

Open File Envelope

No. 12,132

EL 4417

FOUR HILLS

**FIRST ANNUAL REPORT AND FINAL REPORT AT
LICENCE EXPIRY/SURRENDER, FOR THE PERIOD
21/1/2010 TO 20/1/2012**

Submitted by
Falcon Minerals Ltd
2012

© 4/1/2013

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

Enquiries:

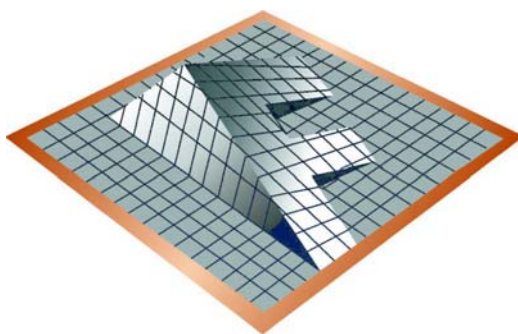
Customer Services
Resources and Energy Group
7th Floor
101 Grenfell Street, Adelaide 5000

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



Government of South Australia

Department for Manufacturing,
Innovation, Trade, Resources and Energy



FALCON MINERALS LIMITED

ACN 009-256-535

ANNUAL TECHNICAL REPORT

EXPLORATION LICENCE 4417

"Four Hills"

21st January 2010 to 20th January 2011

Volume 1 of 1

HELD BY: FALCON MINERALS LIMITED

MANAGER and OPERATOR: FALCON MINERALS LIMITED

**Author: Graeme Cameron
Submitted By: Richard Diermajer
March 2010**

Distribution:

- ❑ Primary Industries and Resources SA
- ❑ Falcon Minerals Limited

MAP SHEETS:	1:250,000	Lake Eyre (SH53-04)
	1:100,000	Piarooka (6241)
		Douglas (6240)

GEOGRAPHIC COORDINATES:

Four Hills Area, approximately 150 km east of Coober Pedy, bounded as follows:

Commencing at a point being the intersection of latitude $28^{\circ}16'55''\text{S}$ and longitude $136^{\circ}31'05''\text{E}$, thence east to longitude $136^{\circ}39'05''\text{E}$, south to latitude $28^{\circ}18'55''\text{S}$, east to longitude $136^{\circ}41'05''\text{E}$, south to latitude $28^{\circ}19'55''\text{S}$, east to longitude $136^{\circ}44'05''\text{E}$, south to latitude $28^{\circ}20'55''\text{S}$, east to longitude $136^{\circ}46'05''\text{E}$, south to latitude $28^{\circ}22'55''\text{S}$, west to longitude $136^{\circ}45'05''\text{E}$ and south to latitude $28^{\circ}24'55''\text{S}$, west to longitude $136^{\circ}43'05''\text{E}$, south to latitude $28^{\circ}25'55''\text{S}$, west to longitude $136^{\circ}42'05''\text{E}$, south to latitude $28^{\circ}26'55''\text{S}$, west to longitude $136^{\circ}41'05''\text{E}$, south to latitude $28^{\circ}35'55''\text{S}$, west to longitude $136^{\circ}33'05''\text{E}$, north to latitude $28^{\circ}25'55''\text{S}$, west to longitude $136^{\circ}31'05''\text{E}$, north to the point of commencement, all the within latitudes and longitudes being geodetic and expressed in terms of the Geodetic Datum of Australia 1994.

COMMODITY: Copper and Gold

KEY WORDS:

Lake Eyre, Piarooka, Douglas, Peake-Denison Inlier, Gawler Craton, iron oxide-copper-gold, IOCG

CONTENTS.

1	INTRODUCTION	5
2	GEOLOGY AND MINERALISATION.....	6
3	HISTORY AND PREVIOUS EXPLORATION.....	7
4	EXPLORATION RATIONALE	10
5	WORK COMPLETED IN THE CURRENT REPORTING PERIOD	11
	5.1 Aboriginal Heritage Clearance	11
	5.2 Exploration Data Review.....	12
	5.3 Geophysical Processing and Target Generation.....	12
	5.4 Detailed Geophysical Modelling.....	14
	5.5 Proposed Work Programs for 2011	15
6	EXPENDITURE STATEMENT	15
7	BIBLIOGRAPHY	16

TABLES

1. Exploration Statistics
2. Tenement Summary
3. Historical Exploration Summary
4. Exploration Expenditure EL 4417

FIGURES

	Scale
1. Four Hills EL 4417 location plan.	As shown
2. Northern Gawler Craton interpreted basement geology.	As shown
3. Four Hills EL 4417 historical exploration activities.	As shown
4. Regional geophysical targeting over Northern Gawler Craton.	As shown
5. Four Hills EL 4417 IOCG targets.	As shown

APPENDICES

Appendix 1 - Peake-Denison detailed gravity modelling over the Four Hills EL 4417.

SUMMARY

Exploration activities carried out within the “Four Hills” Exploration Licence (EL) 4417 during the reporting period involved the following:

- ◆ Aboriginal Heritage clearance negotiations.
- ◆ Review and digital capture of previous exploration data.
- ◆ Geophysical filtering and regional targeting.
- ◆ Geophysical modelling of detailed magnetic and gravity data.
- ◆ Design of follow-up work programmes.
- ◆ Report preparation.
- ◆ Administration.

Exploration statistics are summarised below.

TABLE 1. EXPLORATION STATISTICS FOUR HILLS EL 4417		
Exploration Activity	EL 4417	TOTALS
Aboriginal heritage consultants	Whole EL	574 sq km
Exploration data review and capture	Whole EL	574 sq km
Geophysical processing and target generation	Whole EL	574 sq km
Modelling of detailed magnetic and gravity data	Part EL	178 sq km
Work planning	Whole EL	574 sq km
Report preparation	Whole EL	574 sq km
Administration	Whole EL	574 sq km

1. INTRODUCTION

This report describes the exploration activities completed by Falcon Minerals Ltd. (Falcon) over the “Four Hills” Exploration Licence 4417 for the period 22nd January 2010 to 21st January 2011. EL4417 encompasses 573.9 km² and was granted on the 21st January 2010.

TABLE 2.
TENEMENT SUMMARY

Tenement Number	Initial Date Subsequent Application	Date of last Grant	Expenditure Commitment	Area Sq km
EL4417	21 January 2010	21 January 2010	\$85,000	574

The Four Hills Project is located approximately 60km north-east of the town of William Creek on the western margin of Lake Eyre in northern South Australia, on the Lake Eyre SH53-04 1:250,000 map sheet (Figure 1). Access is via station tracks north from William Creek and east from the Peake homestead via the Oodnadatta Track. The tenement area is the subject of a Native Title claim by the Arabunna People (Claim SC98/002).

The Four Hills Project incorporates parts of the Proterozoic Peake and Denison Inliers that are considered prospective for large iron oxide-copper-gold (IOCG) style deposits.

