12 months, a calcrete survey was conducted over portion of eastern EL 3266 by Minotaur Exploration with collection of 564 samples and assaying for Ag, Au, Ca, Cu, Ni, Pb, U and Zn. Approximately 60% of samples collected possess >12% Ca and are considered to represent reasonable calcrete horizons whereas other samples primarily reflect calcareous soils and sands with weak to modest carbonate development (Figure 23).

Re-sampling by Minotaur Exploration confirmed distinctly elevated gold within calcrete ~4 km N of the Yerda Shear Zone though slightly lower than previously reported. The maximum value was 36 ppb (less than 40 m away from the best site of Aurelius Resources) though the area of interest was enlarged with dimensions of ~750 x 750 m where gold content in calcrete exceeds 10 ppb. Sites of anomalous gold in calcrete are apparently marginal to an inferred Tertiary palaeochannel based on satellite thermal imagery and thus may represent auriferous zones within crystalline basement. Nearby is a prominent E–W splay from the Yerda Shear Zone and this feature ~30 km further east is known to contain anomalous gold (Arcoodaby Prospect) (Figures 24–26).

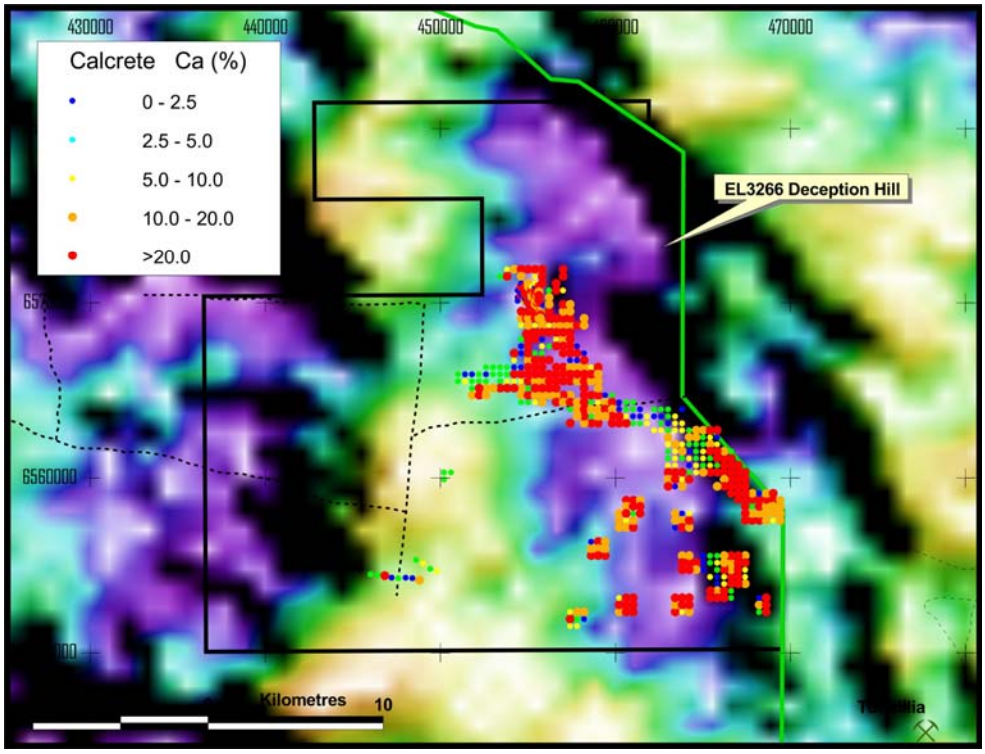

Figure 23: Calcrete Ca (%) on satellite NOAA thermal image for all samples collected during 2005 on EL 3266

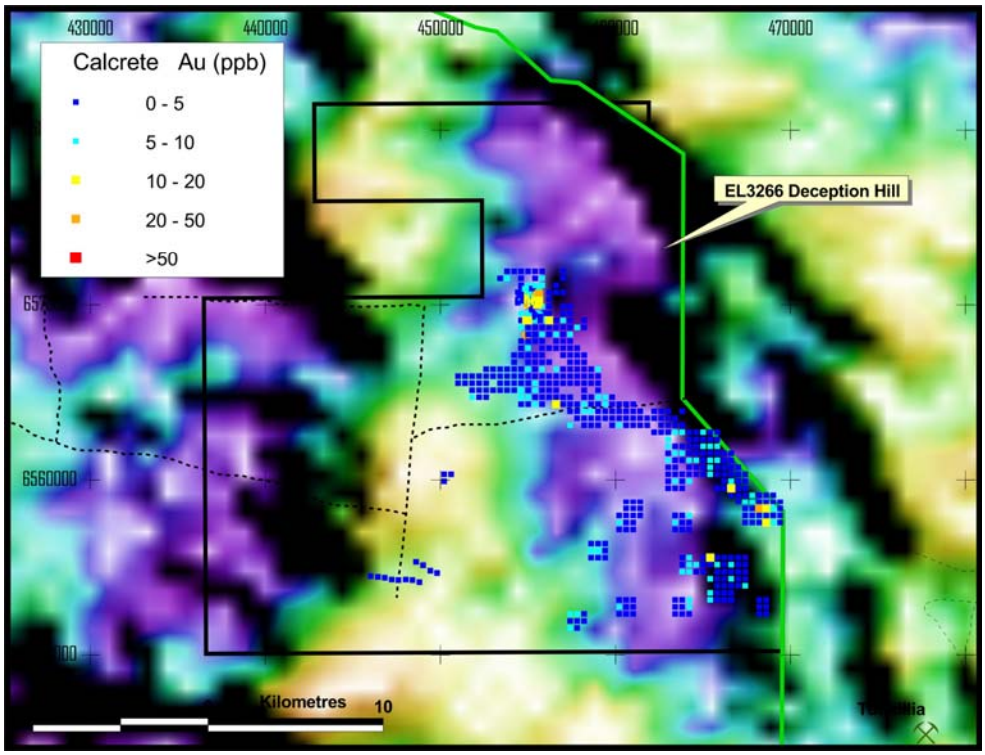

Figure 24: Calcrete Au (ppb) on satellite NOAA thermal image for all samples collected during 2005 on EL 3266

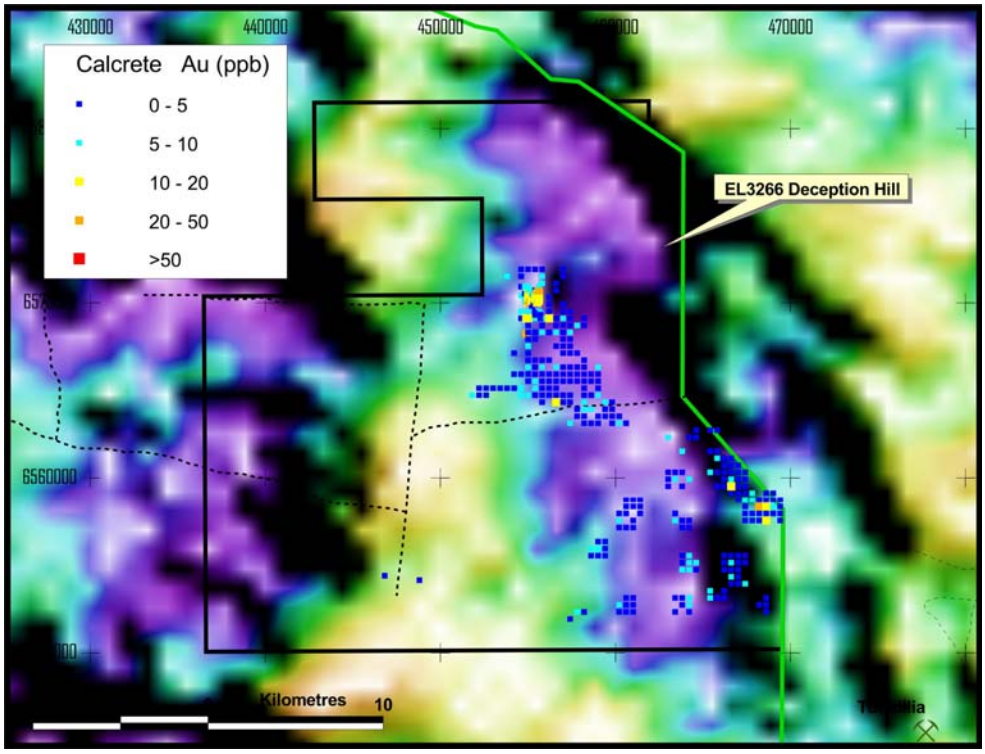

Figure 25: Calcrete Au (ppb) on satellite NOAA thermal image for samples collected during 2005 on EL 3266 with >12% Ca

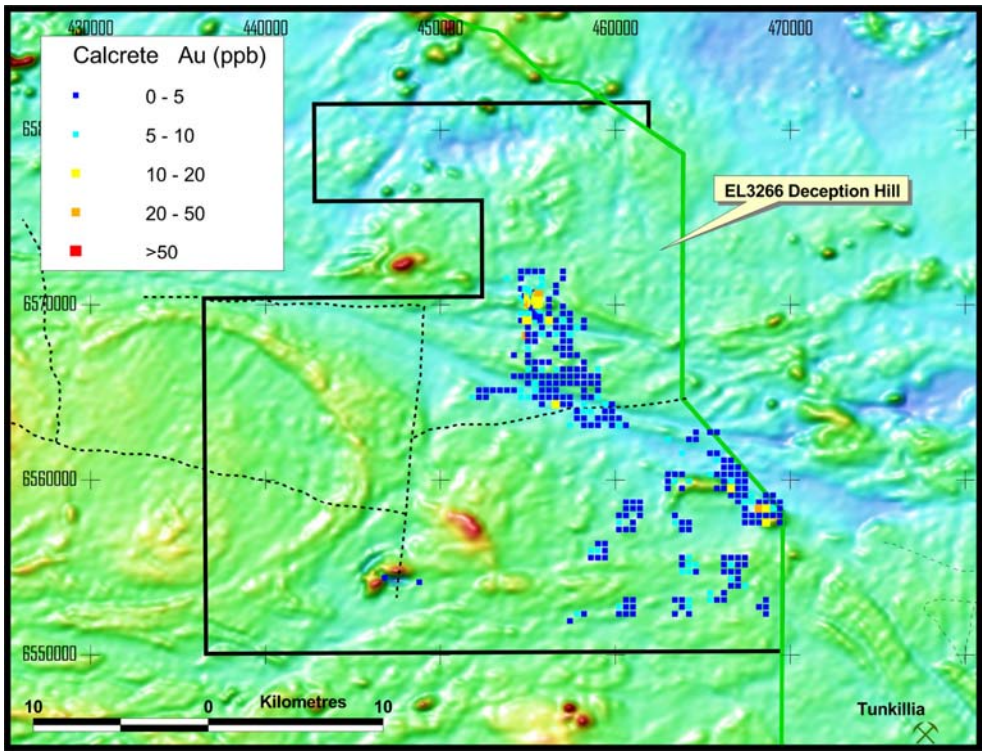

Figure 26: Calcrete Au (ppb) on TMI image for samples collected during 2005 on EL 3266 with >12% Ca

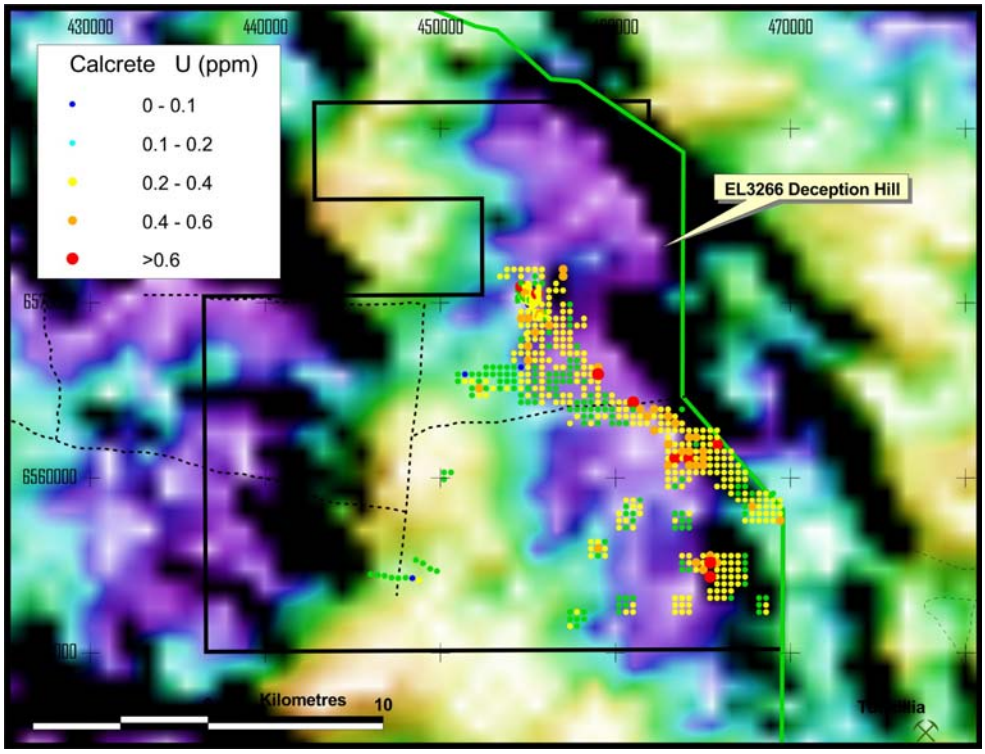

Figure 27: Calcrete U (ppm) on satellite NOAA thermal image for all samples collected during 2005 on EL 3266

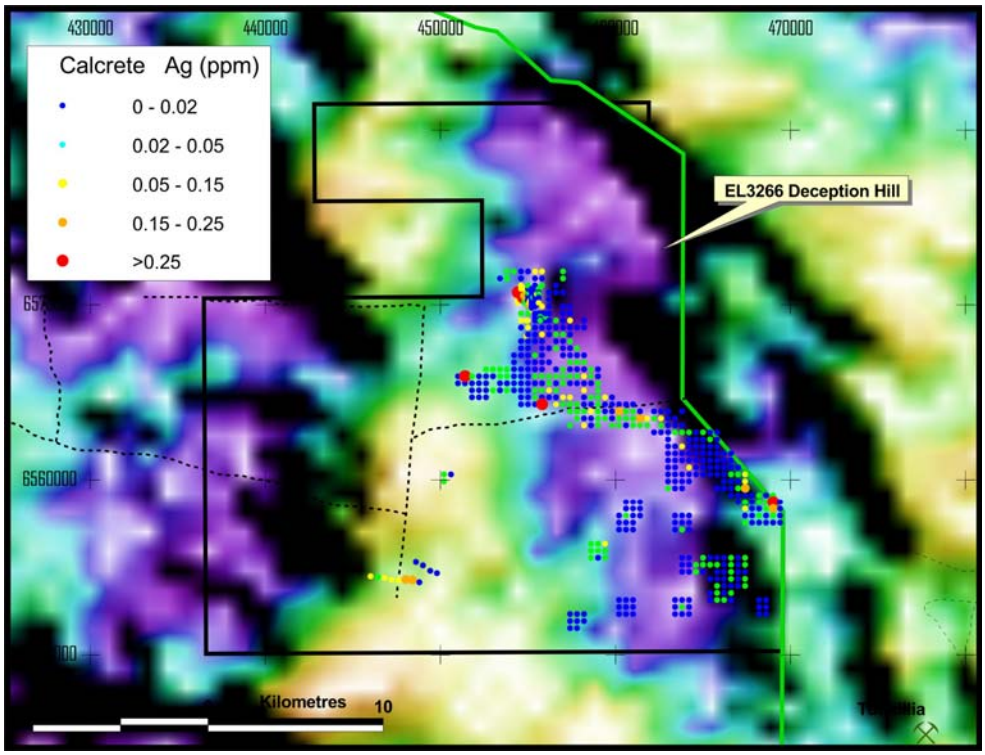

Figure 28: Calcrete Ag (ppm) on satellite NOAA thermal image for all samples collected during 2005 on EL 3266

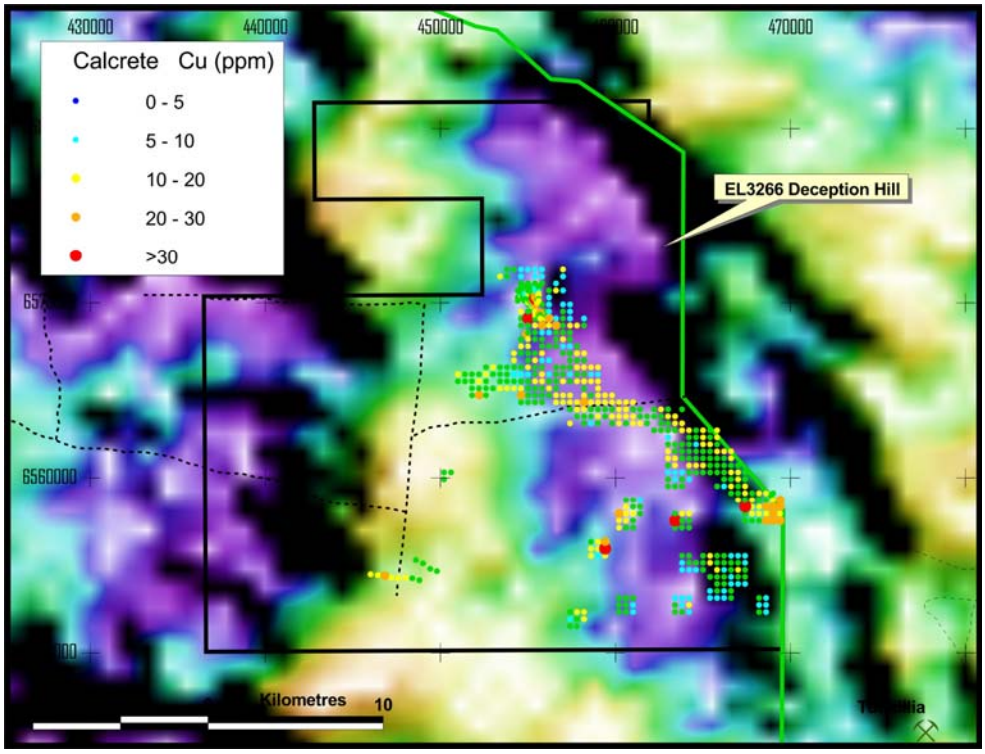

Figure 29: Calcrete Cu (ppm) on satellite NOAA thermal image for all samples collected during 2005 on EL 3266

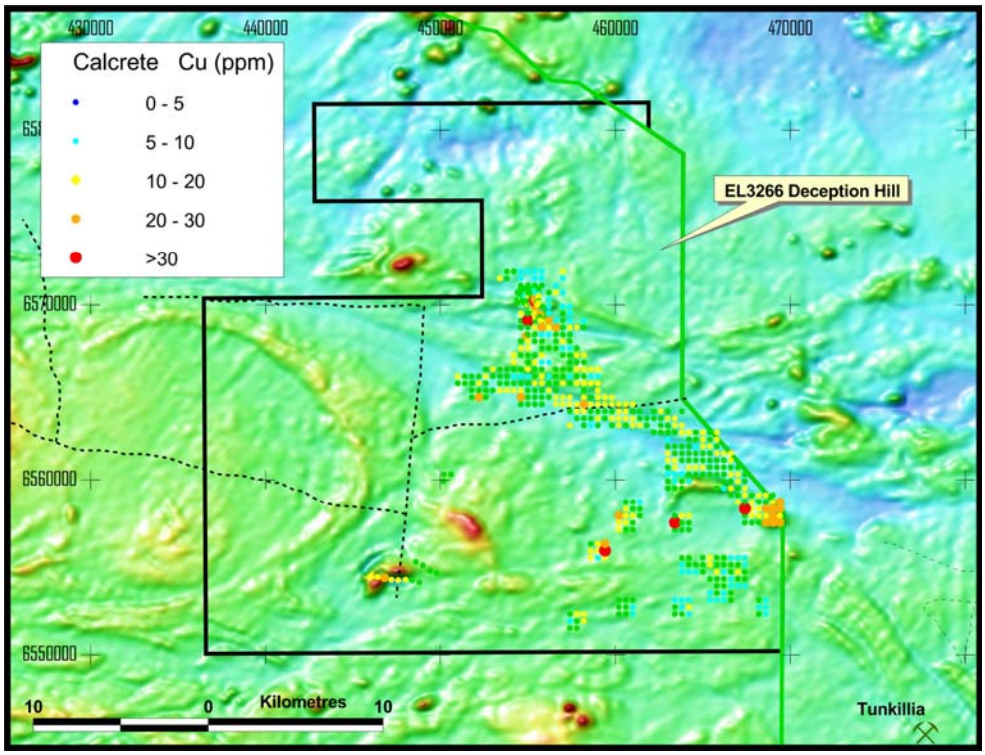

Figure 30: Calcrete Cu (ppm) on TMI image for all samples collected during 2005 on EL 3266

The maximum U value obtained within calcrete was 0.86 ppm with 10 samples containing >0.6 ppm U — all of these are seemingly located within the inferred Tertiary palaeochannel suggesting that calcrete may be an effective sampling medium for appraising the sedimentary uranium potential of an underlying palaeochannel (Figure 27).

Slightly anomalous Ag values (maximum 0.57 ppm) were only obtained marginal to the inferred palaeochannel suggesting that silver is probably depleted and anomalously low within the Tertiary palaeochannel. Similarly, slightly anomalous Cu values (maximum 44 ppm) were also only obtained marginal to the inferred palaeochannel suggesting that Ag and Cu values in calcrete often do not reflect the nature of mineralisation in underlying crystalline basement in some circumstances (Figures 28–30).

FUTURE WORK PROGRAM

Five sites have been selected for RC drilling during the next 12 months in order to evaluate the nature of source units causing the prominent gravity anomalies on EL 3266. Depth to fresh basement is expected to range from 50–100 m and total depths range up to 200 m. It is hoped that some of these geophysical features represent IOCG-style mineralisation.

Further sampling of calcrete will also be undertaken in order to assess the tenement's potential for orogenic-style gold mineralisation within major and ancillary shears and fractures.

EXPENDITURE

Detailed expenditure particulars for the 6 month periods ending 25th April and 25th October 2005 are tabulated below and indicate that the total expenditure on the tenement during the past 12 months was $138,651.43.

EL 3266 Deception Hill			
Expenditure item	6 month period ending 25th Apr 2005 A$	6 month period ending 25th Oct 2005 A$	Year Total A$
Application/fees/rental	3,905.50	3,264.80	7170.30
Assays		10,650.45	10,650.45
Camp hire/maintenance			
Clearance/Native title	491.17		491.17
Communications		164.53	164.53
Computing, maps, data	189.00	561.00	750.00
Drilling			
Environment/Rehabilitation			
Field work	1,576.85	8,681.84	10,258.69
Geological consulting			
Geophysics consulting		35,850.00	35,850.00
Geophysics expenses			
Hire plant/Equipment			
Management overheads	2,365.64	10,239.03	12,604.67
Petrology			
Postage/Freight			
Salaries, contractors, super, workcover	16,873.00	31,205.00	48,078.00
Sample storage		71.91	71.91
Vehicle expenses	620.90	11,940.81	12,561.71
Vehicle hire			
TOTAL	$26,022.06	$112,629.37	**$138,651.43**

Table 1: Summary of exploration expenditure for EL 3266 (Deception Hill) for the year ending 25th October 2005

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APPENDICES
Digital format only

APPENDIX A:

Gravity stations and data collected by Daishsat geophysical contractors during April–June 2005 for Minotaur Exploration

APPENDIX B:

Ground magnetic data collected by Minotaur Exploration

APPENDIX C:

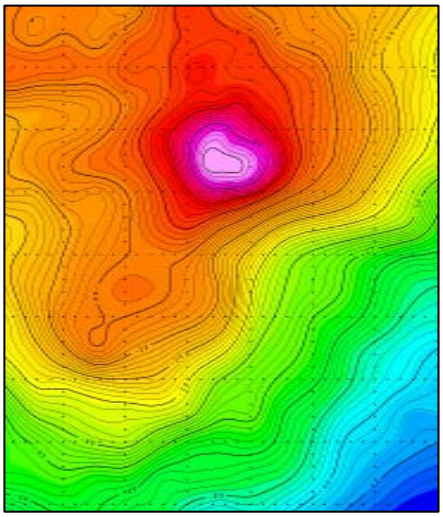
Calcrete stations and data collected by Minotaur Exploration

GAWLER GRAVITY SURVEYS

June 05 – August 05

Report Number 05011

LR Mathews



CLIENT

MINOTAUR EXPLORATION LTD

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TABLE OF CONTENTS

1. INTRODUCTION

Precision GPS-Gravity surveys were carried out between 20th June 2004 and 8th August 2005 for Minotaur Exploration Ltd. A total of 2408 stations were surveyed over several areas in the Gawler Craton region of South Australia.

Gravity data were acquired using Scintrex CG5, and Scintrex CG3 digital gravity meters. Position and level data were obtained using Leica System 1200 GPS units to produce precise post processed and real-time kinematic GPS locations. All data was acquired using Daishsat quad-bike methods.

Gravity data was reduced using standard reductions on the ISOGAL84 gravity network. GPS data were reduced to MGA coordinates with levels expressed as metres above the Australian Height Datum.

2. SURVEY OVERVIEW

The survey was conducted in two main sections, each consisting of a number of smaller areas and traverses. The first section was located in the Yellabinna Reserve, south of the derelict town of Tarcoola. It consisted of 3 separate areas: Deception Hill, Tunkillia West, and Yellabinna, two of which contained traverses. The second section of the survey, referred to as Tunkillia, was located to the north of Lake Everard and consisted of a single large grid with five selected detailed traverses.

Both sections of the survey were infilling on anomalies detected by a large regional survey conducted by Daishsat on behalf of Primary Industries and Resources South Australia (PIRSA) as part of their Program for Accelerated Exploration (PACE). This survey was conducted earlier in the year, using a helicopter and quadbike surveying system on 1km x 2km and 2km x 2km spacings.

The survey specifications for each survey can be found in Appendix E. Appendix A contains a station plot for the survey.

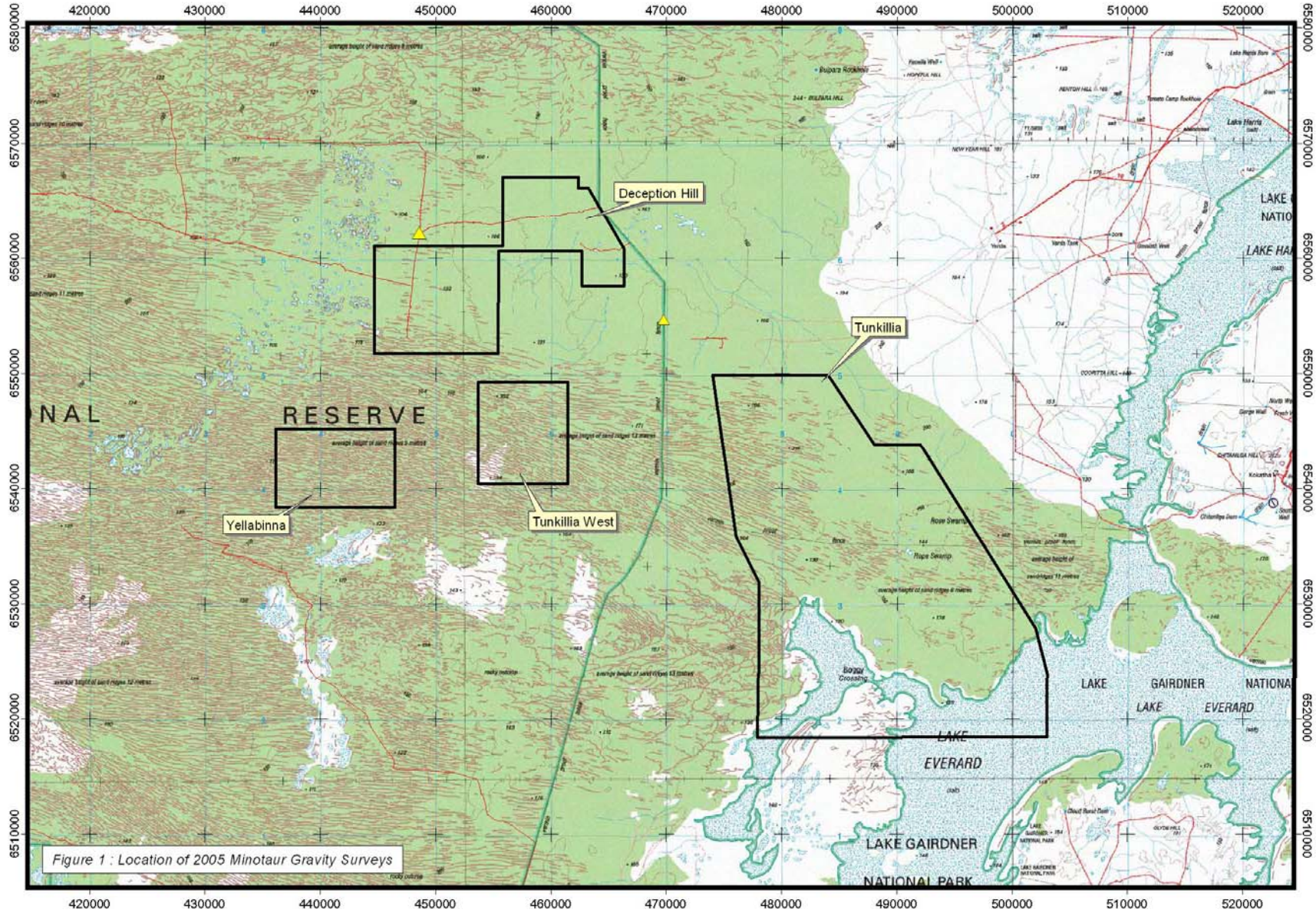


Figure 1 : Location of 2005 Minotaur Gravity Surveys

3. PERSONNEL AND EQUIPMENT

3.1 Personnel

The supervisor in charge of the project was Mr. Luke Czaban. Luke was responsible for daily management of the job and for nightly data processing to ensure quality and integrity. Gravity and GPS measurements were carried out by:

Luke Czaban, Surveyor
Michael Tasker, Surveyor

Final data reduction and inspection were performed by the company geophysicist, Leon Mathews.

3.2 Survey equipment

Two Scintrex CG-5 digital gravity meters:
SN 970409383
SN 041200100

One Scintrex CG3 digital gravity meter
SN 9704365

Three Leica System 1200 dual frequency GPS receivers
Garmin Handheld GPS receivers for navigation
Four Compaq notebooks for data processing and backup
Various chargers, solar cells and batteries.

3.3 Vehicles

Due to the type of terrain to be encountered, 4wd Landcruiser vehicles were used for the duration of the job. To maintain the high Daishsat safety record, vehicles were fitted with a range of safety equipment including:

One 20l jerry can of water
Dual fuel tanks
Two spare tyres
HF radio and Satellite Phone
Self-recovery equipment including a hand winch, snatch straps and rope
Tyre pliers to effect tyre repairs in the field
Tools and spares to enable field repairs as necessary
Survival kit with EPIRB emergency locator beacon

Quad-bike surveying utilized current model 4WD Yamaha bikes. Each bike was equipped with:

10L jerry can of spare fuel
UHF communications
Personal First Aid Kit
Self-recovery equipment including a hand winch, snatch straps and rope
Tyre repair kit
Tools and spares to enable field repairs as necessary

Photo 1: *Quadbike used for gravity surveying*

3.4 Camp

For the western surveys, the field crew stayed at a fly camp (Camp Deception) previously utilised by Daishsat for the PACE surveys. This camp was coincident with the GPS/Gravity base station. The eastern survey was conducted out of an established Minotaur camp.

Whilst camping, all rubbish was burnt and buried, with the camp site left in the same state as it was found.

3.5 Communications

All personnel were equipped with hand-held UHF radios to allow inter-bike communications. Globalstar sat-phone skeds were made to the Perth and Murray Bridge offices at the prescribed intervals.

4. GPS SURVEYING AND PROCESSING

4.1 Set out of the grid

Setout was done concurrently with the gravity data acquisition using the Leica System 1200 operating in either RTK or post processed mode. Set-out accuracy was better than 5m.

Gravity readings were taken as close to the square grid coordinates as possible. Some stations were offset or omitted due to the nature of the terrain, e.g. hilly or thickly vegetated areas.

Repeat gravity stations were marked with a length of flagging, washer, and/or pin flag. Upon each reoccupation of the repeats, the quad-bike was ridden alongside the marker, on the existing tracks, to achieve the same vertical level each time.

4.2 Survey datum and control

The gravity surveying, and hence any gravity reductions, used the Australian Height Datum (AHD) as the reference datum.

An existing Daishsat base station at camp Deception (5831/1110) was used for the western surveys. For the eastern surveys, a base station was set up at the Tunkillia camp. The base station was established using two days worth of static data, and connections to ITRF stations using AUSLIG's online GPS processing system, AUSPOS. For more information on this system, please visit http://www.ga.gov.au/geodesy/sgc/wwwgps/ Final deviations of better than 5mm were obtained for x, y and z, for all occupations. Appendix D contains the GPS base station information.

4.3 Surveying and processing of position and level data

Depending on the spacing, either RTK or post processed methods were used to gain centimetre level positions for each gravity station. For RTK work, the position is calculated on the fly by the receiver, so no additional processing was required. For the post-processed work, the raw GPS data were recorded on to 32 Mb CF cards in the GPS receivers and the data copied onto PC at the end of the day. Data were then processed using Waypoint GrafNav V7.00.

Waypoint combines the processing components, GrafNav and GrafNet, in a complete package.

GrafNav processes data for one baseline (e.g. one base and one remote). GrafNav is normally used for kinematic data which it is extremely well suited for. It can also process single static baselines. Receiver types can be mixed and matched via the use of a common format. This component of Waypoint was used for processing the kinematic data acquired each day.

