EL 5101	Annual Technical Report - 12 month period ending 15/11/2013

EL 5101 Annual Technical Report – 12 month period ending 15/11/2013 (No Work)

.....Good Morning Nella,

NIL RETURN FOR ANNUAL TECHNICAL REPORT EL 5101

Further to our phone conversation yesterday, I hereby confirm that there was no exploration field work undertaken during this last reporting period on Exploration Licence EL 5101.

Accordingly, as there was nothing of geological significance to report, we will not be lodging an Annual Technical Report for this period, and therefore submit a Nil Return.
Kindly acknowledge receipt of this notification by return email.

Our thanks for your attention to this matter.

Robbie Cooper
Tenement Manager
KINGSTON RESOURCES LIMITED

From: DMITRE.Exploration@sa.gov.au
To: jumbo29@hotmail.com
Date: Tue, 15 Apr 2014 09:07:28 +0930
Subject: Fleurieu Mines Pty Ltd

Good Morning Robbie

The following report is overdue –

EL 5101	Annual Technical Report - 12 month period ending 15/11/2013

KINGSTON RESOURCES LIMITED

EL 5101 (Mt Morgan project) Annual Technical Report

Reporting period: *12 months ending 15 November 2014*
Tenement holder: *Fleurieu Mines Pty Ltd*
Operator: *Fleurieu Mines Pty Ltd*
Author: *Stuart Rechner*
Date of report: *January 2015*

Table of Contents

1 Summary of all activities conducted

Works within EL 5101 have targeted Iron Oxide Cu-Au-U (IOCG-U) breccia deposits.
Activity during the reporting period included:

- review of previous reported exploration in the area, open file reports and literature;
- establishment of GIS database;
- analysis and interpretation of regional geophysical data sets, particularly gravity and magnetic data;
- preliminary unconstrained 3D inversion modeling of gravity and magnetic data; and
- liaison with Department of Defence regarding access to Woomera Prohibited Area.

1.1 Exploration index map

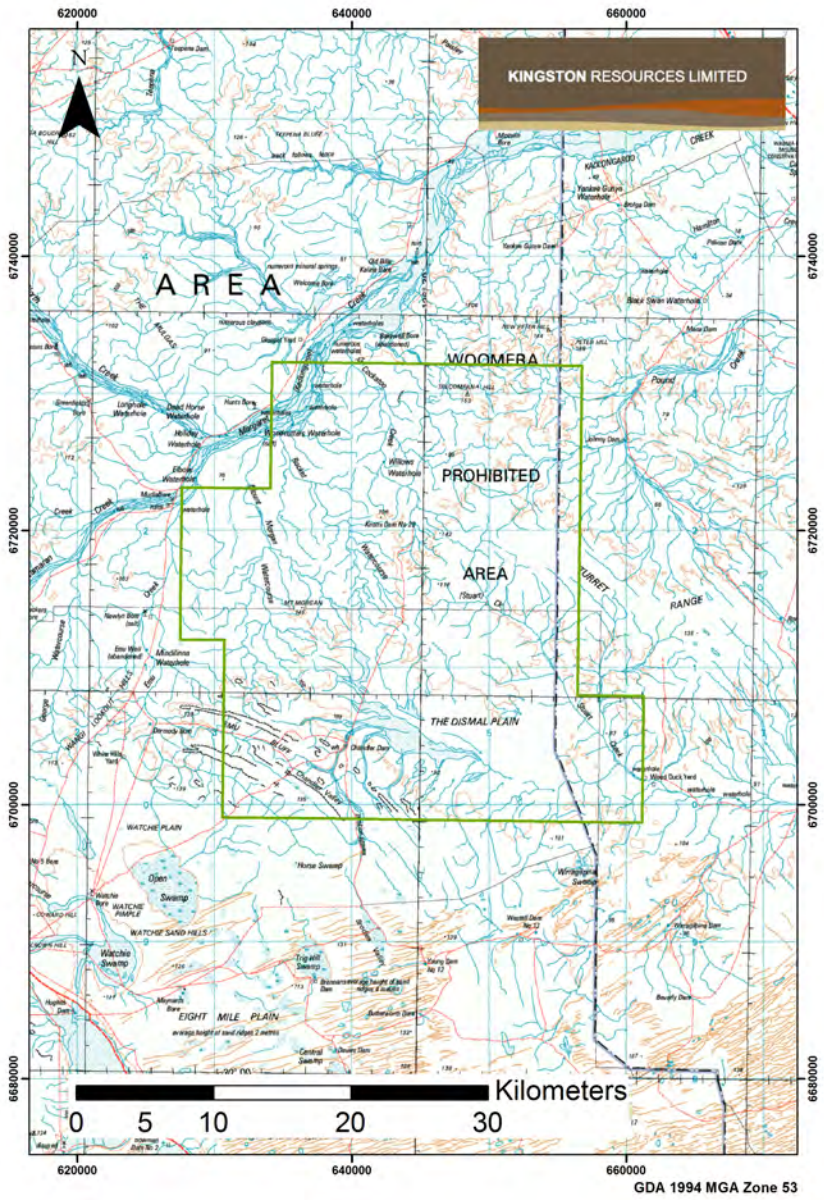

Figure 1: EL 5101 exploration index map

1.2 Keywords

Mapshees: Billa Kalina 250k (SH5307); Curdimurka 250k (SH5308)
Locations: Mt Morgan; Trecompana Hill; Emu Bluff; Chandler Valley; The Dismal Plain
Commodities: Copper; Gold; Uranium; IOCG
Provinces: Gawler Craton; Mt Woods Domain
Geological Units: Hiltaba granite

2 Introduction, history and exploration rationale

2.1 Tenure

- EL 5101 is 100% held and operated by Fleurieu Mines Pty Ltd (Fleurieu).
- EL 5101 was first granted on 16 November 2012, renewed on 16 November 2013 and is due to expire on 15 November 2015.
- EL 5101 covers an area of 909km^2 and has an expenditure commitment of $360,000.

2.2 Location and Access

- EL 5101 is located approximately 100km northwest of Roxby Downs.
- EL 5101 straddles two 1:250,000 Map Sheets: Billa Kalina (SH5307) and Curdimurka (SH5308).
- EL 5101 overlaps with both the Billa Kalina and Stuart Creek pastoral stations.
- EL 5101 lies within Arabana lands.
- EL 5101 is within the Woomera Prohibited Area (WPA) green zone.

