



# BRIDGING REPORT EXPLORATION LICENCE 29687 *"RIDDOCH"*

For the period: 19<sup>th</sup> July 2014 – 31<sup>st</sup> January 2015 (Bridging)

Author:	Neil Chalmers
Date:	31st <sup>th</sup> March 2015
Tenement Holders:	DBL Blues Pty Ltd 100%
Tenement:	EL29687 "Riddoch"
Reporting Period:	19 <sup>th</sup> July 2013 to 31 <sup>st</sup> January 2015 (Year 1)
Distribution:	Core Exploration Ltd (1)
	Geoscience.Info – Department of Mines and Energy (1)
Map Sheet:	Alice Springs 1:250,000 sheet (SF5314)
	Riddoch 1:100,000 sheet (5851)
Target Commodity:	Gold, copper
Keywords:	Literature review, gold, copper

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# 1.0 Summary

Exploration Licence 29687 "Riddoch" is located approximately 100 km's northeast of Alice Springs, north of the Arltunga Historical Reserve and Claraville Homestead. Access from Alice Springs is by way of the Ross Highway for 70 km, thence northeast towards Arltunga, and then heading north to Claraville Homestead. Travel time is just under two hours by road from the township (Figure 1.1).

During the bridging reporting period Core Exploration completed no active exploration activities within EL29687 (Figure 1.2).

The tenement remains prospective for IOCG style mineralization, but Core's focus for the first year of combined reporting Albarta North GR359 will be the regions uranium potential. The company believes that the global uranium market is becoming more positive and as such, the company is planning on thoroughly reviewing all of its Arunta Region tenure's uranium and REE potential.

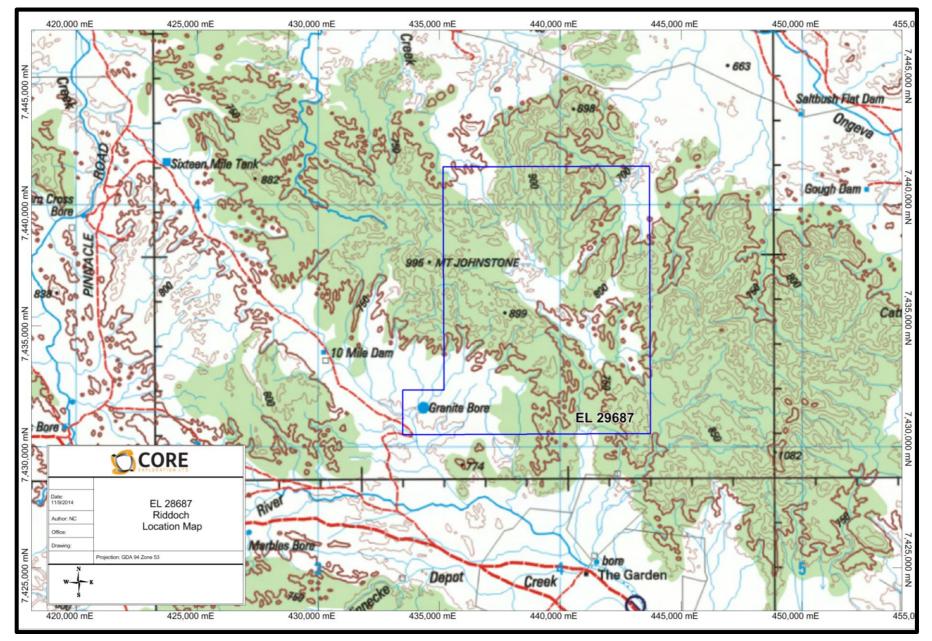
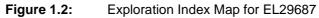


Figure 1.1: Location Map of EL29687

450,000 mE 420,000 mE 425,000 mE 430,000 mE 435,000 mE 440,000 mE 445,000 mE 455,0 7,445,000 mN 7,445,000 mN 7,440,000 mN 7,440,000 mN 7,435,000 mN 7,435,000 mN 7,430,000 mN 7,430,000 mN EL 29687 CORE EL 28687 Riddoch Exploration Index Map Date: 11/9/2014 Author: NC Office: 7,425,000 mN Drawing: ,425,000 mN Projection: GDA 94 Zone 53 W 425,000 mE 420,000 mE 430,000 mE 435,000 mE 440,000 mE 445,000 mE 450,000 mE 455,0

Bridging Report EL29687

19th July 2014 – 31st January 2015 (Bridging)



# 2.0 Introduction

This report details first year exploration activities conducted within Exploration Licence 29668 "Riddoch". The tenement is held by DBL Blues Pty Ltd (100%), a subsidiary of Core Exploration Limited. The tenement is located approximately 100 km's northeast of Alice Springs just north of the Arltunga Historical Reserve and Claraville Homestead. Travel time is just under two hours by road from the township (Figure 1.1). Access from Alice Springs is by way of the Ross Highway for 70 km, thence northeast towards Arltunga and then heading north to Claraville Homestead.