GrafNav and GrafNet share the same processing engine that has been under continuous development since its original inception by Waypoint in 1992. The core of this robust engine is its carrier phase kinematic (CPK) Kalman filter. Some of the major advantages of Waypoint's kernel are:

Fast processing - The GrafNav kernel is one of the fastest on the market. It will process ~0.8 epochs per MHz per second on a Pentium II.

Robust Kalman filter - From experience with processing GPS data from fast jets and NASA sounding rockets, the processing kernel has become extremely robust. Efforts have been made to account for all of the various data error possibilities given the different types of GPS receivers that GrafNav/GrafNet can handle.

Reliable OTF - Waypoint's on-the-fly (OTF) algorithm, called Kinematic Ambiguity Resolution (KAR), has had years of development and stresses reliability. Variations are implemented for both single and dual frequencies, and numerous options are available to control this powerful feature

Accurate Static Processing - Three modes of static processing are implemented in the processing kernel. Fixed static is the most accurate. A quick static solution is also available as an alternative, while the float and iono-free float solution is useful for long baselines.

Dual Frequency - Full dual frequency support comes with GrafNav/GrafNet. For ambiguity resolution, this entails wide/narrow lane solutions for KAR, fixed static and quick static. Ionospheric processing is very important with the peak of the ionosphere's cycle occurring in 2000. The GrafNav kernel implements two ionospheric processing modes including the iono-free and relative models. The relative model is especially useful for airborne applications where initialization is near the base station, and this method is much less susceptible to L2 phase cycle slips.

Forward and Reverse - Processing can be performed in both the forward and reverse directions. Both GrafNav and GrafNet also have the ability to combine these two solutions to obtain a globally optimum one.

Velocity Determination - Since the GrafNav kernel includes the L1 Doppler measurement in its Kalman filter, velocity determination is very accurate. In addition to

this, a considerable about of code has been added specifically for the detection and removal of Doppler errors.

Long Baseline - Because precise ephemeris and dual frequency processing is supported, long baselines accuracies can be as good as 0.1 PPM.

For more information about Waypoint processing software, and in particular, Grafnav, please visit the Waypoint http://www.waypnt.com/grafnav_d.html.

Simple transformations to MGA and AHD were done using the GPS derived WGS84 positions output from Waypoint Grafnav or from the Leica RTK dump.

MGA coordinates were obtained by simply projecting the GPS-derived GDA94 coordinates using a UTM projection with zone 53S. For all practicable purposes, the WGS84 geodetic coordinates are equivalent to GDA94 geodetic coordinates, so no transformation is necessary. For more information about WGS84, GDA94 and MGA coordinates, please visit http://www.ga.gov.au/geodesy/datums/gda.jsp.

AHD heights were calculated in real-time on the fly using Leica algorithms and the latest geoid model for Australia, AUSGEOID98. Information about the geoid, and the modeling process used to extract separations (N values) can be found at http://www.ga.gov.au/geodesy/ausgeoid/. To obtain AHD heights, the modeled N value is subtracted from the GPS derived WGS84 ellipsoidal height (Figure 2).

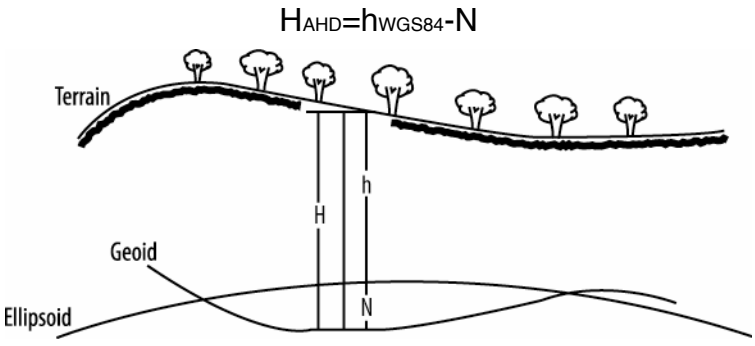


Figure 2: Geoid-Ellipsoid separation

5. GRAVITY ACQUISITION AND PROCESSING

5.1 Gravity data acquisition

Gravity observations were made simultaneously with the GPS observation (Photo 2). Two observations were made for each station so that any seismic or instrumental noise could be immediately detected. Each observation consisted of a 20-second or greater stacking time. The accepted tolerance between readings was limited to 0.03 milliGals to ensure accuracy. Vertical and horizontal levels were restricted to 5 arc seconds at all times. At each station, the station number, time and two gravity readings (in dial units) were recorded in Daishsat carbon-copy gravity field books. The Scintrex CG3 and CG5 also automatically record the station, time and readings digitally to allow for downloading to computer.

Photo 2:GPS-Gravity Acquisition Crew

5.2 Gravity base stations

Base stations located at both camps allowed for calculation of absolute gravity and instrument drift. Details of the gravity bases are contained in Appendix C. A base station reading was taken in the morning before observing, and in the evening, after the

last field observation. Readings were also taken at lunch time, depending on base proximity. When taking a base station reading, the gravity values were stacked over 60 seconds to ensure accuracy. Two observations of 60 seconds were taken at each base reading. Observations were repeated until the readings repeated to 0.020 of a dial reading or less.

For the western surveys, existing Daishsat gravity control was utilised. For the eastern surveys, a new base station was established at Tunkillia camp. This station was established via ABABABA ties to PIRSA control station 9611.002. The Minotaur gravity survey, through infilling on helicopter data controlled from a different base station, identified a problem with the PIRSA base station which was subsequently rectified. The station was assigned an Observed Gravity value that was incorrect. The value was corrected at the conclusion of the survey using ABABA ties to both the Tarcoola and Lake Everard AFGN stations.

5.3 Gravity data processing

Raw gravity data were processed on a daily basis to check for quality and integrity. This interim process produced a set of Bouguer Gravity values which were contoured and imaged to provide a check for any anomalous readings that would need repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. Upon conclusion of the job, the data were reprocessed using the BMR formulae as per PIRSA specifications. Note, the formulae below produce values in milliGals. A division factor of 10 is used to obtain millGals units from gravity units (gu).

Instrument scale factor: This correction was used to correct a gravity reading (in dial units) to a relative milliGal value based on the meter calibration.

Tidal correction: This correction was used to correct for background variations due to changes in the relative position of the moon and sun. The Scintrex calculated ETC was removed and a new ETC calculated using Geosoft Formulae and the surveyed GPS latitude. The formula is too complex to list here.

Instrument Drift: Since gravity meters are mechanical, they are prone to drift (extension of the spring with heat, obeying Hooke's law). If two base readings are taken one can assume that the drift between the two readings is linear and can therefore be calculated. The drift and tidal corrected value is referred to as the *observed gravity*.

Normal Gravity: The theoretical value of gravity was calculated using the 1967 variant of the International Gravity Formula and used to latitude correct the observed gravity.

$$g_t = 9780318 \times (1 + 0.0053024 \sin^2 \Phi - 0.0000059 \sin^2 2\Phi)$$

where Φ = GDA94 latitude

Free-Air Correction: Since gravity varies inversely with the square of distance, it is necessary to correct for changes in elevation between stations to reduce field readings to a datum surface (in this case, AHD).

$$FAC = 3.086 \times h_{AHD}$$

Bouguer Correction: This correction accounts for the attraction of material between the station and datum plane that is ignored in the free-air calculation. Values of 2.67, 2.40 and 2.20 gm/cc were used in the correction.

$$BC = 0.419 \times \rho \times h_{AHD}$$

where ρ = density (2.67, 2.40 and 2.20 gm/cc)

Free Air Anomaly: This is obtained by applying the free air correction (FAC) to the observed gravity reading.

$$FAA = G_{OBSG84} - Gn + FAC$$

Bouguer Anomaly: This is obtained when all the preceding reductions or corrections have been applied to the observed gravity reading.

$$BA267,240,220 = G_{OBSG84} - Gn + FAC - BC$$

5.4 Gravity meter calibration and scale factors

The gravity meters used have been previously calibrated over a number of calibration ranges in WA and SA. Derived scale factors from these calibrations are shown below:

SN 9704365	1.00000000
SN 970409383	1.00185458
SN 041200100	1.00000000

5.5 Gravity meter drift calibration

While the survey was in progress, the meters were cycled overnight as a check on instrument drift. Changes were made to the drift constant where appropriate.

6.0 RESULTS

Raw and processed GPS and gravity data are contained on CDROM as Appendix F. Hardcopy plots of images are contained in Appendix B.

6.1 Stations Surveyed and Survey Progress

In total, 2408 new stations were acquired during the survey. A brief production summary is shown in Table 1 below. Production varied depending on terrain, tree cover and distance from the base station. The crews were typically able to sustain a production rate between 50 and 75 stations/crew/day.

Survey Summary – Deception Hill		
Gravity stations acquired (including repeats)	542	stations
Gravity station repeats	36	7.1 %
New gravity stations acquired	504	stations
Total accidents	0	accidents
Total hours lost from accidents	0	hours
Survey Summary – Tunkillia West		
Gravity stations acquired (including repeats)	310	stations
Gravity station repeats	17	5.8 %
New gravity stations acquired	293	stations
Total accidents	0	accidents
Total hours lost from accidents	0	hours
Survey Summary – Yellabinna		
Gravity stations acquired (including repeats)	266	stations
Gravity station repeats	21	8.6 %
New gravity stations acquired	245	stations
Total accidents	0	accidents
Total hours lost from accidents	0	hours
Survey Summary – Tunkillia		
Gravity stations acquired (including repeats)	1498	stations
Gravity station repeats	132	9.6 %
New gravity stations acquired	1366	stations
Total accidents	0	accidents
Total hours lost from accidents	0	hours

Table 1 : *Gravity Production Summary*

.

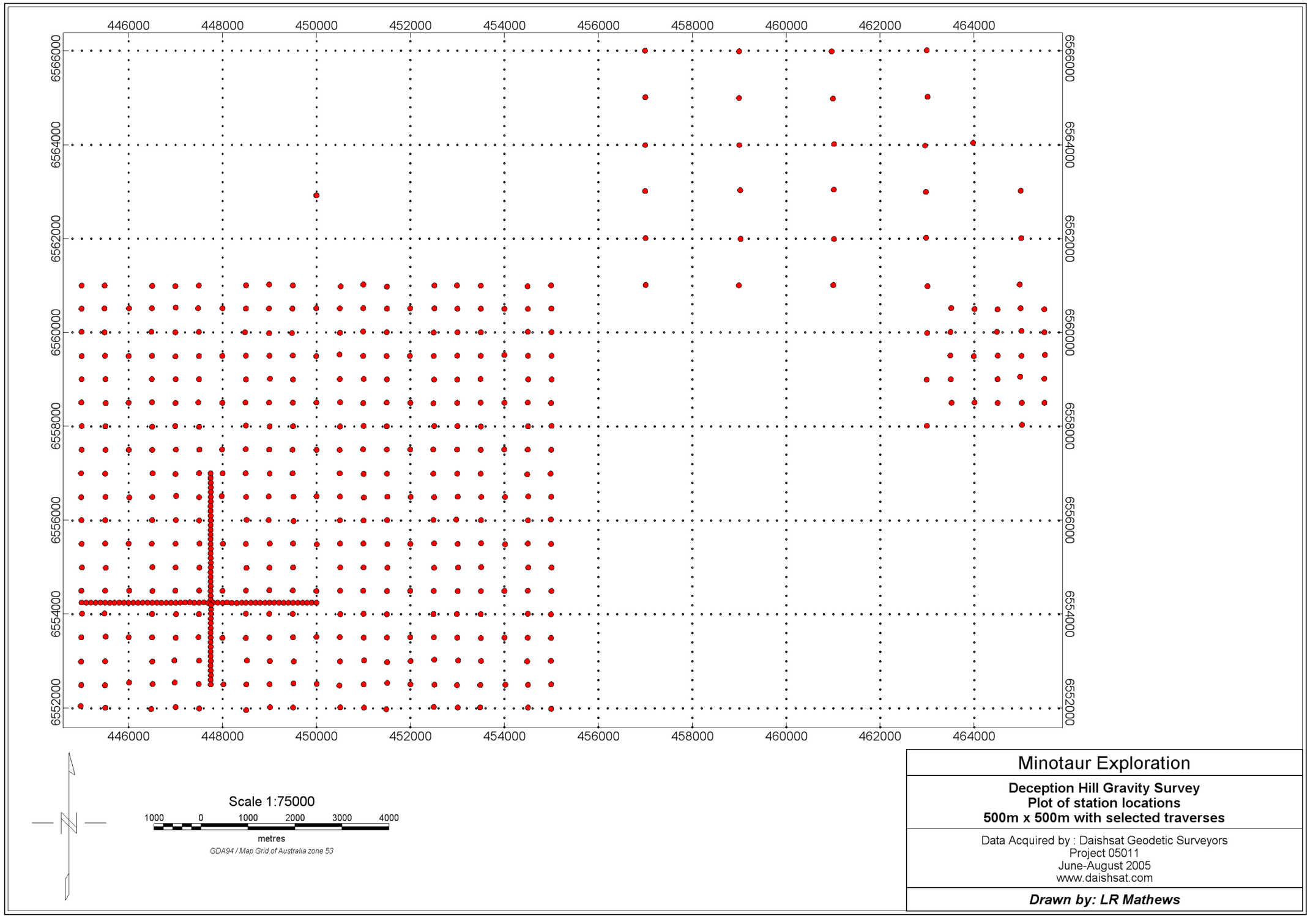
6.2 Data Repeatability

Analysis of the repeat data shows that measurement repeatability is excellent for both GPS and Gravity observations (Appendix C). An analysis for the survey is given below. Based on the repeat data, one can assume the following typical accuracies for the observables:

Vertical position observation : < 0.03 m
Gravity observation : < 0.03 mGals

APPENDIX A

Station Location Plots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450000
452000
454000
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464000
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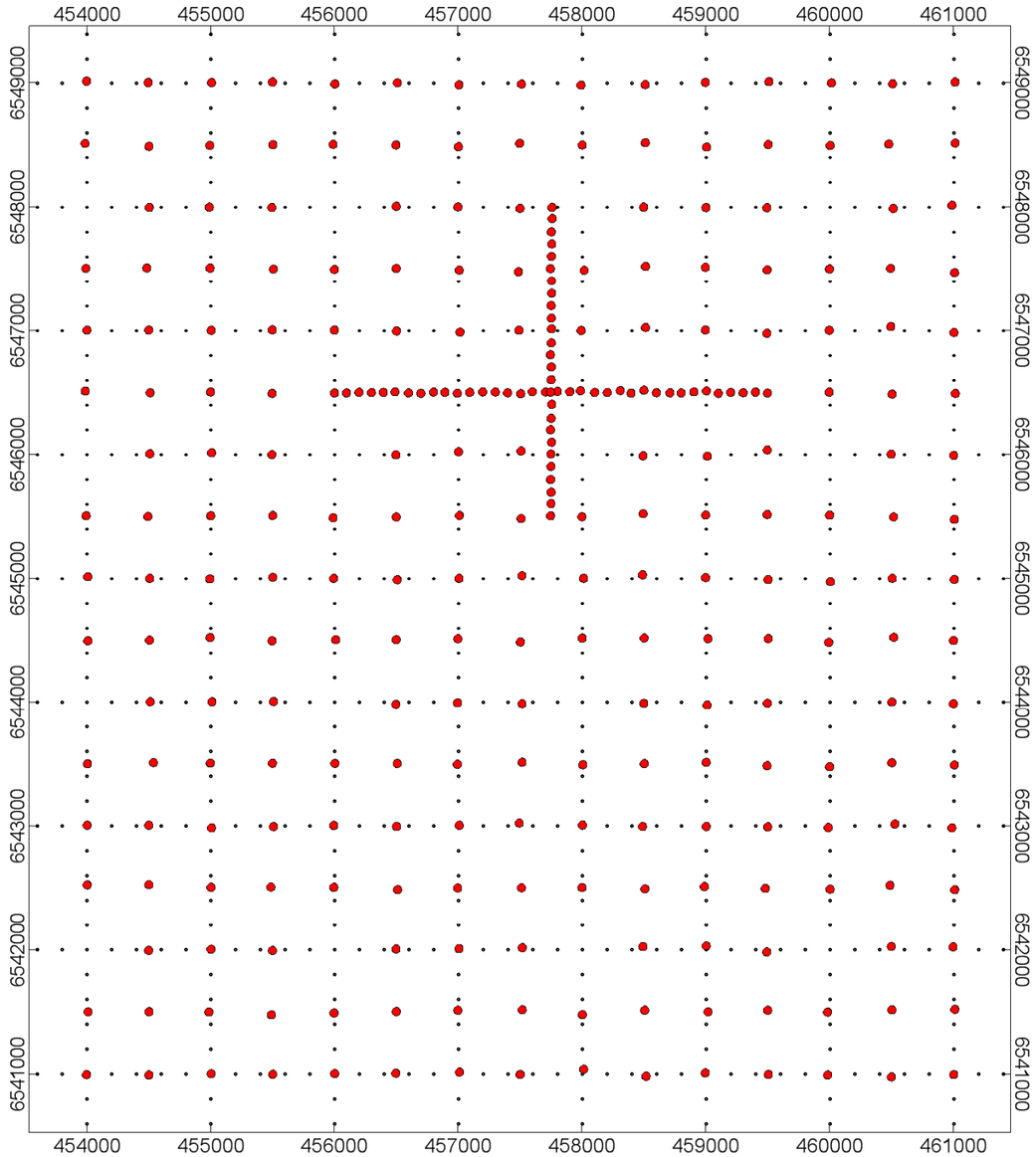
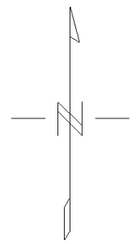
6564000
6562000
6560000
6558000
6556000
6554000
6552000
Scale 1:75000
1000 0 1000 2000 3000 4000
metres
GDA94 / Map Grid of Australia zone 53
Minotaur Exploration
Deception Hill Gravity Survey
Plot of station locations
500m x 500m with selected traverses
Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com
Drawn by: LR Mathews





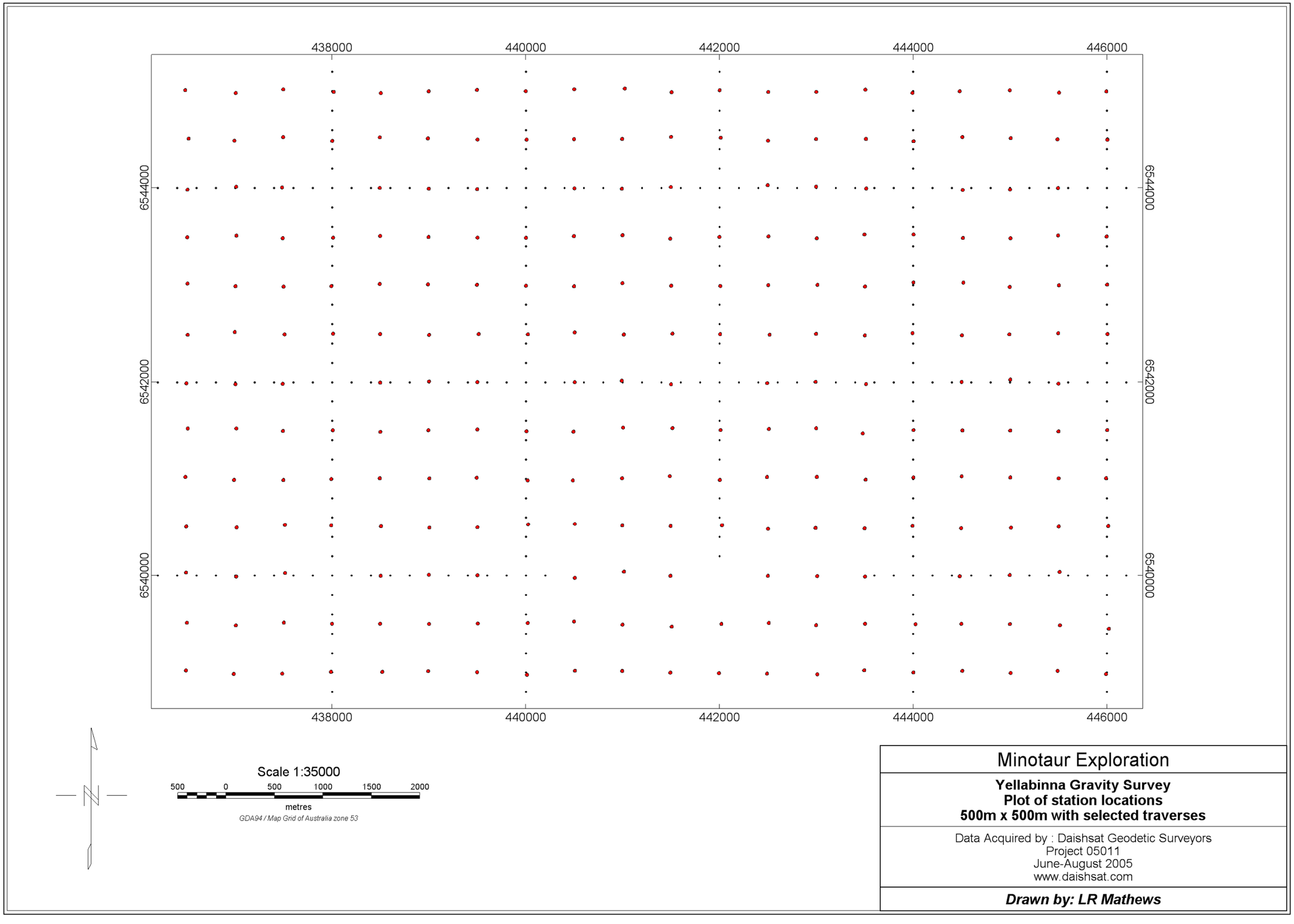
Scale 1:45000

500 0 500 1000 1500 2000 2500

metres

GDA94 / Map Grid of Australia zone 53

Minotaur Exploration
Tunkillia West Gravity Survey **Plot of station locations** **500m x 500m with selected traverses**
Data Acquired by : Daishsat Geodetic Surveyors Project 05011 June-August 2005 www.daishsat.com
Drawn by: LR Mathews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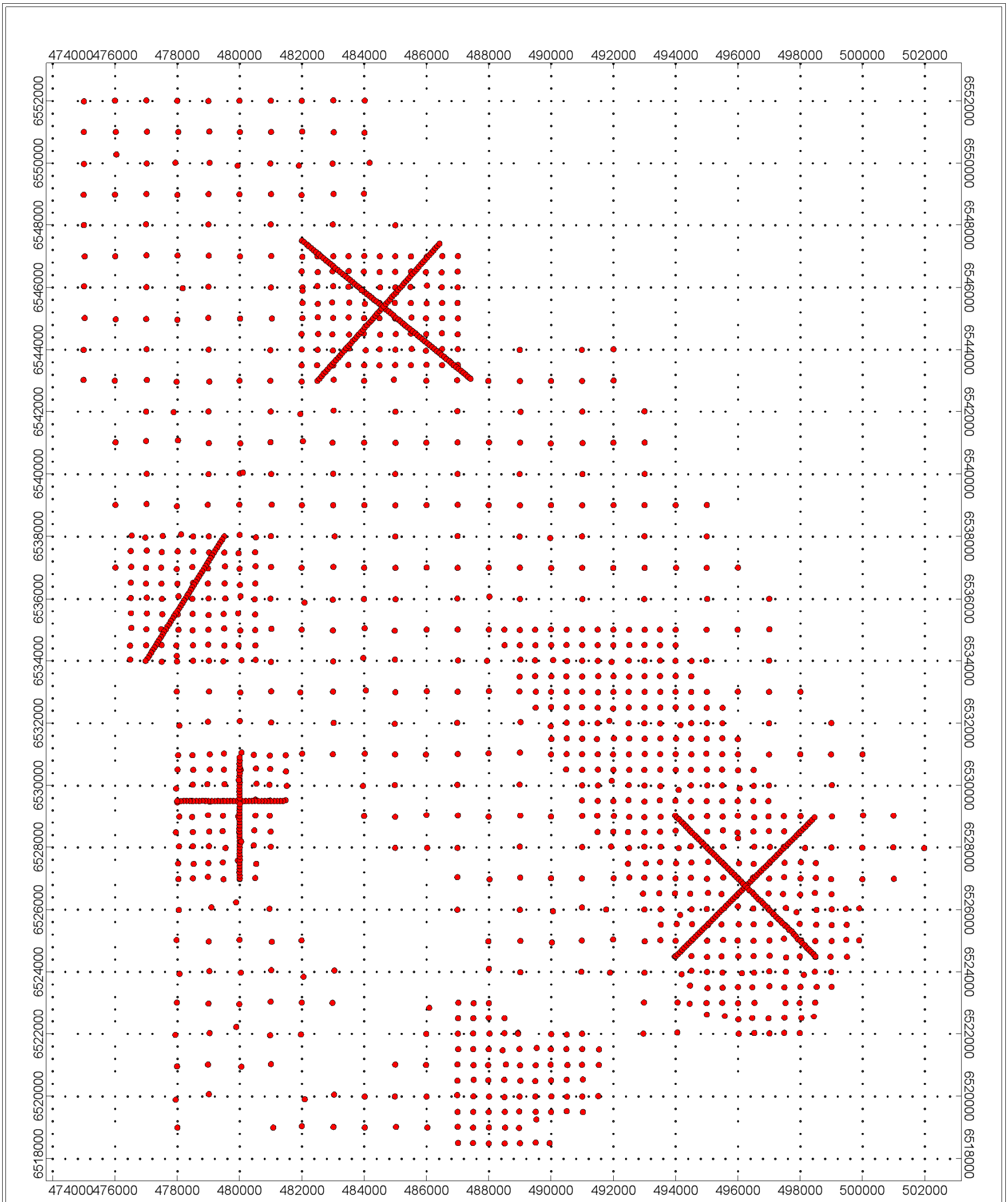
442000
444000
446000
6544000
6542000
6540000
Scale 1:35000
500 0 500 1000 1500 2000
metres
GDA94 / Map Grid of Australia zone 53
Minotaur Exploration
Yellabinna Gravity Survey
Plot of station locations
500m x 500m with selected traverses
Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com
Drawn by: LR Mathews



Scale 1:120000

2500 0 2500

metres

GDA94 / Map Grid of Australia zone 53

Minotaur Exploration

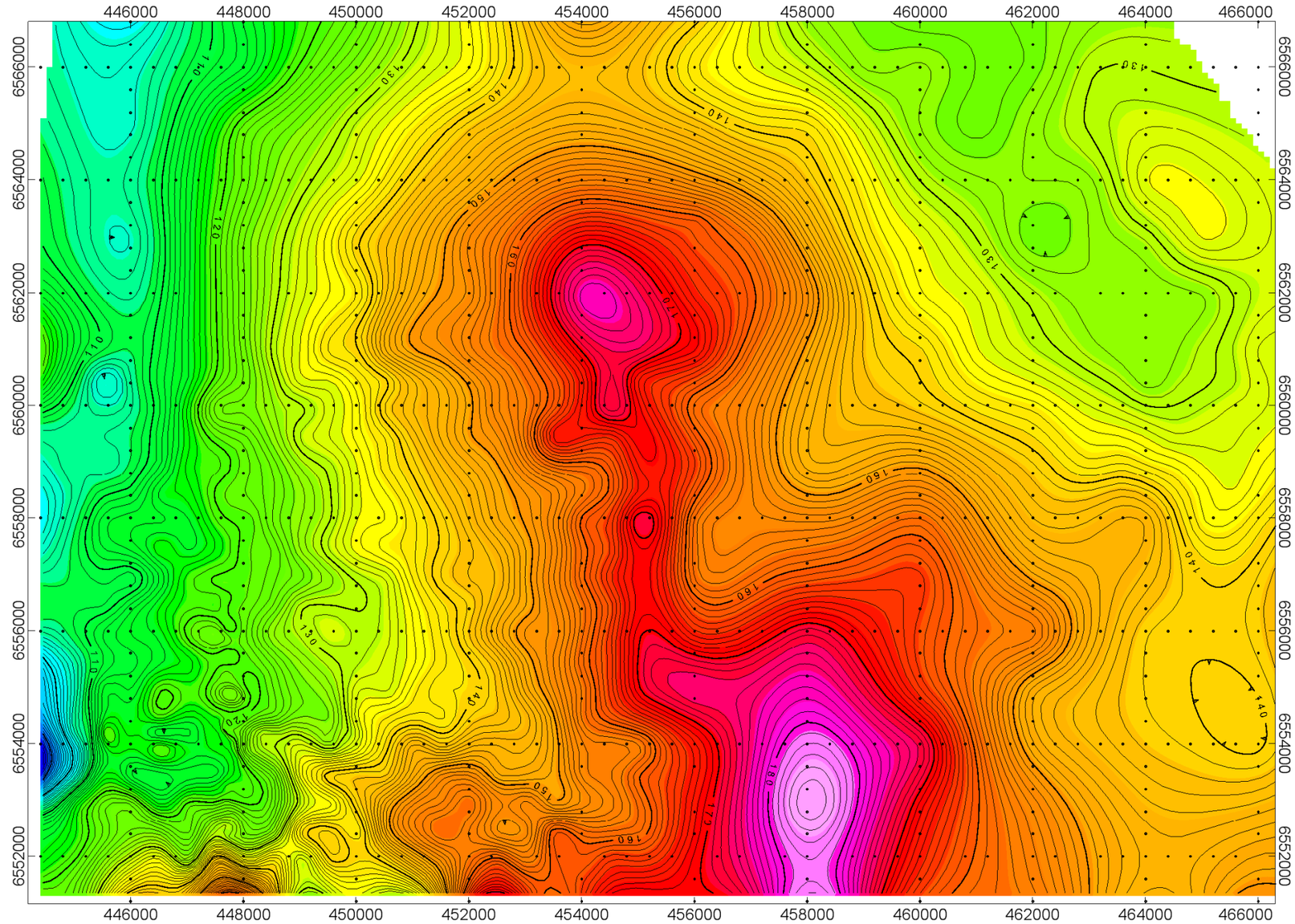
Tunkillia Gravity Survey
Plot of station locations
500m x 500m, 1km x 1km with selected traverses

Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews

APPENDIX B

Colour Images



Scale 1:80000

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metres

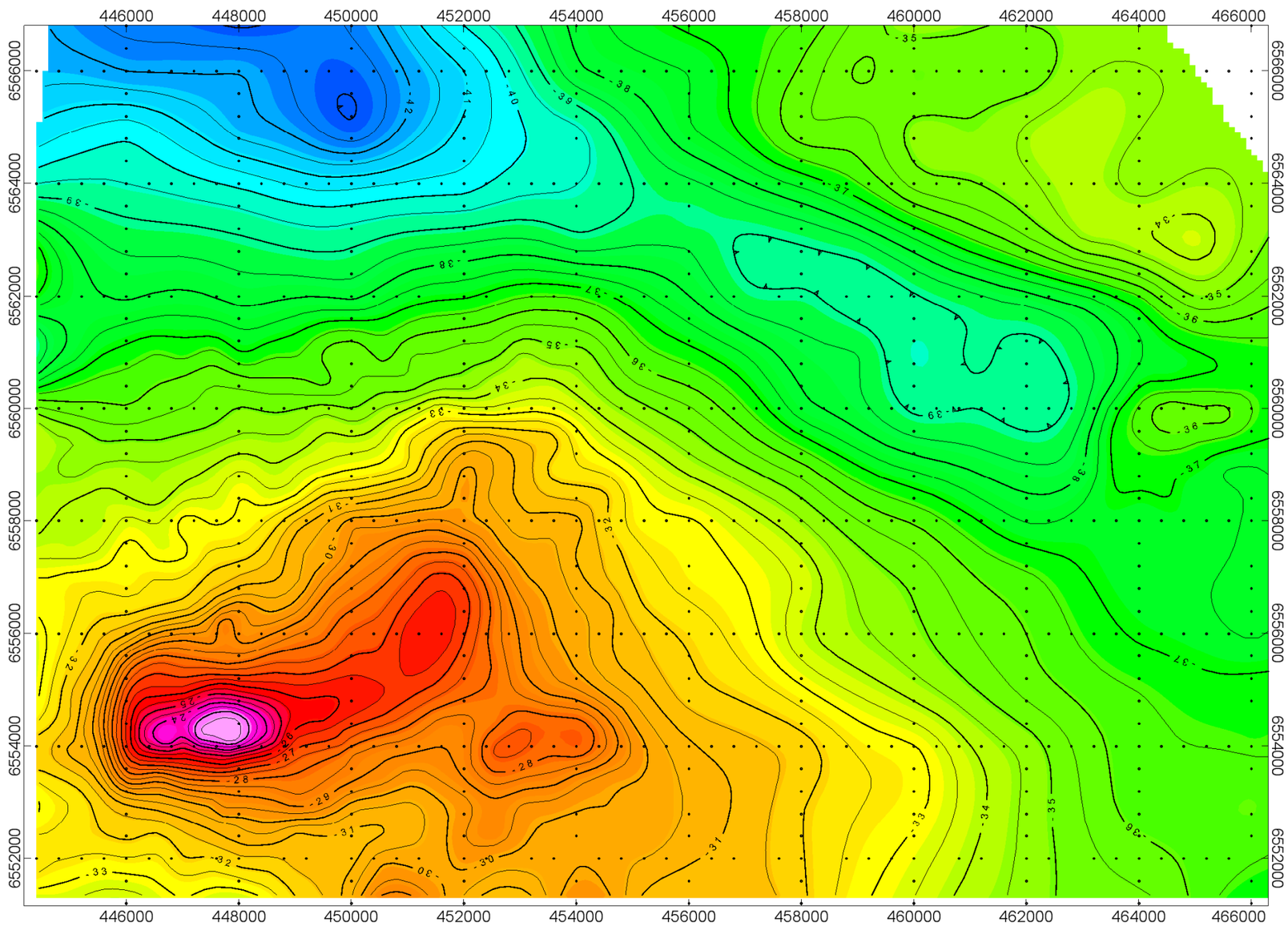
GDA94 / Map Grid of Australia zone 53

GPS Derived Elevation

mAHD

86.96 100.00 115.65 131.30 146.95 162.60 178.24

Minotaur Exploration
Deception Hill Gravity Survey **Image of GPS Derived Elevation** **Linear Stretch, Contour Interval 1m**
Data Acquired by : Daishsat Geodetic Surveyors Project 05011 June-August 2005 www.daishsat.com
Drawn by: LR Mathews