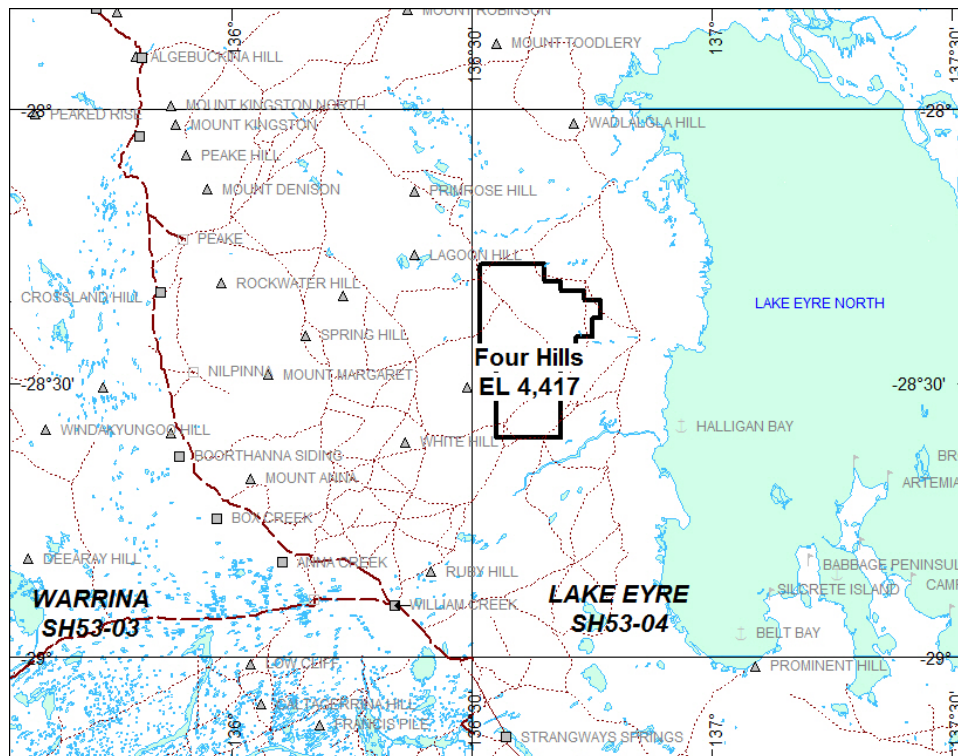


Figure 1 - Location of Four Hills tenement EL 4417.

2. GEOLOGY AND MINERALISATION (derived from Ambrose, 1981)

The Four Hills project area is located on the rifted northeast margin of the Gawler Craton within the northwest extension of the Adelaide Orogenic Belt, midway between the Musgrave Block and Curnamona Craton (Figure 2).

The project area incorporates parts of the Proterozoic Peake and Denison Inliers comprised of Palaeoproterozoic metamorphosed volcano-sedimentary rocks surrounded by Neoproterozoic brecciated lithologies. Palaeoproterozoic (1800-1780 Ma) basement lithologies are exposed within the inliers as large enclaves surrounded by Neoproterozoic “diapiric” breccias and further to the west as isolated exposures at Spring Hill, Mt Charles, Lagoon Hill and Milne Springs. The basement rocks are dominated by interlayered metabasalt and quartzite with subordinate porphyritic rhyolite, granite, phyllite, schist and calc-silicate.

A second volcano-sedimentary cycle is recognised at 1750-1740 Ma equated with the Wallaroo Group of the Northern Yorke Peninsula. These rocks comprise felsic metavolcanics, quartz-feldspar schist, gneiss, calc-silicate and quartzite. Anorogenic felsic plutonism around 1530 Ma is evident within the inliers but is restricted to an occurrence of massive to coarse-grained granite and aplite dykes at Lagoon Hill. The age of these intrusives is important and provides evidence for potential fluid/metal sources with a spatial and temporal relationship to known IOCG mineralising events.

Drilling in the vicinity of Spring Hill, Davenport Creek, Lagoon Hill and Umbum Creek to the west of Four Hills has revealed that the rock sequences have been subjected to high temperature Na-Ca-Fe alteration, overprinted by retrograde actinolite-chlorite-epidote assemblages and partial oxidation of magnetite by haematite. Later stage and overprinting quartz-carbonate-biotite-sulphide (K-alteration) formed in shears and veins has been subjected to weak supergene upgrade.

The inliers also contain a large number of historic small pits and shafts that were developed on copper oxide mineralisation hosted by structurally controlled quartz-haematite veins and haematite breccia pipes. The rock types and their metamorphic and metasomatic alteration paragenesis draws similarities to Proterozoic sequences in the Olary Inlier and the Eastern Succession of the Mt Isa Inlier in northwest Queensland.

Mesozoic sediment cover of the Eromanga Basin largely conceals the Proterozoic metamorphic basement to the east and west of the inliers. Tertiary gibber lag, gypsiferous clays, alluvial gravels, silts/clays, aeolian dune sands, lacustrine and mound spring deposits overlie the Mesozoic sediments and dominate the surficial cover away from the inliers.

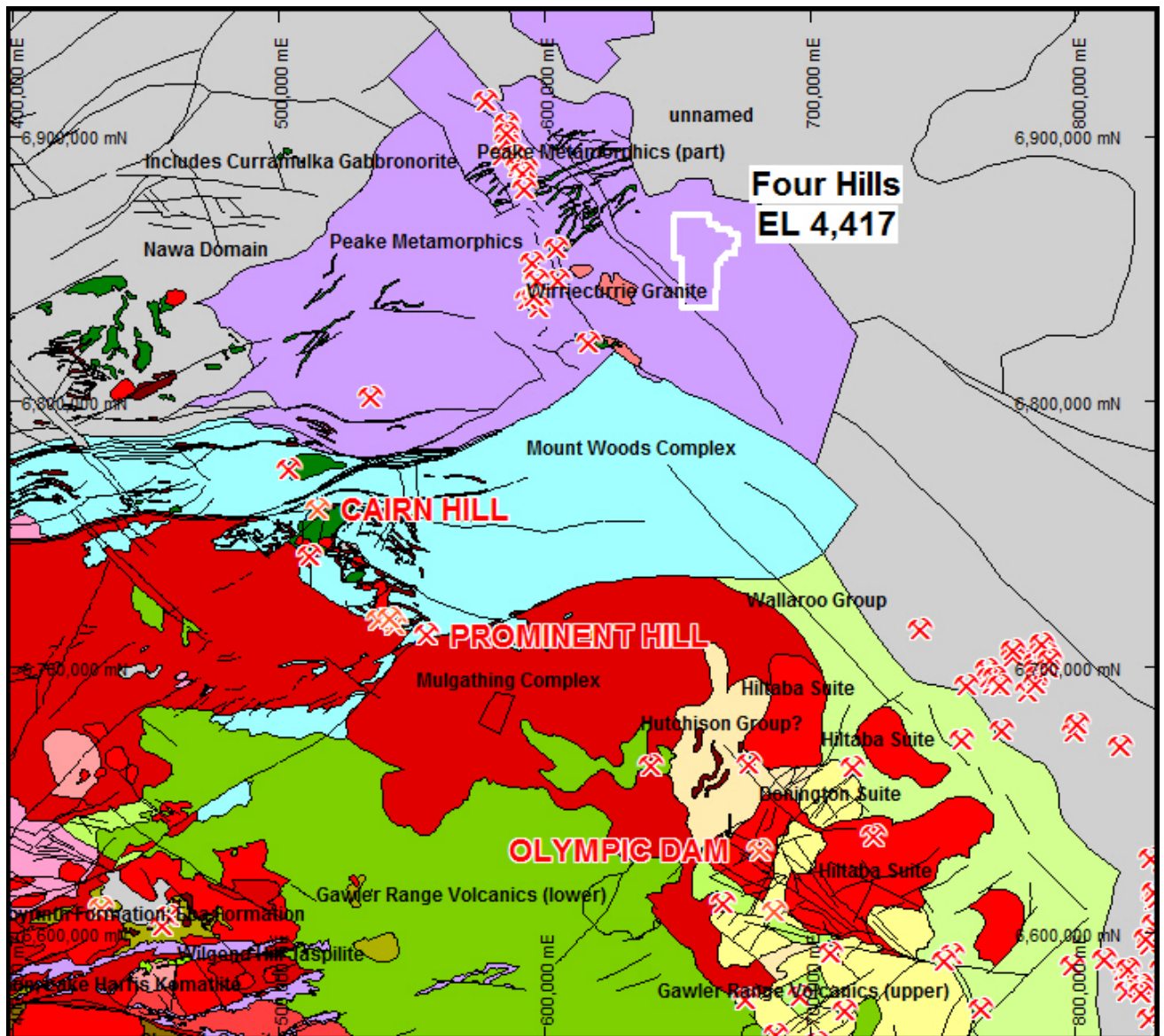


Figure 2 – Northern Gawler Craton interpreted Archaean-Early Proterozoic basement geology and copper (+/- gold) occurrences.