Access within the tenement is limited; the general area is hilly with only a few vehicle tracks available. Due to seasonal rains, much of the area is overgrown inhibiting detailed ground access. The rivers are prone to flooding during heavy rainfalls over the summer. Accommodation can be found at Ambalindum Station (approximately 30min drive) or Ross River (45min drive). The climate is typical of central Australia, hot summers and mild winters.

## 3.0 Tenure

Exploration Licence 29687 was granted to DBL Blues on the 19<sup>th</sup> July 2013. The tenement overlaps pastoral leases PPL989 (Mount Riddock) and PPL 1095 (The Gardens). Tenure details are summarised in Table 3.1.

#### Table 3.1 Summary tenement detail for EL 29687

Tenement	Owner	Date Granted	Tenure	Size	Rent (Year 2)	Expenditure Commitment
EL 29687	DBL Blues Pty Ltd 100%	19/07/2013	6 Years	31 blocks 97.65 km <sup>2</sup>	\$1,331	\$122,000

# 4.0 Geology and Mineralisation

EL 29687 is located in the Proterozoic Aileron Province of the Central Arunta Region. The rocks dominantly comprise variably metamorphosed sediments, volcanics, calcsilicates, amphibolites and granite (Figure 4.1). The dominant structures appear to trend northeast.

The area is underlain by the Palaeoproterozoic Strangways Metamorphic Complex, which forms part of the Aileron Province. The main part of the area is underlain by the Cadney Metamorphics, a sequence of calc silicates, marble and gneisses. The Cadney Metamorphics are bounded on its eastern side by a northwest striking major structure, (Cadney Fault Zone) which cuts through the tenement. Bungitina Metamorphics a metasedimentary package is structurally emplaced on the eastern side of the dominant Cadney Fault Zone.

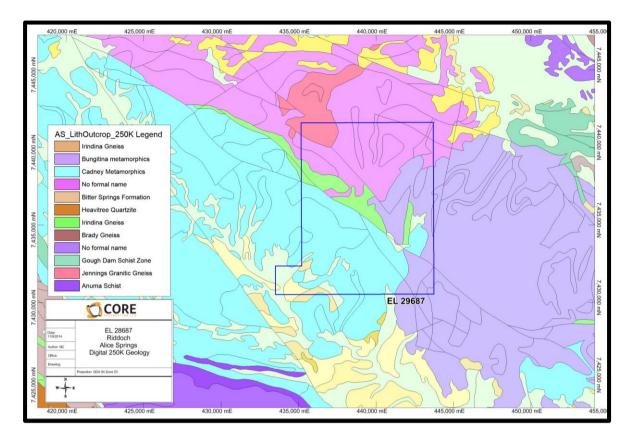


Figure 4.1 Extract from Alice Springs 1:250,000 Geology

### 5.0 **Previous Exploration**

#### 5.1 Historical Exploration

#### Historical Exploration 1969 - 1979

Stockdale Prospecting (SPL) systematically drainage sampled central Australia from 1969 - 1973 including EL 29687. No kimberlitic indicators or diamonds were recovered. However, in a neighbouring tenement a geochemical split (BCO 1735) collected from a tributary of Oneva Creek assayed 4ppb Au. The next immediate drainage to the east, Cadney Creek, was also highly anomalous for gold with results of 383, 57 and 25 ppb Au returned. These samples were subsequently resampled by SPL in 1992.

EL 110 was granted to Russgar Minerals in 1973. Russgar Minerals mapped the area (1:26,000 airphotos) and conducted an aerial "mercury sniffing" geochemical survey over a large area of Harts Range delineating nine areas of elevated mercury readings.

#### Historical Exploration 1980 - 1988

Hillrise Minerals joint ventured EL1802 to CRAE in 198, who conducted a drainage sampling program over a 20km by 10km area commencing from Mt Campbell in the east to Blackfellow Bones Bore in the west. Thirty-five (35) active creek alluvium samples were collected, observed for KIs, assayed for 14 elements for a best result of 55ppm Cu, 60ppm U (822132) and 20ppm W (822080).

White Industries (WIL)/ BHP were granted EL 2648 in 1982 over an area also covering EL 29687. In the region of the current tenement ten (10) drainage samples were collected (RTO955 to 964). Five (5) samples were observed for KIs and assayed for As, Ce, La, Ba, Nb, Zr, Cu, Pb, Zn, Co, Ni, Cr. No anomalous results were reported.