Access to EL 5101:

- from Roxby Downs: north on Borefield Road, NW on Oodnadatta Track, SE on station tracks from Jersey Springs (just north of Coward Springs) to EL 5101; or
- from Stuart Highway: east on station tracks to Mt Eba Station then Millers Creek station then Billa Kalina station, NE on station tracks to EL 5101.

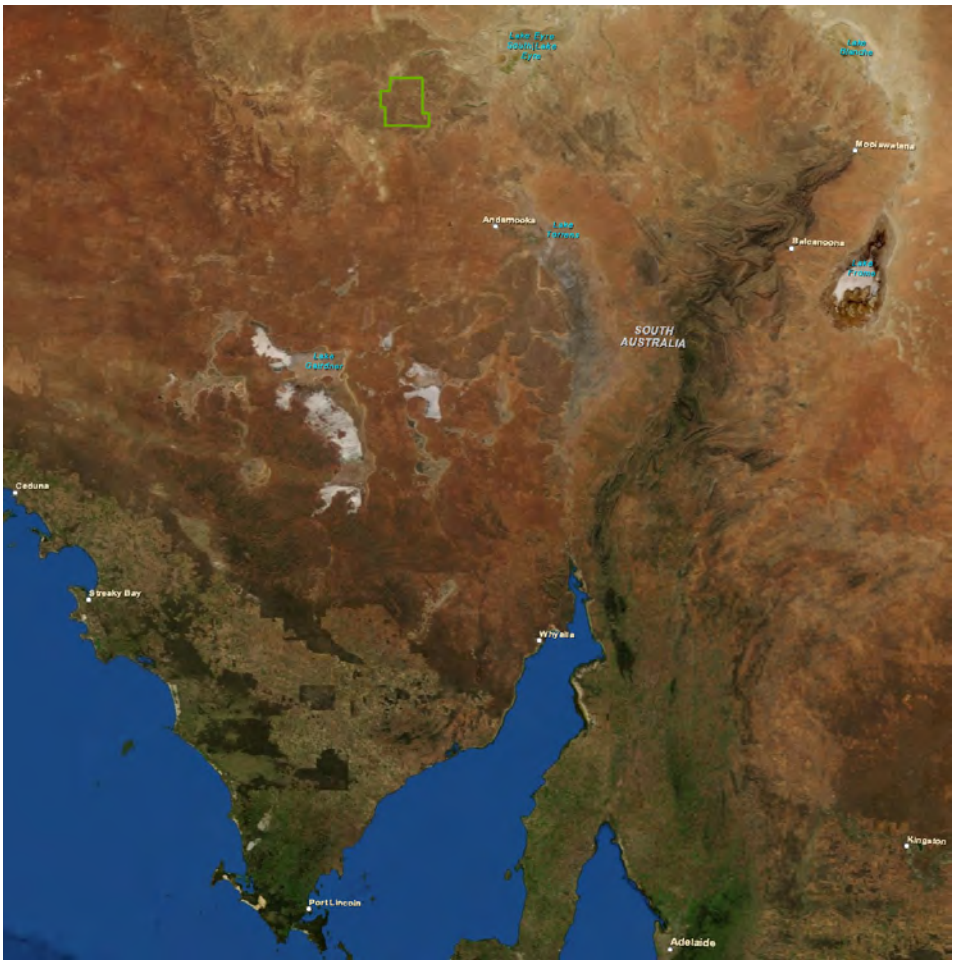

Figure 2: EL 5101 location map

2.3 Exploration history

Newmont Australia Ltd (1977 – 1979) – EL 327, EL 335

Newmont Australia explored for Olympic Dam style mineralisation in the Precambrian basement. Geophysical data was examined and several targets selected for drill testing based on coincident gravity and magnetic anomalies.

Figure 3 below shows EL 5101 overlain on Newmont's 1979 drill hole location map. SR 6 was drilled within EL 5101 but failed to reach crystalline basement ending in the Neoproterozoic Yudnamutana Subgroup.