3. HISTORY AND PREVIOUS EXPLORATION

Chevron, Dampier Mining, CRAE, Pancontinental Gold and BHP Minerals previously explored the Four Hills area and immediate surrounds for copper, gold or uranium. Dampier Mining (1978-1980) completed one drill hole, WLE 1A, at the Umbum prospect within the area now covered by EL 4417. No significant mineralisation was encountered within the pervasive magnetite-actinolite-epidote+/- biotite altered “gneiss” intersected. The rocks were suggestive of a high-temperature metasomatic iron oxide alteration overprint. Pancontinental Gold (1993-95) tested an intense magnetic anomaly at Davenport Creek prospect (25km west of Four Hills) that returned a drill hole intersection of 3m at 2.75% Cu from 330m depth (White and Loftus, 1999).

In 1998-99 BHP Minerals completed a regional gravity survey, ground magnetics and one vertical mud rotary/diamond drill hole (UCD98001), totalling 355.3m, to test a coincident magnetic/gravity target. The hole intersected 292.5m of Phanerozoic cover sediments before intersecting Proterozoic basement rocks consisted of grey, massive to weakly layered, quartz-feldspar-magnetite (+/- amphibole, biotite) rocks and pegmatite/granite. No significant assays were reported from the Proterozoic basement rocks (White and Loftus, 1999).

In 2000, BHP Minerals and Rio Tinto Exploration (RTE) signed a joint venture agreement, with respect to EL 2509, with the latter company as managers of exploration.

During 2000 and 2001 RTE focussed most of its exploration effort within the neighbouring tenements to Four Hills (Palmer et. al., 2001). Exploration activities consisted of a regional data compilation and interpretation, re-logging of drill hole chips, and an environmental management plan. Several regional airborne magnetic anomalies were identified on EL 2509 Umbum Creek as being of exploration interest for IOCG deposits but were at greater than 200m depth so no further work was recommended.

During 2002 no exploration work was carried out on the Four Hills area then covered by EL 2509. EL 2509 was packaged along with the adjacent Peake and Denison IOCG project tenements, owned jointly by RTE and BHPB, and offered to interested parties as a farm-in opportunity (Bishop, 2003). In 2003, EL 3077 Umbum Creek replaced EL 2509 Umbum Creek on the expiry of the latter tenement (Bishop, 2004). EL 3077 was subject to a joint venture agreement signed in October 2003 between RTE, BHP Billiton Minerals Pty Ltd and Phelps Dodge. Phelps Dodge was the joint venture manager and Red Metal Limited the operator. During 2003, Phelps Dodge/Red Metal re-processed and interpreted aeromagnetic and gravity data. This work identified a magnetic/gravity target in the west of EL 3077 (McKay, 2004).

During 2004 contractors Haines Surveys completed a more detailed gravity survey, totalling 846 station measurements, over the gravity/magnetic target area in the west of EL 3077. The detailed gravity survey defined an 800m by 500m, 3.5 milligal gravity target associated with a cross-cutting highly magnetic alteration zone. Drillhole UCDH-0401 (location 653297E, 6861200N, Grid MGA94, Zone 53) was subsequently drilled to test the modelled gravity target and intersected Mesozoic sediments down to 295m depth. Proterozoic basement at the bottom of the hole consisted of weakly foliated granite (with chlorite, magnetite and specularite alteration) cross-cut by chloritic shears and quartz veins.

In late 2005, vertical drill hole UCDH-0401 was extended by 154.3m with a diamond core tail down to 453.0m depth. The hole intersected felsic gneiss with magnetite and amphibole alteration, granite and dolerite (McKay, 2006a). No significant mineralisation was reported although no samples were submitted for analysis.

No further on-ground exploration was conducted on EL 3077 and the ground was relinquished in 2009 before being acquired by Falcon Minerals in January 2010.

A summary of previous copper-gold exploration activity on EL4417 (from 1993-2009) is shown in Figure 3 below.

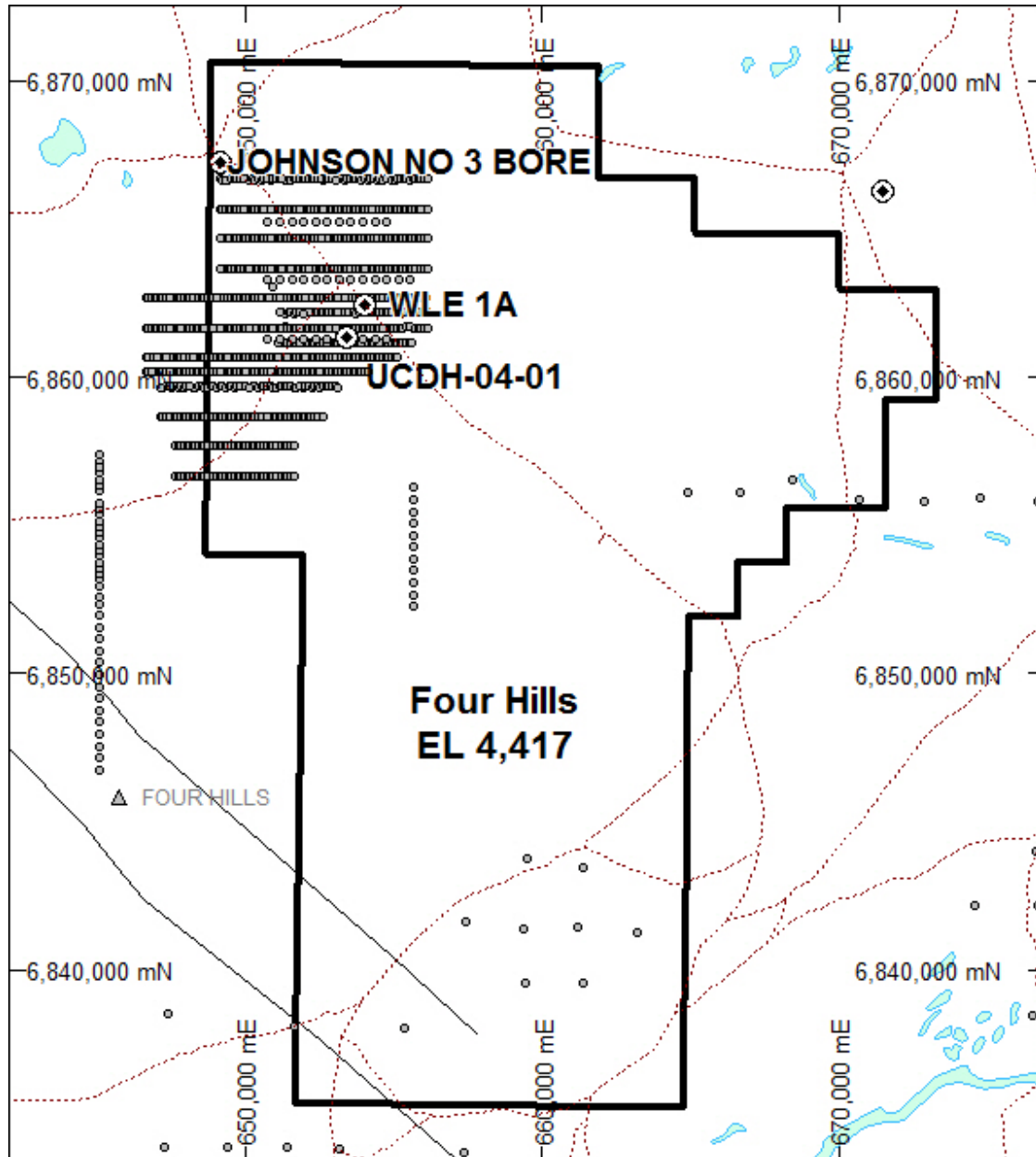


Figure 3 - Four Hills EL 4417 historical exploration activities.

