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No. 11,751

EL 3655 / 4882

KINGOONYA

ANNUAL REPORTS AND FINAL REPORT TO LICENCE SURRENDER, FOR THE PERIOD 27/11/2006 TO 21/4/2015

Submitted by
Uranium SA Ltd, Stellar Resources Limited and AngloGold Ashanti Australia Limited
2015

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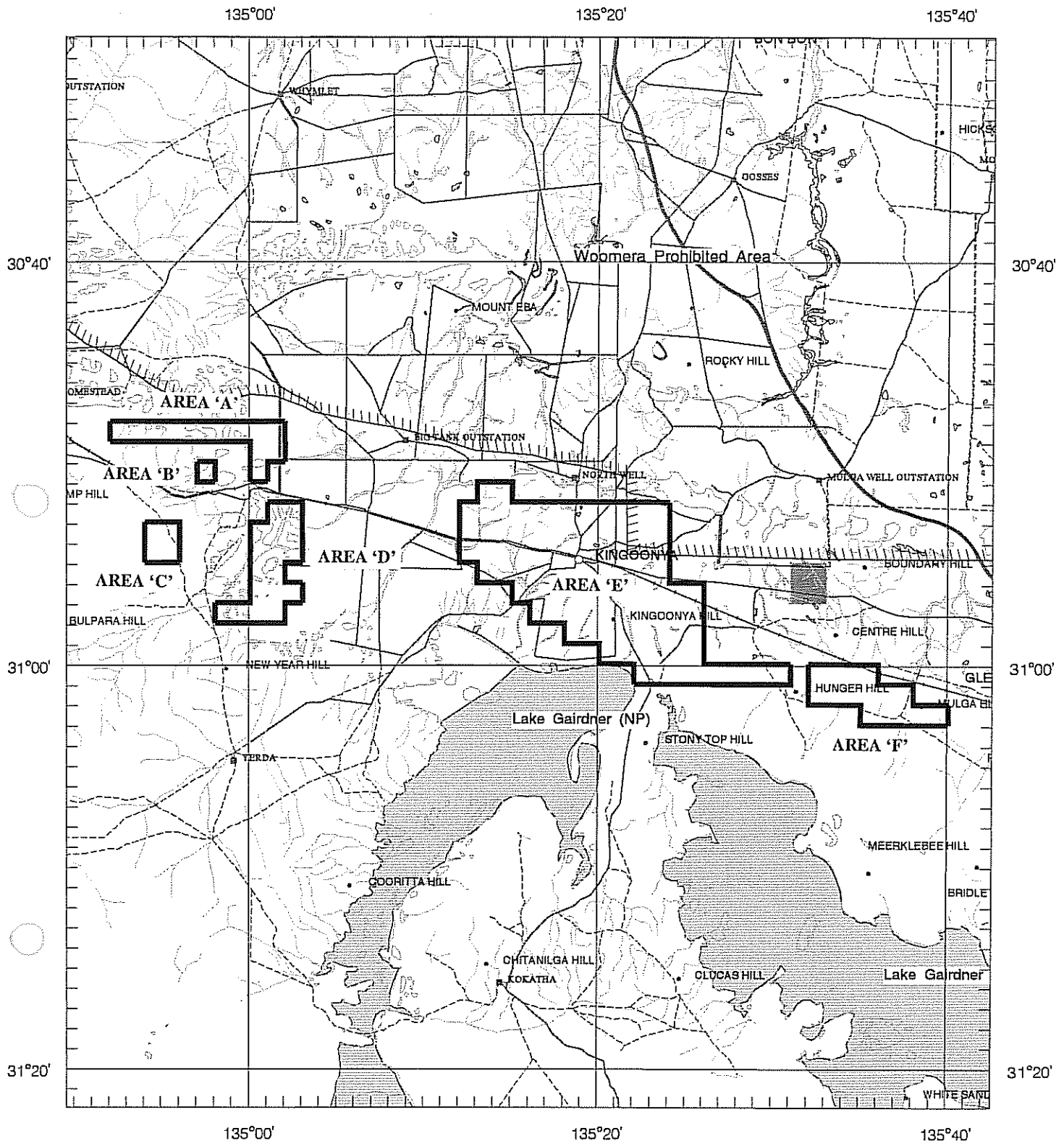
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Resources and Energy Group
7th Floor
101 Grenfell Street, Adelaide 5000

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Facsimile: (08) 8204 1880



Government of South Australia
Department of State Development

SCHEDULE A



APPLICANT : **GINGERTOM RESOURCES PTY LTD**

FILE REF : **135/06**

TYPE : **MINERAL ONLY**

AREA : **499 km² (approx.)**

1:250000 MAPSHEETS : **TARCOOLA KINGOONYA GAIRDNER**

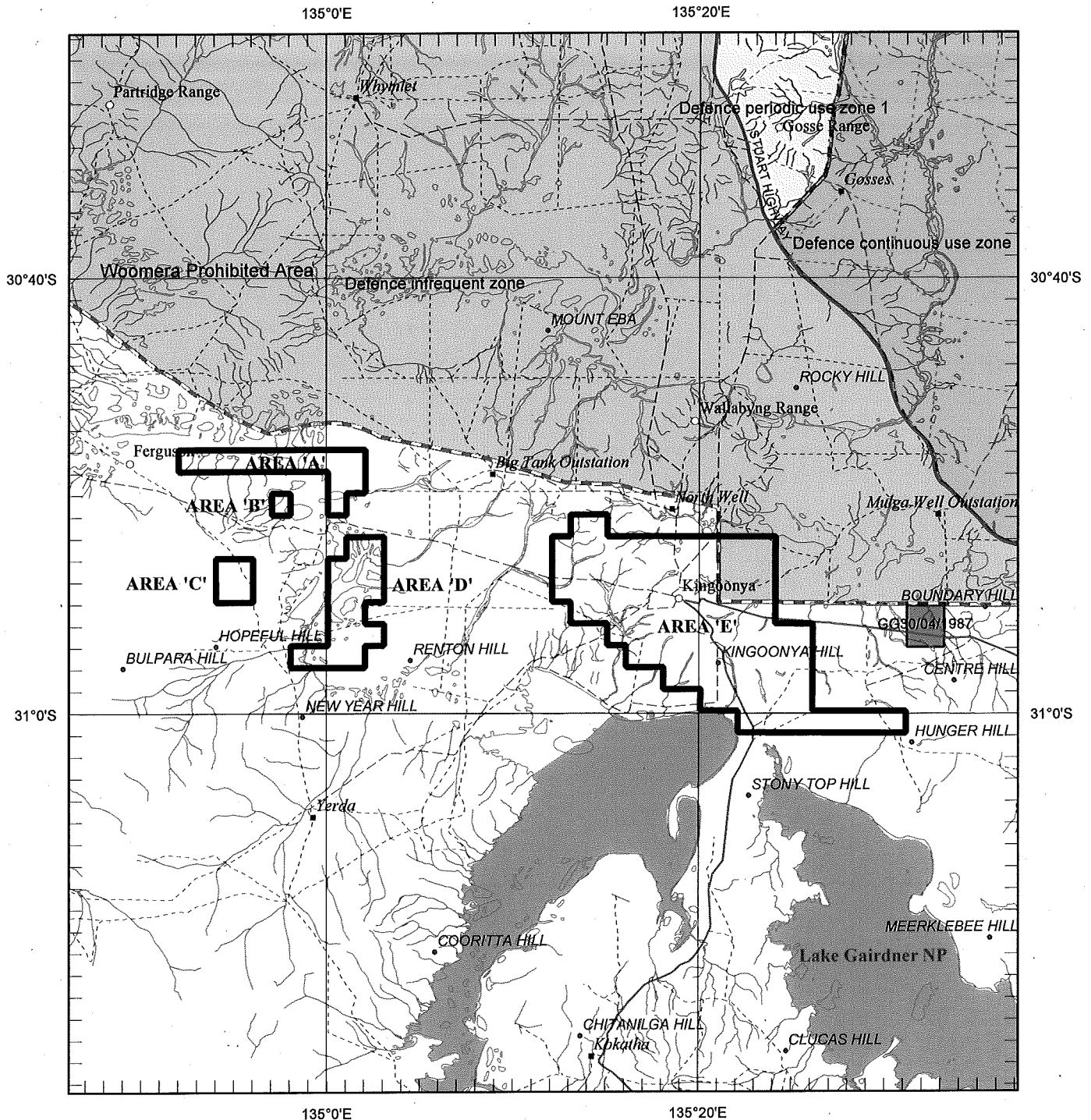
LOCALITY : **KINGOONYA AREA - Approximately 70 km southeast of Tarcoola**

DATE GRANTED : **27-Nov-2006**

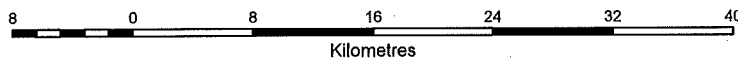
DATE EXPIRED : **26-Nov-2007**

EL NO : **3655**

SCHEDULE A



SCALE 1 : 500 000



LICENCE BOUNDARIES IN : DATUM AGD66

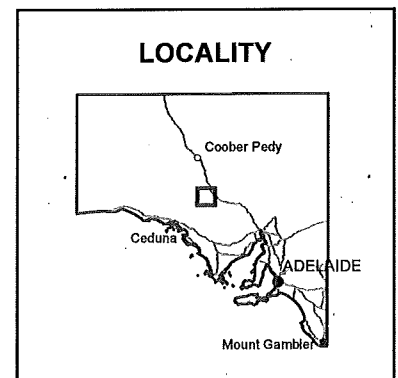
APPLICANT : HILTABA GOLD PTY LTD

FILE REF : 2011/00252 TYPE : MINERAL ONLY

AREA : 376 sq km (approx)

1 : 250 000 MAPSHEETS : KINGOONYA

LOCALITY : KINGOONYA AREA -
Approximately 70 km southeast of Tarcoola



DATE GRANTED: 27-Nov-2011 DATE EXPIRED: 26-Nov-2013 EL NO: **4882**

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Annual Technical Report
For the period ending 26th November 2007

EL 3655 'Kingoonya'

Gingertom Resources Ltd
UraniumSA Limited

By Nicole Galloway Warland
UraniumSA Ltd
20/5/2008



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Digital Files

- CD 1 Annual Technical Report
 ATR_REPTTEM 2007 data See SA Government Mineral Resources Website

BIBLIOGRAPHIC DATA

Report Title	Annual Technical Report for Exploration Licence EL 3655 'Kingoonya' for the reporting period 27 November 2006 to 26 November 2007.
Project Name	Kingoonya
Tenement Number	EL 3655
Tenement Holder	Gingertom Resources Limited (wholly owned by UraniumSA Ltd)
Operator	UraniumSA Ltd
Commodities	Uranium
Tectonic Unit	Gawler Craton
Stratigraphic Units	Mulgathing Complex Sleaford Complex
1:250,000 Map Sheet	SH 53-10 Tarcoola SH 53-11 Kingoonya SH 53-15 Gairdner
1:100,000 Map Sheets	5836 Tarcoola 5936 Kingoonya 5935 Kakatha 6035 Coondambo
Keywords	Kingoonya, Palaeochannel System, Gawler Craton, Algebuckina Sandstone

SUMMARY

Exploration Licence 3655 'Kingoonya', held by UraniumSA Ltd is located around the township of Kingoonya, approximately 250km north of Port Augusta on the central Gawler Craton.

Exploration at 'Kingoonya' is targeting sedimentary uranium in Tertiary palaeochannels. Secondary targets are IOCG-Uranium and unconformity style deposits.

UraniumSA has completed an airborne electromagnetic survey across the area of interpreted palaeodrainage and interpretation of the data is proceeding.

1. Introduction

EL 3655 'Kingoonya' is located approximately 250km north west of Port Augusta and is centred around the township of Kingoonya (Figure 1). The tenement consists of 6 blocks. Access is gained from the Stuart Highway to the east of the tenement and numerous station tracks throughout the tenement. The Trans-Australian railway line runs through the centre of the tenement. This report details exploration work completed by UraniumSA between 27 November 2006 and 26 November 2007.

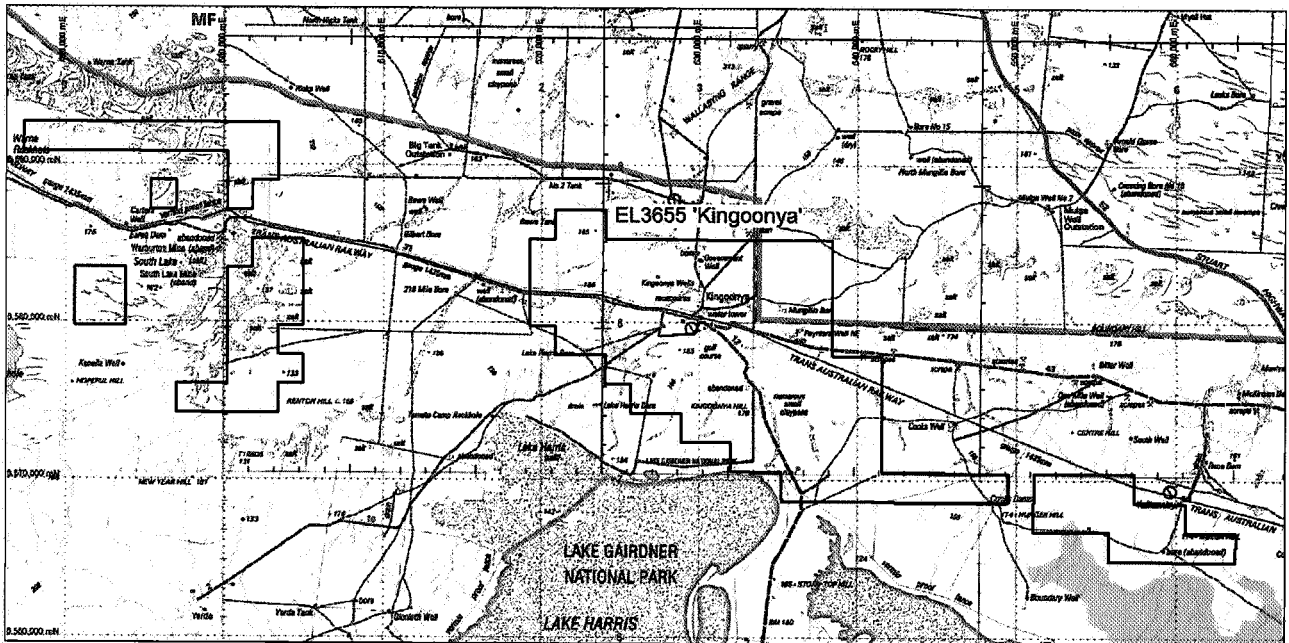


Figure 1: Location Map

2. Tenure

EL 3655 (Kingoonya) covering 499 square kilometres was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited on 27 November 2006 for a term of 1 year. The license was renewed in full at anniversary. The tenement consists of 6 parts.

3. Native Title

EL 3373 is covered by two Native Title claims: the Antakirinja Matu-Yankunytjatara, SC95/007; and the Gawler Ranges Native Title Claim (SC97/007). A Part 9B process has been commenced with the Antakirinja Land Management Aboriginal Corporation in relation to this tenement and negotiations are proceeding. A clearance survey for regional exploration of palaeodrainage targets is scheduled for late November to early December this year. Basement targets outside of the interpreted extent of palaeodrainage will require separate clearances.

4. Geology

'Kingoonya' lies within the Pre-Cambrian Gawler Craton, which underlies a large part of South Australia, and is dominated by felsic volcanic rocks of the Gawler Range Volcanics to the south and arenaceous sediments of the Pandurra Formation to the north and east (figure 2).

The Gawler Range Volcanics are of Mesoproterozoic age (approx 1593Ma) and consist primarily of calc-alkaline dacite-rhyodacite-ryolite pyroclastic rocks deposited sub-aerially on an older late Archaean to Palaeoproterozoic basement (Blissett et al, 1993). Basement comprises Archaean gneisses of the Mulgathing Suite and Archaean mafic to ultramafic rocks of the Harris Greenstone Sequence (Tonkin, D., 2006).

Exploration focus to date is on Eocene and Miocene sediments which extend through the north of the tenement as the interpreted Kingoonya Palaeochannel System, and which are postulated in headwater systems along the southern boundary which drain south into Lake Gairdner (figure 2).

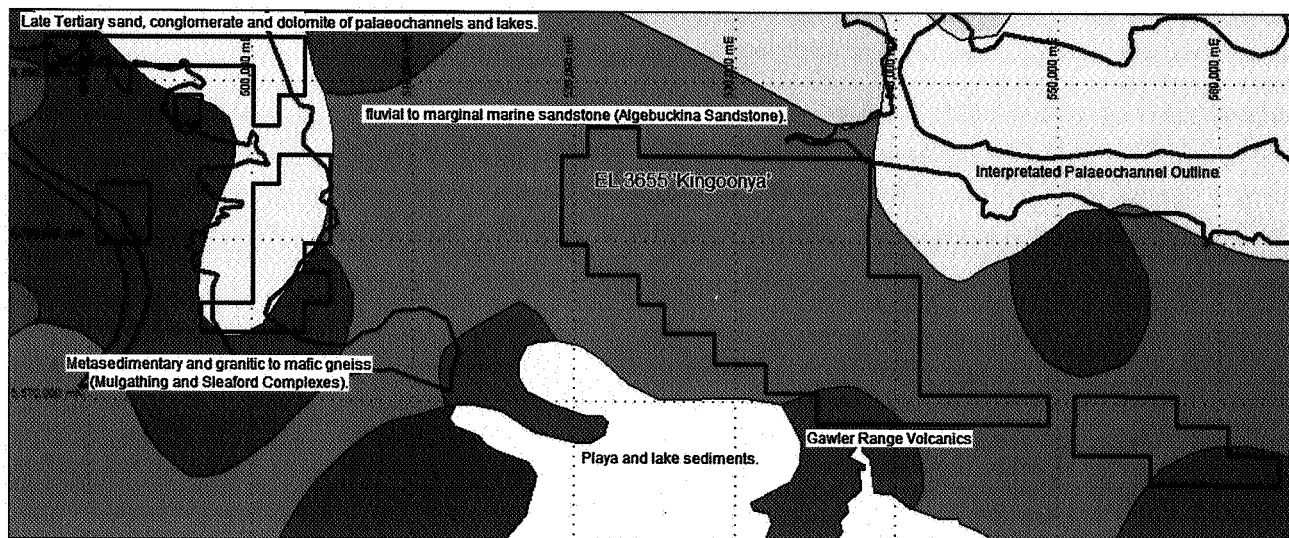


Figure 2: Geology (PIRSA)

5. Work Completed

The focus of exploration was in the western region of the tenement, whereby electro-magnetic data was collected to develop an understanding on the Kingoonya Palaeochannel System. This is scheduled to be followed up with rotary mud drilling, down-hole radiometric logging and chemical assaying to provide data for an interpretation of the palaeodrainage to assist in identifying and testing mineralized targets.

5.1 Geophysics

A reconnaissance airborne electromagnetic survey was conducted on EL 3655 during May 2007. GPX Airborne Pty Ltd conducted the survey using the REPTM Domain Electromagnetic System. The survey was flown using a Squirrel BA helicopter. Line spacing was 2000m, with 4 lines totalling approximately 60 total line km (Figure 3). Data processing and interpretation is in progress. The REPTM survey is to assist with mapping the palaeochannel floodplains within the tenement area (Figure 3).

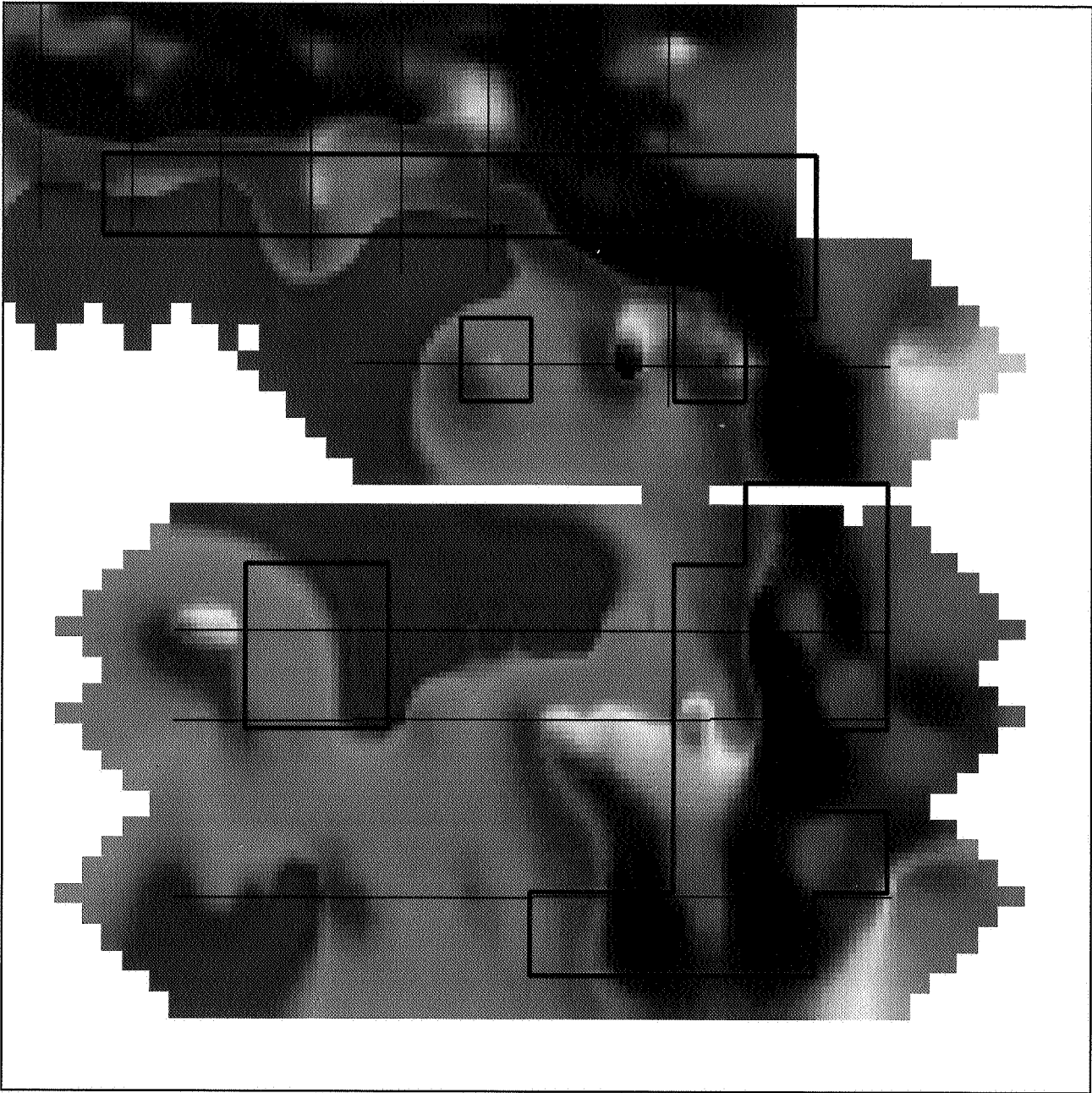


Figure 3: REPTeM Survey – electromagnetics sliced at 35m depth, with flight lines

6. Expenditure

Annual expenditure for EL 3655 'Kingoonya' was \$ 55,000.

Table 1: Annual Expenditure.

Tenure	\$ 79.50
Wages & on costs	\$ 8,948.65
Access & title	\$ 8,523.8
Drilling	\$ 540.56
Geophysics	\$ 28,124.56
Administration	\$ 8,378.08
Total	\$ 54,595.15

7. Conclusion

To date exploration has been focused in the western region of the tenement, where electro-magnetic data was collected to develop an understanding on the Kingoonya Palaeochannel System. Available open file drill hole data will be scrutinised to determine the vertical and lateral extents of the palaeochannel through the tenement. A follow-up rotary mud drilling program with down-hole radiometric logging is scheduled for mid 2008 to confirm palaeochannel boundaries and establishing stratigraphy, and ultimately to test identified palaeochannel targets.

8. References

- Blisset, A.H., Creaser, R.A., Daly, S.J., Flint, R.B. & Parker, A.J., 1993. Gawler Range Volcanics. In Drexel, J.F., Priess, W.V. & Parker, A.J. (eds) *The Geology of South Australia, Volume 1, The Precambrian*, pp107-124.
- Tonkins, D., 2006 Independent Geologists Report. Replacement Prospectus. UraniumSA Limited (unpub).

APPENDIX 1:

GPX Logistics Report

See Also, SA Government Mineral Resources Website

RepTEM Airborne Geophysical Survey

Tarcoola, South Australia.

May 2007

Survey Operations and Logistics Report

For

URANIUM SA

Survey Flown by:



GPX Airborne

JOB NUMBER 2264

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**GPX Airborne
RepTEM (Mkl) Survey**

SURVEY SUMMARY

Client: URANIUM SA
Job Number: 2264
Survey Area: Tarcoola, South Australia
Data Processing Base: Base of Operations and processing base at Stellar House,
Tarcoola

Mobilisation 13th May 2007
Production 14th – 25th May 2007
Demobilisation 26th May 2007

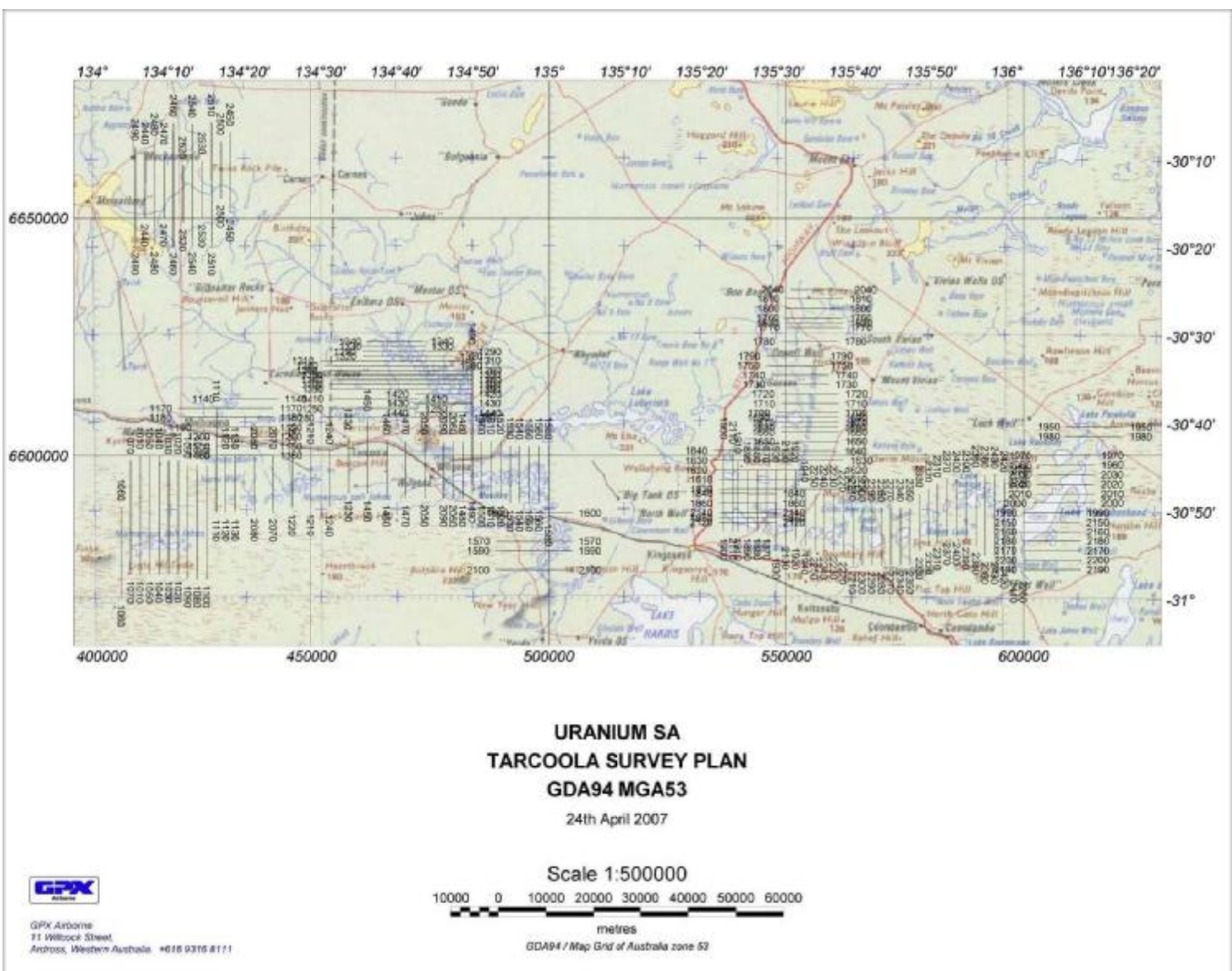
Line km surveyed: Tarcoola, SA 2383.3 km

Survey Crew: Ben Trevenen
Rowan Schneider
Adrian Noetzli
Dale Bourke (Pilot)

In May 2007, GPX Airborne was contracted by Uranium SA to perform a RepTEM survey over the Tarcoola area in South Australia. The job was flown between the 14th and 25th of May 2007.

The base of operations and processing was located at Stellar House, Tarcoola, near the base station location.

Survey Area Map
Overview



RepTEM System Specifications

Transmitter

Waveform –	25% duty cycle square wave
Pulse on Time -	5 ms (inclusive of 1ms cosine ramp on)
Pulse off Time -	15 ms
Pulse Current -	320 Amps
Switch on Ramp -	1 ms
Switch off Ramp -	55 μ s
Tx Loop Area -	~350 m ²
Tx NIA –	112,000
Tx Frequency-	25 Hz

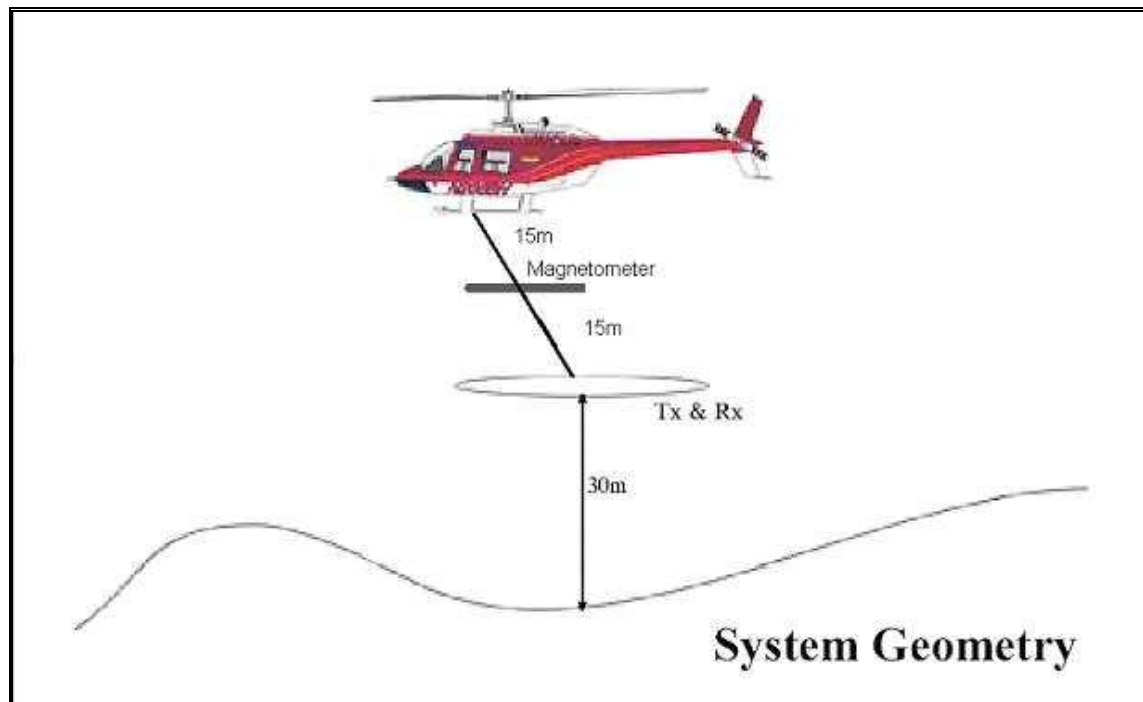
Receiver

A-D Circuitry -	24 bit
Sample Time -	0 - 12 ms
Sampling -	121 Linear channels
Windowed Data -	21 channels

Receiver Coil

Effective NA -	10,000 Square Metres
Bandwidth –	45,000 Hz

Geometry.



Transmitter loop is towed 35 m below helicopter- Receiver coil is located at centre of Tx loop.

Transmitter / Receiver at nominal 35 m terrain clearance.

Helicopter survey speed is between 45 and 55 knots.

Along line sample interval is between 9 and 11 metres

EM Data Channel Specifications

NB: Time 0 is at the start of the switch off ramp

21 Channel Sampling Scheme (55Us ramp)				
Channel	Begin Time	End Time	Centre Time	Width in Time
1	55	80	67.500	25.00
2	80	105	92.500	25.00
3	105	130	117.500	25.00
4	130	155	142.500	25.00
5	155	255	205.000	100.00
6	255	355	305.000	100.00
7	355	456.25	405.625	101.25
8	456.25	557.50	506.875	101.25
9	557.50	760.00	658.750	202.50
10	760.00	1063.75	911.875	303.75
11	1063.75	1468.75	1266.250	405.00
12	1468.75	1975.00	1721.875	506.25
13	1975.00	2582.50	2278.750	607.50
14	2582.50	3291.25	2936.875	708.75
15	3291.25	4101.25	3696.250	810.00
16	4010.25	5012.50	4556.875	911.25
17	5012.50	6025.00	5518.750	1012.50
18	6025.00	7138.75	6581.875	1113.75
19	7138.75	8353.75	7746.250	1215.00
20	8353.75	9670.00	9011.875	1316.25
21	9670.00	11391.25	10530.626	1721.25

RepTEM Airborne Geophysical System



Magnetic Data Specifications

The helicopter was equipped with a bird-mounted Geometrics G 822A Cesium vapor, optically pumped magnetometer continuously sampling at 1200 Hz.