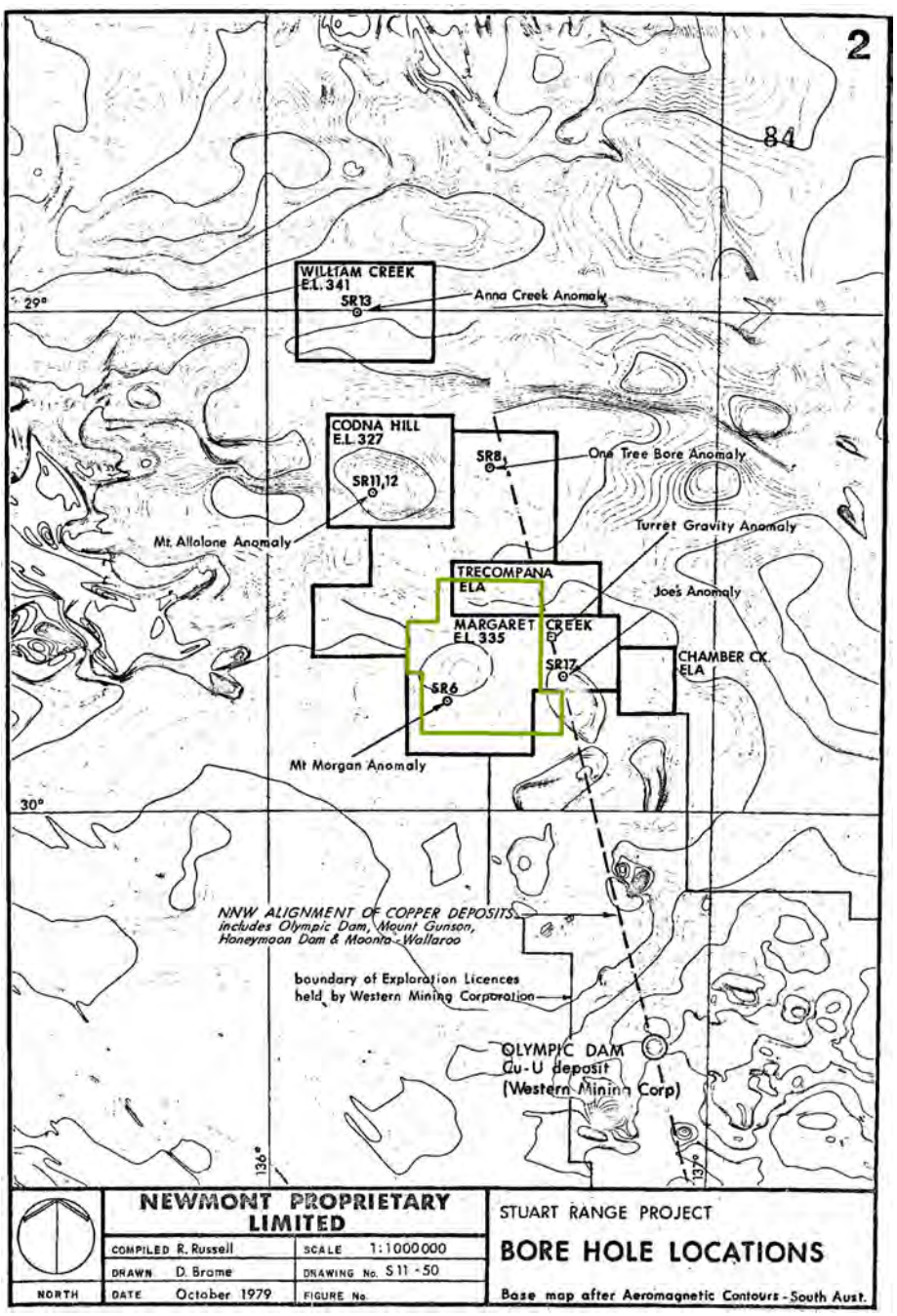

Figure 3: EL 5101 over Newmont 1979 drilling (Wright and Dow)

Flinders Diamonds Ltd (2004) – EL 2759

Flinders drilled 14 shallow aircore holes within EL 5101 in 2004 searching for diamonds with limited success (Wills, Newell and Anderson).

2.4 Exploration rationale

Fleurieu's primary exploration target is IOCG-U mineralisation hosted in hematite-magnetite breccia complexes. Fleurieu selected the Stuart Shelf region on the northeast margin of the Gawler Craton as it is recognised by Geoscience Australia and others as having all the essential ingredients for IOCG-U mineral systems.

The broader Olympic Cu-Au Province is host to Olympic Dam, Prominent Hill, Carrapatenna, Hillside and more recent discoveries. The northern areas are under-explored due to thick sequences of sedimentary cover.

EL 5101 is located to the east of the Mt Woods Inlier, and along the same NW/SE trend as several known Stuart Shelf deposits such as Olympic Dam, Prominent Hill and Carrapateena.

IOCG-U deposits are characterised by hydrothermal ore styles, strong structural controls, abundant magnetitie and/or hematite and a broad space-time association with batholithic granitoids.

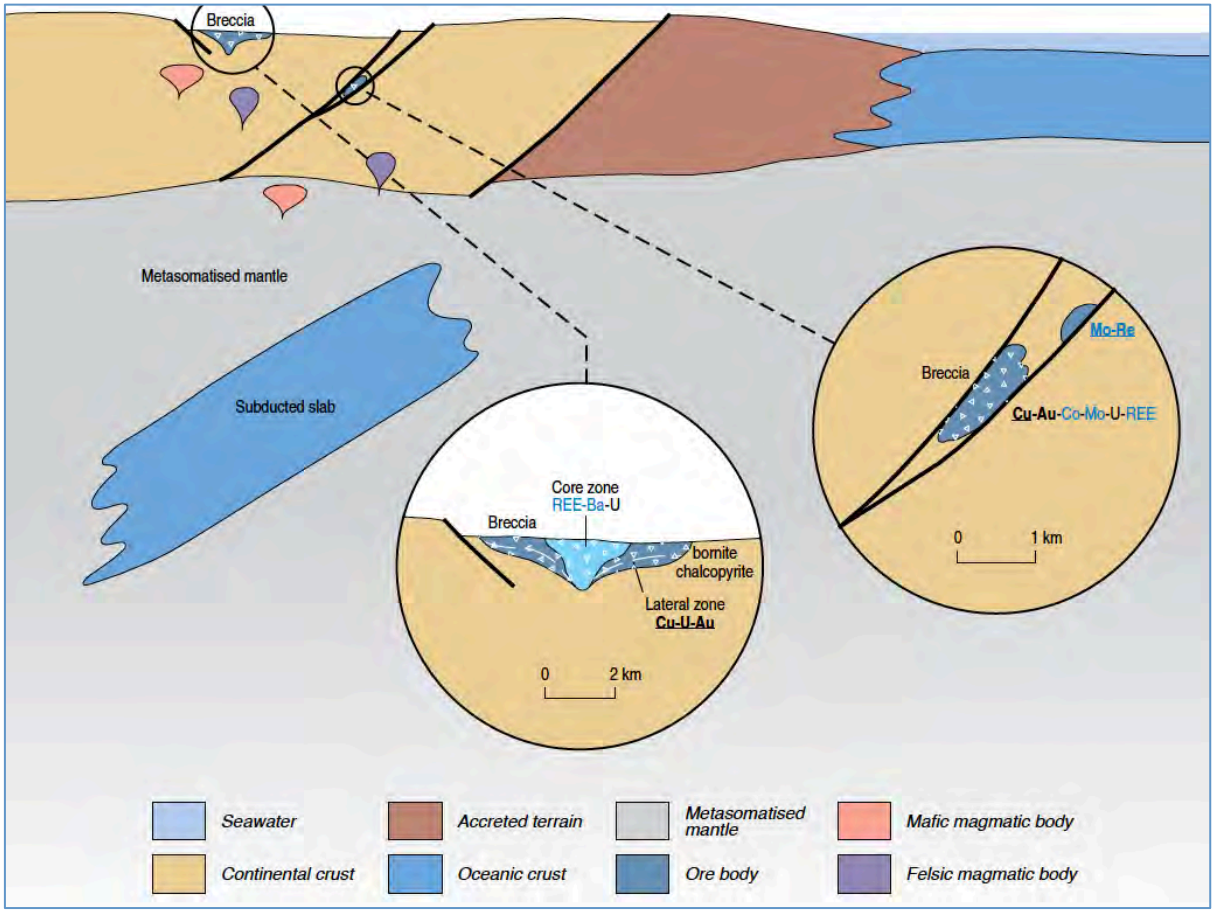

Figure 4: Sketch of IOCG-U mineral system development after Geoscience Australia (Skirrow, Huston and Terrence)

3 Geology

3.1 Basement Geology

EL 5101 lies on the northeastern edge of the Gawler craton on the boundary between the Mt Woods Domain and an "undifferentiated" area (see Figure 5 below).