4. EXPLORATION RATIONALE

The Four Hills Project is located in the prospective northern Gawler Craton region of South Australia (Figure 4). The primary target within the project is Iron Oxide-Copper-Gold (IOCG)

style mineralisation with notable economic mineralisation currently being mined from the (relatively) nearby Olympic Dam, Prominent Hill and Cairn Hill deposits.

Falcon Minerals Limited applied for tenement EL 4417 on the grounds that the Peake-Denison region also has good potential to host significant IOCG mineralisation. An evaluation of the historic exploratory drilling results from the surrounding area indicates that the basement rocks have been subjected to high temperature magnetite-albite-calc silicate alteration, overprinted by retrograde actinolite-chlorite-epidote-chalcopyrite assemblages and partial oxidation of magnetite by haematite. These observations draw similarities to mineralised Proterozoic sequences in the Olary Inlier and the Eastern Succession of the Mt Isa Inlier in northwest Queensland.

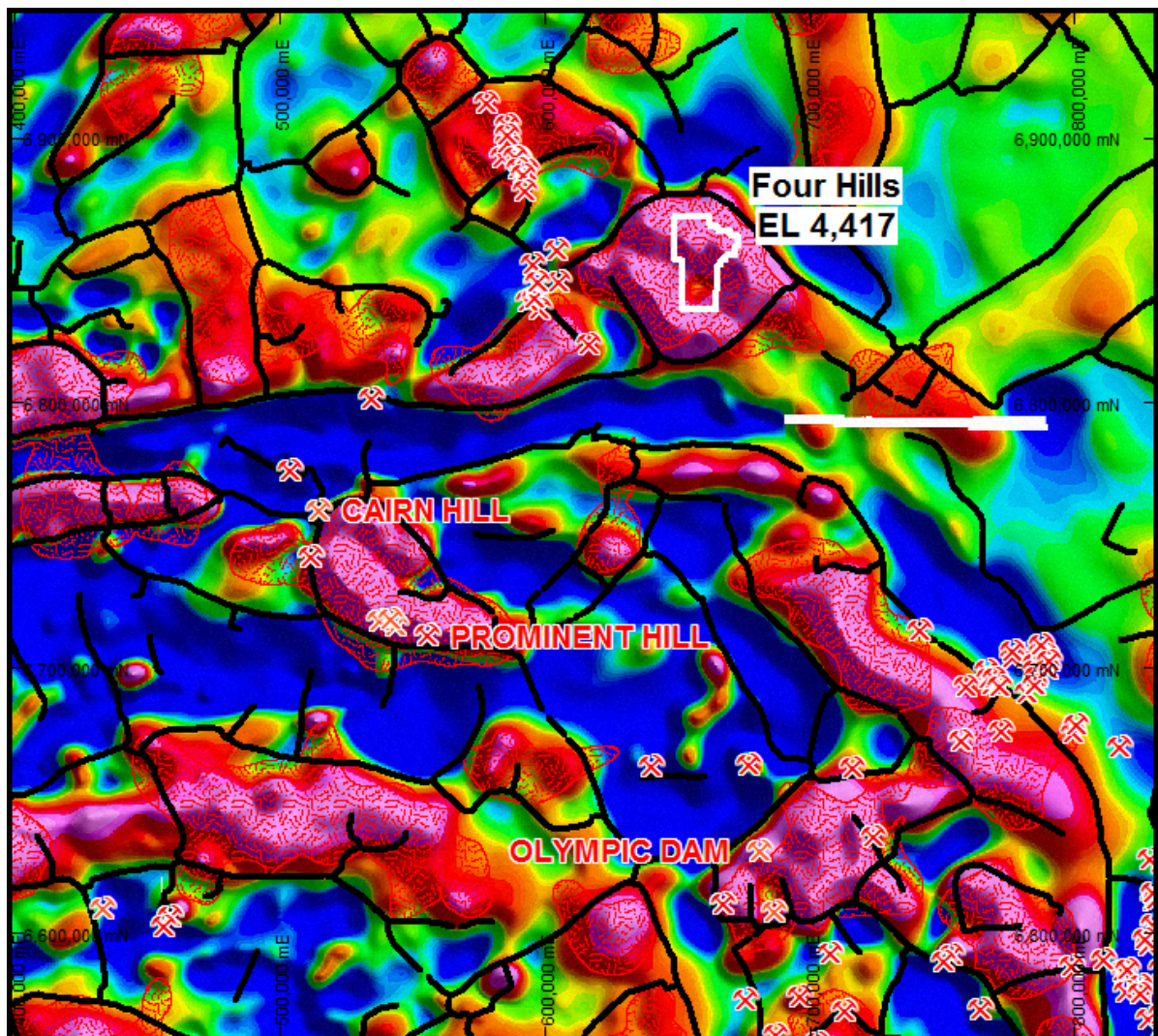


Figure 4 - Northern Gawler Craton regional magnetic target regions and copper occurrences on upward continued magnetic image with major gravity gradients in black.

5. WORK COMPLETED IN THE CURRENT REPORTING PERIOD

5.1 Aboriginal Heritage Clearance

During the reporting period, Falcon entered into consultations with the Arabunna People regarding re-commencement of on-ground gravity surveying in 2010. This work was not completed as detailed historical gravity data was compiled and found to be a sufficient quality to identify drilling targets without acquiring further gravity data.

Further consultations with the Arabunna People will be sought with respect to clearance of further detailed gravity surveys and proposed drilling programs to test geophysical targets in 2011.

5.2 Exploration Data Review

Following the grant of EL 4417 in January 2010, all available historic data was downloaded from the South Australia Resources Information Geoserver (SARIG). It became apparent that a significant quantity of exploration data was not immediately available on SARIG and a request was lodged with PIRSA to acquire the outstanding annual reports and associated data. PIRSA acknowledged that the annual reports for the period 1993 to 2009 had not been completely scanned and would need to be digitally captured and sent to Falcon.

On 10th September 2010 Falcon received a large data package from PIRSA containing all relevant exploration reports for the area now covered by EL4417. These data included PIRSA reports ENV8810, ENV8953 and ENV09741. (see 7.0 Bibliography)

During the remainder of the reporting period, Falcon completed a comprehensive assessment of all available data including extensive compilation of detailed gravity and magnetic data collected between 2004 and 2006. At the same time, Falcon completed processing, modeling and interpretation of the regional geophysical data and identified a number of IOCG target areas within the tenement.

5.3 Geophysical Processing and Target Generation

Fully integrated mineral system targeting (i.e. Source-Pathway-Focus-Trap) was conducted by Falcon in 2009 and showed that potential exists in the Peake-Denison region for a major Iron Oxide-Copper-Gold (IOCG) style deposit.