Scale 1:80000

1000 0 1000 2000 3000 4000 5000

metres

GDA94 / Map Grid of Australia zone 53

Bouguer Gravity 2.67 gm/cc

mGals

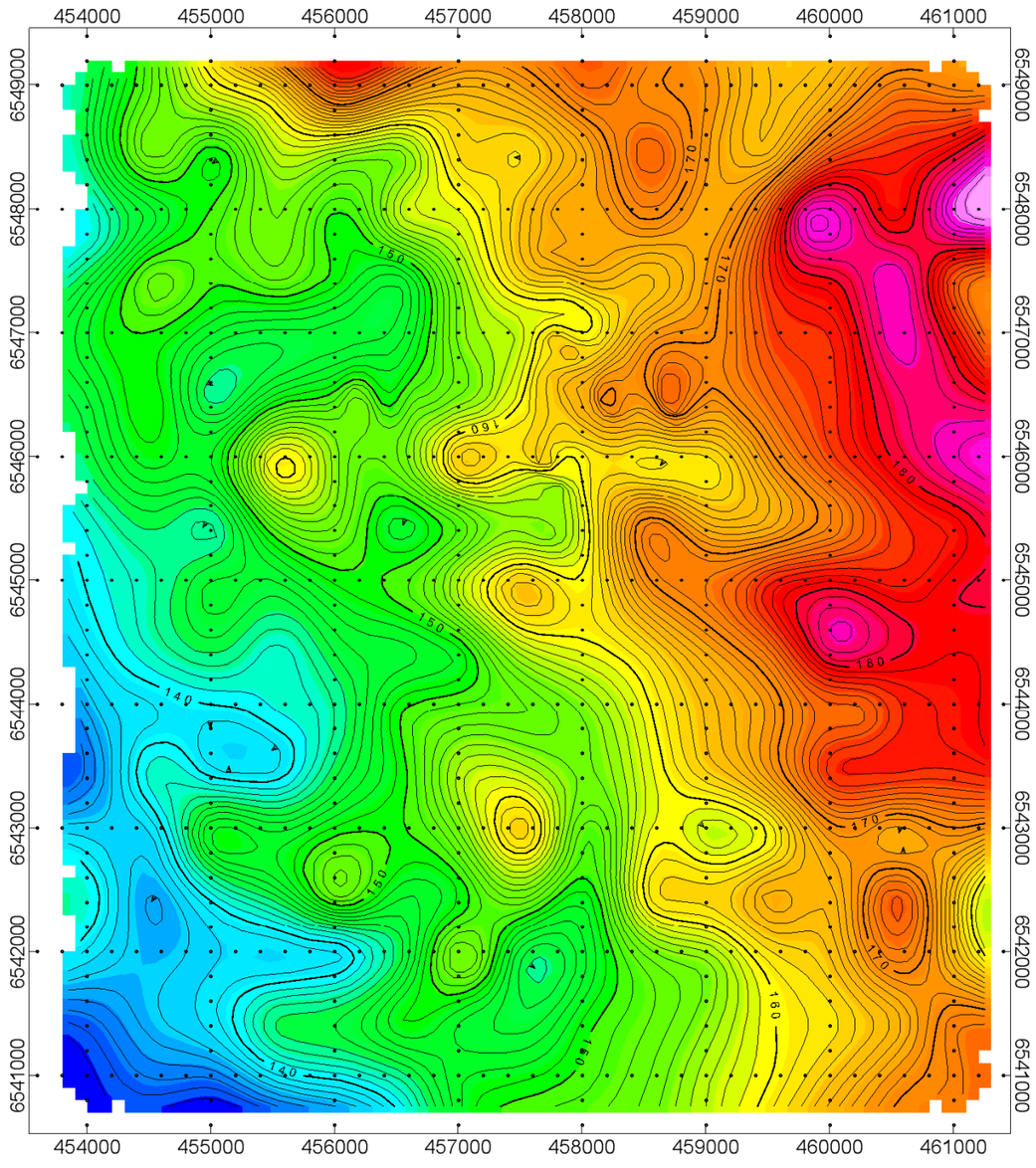
-43.35 -39.98 -36.61 -33.24 -29.87 -26.50 -23.13

Minotaur Exploration

Deception Hill Gravity Survey
Image of Bouguer Gravity 2.67 gm/cc
Linear Stretch, Contour Interval 0.5mGals

Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews



GPS Derived Elevation
mAHD

132.11 141.07 150.02 158.98 167.93 176.88 185.84

Scale 1:45000

500 0 500 1000 1500 2000 2500

metres

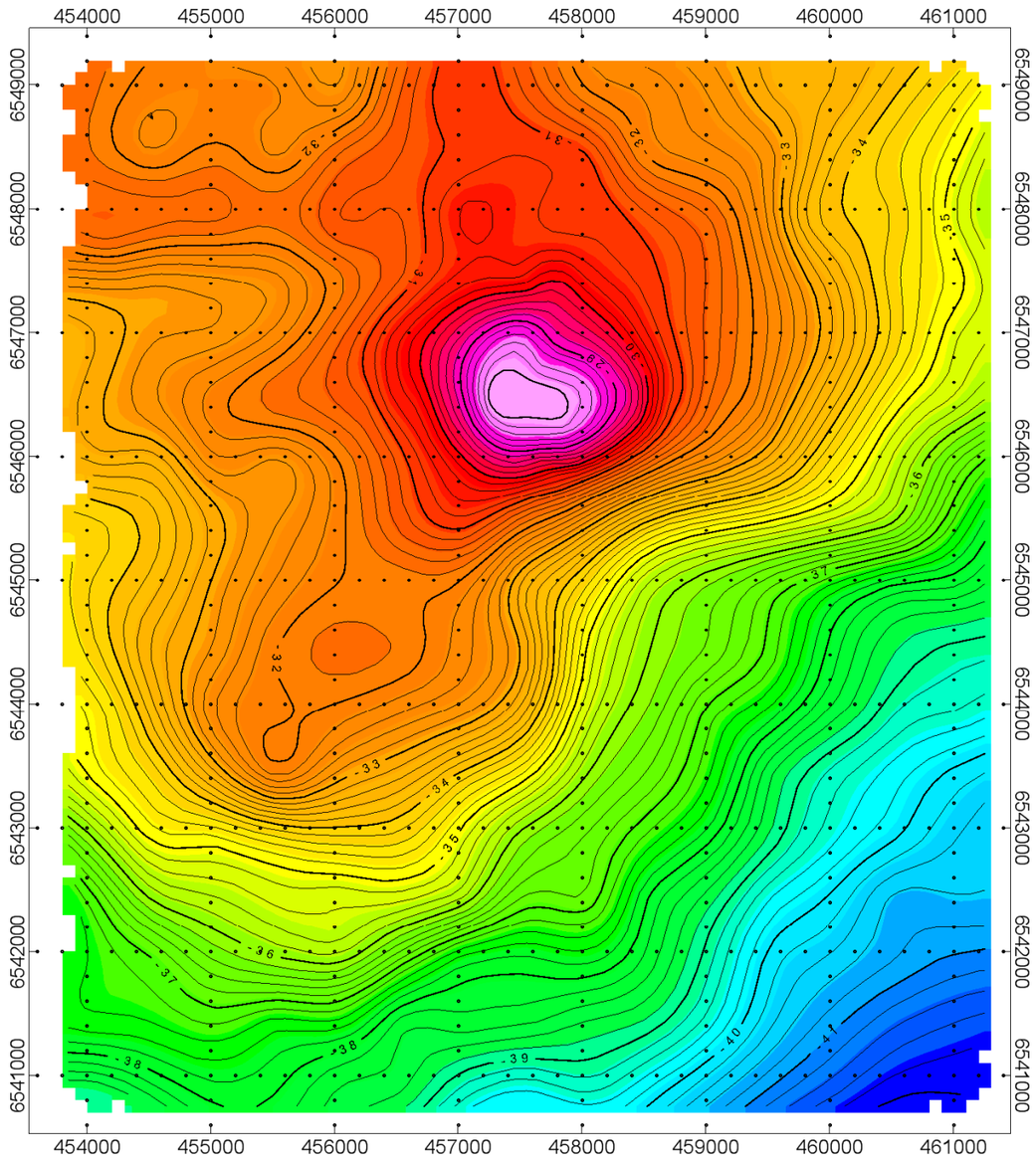
GDA94 / Map Grid of Australia zone 53

Minotaur Exploration

Tunkillia West Gravity Survey
Image of GPS Derived Elevation
Linear Stretch, Contour Interval 1m

Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews



Bouguer Gravity 2.67 gm/cc
mGals

-41.74 -39.53 -37.32 -35.11 -32.90 -30.69 -28.48

Scale 1:45000

500 0 500 1000 1500 2000 2500

metres

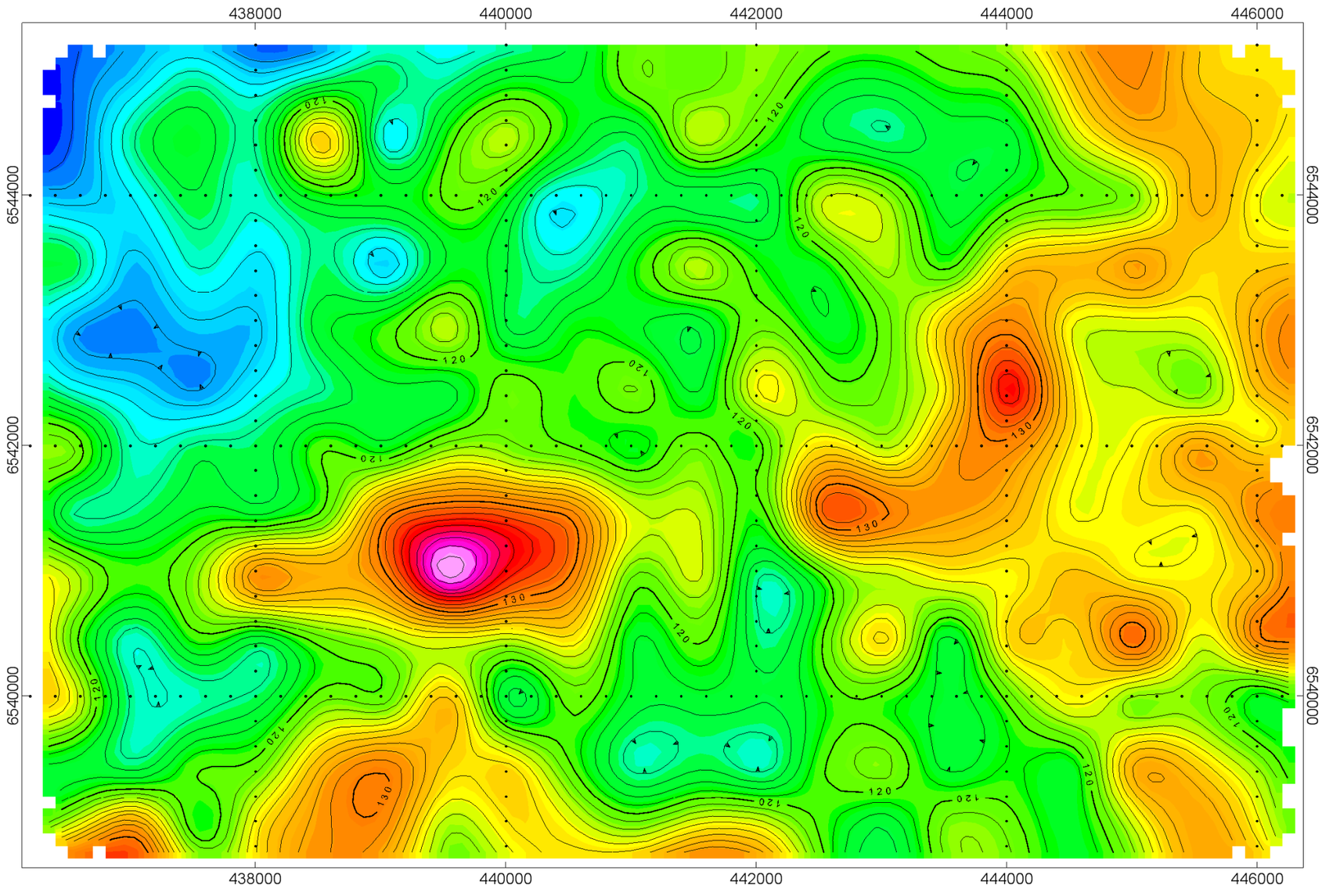
GDA94 / Map Grid of Australia zone 53

Minotaur Exploration

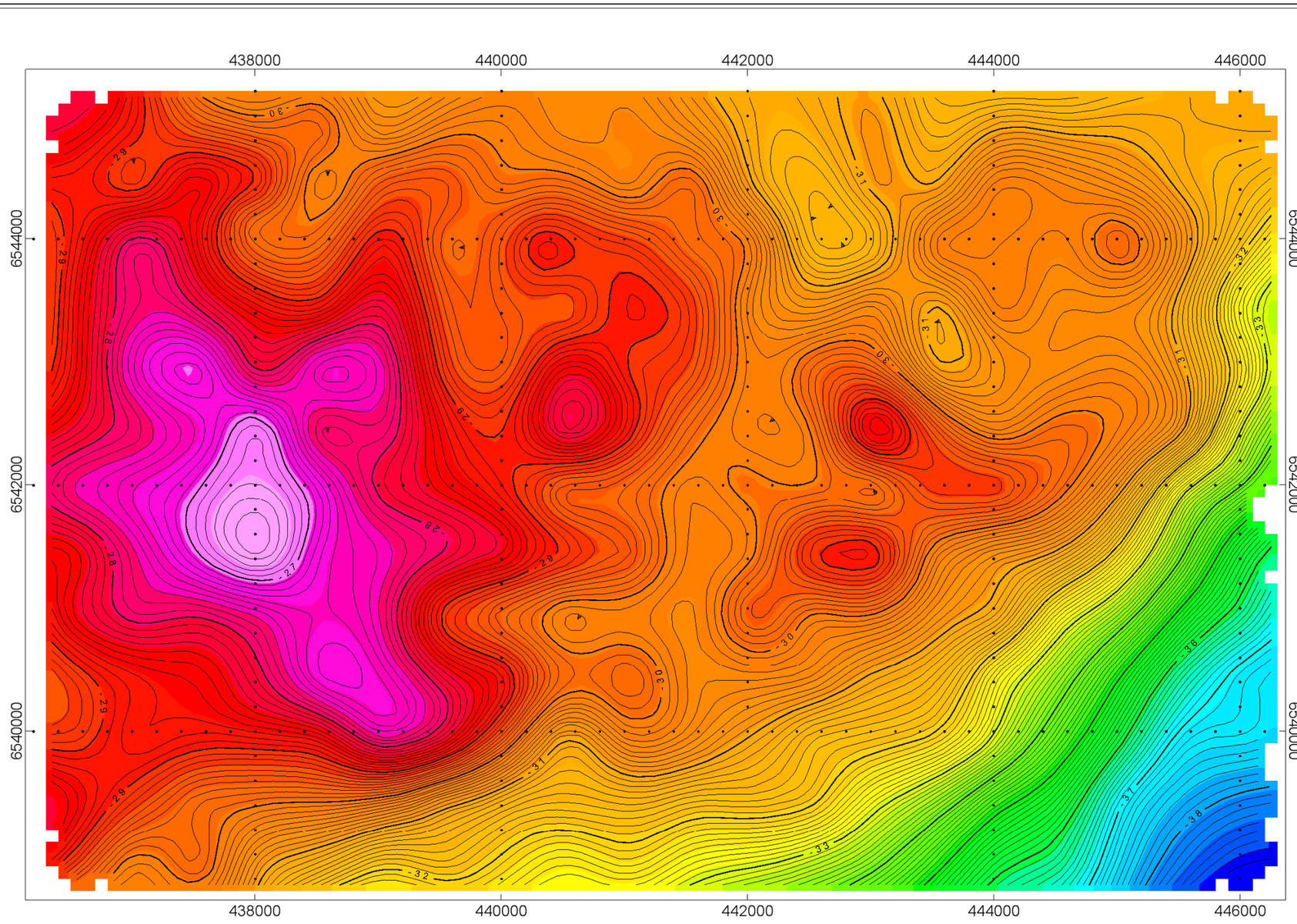
Tunkillia West Gravity Survey
Image of Bouguer Gravity 2.67 gm/cc
Linear Stretch, Contour Interval 0.1m

Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews



Minotaur Exploration
Yellabinna Gravity Survey **Image of GPS Derived Elevation** **Linear Stretch, Contour Interval 1m**
Data Acquired by : Daishsat Geodetic Surveyors Project 05011 June-August 2005 www.daishsat.com
Drawn by: LR Mathews



Scale 1:35000

500 0 500 1000 1500 2000

metres

GDA94 / Map Grid of Australia zone 53

Bouguer Gravity 2.67 gm/cc

mGals

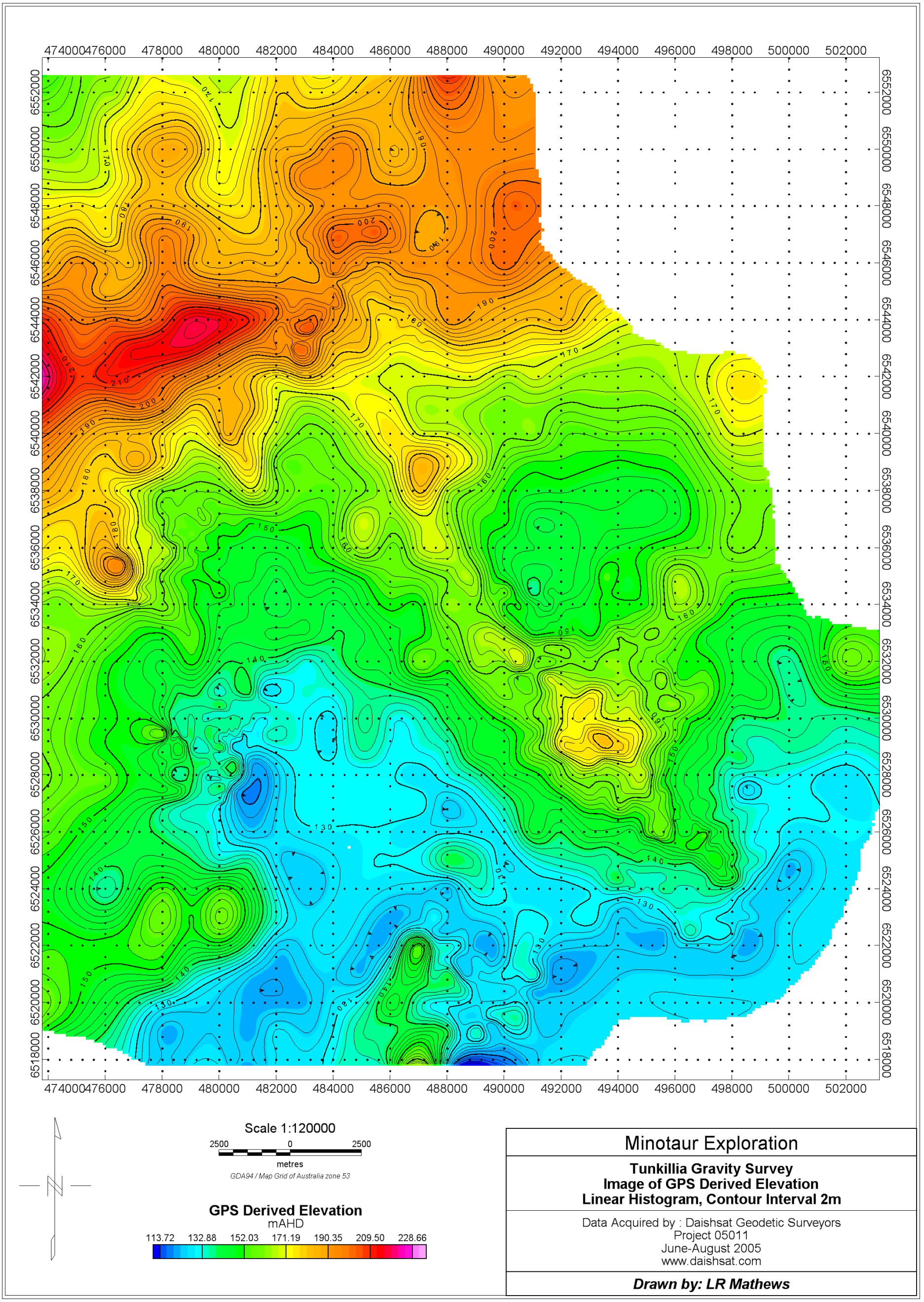
-38.70 -36.76 -34.82 -32.88 -30.94 -29.00 -27.06

Minotaur Exploration

Yellabinna Gravity Survey
Image of Bouguer Gravity 2.67 gm/cc
Linear Stretch, Contour Interval 0.1 mGals

Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews



Scale 1:120000

2500 0 2500

metres

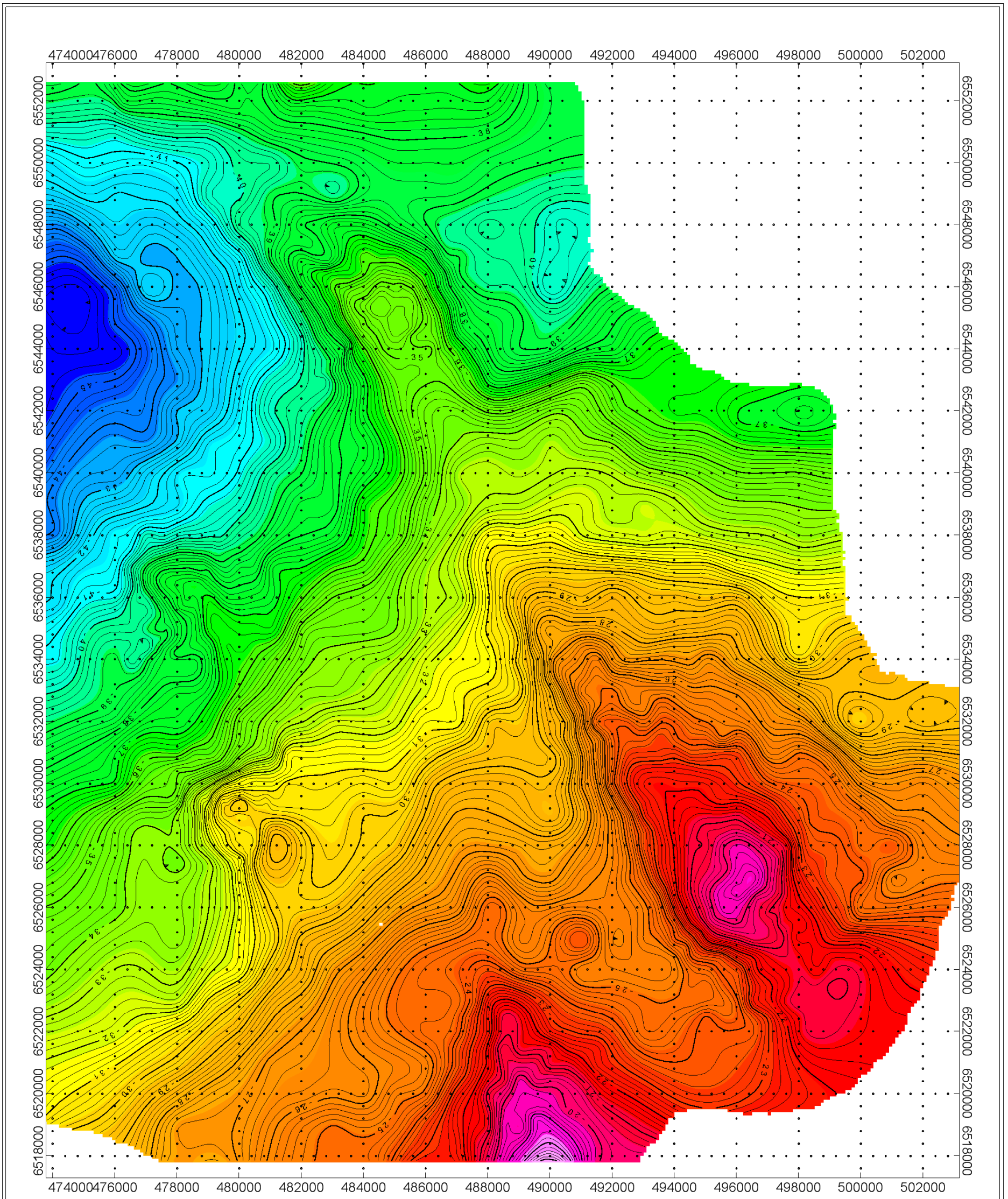
GDA94 / Map Grid of Australia zone 53

GPS Derived Elevation

mAHD

113.72 132.88 152.03 171.19 190.35 209.50 228.66

Minotaur Exploration
Tunkillia Gravity Survey **Image of GPS Derived Elevation** **Linear Histogram, Contour Interval 2m**
Data Acquired by : Daishsat Geodetic Surveyors Project 05011 June-August 2005 www.daishsat.com
Drawn by: LR Mathews



Scale 1:120000

2500 0 2500

metres

GDA94 / Map Grid of Australia zone 53

Bouguer Gravity 2.67 gm/cc

mGals

-45.24 -40.75 -36.27 -31.78 -27.29 -22.80 -18.32

Minotaur Exploration

Tunkillia Gravity Survey
Image of Bouguer Gravity 2.67 gm/cc
Linear Histogram, Contour Interval 0.2mGals

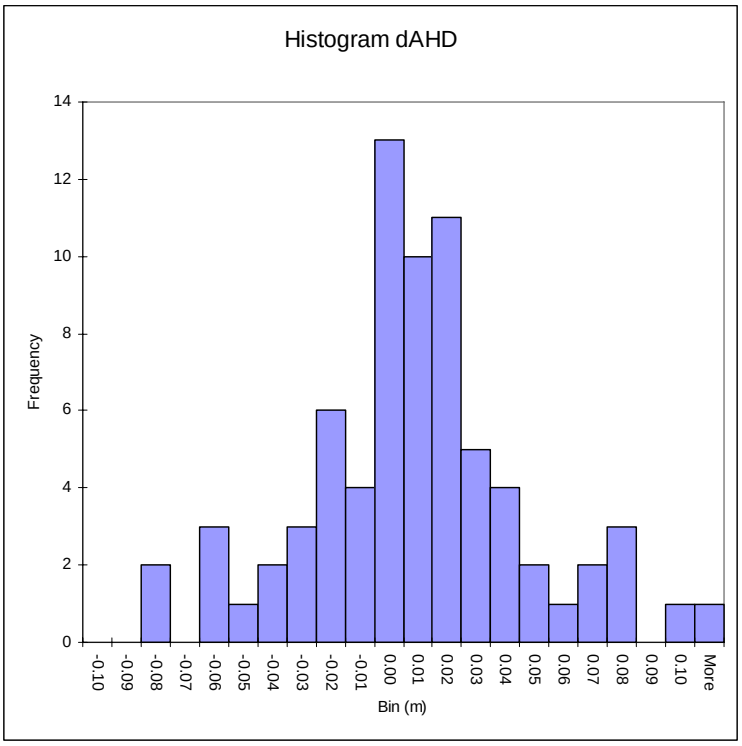
Data Acquired by : Daishsat Geodetic Surveyors
Project 05011
June-August 2005
www.daishsat.com

Drawn by: LR Mathews

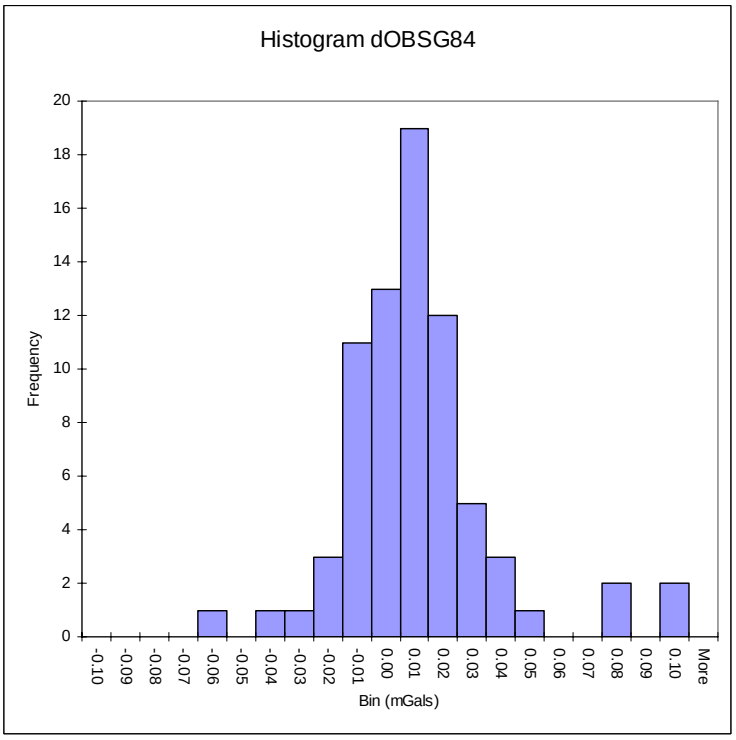
APPENDIX C

Data Repeatability

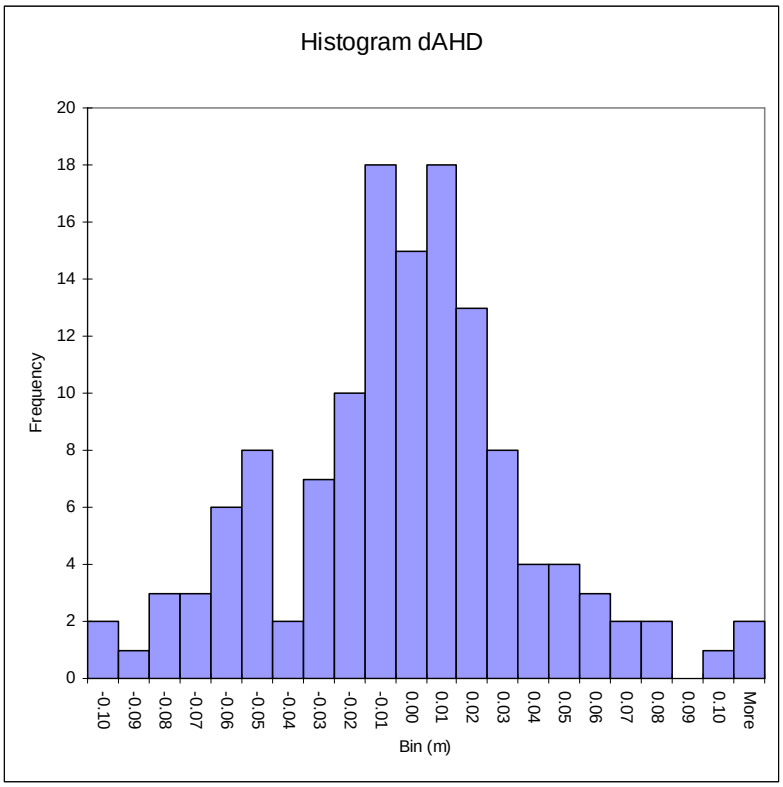
Repeatability of Height Measurement Deception Hill, Tunkillia West, Yellabinna



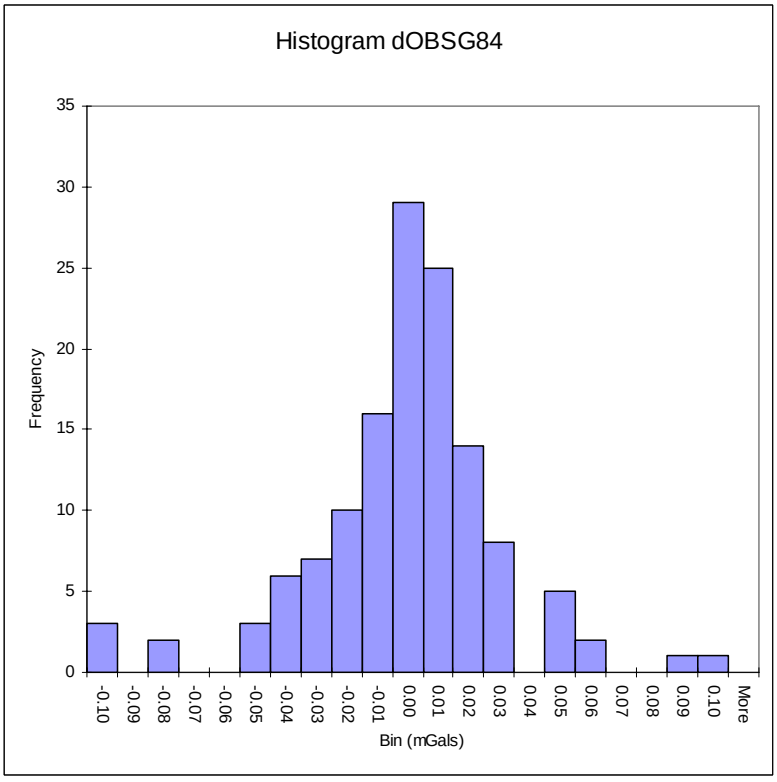
Repeatability of Observed Gravity Deception Hill, Tunkillia West, Yellabinna



Repeatability of Height Measurement Tunkillia



Repeatability of Observed Gravity Tunkillia



Descriptive Statistics Deception Hill, Tunkillia West, Yellabinna

	dAHD	*dOBSG*
Mean	0.004	0.006
Standard Error	0.004	0.003
Median	0.003	0.005
Mode	0.000	0.007
Standard Deviation	0.038	0.026
Sample Variance	0.001	0.001
Kurtosis	0.983	3.311
Skewness	0.146	1.098
Range	0.207	0.155
Minimum	-0.090	-0.063
Maximum	0.117	0.092
Sum	0.308	0.476
Count	74	74

Descriptive Statistics Tunkillia

	dAHD	*dOBSG*
Mean	-0.009	-0.006
Standard Error	0.004	0.003
Median	-0.002	-0.002
Mode	0.000	0.005
Standard Deviation	0.049	0.031
Sample Variance	0.002	0.001
Kurtosis	9.661	2.937
Skewness	-1.614	-0.528
Range	0.421	0.208
Minimum	-0.300	-0.115
Maximum	0.121	0.093
Sum	-1.162	-0.768
Count	132	132

APPENDIX D

Base Station Information

PIRSA PSM 5831/1110 – Deception Camp

MGA94

EASTING (m)	448 572.49
NORTHING (m)	6 562 306.703
ZONE (UTM)	53 South
HEIGHT (AHD, m)	129.983

GDA94

LATITUDE (DMS)	31 4 18.7790 S
LONGITUDE (DMS)	134 27 39.2383 E
GDAHT (m)	126.164

OBSERVED GRAVITY

979344.755 (mGals)

SURVEYED BY

GPS - Daishsat using a multiple static sessions and the AUSPOS online GPS Processing system. Expected accuracy of station coordinates better than 0.005m.