Huntings carried out a photo-interpretation of EL 2648 identifying five circular features of possible kimbertitic origin. Heavy mineral sampling of EL 3498 (includes lower reaches of Anamarra Creek) by Negri River Corporation (NRC) from 1982 to 1985 positively identified several KIs from initial sampling downstream of EL 28853. Unfortunately, a twenty-two (22) sample follow-up program was unable to repeat the positive results of the initial program. Likewise, minus 80 mesh geochemical splits returned highly anomalous gold assays from two localities downstream of EL 28853, namely SNG 3 (0.216ppm Au) and ONG 5 (0.16ppm Au), which also proved unrepeatable.

#### Historical Exploration 1989 - 1998

EL 6013 was granted to G K Bogie in 1989, centered on Cattlewater Pass covering EL 29687. Bogie conducted a gyrocopter drainage sampling program over extremely rugged inaccessible terrain collecting fourty-seven (47) samples from the 28852 licence area i.e. Ongeva and Oneva Creek drainages. The following field season Bogie contracted the late Dr Burton Murrell to conduct an 'overbank silt' drainage sampling program, a technique Dr Murrell was pioneering in the Alice Springs region. Eleven (11) overbank samples (648 – 658) were collected from drainages within the licence area of 28852 returning AAS Cu assays of 50 – 70 ppm. Interestingly, Bogie drainage sampled Cadney Creek (25km east of EL 29687) delineating a weak gold anomaly i.e. WH608 (0.008), WHHA (0.006), WH11b (0.006), WHHC (0.006), and WH11D (0.001) ppm Au contrasting starkly with the bonanza values obtained by SPL 20 years previously.

In 1992 Clarence River Finance P/L prospected the area north of EL 29687, and rock chip sampled the Camp Hill Copper deposit, and three other copper shows trending south-southeast away from Camp Hill (EL 6941). They also prospected Mt Johnstone (Ciccones Find) Samarskite bearing pegmatite (24m x 7m), which is anomalous in REEs, U, Nb, Th, Ta and Ba.

Also in 1992, the late Dr Burton Murrell of Saturn Resources was granted EL 6899 conducting an extensive overbank drainage sampling program including thirty-four (34) samples from the southern drainages of EL 28854 (samples 592, 617 - 619, 621 - 627, 701 - 717, 722 – 724). Gold assays ranged from 0.001 to 0.003 ppm while copper values varied from 30 to 90 ppm.

During 1993, Bogie/Murrell rock chip sampled a 'magnetite gossan' located approximately 6km south-southeast of the western boundary of EL 29687 (EL 6013) which assayed 0.028ppm Au (CP223A). Normandy Exploration heavy mineral sampled 17km of Anamarra Creek, draining Mt Johnstone to the Plenty Highway, and traversing north of EL 29687. Fifty-three (53) samples were collected in 1994 and were observed for KIs from disproportionally large high grade metamorphic terrain concentrates for negative results (EL 7932).

Pasminco were granted EL 8787 in 1995 over the Cadney Creek catchment including the EL 29687 tenure area. A 200 metre line space AMAG geophysical survey was flown over the licence area on north-south orientated flight lines, with an altitude of 80m. Late stage northeast - southwest trending cross faults are prominent magnetic linears within the overall dataset, increasing in both intensity and frequency towards the Copper Queen copper deposit located slightly to the north of the 8787 licence area. A total of twenty-two (22) minus 80 mesh drainage samples were collected, nine (9) of which (133247 to 133250, 133358, 133059, 133060, 133083 and 133087) are located within EL 28852.

#### Historical Exploration 1998 - 2007

EL 22292 was granted to Oneva Exploration P/L in 2001 who prospected the area around EL 29687, including the southeast trending Cadney Fault zone, discovering multiple occurrences of hitherto unknown malachite - dominated copper mineralisation (25 localities). All localities were rock chip sampled (158) and three (Dianas Block 1, Rip Hill and Bikini Basin) were soil sampled (73). Interestingly, Dianas Block 2 to 8 is a continuum of copper (± gold) mineralisation/alteration trending northeast for approximately 2km, hosted by quartz-magnetite iron formation enveloped by magnetite schists. Dianas Block 2 was tested by two RAB drillholes with drill hole depths of 43m and 42m respectively, returning no elevated copper values. Likewise, Dianas Block 8, was tested by two RAB drillholes with drill hole depths of 27m and 35m respectively, again no elevated copper geochemistry was returned. The Corner Post Hill prospect was tested by a single RAB drill hole (34m) twenty-seven (27) samples were assayed for Au, Cu, Pb, Fe, Bi, K, Mg, Na, Ti. No elevated values were returned.