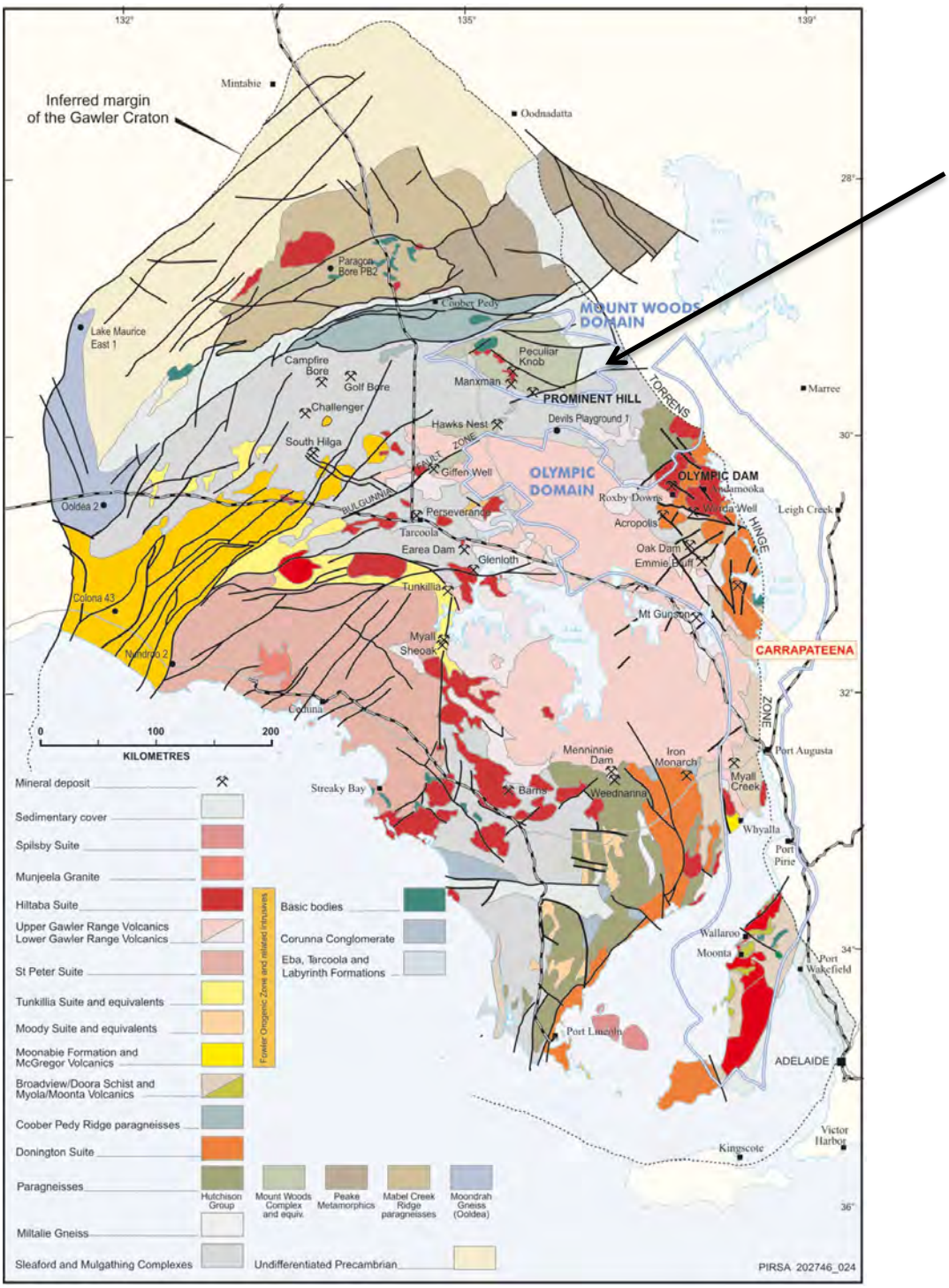

Figure 5: Interpreted solid geology of the Gawler Craton (Wilson)

The Gawler Craton has a history of Archaean and early Proterozoic orogenic evolution terminating during the Carpentarian with a relatively stable platform (see summary at Figure 6).

The eastern margin of the Gawler Craton has been extensively altered by a regional-scale system of iron-rich mineralised hydrothermal fluids, associated with widespread, comagmatic Gawler Range Volcanics and Hiltaba Suite magmatism. IOCG-U mineralisation in the Olympic Copper Gold province is associated with the ca. 1595-1575 Ma Gawler Range Volcanics and Hiltaba Suite igneous event.

Altered rocks include deformed Palaeoproterozic sediments and granites as well as the Mesoproterozoic Hiltaba Suite, Gawler Range Volcanics and interbedded sediments.