Gravity – ABABA ties to PIRSA Base Station 9611.002 "Jennet Gate" using multiple gravity meters. Expected accuracy better than 0.01 mGals.

MISCELLANEOUS DETAILS

The station is located at the junction of two historical drilling tracks within the Yellabinna Regional Reserve. It is located 20m west of the junction, in a small clearing. Access to the station is via a reasonable track heading west from the dog fence. The northern component of the track is also in bad condition. The station is marked by a brass plaque set in concrete and buried a few centimeters below ground level. It is witnessed by a steel picket with PVC cover and red SA Govt Survey witness plate. The gravity base consists of a circular concrete monument of diameter 30cm opposite the steel picket.

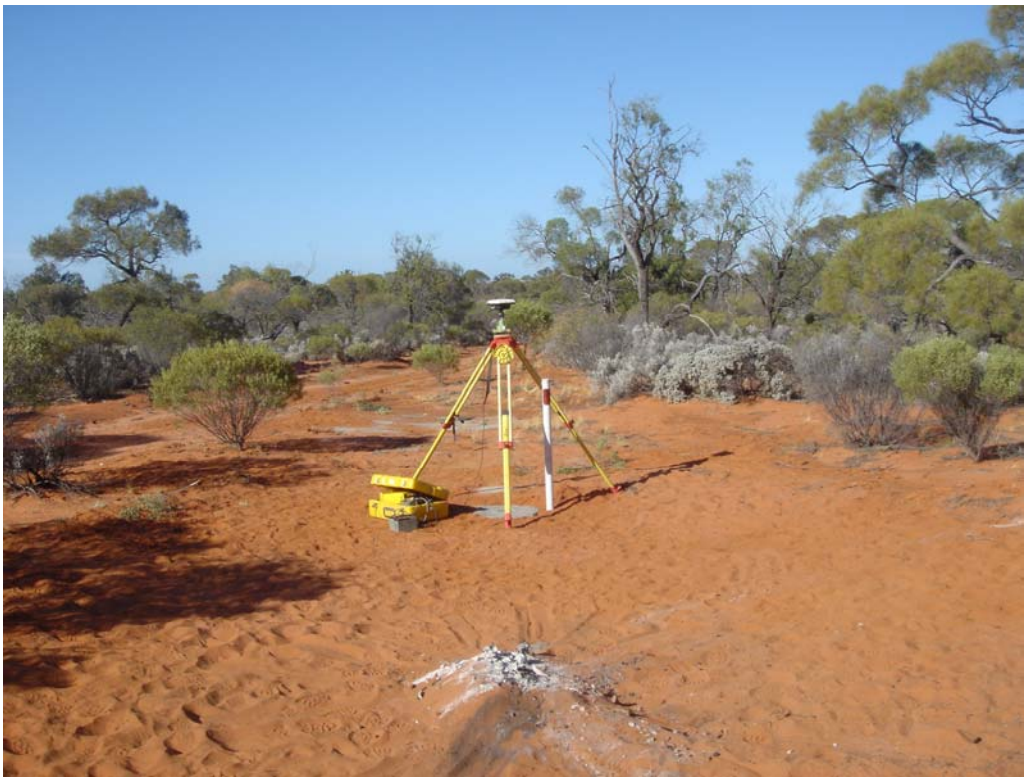


Photo of GPS/Gravity base 5831/1110 with distinguishing features in background

DS GPS/Gravity Gravity Base 0050 – Tunkillia

MGA94

EASTING	484 145.696
NORTHING	6 547 482.520
ZONE	53
HEIGHT (AHD)	199.503

GDA94

LATITUDE	-31 12 23.9802
LONGITUDE	134 50 00.8427
GDAHT	196.754

OBSERVED GRAVITY

979344.045 mGals

SURVEYED BY

GPS - Daishsat using a multiple static sessions and the AUSPOS online GPS Processing system. Expected accuracy of station coordinates better than 0.005m.

Gravity – ABABA ties to PIRSA Base Station 9611.002 "Jennet Gate" using multiple gravity meters. Expected accuracy better than 0.01 mGals.

MISCELLANEOUS DETAILS

The station is located approximately 50m north-east of the old donga building, on the northern side. The GPS base is marked by a steel star picket with approximately 50mm protruding from ground level. It is witnessed with a steel picket and Daishsat plaque. The gravity base is not coincident with the GPS base, but is located on the southern side of a zincalume shed that lies just to the south-west of the old donga building. The base consists of three drill-holes set into a piece of concrete formwork used as a stepping stone.

Photo of GPS/Gravity base 0050 with distinguishing features in background

APPENDIX E

Survey Specifications

Survey Name	**Deception Hill**
Operators	LC, MT
Techniques Employed	GPS, Gravity
Station Spacing	500m
Line Spacing	500m/1000m

Survey Name	**Tunkillia West**
Operators	LC, MT
Techniques Employed	GPS, Gravity
Station Spacing	500m
Line Spacing	500m

Survey Name	**Yellabinna**
Operators	LC, MT
Techniques Employed	GPS, Gravity
Station Spacing	500m
Line Spacing	500m

Survey Name	**Tunkillia**
Operators	LC, MT
Techniques Employed	GPS, Gravity
Station Spacing	500m/1000
Line Spacing	500m/100m

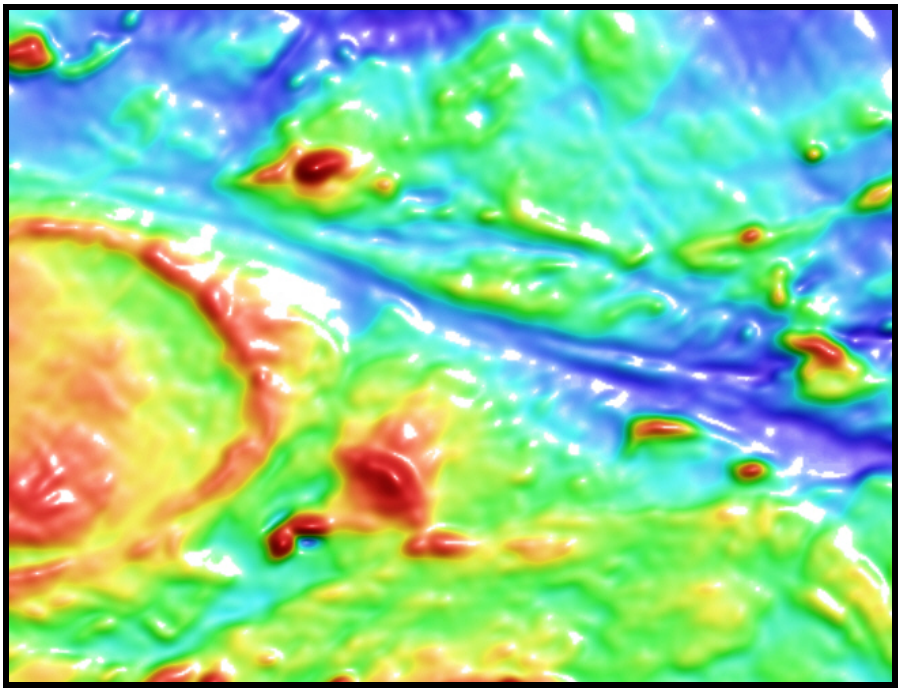
Minotaur A.C.N. 108 483 601

Minotaur Exploration Ltd
247 Greenhill Rd, Dulwich 5065, South Australia
Tel: +61 8 8366 6000 Fax: +61 8366 6001
Email: admin@minotaurexploration.com.au

ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th OCTOBER 2006



R.B. Flint

Minotaur A.C.N. 108 483 601

Minotaur Exploration Ltd
247 Greenhill Rd, Dulwich 5065, South Australia
Tel: +61 8 8366 6000 Fax: +61 8366 6001
Email: admin@minotaurexploration.com.au

ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th OCTOBER 2006

R.B. Flint

July 2007

SUMMARY

- Gravity surveys over the tenement have identified several anomalies, including one at 10 mGals, that may reflect IOCG-style mineralisation. Five targets have been selected for drill testing. A Declaration of Environmental Factors (DEF) has been submitted to PIRSA and DEH for the proposed drilling program within Yellabinna Regional Reserve, but a positive reply has not yet been received.
- An airborne EM survey flown by Fugro Airborne Surveys for Toro Energy has delineated two N-trending, Tertiary palaeochannels. Further work continues on defining palaeochannel convergent and meander features and possible drill targets to appraise the potential for the palaeochannel to host sedimentary U mineralisation at redox boundaries.

MAP REFERENCE: 1:250 000:	TARCOOLA (SH 53-10) & CHILDARA (SH 53-14)
MAP REFERENCE: 1:100 000:	5735 (Tolmer), 5736 (Malbooma), 5835 (Meelera) & 5836 (Tarcoola)
DISTRIBUTION:	PIRSA Toro Energy

CONTENTS

FIGURES

TABLES

APPENDICES

INTRODUCTION

EL 3266 (Deception Hill) is located ~20 km S of Tarcoola on the E–W transcontinental railway line and encompasses an area of 795 km^2 that is predominantly within Yellabinna Regional Reserve, thus requiring special environmental considerations and approvals (Figure 1). The tenement was granted to Minotaur Operations Pty Ltd on 26th October 2004 and the operator is Minex (SA) Pty Ltd. This is the second annual technical report and summarises exploration activities undertaken by Minotaur Exploration on the tenement for the 12 month period up to 25th October 2006. The tenement is considered to have potential for Fe-oxide Cu-Au style mineralisation.

LICENCE	AREA (km^2)	GRANTED	EXPIRES
EL 3266 Deception Hill	795	26/10/2004	25/10/2006

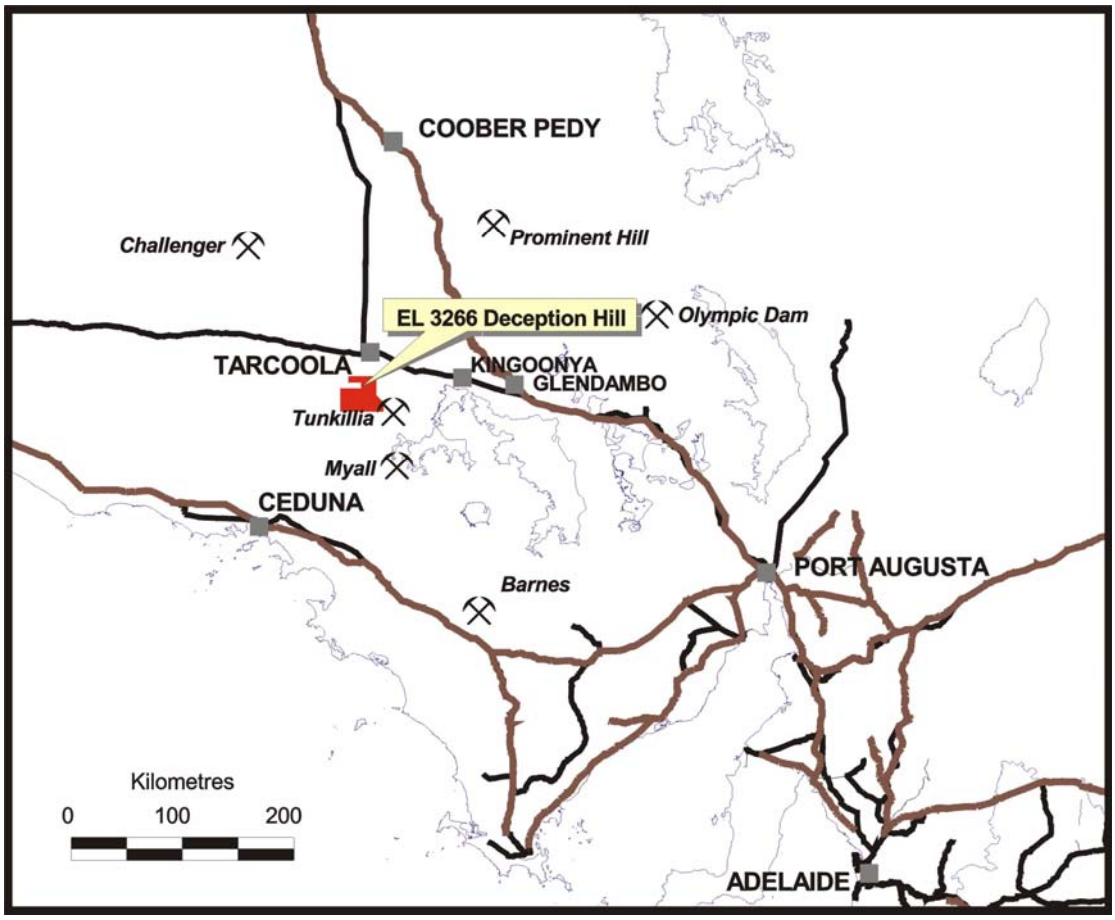


Figure 1: Location plan for EL 3266, South Australia

Basement rock exposures in the region are very scarce (<1%) and restricted to Mesoproterozoic Hiltaba Suite granite, otherwise the terrain is characterised by extensive veneers of aeolian sand dunes and spreads with dunes having an average height of 10 m (Figure 2) (Blissett, 1980; Daly, 1985).

The Tarcoola area of the central Gawler Craton has long been an area of considerable exploration interest, in part due to the predominantly historical Tarcoola Goldfield that was operational during the period 1901–1986 yielding 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

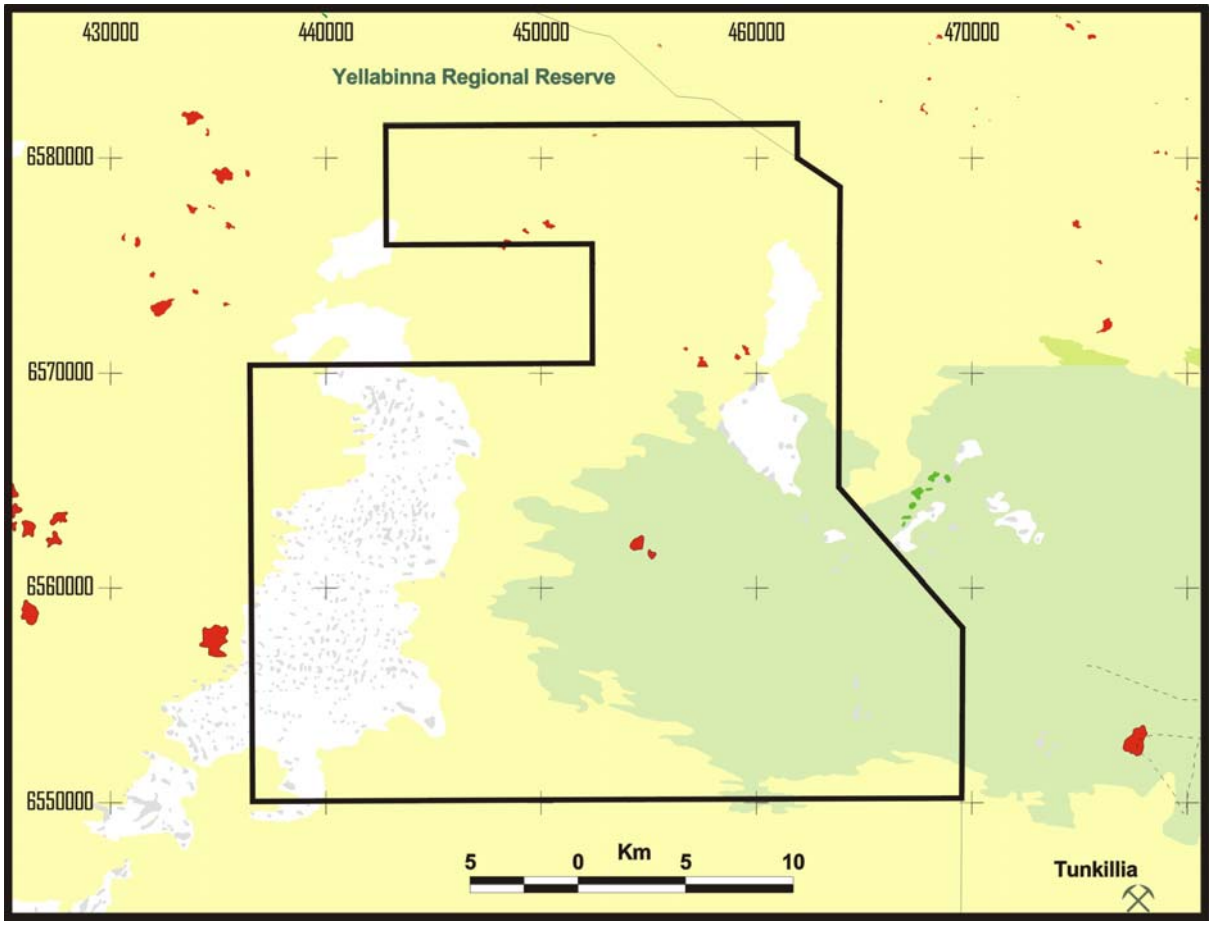


Figure 2: Outcrop geology for EL3266 (Deception Hill) of the central Gawler Craton (Blissett, 1980; Daly, 1985)

REGIONAL GEOLOGY

A great variety of Archaean, Palaeoproterozoic and Mesoproterozoic units are present in the Tarcoola and Kingoonya areas of the central Gawler Craton. Archaean units of the Mulgathing Complex are predominantly leucocratic quartz+feldspar and quartz+feldspar +garnet+biotite gneisses (e.g. Kennella Gneiss) and granite (Glenloth Granite) though basaltic and ultramafic flows (Hopeful Hill Basalt and Lake Harris Komatiite) are also present within the ENE-trending Lake Harris Greenstone Belt east of Tarcoola (Figure 3) (Daly and Fanning, 1993; Daly et al., 1998).

During the Palaeoproterozoic, various volcanosedimentary sequences, including the Wilgena Hill Jaspilite, Eba Formation, Labyrinth Formation and Tarcoola Formation were deposited within localized basins that were variously deformed during late stages of the Kimban and Kararan Orogenies. Associated plutonism includes the Muckanippie Anorthosite and granitoids of the Tunkillia Suite and St Peter Suite. During these deformational episodes, major shear zones developed, including the E-trending Yerda and Oolabinnia Shear Zones and N-trending Yarlbrinda Shear Zone that are up to several kilometers wide with ductile shearing and deformation occurring before ~1600 Ma (Daly et al., 1998; McLean and Betts, 2003).

During the Mesoproterozoic, widespread anorogenic magmatism across the central portion of the craton resulted in voluminous outpourings of the Gawler Range Volcanics, intrusion of Hiltaba Suite granite, emplacement of minor gabbroic plugs and development of Cu-Au +/- U mineralisation at Olympic Dam and Prominent Hill and Au-only mineralization at Tunkillia and Tarcoola (Blissett et al, 1993; Flint, 1993). Displacements along NE-trending faults (e.g. Bulgunnia and Koonibba Faults) were predominantly vertical and of brittle character (Figures 3–4).

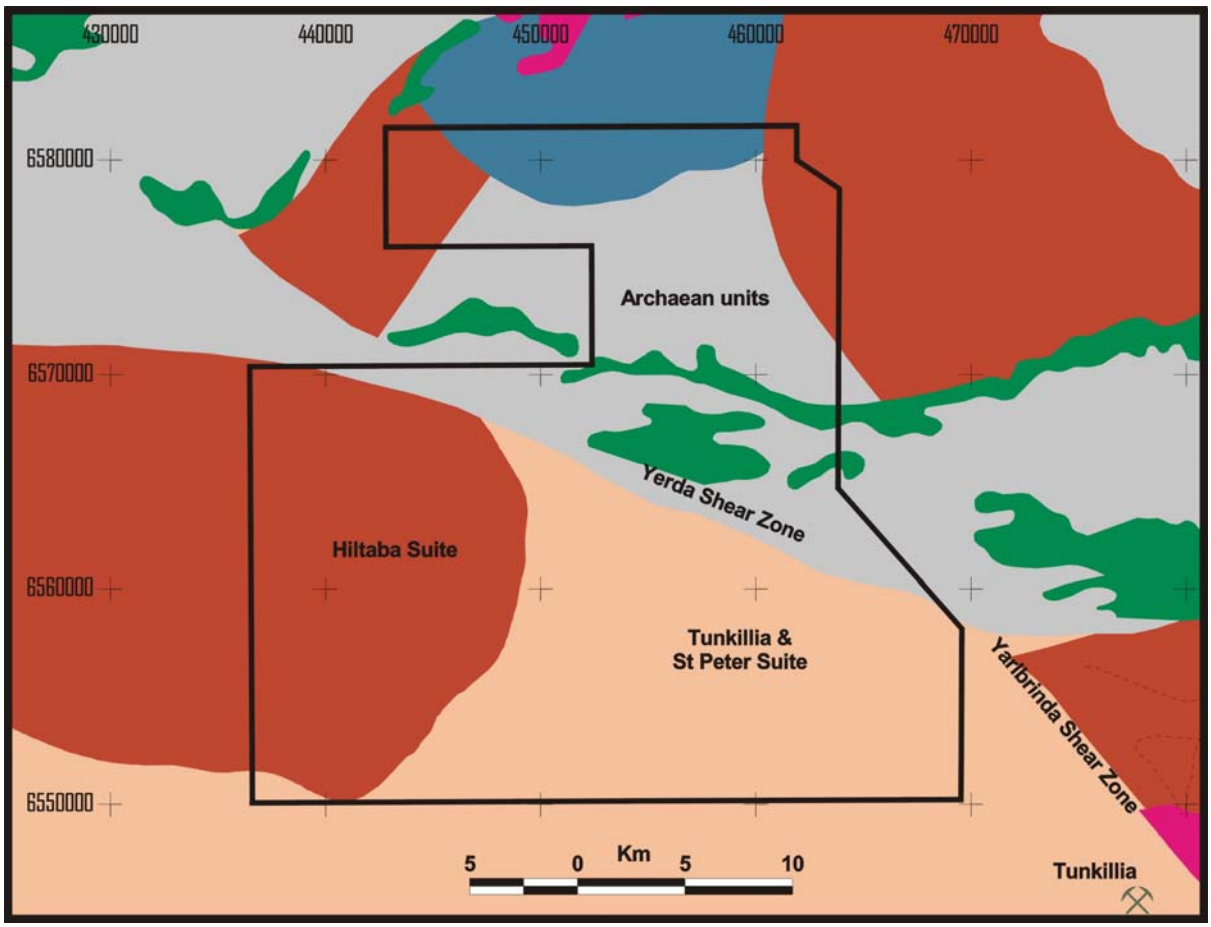


Figure 3: Tectonic interpretation for EL 3266 (Fairclough et al., 2003)

REGIONAL MINERALISATION

No gold mineralisation is known within EL 3266, but it is present regionally at various localities.

The historical Tarcoola Goldfield (~20 km N of EL 3266) during the period 1901–1986 yielded 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

The Glenloth Goldfield (~45 km E of EL 3266) was worked during 1893–1901 and again during the 1930's for a total recorded production of 315.4 kg from 14 620 t of ore yielding an average grade of 21.6 g/t Au (Daly in Flint, 1993). Auriferous quartz veins and sets up to

1 m wide occur within sheared Archaean Glenloth Granite and Kenella Gneiss (Mulgathing Complex) though are believed to have been derived from a shallow, but concealed, Hiltaba Suite granite batholith (Blissett, 1985).

Quartz-vein hosted gold mineralisation is known from several prospects along the Yarlbrinda Shear Zone (Tunkillia, Myall and Sheoak) west of the Gawler Ranges. Helix Resources have defined a total JORC resource for the Tunkillia Prospect on the Yarlbrinda Shear Zone (~15 km E of EL 3266) of 10.5 Mt at 2.2 g/t Au for 730 000 oz of contained gold (Ferris and Wilson, 2004). Host rocks within the Yarlbrinda Shear Zone are sheared Palaeoproterozoic Tunkillia Suite lithologies with gold and associated pyrite occurring in steeply-dipping quartz veins within an alteration zone comprising sericite and chlorite, with mineralisation most likely related to fluids emanating from a Hiltaba Suite granite and preferentially focused along the Yarlbrinda Shear Zone.

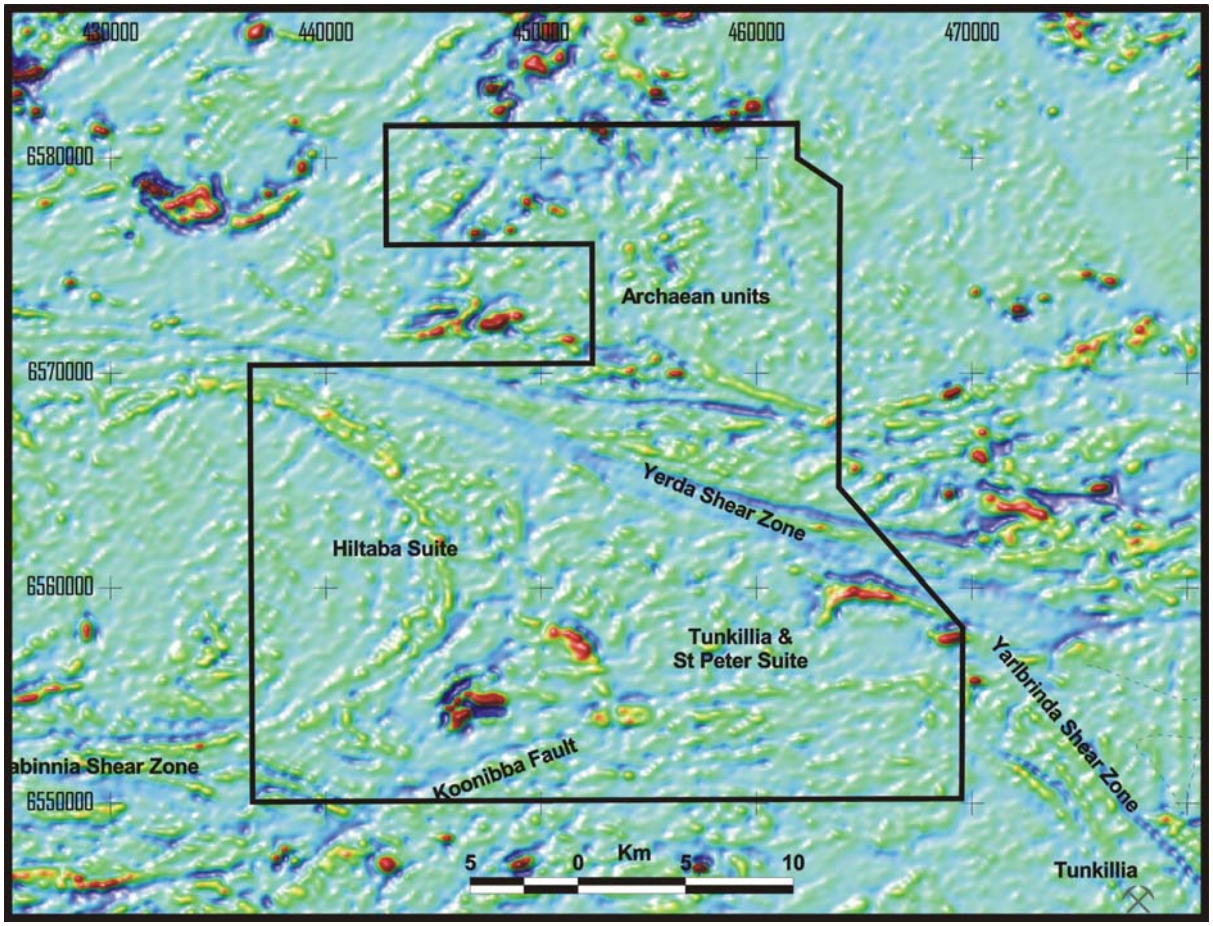


Figure 4: Total Magnetic Intensity image 1VD-TMI-RTP for EL 3266 (PIRSA data)

PREVIOUS EXPLORATION

A summary of historical mineral exploration in the region was presented by Flint and Thompson (2006) along with details of exploration activities undertaken by Minotaur Exploration during the previous 12 months to 25th October 2005.

From the 8–16th of April 2005, the South Australian government, through PIRSA and as part of a regional gravity survey over a large area of the Gawler Craton, incorporated the entire Deception Hill tenement at a station spacing of 2 x 1 km. Within EL 3266 a total of 451 gravity stations were collected by the Daishsat gravity contractors (Figure 5). The PIRSA gravity survey was successful in identifying a significant positive anomaly of interest which was subsequently surveyed by Minotaur Exploration in greater detail from 21st June to 4th July 2005 utilising a station spacing of 500 x 500 m. Two detailed N–S and E–W traverses at 100 m station intervals were also undertaken over the peak of the anomaly. A smaller target located near the Yerda Shear Zone was also identified and followed up with a more detailed survey. All infill areas were also conducted by Daishsat gravity contractors and totaled a further 532 gravity stations.

Aurelius Resources during 1993–98 undertook an extensive calcrete survey collecting 1 384 samples and assays revealed two broad zones of gold anomalism with a peak value of 52 ppb. Results were never pursued. During the past 12 months, Minotaur carried out a calcrete survey over portion of eastern EL 3266 with collection of 564 samples. Re-sampling confirmed distinctly elevated gold within calcrete ~4 km N of the Yerda Shear Zone though slightly lower than previously reported. The maximum value was 36 ppb (less than 40 m away from the best site of Aurelius Resources) though the area of interest was enlarged with dimensions of ~750 x 750 m where gold content in calcrete exceeds 10 ppb.

