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EL 4307

ALGEBUCKINA

**FIFTH PARTIAL SURRENDER REPORT, FOR
THE PERIOD 3/8/2004 TO 28/9/2012**

Submitted by
Red Metal Ltd
2012

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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

EL 4307 Algebuckina
Partial Surrender Report
For the Period Ended 28 September 2012

Oodnadatta SG53-15, Warrina SH53-03

Date: 12 October 2012

Author: G. McKay

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Report Digital File List

EL4307_2012_01 Partial Surrender Report.pdf (this report)
EL4307_2012_02 Surrendered Collar Data.csv
EL4307_2012_03 Surrendered Lithology Logs.csv
EL4307_2012_04 Surrendered Drill Sample Assays.csv
EL4307_2012_05 Surrendered Drill Sample Assays.csv
EL4307_2012_06 Logging Codes.csv
EL4307_2012_07 Surrendered Gravity Data.csv

SUMMARY

This is the second Partial Surrender report for EL 4307 Algebuckina (a subsequent licence to EL 3226) for the period ending 28 September 2012.

An objective of the exploration programme was to determine the potential for strata-controlled uranium deposits within the Jurassic Algebuckina Sandstone and overlying Cretaceous Cadna-owie Formation, lying marginal to the Peake and Denison Inliers. The type of deposits sought include sandstone-hosted roll-front deposits and palaeodrainage controlled sandstone and conglomerate hosted deposits.

Historic drillholes into the Algebuckina Sandstone showed it contains pyrite and organic matter in some areas. A review of the historic drilling identified thick sequences of oxidised Algebuckina Sandstone flanking the radiogenic basement rocks. This setting when combined with a radiogenic provenance was interpreted to be conducive for the formation of uranium roll-front deposits.

Another project objective was to explore for iron-oxide copper-gold (IOCG) type mineralisation on the northern limit of the Peake and Denison Inliers which comprise a series of outcropping northwest oriented fault-bounded wedges of Palaeoproterozoic metamorphic basement rocks (Peake Metamorphics), intruded by granitic and mafic rocks of Palaeoproterozoic and Mesoproterozoic ages immediately adjacent to the eastern margin of the Gawler Craton.

Work conducted on the surrendered blocks (under previous title EL 3226) included:

- Shallow RCP drilling of 4 holes for uranium potential of Mesozoic sandstones.
- A gravity survey in the northern part of the licence.
- Shallow RCP drilling of 1 hole to basement on a gravity anomaly.

KEYWORDS: Uranium, Copper, Gold, IOCG, rotary-mud drilling, Peake and Denison Inliers, Proterozoic.

LOCALITY

Oodnadatta	SG53-15	1:250,000
Warrina	SH53-03	1:250,000
Warrina	6041	1:100,000
Algebuckina	6042	1:100,000

1.0 INTRODUCTION

EL 4307 is located on pastoral leases in the environs of the Denison Range, approximately 140km north-east of Coober Pedy. The tenement area is the subject of a Native Title claim by the Arabunna People (SC98/002).

2.0 TENURE

EL 4307 was granted to Red Metal Limited (subsequent to EL 3226) on 29 September 2009 over an area of 409 sq km.