The Falcon targeting approach uses sophisticated geophysical processing to generate input layers that represent different components of an IOCG ore system model. Magnetic and gravity data have been filtered to highlight major crustal structures (gradients) associated with coincident radically-symmetric magnetic and dense bodies that may reflect iron oxide-sulphide assemblages (Figure 4). A final probabilistic gridding algorithm combines the layers and defines those target areas that are

most likely to host all of the components of the mineralisation model and therefore, provide the best chance of exploration success.

Five components make up the IOCG exploration model:

- 1) **Source** – The regional gravity and magnetic data was filtered to extract regions that may contain deeper (5-10km) iron oxide alteration zones associated with a large mineralising hydrothermal system. Large oxidised intrusive complexes are thought to be a possible source for the metals that are contained in IOCG deposits.
- 2) **Pathway** – Major gradients (edges) were detected in gravity and magnetic data and reflect deep, crustal penetrating structures that could have acted as a pathway for magmas or fluids from deep in the crust.
- 3) **Structural focus** – Intermediate level structural intersections were extracted from high frequency Reduced-to-the-Pole (RTP) magnetic data to reflect areas of high structural complexity.
- 4) **Fluid focus** – Radially symmetric magnetic anomalies were extracted from upward-continued RTP magnetic data to reflect possible focussed magnetite-albite-calc silicate alteration at depths of 1-5km.
- 5) **Trap** – Radially symmetric gravity and magnetic anomalies were extracted from high frequency data to reflect areas of detailed-scale oxide-sulphide-metal enrichment at depths of less than 1km.

Falcon's 2009/10 regional targeting work clearly indicates that the Four Hills Project area satisfies all components of the IOCG exploration model and several discrete targets were identified for further detailed examination (Figure 5).

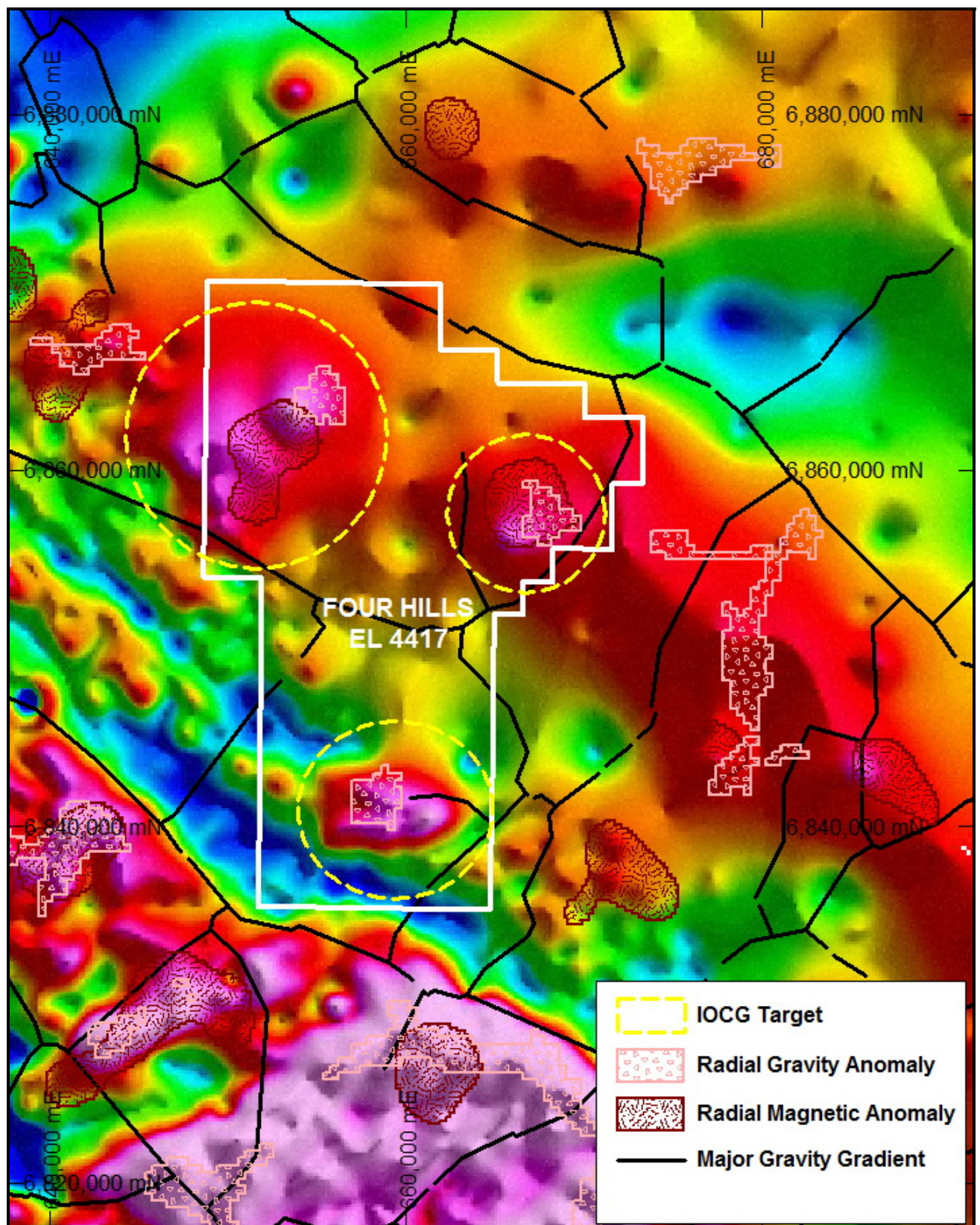


Figure 5 - Peake-Denison IOCG targets (yellow) with radial geophysical anomalies and magnetic gradients on a residual gravity image.

5.4 Detailed Geophysical Modelling

During the year, Falcon Minerals completed further processing of the compiled detailed gravity and magnetic data over the Four Hills project area to determine the amplitude and significance of the regional targets and to better define prospective 3D targets for on-ground follow-up in 2011.

A memorandum outlining the results of the detailed geophysical modelling over the Four Hills area is provided in Appendix 1.

The gravity anomaly in the northwest of EL 4417 is covered by detailed data and the modelling indicates a pipe-like body with a radius of 1100m at a depth of 300m with a density of 2.87g/cc. Further modelling is required to better define this target using additional detailed gravity data from the Red Metals 2004 gravity survey.

The southern anomaly models as a tabular body dipping vertically with a density of 2.85g/cc and a magnetic susceptibility of 0.08SI units at an approximate depth of 500m. The density and magnetic susceptibility are in the range for a mafic intrusion and are not likely to represent IOCG mineralisation although the body still has potential to host magmatic Ni-Cu-PGE sulphide mineralisation.

The eastern-most gravity anomaly on EL 4417 remains to be tested by a detailed gravity survey.

5.5 Proposed Work Programmes for 2011

The Peake and Denison Inliers are considered to be highly prospective for the discovery of significant IOCG deposits. The geophysical results to date, combined with intersected IOCG-style Na-Ca alteration in very limited drilling have proved to be sufficiently encouraging to progress towards further detailed follow-up gravity surveys and diamond drilling program on EL 4417 in 2011.

It is proposed to complete the following work programme during the next 12 months:

- Aboriginal Heritage clearance consultations.
- Detailed 3D gravity modelling and additional 400m x 100m gravity survey/s over IOCG target areas.
- Diamond drilling; at least three angled mud rotary/diamond drillholes are proposed for approximately 1500m to test each major gravity targets identified on Four Hills EL 4417.
- Geochemical and lithochemical analysis of diamond drill core.
- Hyper-spectral analysis of diamond drill core.
- Assessment of results.
- Report preparation.

6. EXPENDITURE STATEMENT

Expenditure during the current year of tenure for 'Four Hills' EL 4417 is presented below.