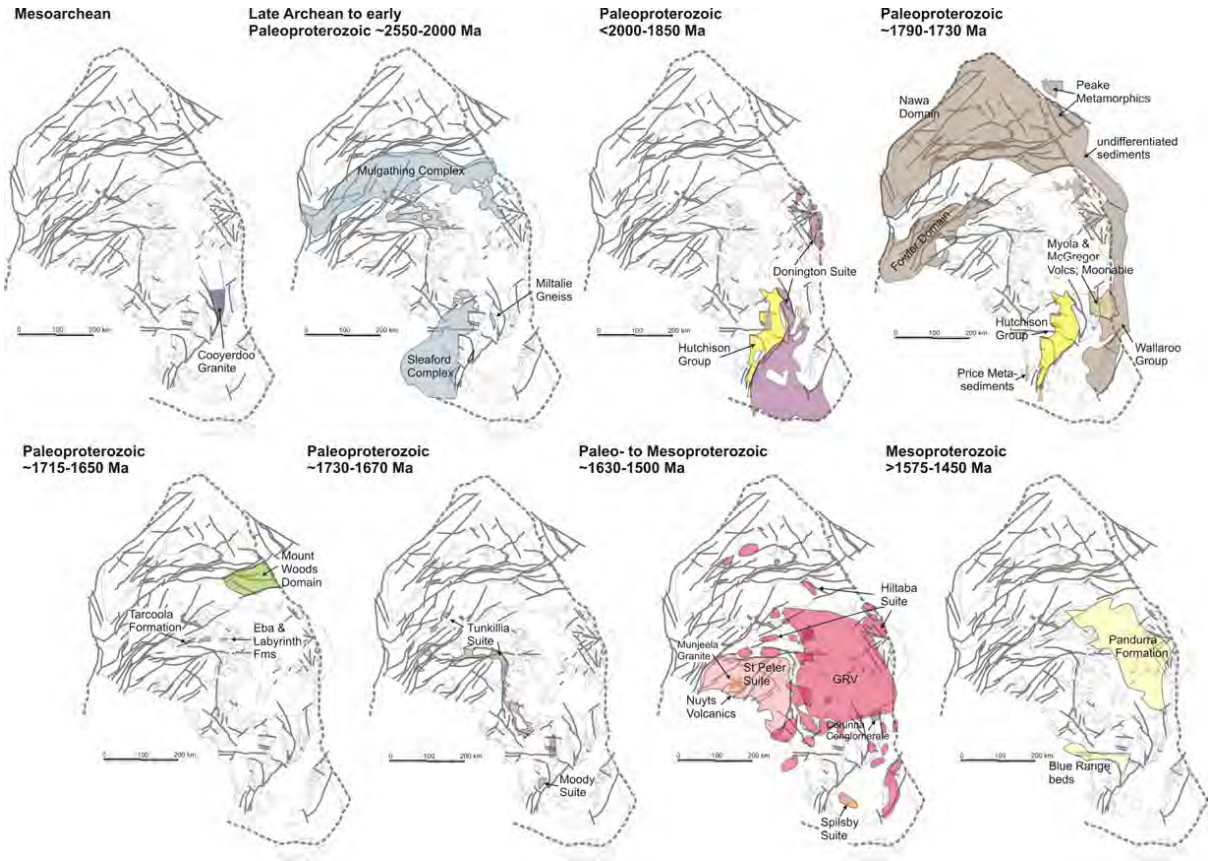

Figure 6: Archean to Mesoproterozoic development of the Gawler Craton, showing the location of major rock units formed in each interval (Hand, Reid and Jagodzinski)

3.2 Adelaide Geosyncline and Stuart Shelf

A deeply subsided sedimentary basin with at least four main phases of rifting in the Adelaidian (Neoproterozoic) and one in the early Cambrian. Twelve major transgressive/regressive cycles in the Adelaidian and three in the Cambrian.

The sequence consists of a thick pile of sedimentary rocks and minor volcanic rocks that were deposited on the eastern margin of Australia during the time of break up of the supercontinent Rodinia. Dominant lithologies are, in order of decreasing abundance, siltstone, sandstone (both mature and feldspathic), dolomite, limestone and diamictite.

4 Geophysics

4.1 Regional Geophysical Setting

Figure 7 below shows the location of EL 5101 on the boundary of the Mt Woods Domain and an "undifferentiated" area of the Gawler Craton.

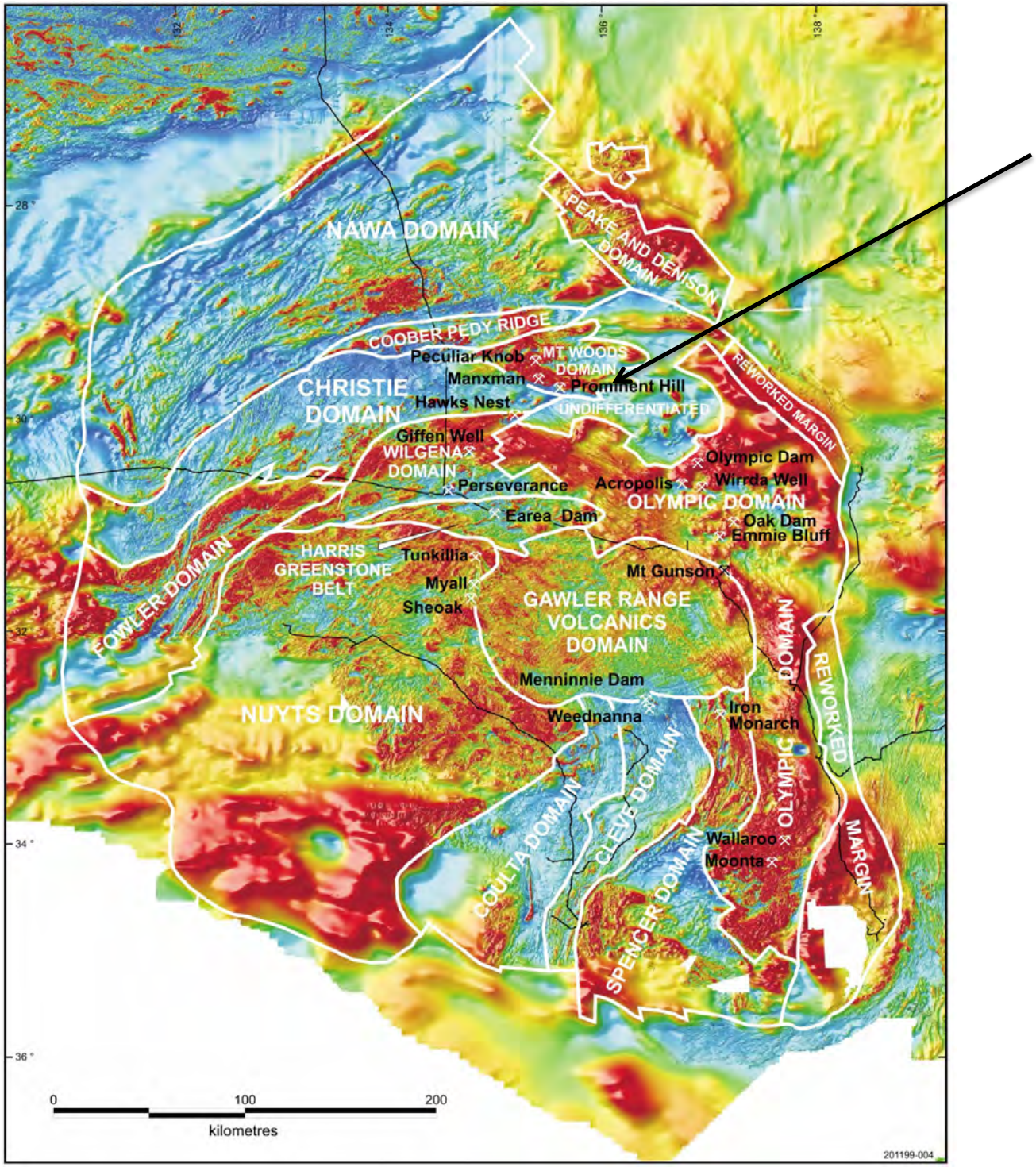

Figure 7: Domains of the Gawler Craton superimposed on total magnetic intensity (Wilson)

4.2 Magnetics

Figure 8 below shows EL 5101 over Reduced to Pole (RTP) Magnetics. The RTP processing moves the magnetic anomalies, locating them directly above their causative bodies. This provides the best theoretical solution for interpretation because it normalises the effect of induced magnetisation and strike on the shape of the magnetic anomaly, while preserving dip and textural information. The major assumption that is made however is that the observed magnetic vectors are due to solely to induced magnetisation, with no contribution from remanent magnetisation.