The instrument has a sensitivity of 0.001nT, with a sensor noise level of less than 0.1nT.

The magnetic readings are resampled to 50Hz with each sample containing an array of 24 readings. Adjacent readings are summed to minimise bias from the EM transmissions to produce the 25Hz magnetic array data. The mid time array positions are averaged to create the magnetic response.

The time-synchronized ground magnetic field data was digitally recorded at a 5.0 sec interval with a Geometrics G856 magnetometer to an accuracy of 0.1nT.

Base Magnetometer

Type: Geometrics G856 Magnetometer.

The Base Station was located at (Local Zone53)

458525E

6602793

Height = 119 m

DATA PROCESSING SUMMARY

The following processes were carried out at the field processing office:

- Spline removal of birdswing
- Negative decays paired and reversed
- Filtering and correction of laser altimeter
- Data is splined to a uniform sample spacing
- Butterworth filter applied to each channel
- Preliminary gridding and data verification

Final EM Processing

Software used for processing at the GPX Perth office:

- Geosoft
- EmaxAIR by Fullagar Geophysics
- ChrisDBF

System response obtained from high level flights is removed from the data. CDIs are generated using EmaxAIR, and depth slice data is interpolated from the Emax output using in-house software. Final plots are created in Geosoft .MAP format, and include CDIs that are masked to the first and last depth solution at each station.

Magnetic Data processing.

The aircrafts magnetic data is corrected for diurnal and the mean diurnal value added back to the channel. Parallax is applied, followed by the IGRF correction, the mean IGRF value being added back to data. Where required tie line and a micro-level will be applied to the final magnetic channel.

Area Name	Diurnal Value	IGRF Value
Tarcoola	57347.1 nT	57393.28 nT

Digital Elevation Model

The laser altimeter data was subtracted from the GPS height to give a digital elevation model which represents height above the WGS84 spheroid. This data was then mean levelled with the SRTM (Satellite Radar Topography Mission, NASA) to remove any levelling.

Final DVD Contents

\images

GeoTiff format images of all depth slices, minimum, maximum and last conductivity, digital elevation and magnetic data.

\grids

Conductivity depth slices with name convention of dnnn.grd where nnn is the depth of the conductivity slice, grids are in Geosoft GRD format. ERMapper format grids have also been provided, with a ERM_Dnnn.ers naming convention.

Final Magnetic grid: ERM_Magnetics.ers

Final Digital Terrain (level with SRTM data): ERM_DEM.ers (WGS84 spheroid)

\grids\cdi_grids

Geosoft format files of the CDI grids.

\located_data

TEM.LDT

Line:	Line number
Fiducial:	Fiducial number as displayed on the CDI sections.
East:	Easting (GDA94 MGA53)(metres)
North:	Northing (GDA94 MGA53)(metres)
Heli_Z:	GPS altitude of helicopter (metres)
TX_Laser:	Height of the laser altimeter on the hoist (metres)
DEMF:	Levelled Digital Elevation Model, WGS84 (metres)
Current:	Transmitter current (amps)
Ch[*]:	EM response, channels 1-21 (uV)
Mag:	Interpolated magnetic channel.

CDI.LDT

Line: Line number
East: Easting (GDA94 MGA53)(metres)
North: Northing (GDA94 MGA53)(metres)
Distance: Distance along line (metres)
Depth: Depth below surface (metres)
Conductivity: Conductivity (mS/m)
RL: GPS depth (WGS84)(metres)

DEPTHSLICE.LDT

Line: Line number
East: Easting (GDA94 MGA53)(metres)
North: Northing (GDA94 MGA53)(metres)
Distance: Distance along line (metres)
RL: GPS depth (WGS84)(metres)
[35-150]: Conductivity at specified depth (mS/m)

COND_SUMMARY.LDT

Line: Line number
East: Easting (GDA94 MGA53)(metres)
North: Northing (GDA94 MGA53)(metres)
Firstcond: First recorded conductivity in a decay (mS/m)
Maxcond: Maximum recorded conductivity in a decay (mS/m)
Lastcond: Last recorded conductivity in a decay (mS/m)
Mincond: Minimum recorded conductivity in a decay (mS/m)

MAGNETICS.LDT (25Hz data)

Line: Line Number
SPM: Seconds past midnight.
East: Easting (GDA94 MGA53)(metres)
North: Northing (GDA94 MGA53)(metres)
Rawmag: Raw magnetics channel
Diurnal: Diurnal data
PreMag: Diurnal corrected.

IGRF: Calculated IGRF value for each point.

MagF : Final magnetics channel

GPS_Z: GPS altitude of helicopter (metres)

Clearance: Ground clearance of the Magnetic Sensor.

Each data type is also accompanied with a similar Geosoft database.

\sections

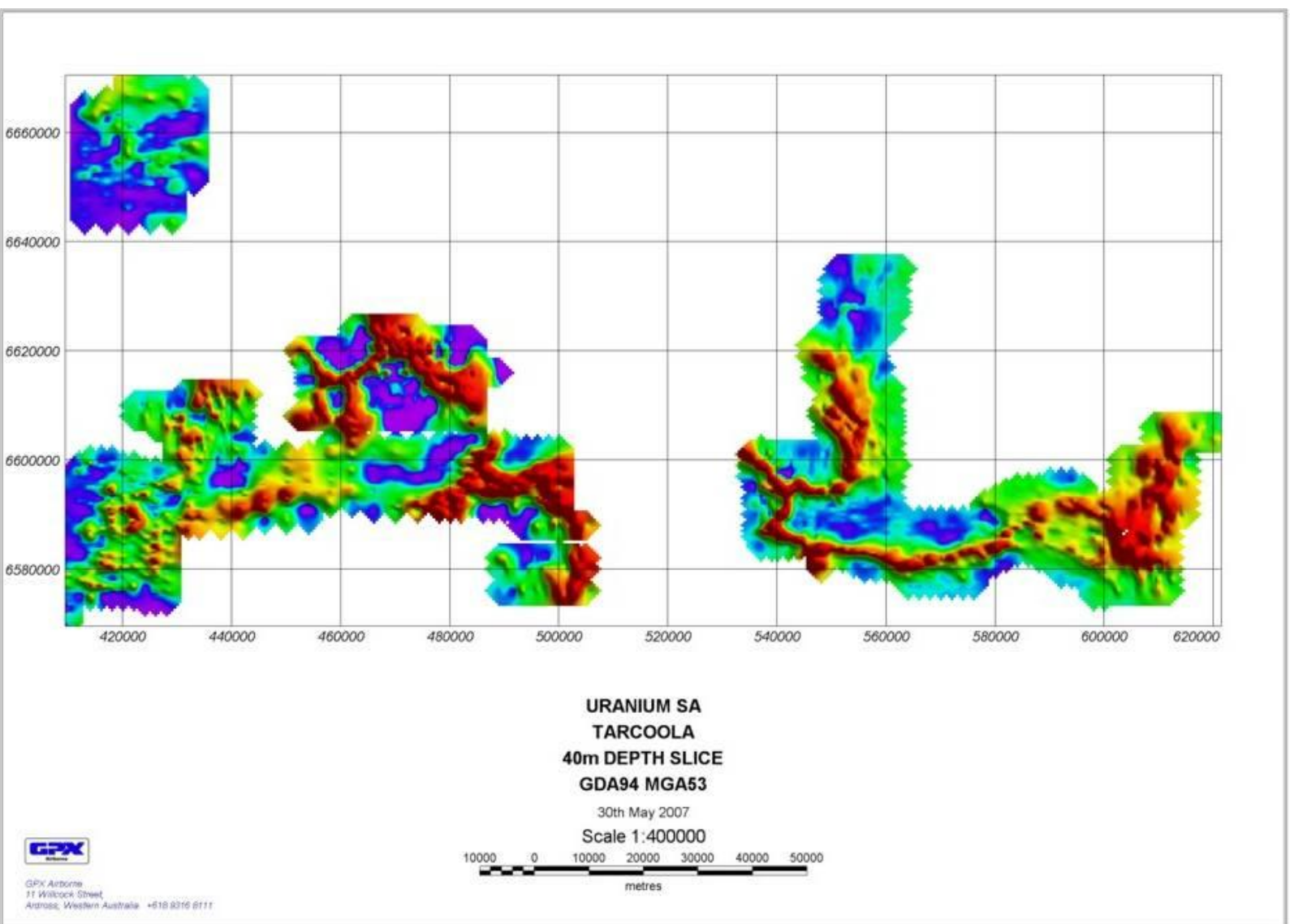
Linear & logarithmic profiles, and conductivity depth images for each line. In Geosoft .MAP format (viewable with the free interface at <http://www.geosoft.com>).

\sections\Images

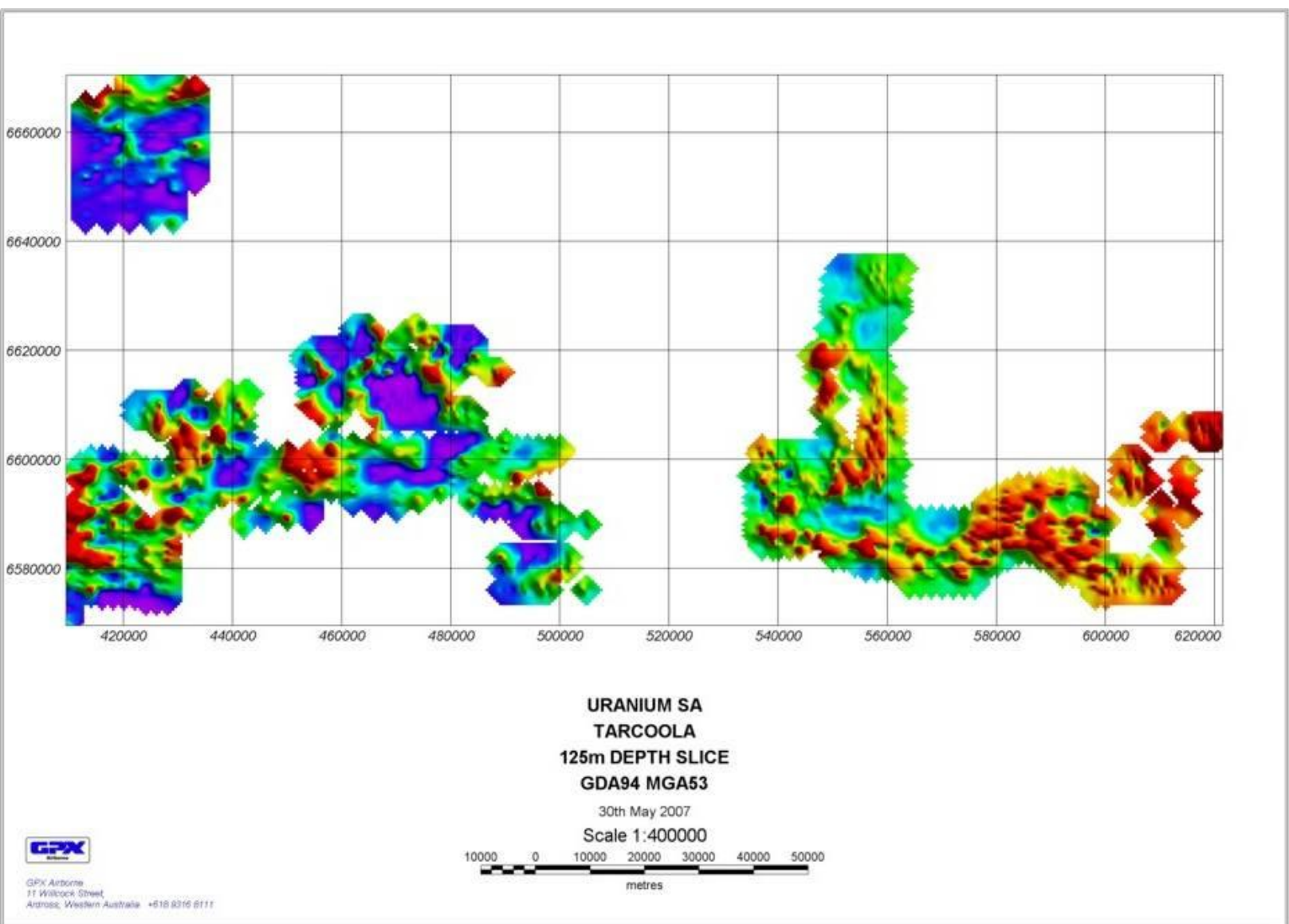
Linear & logarithmic profiles, and conductivity depth images for each line. In PNG (Portable Network Graphics) format.

IMAGES

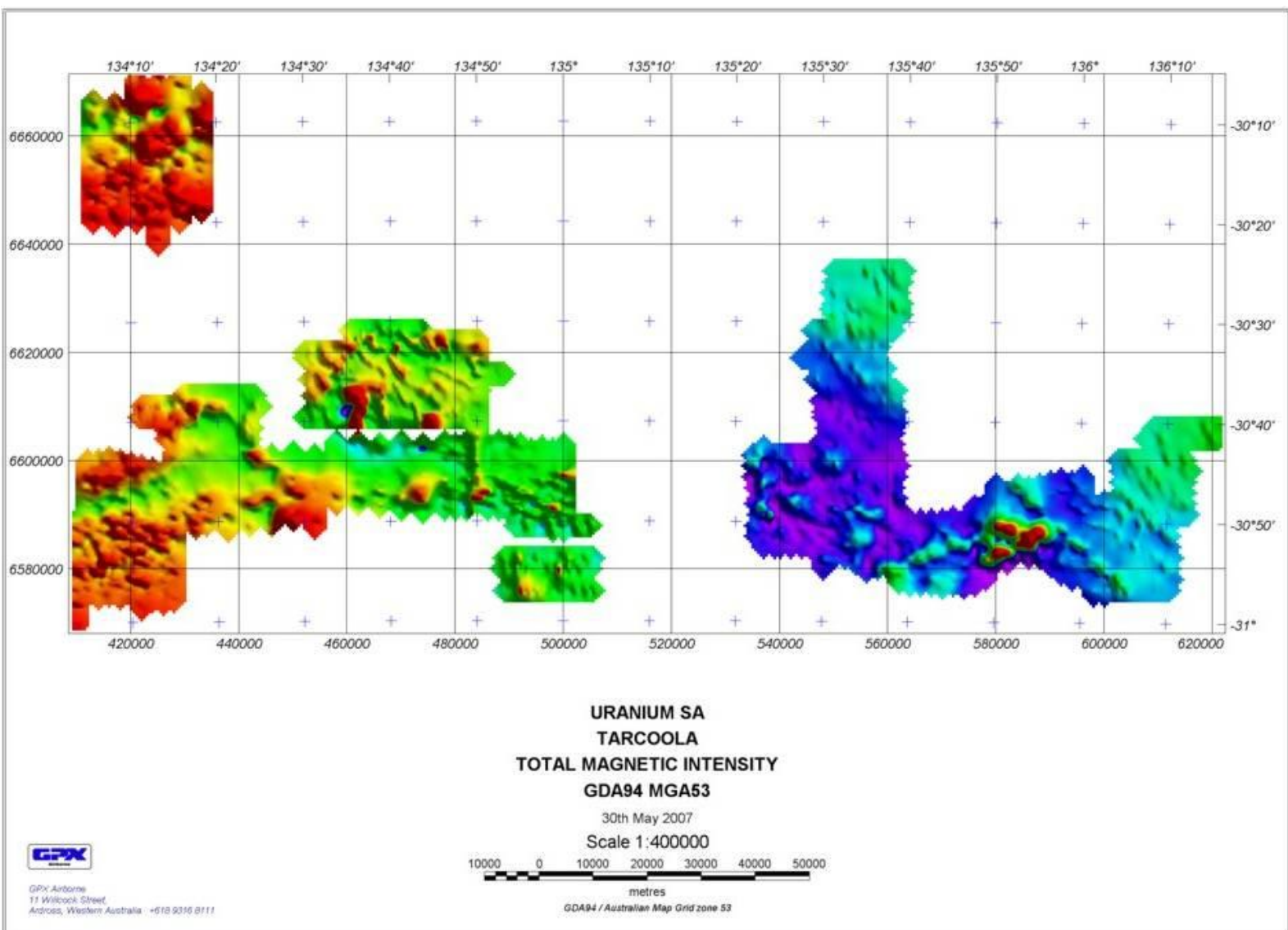
40m Depthslice



125m Depthslice



Total Magnetic Intensity



CONTRACTOR INFORMATION



GPX Airborne
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Locked Bag 3, Applecross,
Western Australia. 6153
Telephone: (08) 9316 8111
Fax: (08) 9316 8033
Web: www.gpx.com.au

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www.uraniumsa.com.au



11 March 2009

Exploration Coordinator
Minerals Tenements
Primary Industries and Resources SA
GPO Box 1671
Adelaide SA 5001

Attention: Sue Watson

Dear Sue,

Annual Technical Report for EL 3655 'Kingoonya' for the period ending 26/11/2008

No field work or technical work was carried out on EL 3655 'Kingoonya' during the reporting period; as such no annual technical report will be presented.

During the reporting period Gingertom Resources Pty Ltd (100% owned by UraniumSA) signed a Part 9B Native Title Mining Agreement with the Antakirinja Matu-Yankunytjatara Native Title Claim Group and Gawler Ranges Native Title Claim Group. No work could be carried out until these documents were signed.

Annual Expenditure was \$10,306; with a total expenditure for the Tenement totalling \$70,000

Regards,

A handwritten signature in blue ink, appearing to read "Nicole Galloway Warland".

Nicole Galloway Warland
Exploration Manager

UraniumSA Ltd
ABN 48 119 978 013

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Norwood, South Australia 5067
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www.uraniumsa.com.au



11 February 2010
Exploration Coordinator
Minerals Tenements
Primary Industries and Resources SA
GPO Box 1671
Adelaide SA 5001

Attention: Sue Watson

Dear Sue,

Annual Technical Report for EL 3655 'Kingoonya' for the period ending 26/11/2009

No field work or technical work was carried out on EL 3655 'Kingoonya' during the reporting period; as such no annual technical report will be presented.

During the reporting period Gingertom Resources Pty Ltd (100% owned by UraniumSA Limited) commence license transfer to stella Resources – this is still in-progress.

Annual Expenditure was \$13,460; with a total expenditure for the Tenement totalling \$83,460 (see table below).

Tenure	\$3,892.4
Wages	\$5,314.85
Geophysics	\$2,496.48
Administration	\$1,756
Total	13,460

Regards,

A handwritten signature in blue ink, appearing to read "Nicole Galloway Warland".

Nicole Galloway Warland
Exploration Manager



ANGLOGOLD ASHANTI
AUSTRALIA

AngloGold Ashanti Australia Limited \ A.B.N. 42 008 737 424

Level 13 \ 44 St Georges Tce \ Perth \ WA 6000 \ Australia \ PO Box Z5046 \ Perth \ WA 6831 \ Australia

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21 January 2010
Exploration Coordinator
Minerals Tenements
Primary Industries and Resources SA
GPO Box 1671
Adelaide SA 5001

Attention: Sue Watson

Dear Sue,

Annual Technical Report for EL 3655 'Kingoonya' for the period ending 26/11/2010

No field or technical work was carried out on EL 3655 'Kingoonya' during the reporting period; as such no annual technical report will be presented.

Transfer of title, from UraniumSA Ltd to Stellar Resources Ltd, was conducted during the first half of the yearly reporting period. During the latter half a Farm-in Joint Venture agreement between Stellar Resources and AngloGold Ashanti was signed, being executed 4th October 2010 and completed on 2nd December 2010.

Access negotiations with legal representatives for the Gawler Ranges claimants and Antakarinja Native Title holders have commenced for 2011.

Please do not hesitate to contact me should you require any additional information with regard to this matter.

Regards,

Tamara Grothues
for AngloGold Ashanti Australia Ltd

AngloGold Ashanti Australia Limited

Gairdner Project

EL3655

Annual Report

For the Period

27 November 2010 to 26 November 2011

Tenure Holder	Hiltaba Gold Pty Ltd
Operator	AngloGold Ashanti Australia
Compiled by	Peter Morant
Date	9 December 2011
Distribution	DMITRE South Australia Hiltaba Gold Pty Ltd

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Appendix 1	Ground Gravity Survey: Digital Data
Appendix 2	Airborne Magnetic-Radiometric Survey: Logistics Report & Digital Data (Mag-Rad data - see Government of South Australia Mineral Resources Website)

Keywords: Gairdner 1:250,000 map sheet; Kingoonya 1:250,000 map sheet; Iron oxide-Copper-Gold; Data Compilation; Gravity Survey; Airborne Magnetic-Radiometric Survey

1. SUMMARY

This report summarises the exploration activities completed on EL3655 during the reporting period 27 November 2010 to 26 November 2011. EL3655 is owned by Hiltaba Gold Pty Ltd, a 100% owned subsidiary of Stellar Resources Limited, and is subject to a farm in and joint venture agreement whereby AngloGold Ashanti Australia Limited has certain rights to earn equity in the tenement (and three other ELs in the Gawler Craton) by meeting conditions set out in the agreement. Exploration of EL3655 is being conducted as part of the Gairdner Project, which comprises EL3655 and EL4573.

Activities completed during the reporting year included:

- Conclusion of a Native Title Mining Agreement with the Gawler Ranges Native Title claimant group
- A ground gravity survey comprising 386 stations within EL3655
- An airborne magnetic survey on north-south lines at 100 metre intervals, for a total of 662 line kilometres within EL3655
- Data compilation and administration.

Airborne magnetic and ground gravity surveying have defined more detailed anomalies within the broad “shell-back” magnetic feature targeted by AngloGold Ashanti for potential IOCG mineralisation. These anomalies are interpreted to mainly relate to 827Ma, NNW-trending Gairdner Suite mafic dykes, which are not related to any known mineralisation. Further interpretation of the geophysical datasets, possibly with follow-up detailed geophysical surveying of selected targets, is recommended before drilling targets can be finalised.

Expenditure for the fifth year of tenure for EL3655, to 26 November 2011, was \$123,847.

The location of activities completed during the reporting year is summarised on the Exploration Index Plan (Figure 1).

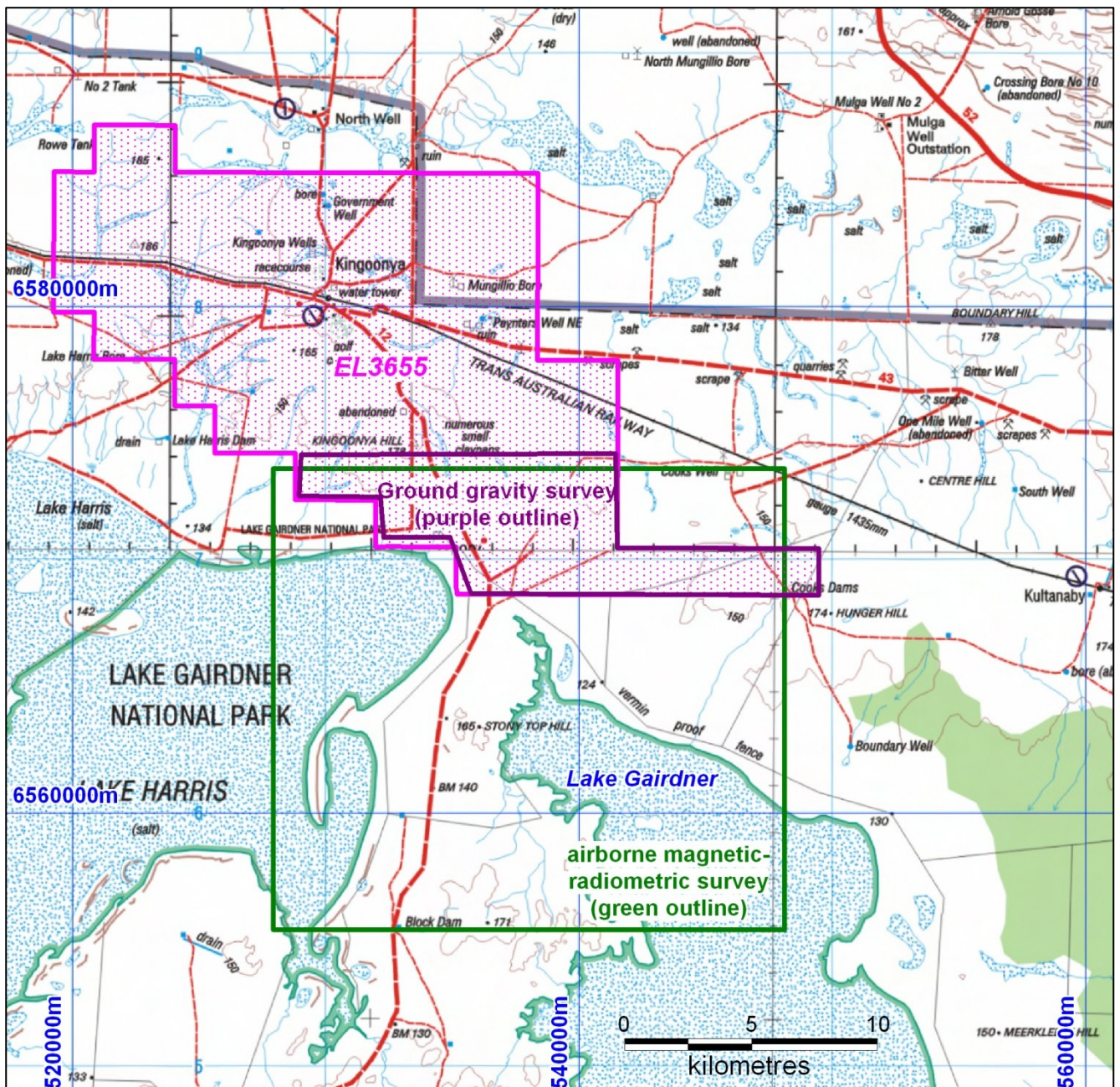


Figure 1 Exploration Index Plan EL3655 (GDA94, Zone 53; 1:250,000)

no exploration activities completed on the four sections of EL3655 to the west of the diagram

2. INTRODUCTION

This report summarises the exploration activities completed on EL3655 (Kingoonya) during the reporting period 27 November 2010 to 26 November 2011. EL3655 is owned by Hiltaba Gold Pty Ltd, a 100% owned subsidiary of Stellar Resources Limited, and is subject to a farm in and joint venture agreement whereby AngloGold Ashanti Australia has certain rights to earn equity in the tenement (and three other ELs in the Gawler Craton) by meeting conditions set out in the agreement. Exploration of EL3655 is being conducted as part of the Gairdner Project with EL4573.

3. LOCATION AND ACCESS

EL3655 is approximately 300km northwest of Port Augusta and is centred on the small settlement of Kingoonya on the Trans Australian Railway (Figure 2). The tenement between Lake Harris and Lake Labyrinth, on Kingoonya 1:250 000 Sheet SH53-11 and Gairdner 1:250 000 Sheet SH53-15. Access is via the sealed Stuart Highway (30km to the north and east) and Trans Australian Railway access road to Kingoonya, with local access along station tracks and fence line tracks. The topography is flat lying with scattered small salt lakes.

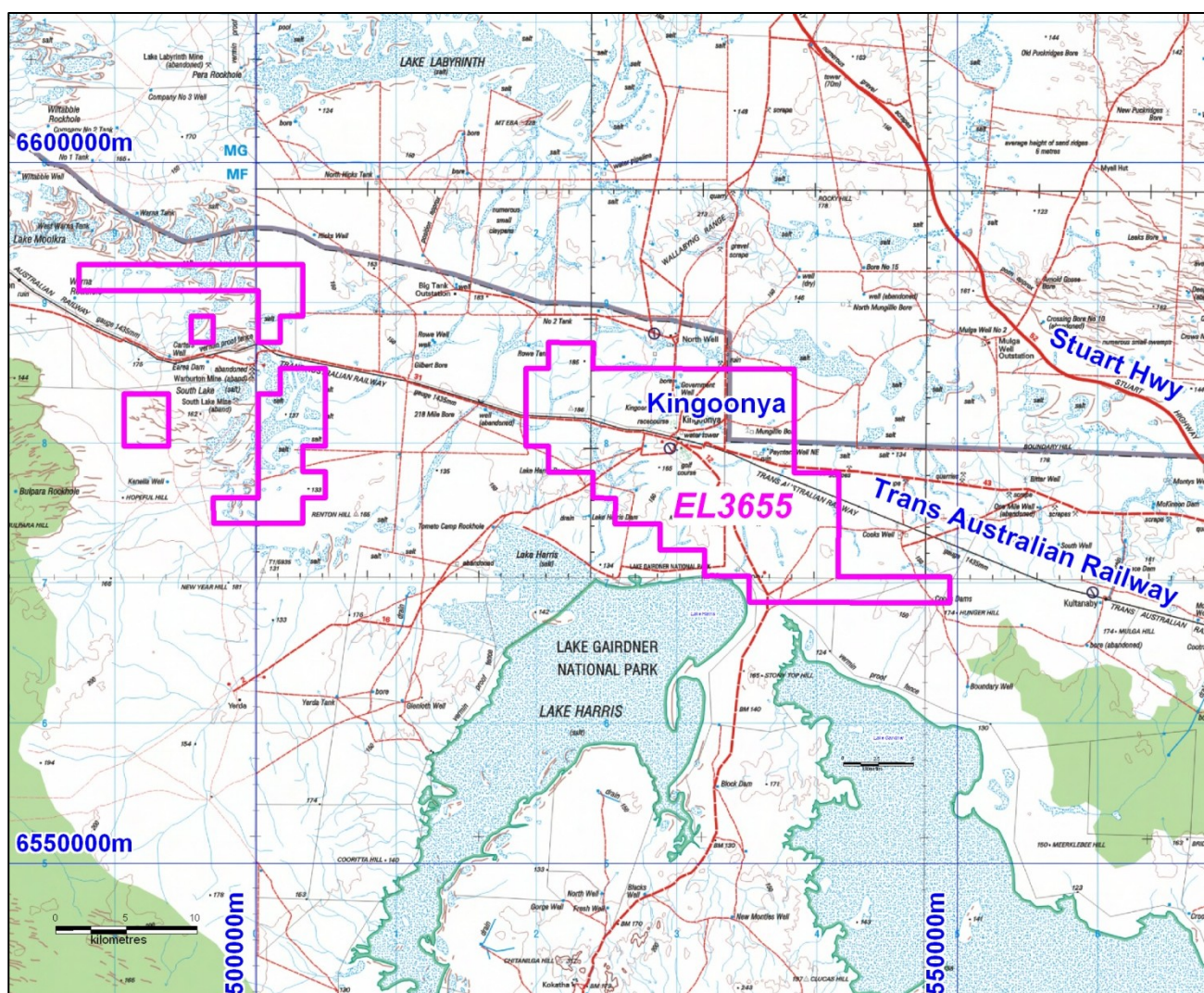


Figure 2 Location of EL3655 Kingoonya (GDA94 Zone 53; 1:500,000)

4. TENURE

EL3655 (Kingoonya) was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited on 27 November 2006. The tenement originally covered 499km² in six sections, but has been reduced to its current area of 377.1km² in five sections. Ownership was transferred to Hiltaba Gold Pty Ltd early in the current reporting period.

The tenement is subject to the farm-in and joint venture agreement between Hiltaba Gold Pty Ltd, Stellar Resources Limited and AngloGold Ashanti Australia Limited dated 4 October 2010.

EL3655 is covered by two Native Title claims: the Antakirinja Matu-Yankunytjatara, SC95/007 and the Gawler Ranges Native Title Claim (SC97/007). Part 9B exploration access agreements have been completed with both Native Title claimant groups.

5. REGIONAL GEOLOGY

EL3655 is in the central Gawler Craton of South Australia. Neoproterozoic to earliest Palaeoproterozoic basement locally includes the Mulgathing Complex, Glenloth Granite and Harris Greenstone Belt. Basement is covered by the ~1590Ma Gawler Range Volcanics (GRV; the coeval Hiltaba Granite Suite intrudes basement) and overlying Pandurra Formation red beds of the Mesoproterozoic Cariewerloo Basin (Figure 3). The western four sections of EL3655 are mainly underlain by the Eocene-Miocene Kingoonya palaeochannel targeted for uranium by UraniumSA (Warland, 2008).