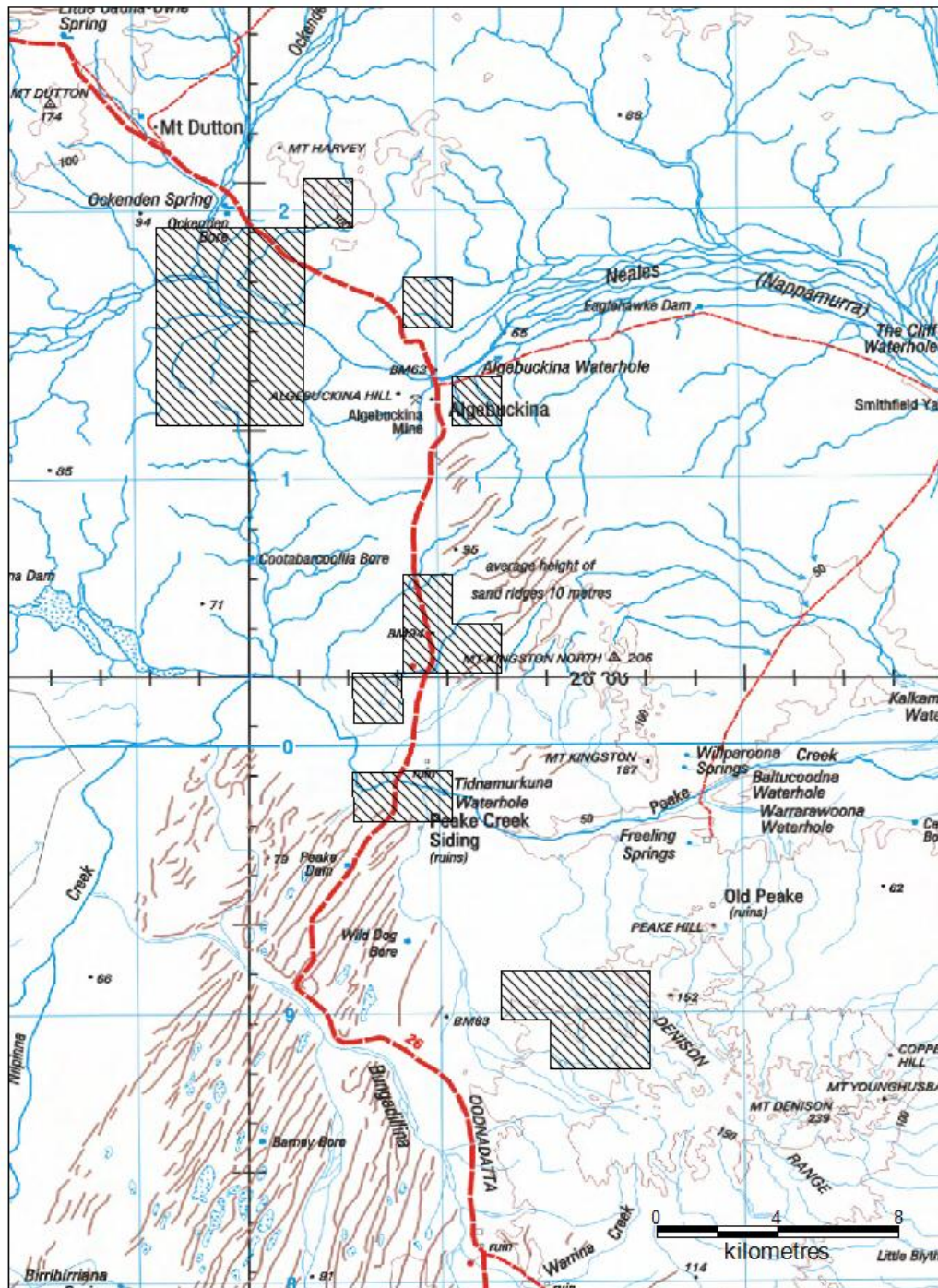


Figure 1 - Location of EL 4307 relinquished portions, September 2012

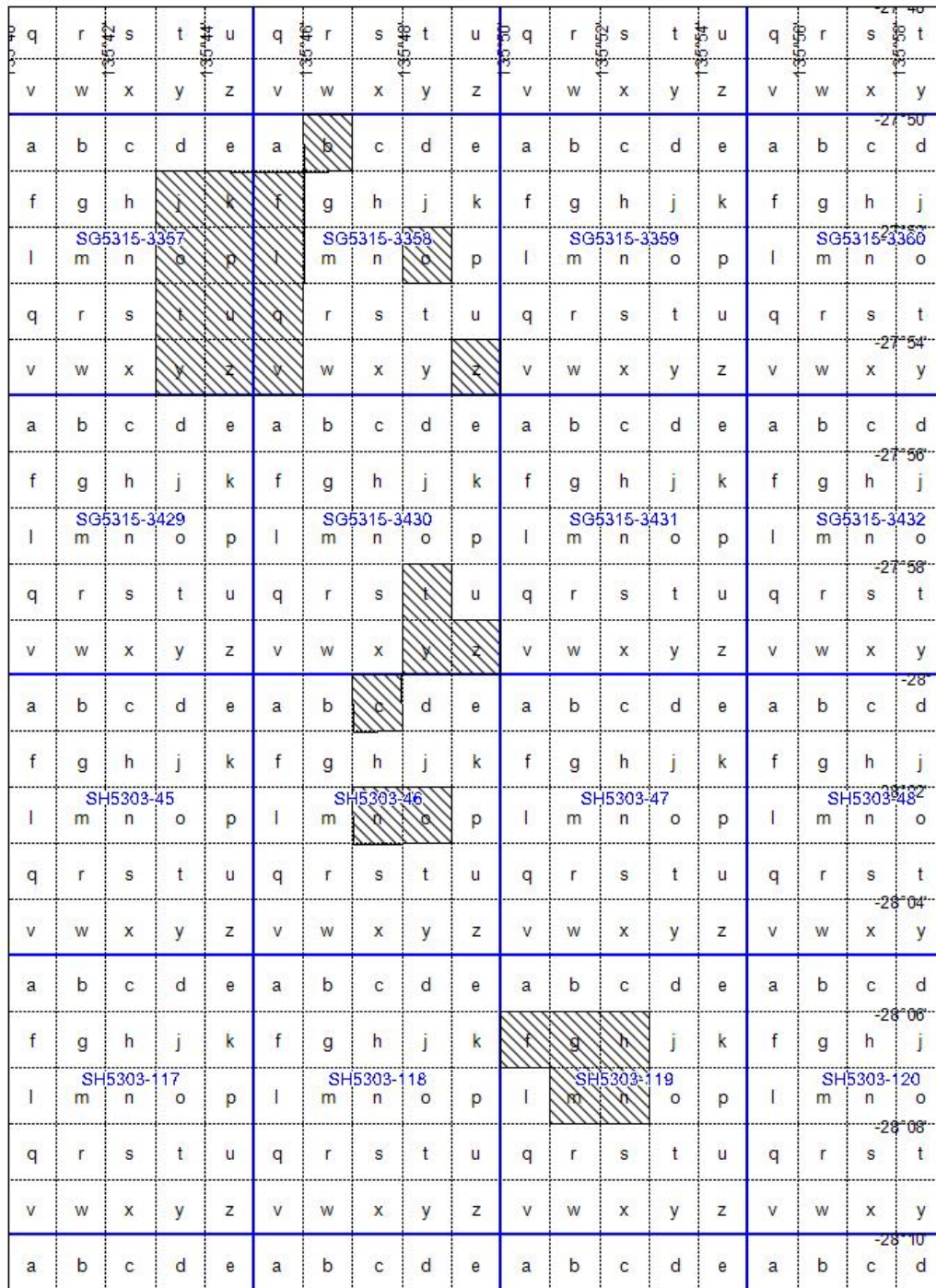


Figure 2 - EL 4307 relinquished blocks, September 2012

3.0 REGIONAL GEOLOGY

The Peake and Denison Inliers comprise a series of outcropping northwest oriented fault-bounded wedges of Palaeoproterozoic metamorphic basement rocks (Peake Metamorphics), intruded by granitic and mafic rocks of Palaeoproterozoic and Mesoproterozoic ages immediately adjacent to the margin of the Gawler Craton. The Algebuckina tenement covers the northern limit of the Peake and Denison Inliers. Distribution of major rock types is shown on Figure 2.

Mesozoic sediment cover of the Eromanga Basin overlies basement sequences varying from less than 50 metres thick west of the basement inliers to greater than 300 metres thick to the east. Artesian water is commonly developed within the Algebuckina sandstone member of the Eromanga Basin.

Tertiary gibber lag, gypsiferous clays, alluvial gravels, silts/clays and Recent aeolian dune sands, lacustrine and mound spring deposits overlie the Mesozoic sediments.