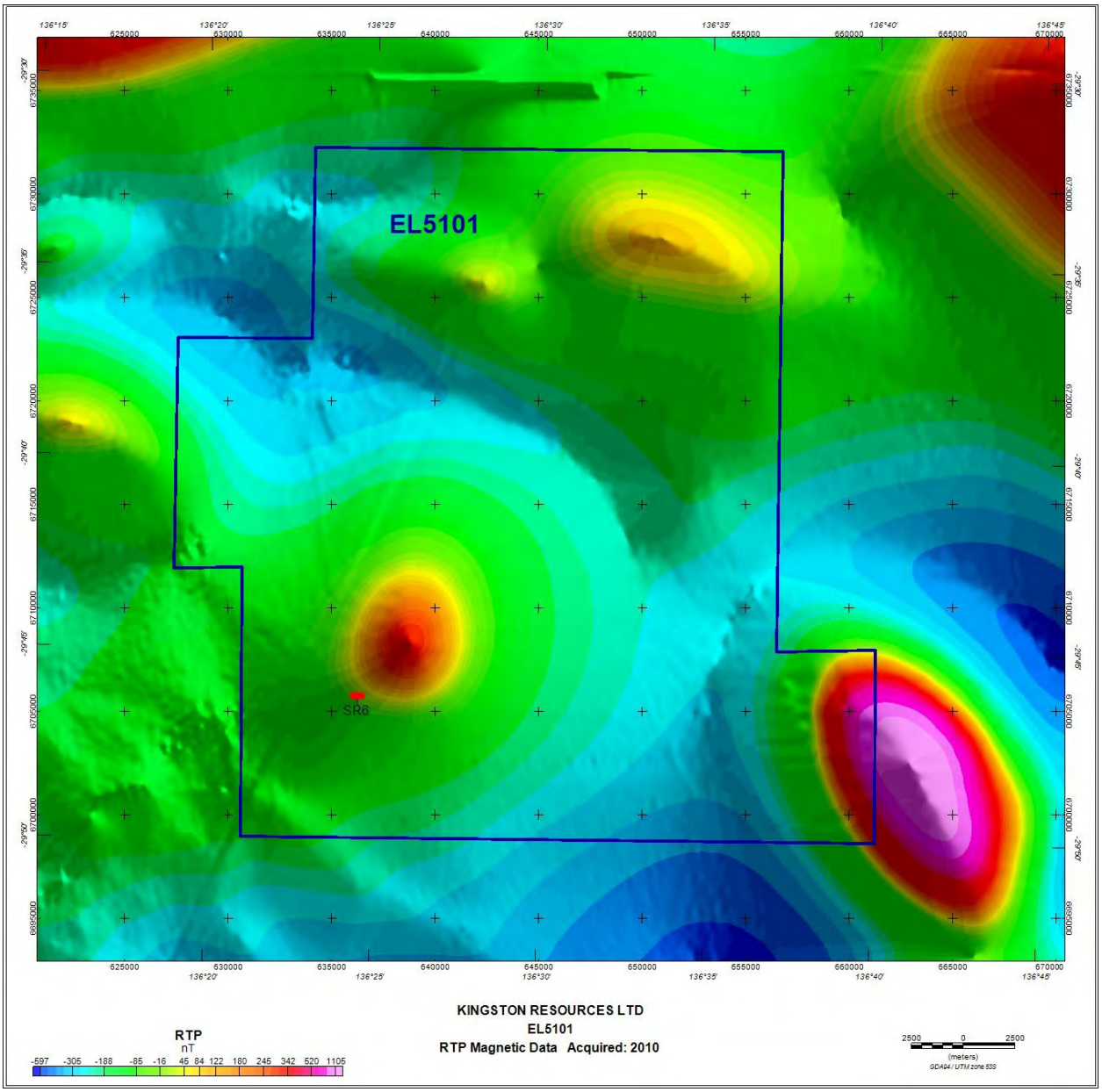

Figure 8: Magnetics RTP (Reduced to Pole)

4.3 Gravity

Figure 9 below shows EL 5101 over Bouguer gravity image. The gravity data was split into pre and post 1995 components. From experience the pre 1995 data is unreliable, this is because it was measured in pre-GPS days with the elevation having to be recorded barometrically. Where a reasonable spread of recent data exists the pre-95 data was not used.