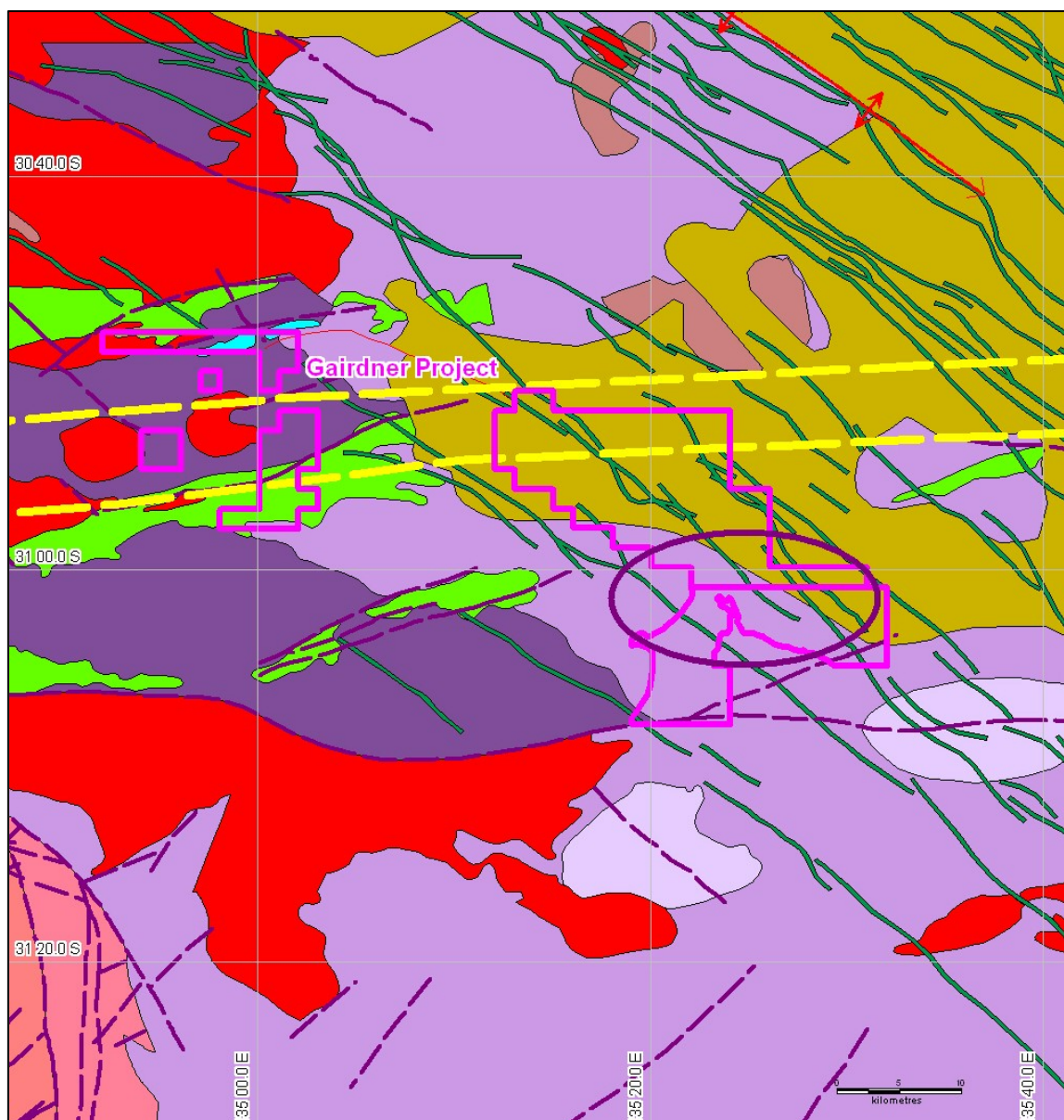


Figure 3 Geology of the Gairdner Project; EL3655 is the northern tenement (5 sections in magenta)

GDA94; PIRSA geological interpretation: dark purple = >2.5Ga Mulgathing Complex and 2.5Ga Glenloth Granite; green = 2.5Ga Harris Greenstone Belt; red = 1.59Ga Hiltaba Suite granites; dark/light lilac = 1.59Ga Gawler Range Volcanics; olive = middle Mesoproterozoic Pandurra Fm of the Cariewerloo Basin; dark green = 0.83Ga Gairdner dyke swarm; purple dashed lines = Archaean-Palaeoproterozoic structures; yellow dashed zone = interpreted deep crustal-lithospheric structure; purple ellipse = outline of magnetically defined exploration target

The Central Gawler Gold Province is a region in the central Gawler Craton in which there is a close spatial association between Hiltaba Suite plutons, coeval structure and gold-dominant mineralisation (Figure 4). Gold mineralisation includes the 0.83Moz Tunkillia and 0.15Moz Tarcoola gold deposits, as well as less advanced prospects/deposits including that at Barns, Nuckulla Hill and Glenloth/Earea Dam. IOCG deposits, including Olympic Dam, Prominent Hill and Carrapateena, are associated with Hiltaba Suite granites in the Olympic Domain in the eastern Gawler Craton.

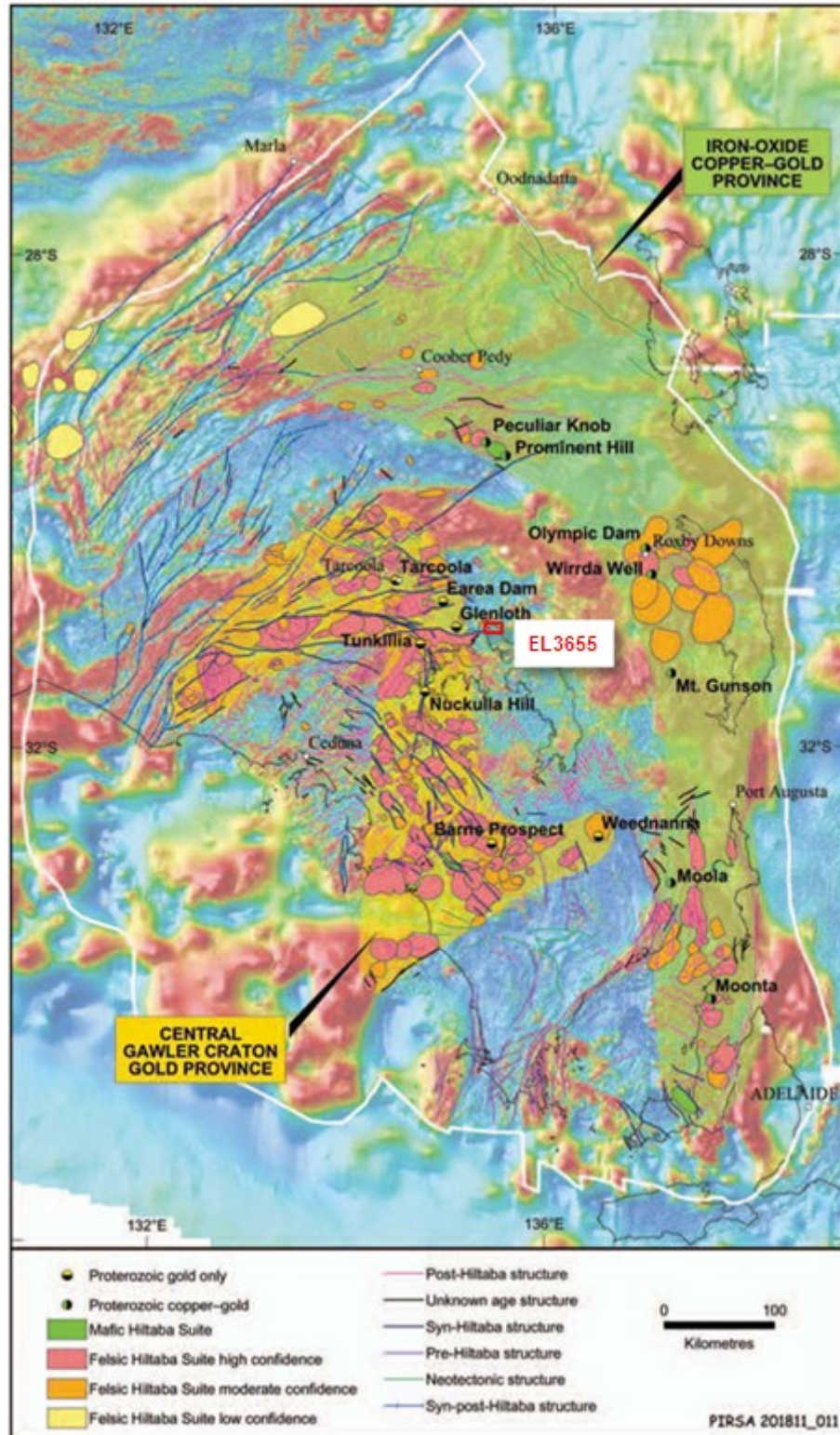


Figure 4 The Central Gawler Gold Province (yellow) and Olympic Domain (green)
(from MESA Journal 30, 2003)

6. EXPLORATION CONCEPT

The exploration concept at Gairdner is that a major IOCG system may be concealed beneath relatively shallow Gawler Range Volcanics (the volcanic equivalents of the ~1590Ma Hiltaba Granite Suite), and is reflected by a broad, diffuse magnetic “shellback” anomaly which to that at the Carrapateena, Olympic Dam and Osborne IOCG deposits (Figure 5). The Central Gawler Gold Province, which includes the 0.83Moz Tunkillia and 0.15Moz Tarcoola deposits of interpreted Hiltaba age hosted by Archaean and Palaeoproterozoic rocks to the west of Gairdner, may be the “smoke” marginal to a major Au±Cu deposit concealed beneath the GRV at Gairdner.

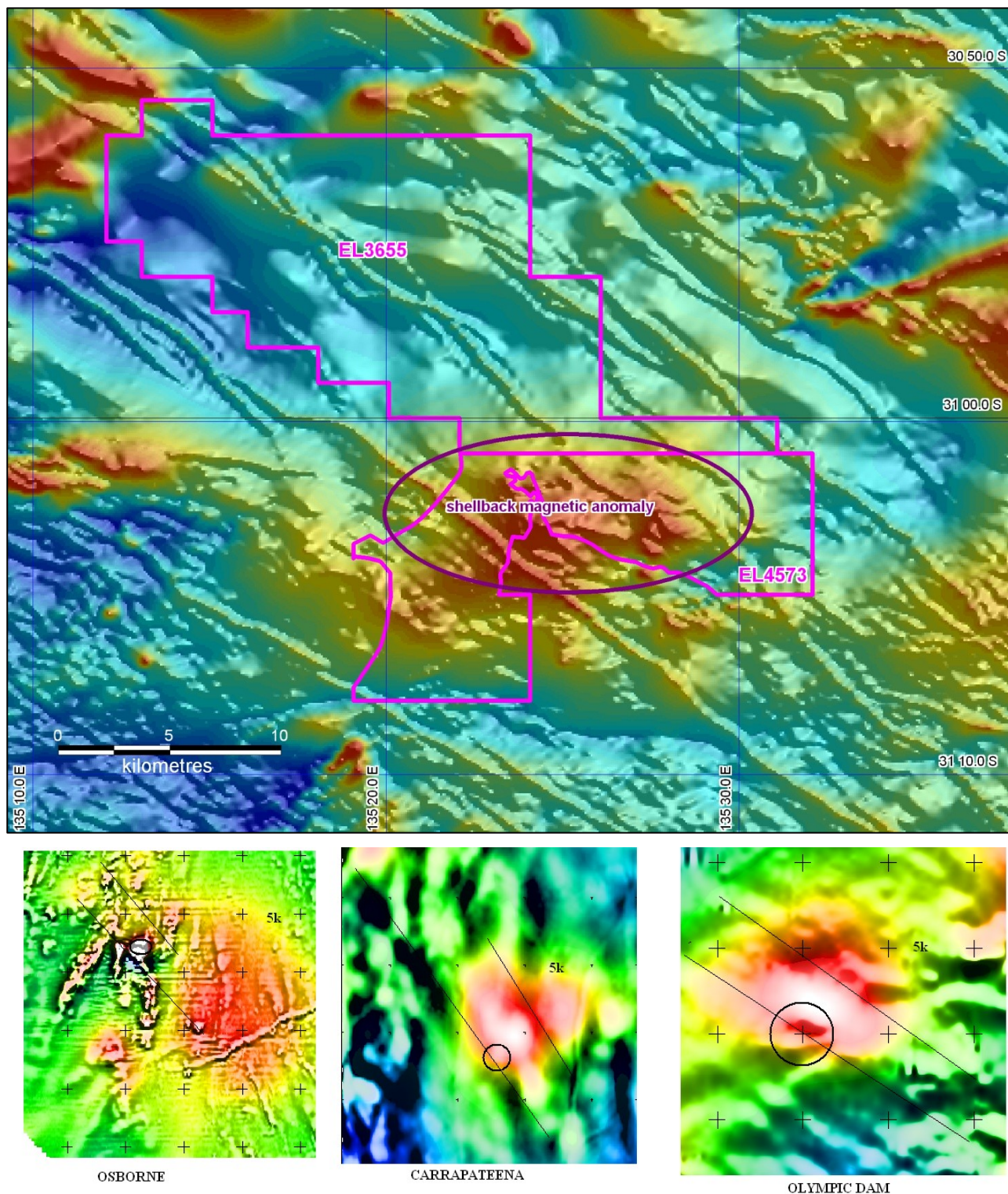


Figure 5 “Shellback” Magnetic Anomaly at Gairdner project compared with magnetic anomalies at Osborne, Carrapateena and Olympic Dam

7. PREVIOUS EXPLORATION

SARIG shows 43 previous mineral exploration licences that overlap current EL3655 (Table 1).

Calcrete sampling has been the main surface geochemical exploration tool used in the Gawler Craton in the past 25 years or so. The PIRSA open file calcrete sampling database includes 1033 samples within current EL3655 (Figure 6), collected by PIMA Mining, MIM Exploration and Dominion Mining, mainly in the late 1990s. The maximum metal tenors recorded in these surveys were 15ppb gold and 87.7ppm copper. However, calcrete sampling is not expected to detect gold and copper mineralisation concealed beneath >100 metres of Gawler Range Volcanics and overlying Mesoproterozoic sedimentary rocks, such as in the eastern part of EL3655 targeted by the current exploration, or in areas of significant palaeochannel development.

The PIRSA open file drilling database (excludes recent confidential data) shows just three previous drill holes, by Afmeco, Dominion and SA DME, completed within the area of EL3655 for a total of 135m (Figure 6).

Airborne geophysical surveys in the PIRSA database include the 400 metre line spacing magnetic-radiometric survey flown by the SA government as part of the South Australian Exploration Initiative.

Previous exploration completed by UraniumSA on EL3655 comprised an airborne electromagnetic survey over the western four sections of the tenement to define palaeochannels for uranium exploration (Warland, 2008). No further exploration was completed on EL3655 until the work described in this report.

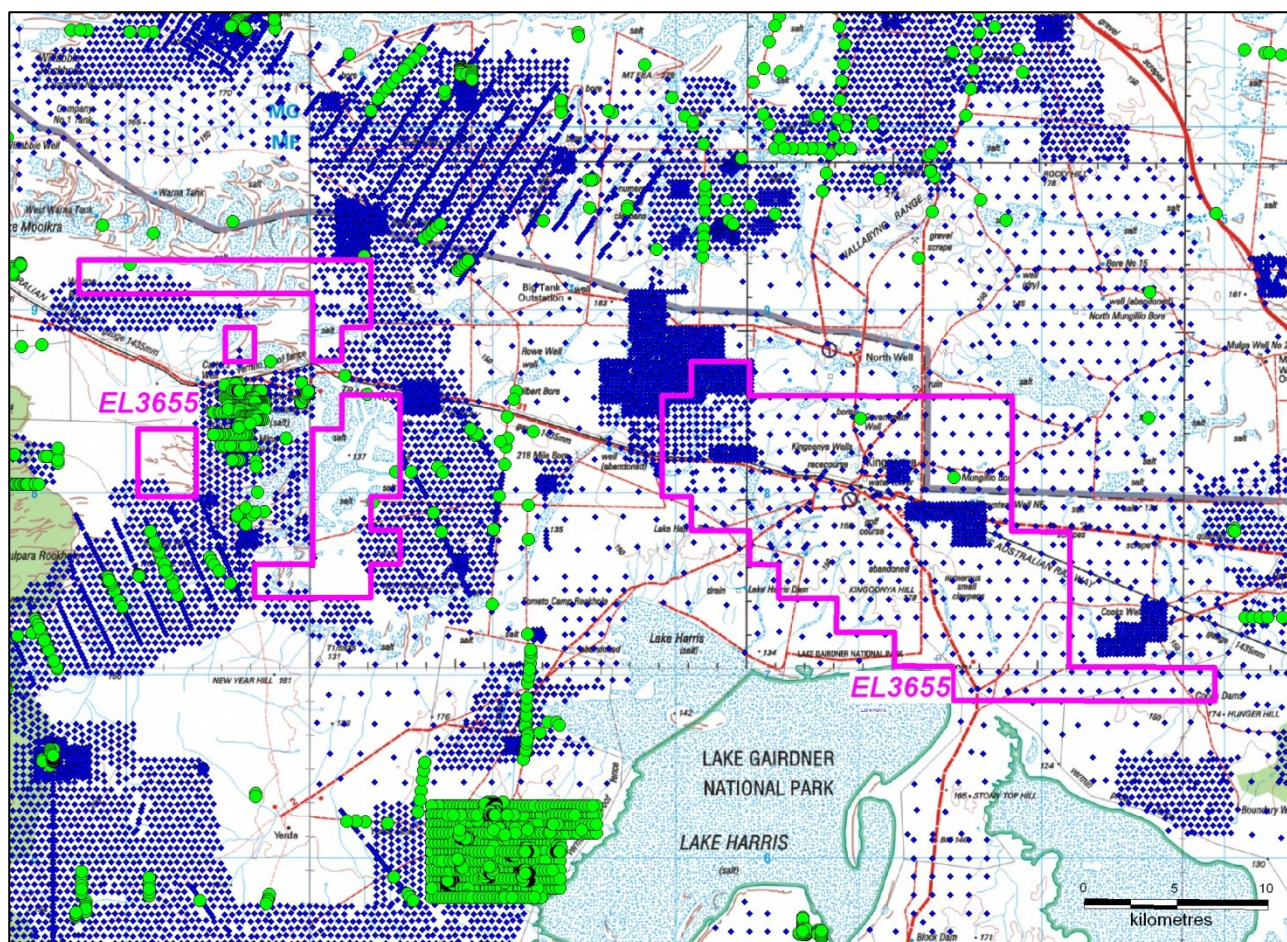


Figure 6 EL3655 Previous Calcrete Sampling (blue diamonds) and drill hole collars (green dots); data from SARIG

Table 1 Previous Exploration Licences overlapping current EL3655

Tenement	Licencees	Operators	Location	Expiry
EL14	Utah Development Co Ltd (100%)	null	MCDOUALL PEAK	4/10/1973
EL56	Abandon Holdings NI (100%)	null	CARTERS WELL	29/03/1975
EL580	Afmeco Pty Ltd (100%)	null	TARCOOLA	15/01/1982
EL694	Afmeco Pty Ltd (100%)	null	TARCOOLA	10/08/1982
EL407	Aberfoyle Exploration Pty Ltd (100%)	null	TARCOOLA	6/06/1980
EL554	Amoco, Minerals Australia Co.	null	MT EBA	12/11/1981
EL966	Amoco, Minerals Australia Co.	null	MT EBA	17/10/1984
EL1017	Amoco, Minerals Australia Co.	null	MT FINKE	27/01/1984
EL752	Santos Ltd (100%)	null	GLENLOTH GOLDFIELD	19/10/1982
EL759	Utah Development Co Ltd (100%)	null	CLUCAS HILL	30/11/1981
EL1055	Afmeco Pty Ltd (100%)	null	TARCOOLA	18/10/1987
EL1460	Clarke, David Brian	null	TARCOOLA	6/12/1992
EL1315	Rio Tinto Exploration Pty Limited (100%)	null	MT EBA	9/01/1990
EL1400	Tarcoola Gold Ltd (100%)	null	BLACK CAMP HILL	28/10/1987
EL1764	Olliver Geological Services Pty Ltd (100%)	Olliver Geological Services Pty Ltd	KINGOONYA	15/09/1993
EL1798	Resolute Resources Pty Limited (50%); Dominion Gold Operations Pty Ltd (50%)	Resolute Resources Pty Limited; Mount Isa Mines Limited	KINGOONYA AREA	15/11/1997
EL1823	Mount Isa Mines Limited (40%); Alkali Exploration NI (10%); Seistend Pty Ltd (10%); Oakman Pty Ltd (10%); Aurelius Resources Pty Ltd (10%); Conor, Colin; Allender, James Fraser	Mount Isa Mines Limited	TARCOOLA - KINGOONYA AREA	3/03/1998
EL1662	Dryga, Paul Hartmut	null	EAREA DAM	23/11/1990
EL1955	Resolute Resources Pty Limited (50%); Dominion Gold Operations Pty Ltd (50%)	Resolute Resources Pty Limited; Dominion Gold Operations Pty Ltd; Mount Isa Mines Limited	LAKE LABYRINTH AREA	26/07/1999
EL1958	Flint, Warwick John	Flint, Warwick John	FERGUSON AREA	26/01/1995
EL1827	Clarke, David Brian	Clarke, David Brian	TARCOOLA AREA	21/03/1998
EL2091	Deep Well Pty Ltd (100%)	Deep Well Pty Ltd; Mount Isa Mines Limited	FERGUSON AREA	12/06/2000
EL2174	Redport Ltd (50%); Kelaray Pty Ltd (50%)	Redport Ltd	KINGOONYA AREA	2/06/1999
EL2351	Australian Continental Mining NI (100%)	Australian Continental Mining NI	LAKE HARRIS AREA	29/05/1998
EL2253	Redport Ltd (50%); Magnesium International Ltd (50%)	Magnesium International Ltd	ROCKY HILL AREA	9/01/2000
EL2510	Gravity Capital Ltd (100%)	Gravity Capital Ltd	TARCOOLA AREA	20/04/2003
EL2518	Mount Isa Mines Limited (100%)	Mount Isa Mines Limited	Tarcoola-Kingoonya area	24/05/2003
EL2466	Mount Isa Mines Limited (100%); Dominion Gold Operations Pty Ltd (%)	Dominion Gold Operations Pty Ltd; Mount Isa Mines Limited	KINGOONYA AREA	2/12/2002
EL2748	Deep Well Pty Ltd (100%)	Deep Well Pty Ltd	Ferguson area - Approx 40 km W of Kingoonya	5/09/2005
EL2636	Dominion Gold Operations Pty Ltd (100%)	Dominion Gold Operations Pty Ltd	Lake Labyrinth area - Approx 30km NW of Kingoonya	26/08/2004
EL2842	Minex (Aust) Pty Ltd (100%)	Minex (Aust) Pty Ltd; BHP Billiton Minerals Pty Ltd	Talia Hill Area - Yellabinna Regional Reserve	18/09/2006
EL2961	South Australian Iron Ore Group Pty Ltd (100%)	Centrex Metals Limited	Lake Moolkra area - Approx 40 km SE of Tarcoola	23/11/2005
EL3089	Hiltaba Gold Pty Ltd (100%)	Hiltaba Gold Pty Ltd; Samphire Uranium Pty Ltd	Tarcoola Area	1/06/2008
EL3107	Range River Gold Ltd (Administrator Appointed) (100%)	Minotaur Operations Pty Ltd; Mithril Resources Limited; Toro Energy Limited; Range River Gold Ltd	Glenloth area - approx 45 km SE of Tarcoola	10/07/2008
EL3120	Dominion Gold Operations Pty Ltd (100%)	Resolute Resources Pty Limited; Minotaur Operations Pty Ltd; Toro Energy Limited; Dominion Gold Operations Pty Ltd	Kingoonya area - approx 70 km ESE of Tarcoola	13/08/2008
EL2974	Terramin Australia Limited (100%)	null	LAKE LABYRINTH AREA	24/06/2003
EL3252	Dominion Gold Operations Pty Ltd (100%)	Resolute Resources Pty Limited; Minotaur Operations Pty Ltd; Toro Energy Limited; Dominion Gold Operations Pty Ltd	Lake Labyrinth area - Approx 30 km NW of Kingoonya	28/09/2009
EL3157	Minotaur Operations Pty Ltd (100%)	Minotaur Uranium Pty Ltd; OZ Minerals Prominent Hill Operations Pty Ltd	Yerda Well area - Approx 50 km SE of Tarcoola	19/01/2009
EL3198	Genex Resources Pty Ltd (100%)	Genex Resources Pty Ltd	Big Tank Outstation area - Approx 20km W of Kingoonya	27/04/2008
EL3211	Marathon Resources Limited (100%)	Marathon Resources Limited; Samphire Uranium Pty Ltd	Mulga Well area - Approx 90km SE of Tarcoola	21/06/2009
EL3527	Abbey Feale Mining Pty Ltd (100%)	Abbey Feale Mining Pty Ltd	Ferguson area - approx 40km W of Kingoonya	27/02/2011
EL3529	Doray Minerals Limited (100%)	Doray Minerals Limited	Centre Hill area - Approx 20 km west of Kingoonya	6/03/2011
EL3817	Minex (Aust) Pty Ltd (100%)	Minex (Aust) Pty Ltd	Talia Hill - approx 130km N of Ceduna	25/06/2009

8. EXPLORATION COMPLETED

Exploration completed during the first year of tenure of EL3655 comprised:

- Conclusion of a Native Title Mining Agreement with the Gawler Ranges Native Title claimant group
- A ground gravity survey comprising 386 stations on EL3655
- An airborne magnetic survey on north-south lines at 100 metre intervals, for a total of 662 line kilometres within EL3655
- Compilation of precompetitive and open file exploration (see 7 PREVIOUS EXPLORATION) data.

Ground Gravity Surveying

Ground gravity surveying was completed by Atlas Geophysics on a 400m by 400m grid over the southeastern part of the tenement. A total of 386 stations were surveyed within EL3655 (Figure 7); survey data are presented in Appendix 1.

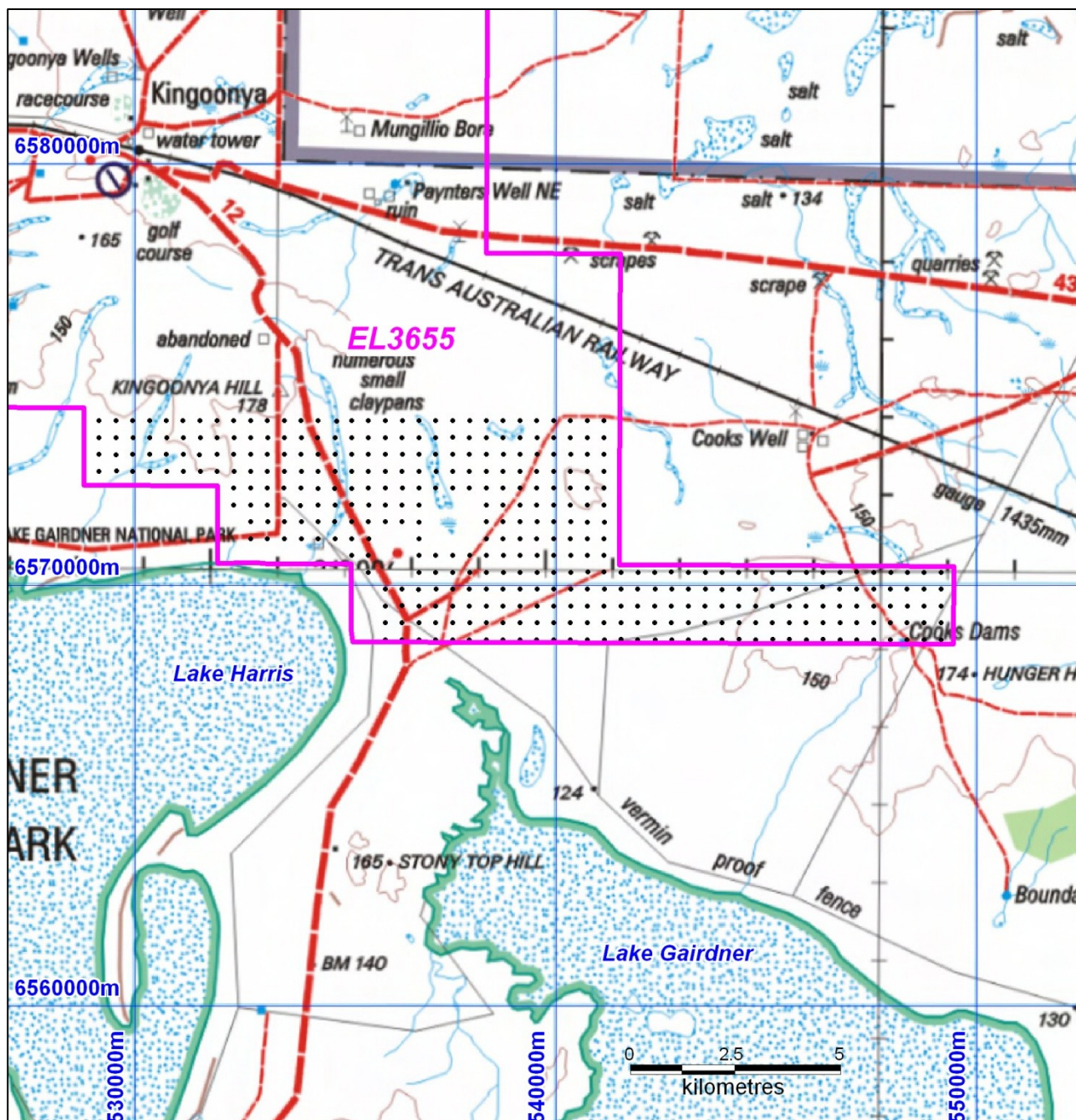


Figure 7 Location of Ground Gravity Stations (GDA94, Zone 53; 1:150,000; stations = black dots)

Images of the gravity data within EL3655 include:

- Residual Bouguer Anomaly with 1km upward continuation (Figure 8)
- Residual Bouguer Anomaly with 2.5km high pass filter (Figure 9)
- Residual Bouguer Anomaly with 5km high pass filter (Figure 10)

The 5km high pass filter image, in particular, (Figure 10) demonstrates a clear relationship between positive gravity anomalies and NNW-trending linear magnetic highs that are interpreted to represent mafic dykes of the 827Ma Gairdner swarm. These dykes do not represent targets for IOCG mineralisation. Further integration of the gravity data with other geophysical and geological datasets is required in order to determine potential targets for diamond drilling in EL3655.