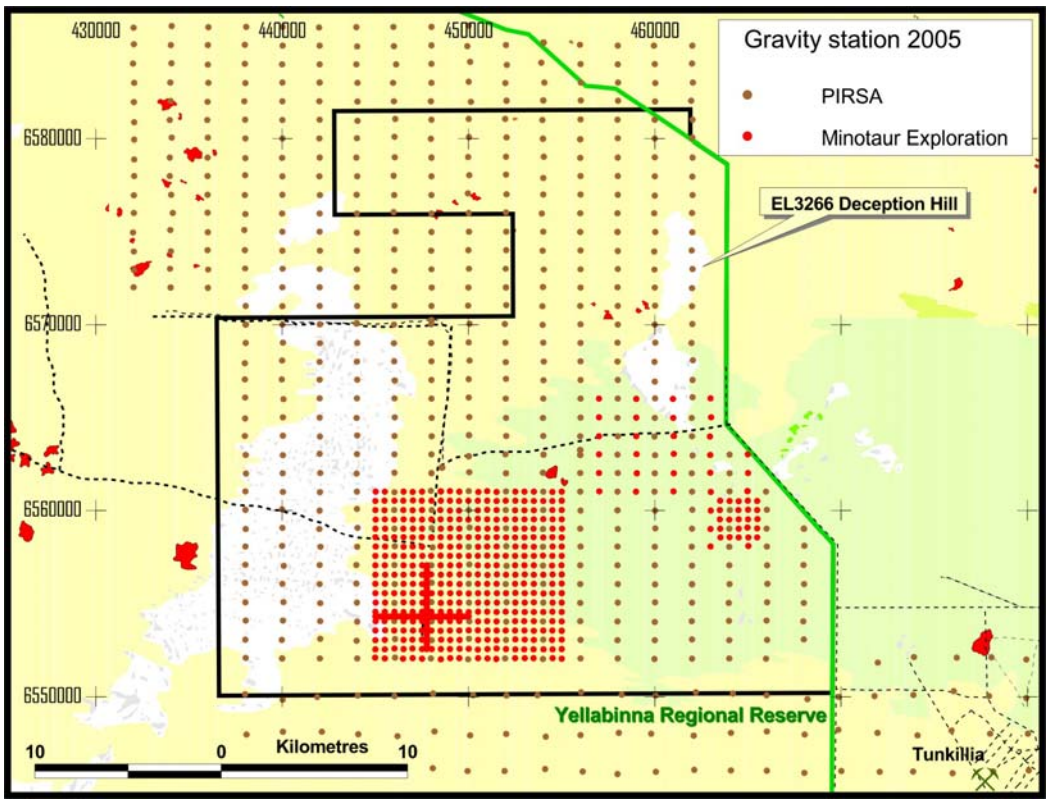


Figure 5: Gravity station localities for 2005 on EL 3266

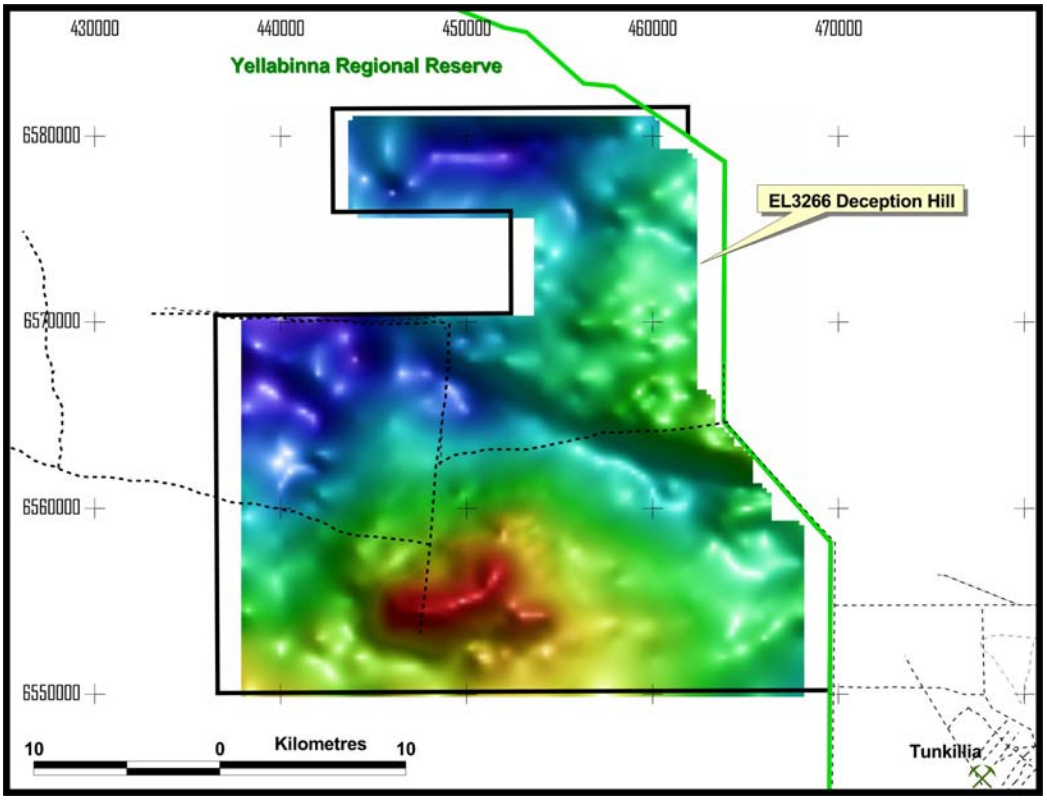


Figure 6: Bouguer gravity anomaly image for EL 3266

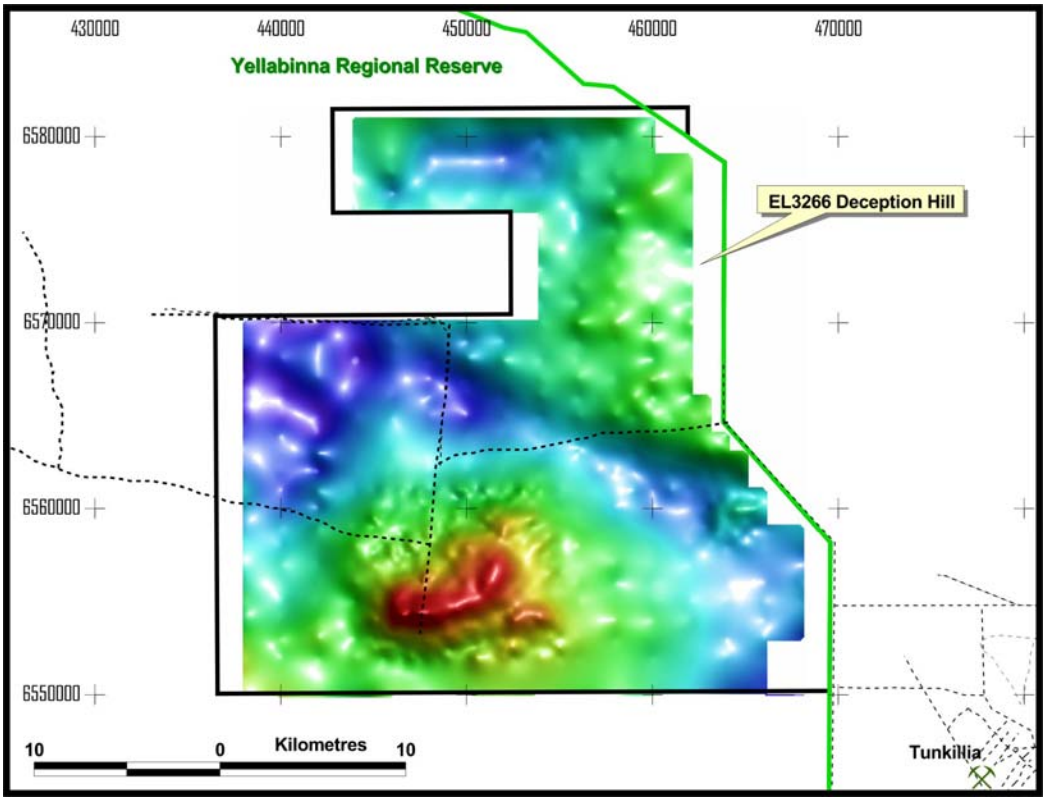


Figure 7: Residual gravity image for EL 3266

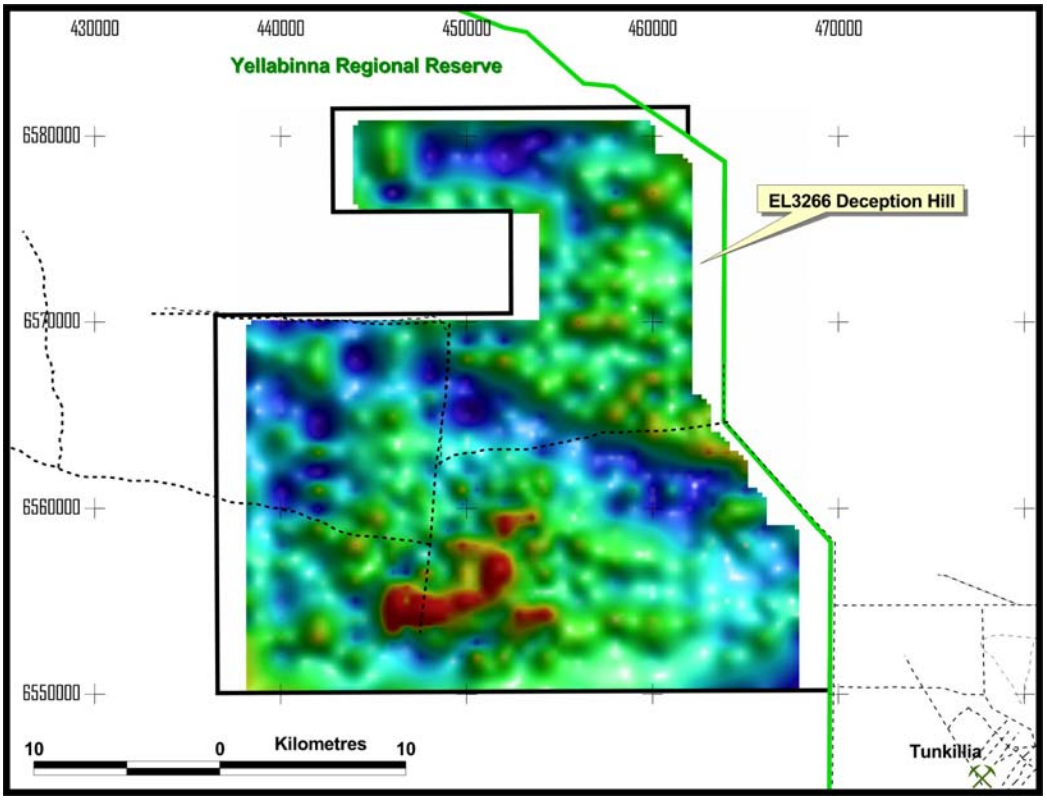


Figure 8: 1VD gravity image for EL 3266

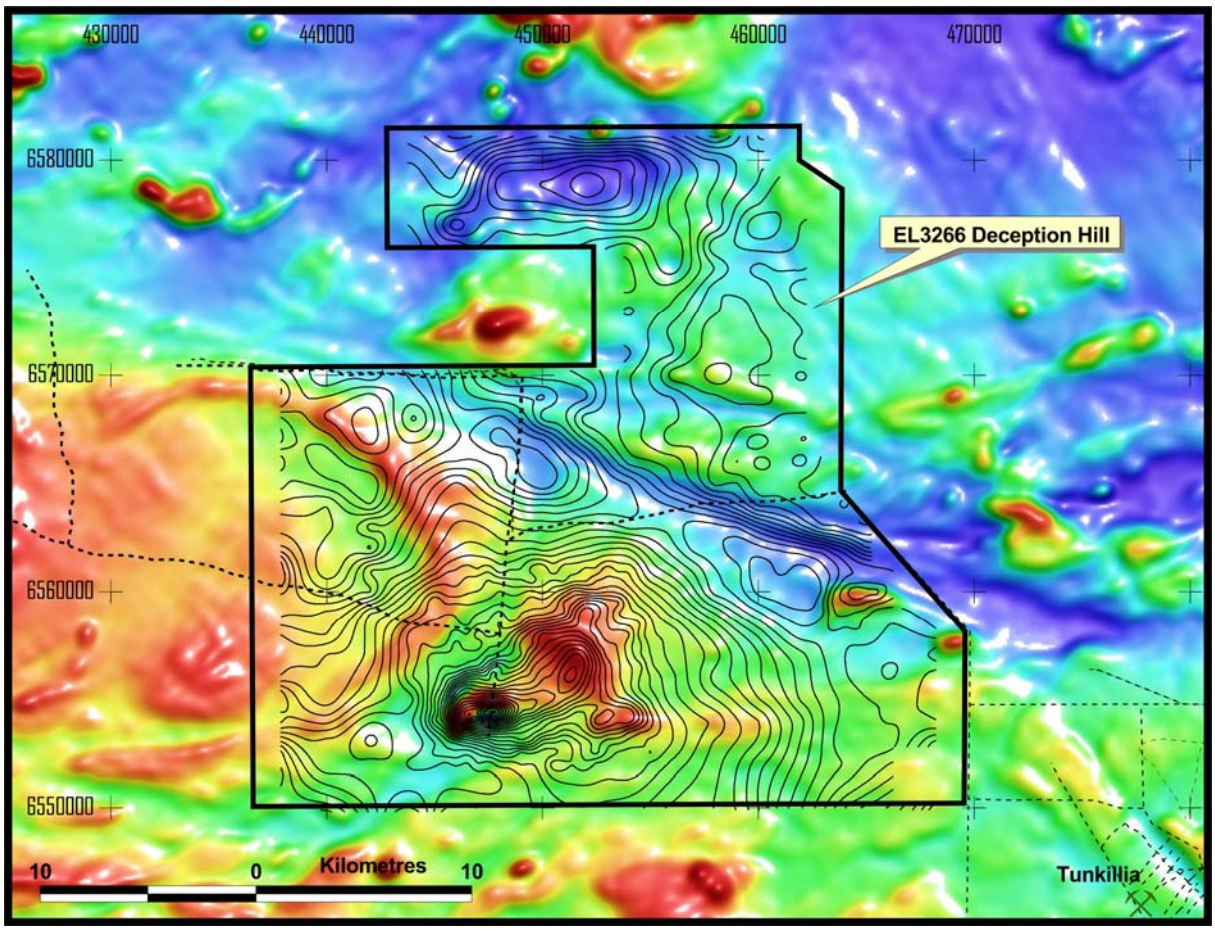


Figure 9: Residual gravity contours over Total Magnetic Intensity (TMI) image for EL3266

GRAVITY DATA AND INTERPRETATION

The Deception Hill tenement area is characterised by several regionally significant gravity features including a prominent WNW-trending linear gravity low, pronounced low (in the southwest) and pronounced high-amplitude anomaly in the south (Figures 6–9).

A WNW-trending linear gravity low (and coincident magnetic feature) delineates the WNW–ESE Yerda Shear Zone, a major crustal weakness separating a predominantly Archaean terrane (Harris Greenstone Belt) to the north and juvenile Palaeoproterozoic granitic suites (Tunkillia and St Peter Suites) to the south. McLean and Betts (2003) geophysically modeled this region (gravity and magnetic data) and interpreted the Yerda Shear Zone to be south-dipping and with predominantly dextral strike-slip displacement during emplacement of Hiltaba Suite granitic plutons (Figures 6–9).

A small anomaly near the eastern boundary of the tenement has an aerial extent of ~1.5 x 2 km, is coincident with a magnetic anomaly and is located immediately adjacent to the Yerda Shear Zone. The anomaly has an amplitude of 1 mGal and its centre is located at 464500E, 6559950N. Source units causing the anomaly are expected to be shallow (<100 m) and nature and age of lithologies are unknown (Figures 6–9, 10).

The pronounced anomaly of low amplitude in the southwest portion of the tenement corresponds with a Hiltaba Suite granitic pluton which is better defined in the airborne magnetic data with a rim of material of higher magnetic susceptibilities surrounding a central zone of low average susceptibility. The pluton is 15–20 km in diameter and was modeled by McLean and Betts (2003) using regional gravity data as having a depth extent of 4–5 km (Figures 6–9).

The pronounced gravity high (up to 10 mGals) southeast of this granitic pluton and between the Oolabinna Shear Zone, Yerda Shear Zone and Koonibba Fault is of considerable interest in possibly representing hematite and/or magnetite-hosted IOCG-style mineralisation. The gravity anomaly has a length of 7 km and a width of 1.8 km, though is a complex gravity feature consisting of a main anomaly along with a number of smaller anomalies. The highest-amplitude portion of the anomaly occurs on the western margin of the gravity complex, is 3 km in length and coincides with a magnetic anomaly (Figures 6–11).

At the eastern margin of the main gravity feature is a second, lower-order anomaly of ~5 mGals (451300mE 6556100mN). This anomaly is not directly coincident with any pronounced magnetic feature, however there is a magnetic anomaly on the northern margin of this gravity anomaly. The third gravity feature is a satellite anomaly to the southeast of the main gravity anomaly. This anomaly, centered at 452850mE 6554150mN, has an amplitude of 2 mGals, aerial extent of ~1.5 km x 2 km and has a coincident magnetic anomaly (Figures 10–11).

Previous mineral exploration drilling near the main gravity anomaly is restricted to four drill holes by Afmeco Pty Ltd in 1981 (holes CHL 21–24) (Figures 10–11). The thickness of Quaternary sediments ranges between 10–15 m with fresh basement at 30–60 m consisting of

granite, gneiss and amphibole +feldspar schist with no significant anomalous geochemistry. Recent field checking of GPS coordinates for these drill holes indicate that their positions differ by ~500 m from those recorded in PIRSA's digital database, and it appears that the drill holes did not adequately evaluate either the gravity or magnetic anomalies. Further drilling is warranted.

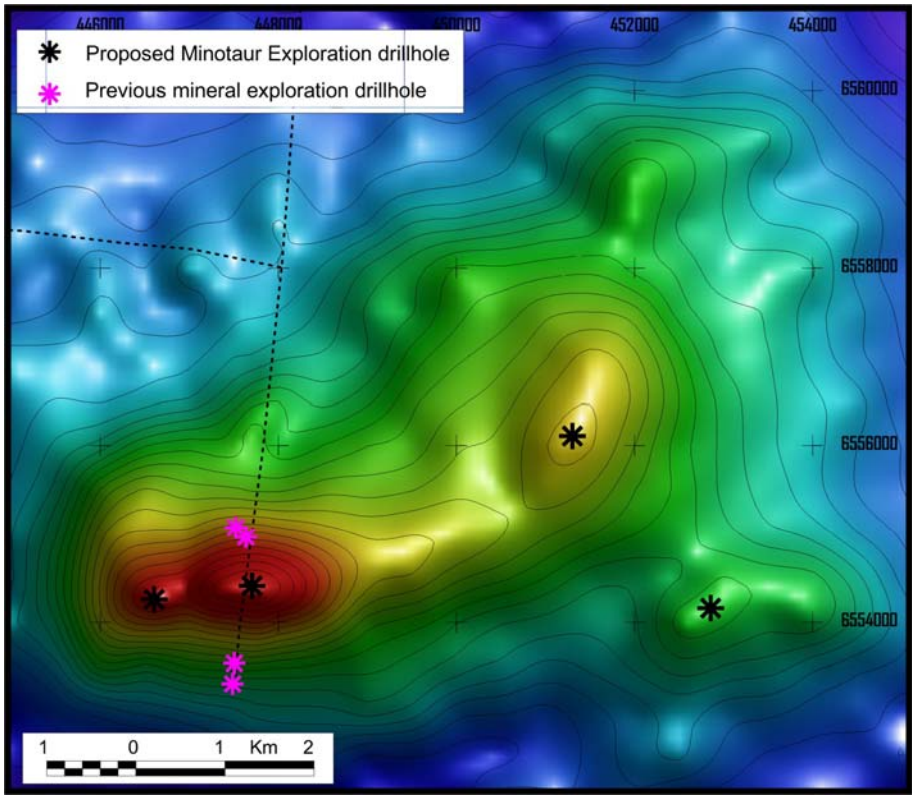


Figure 10: Residual gravity contours and image for the main anomaly on southern EL 3266

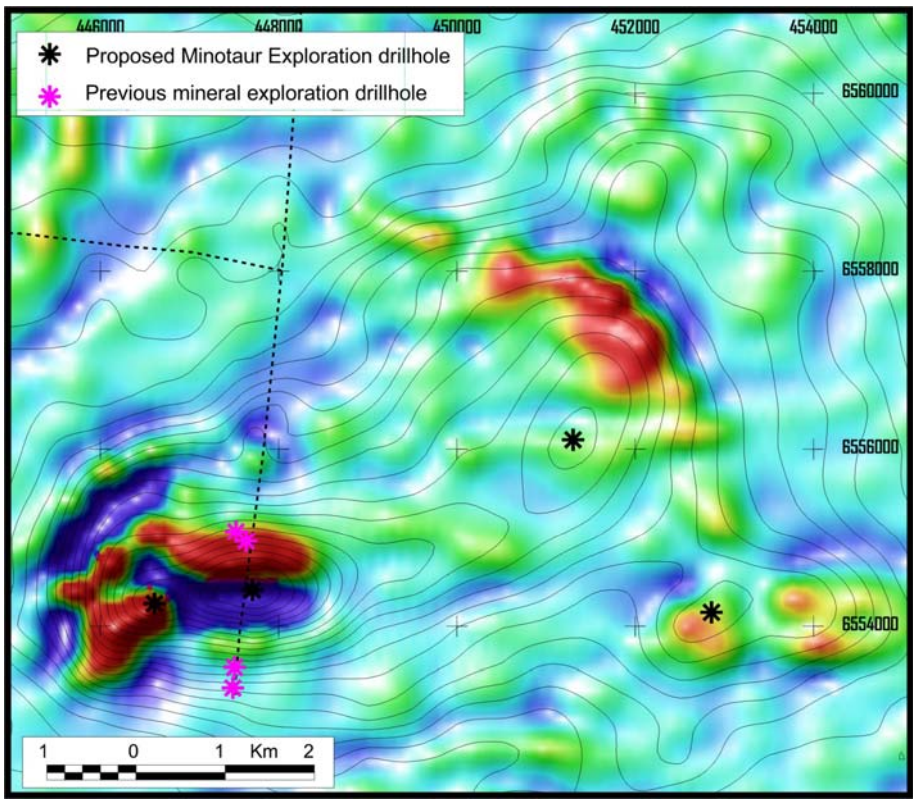


Figure 11: Residual gravity contours on TMI-RTP image for the main gravity anomaly on southern EL 3266

DRILL TARGETS

Five geophysical targets are considered worthy of drill testing in order to appraise the region's potential to host IOCG-style mineralisation. One target is a small coincident gravity and magnetic anomaly located just south of the E–W Yerda Shear Zone and near the eastern boundary of the tenement and Yellabinna Regional Reserve (Figures 10–13).

The other four targets focus on the main 10 mGal gravity anomaly and associated features and are designed to appraise the lithological nature of bedrock causing the gravity and/or magnetic anomalies. Drilling technique preferred is Reverse Circulation (RC) and proposed hole locations are listed in Table 1.

GDA94_E	GDA94_N	Orientation	Azimuth	Est_TD	Comments
464500	6559950	90	360	100	Coincident gravity/magnetic anomaly
451300	6556100	90	360	150	Eastern 5mGal anomaly
452850	6554150	90	360	150	Satellite 2mGal anomaly
446600	6554250	90	360	250	Western 10mGal anomaly and positive normal-polarity magnetic anomaly
447700	6554400	90	360	250	Western 10mGal anomaly and reverse-polarity magnetic anomaly

Table 1: Target criteria and coordinates for proposed drillholes on EL 3266

As the drill targets are all within Yellabinna Regional Reserve, a Declaration of Environmental Factors was compiled in May 2006 and submitted to PIRSA and the Department of Environment and Heritage for their approval. Assessment of the submission was very protracted and approval had not been obtained by October 2006.

Meanwhile efforts continue in an attempt to source a RC drill rig, however, considerable difficulty is being experienced due to current shortage of available drill rigs and also finding one suitable to negotiate the sandy terrain.

AIRBORNE ELECTROMAGNETIC SURVEY

During July–August 2006, Fugro Airborne Surveys carried out for Toro Energy a regional airborme EM survey over various areas in the Tarcoola–Kingoonya–Yellabinna region. Eastern (Area 3) and western (Area 4) portions of EL 3266 were flown using a flight-line spacing of 1 km for a total of 733 line km within the tenement. The data were processed by Fugro to produce images of interpreted depth to bedrock (Figures 12–13).

Two N-trending palaeochannels are clearly defined. One channel closely follows the eastern boundary of the tenement and traverses all basement units including the Yerda Shear Zone. The second channel has its headwaters near the main gravity anomaly and is apparently influenced by basement features initially before it trends northwards. Further work continues on better defining palaeochannel convergent and meander features and possible drill targets to appraise the potential for the palaeochannel to host sedimentary U mineralisation at redox boundaries.

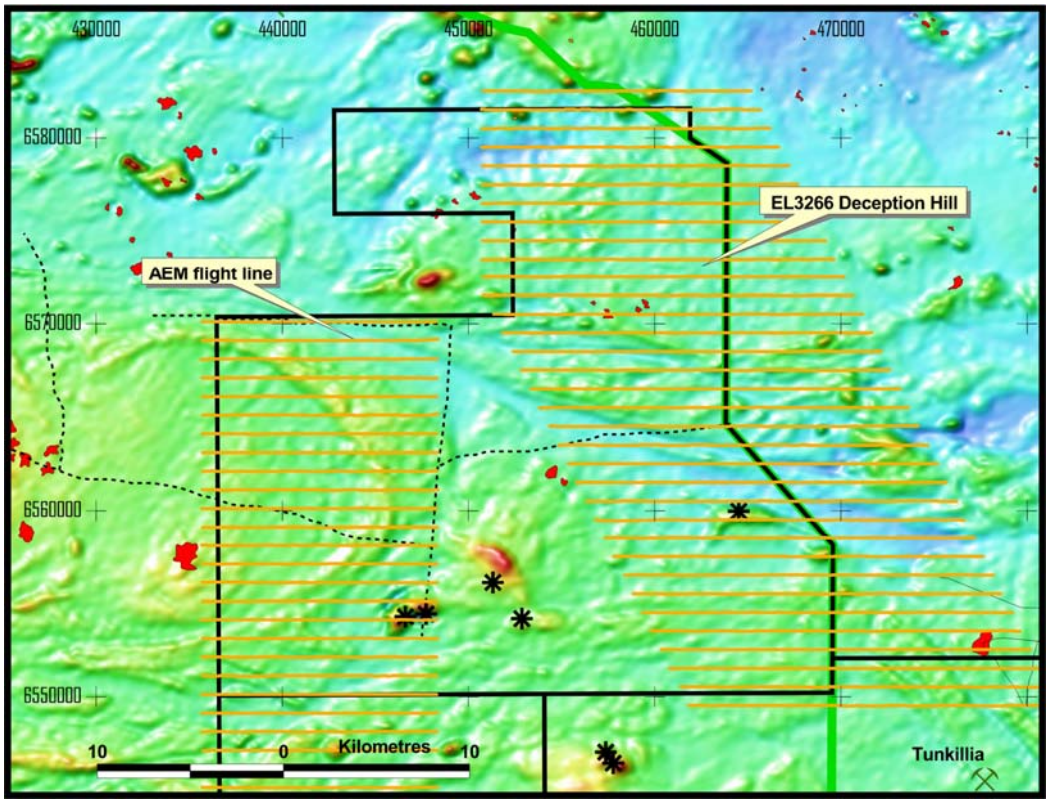


Figure 12: Airborne EM flight lines for 2006 survey superimposed on TMI-RTP image

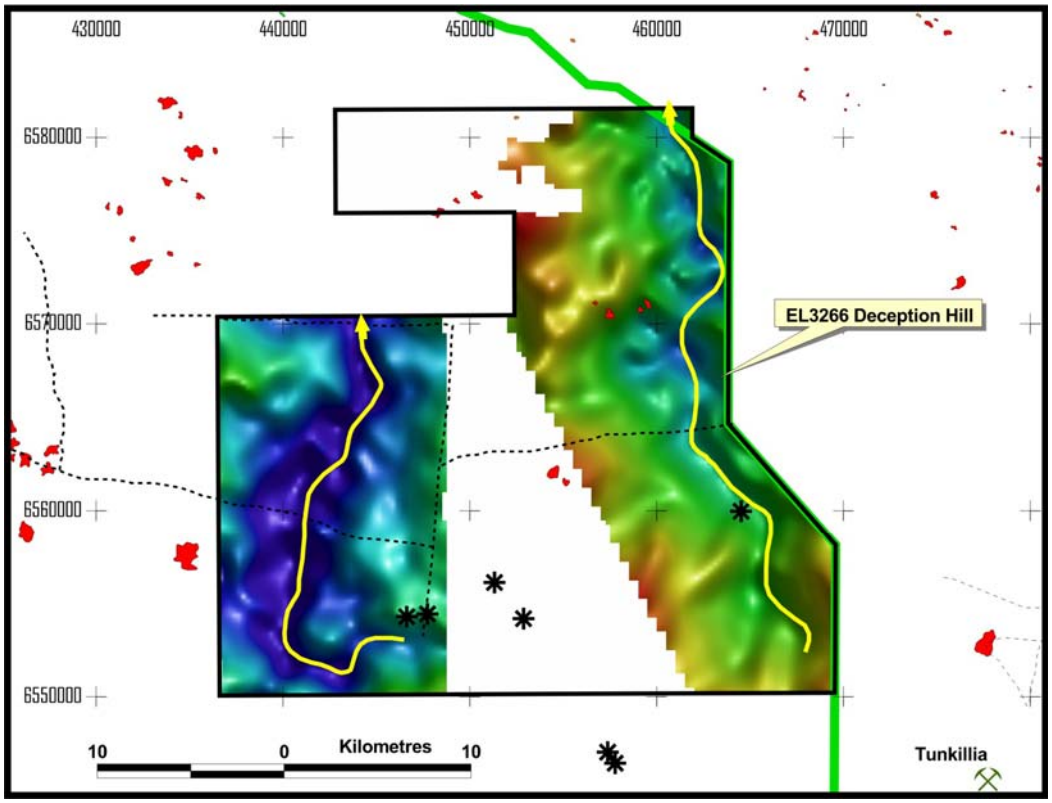


Figure 13: Depth to basement image produced from Airborne EM data (red = shallow basement, blue = deep basement, yellow line = interpreted palaeochannel)

FUTURE WORK PROGRAM

Five sites had been selected on EL 3266 for RC drilling in order to evaluate the nature of source units causing the prominent gravity anomalies and their potential to reflect IOCG-style mineralisation. Depth to fresh basement is expected to range from 50–100 m and total depths for the drillholes will range up to 250 m. So far, drilling has been stalled awaiting approval from PIRSA and DEH on the Declaration of Environmental Factors for the program within Yellabinna Regional Reserve.

Interpretation of the airborne EM data is continuing to improve delineation of palaeochannel convergent and meander features along with identification of possible drill targets to appraise the potential for the palaeochannel to host sedimentary U mineralisation.

Interpretation of the airborne EM data is also continuing to identify late-time conductors that may reflect mineralisation within crystalline basement units.

A calcrete survey is also proposed for the northern portion of the tenement as this area has not been previously covered. An interpreted Hiltaba Suite pluton and NE-trending fault suggest that this region has potential to host Au-Ag mineralisation, similar in age and character to that at Tunkillia.

EXPENDITURE

Detailed expenditure particulars for the 6 month periods ending 25th April 2006 and 25th October 2006 are tabulated below and indicate that the total expenditure on the tenement during the past 12 months was $67,904.25.

EL 3266 Deception Hill			
Expenditure item	6 month period ending 25th Apr 2006 A$	6 month period ending 25th Oct 2006 A$	Year Total A$
Application/fees/rental			
Assays			
Camp hire/maintenance	2,949.16	180.00	3,129.16
Clearance/Native title		12.36	12.36
Communications		190.47	190.47
Computing, maps, data	23.00	154.47	177.47
Drilling			
Environment/Rehabilitation			
Field work	130.31	135.34	265.65
Geological consulting	4,486.91		4,486.91
Geophysics consulting		954.43	954.43
Geophysics expenses		17,755.04	17,755.04
Hire plant/Equipment			
Management overheads (10%)	3,083.88	3,089.24	6,173.12
Petrology			
Postage/Freight/Transport	351.44		351.44
Salaries, contractors, super, workcover	5,195.00	11,315.70	16,510.70
Sample storage			
Toro divestment	3,261.48		3,261.48
Vehicle expenses	84.56		84.56
Vehicle hire		194.56	194.56
TOTAL	$33,922.64	$33,981.61	**$67,904.25**

Table 2: Summary of exploration expenditure for EL 3266 (Deception Hill) for the year ending 25th October 2006

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APPENDICES

APPENDIX A:

Airborne EM data (Area 3) collected by Fugro Airborne Surveys for Toro Energy during July–August 2006
File: EL3266_2006_A_02_AirboreEM.txt (digital format only)

APPENDIX B:

Airborne EM data (Area 4) collected by Fugro Airborne Surveys for Toro Energy during July–August 2006
File: EL3266_2006_A_03_AirboreEM.txt (digital format only)

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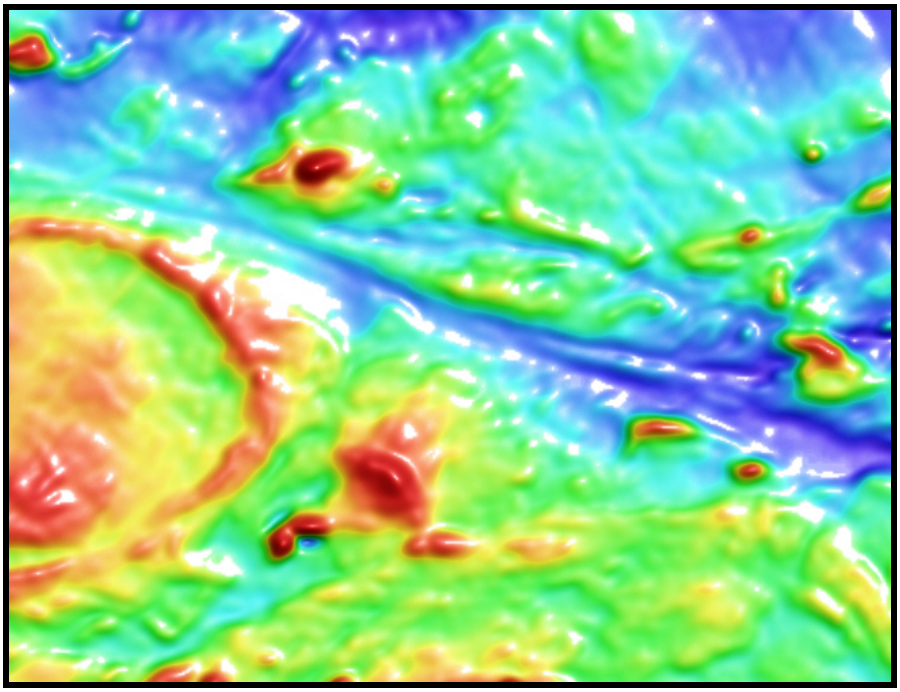
ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th OCTOBER 2007



R.B. Flint
J.M. Godsmark
&
S.J. Pugh

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ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
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FOR YEAR ENDING 25th OCTOBER 2007

R.B. Flint
J.M. Godsmark
&
S.J. Pugh

February 2008

SUMMARY

Exploration activities conducted by Minotaur Exploration in the current period:

- Negotiations to source a suitable drill rig to test geophysical targets within Yellabinna Regional Reserve,
- Negotiations with PIRSA and the DEH over Declaration of Environmental Factors (DEF) for exploration activities within Yellabinna Regional Reserve,
- 29 hole Air Core program undertaken and drill site rehabilitation completed.

Exploration activities conducted by Toro Energy in the current period:

- Negotiations with PIRSA and the Department of Environment and Heritage over Declaration of Environmental Factors (DEF) for exploration activities within Yellabinna Regional Reserve,
- Ongoing Part 9B Agreement negotiations with Far West Coast Native Title claimants.

MAP REFERENCE: 1:250 000:	TARCOOLA (SH 53-10) & CHILDARA (SH 53-14)
MAP REFERENCE: 1:100 000:	5735 (Tolmer), 5736 (Malbooma), 5835 (Meelera) & 5836 (Tarcoola)
DISTRIBUTION:	PIRSA Minotaur Exploration Toro Energy

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1.0 INTRODUCTION

EL 3266 (Deception Hill) is located ~20 km S of Tarcoola on the E–W transcontinental railway line and encompasses an area of 795 km^2 that is predominantly within Yellabinna Regional Reserve thus requiring special environmental considerations and approvals (Figure 1). The tenement was initially granted to Minex (SA) Pty Ltd on 26th October 2004 before being transferred to Minotaur Operations Pty Ltd (Minotaur) on 14th December 2004.