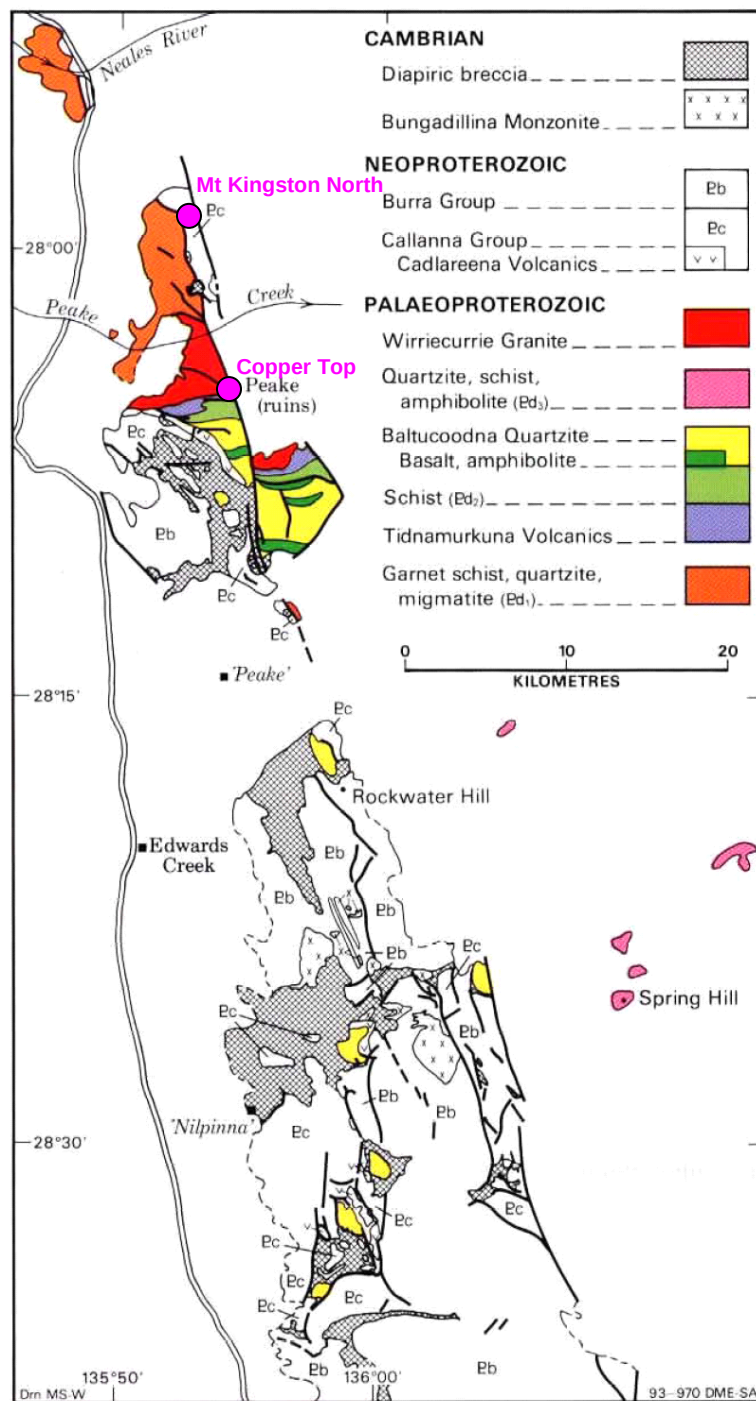


Figure 3 – Peake & Denison Inlier Geology

4.0 PREVIOUS EXPLORATION

Pancontinental Mining (1993-95), RGC Exploration (1995-98) (acquired Pancontinental in late 1995), BHP Minerals Pty Ltd joint venture with RGC (1998-99), Rio Tinto Exploration joint venture with BHP (1999-2001). These companies held EL 1844 / EL 2549. Work activities included stream sediment and gravel sampling, airborne geophysical surveying and gravity surveying.

Over the period 1978 to 1980, Dampier Mining conducted ground magnetic and mapping traverses over magnetic complexes in the area, concluding with two holes (WLE 1 & WLE 2) being drilled. No significant mineralisation was encountered.

Earlier uranium explorers included Mines Administration Pty Ltd (EL 336, 1977-78), Carpentaria Exploration Co. Pty Ltd (EL 888, 1981-82) and Getty Oil Development Co. Ltd (EL 1284, 1985-86).

During 1974 Chevron Exploration Corporation held much of the area under Exploration Licence 22 (Lagoon Hill). Activities were focused on uranium exploration and concluded with an 18-hole mud rotary drilling programme.

5.0 SUMMARY OF WORK COMPLETED

Work conducted on the relinquished portions of EL 4307 (under previous title EL 3226) included:

2006-2007 – Shallow RCP drilling for uranium potential of Mesozoic sandstones. Most holes intersected Cadna-Owie Formation and Algebuckina Sandstone and extended into kaolinitic saprolite and saprock from the Adelaidean and Middle Proterozoic basement. Downhole gamma logging displayed no anomalous activity.

December 2007 - a gravity survey was conducted by Haines Surveys in the northern part of EL 3226.

April 2008 – shallow RCP drilling was conducted by Watson Drilling. One of these holes was a precollar on a basement gravity targets (AG08-51) while the other hole continued testing the sedimentary uranium potential.