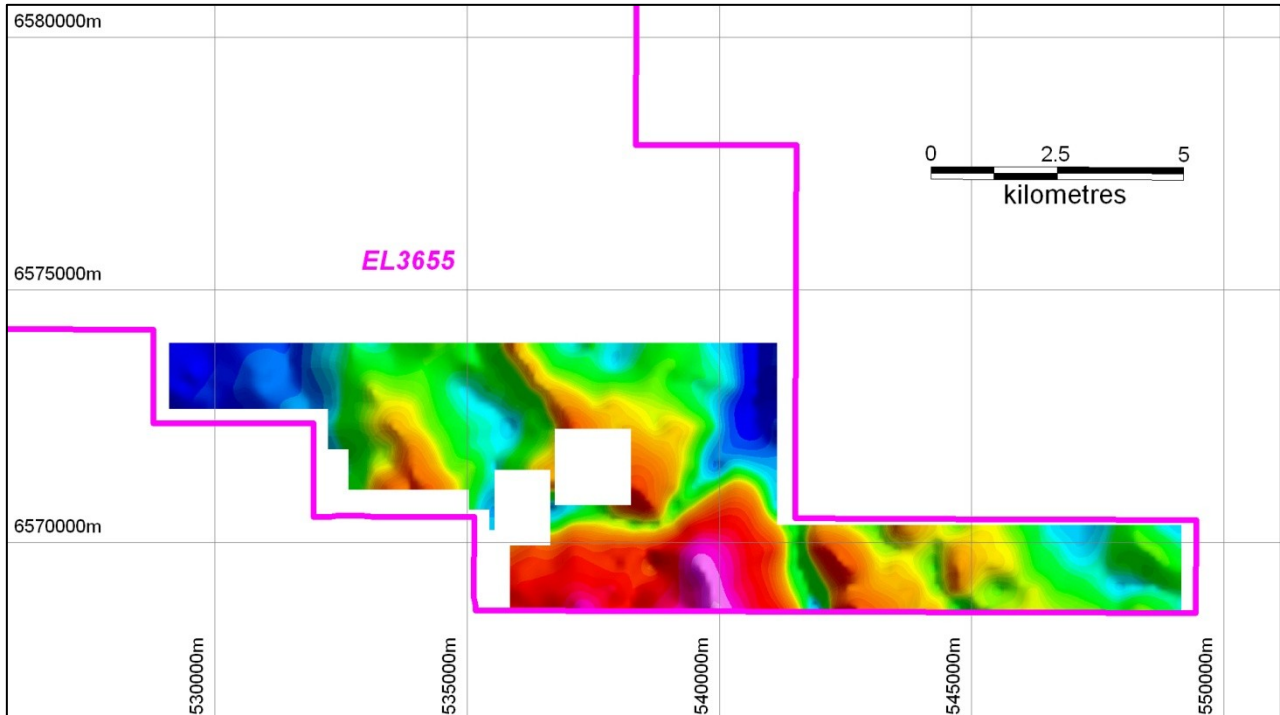


Figure 8 EL3655 1km Upward Continuation Residual Gravity Image (GDA94, Zone 53; 1:150,000)

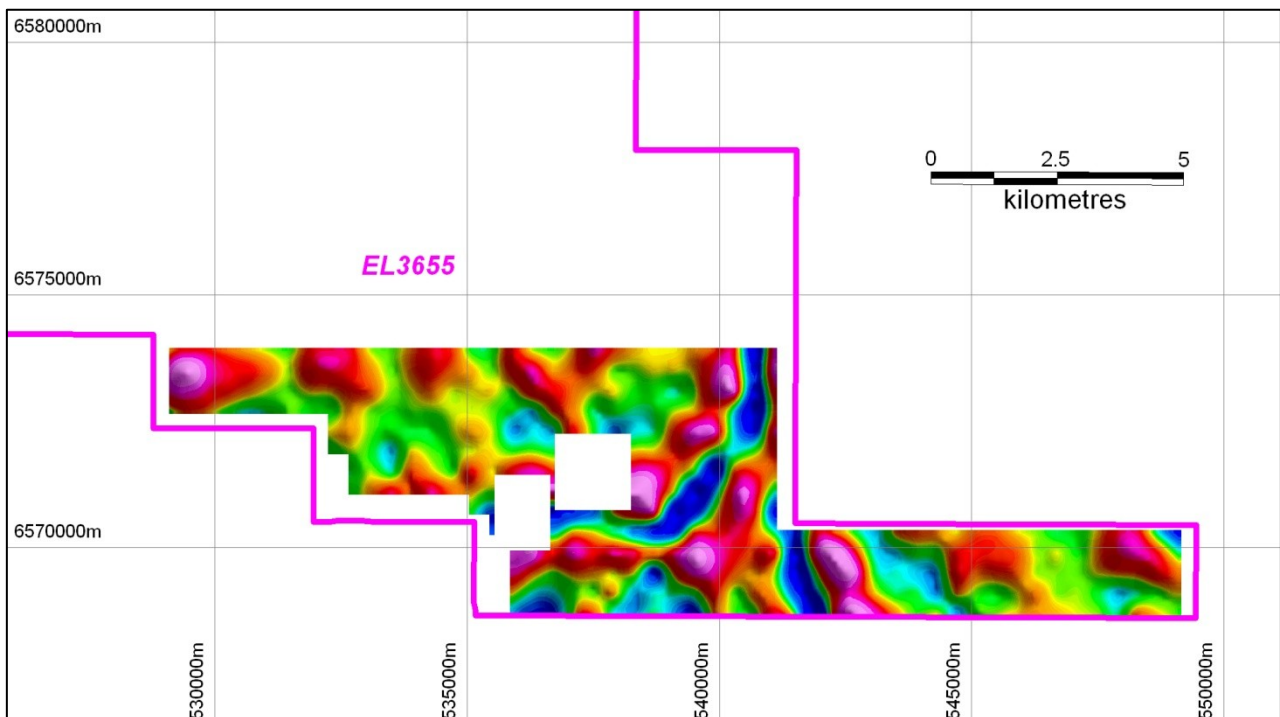


Figure 9 EL3655 2.5km High Pass Residual Gravity Image (GDA94, Zone 53; 1:150,000)

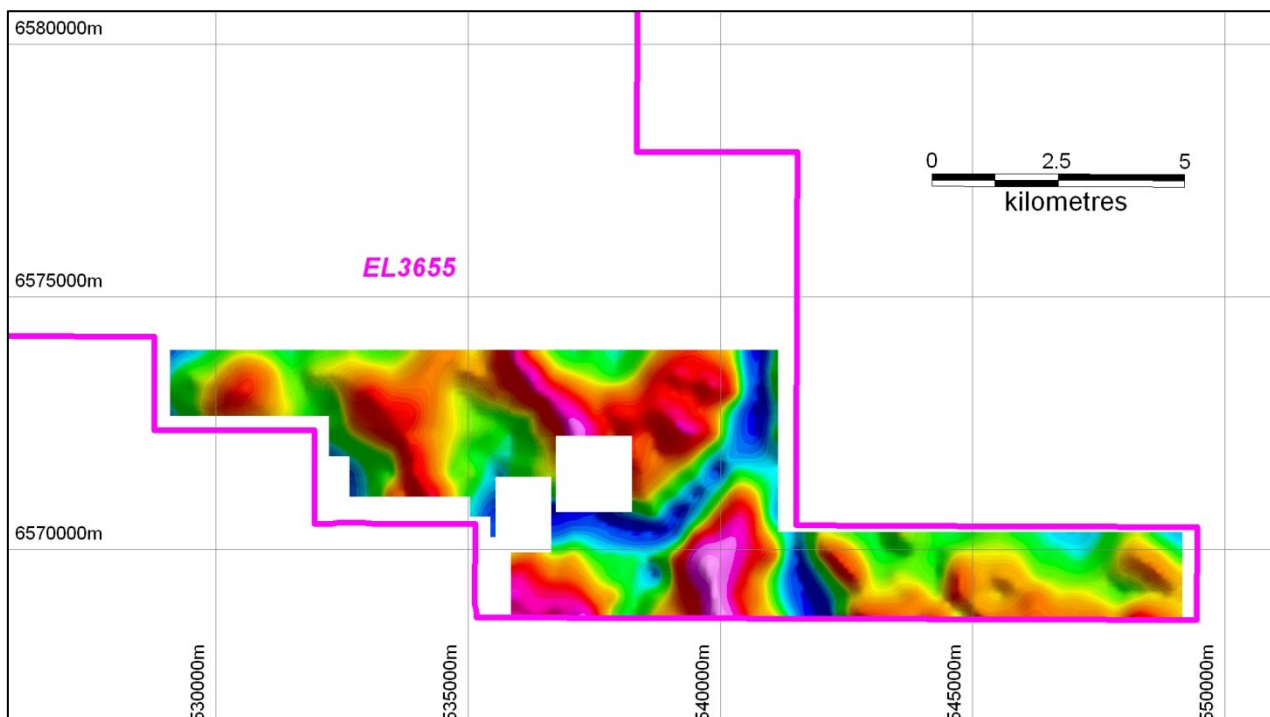


Figure 10 EL3655 5km High Pass Residual Gravity Image (GDA94, Zone 53; 1:150,000)

Airborne Magnetic Surveying

Airborne magnetic and radiometric surveying of EL3655 was completed as part of a survey of the Gairdner Project completed by Aeroquest Airborne in September 2011, referred to by the contractor as the Glendambo survey. A total of 662 line kilometres were surveyed within EL3655 (out of the survey total of 4144 line kilometres), on north-south lines 100 metres apart with east-west tie lines 1000 metres apart (Figure 11).

The logistics report and digital data for the entire magnetic-radiometric survey is presented in Appendix 2. Summary specifications are as follows:

General Survey Equipment

- FU24 – 954 fixed wing survey aircraft
- Aeroquest Airborne proprietary flight planning system
- Georesearch high speed digital data acquisition and survey navigation system
- Novatel, OEMV5, 12 channel precision navigation GPS
- OMNISTAR real time differential GPS system
- Aeroquest Airborne post mission data verification and processing system
- Bendix/King KRA-405 radar altimeter.

Magnetic Data Acquisition Equipment

- Aeroquest Airborne tail stinger magnetometer installation
- Cesium Vapour total field magnetometer
- Fluxgate three component vector magnetometer
- RMS Aeromagnetic Automatic Digital Compensator (AADC II)
- Diurnal monitoring magnetometer (Scintrex Envimag or Geometrics GR-856).

Radiometric Data Acquisition Equipment

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

(Mag-Rad data - see Government of South Australia Mineral Resources Website)

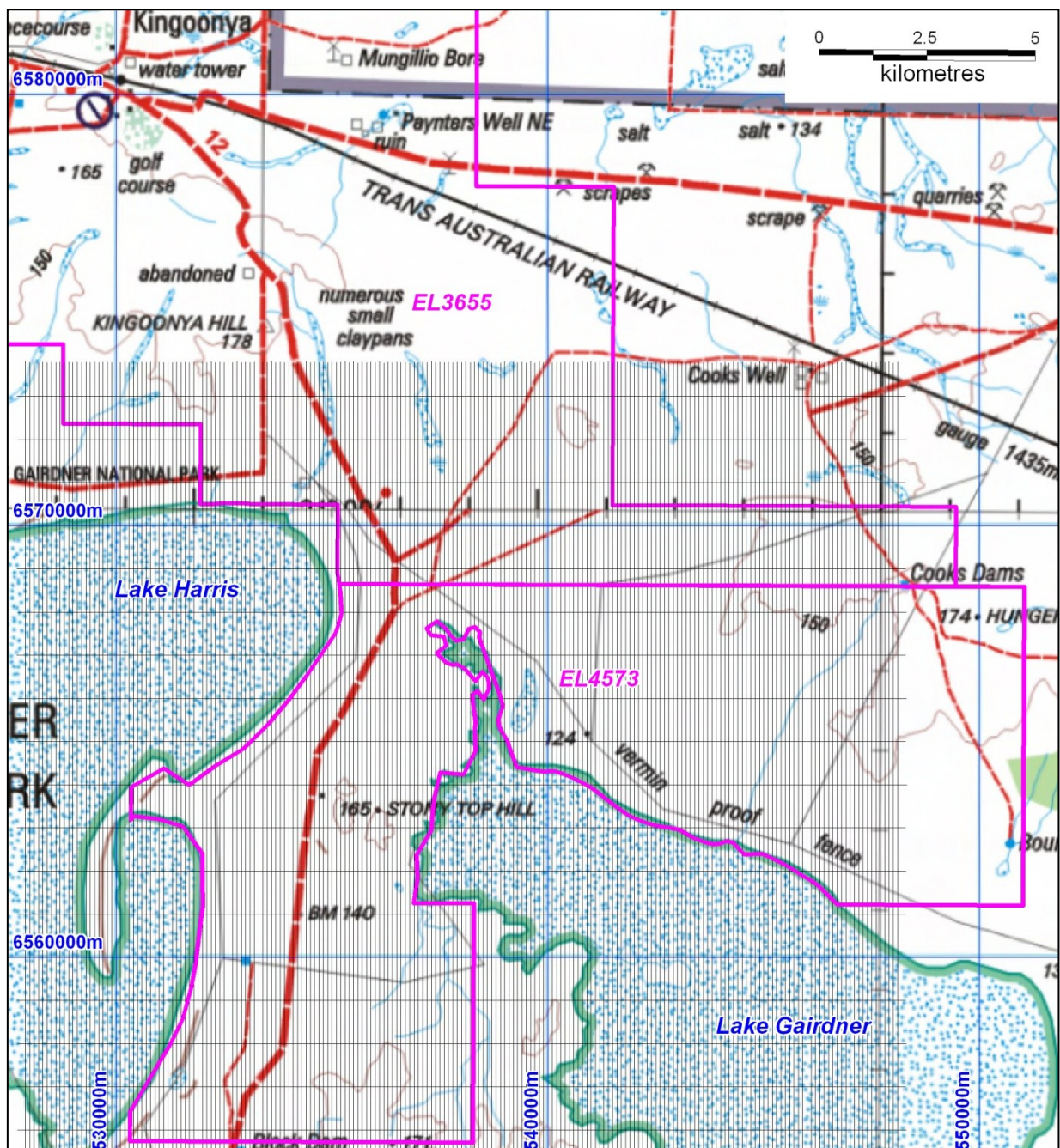


Figure 11 Location of Airborne Magnetic-Radiometric Survey Lines (GDA94, Zone 53; 1:150,000)

Images of the magnetic and radiometric data within EL3655 include:

- TMI RTP (Figure 12)
- Grey scale first vertical derivative of TMI RTP (Figure 13)
- Ternary K-Th-U RGB radiometrics (Figure 14).

The magnetic images are dominated by the overall shell-back anomaly on the southern margin of EL3655 (and adjacent EL4573) that first attracted Stellar Resources to the project area (by analogy with IOCG systems including Carrapateena) and by northwest trending, relatively narrow mafic dykes of the 827Ma Gairdner swam.

Further integration of the magnetic data with other geophysical and geological datasets is required in order to determine potential targets for diamond drilling in EL3655.

(Mag-Rad data - see Government of South Australia Mineral Resources Website)

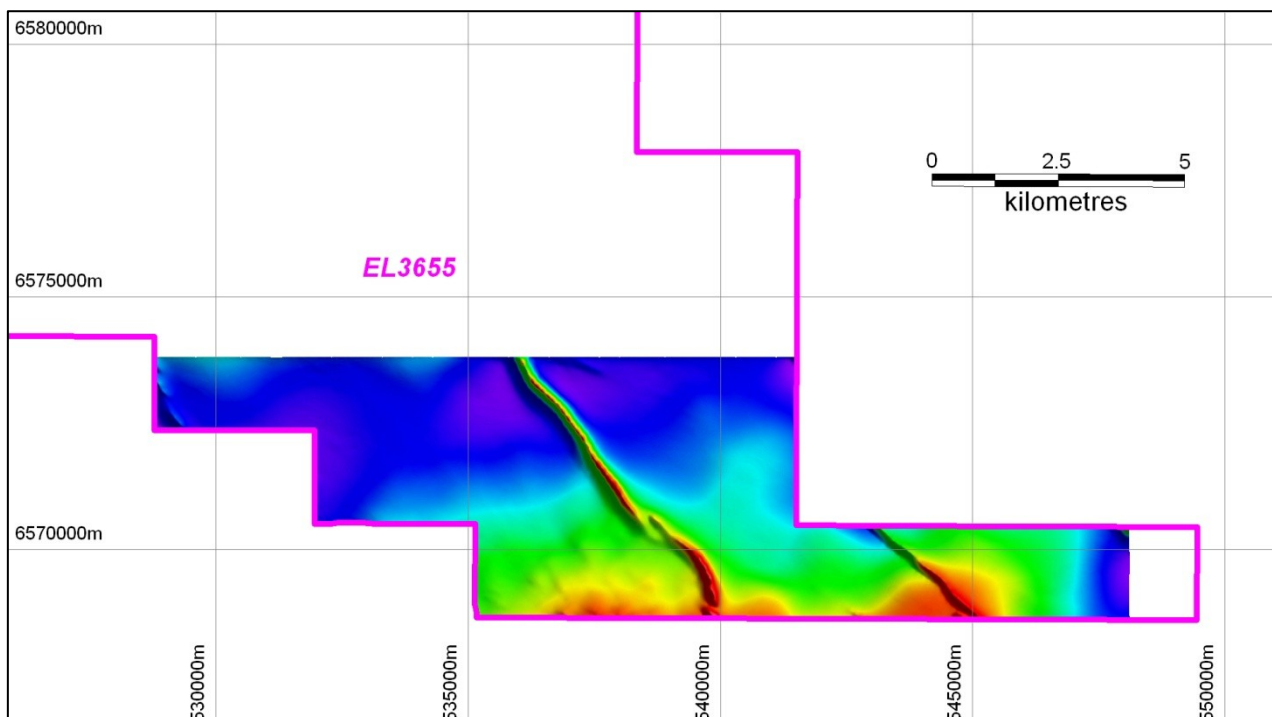


Figure 12 EL3655 TMI RTP Image (GDA94, Zone 53; 1:150,000)

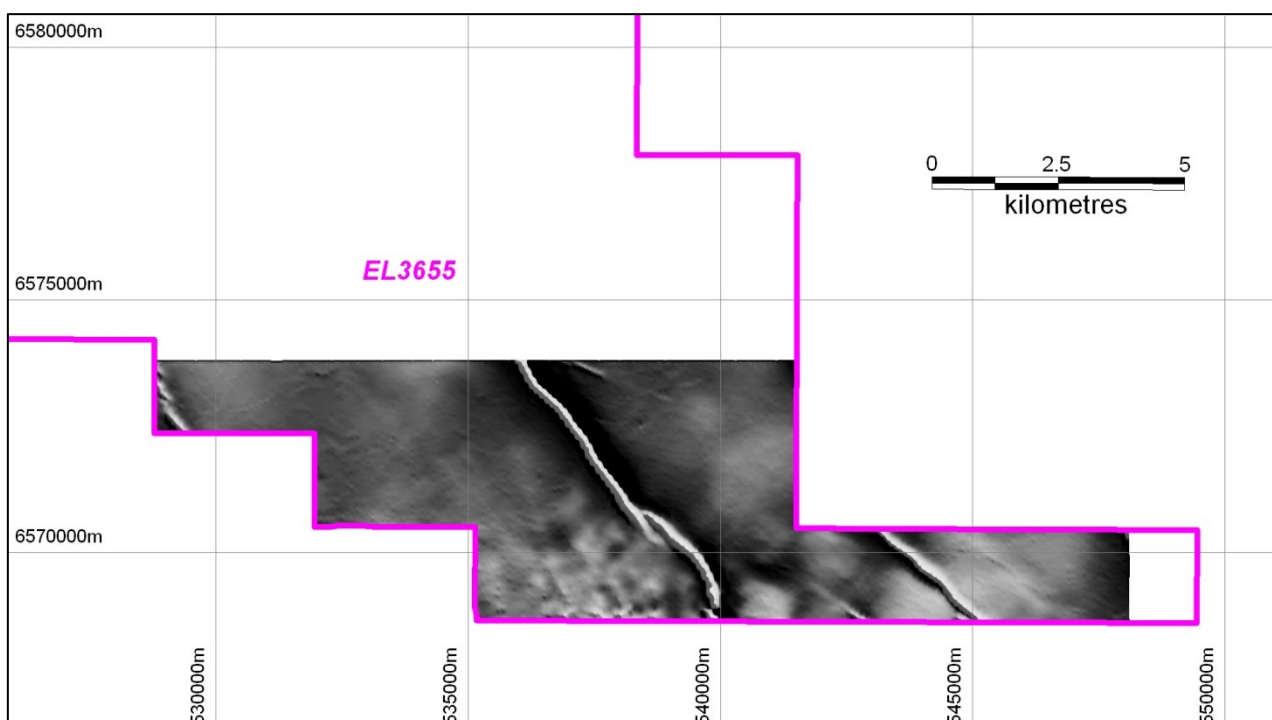


Figure 13 EL3655 TMI RTP Image (GDA94, Zone 53; 1:150,000)

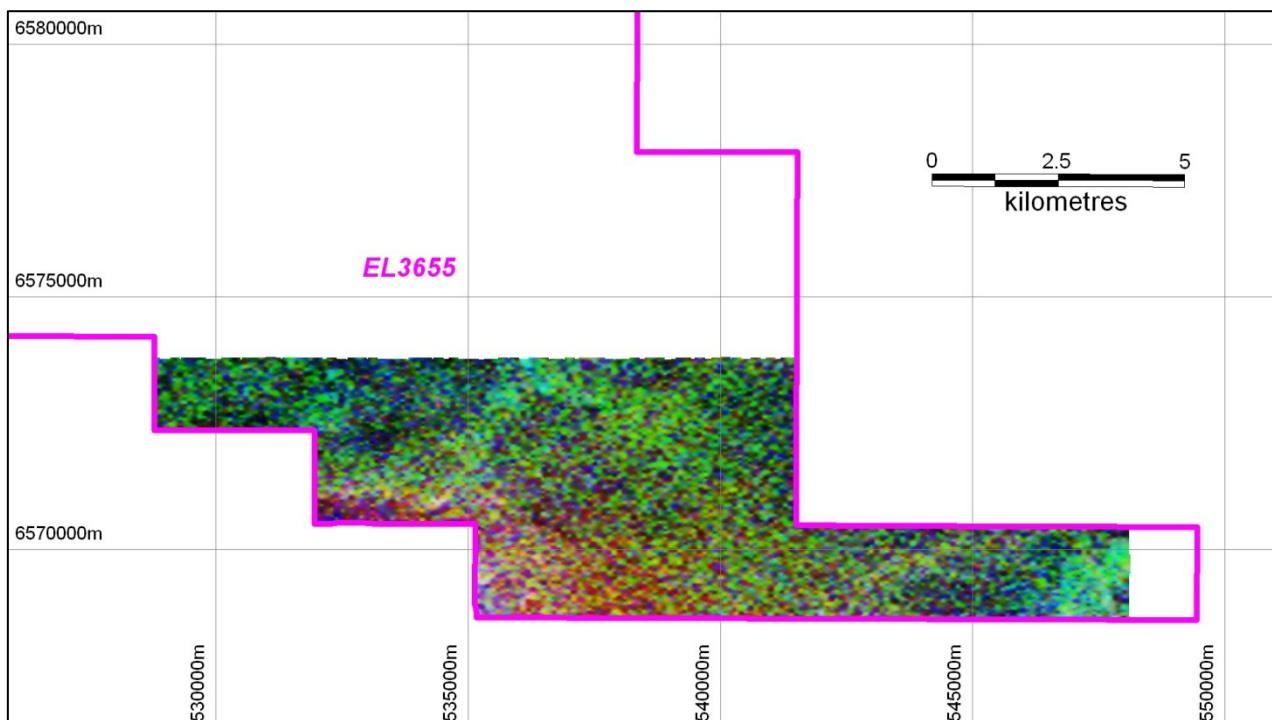


Figure 14 EL3655 Ternary K-Th-U RGB Radiometric Image (GDA94, Zone 53; 1:150,000)

9. EXPENDITURE

Expenditure for the fifth year of tenure for EL3655, to 26 November 2011, was \$123,847. The minimum expenditure commitment was \$100,000.

Field Supplies	\$358
Geological Activities	\$60,550
Geophysical Activities	\$57,771
Travel	\$5,169
TOTAL	\$123,847

10. CONCLUSIONS & RECOMMENDATIONS

Airborne magnetic and ground gravity surveying have defined more detailed anomalies within the broad “shell-back” magnetic feature targeted by AngloGold Ashanti for potential IOCG mineralisation. These anomalies are interpreted to mainly relate to 827Ma, NNW-trending Gairdner Suite mafic dykes, which are not related to any known mineralisation. Further interpretation of the geophysical datasets, possibly with follow-up detailed geophysical surveying of selected targets, is recommended before drilling targets can be finalised.

11. REFERENCES

Warland, N G, 2008, Annual Technical Report for the period ending 26th November 2007 EL 3655 ‘Kingoonya’

Gairdner Gravity Survey

AngloGold Ashanti Limited

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G E O P H Y S I C S

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APPENDICES

Appendix A	Control Station Descriptions
Appendix B	Plots and Imagery
Appendix C	GPS Control Information
Appendix D	Data DVD

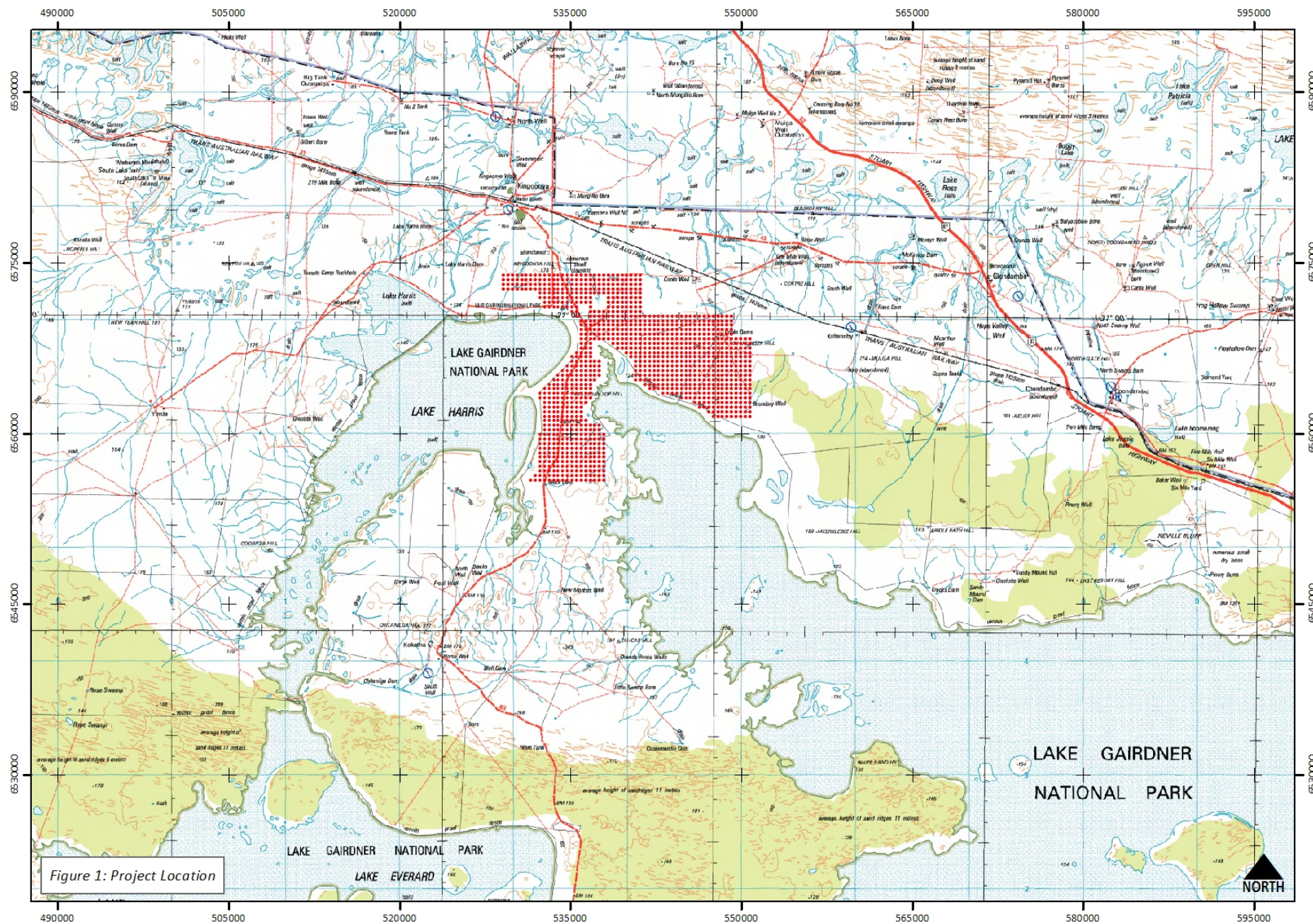
1.0 Project Brief

Project P2011015 required the acquisition and processing of 1,142 gravity stations over tenements held by AngloGold Ashanti Limited. The gravity survey was located over an area known as Gairdner, about 10km south of Kingoonya, in central South Australia (Figure 1). The survey area can be accessed using an unsealed road that travels SE from Kingoonya town site and Trans Continental Road.

Acquisition commenced on 23rd April 2011 and was completed 29th April 2011 with final data delivered shortly thereafter.

Gravity data were acquired using a 400m square grid configuration, with all points covering one single area. Appendix B contains a plot of the locations of acquired gravity stations.

Acquisition was carried out using two ATV's, each with a single operator. The crew were accommodated and messed at the Kingoonya Hotel.



2.0 Equipment and Instrumentation

The following instrumentation was used for acquisition of the gravity data:

- Two Scintrex CG5 Autograv Gravity Meters (Serial Numbers 40298, 40269, SF 1.000000)
- Three Leica System 1200 GPS-Glonass receivers
- One Leica System 500 GPS receiver

Ancillary equipment included:

- Two HP Laptop computers for data download and processing
- Magellan FX324 autonomous GPS receivers for navigation
- Iridium satellite phones for long distance communications
- Personal Protective Equipment for all personnel
- Batteries, battery chargers, solar cells, UPS System
- Survey consumables
- Tools, engineering and maintenance equipment for vehicle servicing
- First aid and survival kits
- Tyres and recovery equipment
- GeoPro satellite tracking devices for long distance communication and tracking

3.0 Calibration and Control

The gravity meters used for survey have been recently calibrated on the Guildford Cemetery – Helena Valley Primary School calibration range (2010990117- 2010990217) in Western Australia. The calibration process has validated the gravity meter's scale factor to ensure reduction of the survey data produces correct Observed Gravities from measured dial reading values.

A single GPS-Gravity control station (201101500001 Kingoonya) was established on 22nd April, 2011 to control field observations. Appendix A contains a description for the station.

Primary GPS control was established by submitting static data to Geoscience Australia's AUSPOS processing system to produce first-order geodetic coordinates accurate to better than 10mm for the x, y and z observables. Multiple days of static GPS data have been submitted to ensure accuracy and reliability of the solution. The details of the control process have been summarised in a table included in Appendix C.

Primary gravity control was established at the same location as the primary GPS control station. Once tied to the Australian Fundamental Gravity Network (AFGN), the gravity control station allowed all field gravity observations to be tied to the Australian Absolute Gravity Datum 2007 (AAGD07). An accurate observed or absolute gravity value for the control station was established via "ABA" ties with the project gravity meters to AFGN "1994932503" at the Mobil Roadhouse in Glendambo, on the 22nd and 30th April 2011. Expected accuracy of the tie survey would be 0.01 mGal (0.1gu).

4.0 GPS-Gravity Acquisition

Gravity data were acquired concurrently with GPS data using two Scintrex CG5 gravity meters. Data were acquired in a single shift of 10 hours duration, with each shift consisting of a single loop controlled by observations at the gravity control station. Each loop contained a minimum of two repeated readings so that an interlocking network of closed loops was formed. A total of **5.52%** repeats were acquired for quality control purposes. Repeat readings were evenly distributed on a time-basis throughout each of the gravity loops.

GPS data were acquired with the rover receivers operating in post-process kinematic (PPK) mode. When carrying out acquisition with an ATV, the GPS-Glonass sensor is mounted on the front of the ATV (fixed antenna heights of 1.49m and 1.545m) and the PPK data are logged by the receivers inside a protective case mounted to the front of the ATV. Static data were logged at the control station for submission to AUSPOS for delivery of final coordinates.

5.0 GPS Processing and QA

The acquired GPS and Glonass raw data were processed nightly in the field using Novatel Waypoint GrafNav v8.3 post-processing software. The resulting data (in Atlas Geophysics PPK standard format) were then imported into Atlas Geophysics Reduction and Interpretation Software (AGRIS) for QA and use in the reduction of the gravity data.

Projection from GPS-Glonass derived WGS84/GDA94 coordinates to Map Grid of Australia (MGA) coordinates was performed in GrafNav. For most practical applications where a horizontal accuracy of only a metre or greater is required, GDA94 coordinates can be considered the same as WGS84. MGA coordinates were obtained by projecting the GPS-derived WGS84 coordinates onto MGA Zone 53S using a Universal Transverse Mercator (UTM) projection. Elevations above the Australian Height Datum (AHD) were modelled using GrafNav software and the AUSGEOID98 geoid model.

A module built into AGRIS allowed the user to import the positional data from GrafNav and examine quality factors such as station repeatability between multiple control stations, coordinate velocity, dilution of precision, coordinate quality factor and standard error for each gravity station location. The procedure is carried out before merging the positional data with gravity data for final reduction to Bouguer anomaly. Comprehensive statistics, repeatability analysis and histogram plotting are also performed.

Quality control procedures were applied to the GPS-Glonass data on a daily basis and any gravity stations not conforming to the quoted specifications were repeated by the company at no cost to the client.

6.0 Gravity Processing and QA

The acquired gravity data were processed using the company's in-house gravity pre-processing and reduction software, AGRIS. This software allows for full data pre-processing, reduction to Bouguer Anomaly, repeatability and statistical analysis, as well as full quality analysis of the output dataset.

Once downloaded from the gravity meter, the data are analysed for consistency and preliminary QA is performed to check that observations meet specification for standard deviation, reading rejection, temperature and tilt values. Once the data are verified, the software averages the multiple readings and performs a merge with the GPS data (which it has also previously verified) and performs a linear drift correction and earth tide correction. Any gravity stations not conforming to the quoted specifications were repeated by the company at no cost to the client.

The following corrections were applied to the dataset to produce Spherical Cap Bouguer Anomalies on the GRS80 ellipsoid and AAGD07 gravity datum. For legacy reasons, Geoidal Bouguer Anomalies on the Australian Height Datum (AHD) and ISO GAL84 gravity datum have also been calculated. The formulae below produce data in μms^{-2} or gravity units. To convert to mGal, divide by a factor of 10.