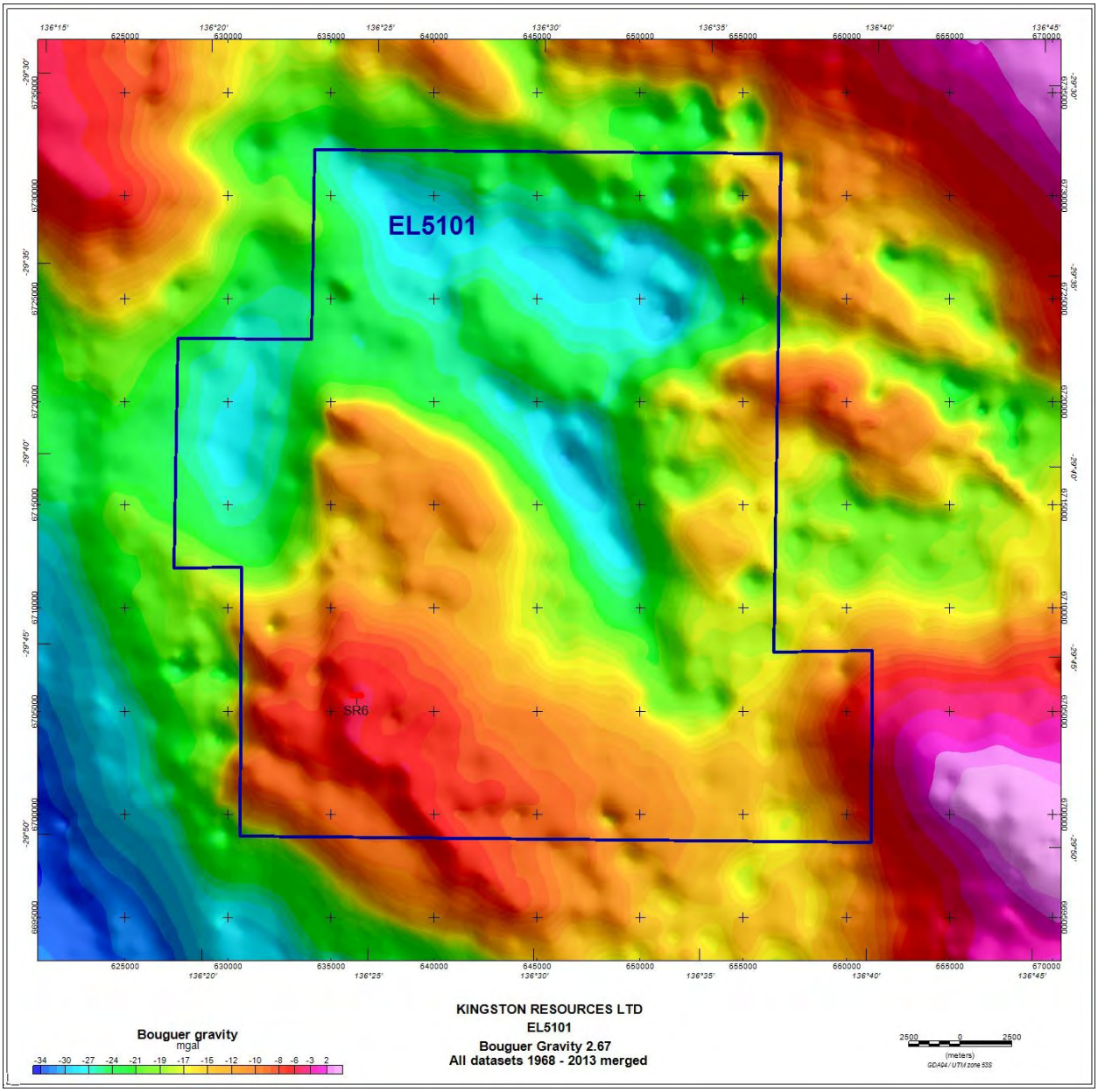

Figure 9: Gravity - Bouguer plate reduction, 2.67 assumed

4.4 Interpretation

Figure 10 below shows a detailed geophysical interpretation of EL 5101 overlaid on RTP magnetics. The interpretation highlights zones of anomalous density and susceptibility, and resolves major structural elements.

The main 600nT magnetic anomaly, in the southern half of EL5101, is spatially associated with elongate lower amplitude magnetic anomalies these likely represent intrusives that have exploited pre-existing structures parallel to the major structural fabric.

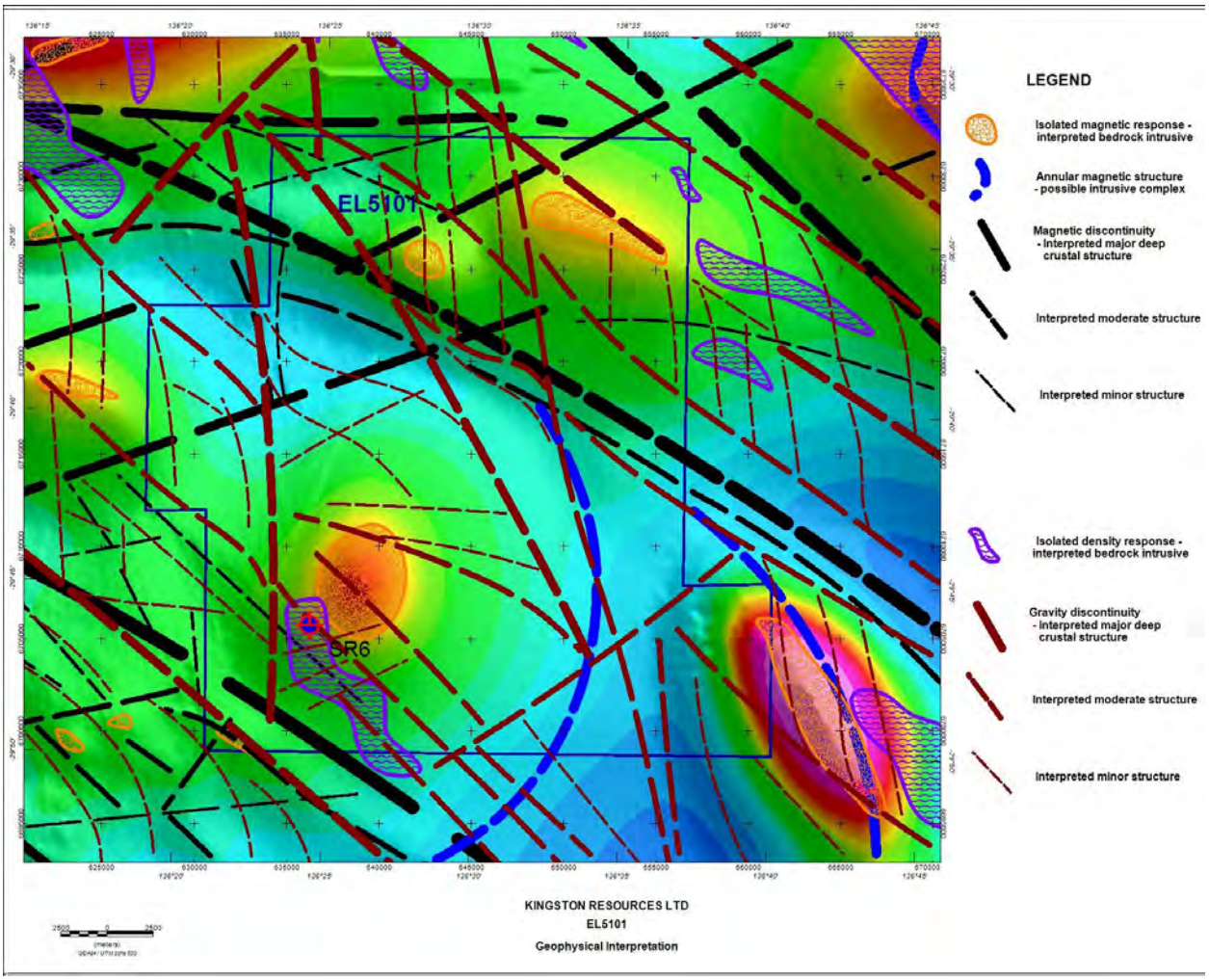

Figure 10: Detailed interpretation overlaid on RTP magnetics (Moore)

5 Drilling

The only significant drill hole on EL 5101 is Newmont's SR 6 drilled in 1979. A geological log is seen in Figure 11. SR 6 failed to reach crystalline basement and test the geophysical target.