Tanami Gold (TGNL) moved into the Harts Range area in 2002. EL 10078 was pegged over the Copper Queen copper workings located approximately 8km east of EL 28852. TNGL believed Harts Range was potentially prospective for Selwyn-type Cu-Au and/or Coronation Hill-type Au – PGE mineralisation, primarily based on Au-Cu-PGE mineralised carbonate veins discovered at the Kongo prospect, 12km west of Copper Queen by PNC in 1996. TGNL collected fifty-three (53) rock chip, fourteen (14) lag, 1597 soil, and eighty-three (83) drainage samples. 230 RAB drillholes were also collared and drilled for a total of 6,843m. 2613 drill spoil samples were assayed. The geochemical sampling program delineated a 20km x 15km area of geochemical anomalism

structurally constrained by the northwest - southeast trending Florence Creek Shear Zone, and the east - west Copper Queen trend.

During 2003 detailed analysis of hyperspectral data over Riddoch Amphibolite (765Ma) within EL 10078 was completed using the Hymap Thematic mapper airborne remote sensing system. The 'mineral mapping' was useful for delineating ultramafic plugs  $\pm$  PGE mineralisation, carbonate/chlorite/muscovite alteration  $\pm$  Au associated with retrogressed shear zones common throughout Harts Range area. Also, anthophyllitic units which commonly host Cu - Zn - Pb - Ag- Au mineralisation, gossanous zones  $\pm$  Au and basemetals.

Core Exploration commenced a thorough review of historical exploration work completed within EL 29687, as part of the companies "Riddoch" tenement package during the 2013-2014 reporting period, in conjunction with Joint Venture tenement EL 27709.

The Arltunga-Winnecke Goldfields have been extensively explored for gold by various companies, including wellfunded modern gold explorers Normandy NFM and Tanami Gold. The gold at Arltunga and Winnecke is contained within massive white quartz veins which contain pyrite and rare chalcopyrite. The veins are hosted by various rock units in the Arunta basement and overlying Amadeus Basin. Their emplacement has been interpreted to be related to the ca.320 Ma Alice Springs orogeny. These auriferous veins extend beyond and between the two known goldfields, including at Pattersons (also known as John Bulls Surprise). The greatest problem with this gold system is the extreme variability of results from the same vein and between adjacent prospects. Rock chips from known prospects can frequently return >10 g/t Au, but drilling results have consistently failed to return economic grades and widths, despite intersecting the veins.

Core Exploration completed a detailed review of GIS datasets and mineral potential modeling for the companies Riddoch tenements based on epigenetic vein hosted gold systems.

A number of geological features were identified as potentially having an important role in the development of gold bearing epigenetic quartz veins:

- North-easterly structures
- Retrogressive alteration
- Outcropping quartz dominant vein systems
- Contacts between the Heavitree Quartzite and Palaeoproterozoic basement
- Zones of dilation along regional structures including inflections and fault jogs
- Zones of demagnetization associated with retrogressive alteration

These feature will be investigated in various datasets available for EL 29687 (e.g. Landsat, Google Earth, regional magnetics, Aster data) and incorporated into a mineral potential model within the company's GIS system for exploration targeting.

Results from the detailed analysis of public domain geological, geochemical and geophysical datasets will be used to prioritise areas within the EL 29687 tenure for first pass field reconnaissance work, potentially including soil sampling, rock chip sampling and geological mapping.

Core Exploration submitted a Variation of Covenant application to the Northern Territory Department of Mines and Energy on 1<sup>st</sup> September 2014 to reduce the second year covenant for EL 29687 for the benchmark minimum amount of \$17,750. Market conditions have changed since application for the Licence and, although the Licence remains an integral part of the Holder's strategy toward securing an economic and environmentally sustainable mining operation, it has become necessary to prioritise expenditure and maintain strategic cash reserves until conditions improve.

The Variation of Covenant application was successfully approved by the Department of Mines and Energy on the 12<sup>th</sup> September 2014.

## 6.0 Bridging Period Work Summary & Discussion

No active exploration was undertaken on EL29687 during the bridging period.

Table 6.1: Exploration expenditure figures for the bridging period, EL29687.

EL29687 19/7/14-31/1/15 Bridging	Eligible		
Geology - salaries	\$796.00		
Tenement - maintenance general	\$330.83		
Miscellaneous items	\$30.00		
Depreciation of equipment	\$6.00		
TOTAL	\$1,162.83		

## 7.0 Rehabilitation

There were no earth disturbing activities on the tenement. No rehabilitation was required.

### 8.0 Conclusions and Recommendations

Core's exploration focus in the first year of the combined reporting GR359 (next reporting period) is expected to be on regions uranium prospectivity. Core believes that the global uranium market is improving and as such is focused on reviewing and increasing its tenures uranium potential within the Arunta region including within EL29687. Other parts of the Aileron Province have a range of uranium dominant prospects, the emplacement mechanisms of which will be used as analogues controlling the companies exploration processes within EL29687 in the next reporting period.

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