Table 1 - Drillhole collars

HOLE	E_MGA53	N_MGA53	Elevation	Azim	Dip	Total Depth	Basement	Date Completed
AG0606	579686	6905528	90	0	-90	36	30	14/12/2006
AG0711	578668	6901345	50	0	-90	44	-	3/02/2007
AG0730	577495	6897185	62	0	-90	66	50	16/10/2007
AG0849	578001	6897169	70	0	-90	66	51	7/4/2008
AG0851	572831	6917694	69	0	-90	25.5	23	8/4/2008

6.0 CONCLUSIONS

The surrendered portions were considered to have lower exploration potential.

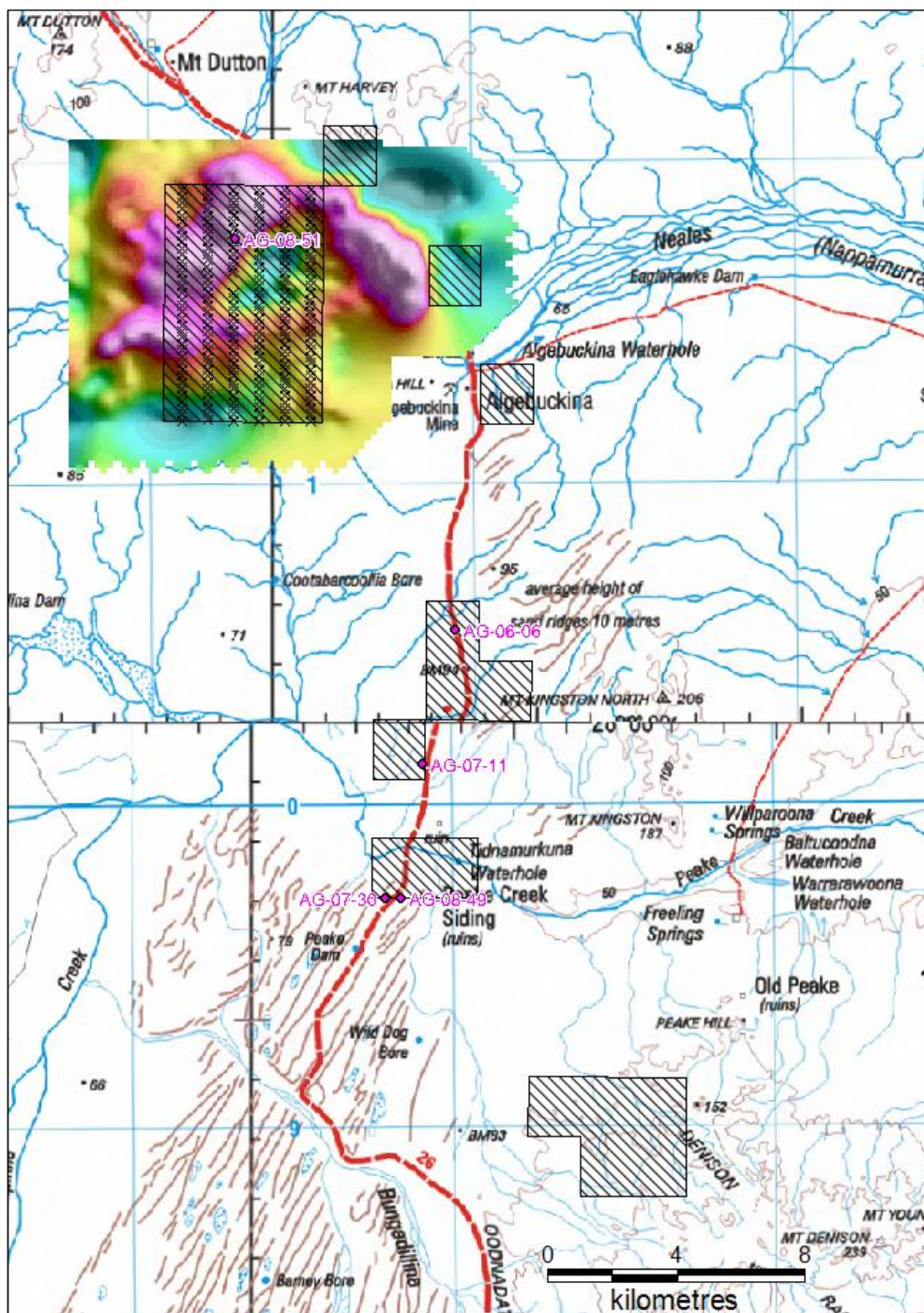


Figure 4 – EL 4307 relinquished portions with drillholes (pink) and gravity survey image