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

$$r_c = 10 \cdot (r \cdot S(r))$$

where,

r_c corrected reading in gravity units
 r gravity meter reading in dial units
 $S(r)$ scale factor (dial units/milliGal)

Earth Tide Correction: The earth is subject to variations in gravity due to the gravitational attraction of the Sun and the Moon. These background variations can be corrected for using a predictive formula which utilises the gravity observation position and time of observation. The Scintrex CG5 gravity meter automatically calculates ETC but uses only an approximate position for the gravity observation so is not entirely accurate. For this reason, the Scintrex ETC is subtracted from the reading and a new correction calculated within AGRIS software.

$$r_t = r_c + g_{tide}$$

where,

r_t tide corrected reading in gravity units
 r_c scale factor corrected reading in gravity units
 g_{tide} Earth Tide Correction (ETC) in gravity units

Instrument Drift Correction: Since all gravity meters are mechanical they are all prone to instrument drift. Drift can be caused by mechanical stresses and strains in the spring mechanism as the meter is moved, knocked, reset, subjected to temperature extremes,

subjected to vibration, unclamped etc. The most common cause of instrument drift is due to extension of the sensor spring with changes in temperature (obeying Hooke's law). To calculate and correct for daily instrument drift, the difference between the gravity control station readings (closure error) is used to assume the drift and a linear correction is applied.

$$ID = \frac{r_{cs2} - r_{cs1}}{t_{cs2} - t_{cs1}}$$

where,

ID	Instrument Drift in gu/hour
r_{cs2}	control station 2nd reading in gravity units
r_{cs1}	control station 1st reading in gravity units
t_{cs2}	control station 2 time
t_{cs1}	control station 1 time

Observed Gravity: The preceding corrections are applied to the raw gravity reading to calculate the earth's absolute gravitational attraction at each gravity station. The corrections produced Observed Gravities on the AAGD07 and ISOGAL84 datums.

$$G_o = g_{cs1} + (r_t - r_{cs1}) - (t - t_{cs1}) \cdot ID$$

where,

G_o	Observed Gravity in gravity units (ISOGAL84 or AAGD07)
g_{cs1}	control station 1 known Observed Gravity in gravity units
r_t	tide corrected reading in gravity units
r_{cs1}	control station 1 reading in gravity units
t	reading time
t_{cs1}	control station 1 time
ID	instrument drift in gravity units/hour

Theoretical Gravity 1980: The theoretical (or normal) gravity value at each gravity station is calculated based on the assumption that the Earth is a homogeneous ellipsoid. The closed form of the 1980 International Gravity Formula is used to approximate the theoretical gravity at each station location and essentially produce a latitude correction. Gravity values vary with latitude as the earth is not a perfect sphere and the polar radius is much smaller than the equatorial radius. The effect of centrifugal acceleration is also different at the poles versus the equator.

$$G_{t80} = 9780326.7715((1 + 0.001931851353(\sin^2 l))/(SQRT(1 - 0.0066943800229(\sin^2 l)))$$

where,

G_{t80}	Theoretical Gravity 1980 in gravity units
l	GDA94 latitude at the gravity station in decimal degrees

Theoretical Gravity 1967: The theoretical (or normal) gravity value at each gravity station is calculated based on the assumption that the Earth is a homogeneous ellipsoid. The 1967 variant of the International Gravity Formula is used to approximate the theoretical gravity at each station location and essentially produce a latitude correction. Gravity values vary with latitude as the earth is not a perfect sphere and the polar radius is much smaller than the

equatorial radius. The effect of centrifugal acceleration is also different at the poles versus the equator.

$$G_{t67} = (9780318.456 \cdot (1 + 0.005278895 \cdot \sin^2(l) + 0.000023462 \cdot \sin^4(l)))$$

where,

G_{t67} Theoretical Gravity 1967 in gravity units

l GDA94 latitude at the gravity station in decimal degrees

Atmospheric Correction: The gravity effect of the atmosphere above the ellipsoid can be calculated with an atmospheric model and is subtracted from the theoretical gravity.

$$AC = 8.74 - 0.00099 \cdot h + 0.0000000356 \cdot h^2$$

where,

AC Atmospheric Correction in gravity units

h elevation above the GRS80 ellipsoid in metres

Ellipsoidal Free Air Correction: Since the gravity field varies inversely with the square of distance, it is necessary to correct for elevation changes from the reference ellipsoid (GRS80). Gravitational attraction decreases as the elevation above the reference ellipsoid increases.

$$EFAC = -(3.087691 - 0.004398 \sin^2 l) \cdot h + 7.2125 \cdot 10^{-7} \cdot h^2$$

where,

$EFAC$ Ellipsoidal Free Air Correction in gravity units

l GDA94 latitude at the gravity station in decimal degrees

h elevation above the GRS80 ellipsoid in metres

Geoidal Free Air Correction: Since the gravity field varies inversely with the square of distance, it is necessary to correct for elevation changes from the reference geoid (AHD). Gravitational attraction decreases as the elevation above the reference geoid increases.

$$GFAC = (3.08768 - 0.00440 \sin^2(l)) \cdot h - 0.000001442 \cdot h^2$$

where,

$GFAC$ Free Air Correction in gravity units

l GDA94 latitude at the gravity station in decimal degrees

h elevation above the reference geoid (AHD) in metres

Spherical Cap Bouguer Correction: If a gravity observation is made above the reference ellipsoid, the effect of rock material between the observation and the ellipsoid must be taken into account. The mass of rock makes a positive contribution to the gravity value. The correction is calculated using the closed form equation for the gravity effect of a spherical cap of radius 166.7km, based on a spherical Earth with a mean radius of 6,371.0087714km, height relative the ellipsoid and rock densities of 2.67, 2.40 and 2.20 tm^{-3} (gm/cc).

$$SCBC = 2\pi G\rho((1 + \mu) \cdot h - \lambda R)$$

where,

SCBC Spherical Cap Bouguer Correction in gravity units
G gravitational constant = $6.67428 \cdot 10^{-11} \text{m}^3 \text{kg}^{-1} \text{s}^{-2}$
ρ rock density (2.67, 2.40 and 2.20 t m^{-3})
h elevation above the GRS80 ellipsoid in metres
R ($R_o + h$) the radius of the earth at the station
R_o mean radius of the earth = 6,371.0087714 km (on the GRS80 ellipsoid)
μ & *λ* are dimensionless coefficients defined by:

$$\mu = ((1/3) \cdot \eta^2 - \eta)$$

where,

$$\eta = h/R$$

$$\lambda = (1/3)\{(d + f\delta + \delta^2)[(f - \delta)^2 + k]^{\frac{1}{2}} + p + m \cdot \ln(n/(f - \delta + [(f - \delta)^2 + k]^{\frac{1}{2}}))\}$$

where,

$$\begin{aligned} d &= 3 \cdot \cos^2 \alpha - 2 \\ f &= \cos \alpha \\ k &= \sin^2 \alpha \\ p &= -6 \cdot \cos^2 \alpha \cdot \sin(\alpha/2) + 4 \cdot \sin^3(\alpha/2) \\ \delta &= (R_o/R) \\ m &= -3 \cdot k \cdot f \\ n &= 2 \cdot [\sin(\alpha/2) - \sin^2(\alpha/2)] \\ \alpha &= S/R_o \text{ with } S = \text{Bullard B Surface radius} = 166.735 \text{ km} \end{aligned}$$

Geoidal Bouguer Correction: If a gravity observation is made above the reference geoid, the effect of rock material between the observation and the ellipsoid must be taken into account. The mass of rock makes a positive contribution to the gravity value. The slab of rock makes a positive contribution to the gravity value. Rock densities of 2.67, 2.40 and 2.20 t m^{-3} (gm/cc) were used in the correction.

$$GBC = 0.4191 \cdot \rho \cdot h$$

where,

GBC Geoidal Bouguer Correction in gravity units
ρ rock density (2.67, 2.40 and 2.20 t m^{-3})
h elevation above the reference geoid (AHD) in m

Terrain Correction: The terrain correction accounts for variations in gravity values caused by variations in topography near the observation point. The correction accounts for the attraction of material above the assumed Bouguer slab and for the over-correction made by the Bouguer correction when in valleys. The terrain correction is positive regardless of whether the local topography consists of a mountain or a valley. Terrain corrections were not applied on this project as the survey area was flat and devoid of any appreciable topography.

Ellipsoidal Free Air Anomaly: The Ellipsoidal Free Air Anomaly is the difference between the observed gravity and theoretical gravity that has been computed for latitude and corrected for the elevation of the gravity station above or below the reference ellipsoid.

$$EFAA = G_{oAAGD07} - (G_{t80} - AC) - EFAC$$

where,

EFAA Ellipsoidal Free Air Anomaly in gravity units

G_o Observed Gravity on the AAGD07 datum in gravity units

G_{t80} Theoretical Gravity 1980 in gravity units

AC Atmospheric Correction in gravity units

EFAC Ellipsoidal Free Air Correction in gravity units

Geoidal Free Air Anomaly: The Geoidal Free Air Anomaly is the difference between the observed gravity and theoretical gravity that has been computed for latitude and corrected for the elevation of the gravity station above or below the reference geoid.

$$GFAA = G_{oISOGAL84} - G_{t67} + GFAC$$

where,

GFAA Free Air Anomaly in gravity units

G_o Observed Gravity on the ISOGAL84 datum in gravity units

G_{t67} Theoretical Gravity 1967 in gravity units

GFAC Geoidal Free Air Correction in gravity units

Spherical Cap Bouguer Anomaly: The Spherical Cap Bouguer Anomaly is computed from the Ellipsoidal Free Air Anomaly above by removing the attraction of the spherical cap calculated by the Spherical Cap Bouguer Correction.

$$SCBA = EFAA - SCBC$$

where,

SCBA Spherical Cap Bouguer Anomaly in gravity units

EFAA Ellipsoidal Free Air Anomaly in gravity units

SCBC Bouguer Correction in gravity units

Geoidal Bouguer Anomaly: The Geoidal Bouguer Anomaly is computed from the Geoidal Free Air Anomaly above by removing the attraction of the slab calculated by the Geoidal Bouguer Correction.

$$GBA = GFAA - GBC$$

where,

GBA Geoidal Bouguer Anomaly in gravity units

GFAA Geoidal Free Air Anomaly in gravity units

GBC Geoidal Bouguer Correction in gravity units

Complete Bouguer Anomaly: This is obtained by adding the terrain correction to the Bouguer Anomaly (Spherical Cap or Geoidal). The Complete Bouguer Anomaly is the most interpretable value derived from a gravity survey as changes in the anomaly can be directly attributed to lateral density contrasts within the geology below the observation point.

$$CBA = BA + TC$$

where,

CBA Complete Bouguer Anomaly in gravity units

BA Bouguer Anomaly in gravity units

TC Terrain Correction in gravity units

7.0 Results

The gravity survey was completed with seven days of acquisition, with only a two hour delay to production during this period due to a small mechanical problem with one of the ATV's. An average acquisition rate of 82 stations per crew for each day of production was achieved over the duration of the project. A copy of the full production report is contained on the data DVD.

Final raw data have met and exceeded quoted project specifications. Repeatability of the data was good, with the standard deviation of the elevation repeats at 0.035m and the standard deviation of the gravity repeats at 0.025 mGals. The production report contains summary statistics and histograms for repeatability.

8.0 Data Formats and Deliverables

Final reduced ASCII data for the project have been delivered in standard Atlas format. Table 2 overleaf details the format of the final gravity database supplied. All fields are comma delimited.

Appendix B contains plots of final station locations, images of GPS Derived Elevation (GRS80), Spherical Cap Bouguer Anomaly and first vertical derivative of Spherical Cap Bouguer Anomaly.

Raw GPS-GNSS and gravity data in their respective native formats have been included on the data DVD as Appendix D. Table 1 below summarises the deliverables.

Final Delivered Data	Format	Data DVD	Hardcopy
Gravity Database	Comma Space Delimited .csv	•	
Gravity Database	Geosoft Database .gdb	•	
Raw Positional Data	AGRIS format, comma delimited	•	
Raw Gravity Data	Scintrex CG5 format	•	
Final Grids	ER Mapper Grids .ers	•	
Final Images	Mapinfo Compatible .tif	•	•
Acquisition Memo	PDF .pdf	•	•

Table 1: Final Deliverables

Field Header	Field Description	Format	Units
PROJECT	Atlas Geophysics Project Number	A9	None
STATION	Unique Station ID	I8	None
STATIONCODE	Unique Station Code	A13	None
TYPE	Observation Type : Base, Field or Repeat	A8	None
MGAEAST	Coordinate Easting MGA94/GDA94	F11.3	m
MGANORTH	Coordinate Northing MGA94/GDA94	F12.3	m
ZONE	MGA Zone Number	F8.0	NA
GDA94LAT	Coordinate Latitude GDA94	F15.10	DD
GDA94LONG	Coordinate Longitude GDA94	F15.10	DD
ORTHOHTM	Coordinate Elevation Orthometric	F9.3	m
GRS80HTM	Coordinate Elevation Ellipsoidal	F9.3	m
NAG98	Geoid Separation	F8.3	m
AMG84EAST	Coordinate Easting AMG84	F11.3	m
AMG84NORTH	Coordinate Northing AMG84	F12.3	m
DATE	Observation Date	I8	None
TIME	Observation Time	I8	None
DIALMGAL	Gravity Dial Reading	F9.3	mGal
ETCMGAL	Earth Tide Correction (Longman)	F8.3	mGal
SCALE	Scale Factor Applied to Dial Reading	F9.6	None
OBSG84MGAL	Observed Gravity ISOGL84	F11.3	mGal
OBSG84GU	Observed Gravity ISOGL84	F11.2	gu
OBSGAAGD07GU	Observed Gravity AAGD07	F13.2	gu
OBSGAAGD007MGAL	Observed Gravity AAGD07	F16.3	mGal
DRIFTMGAL	Drift Applied to Dial Readings	F10.3	mGal
TGRAV67GU	Theoretical Gravity 1967	F11.2	gu
TGRAV67MGAL	Theoretical Gravity 1967	F12.3	mGal
TGRAV80GU	Theoretical Gravity 1980	F11.2	gu
GFACGU	Geoidal Free Air Correction	F8.2	gu
GFACMGAL	Geoidal Free Air Correction	F9.3	mGal
GFAAGU	Geoidal Free Air Anomaly	F8.2	gu
GFAAMGAL	Geoidal Free Air Anomaly	F9.3	mGal
GBC267GU	Geoidal Bouguer Correction 2.67 tm ⁻³	F9.2	gu
GBC240GU	Geoidal Bouguer Correction 2.40 tm ⁻³	F9.2	gu
GBC220GU	Geoidal Bouguer Correction 2.20 tm ⁻³	F9.2	gu
GBC267MGAL	Geoidal Bouguer Correction 2.67 tm ⁻³	F11.3	mGal
GBC240MGAL	Geoidal Bouguer Correction 2.40 tm ⁻³	F11.3	mGal
GBC220MGAL	Geoidal Bouguer Correction 2.20 tm ⁻³	F11.3	mGal
GBA267GU	Geoidal Bouguer Anomaly 2.67 tm ⁻³	F9.2	gu
GBA240GU	Geoidal Bouguer Anomaly 2.40 tm ⁻³	F9.2	gu
GBA220GU	Geoidal Bouguer Anomaly 2.20 tm ⁻³	F9.2	gu
GBA267MGAL	Geoidal Bouguer Anomaly 2.67 tm ⁻³	F11.3	mGal
GBA240MGAL	Geoidal Bouguer Anomaly 2.40 tm ⁻³	F11.3	mGal
GBA220MGAL	Geoidal Bouguer Anomaly 2.20 tm ⁻³	F11.3	mGal
TGRAV80ACGU	Theoretical Gravity 1980 Atmospheric Corrected	F11.2	gu
EFACGU	Ellipsoidal Free Air Correction	F9.2	gu
EFAAGU	Ellipsoidal Free Air Anomaly	F8.2	gu
SCBC267GU	Spherical Cap Bouguer Correction 2.67 tm ⁻³	F10.2	gu
SCBC240GU	Spherical Cap Bouguer Correction 2.40 tm ⁻³	F10.2	gu
SCBC220GU	Spherical Cap Bouguer Correction 2.20 tm ⁻³	F10.2	gu
SCBA267GU	Spherical Cap Bouguer Anomaly 2.67 tm ⁻³	F10.2	gu
SCBA240GU	Spherical Cap Bouguer Anomaly 2.40 tm ⁻³	F10.2	gu
SCBA220GU	Spherical Cap Bouguer Anomaly 2.20 tm ⁻³	F10.2	gu
SCBA267MGAL	Spherical Cap Bouguer Anomaly 2.67 tm ⁻³	F12.3	mGal
SCBA240MGAL	Spherical Cap Bouguer Anomaly 2.40 tm ⁻³	F12.3	mGal
SCBA220MGAL	Spherical Cap Bouguer Anomaly 2.20 tm ⁻³	F12.3	mGal
TCINNERGU	Inner Terrain Correction	F8.2	gu
TCINNERMGAL	Inner Terrain Correction	F8.3	mGal
QFINNER	Quality Factor Inner TC	I2	None
TCOUTERGU	Outer Terrain Correction	F8.2	gu
TCOUTERMGAL	Outer Terrain Correction	F8.3	mGal
QFOUTER	Quality Factor Outer TC	F2	None
TCOTALGU	Total Terrain Correction	F8.2	gu
TCOTALMGAL	Total Terrain Correction	F8.3	mGal
CGBA267GU	Complete Geoidal Bouguer Anomaly 2.67 tm ⁻³	F11.3	gu
CGBA267MGAL	Complete Geoidal Bouguer Anomaly 2.67 tm ⁻³	F11.3	mGal
CSCBA267GU	Complete Spherical Cap Bouguer Anomaly 2.67 tm ⁻³	F12.2	gu
CSCBA267MGAL	Complete Spherical Cap Bouguer Anomaly 2.67 tm ⁻³	F12.2	mGal
DIFFEASTM	Repeat Error for Easting Observation	F8.3	m
DIFFNORTHM	Repeat Error for Northing Observation	F8.3	m
DIFFHTM	Repeat Error for Elevation Observation	F8.3	m
DIFFOBSGMGAL	Repeat Error for Observed Gravity	F8.3	mGal
DIFFOBSSGU	Repeat Error for Observed Gravity	F8.2	gu
METERSN	Serial Number of Gravity Instrument	I8	None
CLOSUREGU	Loop Closure in gu	F8.2	gu
CLOSUREMGAL	Loop Closure in mGal	F8.3	mGal
GRVBASE	Gravity Base	A11	None
GPSBASE	GPS Base	A11	None

Table 2: Final Gravity Database Format

9.0 Project Safety

Prior to survey commencement, a Hazard Identification and Risk Assessment (HIRA) was carried out for all new tasks not covered under Atlas Geophysics Standard Operating Procedures (SOP's) or the company's Health Safety Environment (HSE) field manual.

Weekly toolbox meetings were held to discuss project safety and address any staff member concerns. No incidents were reported on this project.

APPENDIX A

Control Station Descriptions

201101500001 – Kingoonya

GDA94/GRS80		MGA Z53		AMG Z53	
<i>Latitude</i>	-31 00 56.0383	<i>Easting</i>	537,296.550	<i>Easting</i>	537,167.912
<i>Longitude</i>	135 23 26.6665	<i>Northing</i>	6,568,607.409	<i>Northing</i>	6,568,436.214
<i>Ellipsoidal Height</i>	130.395	<i>Orthometric Height</i>	131.315	<i>Orthometric Height</i>	131.315

OBSERVED GRAVITY

Date established: 22/04/2011

<i>gu AAGD07</i>	9793533.44	
<i>mGal ISO GAL84</i>	979353.422	

Occupation Method/Location Details

At this control station, the GPS control point consists of a steel picket driven into the ground with approximately 15cm protruding. The gravity control point consists of a small concrete slab set into the ground, opposite the GPS control point. The control station is witnessed by an Atlas Geophysics survey plaque (reading 201101500001) attached to a 1.5 metre steel picket placed within 0.5m of the both control points.

Gravity Control was established via multiple ABA loops with the project meters to AFGN “1994932503” at the Mobil Roadhouse in Glendambo on 22nd and 30th April, 2011. Expected accuracy would be better than 0.01 mGal.

GPS Control was established using AUSPOS. Three separate 10 hour sessions were submitted to AUSPOS’s online processing systems where returned coordinates were accurate to better than 0.01m.

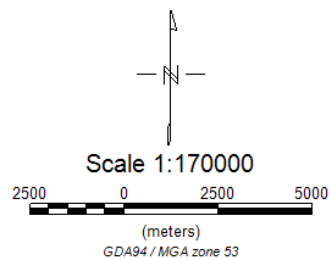
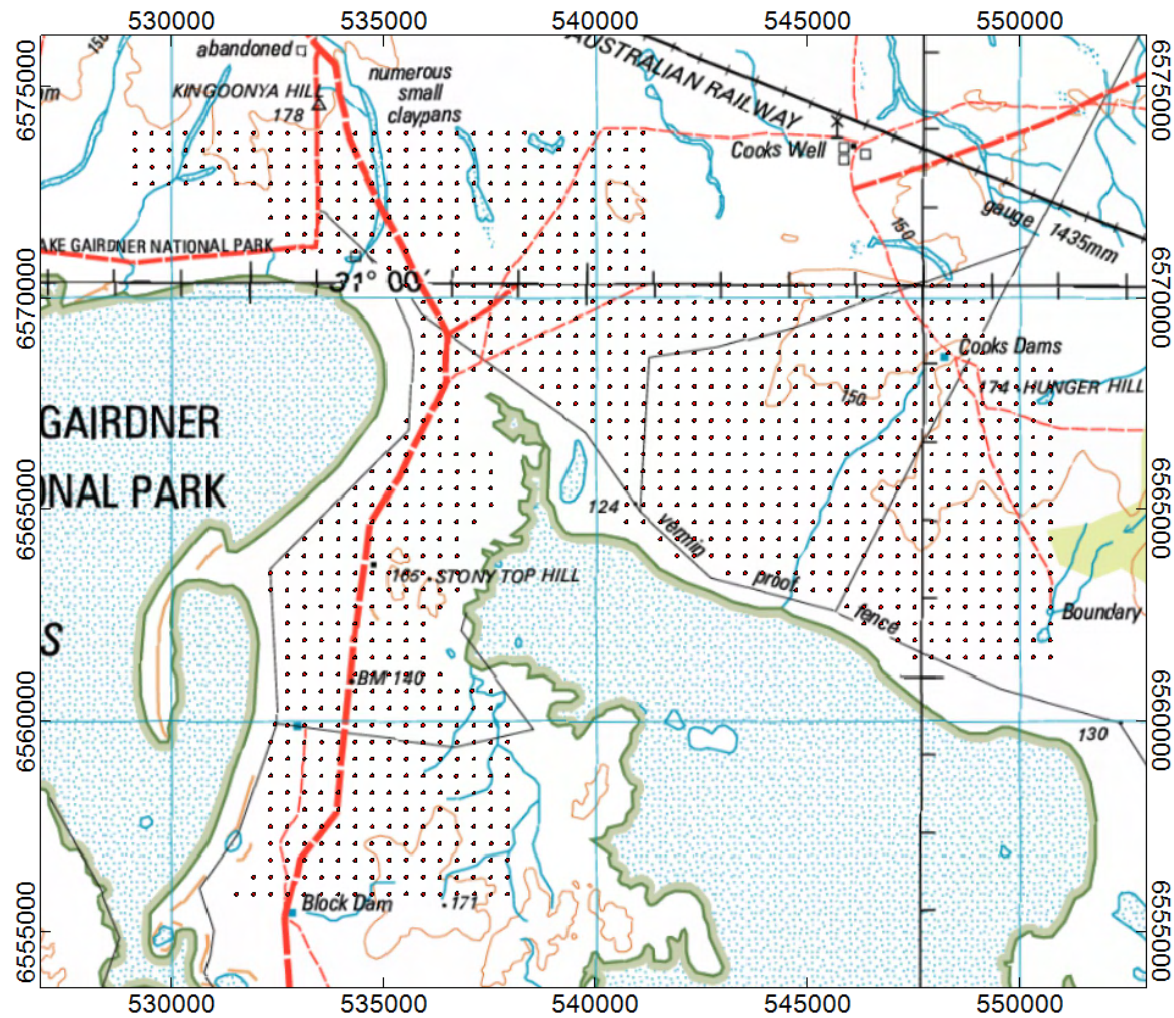
The station can be reached by the following directions: From the Kingoonya Hotel, travel 12km south east along Jacob Street towards Yardea. Just prior to reaching the second cattle grid you will find a fence line track leading east. Take this track for approximately 1km and you will find the control station on the southern side of the track, between the fence and track.



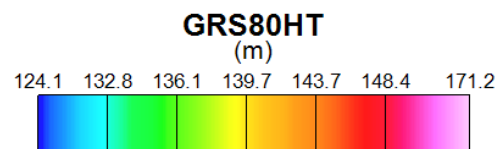
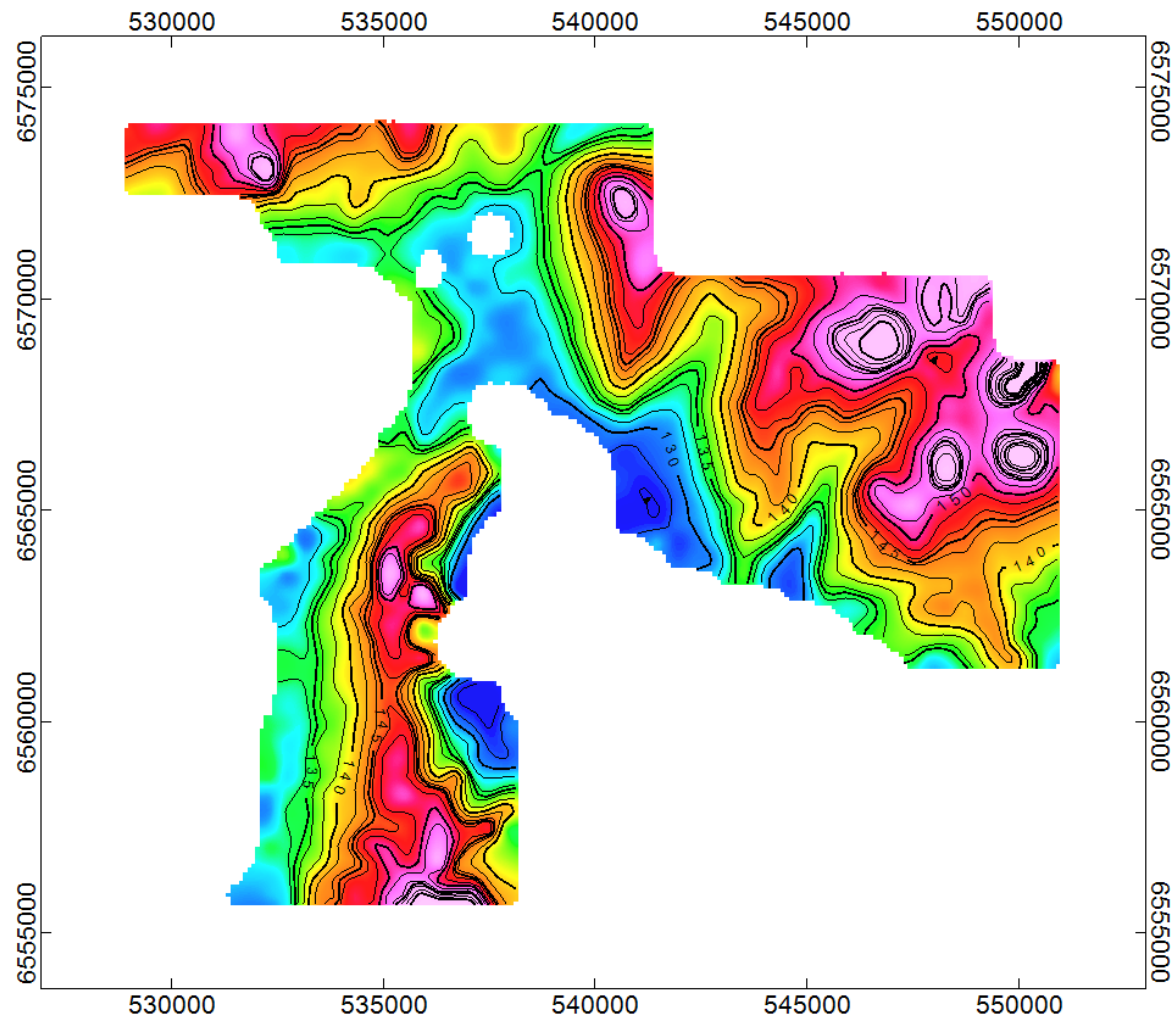
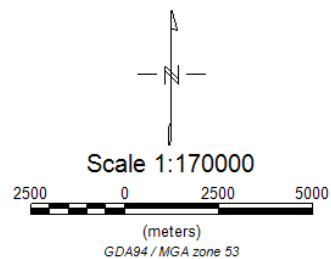
Photograph of Control Station 201101500001 and surrounds

APPENDIX B

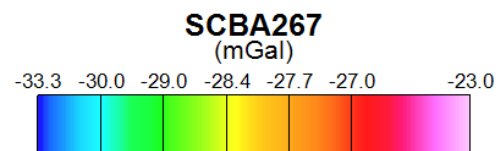
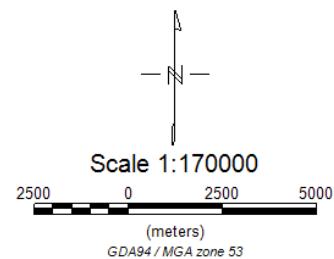
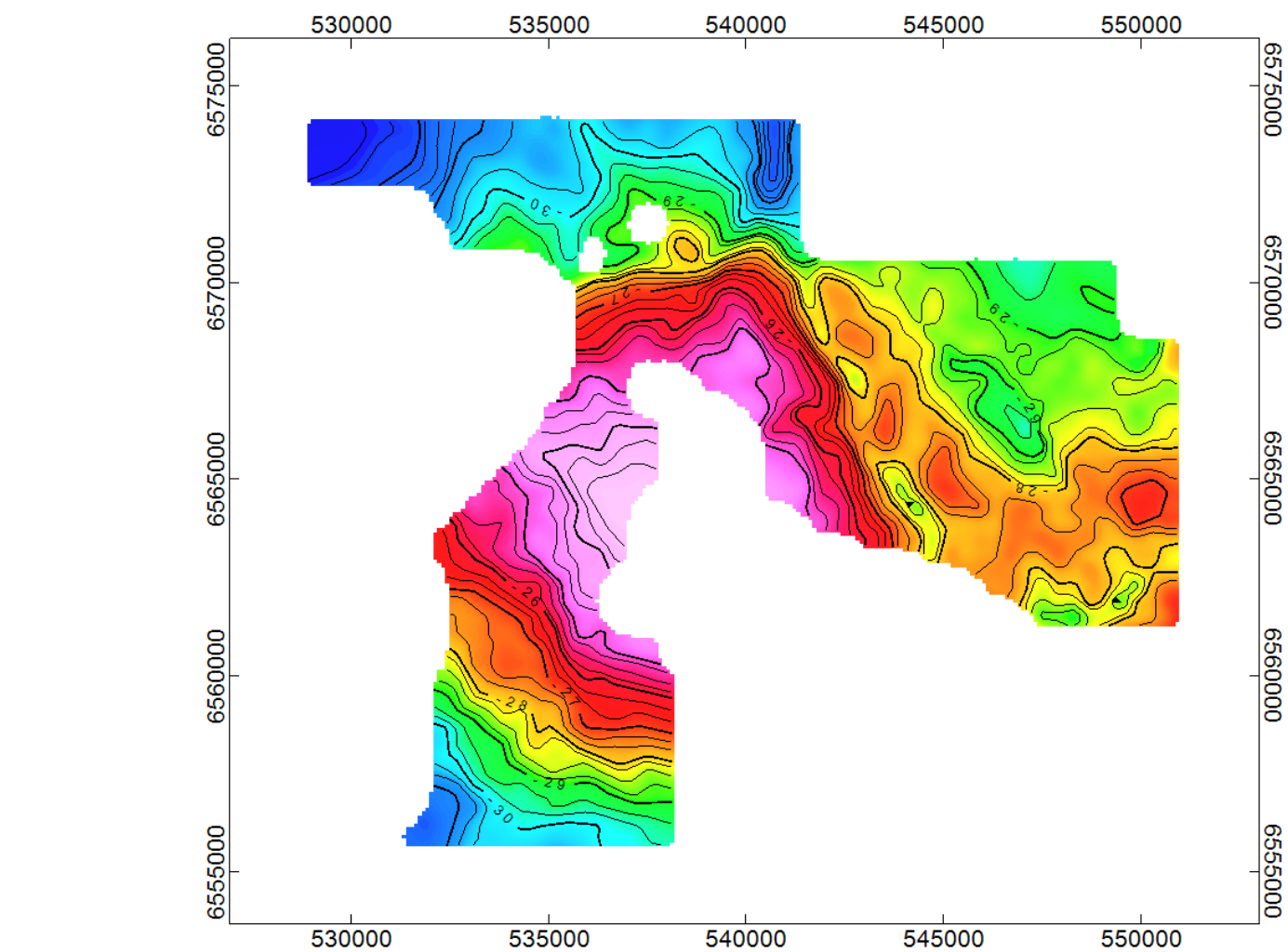
Plots



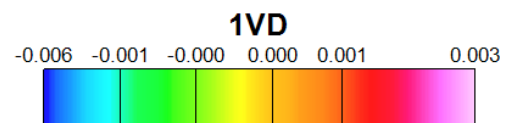
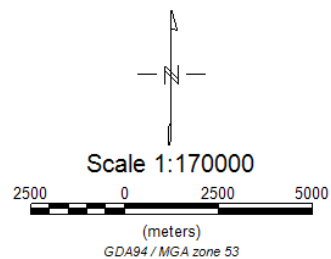
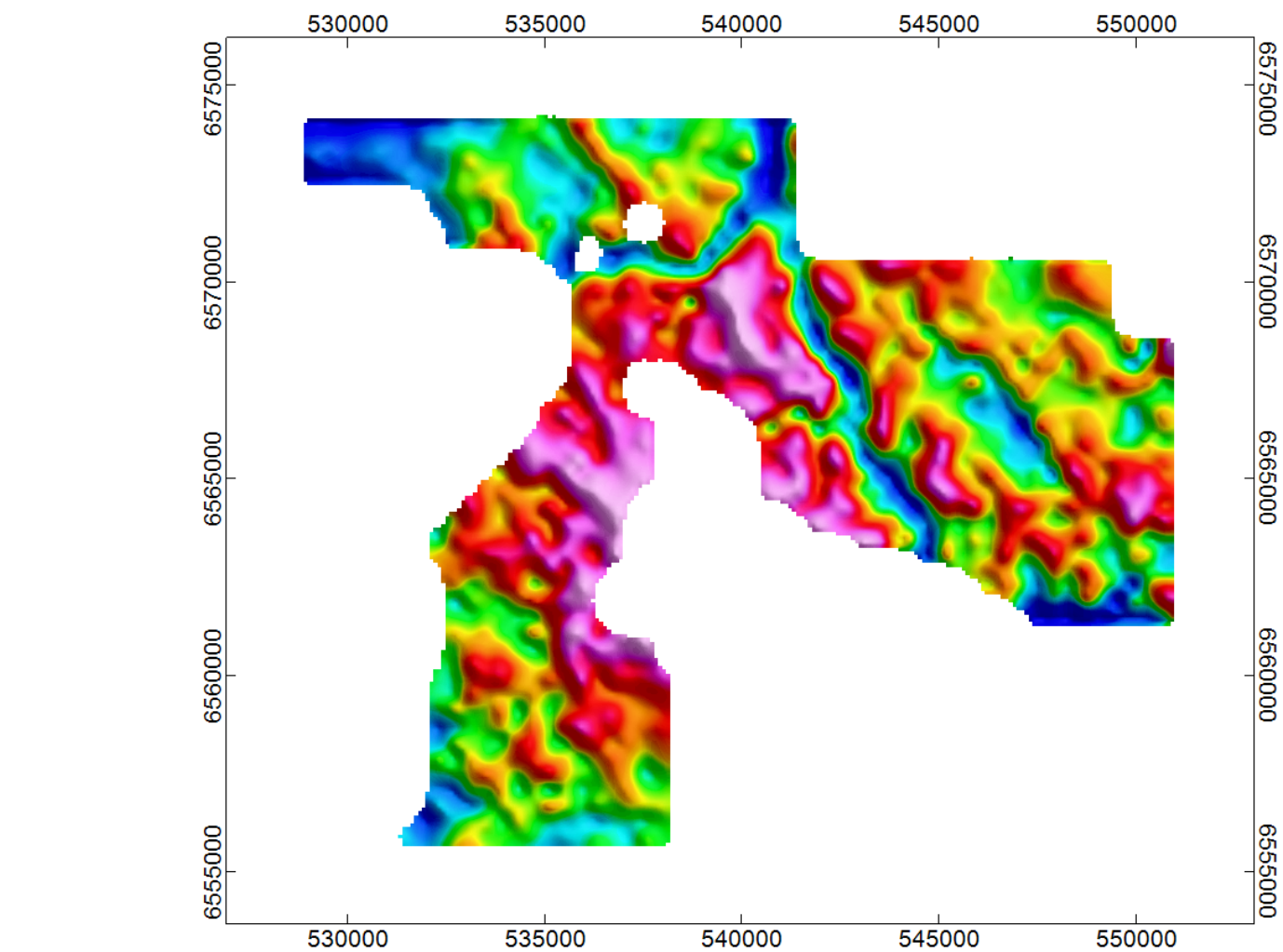
ANGLOGOLD ASHANTI LIMITED
P2011015 Gairdner Gravity Survey Plot of Gained Gravity Stations 400m x 400m Station spacing
ATLAS GEOPHYSICS PTY LTD FINAL DATA RELEASE www.atlasgeo.com.au
<i>drawn by : NJP</i>