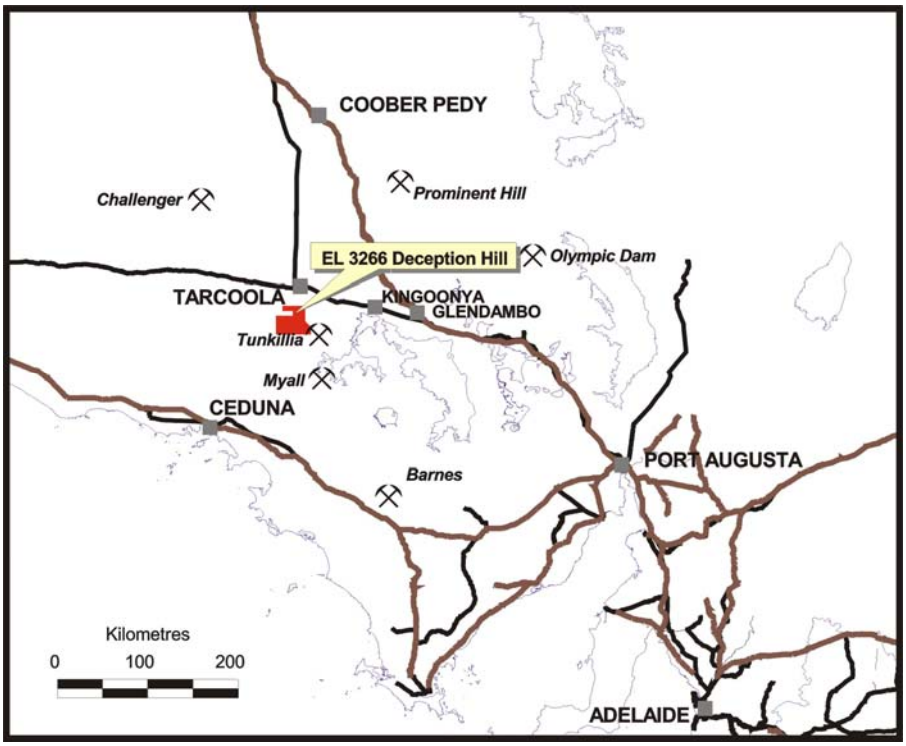

Figure 1. Location plan for EL 3266, South Australia.

The tenement is considered to have potential for Fe-oxide Cu-Au style mineralisation and sedimentary (palaeochannel) uranium mineralisation. Under a bipartite agreement made on 31 January 2006 between Minotaur and Toro Energy (Toro), the uranium exploration, mining and processing rights over EL 3266 were divested to Toro, subject to Toro listing on the ASX. Toro listed successfully on 24 March 2006.

This is the third annual technical report and summarises exploration activities undertaken by Minotaur Exploration and Toro Energy on the tenement for the 12 month period up to 25th October 2007. Technical results for the previous two years have been reported by Flint and Thompson (2006) and Flint (2007).

Basement rock exposures in the region are very scarce (<1%) and restricted to Mesoproterozoic Hiltaba Suite granite, otherwise the terrain is characterised by extensive veneers of aeolian sand dunes and spreads with dunes having an average height of 10 m (Figure 2) (Blissett, 1980; Daly, 1985).

The Tarcoola area of the central Gawler Craton has long been an area of considerable exploration interest, in part due to the predominantly historical Tarcoola Goldfield that was operational during the period 1901–1986 yielding 2.387 t of gold at an average grade of 37.5 g/t Au. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

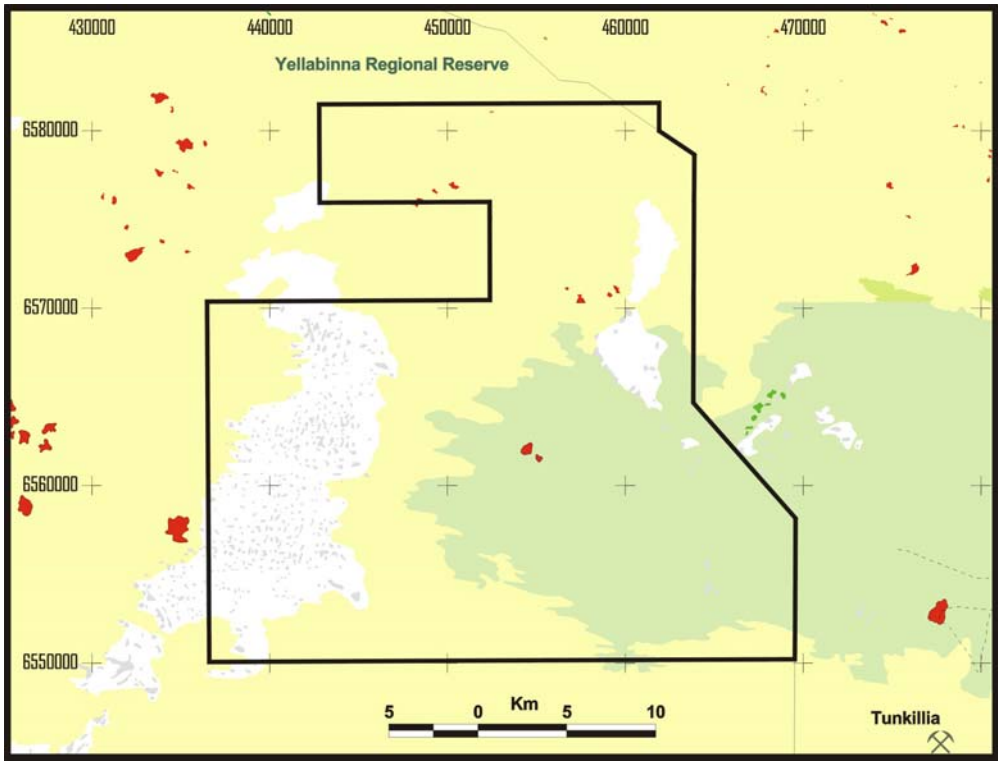

Figure 2. Outcrop geology for EL 3266 (Deception Hill) from Blissett (1980) and Daly (1985).

2.0 REGIONAL GEOLOGY

A great variety of Archaean, Palaeoproterozoic and Mesoproterozoic units are present in the Tarcoola and Kingoonya areas of the central Gawler Craton. Archaean units of the Mulgathing Complex are predominantly leucocratic quartz+feldspar and quartz+feldspar +garnet+biotite gneisses (e.g. Kennella Gneiss) and granite (Glenloth Granite) though basaltic and ultramafic flows (Hopeful Hill Basalt and Lake Harris Komatiite) are also present within the ENE-trending Lake Harris Greenstone Belt east of Tarcoola (Figure 3) (Daly and Fanning, 1993; Daly et al., 1998).

During the Palaeoproterozoic, various volcanosedimentary sequences, including the Wilgena Hill Jaspilite, Eba Formation, Labyrinth Formation and Tarcoola Formation were deposited within localized basins that were variously deformed during late stages of the Kimban and Kararan Orogenies. Associated plutonism includes the Muckanippie Anorthosite and granitoids of the Tunkillia Suite and St Peter Suite. During these deformational episodes, major shear zones developed, including the E-trending Yerda and Oolabinnia Shear Zones and N-trending Yarlbrinda Shear Zone that are up to several kilometres wide with ductile shearing and deformation occurring before ~1600 Ma (Daly et al., 1998; McLean and Betts, 2003).

During the Mesoproterozoic, widespread anorogenic magmatism across the central portion of the craton resulted in voluminous outpourings of the Gawler Range Volcanics, intrusion of Hiltaba Suite granite, emplacement of minor gabbroic plugs and development of Cu-Au +/- U mineralisation at Olympic Dam and Prominent Hill and Au-only mineralization at Tunkillia and Tarcoola (Blissett et al, 1993; Flint, 1993). Displacements along NE-trending faults (e.g. Bulgunnia and Koonibba Faults) were predominantly vertical and of brittle character (Figures 3–4).

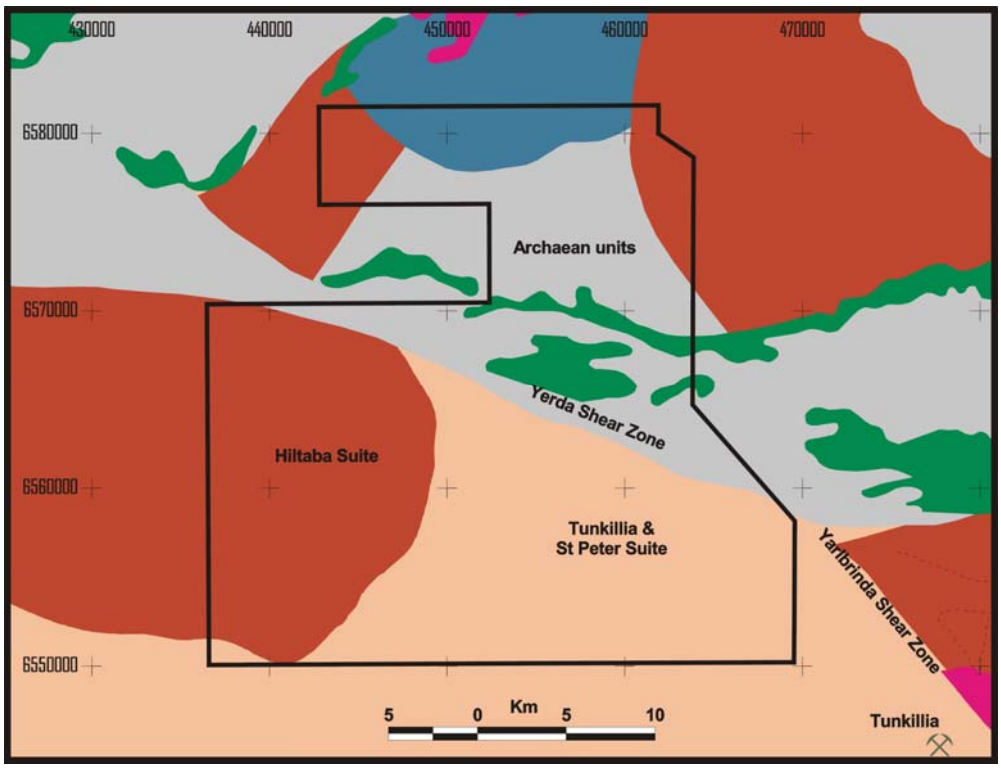

Figure 3. Tectonic interpretation for EL 3266 (Fairclough et al., 2003).

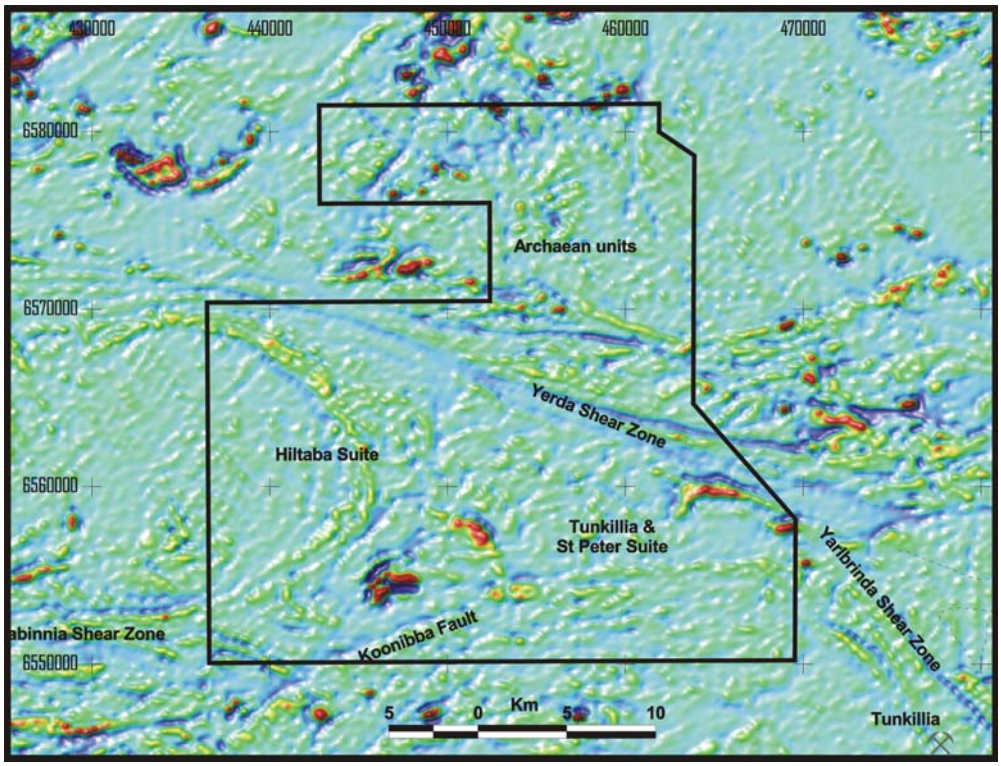

Figure 4. Total Magnetic Intensity image 1VD-TMI-RTP for EL 3266 (PIRSA data).

3.0 REGIONAL MINERALISATION

No gold mineralisation is known within EL 3266, but it is present regionally at various localities.

The historical Tarcoola Goldfield (~20 km N of EL 3266) during the period 1901–1986 yielded 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

The Glenloth Goldfield (~45 km E of EL 3266) was worked during 1893–1901 and again during the 1930's for a total recorded production of 315.4 kg from 14,620 t of ore yielding an average grade of 21.6 g/t Au (Daly in Flint, 1993). Auriferous quartz veins and sets up to 1 m wide occur within sheared Archaean Glenloth Granite and Kenella Gneiss (Mulgathing Complex) though are believed to have been derived from a shallow, but concealed, Hiltaba Suite granite batholith (Blissett, 1985).

Quartz-vein hosted gold mineralisation is known from several prospects along the Yarlbrinda Shear Zone (Tunkillia, Myall and Sheoak) west of the Gawler Ranges. At all these localities, gold is believed to be associated with hydrothermal fluids emanating from a Hiltaba Suite pluton or batholith.

Minotaur Exploration defined a resource for Area 223 of the Tunkillia deposit (~15 km E of EL 3266) in 2007 in accordance with the JORC code. Area 223 has a total gold inventory of 800,000 ounces, comprising an oxide resource of 5.7 million tonnes at 1.3 g/t Au (230,000 ounces) at 0.5 g/t cutoff, and a sulphide resource of 8.6 million tonnes at 2.1 g/t Au (570,000 ounces) at 1.0 g/t cutoff (Gee et al, 2007). Host rocks within the Yarlbrinda Shear Zone are sheared Palaeoproterozoic Tunkillia Suite lithologies with gold and associated pyrite occurring in steeply-dipping quartz veins within an alteration zone comprising sericite and chlorite, with mineralisation most likely related to fluids emanating from a Hiltaba Suite granite and preferentially focused along the Yarlbrinda Shear Zone.

4.0 PREVIOUS MINERAL EXPLORATION

Prior to EL 3266 being granted to Minotaur, six exploration companies explored the Deception Hill area (Table 1). Exploration activities conducted by these companies have been summarised in Flint and Thompson (2006).

EL		Granted	Expiry	References	
580	Afmeco Pty Ltd	16/01/80	15/01/82	ENV3778	ENV5234
618	Afmeco Pty Ltd	21/04/80	28/05/81	ENV3836	ENV4074
684	Afmeco Pty Ltd	11/08/80	29/05/81	ENV4074	
868	Afmeco Pty Ltd	11/08/81	10/08/82	ENV4074	
1017	Amoco Minerals Australia Co	28/07/82	27/01/84	ENV4896	
1171	Amoco Minerals Australia Co	2/09/83	1/09/84	ENV5323	
1390	CSR Ltd	13/03/87	12/03/89	ENV6859	
1414	Tarcoola Gold Ltd	17/07/87	16/07/88	ENV6921	
1447	Tarcoola Gold Ltd	27/11/87	26/05/88	ENV6975	
1525	Tarcoola Gold Ltd	29/09/88	28/09/89	ENV6844	
1859	Aurelius Resources and partners	30/08/93	29/08/98	-	
2202	Goldstream Mining NL	27/09/96	16/08/00	ENV9522	

Table 1: Summary of previous mineral exploration activity on EL 3266

In April 2005, a regional gravity survey conducted by PIRSA over a large area of the Gawler Craton incorporated EL 3266 in entirety at a station spacing of 2 x 1 km. Within EL 3266 a total of 451 gravity stations were collected and identified a significant positive anomaly which was subsequently surveyed by Minotaur Exploration in 2005 utilising a station spacing of 500 x 500 m. Two detailed N–S and E–W traverses at 100 m station intervals were also undertaken over the peak of the anomaly. A smaller target located near the Yerda Shear Zone was also identified and followed up with a more detailed survey.

Aurelius Resources during 1993–98 undertook an extensive calcrete survey collecting 1,384 samples and assays revealed two broad zones of gold anomalism with a peak value of 52 ppb. These results were followed up when Minotaur carried out a calcrete survey over portion of eastern EL 3266; re-sampling confirmed distinctly elevated gold within calcrete ~4 km N of the Yerda Shear Zone of slightly lower tenor than previously reported. The area of interest was enlarged with dimensions of ~750x750 m where gold content in calcrete exceeds 10 ppb.

The Deception Hill tenement area is characterised by several regionally significant gravity features including a prominent WNW-trending linear gravity low, a pronounced low in the southwest and pronounced high-amplitude anomaly in the south. These features were further analysed in the previous annual technical report (Flint, 2007).

The pronounced gravity high (up to 10 mGals) southeast of this granitic pluton and between the Oolabinna Shear Zone, Yerda Shear Zone and Koonibba Fault was interpreted to represent possible haematite and/or magnetite-hosted IOCG-style mineralisation (Flint, 2007). At the eastern margin of the main gravity feature is a second, lower-order anomaly not directly coincident with any pronounced magnetic feature. The third gravity feature is a satellite anomaly, which has a coincident magnetic anomaly, located to the southeast of the main gravity anomaly.

Previous mineral exploration drilling near the main gravity anomaly (Afmenso Pty Ltd 1981 holes CHL 21–24) did not adequately evaluate either the gravity or magnetic anomalies (Flint, 2007) (Figure 5).

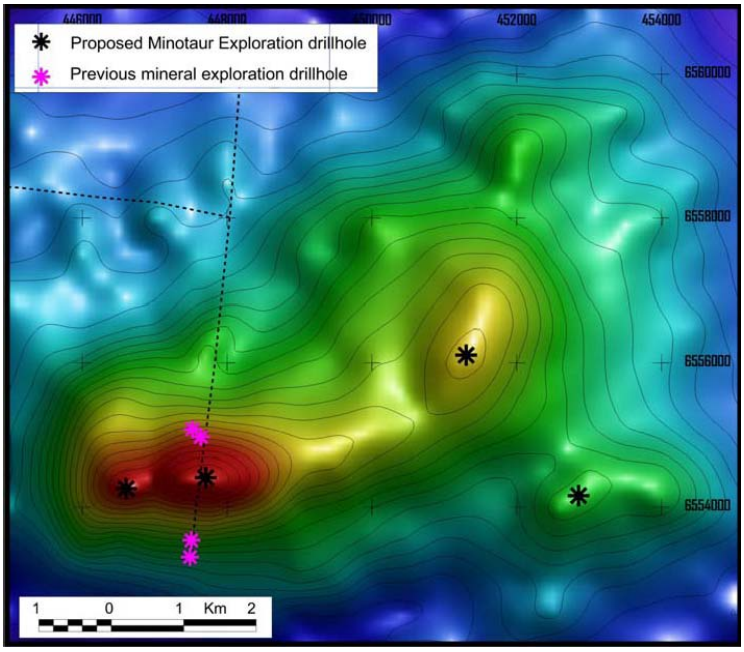

Figure 5. Residual gravity contours and image for the main anomaly on southern EL 3266.

Five geophysical targets located within Yellabinna Regional Reserve, and considered worthy of drill testing, were the subject of a Declaration of Environmental Factors compiled in May 2006 by Minotaur and submitted to PIRSA and the Department of Environment and Heritage for their approval.

During July–August 2006, Fugro Airborne Surveys carried out a regional airborne EM survey for Toro Energy over various areas in the Tarcoola–Kingoonya–Yellabinna region. Eastern and western portions of EL 3266 (Survey Areas 3 and 4, respectively) were flown using a flight-line spacing of 1 km for a total of 733 line km within the tenement. Two N-trending palaeochannels are clearly identified in the data (Figure 6), but further work on better defining palaeochannel features and possible sedimentary uranium drill targets was deemed necessary.

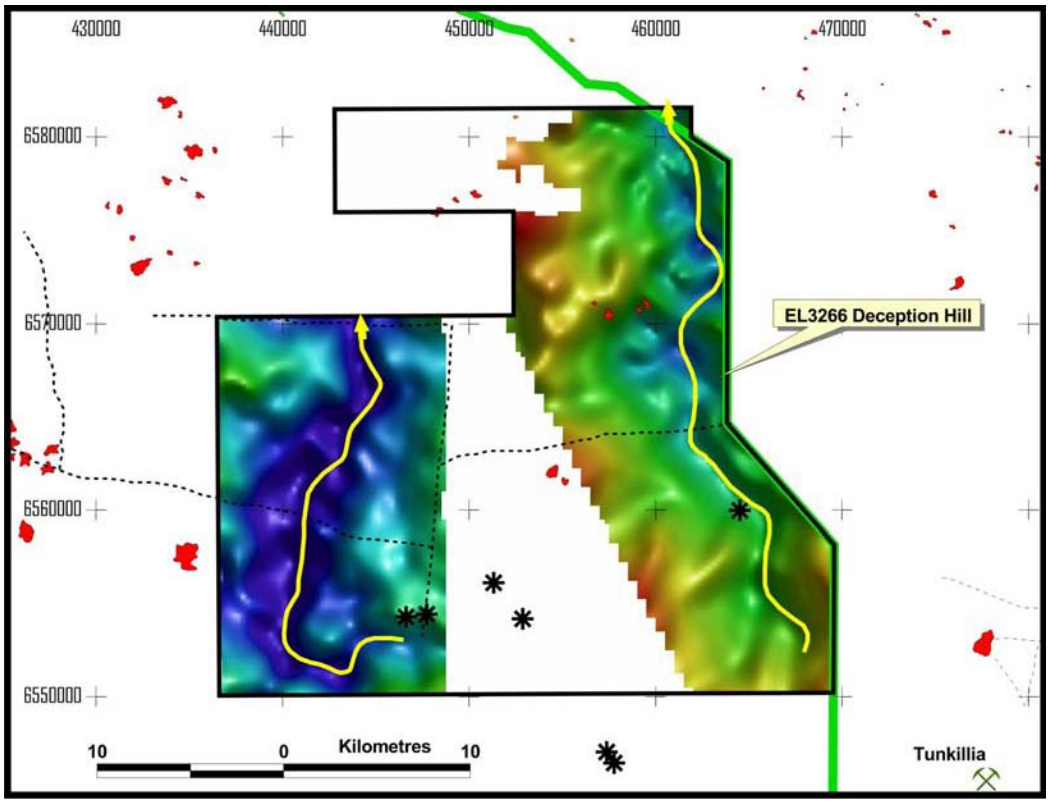

Figure 6. Depth to basement image produced from AEM data (red = shallow basement, blue = deep basement, yellow line = interpreted palaeochannel).

5.0 EXPLORATION ACTIVITY UNDERTAKEN IN THE CURRENT PERIOD

Exploration activity undertaken in the current reporting period includes the following:

Minotaur Exploration

- Negotiations to source a suitable drill rig to test geophysical targets within Yellabinna Regional Reserve,
- Negotiations with PIRSA and the Department of Environment and Heritage over Declaration of Environmental Factors (DEF) for exploration activities within Yellabinna Regional Reserve,
- 29 hole Air Core program completed,
- Drill site rehabilitation completed.

Toro Energy

- Negotiations with PIRSA and the Department of Environment and Heritage over Declaration of Environmental Factors (DEF) for exploration activities within Yellabinna Regional Reserve,
- Ongoing negotiations with Far West Coast Native Title claimants over a Part 9B Agreement.

5.1 Air core drilling IOCG targets

After a review of regional-scale and detailed geophysical data, Minotaur selected five targets on EL 3266 to test by drilling and thereby appraise the region's potential to host IOCG-style mineralisation.

As the drill targets are all located within the Yellabinna Regional Reserve (Table 1, Figure 7), a Declaration of Environmental Factors (DEF) was compiled in May 2006 and submitted to PIRSA and the Department of Environment and Heritage. The DEF was approved 23rd May, 2007 after a protracted delay and period of negotiation.

TARGET #	TARGET
DH 1A	Western 10mGal anomaly and positive normal-polarity magnetic anomaly
DH 1B	Western 10mGal anomaly and reverse-polarity magnetic anomaly
DH 2	Eastern 5mGal anomaly
DH 3	Satellite 2mGal anomaly
DH 4	Coincident gravity/magnetic anomaly

Table 2. Minotaur's 2007 target areas within Yellabinna Regional Reserve.

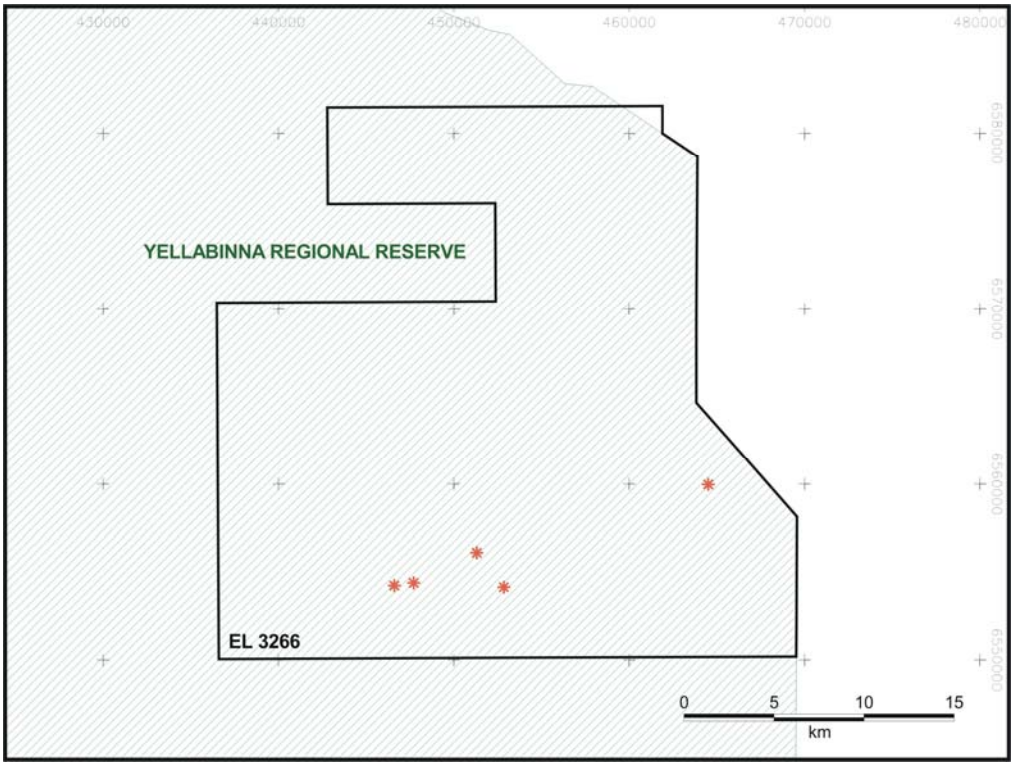

Figure 7. Location of the 2007 drilling targets relative to the Yellabinna Regional Reserve

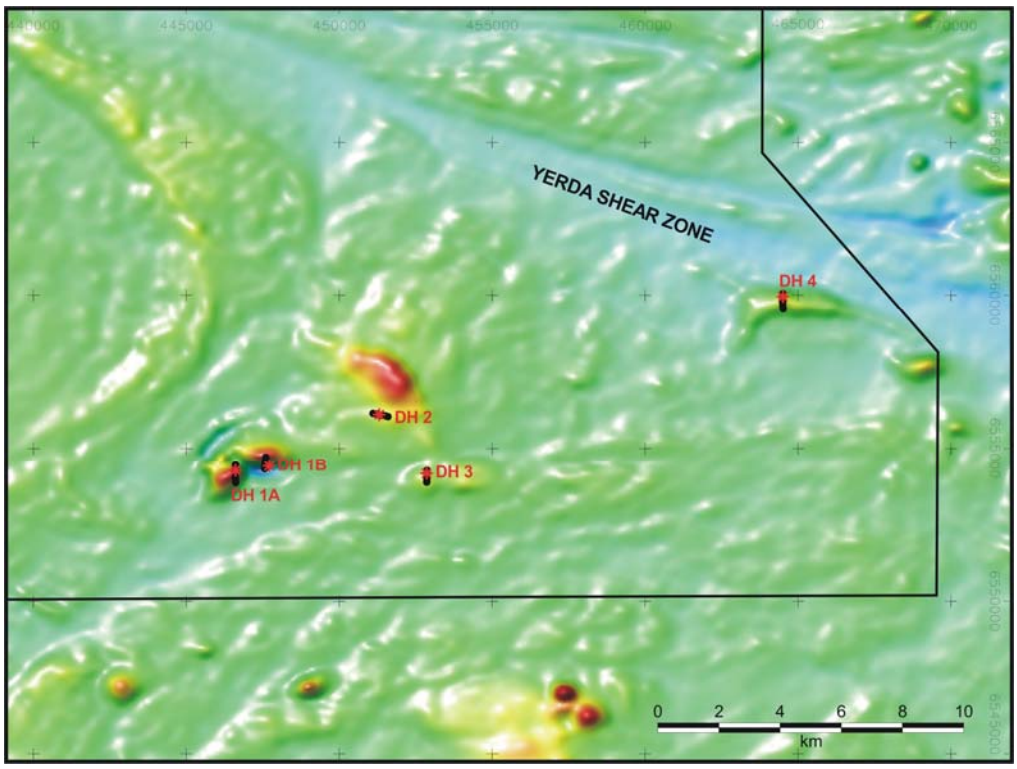

Figure 8. Targets (red) and drill collars (black) within EL 3266 plotted over a RTP TMI image.

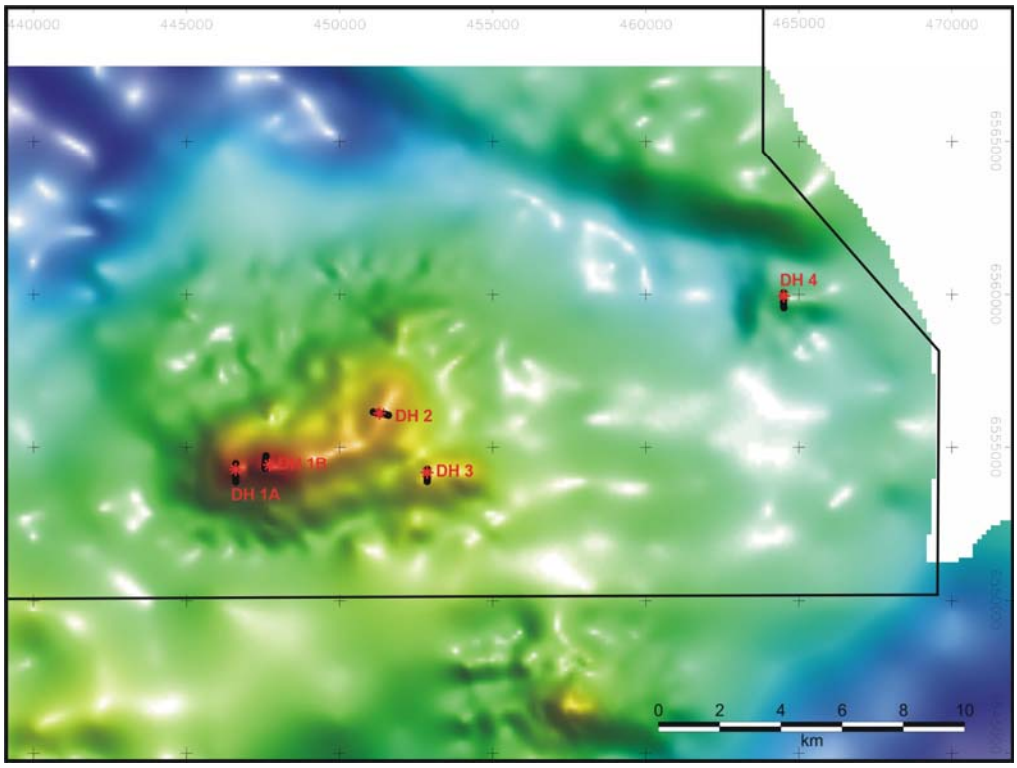

Figure 9. Targets (red) and drill collars (black) within EL 3266 plotted over a Bouguer anomaly gravity image.

Target DH 4 is a small coincident gravity/ magnetic anomaly located just south of the E–W Yerda Shear Zone and near the eastern boundaries of the tenement and Yellabinna Regional Reserve (Figures 8–9).

The other four targets (DH 1A, 1B, 2 and 3) focus on the main 10 mGal gravity anomaly and associated features and are designed to appraise the lithological nature of bedrock causing the gravity and/or magnetic anomalies (Figures 5, 8–9).

In July 2007, Bullion Drilling was contracted to drill multiple shallow air-core (AC) holes over each of the 5 targets (Appendix A). Alternatively, consideration was also given to drilling a single deep reverse circulation (RC) hole of ~75–250 m depth at each target, but an appropriate RC rig capable of negotiating the sandy terrane could not be sourced.

A total of 29 drill holes were completed for a total of 1,175 m (Figures 8–9) (Table 3). From each drillhole, 4 m composite samples were collected for geochemical analysis, representative samples were collected over 2 m intervals for submission to the PIRSA Core Library Storage Facility in Adelaide, and chip-tray samples were collected over 2 m intervals through the weathered zone and 1 m intervals in fresh rock for geological logging.