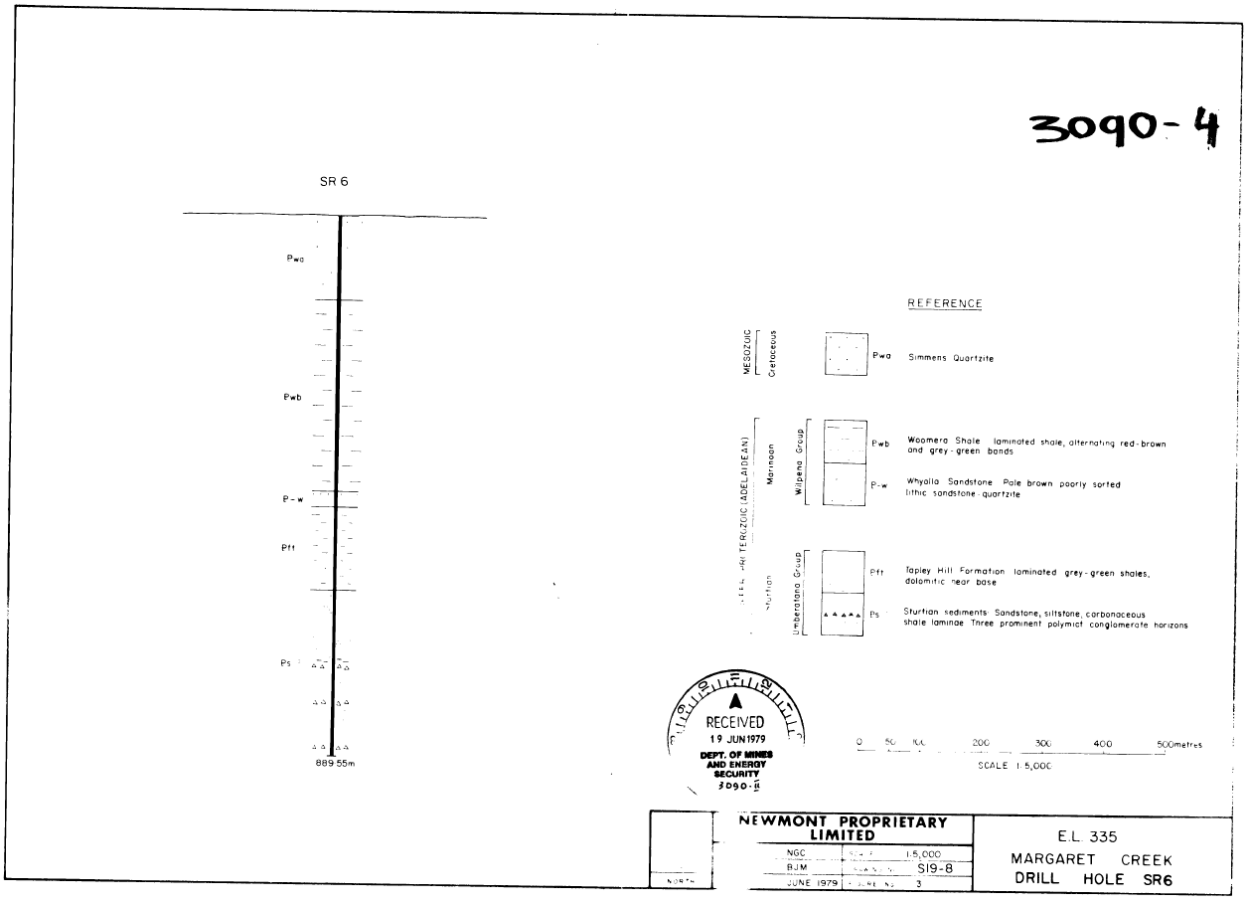

Figure 11: Geological log SR 6 (Wright and Dow)

DDH SR/6

0 -	146.8 m	Simmens Quartzite
146.8 -	455.63	Woomera Shale
455.63-	464.71	Whyalla Sandstone
464.71-	616.73	Tapley Hill Formation
616.73-	889.55	Sturtian sedimentary sequence

Traces of pyrite and possibly chalcopyrite occur at and immediately below the base of the Tapley Hill Formation in the matrix of the clean Sturtian sediments. Several other minor occurrences of pyrite are found immediately below other shale bands within the Sturtian sequence. Only background values (2-3 cps U + Th) were obtained when the core was logged with a scintillometer.

6 Conclusion

Analysis and interpretation of existing geological and geophysical data indicates that EL 5101 potentially has the essential ingredients for an IOCG-U mineral system.

There is evidence in the magnetic and gravity data to interpret several deep crustal structure trending NW/SE to NNW/SSE. Crosscutting structures oriented E/W and NW/SW have also been identified.

The addition of gravity data from the 2013 Woomera survey has substantially improved data resolution with respect to the SW gravity anomaly. This additional data warrants further investigation.

Works Cited

Hand, Martin, Anthony Reid and Liz Jagodzinski. "Tectonic Framework and Evolution of the Gawler Craton, Southern Australia." Economic Geology 102.8 (n.d.): 1377-1395.
Moore, Chris. "EL 5101 Geophysical Data Analysis." Moore Geophysics, 2014.
Skirrow, Roger G, et al. "Critical commodities for a high-tech world: Australia's potential to supply global demand." 2013.
Wills, K JA, et al. "Envelope 09851." Flinders Diamonds Ltd, 2007.
Wilson, Tania. Uranium and Uranium Mineral Systems in South Australia. 2nd Edition. DMITRE, 2012.
Wright, R G and J AS Dow. "Envelope 03090." Newmont Pty Ltd, 1979.

Our ref: EL's 5101 and 5479

29 June 2015
Nella Petruzzella
EL Reporting Officer
Mineral Resources Division
Department of State Development
GPO Box 320
Adelaide SA 5001

Dear Nella

EL 5101 and EL 5479
Final Technical Reports for periods ending 9/06/2015

In reference to the Final Technical Reports for EL 5101 and EL 5479 for the period up to the date of surrender on 9/6/2015, please be advised that no exploration was conducted on the tenements during tenure of EL 5101 and EL 5479.

If you require any further information, please contact me.

Yours Faithfully
Fleurieu Mines Pty Ltd

Mathew Whyte
Director
08 9336 6619