ANGLOGOLD ASHANTI LIMITED
P2011015 Gairdner Gravity Survey Pseudocoloured image of GPS Derived Elevation (GRS80) Shade = None, Contours = 2m, Histo = Equalised
ATLAS GEOPHYSICS PTY LTD FINAL DATA RELEASE www.atlasgeo.com.au
<i>drawn by : NJP</i>



ANGLOGOLD ASHANTI LIMITED
P2011015 Gairdner Gravity Survey Pseudocoloured image of SC Bouguer Anomaly 2.67gm/cc Shade = None, Contours = 0.3mGal, Histo = Equalised
ATLAS GEOPHYSICS PTY LTD FINAL DATA RELEASE www.atlasgeo.com.au
<i>drawn by : NJP</i>



ANGLOGOLD ASHANTI LIMITED	
P2011015 Gairdner Gravity Survey	
Pseudocoloured image of 1VD of SC Bouguer Anomaly 2.67gm/cc	
Shade = NE, Contours = None, Histo = Equalised	
ATLAS GEOPHYSICS PTY LTD	
FINAL DATA RELEASE	
www.atlasgeo.com.au	
<i>drawn by : NJP</i>	

APPENDIX C

GPS Control Information

201101500001
0001 -31 00 56.03832 135 23 26.66653 130.398 131.318 GDA94
0001 -31 00 56.03835 135 23 26.66653 130.395 131.315 GDA94
0001 -31 00 56.03830 135 23 26.66654 130.393 131.313 GDA94

GDA94AVE
-31 0 56.0383
135 23 26.6665

-31.01556619
135.39074069

GRS80HT
130.395

AHDHT
131.315

N
-0.920

MGA53
537296.550
6568607.409

AMG53
537167.912
6568436.214

PROJECT	P2011015
CLIENT	ANGLO
PROJECT AREA	GAIRDNER
SUPERVISORS	JE
OPERATORS	JE, SC
SURVEY SIZE	1142
VEHICLES	1CVF259, 1CXR890

atlas
G E O P H Y S I C S

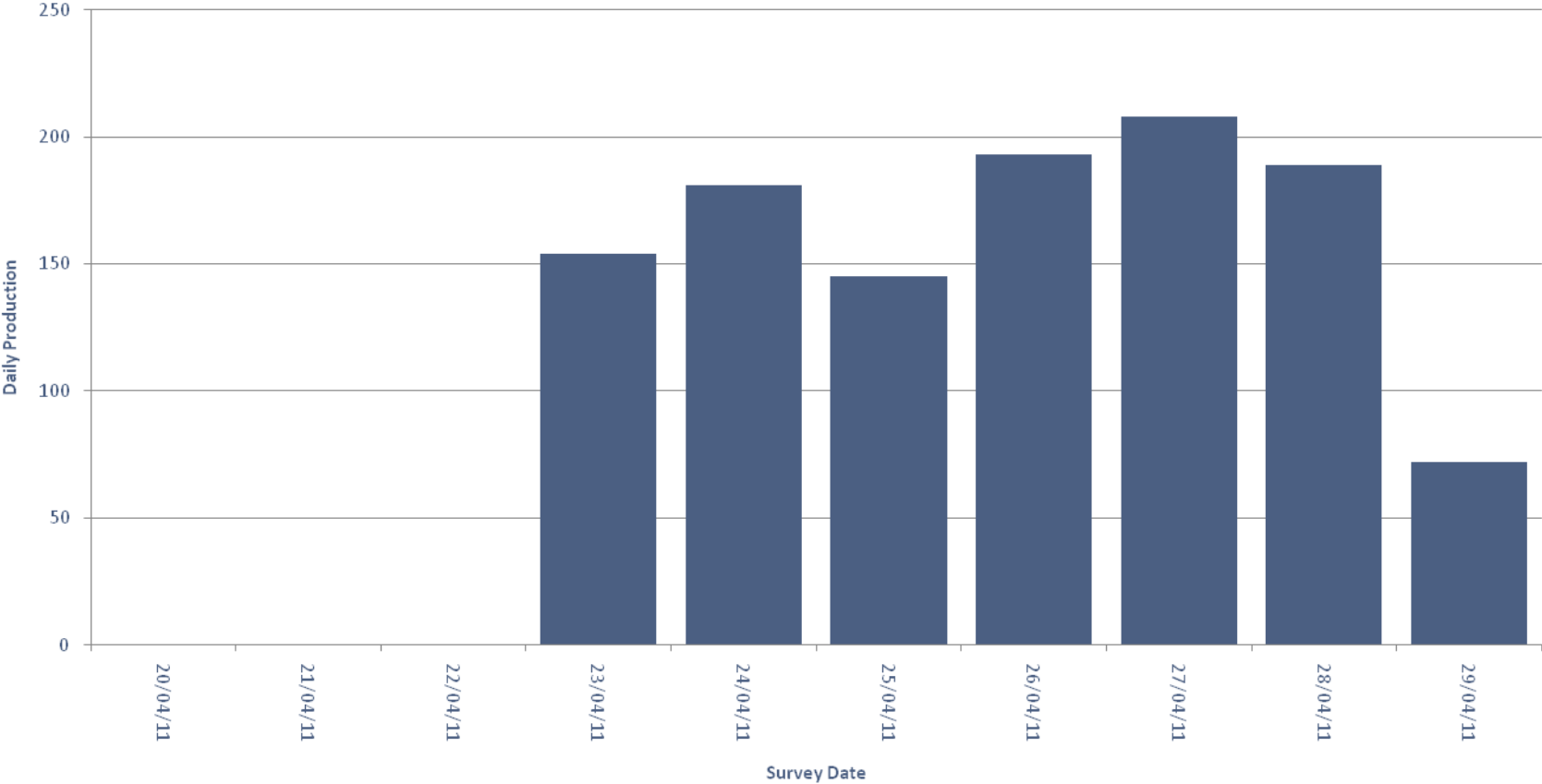
Production Table

DATE	MOB STANDBY %	SURVEY %	40269 FIELD	40269 REPEAT	40269 %REPEAT	40298 FIELD	40298 REPEAT	40298 %REPEAT	FIELD TOTAL	REPEAT TOTAL	SURVEY TOTAL	SURVEY REMAIN	SURVEY REPEAT	SURVEY %REPEAT	SURVEY % COMPLETE
20/04/11	100%	0%	0	0	0.00%	0	0	0.00%	0	0	0	1142	0	0.00%	0.00%
21/04/11	100%	0%	0	0	0.00%	0	0	0.00%	0	0	0	1142	0	0.00%	0.00%
22/04/11	100%	0%	0	0	0.00%	0	0	0.00%	0	0	0	1142	0	0.00%	0.00%
23/04/11	0%	100%	92	7	7.61%	62	3	4.84%	154	10	154	988	10	6.49%	13.49%
24/04/11	0%	100%	110	6	5.45%	71	4	5.63%	181	10	335	807	20	5.97%	29.33%
25/04/11	0%	100%	82	4	4.88%	63	3	4.76%	145	7	480	662	27	5.63%	42.03%
26/04/11	0%	100%	103	5	4.85%	90	6	6.67%	193	11	673	469	38	5.65%	58.93%
27/04/11	0%	100%	110	5	4.55%	98	2	2.04%	208	7	881	261	45	5.11%	77.15%
28/04/11	0%	100%	110	6	5.45%	79	6	7.59%	189	12	1070	72	57	5.33%	93.70%
29/04/11	50%	50%	24	4	16.67%	48	2	4.17%	72	6	1142	0	63	5.52%	100.00%

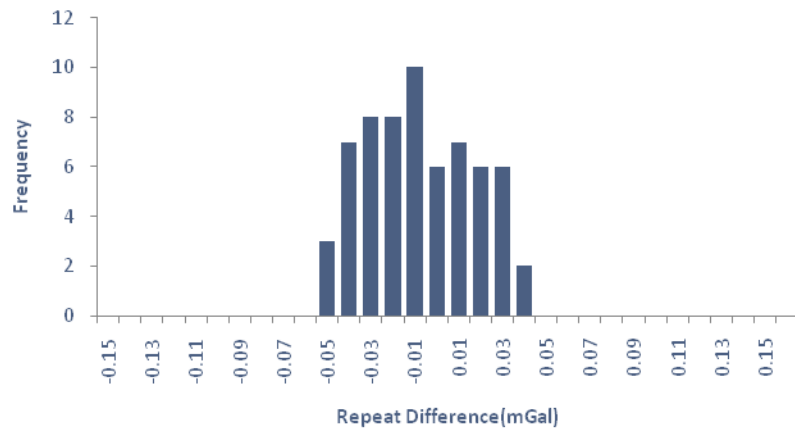
Supervisor Comments:

DATE	COMMENT
20/04/11	Today JE mobilised to Adelaide as did SC. When both JE and SC were in Adelaide they collected the Land cruiser and mobilised to Port Augusta.
21/04/11	Today JE and SC collected the truck and some items needed for the Gairdner survey before they mobilised and headed out to Kingoonya where the survey is to be completed.
22/04/11	Today JE and SC rode both bikes out to the approximate location of the base station and did some practice riding in the terrain. Both crew members then headed back to camp where the base station was collected then taken out in the vehicle to be setup. A mock survey was then completed with the base running to ascertain whether or not everything was in order. Once this was completed the crew did two loops from base to Glendambo to tie the newly made base in. Greg Cant from Anglo Gold joined the crew tonight and will be staying with the crew for a few days during surveying.
23/04/11	After having a morning meeting with GC it was decided the top section of the grid would be completed first in the survey. Both JE and SC drove out in the vehicle to the base to begin surveying for the day. JE began surveying in the top section to the east while SC surveyed the western top section. Both crew members collected points in an east to west fashion throughout the day before, heading to the car at the end of day's survey. There were numerous clay pans and dried water areas which must be handled with extreme care as the traditional owners of the land expressed concern over these areas. SC encountered a fence which slowed his progress throughout the day and numerous fox and rabbit holes also needed to be avoided.
24/04/11	Today JE and SC drove out to base station to begin the day of surveying. SC continued surveying in the northern section of the grid in an east to west fashion. JE began work on the eastern section running lines in a similar east to west fashion. Fences caused delays for both JE and SC throughout the day however no safety issues or hazards arose. In the afternoon a tool box meeting was held with JE, SC and GC all present and attending.
25/04/11	Today JE and SC continued surveying in the eastern section of the grid. JE concentrated running lines east to west in the lower section while SC continued running points east to west in the northern section. At approximately 2:30pm the throttle cable broke away on JE's quad. After closer inspection it was decided to manually ride the bike back to the car to attempt to fix the problem. SC found whilst surveying that two of the brackets holding the gravity box onto the bike had snapped and would need to be fixed before continuing to survey. SC and JE met up at the car and it was decided JE's quad bike would be able to continue surveying whilst the Honda would need to be welded before continuing. JE drove the vehicle back to camp while SC rode the Honda back. When back at camp a welder was able to be acquired and a station hand was able to help weld the brackets back to a good working order. Surveying will continue as per normal tomorrow with the Honda being fixed and the Arctic cat running with a manual throttle lever.
26/04/11	Today JE and SC continued surveying in the eastern section of the grid. JE ran lines east to west on the western side of the vermin fence while SC ran points east to west on the eastern side of the vermin fence. Fence crossing and some bumpy conditions slowed some parts of today's survey however it was a successful day of surveying with no safety issues or hazards encountered.
27/04/11	Today JE continued surveying in the eastern section of the grid running points in an east to west direction throughout the day. SC began surveying in the southern most section of the survey area. SC began by running a line of points directly south then picking points up in an east to west fashion for the remainder of the shift. No safety issues or hazards arose throughout the day.
28/04/11	Today JE began surveying in the western side of the southern section of the grid. JE ran a line of points south through the grid before running points in an east to west direction back up north through the grid. SC continued surveying in a similar fashion as the previous day finishing his side of the grid. It is expected that the survey will be completed tomorrow. GC will be leaving camp tomorrow. No safety issues or hazards arose throughout the day.
29/04/11	Today GC left camp in the morning to return to Perth. JE began surveying in the eastern section of the survey area. JE ran two lines of points at the southern section of the eastern grid before picking up a small section of missed points and repeats back to the vehicle to finish the day. SC continued surveying in the southern section of the grid running the remainder of the lines in an east to west fashion northwards. The entire survey area was finished at approximately lunch time and the crew are now cleaning and packing up camp ready to mobilise to Port Augusta tomorrow.

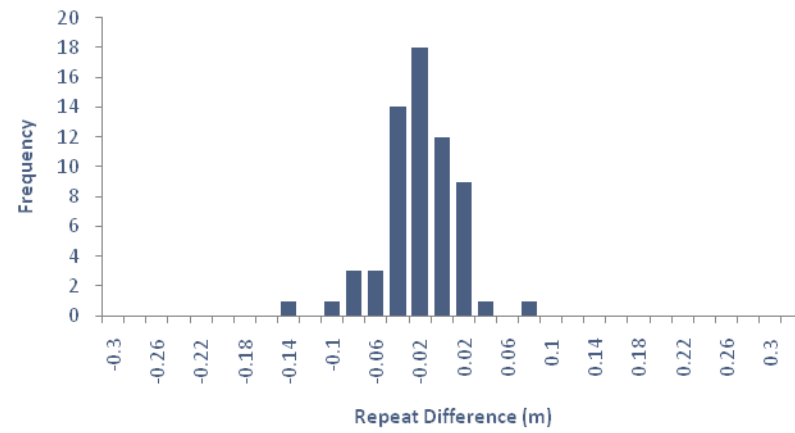
Daily Production Chart



Histogram of Gravity Repeat Differences



Histogram of Elevation Repeat Differences



FIELD	MEAN	SD	MINIMUM	MAXIMUM
DIFFEASTM	0.071	0.795	-4.451	3.113
DIFFNORTHM	0.179	0.871	-1.870	4.791
DIFFHTM	-0.010	0.035	-0.128	0.091
DIFFOBSGMGAL	-0.002	0.025	-0.047	0.049
DIFFOBSSGGU	-0.022	0.247	-0.470	0.490



Logistics Report

for a

DETAILED AIRBORNE MAGNETIC, RADIOMETRIC AND DIGITAL TERRAIN SURVEY

For the

Gairdner and Coober Pedy Projects

carried out on behalf of

ANGLOGOLD ASHANTI AUSTRALIA LIMITED

(Aeroquest Job # B289)

FAUNTLEROY AVENUE, PERTH AIRPORT
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A.B.N. 31 058 054 603



AEROQUEST AIRBORNE
High Resolution Airborne Surveys

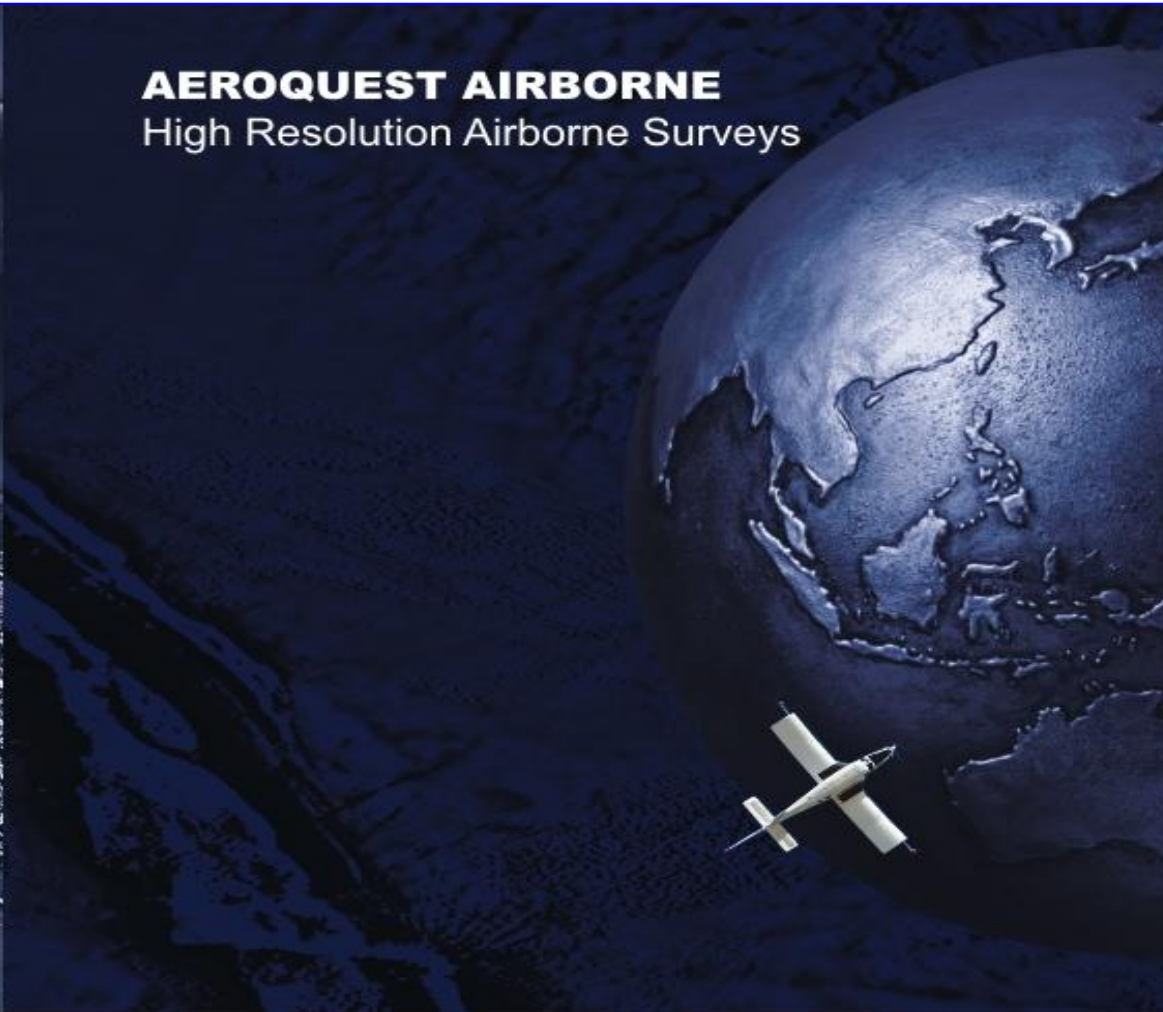


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1 GENERAL SURVEY INFORMATION

Aeroquest Airborne conducted a low level airborne geophysical survey for the following company:

AngloGold Ashanti Australia Limited
Level 13, 44 St Georges Terrace,
Perth WA 6000

Acquisitions for these surveys commenced on the 11th September 2011 and were completed on the 18th September 2011. The base locations used for operating the aircraft and performing in-field quality control were Coober Pedy and Glendambo, South Australia.

2 SURVEY SPECIFICATIONS

The areas surveyed were located near Coober Pedy and Glendambo in South Australia. The survey was flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia and was contained within zone 53 with a central meridian of 135 degrees. Details of the datum and projection system are provided in Appendix B of this report. Survey boundary coordinates are listed in Appendix C.

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

PROJECT NAME	LINE SPACING	LINE DIRECTION	TIE LINE SPACING	TIE LINE DIRECTION	SENSOR HEIGHT	TOTAL LINE KM
Gairdner	100m	000-180	1000m	090-270	50m	4,144
Coober Pedy	50m	090-270	500m	000-180	50m	2,393
TOTAL						6,807

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

3 AIRCRAFT AND SURVEY EQUIPMENT

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

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

General Survey Equipment

- FU24 – 954 fixed wing survey aircraft.
- Aeroquest Airborne proprietary flight planning system.
- Georeports high speed digital data acquisition and survey navigation system.
- Novatel, OEMV5, 12 channel precision navigation GPS.
- OMNISTAR real time differential GPS system.
- Aeroquest Airborne post mission data verification and processing system.
- Bendix/King KRA-405 radar altimeter.

Magnetic Data Acquisition Equipment

- Aeroquest Airborne tail stinger magnetometer installation.
- Cesium Vapour total field magnetometer.
- Fluxgate three component vector magnetometer.
- RMS Aeromagnetic Automatic Digital Compensator (AADC II).
- Diurnal monitoring magnetometer (Scintrex Envimag or Geometrics GR-856).

Radiometric Data Acquisition Equipment

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

3.1 Survey Aircraft

The aircraft used for this survey was a FU24-950 series fixed wing survey aircraft, owned and operated by Aeroquest Airborne, registration VH-HVP. The specifications are as follows:

Power Plant

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

Performance

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



3.2 Data Positioning and Flight Navigation

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

Navigation was performed using a GeoRESULTS designed and built electronic pilot navigation system providing computer controlled digital navigation instrumentation mounted in the cockpit.

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

The GPS systems used for the survey were:

- Aircraft GPS Model Novatel, OEMV5
- Sample rate 0.5 Seconds (2 Hz)
- GPS satellite tracking channels 12 parallel
- Typical differentially corrected accuracy 1-2 metres (horizontal)
3-5 metres (vertical)

3.3 Aeroquest Data Acquisition System and Digital Recording

All geophysical sensor data and positional information measured during the survey was recorded using a Geosresults, high speed, precision data acquisition system. Survey data was downloaded onto a removal flash device on completion of each survey flight.

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

3.4 Altitude Readings

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

- Radar altimeter models Bendix/King KRA-405
- Accuracy 0.3 metres
- Resolution 0.1 metres
- Range 0 - 762 metres
- Sample rate 0.1 Seconds (10Hz)

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

3.5 Aeroquest Stinger Mounted Magnetometer System

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

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



3.6 Total Field Magnetometer



Total field magnetic data readings for the survey were made using a Cesium Vapour Magnetometer. This precision sensor has the following specifications:

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

3.7 Three Component Vector Magnetometer

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

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

3.8 Aircraft Magnetic Compensation

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

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

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

3.9 Diurnal Monitoring Magnetometer

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

The specifications for the magnetometer used are as follows:

- Model Scintrex Envimag or Geometrics GR-856
- Resolution 0.1 nT
- Sample interval 5 seconds (0.2 Hz)
- Operating range 20,000nT to 90,000nT
- Temperature -20°C to +50°C



3.10 Barometric Altitude

An SETRA 720 barometric altimeter was installed in the aircraft so as to record and monitor barometric height and pressure. The data was recorded at 0.10 second intervals and is used for the reduction of the radiometric data.

- Model SETRA 270
- Accuracy 2 metres
- Height resolution 0.1 metres
- Height range 0 - 3500 metres
- Maximum operating pressure: 1,100 mb
- Repeatability: 0.1%
- Sample rate 10 Hz

3.11 Temperature and Humidity

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

3.12 Radiometric Data Acquisition

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

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

Spectrometer model	Exploranium GR820
• Detector volume	32 litres
• Sample rate	1 Hz



4 PROJECT MANAGEMENT

ANGLOGOLD ASHANTI AUSTRALIA LTD

Greg Cant

Aeroquest Airborne Perth Office

David Abbott
Cameron Johnston
Rebecca Steadman

5 DATA PROCESSING PROCEDURES

5.1 *Data Pre-processing*

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

At the commencement of each acquisition flight, all the instrumentation clocks were synchronized to local time, and the error and latency of each instrument in providing its data measurement calculated. The results of these latency measurements were recorded into a synchronisation file, and the results used to assign GPS positions to the magnetic, radiometric and elevation data.

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

5.2 Magnetic Data Processing

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

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

The X and Y positioning of the data was then checked for spikes before applying the IGRF correction. Any spikes in the positions were manually edited. The updated IGRF 2011 correction was calculated at each data point (taking into account the height above sea level).

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

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

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

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

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

5.3 Radiometric Data Processing

Statistical noise reduction of the 256 channel data was performed using the Noise Adjusted Singular Variable Decomposition (NASVD) method described by Hovgaard and Grasty (1997).

Noise-adjusted singular value decomposition is performed, and the number of components to be used is determined by inspection of plots of the spectral components and by a statistical analysis of the contributions of the components. If the spectral shapes show any unusual characteristics, further analysis of the concentrations of the spectral components in the line data is performed in order to identify and eliminate any corrupt spectra. If such spectra were eliminated, the NASVD process is re-performed, in order to obtain spectral components free of any bias from corrupt spectra.

Only the dominant spectral shapes (identified as described above) were used in the spectral reconstruction process. The first 8 NASVD components were used for this process.

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

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

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

The Uranium and Total Count channels were tie-levelled to remove the effects of residual radon background. The tie-levelling process employed was a least-squares/median filter procedure, which generated a single correction for each line of data. Mis-matches were calculated at each tie-traverse intersection and the median mismatch for each flight line was calculated as the residual levelling error for that line.

5.4 Digital Terrain Model Data Processing

The radar altimeter data was subtracted from the GPS altimeter data leaving digital terrain data.

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

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

Head Office Address:

Aeroquest Airborne
Fauntleroy Avenue, Perth Airport
REDCLIFFE WA 6104

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

Postal Address:

Aeroquest Airborne
P.O. Box 126
BELMONT WA 6984

Quoting reference number: B289

6 APPENDIX A - LOCATED DATA FORMATS

MAGNETIC LOCATED DATA

FIELD FORMAT DESCRIPTION			UNITS
1	I8	LINE NUMBER	
2	I4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (GDA94)	degrees
8	F12.6	LONGITUDE (GDA94)	degrees
9	F12.2	EASTING (MGA53)	metres
10	F12.2	NORTHING (MGA53)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	F8.1	TERRAIN HEIGHT (WGS84)	metres
14	F10.3	RAW MAGNETIC INTENSITY	nT
15	F10.3	DIURNAL CORRECTED TMI	nT
16	F10.3	DIURNAL AND IGRF CORRECTED TMI	nT
17	F10.3	TIE LINE LEVELLED TMI	nT
18	F10.3	FINAL TOTAL MAGNETIC INTENSITY	nT

RADIOMETRIC LOCATED DATA

FIELD FORMAT DESCRIPTION			UNITS
1	I8	LINE NUMBER	
2	4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (GDA94)	degrees
8	F12.6	LONGITUDE (GDA94)	degrees
9	F12.2	EASTING (MGA53)	metres
10	F12.2	NORTHING (MGA53)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	I5	LIVE TIME	milli sec
14	F8.1	PRESSURE	hPa
15	F6.1	TEMPERATURE	Degrees Celcius
16	F6.1	HUMIDITY	percent
17	I6	TOTAL COUNT (RAW)	Counts/sec
18	I6	POTASSIUM (RAW)	Counts/sec
19	I6	URANIUM (RAW)	Counts/sec
20	I6	THORIUM (RAW)	Counts/sec
21	I6	COSMIC (RAW)	Counts/sec
22	F8.1	TOTAL COUNT (CORRECTED)	Counts/sec
23	F8.1	POTASSIUM (CORRECTED)	Counts/sec
24	F8.1	URANIUM (CORRECTED)	Counts/sec
25	F8.1	THORIUM (CORRECTED)	Counts/sec
26	F9.4	DOSE RATE	nGy/hr
27	F9.4	POTASSIUM GRND CONCENTRATION	%
28	F9.4	URANIUM GRND CONCENTRATION	ppm
29	F9.4	THORIUM GRND CONCENTRATION	ppm

GRIDDED DATASET FORMATS

Gridding was performed using a bicubic spline algorithm.

The following grid formats have been provided:

- ER-Mapper format

LINE NUMBER FORMATS

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

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

AEROQUEST FILE NAMING FORMATS

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

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

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

7 APPENDIX B - COORDINATE SYSTEM DETAILS

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

MGA94

Coordinate type
Geodetic datum
Semi major axis
Flattening

Map Grid of Australia 1994
Universal Transverse Mercator Projection Grid
Geocentric Datum of Australia
6378137m
1/298.257222101

8 APPENDIX C - SURVEY BOUNDARY DETAILS

Coordinates

Gairdner

527900	6573600
548100	6573600
548100	6555400
527900	6555400

Cooper Pedy

416900	6775600
427100	6775600
427100	6765400
416900	6765400

9 APPENDIX E – PROCESSING PARAMETERS

Magnetic Processing Parameters

Gairdner

IGRF Date:	IGRF 2011.7
Average Declination:	6.1976 degrees
Average Inclination:	-63.5199 degrees
Average Field strength:	57434.28 nT
Average diurnal:	57530.00 nT

Coober Pedy

IGRF Date:	IGRF 2011.7
Average Declination:	5.5739 degrees
Average Inclination:	-61.7037 degrees
Average Field strength:	56460.41 nT
Average diurnal:	55950.00 nT

Radiometric Processing Parameters

Height Attenuation Coefficients

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

Cosmic Correction Coefficients

Total Count:	0.851
Potassium:	0.0474
Uranium:	0.0395
Thorium:	0.0487

Aircraft Background Coefficients

Total Count:	35.233
Potassium:	5.515
Uranium:	0.6187
Thorium:	0.257

Sensitivity Coefficients

Total Count:	34.79 cps/dose rate
Potassium:	139.29 cps/%k
Uranium:	10.73 cps/ppm
Thorium:	7.97 cps/ppm

Radiometric Stripping Coefficients

Alpha:	0.227
Beta:	0.378
Gamma:	0.708
a:	0.0682

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

AngloGold Ashanti Australia Limited

Gairdner Project

EL4882

Annual Report

For the Period

27 November 2011 to 26 November 2012

Tenure Holder	Hiltaba Gold Pty Ltd
Operator	AngloGold Ashanti Australia
Compiled by	Chris Fairall
Date	January 2013
Distribution	DMITRE South Australia Hiltaba Gold Pty Ltd

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Keywords: Gairdner 1:250,000 map sheet; Kingoonya 1:250,000 map sheet; Iron oxide-Copper-Gold; Data Compilation; Gravity Survey; Airborne Magnetic-Radiometric Survey

1. SUMMARY

This report summarises the exploration activities completed on EL4882 (formerly EL3655) during the reporting period 27 November 2011 to 26 November 2012. EL4882 is owned by Hiltaba Gold Pty Ltd, a 100% owned subsidiary of Stellar Resources Limited, and is subject to a farm in and joint venture agreement whereby AngloGold Ashanti Australia Limited has certain rights to earn equity in the tenement (and three other ELs in the Gawler Craton) by meeting conditions set out in the agreement. Exploration of EL4882 is being conducted as part of the Gairdner Project, which comprises EL4882 and EL4573.

Activities completed during the reporting year included:

- Continuing discussions about a Native Title Mining Agreement with the Gawler Ranges Native Title claimant group
- No on ground exploration

Expenditure for the first year of tenure for EL4882, to 26 November 2012, was \$40,536.76.

The location of activities completed during the reporting year is summarised on the Exploration Index Plan (Figure 1).