TABLE 4. EXPLORATION EXPENDITURE EL 4417	
Exploration Activity	Period ending 21st January 2011
Aboriginal heritage clearance negotiations	\$350
Exploration data review	\$7896
Regional geophysical processing and target generation	\$5581
Detailed geophysical modelling	\$4340
Work planning	\$846
Report preparation	\$957
Administration/Tenements	\$5087
OVERHEADS	\$2117
Totals	\$21,174

Total exploration expenditure for the 12 month period from 22nd January 2010 to 21st January 2011 was \$21,174.

7. BIBLIOGRAPHY

ENV09741

McKay G. 2008. Ninth Annual Combined Report for the Period Ending 31st December 2008, EL3192 Mt Denison, EL3249 Mt Charles (Red Metal Limited Report).

McKay G. 2007. Eighth Annual Combined Report for the Period Ending 31st December 2007, EL3077 Umbum Creek, EL3192 Mt Denison, EL3249 Mt Charles (Red Metal Limited Report).

McKay G. 2006. Seventh Annual Combined Report for the Period Ending 31st December 2006, EL3077 Umbum Creek, EL3192 Mt Denison, EL3249 Mt Charles (Red Metal Limited Report).

McKay G. 2005. Sixth Annual Combined Report for the Period Ending 31st December 2005, EL3077 Umbum Creek, EL3192 Mt Denison, EL3249 Mt Charles (Red Metal Limited Report).

McKay G. 2004. Fifth Annual Combined Report for the Period Ending 31st December 2004, EL3077 Umbum Creek, EL2549 Mt Denison, EL2620 Mt Charles (Red Metal Limited Report).

McKay G. 2003. EL 2549 Final Report for the Period Ending 16 September 2003 (Red Metal Limited Report).

McKay G. 2003. Fourth Annual Combined Report for the Period Ending 31st December 2003, EL3077 Umbum Creek, EL2549 Mt Denison, EL2620 Mt Charles (Red Metal Limited Report).

Bishop S.R. 2002. Third Annual Report for the Period Ending 31st December 2002, Peake and Denison Farm-In and Joint Venture, South Australia, RTE Exploration Report 25805.

Christie A. N. 2001. Final Environmental Report for Period Ending EL2509, Umbum Creek, EL2549 Mt Denison, EL2557 Wood Duck Creek, EL2596 Mt Toodla, EL2620 Mt Charles. RTE Report 24830.

Jaski C.T., Grant T.W., Speyers G.P., Christie A.N. and Palmer D.C.2001. Second Annual Report for the Period Ending 31st December 2001, Peake and Denison Farm-In and Joint Venture, South Australia, RTE Exploration Report 24838.

Palmer D.C., Grant T.W., Chapman R.N.2001. First Annual Report for the Period ending 31st December 2000, Peake and Denison Joint Venture EL 2509 Umbum Creek, EL2549 Mt Denison, EL 2557 Wood Duck Creek, EL2596 Mt Toodla, EL 2620 Mt Charles. RTE Exploration Report 24635.

Raddock A., Zwart N. 2000. Environmental Management Plan. Peake & Denison Project, EL2596 Mt Toodla, EL 2557 Wood Duck Creek, EL 2549 Mt Denison, EL 2620 Mt Charles, EL 2509 Umbum Creek & ELA036/00 Douglas Creek. RTE Exploration Report 24448.

White M. 2000. EL 2509, 2549, 2557, 2596, 2620 Umbum Creek, Mt Denison, Wood Duck Creek, Mt Toodla, Mt Charles. Peake and Denison Project, South Australia. Annual Report for the Period Ended 11 May 2000. BHP Minerals Report CR 9827.

ENV08953

White M. and Loftus K. 1999. EL's 1925 and 2549 Mt Charles and Mt Denison Peake and Denison JV Project South Australia, Combined Annual Report for the Period ended 31 May 1999. BHP Minerals Report.

White M. and Loftus K. 1999. EL's 2509 Umbum Creek Peake and Denison Project South Australia, Annual Report for the Period ended 15 April 1999. BHP Minerals Report.

Joyce, K. 1998. EL's 1844 & 1925 Status Report to February 1998. RGC Exploration Limited.

Elliston, AL and Joyce, K.1997. EL's 1844 & 1925 combined Annual Report for period to 11 July1997 (2 volumes). RGC Exploration Limited.

Ford, JH and Elliston, AL.1996. EL's 1844 & 1925 combined Annual Report for period to 11 July1996 (3 volumes). RGC Exploration Limited.

ENV08810

Ford, JH. 1995. EL 1844 Annual Report for period to 11 July 1995. Pancontinental Mining Ltd.

Jones, M. 1994. EL 1844 Annual Report for period to 11 July 1994. Pancontinental Mining Ltd.

Flint, R.B. 1993. Peake and Denison Inliers. In The Geology of South Australia Vol.1, The Precambrian. SA Geol Surv. Bull.54.

Fanning C.M. 1988. Magmatic and tectonic evolution of the Southern Gawler Craton – new data on timing from U Pb isotopes. Geol Soc Aust. Abstracts.

Ambrose G.J., et al 1981. Precambrian and Palaeozoic geology of the Peake and Denison Ranges. SA Geol Surv Bull. 50.

Appendix 1

Peake-Denison detailed gravity modelling over the Four Hills EL 4417

Peake-Denison Detailed Gravity Modeling

A memo prepared for Graeme Cameron of Falcon Minerals

By Daniel Core of Fathom Geophysics

Introduction

Detailed gravity data from reports was provided to Fathom (Figure 1). These data were reviewed and anomalies that are present were modeled. Some of the surveys did not contain any anomalies. The survey from report ENV09932 (Toodla) was included in the original data downloaded from the PIRSA so the data from the report will not be used for any modeling. The anomalies modeled are from the original four ELAs in this area. No additional modeling of magnetic data was completed for this report. The anomalies on the Peake ELA will be shown in a later report that includes the magnetic modeling for that area.

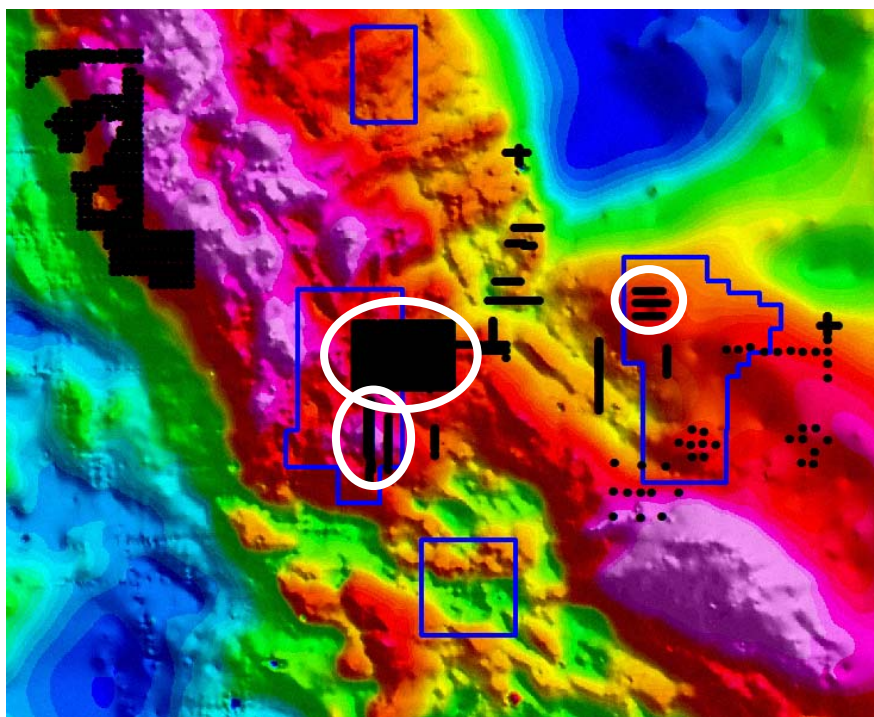


Figure 1. Bouguer gravity image with ELAs shown in blue. Black points are the new surveys from the reports. The surveys circled in white are those that contain anomalies that were modeled for this report.