Hole depths ranged from 16–55 m corresponding approximately to depths to fresh basement. Basement lithologies encountered include gabbro (DH07A01, 2, 4–7, 18), granodiorite (DH07A03, 13–16, 23, 27–28), granite (DH07A08–12, 17, 19, 21–22) and ?felsic volcanic (DH07A24–26, ?29) (Table 4) (Appendix B).

Assay data reveal no significant anomalous results (Appendix C). Maximum Au value was only 0.02 ppm, maximum Ag value of 0.7 ppm, maximum Cu value of 296 ppm (DH07A18, 53–54m, EOH), maximum Pb value of 93 ppm and maximum Zn of 173 ppm. The maximum U value was 60 ppm (DH07A25, 24–28 m). Rare earth elements La, Y and Ce were generally low with maximum values of 280, >250 and >250 ppm respectively. Unfortunately, analytical technique used had an upper detection limit for these rare earths. Hole DH07A15 contained elevated Ce over a 8 m interval (20–28 m) whilst hole DH07A25 contained elevated Ce over a 16 m interval (20–36 m) corresponding with zones of high degrees of Tertiary weathering rather than primary basement lithologies.

Target ID	Hole ID	Total depth
DH 1A	DH07A01	31
	DH07A02	28
	DH07A03	19
	DH07A04	22
	DH07A05	16
	DH07A06	34
	DH07A07	34
DH 1B	DH07A19	38
	DH07A20	41
	DH07A21	31
	DH07A22	38
	DH07A23	30
DH 2	DH07A08	55
	DH07A09	43
	DH07A10	46
	DH07A11	40
	DH07A12	49
	DH07A13	52
DH 3	DH07A14	48
	DH07A15	58
	DH07A16	49
	DH07A17	43
	DH07A18	54
DH 4	DH07A24	34
	DH07A25	43
	DH07A26	50
	DH07A27	46
	DH07A28	48
	DH07A29	55

Table 3. List of Air Core holes drilled at each Deception Hill geophysical target.

Hole ID	Basement lithologies intersected
DH07A01	Gabbro, 2-5% magnetite
DH07A02	Gabbro, 2-5% magnetite
DH07A03	Granodiorite, minor magnetite
DH07A04	Gabbro, abundant magnetite, no quartz
DH07A05	Gabbro, 5% magnetite, occasional limonite on fractures
DH07A06	Silicified breccia, strongly magnetic gabbro
DH07A07	Gabbro, mafic minerals and red-rock altered feldspar, brecciated
DH07A08	Granite, weak limonite staining, fresh biotite towards base
DH07A09	Dolerite, granite
DH07A10	Granite, 1 metre dolerite intercept
DH07A11	Coarse grained granite, traces of biotite, moderately haematite dusted
DH07A12	Granite, 5% mafics, unaltered
DH07A13	Granodiorite, minor magnetite
DH07A14	Weakly foliated mafic rich granodiorite
DH07A15	Coarse grained granodiorite, 10 % mafics
DH07A16	Orange-brown coarse grained granite, minor biotite
DH07A17	Granite, minor biotite
DH07A18	Dolerite (dyke?), minor quartz vein
DH07A19	Medium grained granite, moderate red-rock alteration, minor biotite
DH07A21	Granite, minor biotite
DH07A22	Medium grained granite, minor biotite
DH07A23	Granodiorite-diorite, very dark, 20% mafics
DH07A24	Medium orange, fine-grained rock, possible GRV dacite?
DH07A25	Granite-rhyodacite?, orange, fine-grained, with rare quartz phenocrysts
DH07A26	Dark orange, fine-medium grained granite or rhyodacite??
DH07A27	Granodiorite, 25-30% mafics (amphibolite, biotite, 5% magnetite)
DH07A28	Brecciated granodiorite, abundant chloritic mafics, strong red-rock alteration of feldspar
DH07A29	Chloritic breccia, granodiorite? and dacite? (fine grained, dark pink, no mafics)

Table 4. Summary of basement lithologies intersected in AC holes DH07A01–29.

Rather than reflecting iron-oxide copper-gold mineralisation, the targeted geophysical anomalies on EL 3266 can be accounted for by the presence of primary mafic-bearing and mafic-rich lithologies (e.g. gabbro and granodiorite) at very shallow depths (<50 m). There appears to be little potential for IOCG-style mineralisation, however, the potential for gold-only mineralisation within shear and fault zones, as at the Tunkillia Prospect along the Yarlbrinda Shear Zone, remains untested.

5.2 Drill site rehabilitation

The Minotaur Air Core drilling program within Yellabinna Regional Reserve was undertaken in accordance with the Declaration of Environmental Factors, originally submitted 1/06/2006 and revised 30/04/2007. A comprehensive environmental report submitted to PIRSA on 13th December 2007 following the completion of rehabilitation activities (Hill and Flint, 2007) is presented here in an abbreviated form.

A total of 29 AC holes were drilled into five separate geophysical targets (Figures 8, 9). Additional access tracks were prepared and previously established tracks were upgraded to a standard to allow safe access for the drilling rig and associated support vehicles. A smaller AC drill rig was used, rather than a larger Reverse Circulation (RC) rig as previously planned. The use of the smaller rig necessitated a number of extra shallow holes to be drilled at each site rather than the one deep drill hole.

A campsite was established within the Reserve to reduce vehicle movement and to minimise the usage of existing access tracks. This was also a precautionary measure to exclude introduction of exotic biota, and reduce the potential for accidental injury or death of animals.

During drilling operations, all drill cuttings were collected in sample retention bags. At the completion of each hole, excess cuttings and spillage were shovelled down the hole. The hole was then plugged with an Octoplug and buried. For holes where casing was used it was generally retrieved afterwards. In several instances where there was a great depth of sand and several 6 m lengths of casing were needed, the bottom length of casing was not retrieved, being left at a depth of greater than 6 m below ground level. Each drill site was inspected for oil/fuel spills as soon as the rig moved off site. At each site a small amount of hammer oil was noted to have dribbled from the rod rack; as biodegradable oil is used no remedial measures were deemed necessary. A small amount of hydraulic oil was also noted at several sites (estimated to be less than 100 ml) due to a small leak in the hydraulic system remedied in part by attaching a 20 litre container to the rig to catch the majority of the leaking oil. Immediate remedial action was taken on any spills, consisting of the sprinkling of superphosphate on the area and raking it in. The addition of superphosphate (and ammonium nitrate) to oil-contaminated soils has been shown to be highly effective in stimulating the soil

biota (bacteria, fungi) to rapidly biodegrade the oil/fuel. Larger spills were collected during rehabilitation into sample retention bags and removed from the Reserve.

At the completion of the drilling operations, the camp and drilling equipment were packed up and moved out of the area. The campsite was closely inspected for any rubbish, which was collected for disposal. The fireplace was checked, fully extinguished and then buried. Several small oil spills were collected during the rehabilitation phase.

Rehabilitation of the drill sites, access tracks and campsite was carried out over two field periods. At each drill site, bags of drill cuttings were removed from the Reserve. A thorough clean-up of each drill site was undertaken, with any discolouration from any left-over drill-cuttings being first raked in and then buried, any wheel-tracks away from the established track were raked, any other rubbish collected and any other required remedial action carried out.

The access tracks were either scarified or smoothed using a heavy tow-along metal bar. Small amounts of biodegradable flagging tape that had been used to mark out the access tracks were removed from trees and any rubbish was collected from along the track. Vegetation which had been piled up during access track clearance was spread out onto the access track to encourage re-seeding and to create refuge for small animals. Entrances to Minotaur's access tracks from the established tracks were raked smooth by hand for the first 100 m and leaf litter and fallen branches distributed to disguise and block the tracks. Windrow profiles were also re-flattened by rake.

The entire camp site was scarified to de-compact the soil where heavy vehicles had traversed, and wheel tracks to and from the campsite were raked over, to flatten any ruts and remove any tyre marks.

Representative photographs were recorded of all stages of the mineral exploration program (Figures 10–13).

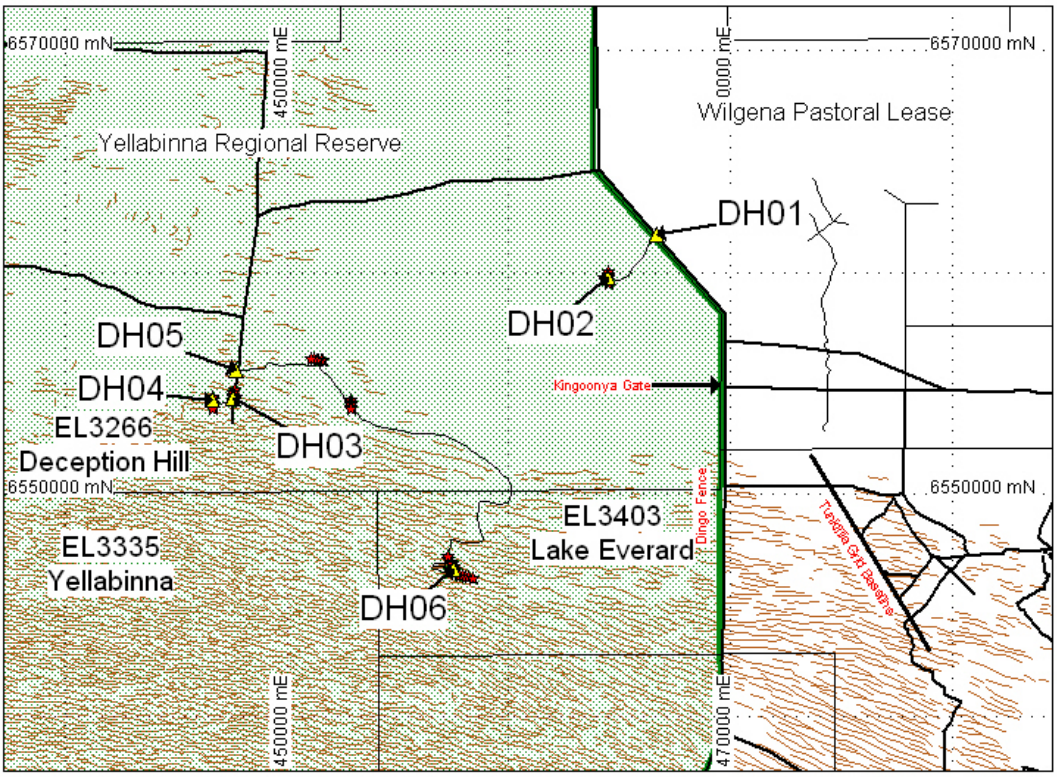

Figure 10: Major photo locations (DH01–DH06) used to record impact of exploration activities.

Figure 11. Photo point DH02, west view, prior to mineral exploration activities at target DH 4.

Figure 12. Photo point DH02, west view, after drilling activities at target DH 4.

Figure 13. Photo point DH02, west view, immediately after rehabilitation at target DH 4.

5.3 Access negotiations for sedimentary uranium exploration

Toro Energy has submitted a Declaration of Environmental Factors (DEF) to PIRSA and the Department of Environment and Heritage (DEH) as part of the future work proposal for EL 3266. A response is still pending at the close of the current reporting period.

Following approval of the DEF, Toro intends to conduct a heritage clearance survey and, pending the approval of the local claimants, complete a biogeochemical sampling program with the intention of further refining drill targets with minimal environmental impact. Access for this type of exploration will be either by quad bike or helicopter. The decision to trial biogeochemical sampling at Deception Hill is based on encouraging results obtained from trials in other areas undertaken by Adelaide University.

Depending on the results of the biogeochemical survey, drilling of refined targets may be undertaken. Approximately 95 Air Core holes are planned over four northern traverses (TGL11–14) and one southern traverse (TYE11) within EL 3266 (Figure 14) and these traverses are designed to test key locations across a palaeochannel interpreted from airborne EM data collected in 2006 (Section 4, Figure 6).

5.4 Native Title negotiations

The Far West Coast Native Title claimants and Toro Energy are currently negotiating a Part 9B Agreement.

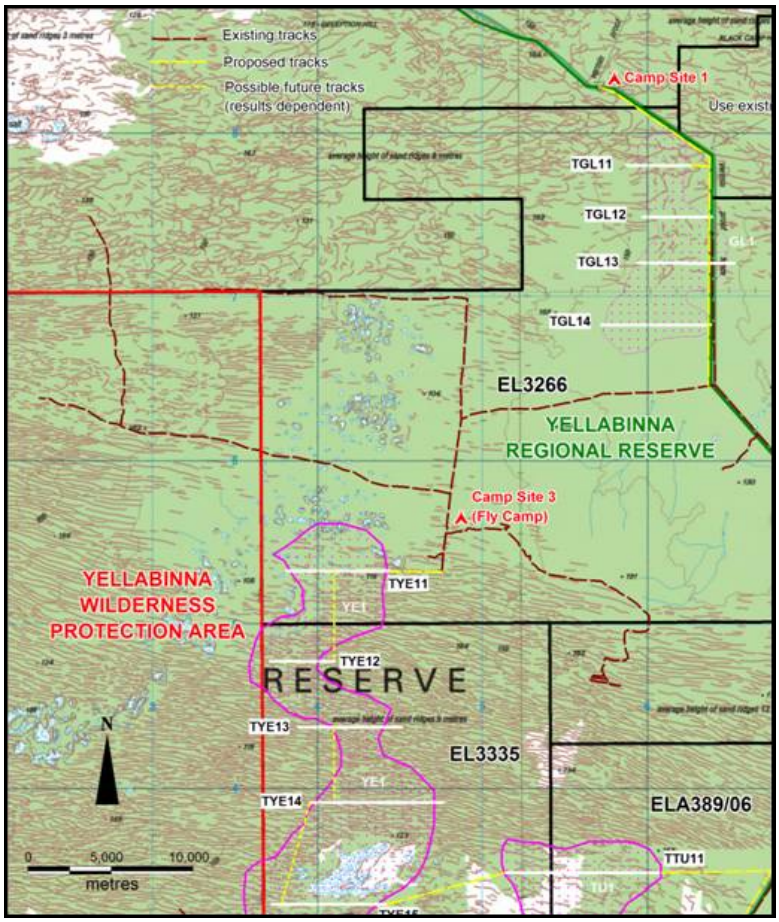

Figure 14. Drill traverses TGL11–14 and TYE11 planned for EL 3266 dependant on approval of lodged DEF, heritage clearance results and biogeochemical survey.

6.0 EXPENDITURE

Expenditure by Minotaur Exploration and Toro Energy for the 12 month period ending 25th October 2007 totalled $149,908.08 (Table 5).

Exploration cost	***Year total A$***
Applications/ rentals	8,269.36
Assays	13,699.39
Camp hire/maintenance	4,315.38
Communications	893.68
Computer expenses	948.00
Drilling	44,247.06
Equipment hire	476.00
Fees	11.70
Field expenses	2,645.23
Freight/ transport	32.73
Maps/ data/ drafting	97.50
Native Title costs	8,631.43
Salaries	42,892.00
Vehicle expenses	9,120.61
Administrative costs (10%)	13,628.01
TOTAL	**149,908.08**

Table 5. Summary of total exploration expenditure for EL 3266 (Deception Hill) for the year ending 25th October 2007.

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8.0 APPENDICES

APPENDIX A:

Drillhole collars for drill holes DH07A01-29 (digital file only)

APPENDIX B:

Lithology data for drill holes DH07A01-29 (digital file only)

APPENDIX C:

Assay data for drill holes DH07A01-29 (digital file only)

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MINOTAUR

12 December 2008

Executive Director
PIRSA - Mineral Resources
GPO Box 1671
ADELAIDE, SA 5001

Dear George,

RE: Annual Technical Report for EL 3266 – Deception Hill

I refer to the Annual Technical Report for Exploration Licence 3266 – Deception Hill for the year ending the 25th October 2008.

No new technical work or field exploration activities were conducted by Minotaur Operations Pty Ltd on this tenement for the reporting period; hence this letter represents the Annual Technical Report for EL 3266 – Deception Hill.

Should you require any further information please contact me on 8366 6000.

Yours sincerely

Phil Cronin
Tenement Administrator
Minotaur Operations Pty Ltd

Minotaur A.C.N. 108 483 601

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ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th October 2009

J.M. Godsmark & A.E. Lockheed

January 2010

Minotaur A.C.N. 108 483 601

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ANNUAL TECHNICAL REPORT

EL 3266 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 25th October 2009

J.M. Godsmark & A.E. Lockheed

SUMMARY

- Plans are progressing for a thirteen line-kilometre biochemical sampling survey within Yellabinna Regional Reserve, involving sampling leaves from various native plants. Preparation of the required Declaration of Environmental Factors (DEF) report for PIRSA is underway.

1:250 000 map reference	SH 53-10 TARCOOLA, SH 53-14 CHILDARA	
1:100 000 map reference	5735 Tolmer	5736 Malbooma
	5835 Meelera	5836 Tarcoola

DISTRIBUTION: PIRSA
Minotaur Exploration Ltd

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

EL 3266 (Deception Hill) is located ~20 km S of Tarcoola on the E–W transcontinental railway line and encompasses an area of 795 km^2 that is predominantly within Yellabinna Regional Reserve thus requiring special environmental considerations and approvals for ongoing exploration activity (Figure 1).

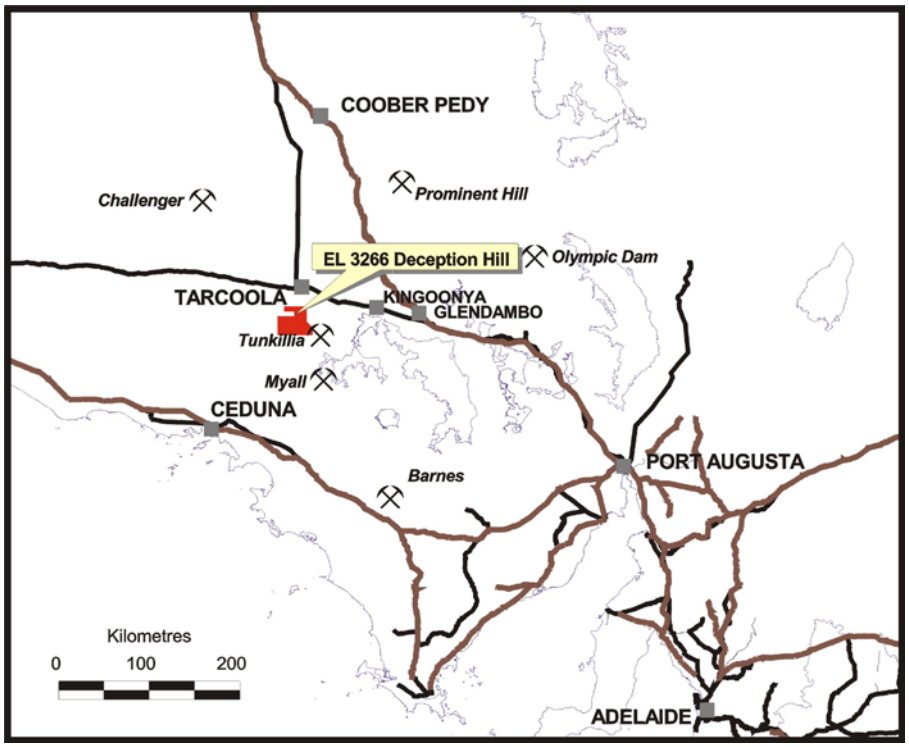

Figure 1. Location plan for EL 3266, South Australia.

The tenement was initially granted to Minex (SA) Pty Ltd on 26th October 2004 before being transferred to Minotaur Operations Pty Ltd (Minotaur) on 14th December 2004 to continue exploration for Fe-oxide Cu-Au style mineralisation.

Toro Energy was exploring EL 3266 for sedimentary (palaeochannel) uranium mineralisation. under a bipartite agreement made with Minotaur on 31 January 2006. Toro withdrew from the agreement 3rd October 2008 at which time the uranium rights on EL 3266 reverted to Minotaur as the tenement holder.

This report is the final annual technical report for EL 3266 and summarises exploration activities undertaken by Minotaur Exploration on the tenement during the 12 month period ending 25th October 2009. Technical results for three previous years of tenure have been

reported by Flint and Thompson (2006), Flint (2007) and Flint et al (2008). No exploration activity was undertaken in the 2007-2008 reporting period.

2.0 TENURE

EL 3266 (Deception Hill) expired 25th October 2009 and Subsequent Exploration Licence Application 2009/00313 is currently under consideration by PIRSA – Mineral Tenements (Table 1).

File Reference	Locality	Application Date	Area km^2
ELA 2009/00313	Deception Hill	25/09/09	795

Table 1. Deception Hill tenement details.

3.0 REGIONAL GEOLOGY

A great variety of Archaean, Palaeoproterozoic and Mesoproterozoic units are present in the Tarcoola and Kingoonya areas of the central Gawler Craton. Archaean units of the Mulgathing Complex are predominantly leucocratic quartz+feldspar and quartz+feldspar +garnet+biotite gneisses (e.g. Kennella Gneiss) and granite (Glenloth Granite) though basaltic and ultramafic flows (Hopeful Hill Basalt and Lake Harris Komatiite) are also present within the ENE-trending Lake Harris Greenstone Belt east of Tarcoola (Daly and Fanning, 1993; Daly et al., 1998).

During the Palaeoproterozoic, various volcanosedimentary sequences, including the Wilgena Hill Jaspilite, Eba Formation, Labyrinth Formation and Tarcoola Formation were deposited within localized basins that were variously deformed during late stages of the Kimban and Kararan Orogenies. Associated plutonism includes the Muckanippie Anorthosite and granitoids of the Tunkillia Suite and St Peter Suite. During these deformational episodes, major shear zones developed, including the E-trending Yerda and Oolabinnia Shear Zones and N-trending Yarlbrinda Shear Zone that are up to several kilometres wide with ductile shearing and deformation occurring before ~1600 Ma (Daly et al., 1998; McLean and Betts, 2003) (Figure 2).

During the Mesoproterozoic, widespread anorogenic magmatism across the central portion of the craton resulted in voluminous outpourings of the Gawler Range Volcanics, intrusion of

Hiltaba Suite granite, emplacement of minor gabbroic plugs and development of Cu-Au +/- U mineralisation at Olympic Dam and Prominent Hill and Au-only mineralization at Tunkillia and Tarcoola (Blissett et al, 1993; Flint, 1993). Displacements along NE-trending faults (e.g. Bulgunnia and Koonibba Faults) were predominantly vertical and of brittle character (Figure 3).

Basement rock exposures in the region are very scarce (<1%) and restricted to Mesoproterozoic Hiltaba Suite granite (Figure 4), otherwise the terrain is characterised by extensive veneers of aeolian sand dunes and spreads with dunes having an average height of 10 m (Blissett, 1980; Daly, 1985).

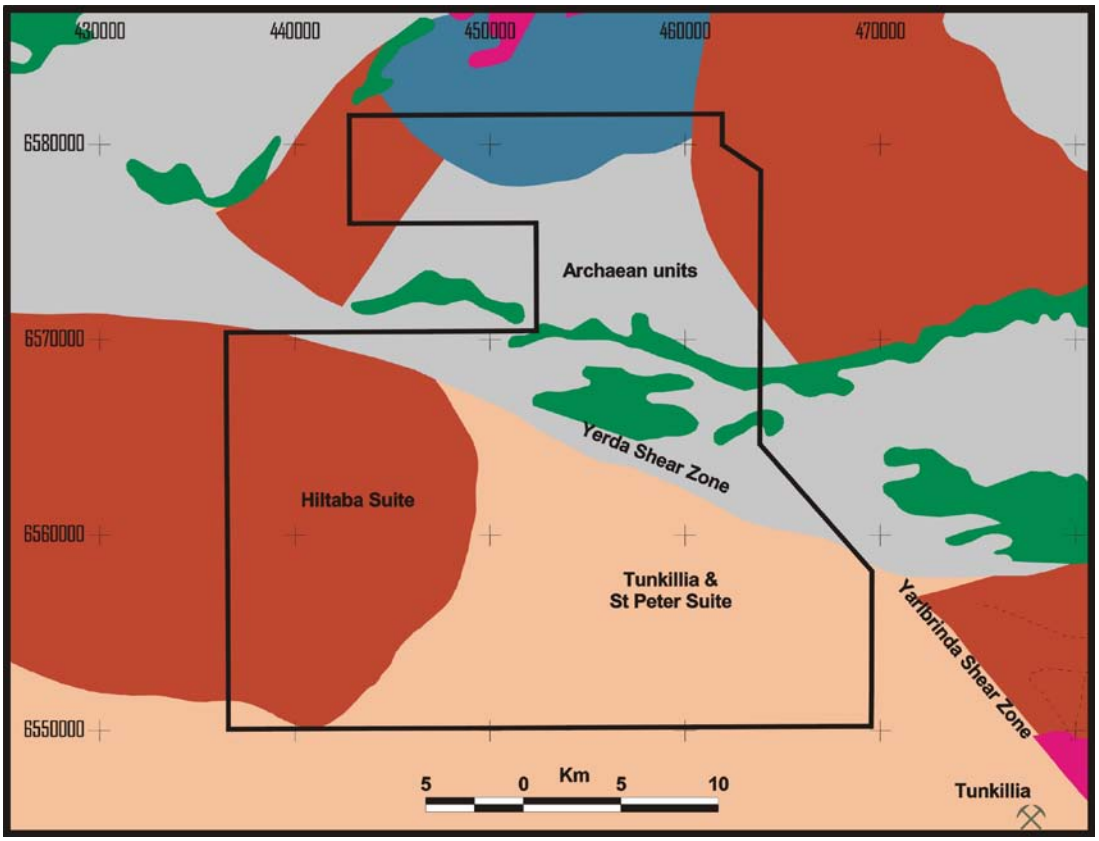

Figure 2. Tectonic interpretation for EL 3266 (Fairclough et al., 2003).

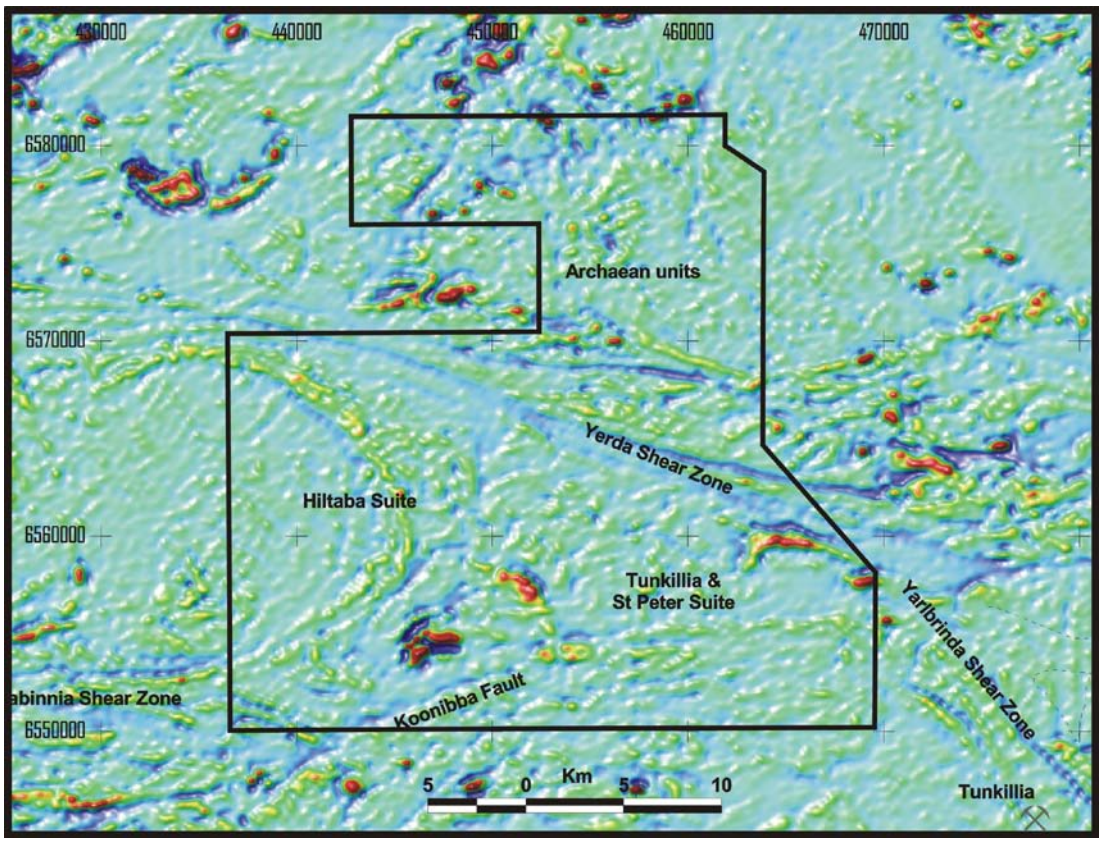

Figure 3. Total Magnetic Intensity image 1VD-TMI-RTP for EL 3266 (PIRSA data).

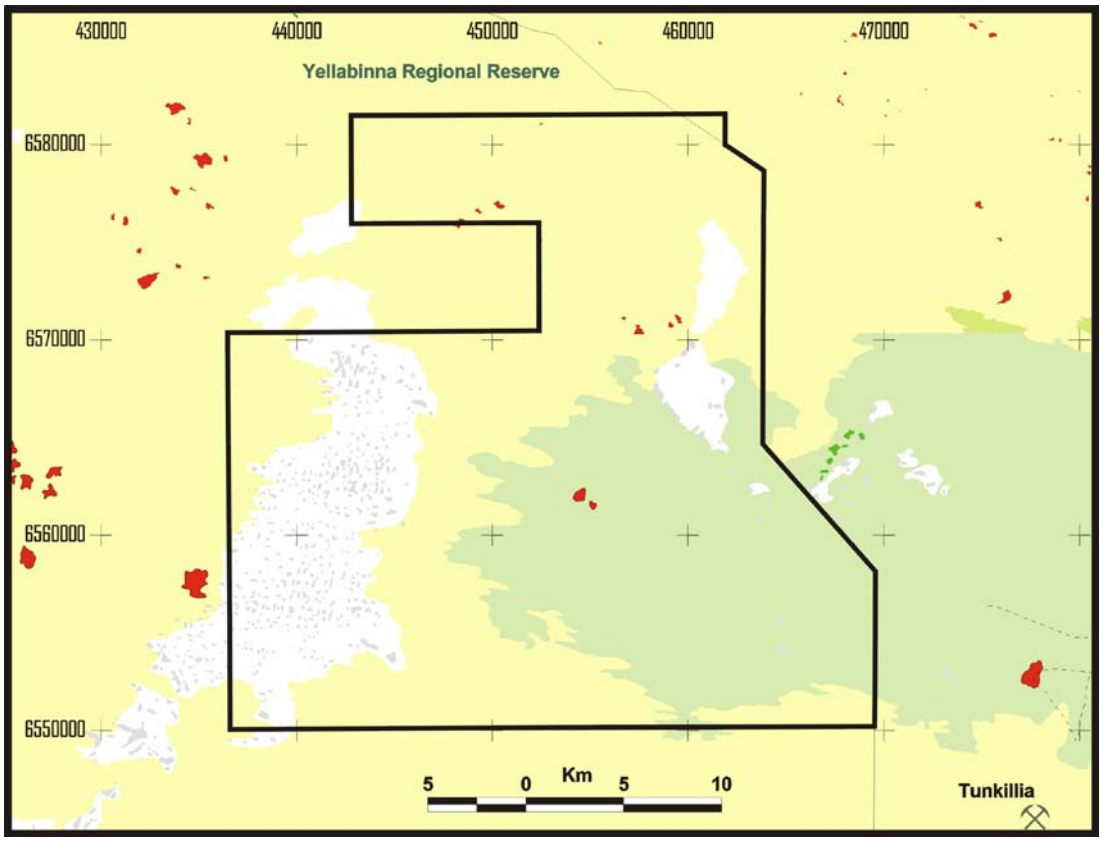

Figure 4. Outcrop geology for EL 3266 (Deception Hill) from Blissett (1980) and Daly (1985).

4.0 REGIONAL MINERALISATION

No gold mineralisation is known within EL 3266, but it is present regionally at various localities.

The historic Tarcoola Goldfield (~20 km N of EL 3266) during the period 1901–1986 yielded 2.387 t of Au at an average grade of 37.5 g/t. Production was from quartz reefs within predominantly Palaeoproterozoic Tarcoola Formation siltstone and quartzite and to a much lesser extent within nearby Hiltaba Suite granite (Daly et al., 1990; Daly in Flint, 1993).

The Glenloth Goldfield (~45 km E of EL 3266) was worked during 1893–1901 and again during the 1930's for a total recorded production of 315.4 kg from 14,620 t of ore yielding an average grade of 21.6 g/t Au (Daly in Flint, 1993). Auriferous quartz veins and sets up to 1 m wide occur within sheared Archaean Glenloth Granite and Kenella Gneiss (Mulgathing Complex) though are believed to have been derived from a shallow, but concealed, Hiltaba Suite granite batholith (Blissett, 1985).

Quartz-vein hosted gold mineralisation is known from several prospects along the Yarlbrinda Shear Zone (Tunkillia, Myall and Sheoak) west of the Gawler Ranges. At all these localities, gold is believed to be associated with hydrothermal fluids emanating from a Hiltaba Suite pluton or batholith.

Minotaur Exploration reported the 2009 gold inventory of Area 223 of the Tunkillia deposit (~15 km E of EL 3266) as 803,000 ounces comprising an oxide resource of 6.3 Mt @ 1.1 g/t Au equating to ~224,000 ounces (0.5 g/t cutoff), a primary gold resource of 9.3 Mt @ 1.9 g/t Au equating to 579,000 ounces (1.0 g/t cutoff) and a primary silver resource of 9.3 Mt @ 5.5 g/t Ag equating to 1,658,000 ounces (ASX release 8th August 2009).