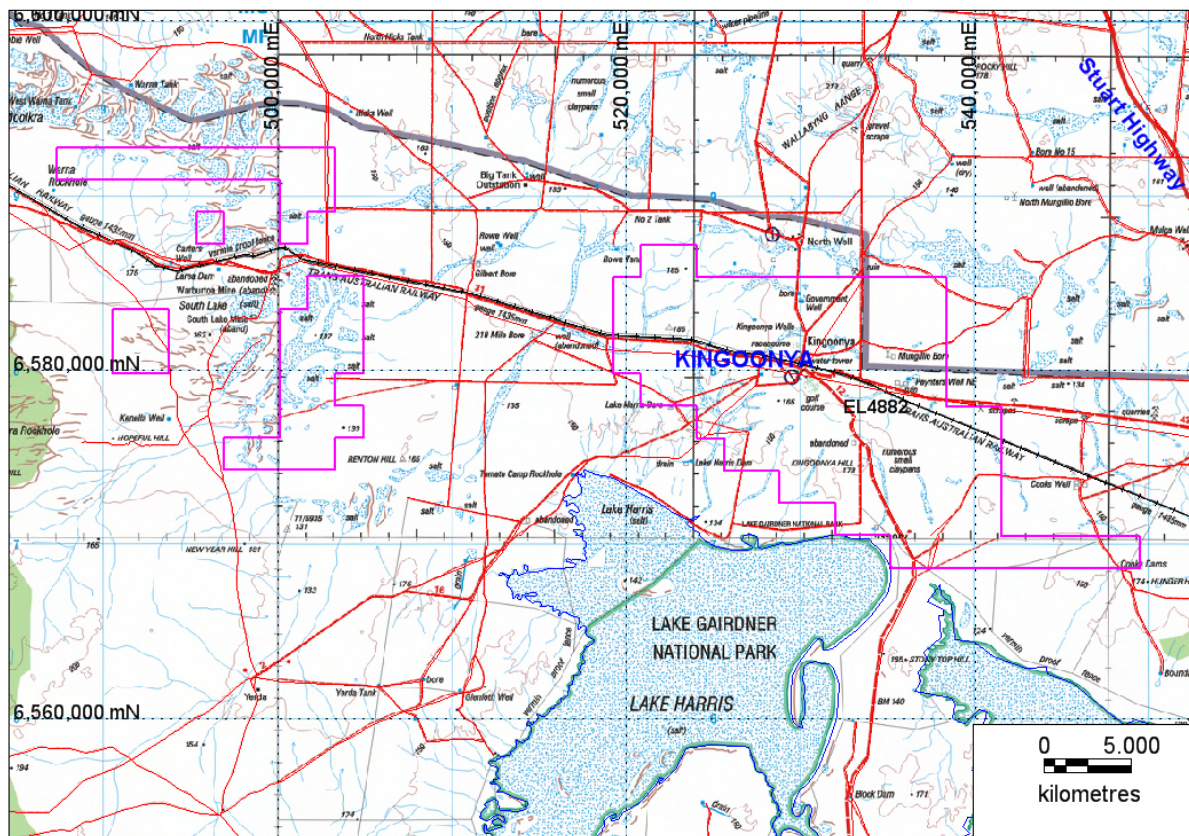


Figure 1 Exploration Index Plan EL4882

2. INTRODUCTION

This report summarises the exploration activities completed on EL4882 (Kingoonya) during the reporting period 27 November 2011 to 26 November 2012. EL4882 is owned by Hiltaba Gold Pty Ltd, a 100% owned subsidiary of Stellar Resources Limited, and is subject to a farm in and joint venture agreement whereby AngloGold Ashanti Australia has certain rights to earn equity in the tenement (and three other ELs in the Gawler Craton) by meeting conditions set out in the agreement. Exploration of EL4882 is being conducted as part of the Gairdner Project with EL4573.

3. LOCATION AND ACCESS

EL4882 is approximately 300km northwest of Port Augusta and is centred on the small settlement of Kingoonya on the Trans Australian Railway (1). The tenement between Lake Harris and Lake Labyrinth, on Kingoonya 1:250 000 Sheet SH53-11 and Gairdner 1:250 000 Sheet SH53-15. Access is via the sealed Stuart Highway (30km to the north and east) and Trans Australian Railway access road to Kingoonya, with local access along station tracks and fence line tracks. The topography is flat lying with scattered small salt lakes.

The location of EL4882 is shown in Figure 1

4. TENURE

EL3655 (now EL4882) was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited on 27 November 2006. The tenement originally covered 499km² in six sections, but has been reduced to its current area of 377.1km² in five sections. Ownership was transferred to Hiltaba Gold Pty Ltd early in 2011. EL3655 was renewed as EL4882 in June 2012 with the grant date backdated to 26th November 2011.

The tenement is subject to the farm-in and joint venture agreement between Hiltaba Gold Pty Ltd, Stellar Resources Limited and AngloGold Ashanti Australia Limited dated 4 October 2010.

EL4882 is covered by two Native Title claims: the Antakirinja Matu-Yankunytjatara, SC95/007 and the Gawler Ranges Native Title Claim (SC97/007). Part 9B exploration access agreements have been completed with AMY though still in negotiations with Gawler Ranges.

5. REGIONAL GEOLOGY

EL4882 is in the central Gawler Craton of South Australia. Neoproterozoic to earliest Palaeoproterozoic basement locally includes the Mulgathing Complex, Glenloth Granite and Harris Greenstone Belt. Basement is covered by the ~1590Ma Gawler Range Volcanics (GRV; the coeval Hiltaba Granite Suite intrudes basement) and overlying Pandurra Formation red beds of the Mesoproterozoic Cariewerloo Basin (Figure 2). The western four sections of EL4882 are mainly underlain by the Eocene-Miocene Kingoonya palaeochannel targeted for uranium by UraniumSA (Warland, 2008).

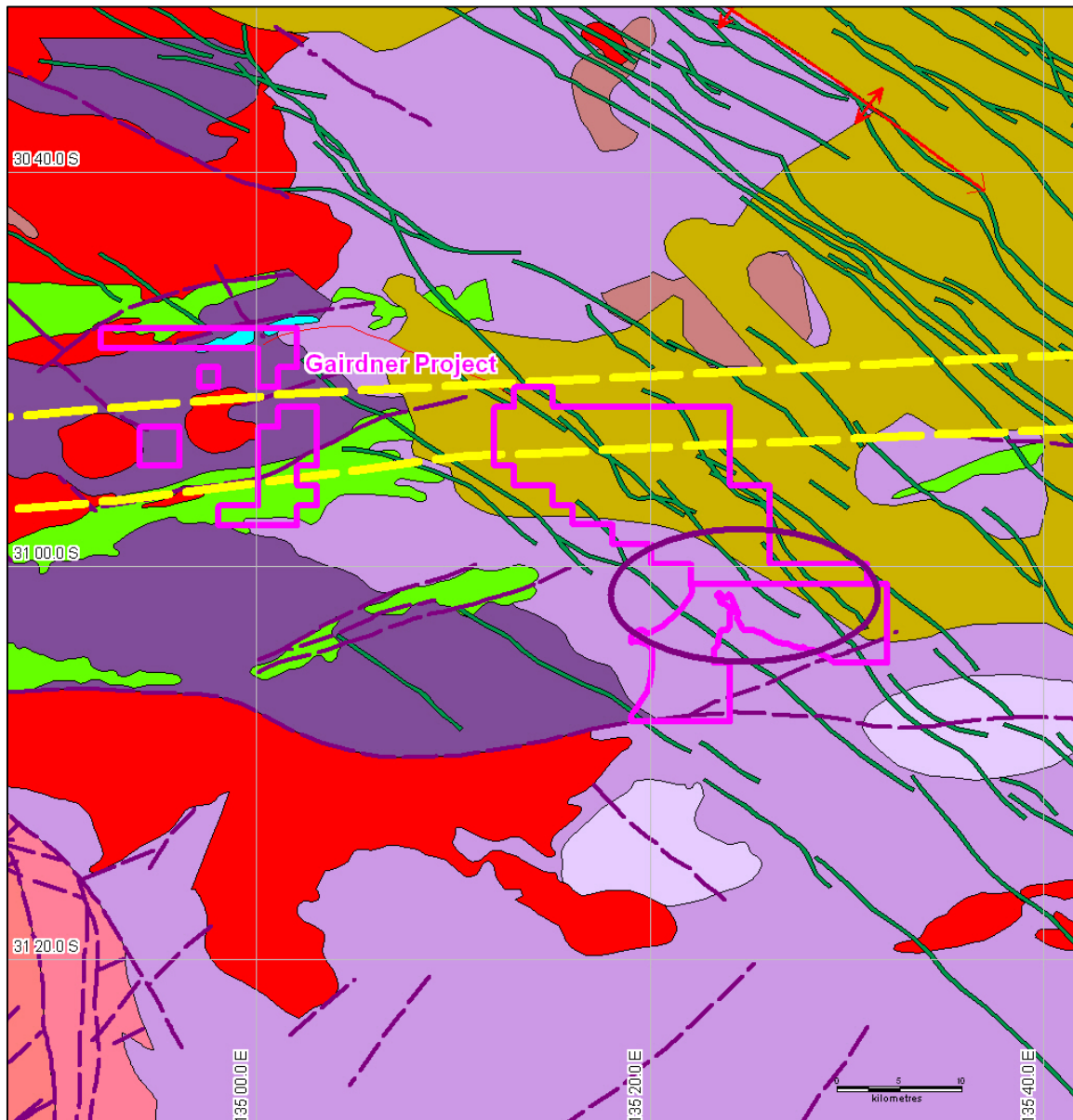


Figure 2 Geology of the Gairdner Project; EL4882 is the northern tenement (5 sections in magenta)

GDA94; PIRSA geological interpretation: dark purple = >2.5Ga Mulgathing Complex and 2.5Ga Glenloth Granite; green = 2.5Ga Harris Greenstone Belt; red = 1.59Ga Hiltaba Suite granites; dark/light lilac = 1.59Ga Gawler Range Volcanics; olive = middle Mesoproterozoic Pandurra Fm of the Cariewerloo Basin; dark green = 0.83Ga Gairdner dyke swarm; purple dashed lines = Archaean-Palaeoproterozoic structures; yellow dashed zone = interpreted deep crustal-lithospheric structure; purple ellipse = outline of magnetically defined exploration target

The Central Gawler Gold Province is a region in the central Gawler Craton in which there is a close spatial association between Hiltaba Suite plutons, coeval structure and gold-dominant mineralisation (Figure 3). Gold mineralisation includes the 0.83Moz Tunkillia and 0.15Moz Tarcoola gold deposits, as well as less advanced prospects/deposits including that at Barns, Nuckulla Hill and Glenloth/Earea Dam. IOCG deposits, including Olympic Dam, Prominent Hill and Carrapateena, are associated with Hiltaba Suite granites in the Olympic Domain in the eastern Gawler Craton.

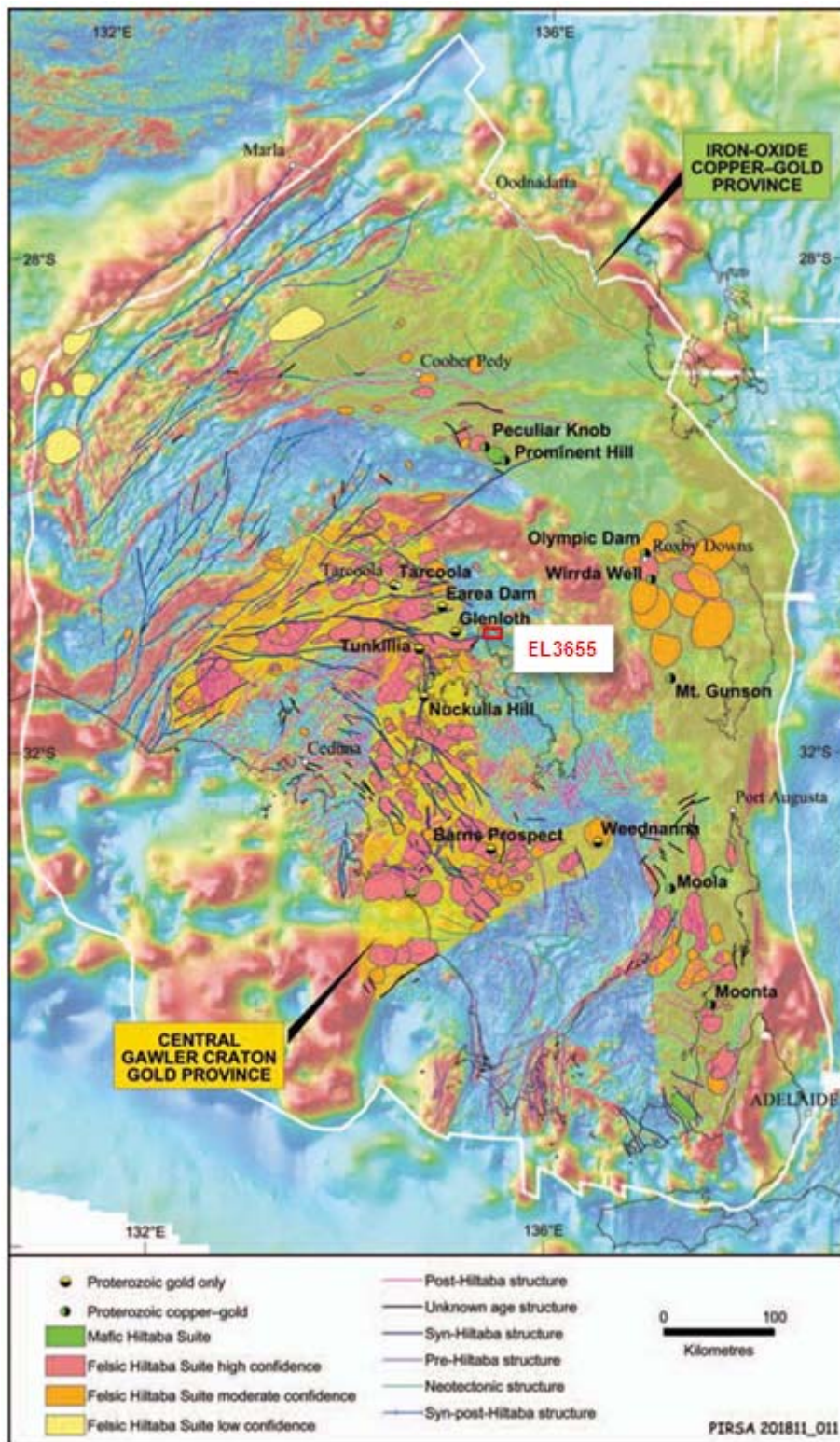


Figure 3 The Central Gawler Gold Province (yellow) and Olympic Domain (green). EL4882 (formerly EL3655) is shown in red. (from MESA Journal 30, 2003)

6. EXPLORATION CONCEPT

The exploration concept at Gairdner is that a major IOCG system may be concealed beneath relatively shallow Gawler Range Volcanics (the volcanic equivalents of the ~1590Ma Hiltaba Granite Suite), and is reflected by a broad, diffuse magnetic “shellback” anomaly which to that at the Carrapateena, Olympic Dam and Osborne IOCG deposits (Figure 4). The Central Gawler Gold Province, which includes the 0.83Moz Tunkillia and 0.15Moz Tarcoola deposits of interpreted

Hiltaba age hosted by Archaean and Palaeoproterozoic rocks to the west of Gairdner, may be the “smoke” marginal to a major Au±Cu deposit concealed beneath the GRV at Gairdner.

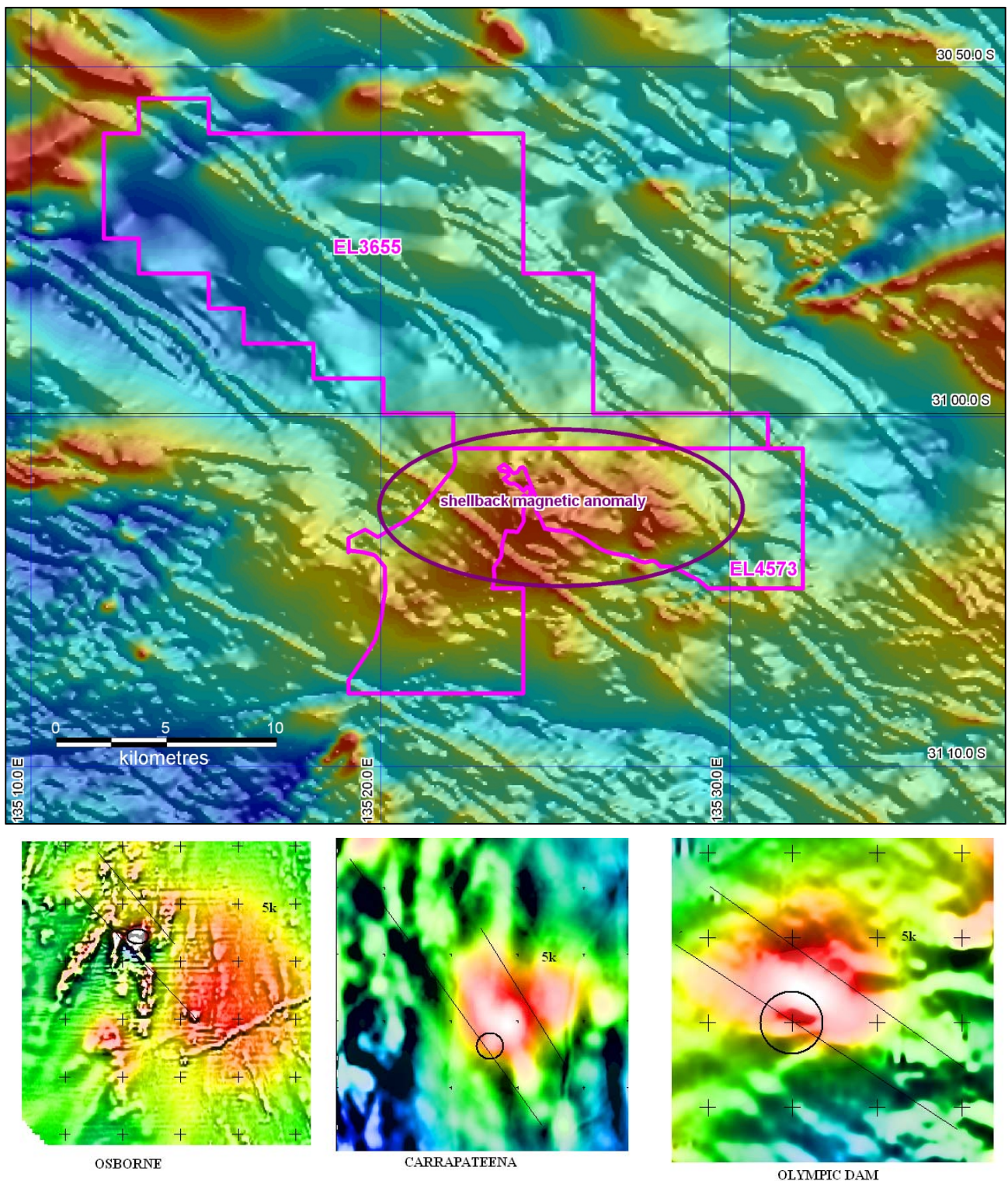


Figure 4 “Shellback” Magnetic Anomaly at Gairdner project compared with magnetic anomalies at Osborne, Carrapateena and Olympic Dam

7. PREVIOUS EXPLORATION

SARIG shows 43 previous mineral exploration licences that overlap current EL4882 (Table 1).

Calcrete sampling has been the main surface geochemical exploration tool used in the Gawler Craton in the past 25 years or so. The PIRSA open file calcrete sampling database includes 1033 samples within current EL4882 (Figure 5), collected by PIMA Mining, MIM Exploration and

Dominion Mining, mainly in the late 1990s. The maximum metal tenors recorded in these surveys were 15ppb gold and 87.7ppm copper. However, calcrete sampling is not expected to detect gold and copper mineralisation concealed beneath >100 metres of Gawler Range Volcanics and overlying Mesoproterozoic sedimentary rocks, such as in the eastern part of EL4882 targeted by the current exploration, or in areas of significant palaeochannel development.

The PIRSA open file drilling database (excludes recent confidential data) shows just three previous drill holes, by Afmeco, Dominion and SA DME, completed within the area of EL4882 for a total of 135m (Figure 5).

Airborne geophysical surveys in the PIRSA database include the 400 metre line spacing magnetic-radiometric survey flown by the SA government as part of the South Australian Exploration Initiative.

Previous exploration completed by UraniumSA on EL4882 comprised an airborne electromagnetic survey over the western four sections of the tenement to define palaeochannels for uranium exploration (Warland, 2008). No further exploration was completed on EL4882 until the work described in this report.

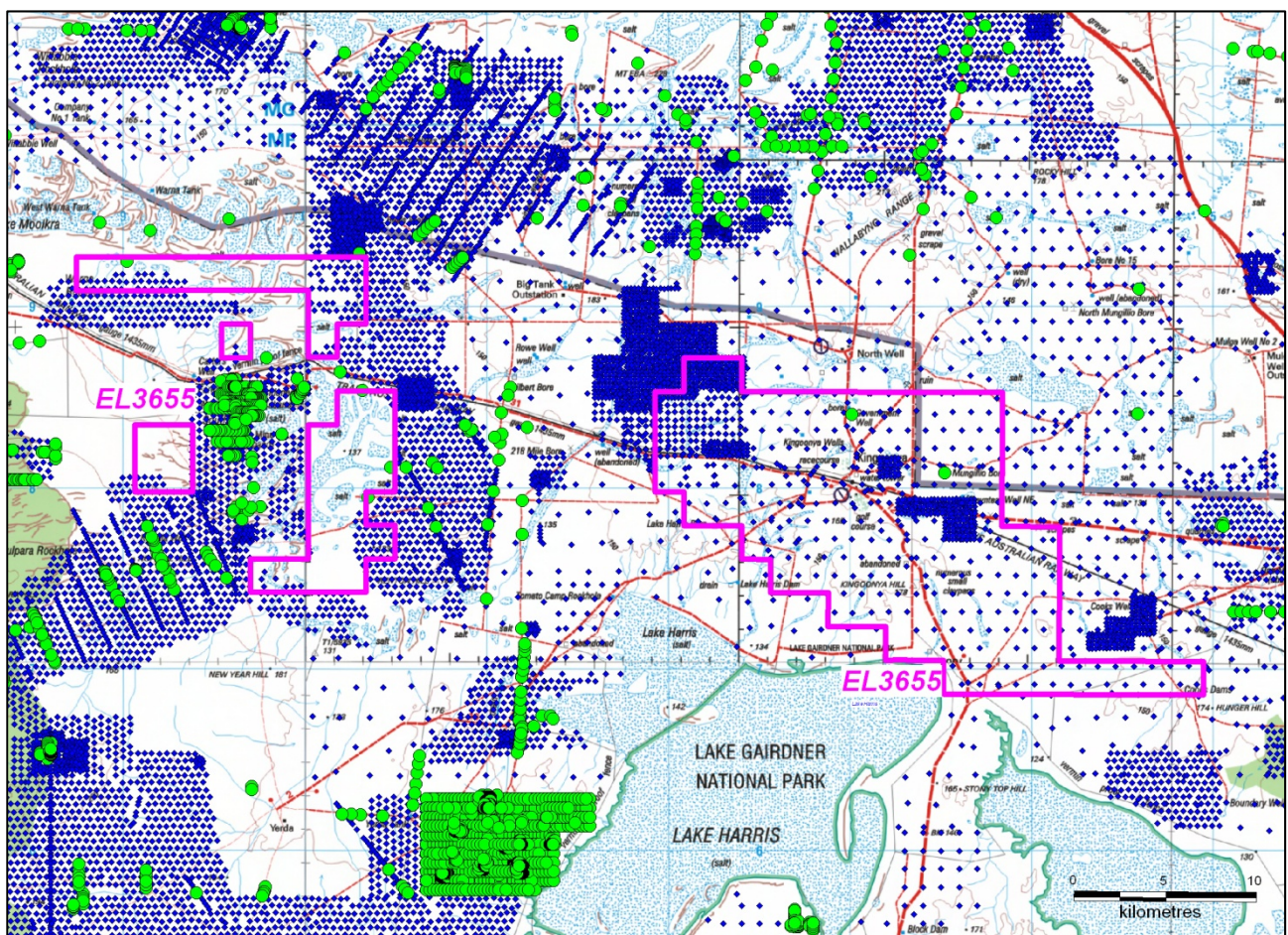


Figure 5 EL4882 (previously EL3655) Previous Calcrete Sampling (blue diamonds) and drill hole collars (green dots); data from SARIG

Table 1 Previous Exploration Licences overlapping current EL4882

Tenement	Licencees	Operators	Location	Expiry
EL14	Utah Development Co Ltd (100%)	null	MCDOUALL PEAK	4/10/1973
EL56	Abandon Holdings NI (100%)	null	CARTERS WELL	29/03/1975
EL580	Afmeco Pty Ltd (100%)	null	TARCOOLA	15/01/1982
EL694	Afmeco Pty Ltd (100%)	null	TARCOOLA	10/08/1982
EL407	Aberfoyle Exploration Pty Ltd (100%)	null	TARCOOLA	6/06/1980
EL554	Amoco, Minerals Australia Co.	null	MT EBA	12/11/1981
EL966	Amoco, Minerals Australia Co.	null	MT EBA	17/10/1984
EL1017	Amoco, Minerals Australia Co.	null	MT FINKE	27/01/1984
EL752	Santos Ltd (100%)	null	GLENLOTH GOLDFIELD	19/10/1982
EL759	Utah Development Co Ltd (100%)	null	CLUCAS HILL	30/11/1981
EL1055	Afmeco Pty Ltd (100%)	null	TARCOOLA	18/10/1987
EL1460	Clarke, David Brian	null	TARCOOLA	6/12/1992
EL1315	Rio Tinto Exploration Pty Limited (100%)	null	MT EBA	9/01/1990
EL1400	Tarcoola Gold Ltd (100%)	null	BLACK CAMP HILL	28/10/1987
EL1764	Olliver Geological Services Pty Ltd (100%)	Olliver Geological Services Pty Ltd	KINGOONYA	15/09/1993
EL1798	Resolute Resources Pty Limited (50%); Dominion Gold Operations Pty Ltd (50%)	Resolute Resources Pty Limited; Mount Isa Mines Limited	KINGOONYA AREA	15/11/1997
EL1823	Mount Isa Mines Limited (40%); Alkali Exploration NI (10%); Seistend Pty Ltd (10%); Oakman Pty Ltd (10%); Aurelius Resources Pty Ltd (10%); Conor, Colin; Allender, James Fraser	Mount Isa Mines Limited	TARCOOLA - KINGOONYA AREA	3/03/1998
EL1662	Dryga, Paul Hartmut	null	EAREA DAM	23/11/1990
EL1955	Resolute Resources Pty Limited (50%); Dominion Gold Operations Pty Ltd (50%)	Resolute Resources Pty Limited; Dominion Gold Operations Pty Ltd; Mount Isa Mines Limited	LAKE LABYRINTH AREA	26/07/1999
EL1958	Flint, Warwick John	Flint, Warwick John	FERGUSON AREA	26/01/1995
EL1827	Clarke, David Brian	Clarke, David Brian	TARCOOLA AREA	21/03/1998
EL2091	Deep Well Pty Ltd (100%)	Deep Well Pty Ltd; Mount Isa Mines Limited	FERGUSON AREA	12/06/2000
EL2174	Redport Ltd (50%); Kelaray Pty Ltd (50%)	Redport Ltd	KINGOONYA AREA	2/06/1999
EL2351	Australian Continental Mining NI (100%)	Australian Continental Mining NI	LAKE HARRIS AREA	29/05/1998
EL2253	Redport Ltd (50%); Magnesium International Ltd (50%)	Magnesium International Ltd	ROCKY HILL AREA	9/01/2000
EL2510	Gravity Capital Ltd (100%)	Gravity Capital Ltd	TARCOOLA AREA	20/04/2003
EL2518	Mount Isa Mines Limited (100%)	Mount Isa Mines Limited	Tarcoola-Kingoonya area	24/05/2003
EL2466	Mount Isa Mines Limited (100%); Dominion Gold Operations Pty Ltd (%)	Dominion Gold Operations Pty Ltd; Mount Isa Mines Limited	KINGOONYA AREA	2/12/2002
EL2748	Deep Well Pty Ltd (100%)	Deep Well Pty Ltd	Ferguson area - Approx 40 km W of Kingoonya	5/09/2005
EL2636	Dominion Gold Operations Pty Ltd (100%)	Dominion Gold Operations Pty Ltd	Lake Labyrinth area - Approx 30km NW of Kingoonya	26/08/2004
EL2842	Minex (Aust) Pty Ltd (100%)	Minex (Aust) Pty Ltd; BHP Billiton Minerals Pty Ltd	Talia Hill Area - Yellabinna Regional Reserve	18/09/2006
EL2961	South Australian Iron Ore Group Pty Ltd (100%)	Centrex Metals Limited	Lake Moolkra area - Approx 40 km SE of Tarcoola	23/11/2005
EL3089	Hiltaba Gold Pty Ltd (100%)	Hiltaba Gold Pty Ltd; Samphire Uranium Pty Ltd	Tarcoola Area	1/06/2008
EL3107	Range River Gold Ltd (Administrator Appointed) (100%)	Minotaur Operations Pty Ltd; Mithril Resources Limited; Toro Energy Limited; Range River Gold Ltd	Glenloth area - approx 45 km SE of Tarcoola	10/07/2008
EL3120	Dominion Gold Operations Pty Ltd (100%)	Resolute Resources Pty Limited; Minotaur Operations Pty Ltd; Toro Energy Limited; Dominion Gold Operations Pty Ltd	Kingoonya area - approx 70 km ESE of Tarcoola	13/08/2008
EL2974	Terramin Australia Limited (100%)	null	LAKE LABYRINTH AREA	24/06/2003
EL3252	Dominion Gold Operations Pty Ltd (100%)	Resolute Resources Pty Limited; Minotaur Operations Pty Ltd; Toro Energy Limited; Dominion Gold Operations Pty Ltd	Lake Labyrinth area - Approx 30 km NW of Kingoonya	28/09/2009
EL3157	Minotaur Operations Pty Ltd (100%)	Minotaur Uranium Pty Ltd; OZ Minerals Prominent Hill Operations Pty Ltd	Yerda Well area - Approx 50 km SE of Tarcoola	19/01/2009
EL3198	Genex Resources Pty Ltd (100%)	Genex Resources Pty Ltd	Big Tank Outstation area - Approx 20km W of Kingoonya	27/04/2008
EL3211	Marathon Resources Limited (100%)	Marathon Resources Limited; Samphire Uranium Pty Ltd	Mulga Well area - Approx 90km SE of Tarcoola	21/06/2009
EL3527	Abbey Feale Mining Pty Ltd (100%)	Abbey Feale Mining Pty Ltd	Ferguson area - approx 40km W of Kingoonya	27/02/2011
EL3529	Doray Minerals Limited (100%)	Doray Minerals Limited	Centre Hill area - Approx 20 km west of Kingoonya	6/03/2011
EL3817	Minex (Aust) Pty Ltd (100%)	Minex (Aust) Pty Ltd	Talia Hill - approx 130km N of Ceduna	25/06/2009

8. EXPLORATION COMPLETED

Exploration completed during the first year of tenure of EL4882 comprised:

- Continuation of negotiations for a Native Title Mining Agreement with the Gawler Ranges Native Title claimant group
- No on ground exploration
- Analysis and interpretation of previous geophysical results

9. EXPENDITURE

Expenditure for the first year of tenure for EL4882, to 26 November 2012, was \$40,536.76. The minimum expenditure commitment was \$260,000.

Field Supplies	\$0
Geological Activities	\$12,819.36
Geophysical Activities	\$0
Travel	\$0
Heritage	\$27,717.40
TOTAL	\$40,536.76

10. CONCLUSIONS & RECOMMENDATIONS

No IOCG drill targets were defined from the geophysical surveys. Re-interpretation of the geophysical datasets may be required. Negotiations with the native title group should be continued for a successful outcome.

11. REFERENCES

Warland, N G, 2008, Annual Technical Report for the period ending 26th November 2007 EL 3655 'Kingoonya'

24 February 2014

DMITRE,
Minerals and Energy Division,
GPO Box 1264,
Adelaide,
SA. 5001.

Dear Sir/Madam,

EL4882 Kingoonya
Annual Report
For the period 27/11/2012 to 28/11/2013

This report is for exploration activities completed on EL4882 for the reporting period 27/11/2012 to 26/11/2013.

EL4882 is approximately 300km northwest of Port Augusta and is centred on the small settlement of Kingoonya on the Trans Australian Railway. The tenement lies north of Lake Harris and Lake Labyrinth, and is covered by 1:250k map sheets Kingoonya SH53-11 and Gairdner SH53-15. Access is via the sealed Stuart Highway (30km to the north and east) and Trans Australian Railway access road to Kingoonya, with local access along station tracks and fence line tracks. The topography is flat lying with scattered small salt lakes.

EL4882 (as prior EL3655) was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited on 27/11/2006. The tenement originally covered 499km² in six sections, and was subsequently reduced to an area of 377.1km² in five sections. Ownership was transferred to Hiltaba Gold Pty Ltd (wholly owned by Stellar Resources Ltd) early in 2011. EL3655 was renewed as subsequent licence EL4882 in 2012 for the same area, and upon renewal in 2013 was reduced to 265km².

The tenement was subject to a farm-in and joint venture agreement between Hiltaba Gold Pty Ltd and AngloGold Ashanti Australia Limited from 4/10/2010 to 28/02/2013.

EL4882 is in the central Gawler Craton of South Australia. Neoarchean to earliest Palaeoproterozoic basement locally includes the Mulgathing Complex, Glenloth Granite and Harris Greenstone Belt. Basement is covered by the ~1590Ma Gawler Range Volcanics (GRV; the coeval Hiltaba Granite Suite intrudes basement) and overlying Pandurra Formation red beds of the Mesoproterozoic Carrierloo Basin. The Eocene-Miocene age Kingoonya palaeochannel, targeted for uranium by UraniumSA, overlies the basement for the western four sections of the licence. The Central Gawler Gold Province is a region in the central Gawler Craton in which there is a close spatial association between Hiltaba Suite plutons, coeval structure and gold-dominant mineralisation. AGA were targeting Hiltaba age lithologies hosted by Archaean and Palaeoproterozoic rocks that may have been "smoke" marginal to a major Au±Cu deposit concealed beneath the GRV, in the eastern block of the licence.

AGA report that they were unable to identify any well defined drilling targets within EL4882 (& the adjacent EL4573), and consequently withdrew from the agreement as at 28/02/2013.

No field work has been undertaken by AGA or Hiltaba/Stellar on the licence for the reporting period.

Expenditure for 27/11/12 to 26/11/13

Expenditure by Hiltaba for the period:	5,169.86
Expenditure by AGA for the period:	<u>2,456.00</u>
Total expenditure for the period:	7,625.86

Expenditure for 27/11/11 to 26/11/12:	<u>44,579.26</u>
Total expenditure for licence:	\$52,204.98

Yours sincerely,



Peter Blight
CEO

Expenditure: Hiltaba Gold Pty Ltd.