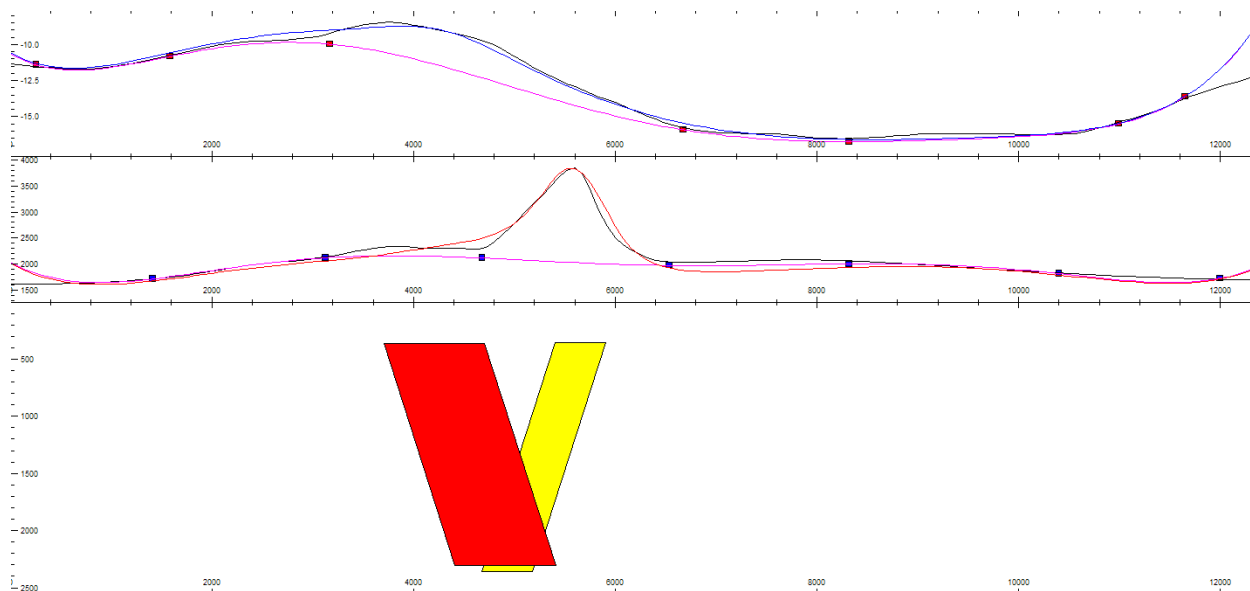


Figure 14. Modeling of magnetic and gravity data for the western profile on the William Creek ELA.

Four Hills

The Four Hills ELA has three anomalies that need to be modeled. So far only the southern anomaly has been modeled because no detailed data are available. The southern anomaly models as a tabular body dipping vertically with a density of 2.85 g/cc and a magnetic susceptibility of 0.08 SI. The approximated depth is 500 m.

The density and magnetic susceptibility are in the range for a mafic intrusion and are not likely IOCG mineralization. No follow-up work is recommended for this anomaly. The two northern anomalies still need to be modeled.

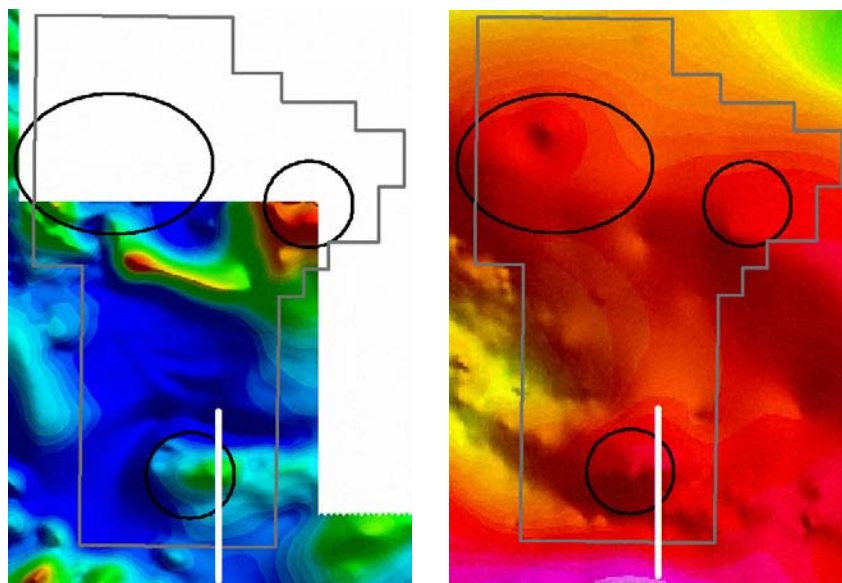


Figure 15. Magnetic (left) and gravity (right) data for the Four Hills ELA. The anomalies are circled in black, the ELA is shown in gray and the profile used for modeling is shown in white.

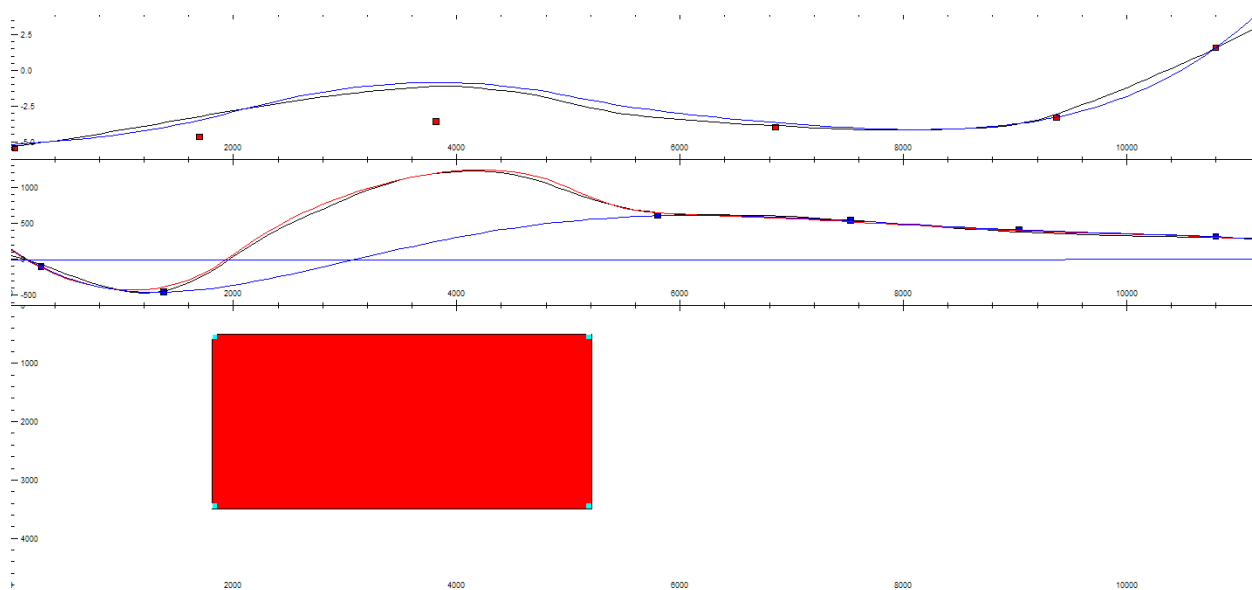


Figure 16. Modeling of magnetic and gravity data for the Four Hills ELA southern anomaly.