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5.0 PREVIOUS EXPLORATION WITHIN EL 3266

Prior to EL 3266 being granted to Minotaur, six exploration companies explored the Deception Hill area (Table 2). Exploration activities conducted by these companies have been summarised in Flint and Thompson (2006).

EL		Granted	Expiry	References	
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1171	Amoco Minerals Australia Co	2/09/83	1/09/84	ENV5323	
1390	CSR Ltd	13/03/87	12/03/89	ENV6859	
1414	Tarcoola Gold Ltd	17/07/87	16/07/88	ENV6921	
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Table 2. Summary of previous mineral exploration activity on EL 3266

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The Deception Hill tenement area is characterised by several regionally significant gravity features including a prominent WNW-trending linear gravity low, a pronounced low in the southwest and pronounced high-amplitude anomaly in the south. These features were further analysed by Flint (2007).

The pronounced gravity high (up to 10 mGals) southeast of this granitic pluton and between the Oolabinna Shear Zone, Yerda Shear Zone and Koonibba Fault was interpreted to represent possible haematite and/or magnetite-hosted IOCG-style mineralisation (Flint, 2007). At the eastern margin of the main gravity feature is a second, lower-order anomaly not directly coincident with any pronounced magnetic feature. The third gravity feature is a satellite anomaly, which has a coincident magnetic anomaly, located to the southeast of the main gravity anomaly.

Previous mineral exploration drilling near the main gravity anomaly (Afmenso Pty Ltd 1981 holes CHL 21–24) did not adequately evaluate either the gravity or magnetic anomalies (Flint, 2007) (Figure 5).

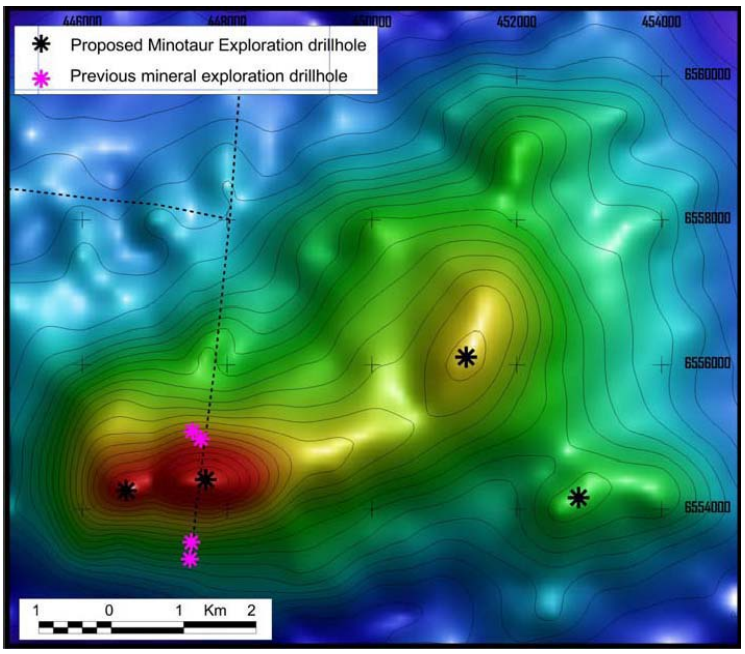

Figure 5. Residual gravity contours and image for the main anomaly on southern EL 3266.

Five geophysical targets located within Yellabinna Regional Reserve were the subject of a Declaration of Environmental Factors compiled in May 2006 by Minotaur and submitted to PIRSA and the Department of Environment and Heritage for approval.

Twenty-nine aircore holes were drilled in July 2007 into the main 10 mGal gravity anomaly and associated features (Figure 5) plus a small coincident gravity/ magnetic anomaly located just south of the E–W Yerda Shear Zone. No significantly anomalous results were returned (Flint et al, 2008). Rather than reflecting iron-oxide copper-gold mineralisation, the targeted geophysical anomalies on EL 3266 can be accounted for by the presence of primary mafic-bearing and mafic-rich lithologies at depths less than 50 m (Flint et al, 2008). Rehabilitation of the 29 drill sites, access tracks and campsite has been completed.

During July–August 2006, Fugro Airborne Surveys carried out a regional airborne EM survey for Toro Energy over various areas in the Tarcoola–Kingoonya–Yellabinna region. Eastern and western portions of EL 3266 (Survey Areas 3 and 4, respectively) were flown using a flight-line spacing of 1 km for a total of 733 line km within the tenement. Two N-trending palaeochannels are clearly identified in the data but further work is necessary to refine the targets.

6.0 EXPLORATION ACTIVITY UNDERTAKEN IN THE CURRENT PERIOD

Exploration activity for EL 3266 (Deception Hill) in the reporting period ending 25th October 2009 included planning for a biochemical sampling survey within the Yellabinna Regional Reserve and preparation of the required Declaration of Environmental Factors (DEF) report.

Following a review of regional geophysical data and calcrete data, Minotaur staff designed a thirteen line-kilometre biogeochemical plant survey. Locations of the proposed survey lines are shown in Figure 6.

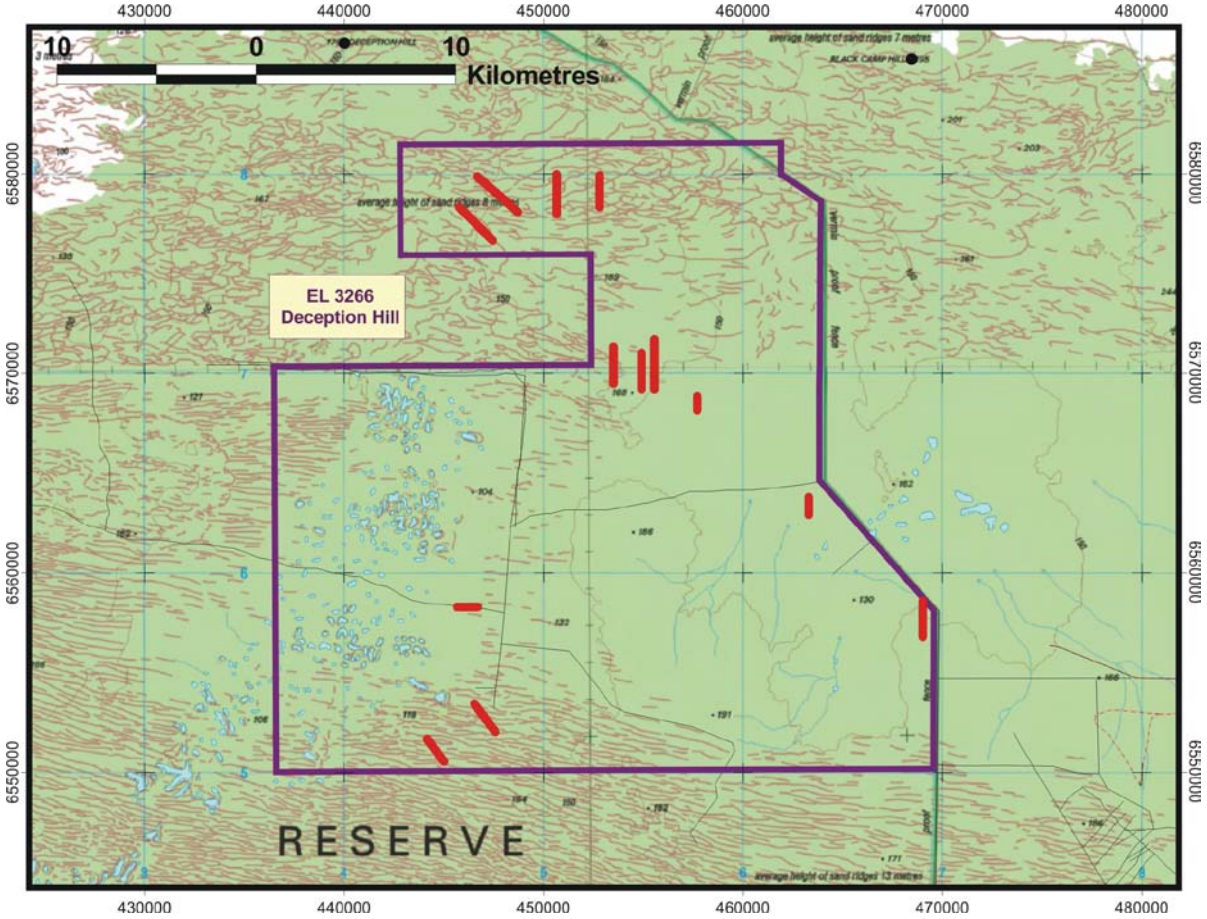

Figure 6. Regional topography within EL 3266 and the Yellabinna Regional Reserve showing dune arrays, salt lake systems, watercourses, existing tracks and proposed biogeochemical sampling survey lines (red).

Sampling involves the collection of leaves from selected plants species at 50 m spacings along the survey lines. In trial biogeochemical sampling surveys in the region, Black Oak *Casuarina pauper* and Pearl Bluebush *Maireana sedifolia* have been found to reflect the presence of known Au mineralisation at depth (e.g. Lowrey, 2007). These species will be targeted during the Deception Hill survey; however, as the proposed survey lines have not yet been visited by Minotaur representatives, the actual vegetation on the lines is unknown at this stage.

At each pre-determined sample location or as close to as possible (located by GPS), an appropriate plant sample will be chosen and leaves picked to fill a small paper lunch bag.

The proposed biogeochemical program will commence in early 2010, depending on DEF approval and approval by PIRSA of the Subsequent EL application (ELA 2009/00313). The program is expected to take approximately one week to complete. Depending upon results, a follow-up program of approximately one week in duration may be required for further sampling.

7.0 EXPENDITURE

Total expenditure for activities on EL 3266 (Deception Hill) for the year ending 25th October 2009 was $33,179.00 (Table 3).

Cartography / Maps / Data	$	565.13
Communications	$	867.82
Computer Expenses	$	1,566.00
Field Expenses	$	1,537.27
Freight / Transport	$	34.19
Land Access	$	2,075.25
Major Equipment	$	240.00
Motor Vehicle - Expenses	$	2,461.38
Salaries	$	13,897.00
Tenement Licensing	$	6,663.00
Travel	$	255.69
Admin 10%	$	3,016.27
TOTAL	**$**	**33,179.00**

Table 3. Summary of exploration expenditure for EL 3266 (Deception Hill) for the year ending 25th October 2009.

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ANNUAL TECHNICAL REPORT

EL 4439 DECEPTION HILL
SOUTH AUSTRALIA

FOR YEAR ENDING 8th March 2011

B. J. van der Stelt

August 2011

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SUMMARY

- A DEF was submitted for a biogeochemical sampling program within the Yellabinna Regional Reserve, which was returned with suggestions for revision.
- Further work on biogeochemical sampling on adjacent exploration licences has indicated the need for a revised sampling program within EL4439
- A new sampling program has been prepared and incorporated in to a new DEF which is nearing completion for submission

1:250 000 map reference	SH 53-10 TARCOOLA, SH 53-14 CHILDARA	
1:100 000 map reference	5735 Tolmer	5736 Malbooma
	5835 Meelera	5836 Tarcoola

DISTRIBUTION: PIRSA
Minotaur Exploration Ltd

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

Exploration Licence 4439 (Deception Hill) is located ~20 km S of Tarcoola on the E–W transcontinental railway line (Figure 1) and encompasses an area of 795 km^2. The EL is predominantly within the Yellabinna Regional Reserve thus requiring special environmental considerations and approvals for ongoing exploration activity. The tenement is considered prospective for structural gold and palaeochannel uranium style deposits, and has also been explored for iron-oxide-copper-gold mineralisation.

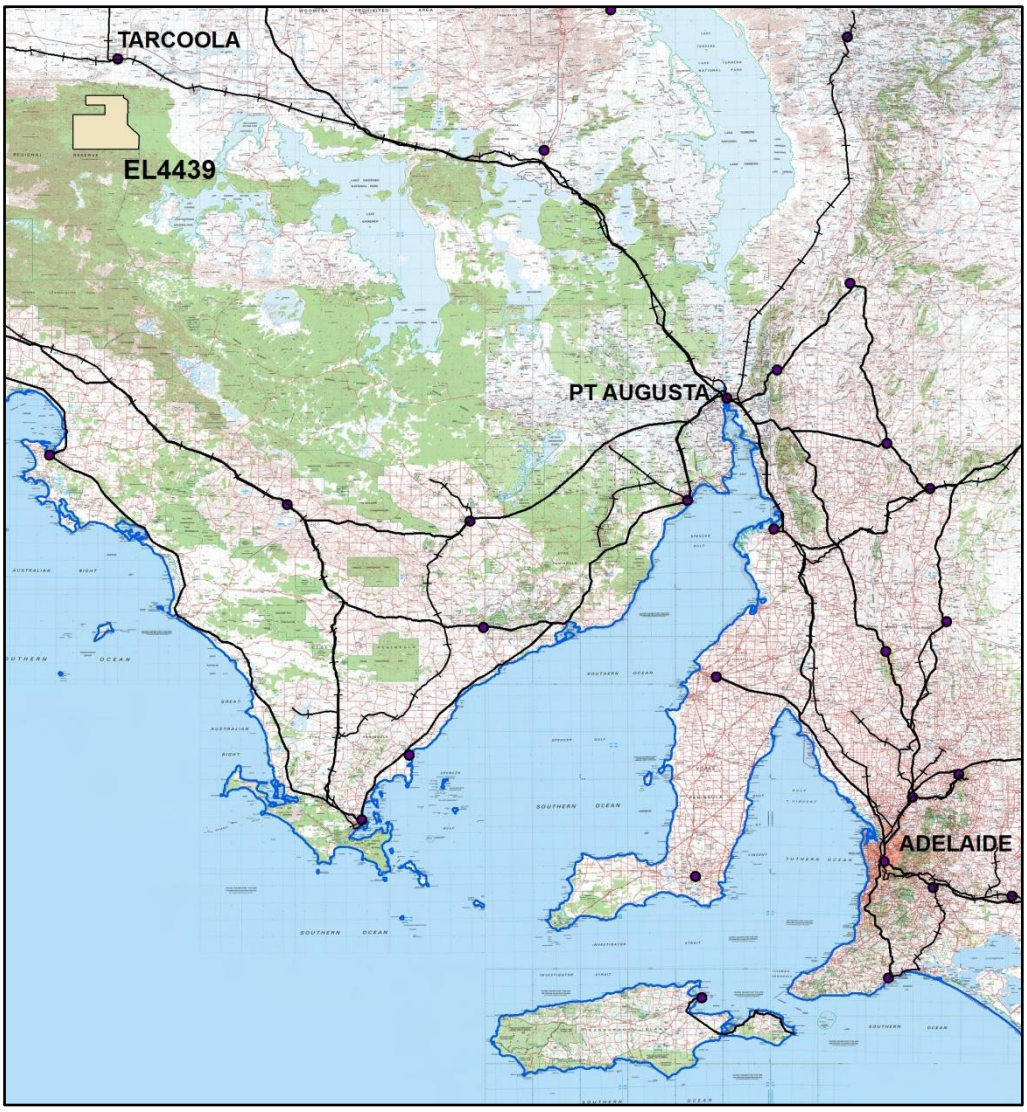

Figure 1. Location plan for EL 4439, South Australia.

2.0 TENURE

The tenement was initially granted as EL3266 to Minex (SA) Pty Ltd on 26th October 2004. The tenement was transferred to Minotaur Operations Pty Ltd (Minotaur) on 14th December 2004. On 25 October 2009 the tenement reached its maximum tenure of 5 years and a subsequent ELA was lodged. Subsequent Exploration Licence 4439 was granted on 9 March 2010 for a period of one year.

File Reference	Locality	Grant Date	Area km^2
EL 4439	Deception Hill	9/3/10	795

Table 1. Deception Hill tenement details.

3.0 REGIONAL GEOLOGY

A great variety of Archaean, Palaeoproterozoic and Mesoproterozoic units are present in the Tarcoola and Kingoonya areas of the central Gawler Craton. Archaean units of the Mulgathing Complex are predominantly leucocratic quartz+feldspar and quartz+feldspar +garnet+biotite gneisses (e.g. Kennella Gneiss) and granite (Glenloth Granite) though basaltic and ultramafic flows (Hopeful Hill Basalt and Lake Harris Komatiite) are also present within the ENE-trending Lake Harris Greenstone Belt east of Tarcoola (Daly and Fanning, 1993; Daly et al., 1998).

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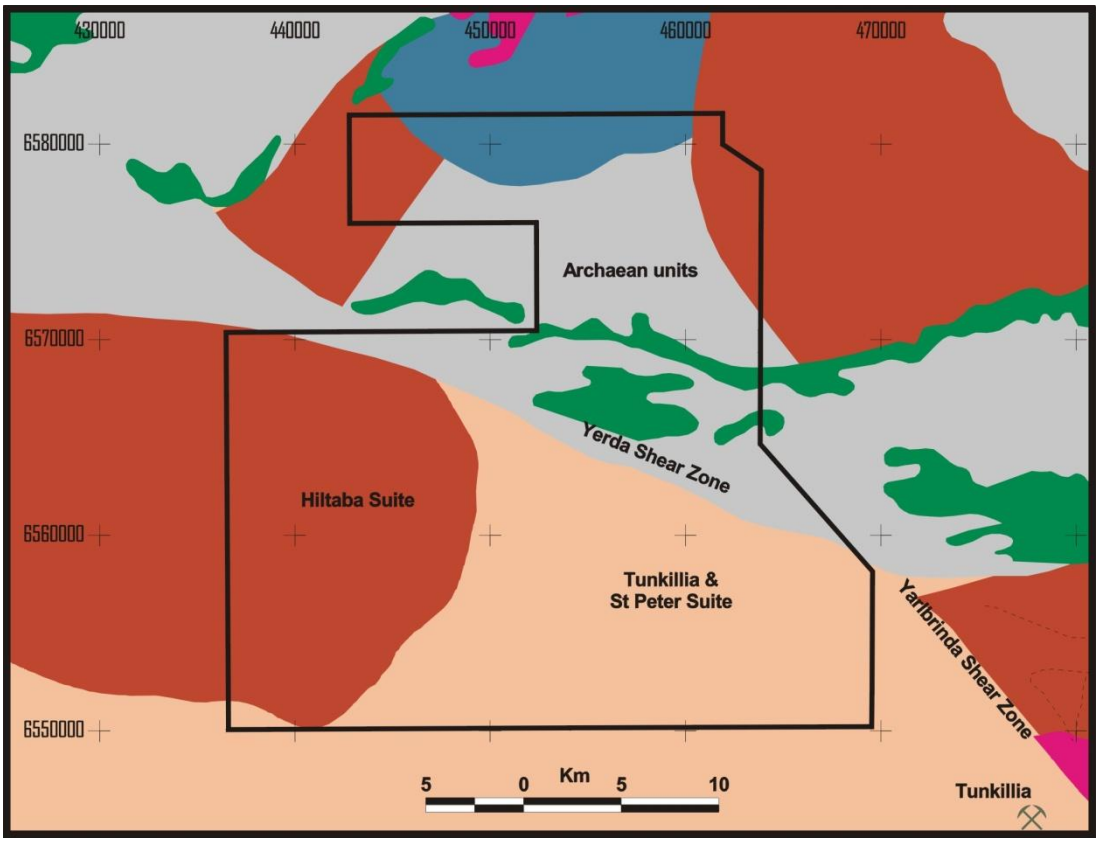

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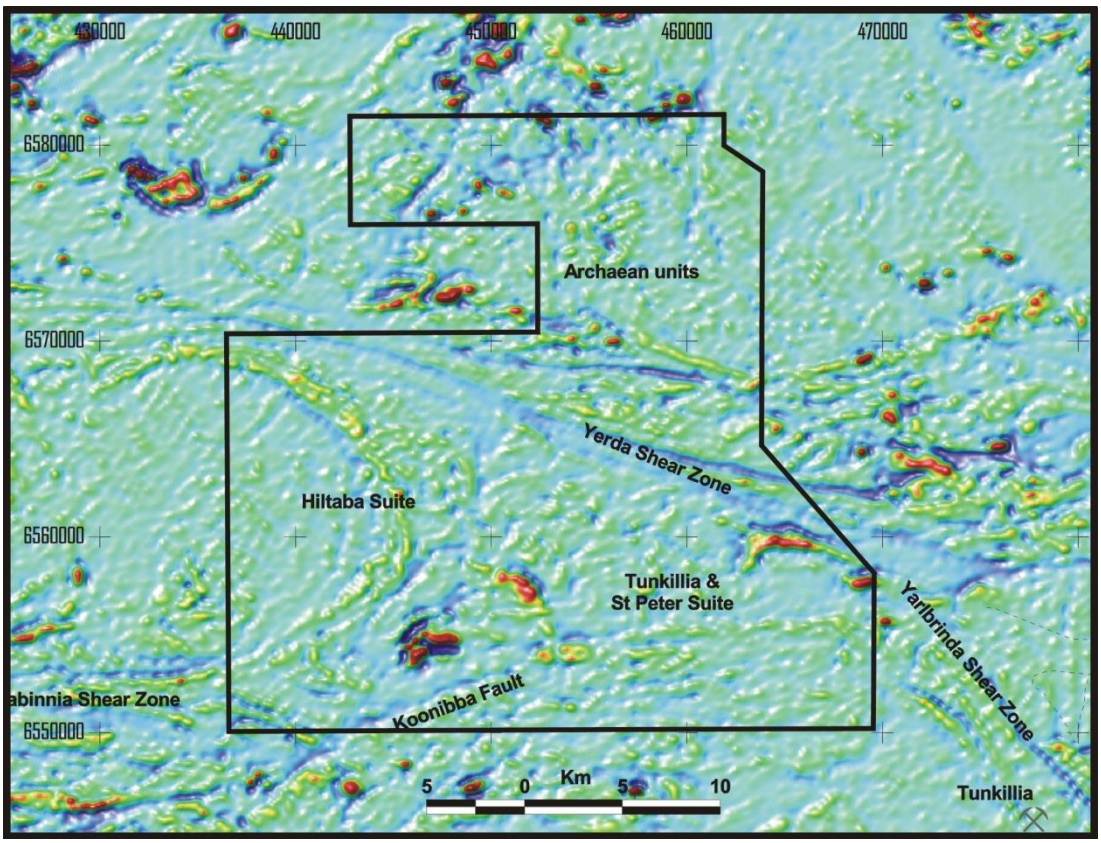

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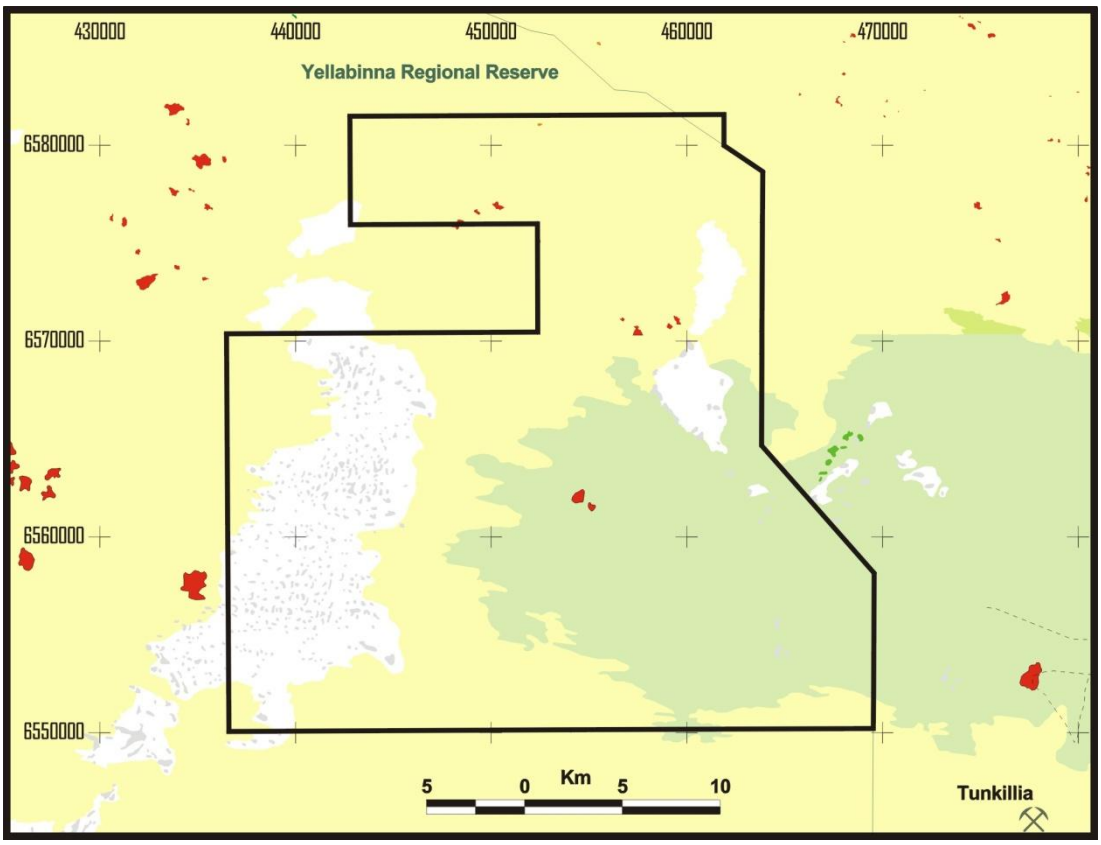

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Aurelius Resources during 1993–98 undertook an extensive calcrete survey collecting 1,384 samples and assays revealed two broad zones of gold anomalism with a peak value of 52 ppb. These results were followed up when Minotaur carried out a calcrete survey over portion of eastern EL 3266; re-sampling confirmed distinctly elevated gold within calcrete ~4 km N of the Yerda Shear Zone of slightly lower tenor than previously reported. The area of interest was enlarged with dimensions of ~750 x 750 m where gold content in calcrete exceeds 10 ppb.

The Deception Hill tenement area is characterised by several regionally significant gravity features including a prominent WNW-trending linear gravity low, a pronounced low in the southwest and pronounced high-amplitude anomaly in the south. These features were further analysed by Flint (2007).

The pronounced gravity high (up to 10 mGals) southeast of this granitic pluton and between the Oolabinna Shear Zone, Yerda Shear Zone and Koonibba Fault was interpreted to represent possible haematite and/or magnetite-hosted IOCG-style mineralisation (Flint, 2007). At the eastern margin of the main gravity feature is a second, lower-order anomaly not directly coincident with any pronounced magnetic feature. The third gravity feature is a satellite anomaly, which has a coincident magnetic anomaly, located to the southeast of the main gravity anomaly.

Previous mineral exploration drilling near the main gravity anomaly (Afmenso Pty Ltd 1981 holes CHL 21–24) did not adequately evaluate either the gravity or magnetic anomalies (Flint, 2007) (Figure 5).

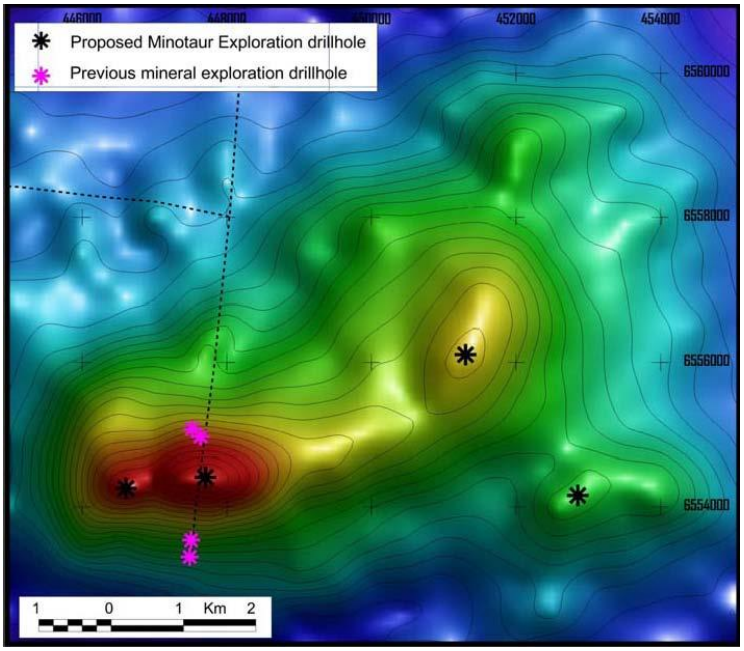

Figure 5. Residual gravity contours and image for the main anomaly on southern EL 4439.

Five geophysical targets located within Yellabinna Regional Reserve were the subject of a Declaration of Environmental Factors compiled in May 2006 by Minotaur and submitted to PIRSA and the Department of Environment and Heritage for approval.

Twenty-nine aircore holes were drilled in July 2007 into the main 10 mGal gravity anomaly and associated features (Figure 5) plus a small coincident gravity/ magnetic anomaly located just south of the E–W Yerda Shear Zone. No significantly anomalous results were returned (Flint et al, 2008). Rather than reflecting iron-oxide copper-gold mineralisation, the targeted geophysical anomalies on Deception Hill can be accounted for by the presence of primary mafic-bearing and mafic-rich lithologies at depths less than 50 m (Flint et al, 2008). Rehabilitation of the 29 drill sites, access tracks and campsite has been completed.

During July–August 2006, Fugro Airborne Surveys carried out a regional airborne EM survey for Toro Energy over various areas in the Tarcoola–Kingoonya–Yellabinna region. Eastern and western portions of EL 3266 (Survey Areas 3 and 4, respectively) were flown using a flight-line spacing of 1 km for a total of 733 line km within the tenement. Two N-trending palaeochannels are clearly identified in the data but further work is necessary to refine the targets.

6.0 EXPLORATION ACTIVITY UNDERTAKEN IN THE CURRENT PERIOD

Exploration activity for EL 4439 (Deception Hill) in the reporting period ending 8th March 2010 focussed on the planning of a low-impact exploration program utilising biogeochemical sampling to test for the subsurface presence of minerals. A DEF based on this program was prepared and submitted to PIRSA while the tenement was still under application (Subsequent ELA 2009/00313). PIRSA responded with an significant list of recommendations and changes and these were incorporated in to a new DEF during early 2010.

Exploration occurring during 2010 on adjacent EL3403, with similar landforms and vegetation types, continued to refine and develop our understanding of the vegetation sampling technique. A detailed analysis of vegetation sampling undertaken on this tenement during late 2010 has indicated that the program initially planned for EL 4439 would be deficient. Consequently during early 2011 a new biogeochemical sampling program for Deception Hill has been developed and a new DEF has been prepared. The DEF is undergoing internal checking within Minotaur to make sure it is consistent with our new Environmental and Occupational Health and Safety guidelines in preparation for submission.

7.0 EXPENDITURE

Total expenditure for activities on EL 4439 (Deception Hill) for the year ending 8th March 2010 was $53,521.35 (Table 3).

Communications	$ 852.28
Computing	$ 3,122.63
Data, Maps, Cartography	$ 746.65
Field Expenses	$ 1,870.80
Major Equipment Hire	$ 1,440.00
Motor Vehicle Expenses	$ 5,199.02
Plant / Equipment Hire	$ 27.68
Regional Office / Camp	$ 500.00
Salaries	$ 27,155.00
Tenement Licensing	$ 6,841.50
Travel	$ 900.21
Admin 10%	$ 4,865.58
TOTAL	**$ 53,521.35**

Table 3. Summary of exploration expenditure for EL 4439 (Deception Hill) for the year ending 8th March 2010.

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TUNKILLIA GOLD PTY LTD

16 August 2012

EL Reporting Officer
Mineral Resources Division
DMITRE
GPO Box 1234
ADELAIDE SA

Attention: Nella Petruzzella
Sent by email DMITRE.Exploration@sa.gov.au

Dear Nella,

RE: Annual Technical Report for EL4439

I refer to the Annual Technical Report for Exploration Licence 4439 (Deception Hill) for the year ending 8th March 2012.

No field exploration activities were conducted by Tunkillia Gold Pty Ltd (Tunkillia) on this tenement during the reporting period; hence this letter represents the Annual Technical Report for EL4439.

Activities undertaken by Tunkillia included;

- Internal data review following project acquisition
- Collation of data into a DataShed JORC compliant database (ongoing)
- Processing of regional gravity and magnetic data sets

Yours faithfully

Adrian McArthur
Exploration Manager
Tunkillia Gold Pty Ltd

28 October 2013

EL Reporting Officer
Mineral Resources Division
DMITRE
GPO Box 1234
ADELAIDE SA

Attention: Nella Petruzzella
Sent by email DMITRE.Exploration@sa.gov.au

Dear Nella,

RE: Final Technical Report for EL4439

I refer to the Final Technical Report for Exploration Licence 4439 (Deception Hill). The tenement (originally EL3266) was granted on the 26th October 2004 to Minex (SA) Pty Ltd for a period of five years. The tenement was transferred to Minotaur Operations Pty Ltd on 14th December 2004. The entire tenement was reapplied for and granted as EL4439 for a period of one year and subsequently renewed for two years.

The tenement transferred to Tunkillia Gold Pty Ltd on the 17th January 2012, after the acquisition of Minotaur Ventures Pty Ltd. It formed part of the Amalgamated Expenditure Arrangement for the Tunkillia Gold Project, which was granted on the 4th October 2012. Joint Technical Reporting was granted on 21st January 2013. The tenement was subsequently relinquished on 17th September 2013.

The tenement lies within the Yellabinna Nature Reserve and requires special environmental considerations and approvals.

Since the project acquisition, no field exploration activities were conducted by Tunkillia Gold Pty Ltd on this tenement; hence this letter represents the Final Technical Report for EL4439.

Activities undertaken by Tunkillia included;

- Internal data review following project acquisition
- Collation of data into a DataShed JORC compliant database
- Assessment of regional gravity and magnetic data sets

Total expenditure on the project since acquisition on the 17th January 2012 was $43,790 and the total expenditure on the tenement since the grant date 9th March 2010 was $108,954.

Yours faithfully

Adrian McArthur
Exploration Manager
Tunkillia Gold Pty Ltd