Transaction Report				
Hiltaba Gold Pty Ltd				
Printed At: 24/02/2014 14:50:43			Base Currency: AUD	Page: 1
Job No	Job Details	Department	Groups	
Tran. Date		Doc Ref - Description	Posting Ref	Amount
Job Code: 1700	EL4882 Kingoonya	D1	GROUP	
	1053	Technical	Total	\$2,163.36
Phase Total	105	STAFF COSTS		\$2,163.36
	1061	Professional Technical	Total	\$1,292.50
Phase Total	106	CONTRACT PERSONNEL		\$1,292.50
	1651	Administration	Total	\$1,714.00
Phase Total	165	OVERHEADS		\$1,714.00
	1901	Write Off	Total	(\$1,736.06)
Phase Total	190	WRITE OFF / PROVISIONS		(\$1,736.06)
Job Total : 1700				\$3,433.80
Class 17				\$3,433.80
Report Total:				\$3,433.80

Expenditure: AngloGold Ashanti Australia Ltd.

	Posting Date From/To	27/11/2012 - 30/04/2013		
	Tenement	EL4882		
	Cost Element			▼ Total Tenement Actual Amount
Tenement	Mineral - Exploration Activities	▼ ARL MIN_EXPL	Mineral - Exploratio	2,456
EL4882		▶ ARL GEO_ACT	Geological Activitie	2,456

2 February 2015

DMITRE,
Minerals and Energy Division,
GPO Box 1264,
Adelaide,
SA. 5001.

Dear Sir/Madam,

EL4882 Kingoonya
Annual Report
For the period 27/11/2013 to 28/11/2014

This report is for exploration activities on EL4882 for the reporting period 27/11/2013 to 26/11/2014.

EL4882 is centred on the small settlement of Kingoonya on the Trans Australian Railway, approximately 300km north-west of Port Augusta and 600km north-west of Adelaide. The tenement consists of a western block 30.5km north-west of Kingoonya and an eastern block 14km south-east of Kingoonya. The tenement is covered by 1:250k map sheets Kingoonya SH53-11 and Gairdner SH53-15. Access is via the sealed Stuart Highway (30km to the north and east) and Trans Australian Railway access road to Kingoonya, with local access along station tracks and fence line tracks. The topography is flat lying with scattered small salt lakes.

EL4882 (as prior EL3655) was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited on 27/11/2006. The tenement originally covered 499km² in six sections, and since then has been sequentially reduced to an area of 48.5km² in two sections, being approximately 5.9km² for the western and 42.5km² for the eastern. Ownership of EL3655 was transferred to Hiltaba Gold Pty Ltd (wholly owned by Stellar Resources Ltd) early in 2011. EL3655 was renewed as subsequent licence EL4882 as at 28th November 2012.

The tenement was subject to a farm-in and joint venture agreement between Hiltaba Gold Pty Ltd and AngloGold Ashanti Australia Limited from 4/10/2010 to 28/02/2013. AGA reported that they were unable to identify any well defined drilling targets within EL4882 (& the adjacent EL4573) and consequently withdrew from the agreement.

EL4882 is in the central Gawler Craton of South Australia. Neoarchean to earliest Palaeoproterozoic basement locally includes the Mulgathing Complex, Glenloth Granite and Harris Greenstone Belt. Basement is covered by the ~1590Ma Gawler Range Volcanics (GRV; the coeval Hiltaba Granite Suite intrudes basement) and overlying Pandurra Formation red beds of the Mesoproterozoic Carrierloo Basin. The Eocene-Miocene age Kingoonya palaeochannel, targeted for uranium by UraniumSA, overlies the basement for the western four sections of the licence. The Central Gawler Gold Province is a region in the central Gawler Craton in which there is a close spatial association between Hiltaba Suite plutons, coeval structure and gold-dominant mineralisation. AGA were targeting Hiltaba age lithologies hosted by Archaean and Palaeoproterozoic rocks that may have been "smoke" marginal to a major Au±Cu deposit concealed beneath the GRV, in the eastern block of the licence.

No field work has been undertaken by Hiltaba/Stellar on the licence for the reporting period, with all efforts going towards securing another joint venture partner.

Expenditure for 27/11/13 to 26/11/14

Expenditure by Hiltaba for the period: 10,250.31

Previous expenditure for licence: 44,579.26

Total expenditure for licence: \$62,455.29

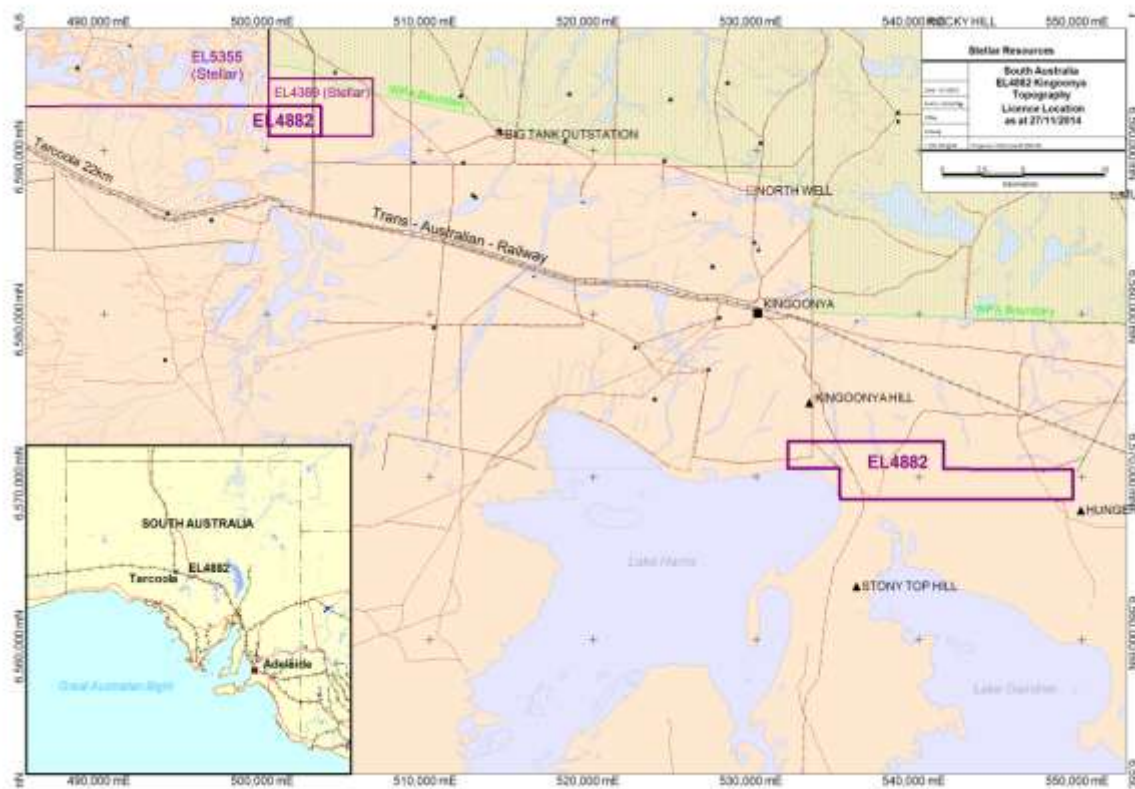
Yours sincerely,



Peter Blight
CEO

Expenditure: Hiltaba Gold Pty Ltd.

Transaction Report			
Hiltaba Gold Pty Ltd			
Printed At: 16/01/2015 13:18:54		Page: 1	
Job No	Job Details	Department	
Tran. Date		Doc Ref - Description	Amount
Job Code: 1700 EL4882 Kingoonya		D1	
	1053	Technical	\$2,698.76
Phase Total	105	STAFF COSTS	\$2,698.76
	1061	Professional Technical	\$2,543.75
Phase Total	106	CONTRACT PERSONNEL	\$2,543.75
	1505	Rents/ Other Utilities	\$1,600.80
Phase Total	150	TENEMENT COSTS	\$1,600.80
	1651	Administration	\$3,407.00
Phase Total	165	OVERHEADS	\$3,407.00
	1901	Write Off	\$9,633.66)
Phase Total	190	WRITE OFF / PROVISIONS	\$9,633.66)
Job Total : 1700			\$616.65
Class 17			\$616.65
Report Total:			\$616.65



EL4882 Kingoonya: Licence Location and Areas



EL4882 – KINGOONYA

RELINQUISHMENT REPORT

for the period

27/11/2011 to 21/04/2015

Distribution List

DSD

Stellar Resources Limited

Prepared by: Adrian Rigg

23 April 2015

SUMMARY

EL4882 is located approximately 300km north-west of Port Augusta and is centred on the small settlement of Kingoonya on the Trans Australian Railway. The tenement consists of two remaining blocks - A (western) and E (eastern). Block A has been held for its iron ore prospect and block E for IOCG prospectivity.

For block E AngloGold Ashanti Australia, under joint venture agreement, undertook exploration for IOCG mineralisation in 2011, and for block A Stellar worked on the Hick's Hill magnetite prospect which straddles the boundaries of EL4882 and EL4389 to the north (now relinquished).

Following their geophysics programme over block E of EL4882 and adjoining licence EL4573, AngloGold were unable to define a drilling target and consequently withdrew from the JV. Stellar's work at block A and EL4389 at Hick's Hill was restricted due to an Aboriginal Heritage exclusion zone limiting the full testing of the jaspilite. Stellar has decided to relinquish the licence as an acceptable access agreement hasn't been negotiated with the traditional landowner group, in conjunction with the weakening price of iron ore and ample on-stream supply.

Stellar considers that further testing of the Hick's Hill jaspilite is warranted when access and price considerations are more favourable.

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8	CONCLUSIONS AND RECOMMENDATIONS	9

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1 INTRODUCTION

EL3655 (now EL4882) consisted of six blocks when acquired by Stellar from UraniumSA (USA), with four blocks or portions being relinquished to 2014. This report is for the relinquishment of the two remaining blocks.

AngloGold Ashanti (AGA) entered a joint venture agreement with Stellar in 2010 to assess the area for IOCG mineralisation. Following their 2011 aeromagnetics and gravity programme over block E of EL4882 and adjoining licence EL4573, AngloGold modelled a large aeromagnetic "shellback" anomaly, but were unable to define a drilling target and consequently withdrew from the JV.

Research had shown an outcropping Proterozoic jaspilite 45km south-east of Stellar's Coolybring magnetite deposit. To cover the prospect EL4389 Hick's Hill was granted to Stellar Resources Ltd in 2009, and EL3655 (now EL4882) was purchased from UraniumSA in 2009, as the north-west block (A) covered the southern extension of the jaspilite occurrence. Aeromagnetic and gravity data indicated that the jaspilite lay within EL4389 and EL3655. Only one hole had previously been drilled into the anomaly, by Mt Isa Mines in 1998 as part of an IOCG exploration programme. In 2010 Stellar undertook a gravity survey, modelled PIRSA aeromagnetics and the Stellar gravity data, and drilled six RC holes with follow up geochemical analysis and Davis Tube testing. The prospect could not be fully tested due an Aboriginal Heritage exclusion zone, so no further work was done.

Field work for blocks A and E consisted of geophysics only, with no ground disturbance.

USA had held EL3655 for palaeochannel roll-front uranium exploration.

2 TITLE AND ACCESS

EL4882 is located approximately 300km north-west of Port Augusta and is centred on the small settlement of Kingoonya on the Trans Australian Railway. The tenement consists of two blocks: Block A (western) centred 30km NW of Kingoonya, and Block E (eastern) centred 13km SE of Kingoonya and north of Lake Harris and Lake Gairdner. The blocks are covered by 1:250k map sheets Kingoonya SH53-11 and Gairdner SH53-15. Access is via the sealed Stuart Highway (30km to the north and east) and the Trans Australian Railway access road to Kingoonya, with local access along station tracks and fence line tracks. Topography is flat lying for both blocks with one low hill (Hick's Hill 144m, see Photographs 1 & 2) adjacent to block A. Block A of the licence is located within the North Well pastoral lease.

After an Aboriginal Heritage survey, access was excluded to the hill, including a 500m buffer zone.

EL4882 (as prior EL3655) was granted to Gingertom Resources Pty Ltd, a wholly owned subsidiary of UraniumSA Limited (USA) on 27/11/2006. The tenement originally covered 499km² in six sections, and was subsequently reduced to an area of 377.1km² in five sections. Ownership was transferred to Hiltaba Gold Pty Ltd (wholly owned by Stellar Resources Ltd) from 26/10/2009. EL3655 was renewed as subsequent licence EL4882 on 27/11/2011 for the same area. Upon renewal in 2013 the area was reduced from 377km² to 73km², and upon renewal in 2014 was further reduced to 49.5km² (Figure 1).

EL3655 (& successor tenement EL4882) was subject to a farm-in and joint venture agreement between Hiltaba Gold Pty Ltd and AngloGold Ashanti Australia Limited (AGA) from 4/10/2010 to 28/02/2013.

All survey and spatial information relating to work completed by Stellar Resources presented is reported in datum GDA94, MGA coordinates, Zone 53.

The relinquishment is for the whole of blocks A and E (Figure 1), as at 1/04/2015.



Photograph 1. Hick's Hill



Photograph 2. Hick's Hill – Jaspilite Surface Expression (dark zone)

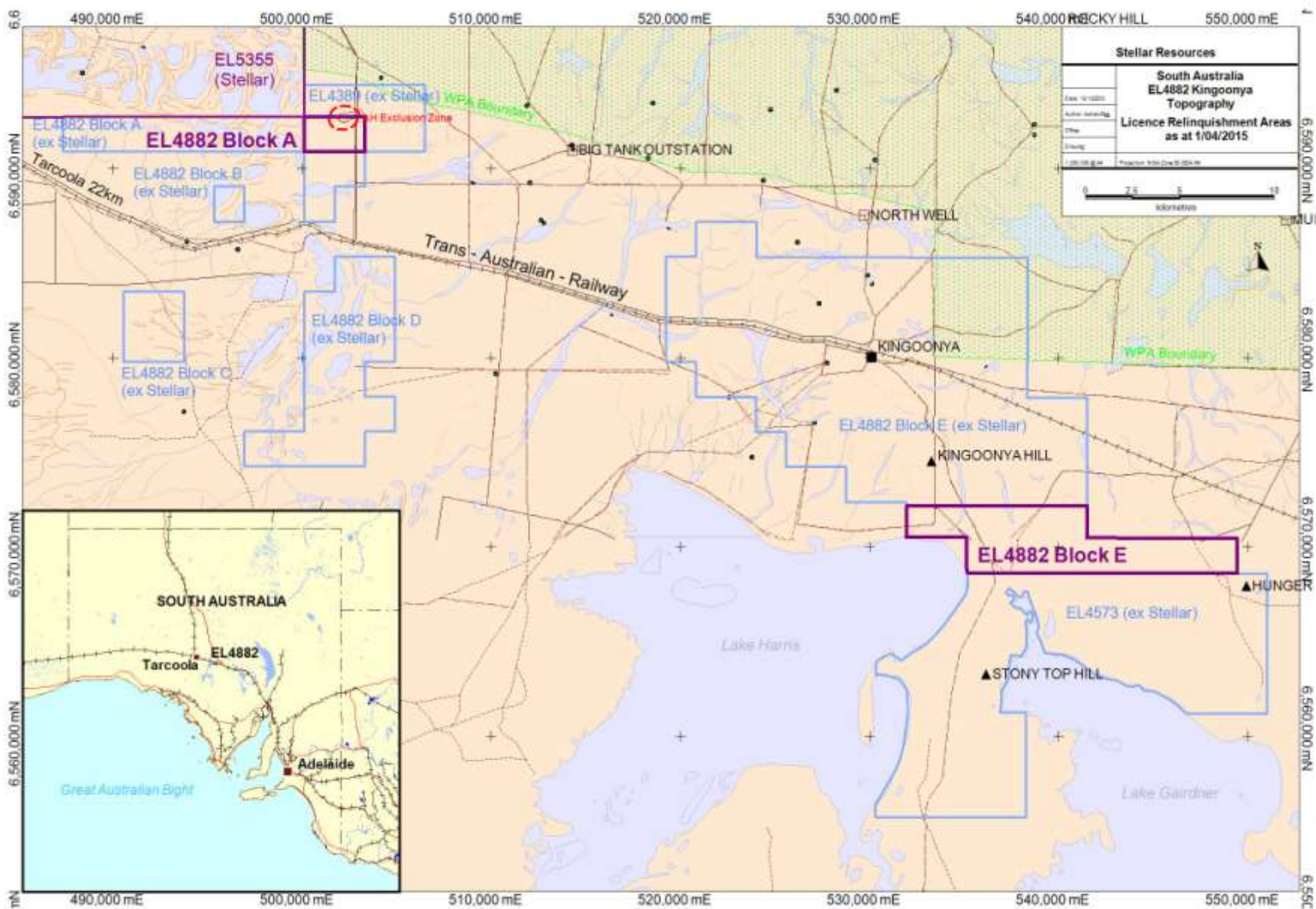


Figure 1: EL 4882: Tenement Location Plan

3 REGIONAL & LOCAL GEOLOGY

EL4882 lies within the Pre-Cambrian Gawler Craton, which underlies a large part of South Australia, and is dominated by felsic volcanic rocks of the Gawler Range Volcanics (GRV) to the south and arenaceous sediments of the Pandurra Formation to the north and east. The relinquishment blocks consist of Lower Gawler Range Volcanics. These are of Mesoproterozoic age (approx 1593Ma) and consist primarily of calc-alkaline dacite-rhyodacite-rhyolite pyroclastic rocks deposited sub-aerially on an older late Archaean to Palaeoproterozoic basement (Blissett et al, 1993). Basement comprises Archaean gneisses of the Mulgathing Suite and Archaean mafic to ultramafic rocks of the Harris Greenstone Sequence (Tonkin, D., 2006). Block A includes a palaeoproterozoic jaspilite BIF.

AGA was targeting Hiltaba age lithologies hosted by Archaean and Palaeoproterozoic rocks that may have been “smoke” marginal to a major Au±Cu deposit concealed beneath the GRV in the southern part of the eastern block of the licence. Their focus was on a broad, diffuse magnetic “shellback” anomaly which was interpreted to be similar to that which hosts the Carrapateena, Olympic Dam and Osborne IOCG deposits.

The Hick’s Hill jaspilite covered by EL4882 and ex-Stellar EL4389 lies 45km south-east of Stellar’s Coolybring magnetite project in the adjoining Tarcoola licence (EL5355).



Photograph 3: EL4882 / EL4389 - Typical Hick’s Hill landscape over jaspilite (not drilled here)

The Hick’s Hill Jaspilite (see above) is similar to the Wilgena Hill - Coolybring Jaspilite (in EL5355) which has been tentatively correlated with the Hutchison Group iron formations of the Middleback

Range (the magnetite and haematite deposits that supply OneSteel's iron and steel making operations at Whyalla), although the latter show distinct differences which are largely of primary origin and not due to deformation and metamorphism.

The Jaspilite is a distinctive red-black laminated jaspilitic banded iron formation, with banding mildly to strongly deformed and recrystallised, having been deposited under very stable conditions. The character of the Jaspilite is similar to that noted in the Brockman Iron Formation of the Hamersley Group in Western Australia.

The palaeoproterozoic jaspilite and the mesoproterozoic lower Gawler Range Volcanics within the licence are overlain by pleistocene alluvial/fluvial sediments (calcreted colluviums and red-brown clayey sand) up to 100m in thickness.

4 PREVIOUS EXPLORATION

Prior to Hiltaba and AGA, earlier exploration work was undertaken by SADME, MIM and Pima Mining.

A summary of work done on the relinquishment areas is as follows (see Figures 2 & 3):

- Regional aeromagnetics and gravity surveys, SADME;
- Calcrete sampling block A x 32 x 500m spacings for Au, Cu, Ni by MIM in 1998;
- Calcrete sampling block E x 43 x 1000m spacings for As, Au, Cu by Pima Mining in 1999.

The Hick's Hill magnetite body (and the Wilgena Hill and Coolybring bodies in Stellar's EL5355 Tarcoola) was discovered as a result of government mapping and airborne geophysical surveys in the 1950's and 1960's. Abadon Holdings NL (SML680) held the area in the early 1970's, with only a description of the outcrop geology being done. The only recorded previous field exploration for block A of the licence area was undertaken by Mount Isa Mines (EL2466) in the 1990's. MIM drilled one hole (EG1, 54m) immediately to the east of Hick's Hill in August 1998 as part of an IOCG exploration programme (within EL4389). The RC chips were assayed for gold only at the time, and later by Centrex for Fe. MIM undertook calcrete sampling in the Hick's Hill district including within block A of EL4882.

5 STELLAR EXPLORATION - 2009 TO 2014

AngloGold Ashanti Australia Ltd Joint Venture work.

Block E:

As part of AGA's 2011 IOCG exploration programme, AGA undertook an aeromagnetic survey and a ground gravity survey (see Figure 2):

- Aeromagnetic/radiometric survey: 662 line kilometres on n/s 100m spaced lines covering EL4882 (ex EL3655) and relinquished EL4573.
- Gravity survey: 386 stations at 400m spacings within the original EL4882 (ex EL3655), with 239 within the final relinquishment area.

Hiltaba Gold Pty Ltd (Stellar) work.

Block A:

Stellar work covering EL3655-EL4882 and EL4389 for the Hick's Hill magnetite prospect from 2009 to 2014, is as follows (see Figure 3):

- Aboriginal heritage survey: work area clearance for the Antakirinja Matu-Yunkunytjatjara Native Title Claimant Group, November 2009;
- detailed ground gravity (21 north-south lines @200m line spacing), December 2009;
- modelling and analysis of PIRSA aeromagnetics and Stellar gravity data, February 2010;

Associated prospect work within EL4389:

- 6 RC drill holes totalling 572m with routine assaying, May 2010;
- geochemical analysis of holes HH102 – HH106, June 2010;
- DTR analysis of holes HH102, 3, 4 & 6, June 2010.

See EL3655 Annual Technical Report 2011 and EL4389 Hick's Hill Annual Technical Report 2010, for detailed information and data.

A ground gravity survey was undertaken over the main prospect area. The gravity survey comprising 443 stations at 100m station spacing along 21 200m spaced lines, for a total of 49.7 line km, was undertaken by Haines Surveys for Stellar in December 2009 (see Figure 3). PIRSA supplied regional scale aeromagnetics.

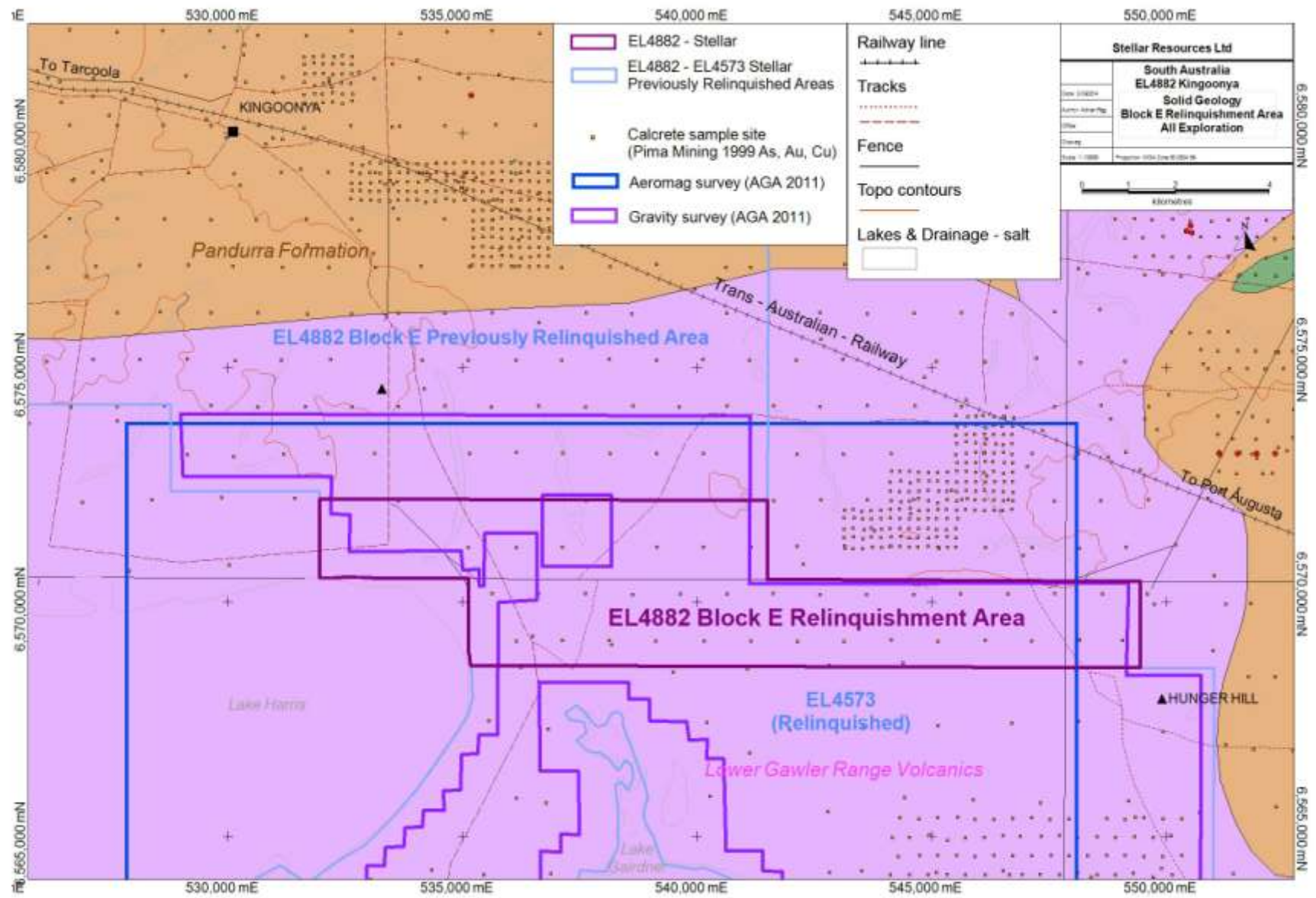
Magnetic and gravity profiles across the ground gravity and magnetic trends at Hick's Hill are similar to those noted over Onesteel's Iron Magnet Project in the Middleback Ranges.

The six RC drill holes within EL4389 sampled basement banded iron formation within the magnetic trend that defines the Hick's Hill prospect. The location of the drill traverse was determined by the Aboriginal Heritage survey exclusion zone. No drilling has been done within block A of EL4882.

Petrological studies of the magnetite BIF indicate low-grade regional metamorphism (greenschist facies) resulting in recrystallisation of the banded iron chemical sediments to form fine-grained microgranular layered assemblages of quartz, magnetite, and haematite.

Analytical results indicate head iron (Fe) grades within the target BIF horizons average 28%Fe. The average Fe grades are inferred to be toward the upper end of the range for banded iron formations globally, that typically report Fe in the range of 20% to 40%.

Davis Tube Recovery (DTR) test work showed that conventional grinding and magnetic separation is capable of producing a high quality magnetic concentrate, averaging 69%, that should generate a price premium. The concentrate contained low impurity levels of aluminium, phosphorous and sulphur.



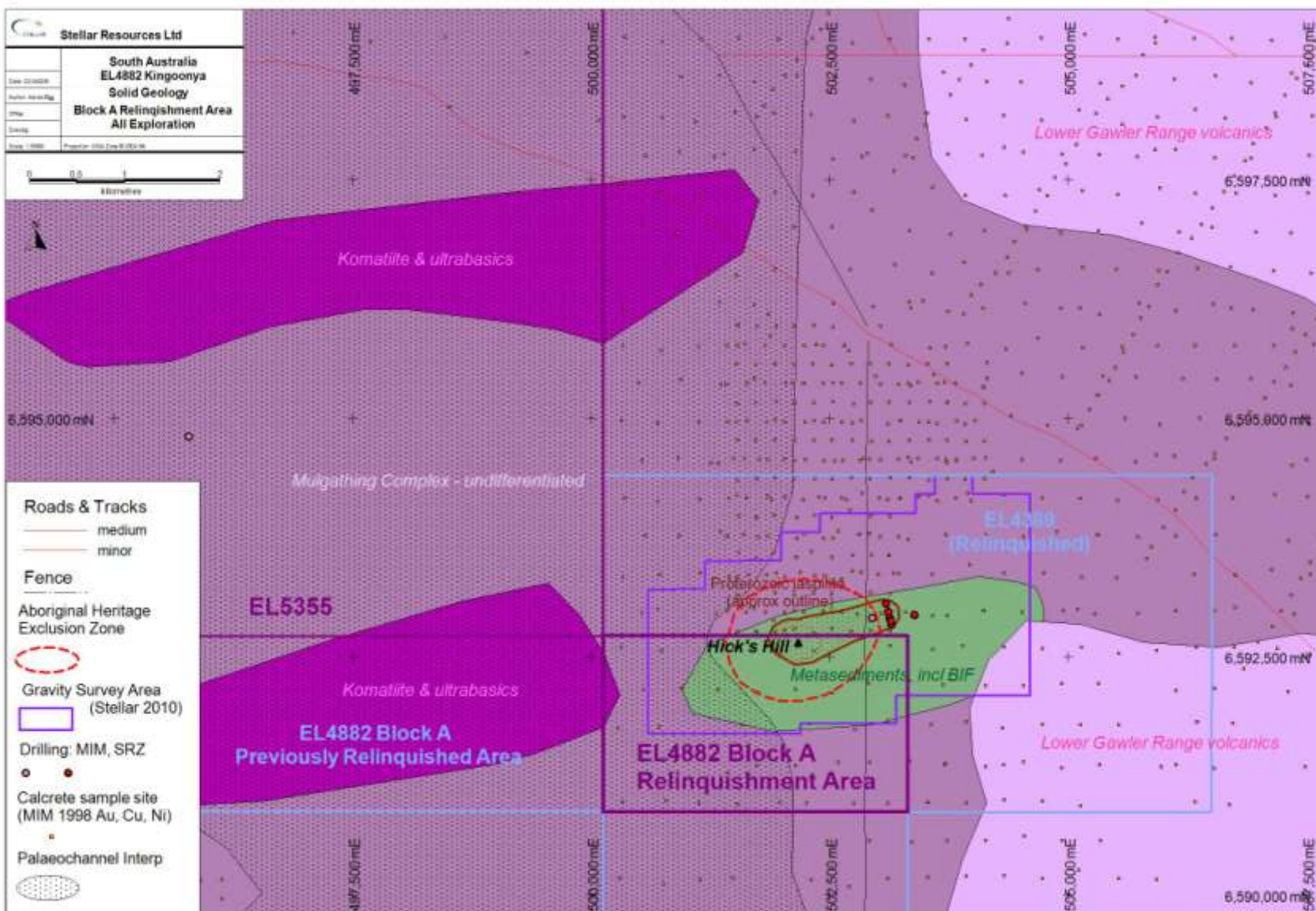


Figure 3: EL4882: Block A Solid Geology with All Exploration Work.

6 REHABILITATION

Geophysical work only was undertaken for the two blocks with no field impact.

7 EXPENDITURE

Total expenditure for EL4882 Kingoonya from 27/11/2011 to 1/04/2015 was \$28,502.

8 CONCLUSIONS AND RECOMMENDATIONS

AGA concluded that airborne magnetic and ground gravity surveys had defined more detailed anomalies within the targeted broad “shell-back” magnetic feature for potential IOCG mineralisation. The anomalies were interpreted to relate mainly to 827Ma, NNW-trending Gairdner Suite mafic dykes, which are not related to any known mineralisation. They recommended further interpretation of the geophysical datasets, possibly with follow-up detailed geophysical surveying of selected targets, before any drilling targets could be finalised. AGA did no further field work for EL3655-4882 (or EL4573).

Stellar's primary interest in EL4882 has been for the Hick's Hill iron ore prospect which straddles the boundary of the now-relinquished EL4389 and block A of EL4882. In 2010 Stellar drilled six RC holes within EL4389 approximately 200m north of the north-east corner of EL4882 block A. Drilling at the Hick's Hill iron ore prospect indicated a high quality magnetite resource. The Aboriginal Heritage survey exclusion zone covers most of the key central part of the project target area and has precluded any further work required to define the actual resource extent and grade.

Based on samples from the 2010 RC drill programme, Davis Tube Recovery test work indicated an average Fe grade for the Hick's Hill Iron Formation of approximately 33% Fe, with calculated iron recovery at approximately 80% and a mass recovery of approximately 33%. This work would suggest potential exists to produce a high quality product of 69% Fe with low to moderate silica of 3.8% and low impurities (aluminium, phosphorous and sulphur).

Stellar considers that further drilling is warranted to fully test the extent of the iron mineralisation. The limited 2010 drilling over the coincident gravity and magnetic features within the Hick's Hill prospect area indicates the potential to define a magnetite iron resource in excess of 90 million tonnes grading approximately 33%Fe.

If an acceptable access agreement can be negotiated with the traditional owners group and with a stronger iron ore price and favourable market, then the project may prove up to become a mining project.

References

- Blisset, A.H., Creaser, R.A., 1993 The Geology of South Australia, Volume 1, The Precambrian, pp107-124.
Daly, S.J., Flint, R.B. &
Parker, A.J., 1993. Gawler
Range Volcanics. In Drexel,
J.F., Priess, W.V. & Parker,
A.J. (eds)
- Morant, P. 2011 Gairdner Project, EL3655, Annual Report for the Period 27
November 2010 to 26 November 2011, AngloGold Ashanti
Australia Ltd.
- Rigg, A.M. 2010 EL4389 Hick's Hill. Annual Technical Report for the 12 Months
Ended 8 December 2010
- Tonkin, D. 2006 Independent Geologists Report. Replacement Prospectus.
UraniumSA Ltd (unpub).
- Warland, N.G. 2008 Annual Technical Report for the period ending 26th November
2007, EL 3655 'Kingoonya', UraniumSA Ltd.