ENV06542

There are several surveys captured from this report that are in and around the Four Hills ELA. The data in the southern portion of the ELA is no more detailed than the data used for the original modeling so no additional work was done with those data.

The single line in the middle of the ELA and the line just west of the ELA do not contain significant anomalies. The lines in the eastern portion of the ELA and just outside the ELA to the east also do not show significant anomalies. The target in the eastern portion of the ELA has not been adequately tested with the single line over it. The spacing is coarse, it is parallel to the anomaly and it does not cover the entire magnetic anomaly.

The anomaly in the northwest of the ELA is covered by detailed data and modeling work was completed (Figure 3). It models as a pipe-like body with a radius of about 1100 m, 300 m deep and a density of 2.87 g/cc. This indicates that the part of the target that is covered by the detailed gravity does not require any additional follow-up. Not the entire target is covered but the best looking part of the regional gravity signal appears to be covered (Figure 4). There could still be local anomalies of interest in the part of the target that is not covered.

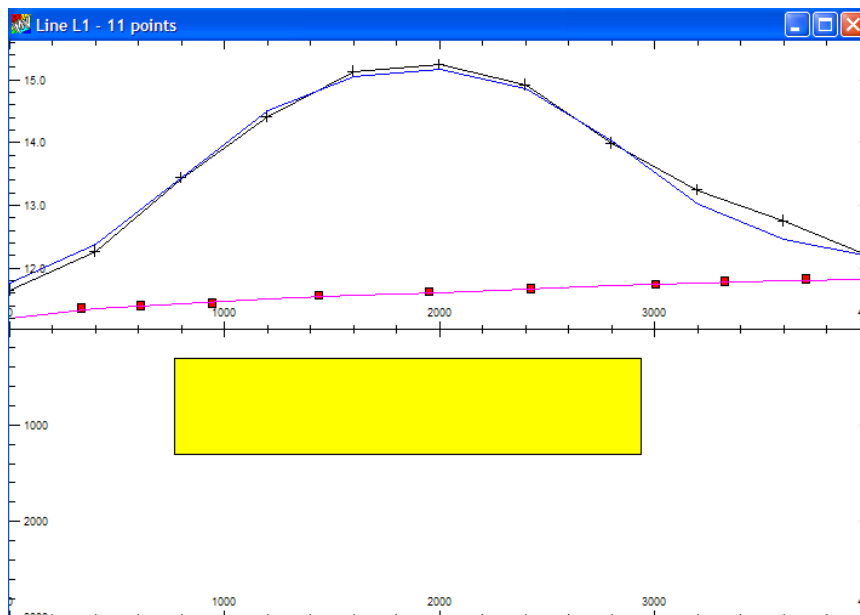


Figure 3. Detailed gravity modeling over the northwest survey. This is the southernmost line which has the best anomaly.

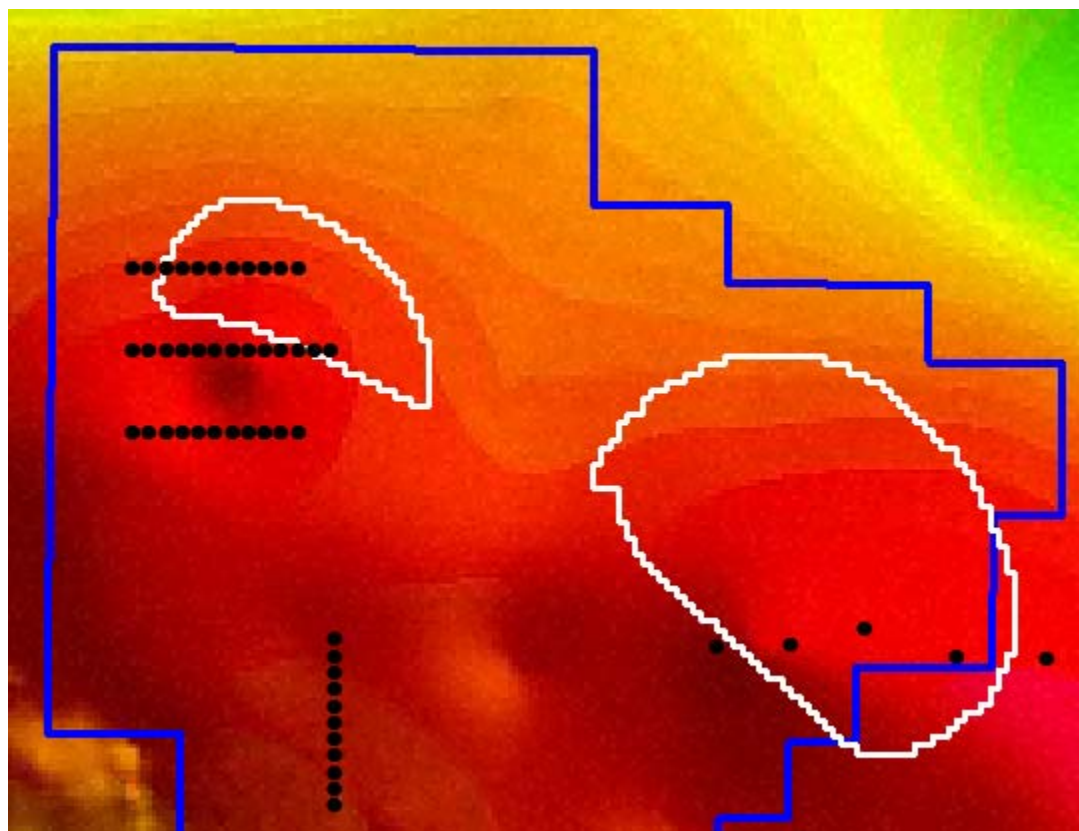
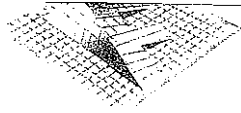


Figure 4. Gravity coverage for the Four Hills targets. The eastern target is not covered at all but the northwest anomaly has significant coverage. The southern line over the northwest target has the best anomaly.

ENV08448

This report contains a detailed survey over the Spring Hill area. The coverage of the survey is shown in Figure 5 with the profiles that were modeled. Most of the target is covered by the gravity. There is a general correlation between the magnetic and gravity data. However, at the highest points in the gravity survey, the magnetic data are at relatively low values (Figure 6). This is a positive result since the goal is locating hematite alteration that should have a lower magnetic signature and higher gravity signature than magnetite alteration.

The modeling results are shown in Figure 7. The first line is the more northern of the two shown in Figure 6. Both bodies model with a density of around 3.3 g/cc indicating that they are both of interest.



FALCON

MINERALS

ABI" 20 009 256 535
Suite 19, 100 Hay Str-eeet
Subiaco. Western Australra 6008
PO Box 8319, Subiaco EastWA 6008
Telephone (081 9382 1596
Facsimile : (08) 9382 4637
Email: fcn@falconminerals.com.au
Website: falconminerals.com.a.u

14 February 2012

Sue Watson
Exploration Coordinator
Department of Primary Industry & Resources
GPO Box 1671
Adelaide SA 5001

Dear Sue,

Re Exploration Licence 4417- Four Hills

Enclosed for receipt is a surrender document in relation to the above mentioned exploration licence. Please treat the last years technical report for the year ending January 21st 2011 as the final surrender report (January 20th 2012), as no field work has been conducted over the tenement during the last 12 months.

Yours faithfully


Richard Diermajer
Director