



Quantum Resources Limited
ACN 006 690348

BARROW CREEK
EXPLORATION LICENCE 23390
FINAL REPORT
FOR THE PERIOD
22 APRIL 2003 TO 19 MARCH 2009

By
B. White

DUE DATE: 21 May 2009

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Department of Primary Industry Fisheries and Mines, Darwin
Quantum Resources Limited, Melbourne



TENEMENT REPORT INDEX

COMPANY / OPERATOR:	Quantum Resources Limited
PROJECT:	Barrow Creek
TENEMENT:	EL23390
REPORTING PERIOD:	22 April 2003 to 19 March 2009
AUTHOR:	B. White
DUE DATE:	21 May 2009
STATE:	Northern Territory
LATITUDE:	22°09'57"S - 22°20'00"S
LONGITUDE:	134°53'07"E to 135°09'01"E
MGA mN:	7,530,100mN to 7,548,800mN
MGA mE:	488,250mE to 515,553mE
1:250,000 SHEET:	Alcoota SF53-10, Huckitta SF53-11
1:100,000 SHEET:	Utopia 5853, MacDonald Downs 5953
MINERAL DISTRICT:	Barrow Creek Region
COMMODITY:	Pb, Zn, Phosphate
KEY WORDS:	Georgina Basin, Barrow Creek, Tomahawk Beds, Dulicie Sandstone, Base Metals.



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1. SUMMARY OF EXPLORATION ACTIVITY

This report describes the exploration activities conducted over Exploration Licence 23390 between the 22nd of April, 2003, and the 19th of March, 2009 (Figure 1). A preliminary data review was conducted during 2003 to catalogue previous exploration work conducted in the area. A ground reconnaissance mapping exercise, which included some grab sampling, was undertaken in 2006. In 2007, staff changes triggered a second review of historical data, in order to familiarise new staff with the Barrow Creek project area.

2. TENEMENT STATUS

Exploration Licence 23390 was granted to Astro Diamond Mines N.L. ("Astro") on the 22nd of April, 2003. A deferral of reduction was granted on the 13th of July, 2005, and the tenement was reduced in size to 155 sub-blocks on the 22nd of April, 2006. On the 20th of March, 2007 a reduction deferral was granted. Under Dealing D92679, Quantum Resources Limited ("Quantum") gained an eighty percent (80%) interest in the tenement on the 21st of July, 2008. On the 2nd of October, 2008 a partial waiver of reduction was granted enabling the retention of eighty four (84) blocks. The tenement was surrendered on the 19th of March, 2009.

TENEMENT	DATE	STATUS
EL23390	22/08/03	Tenement granted
	13/07/05	Deferral of reduction granted
	22/04/06	Compulsory reduction
	21/07/08	Quantum acquired 80% interest in tenement
	02/10/08	Partial waiver of reduction granted
	19/03/09	Tenement surrendered

Table 1: Tenement Status

3. LOCATION AND ACCESS

Exploration Licence 23390 is located approximately two hundred and fifty kilometres (250km) north of Alice Springs, as measured along major highways (Figure 2). Access to the tenement is via Alice Springs, along the Stuart Highway and the unsealed Sandover Highway. Minor tracks transect the tenement, however the roads in the area are seasonal. The minor tracks provide limited access to the exploration area, and much of the tenement can only be accessed via cross country travel with off road vehicles. During the wet season, between October and March, the area becomes largely unnavigable to vehicular traffic.

134°50'0"E


135°0'0"E

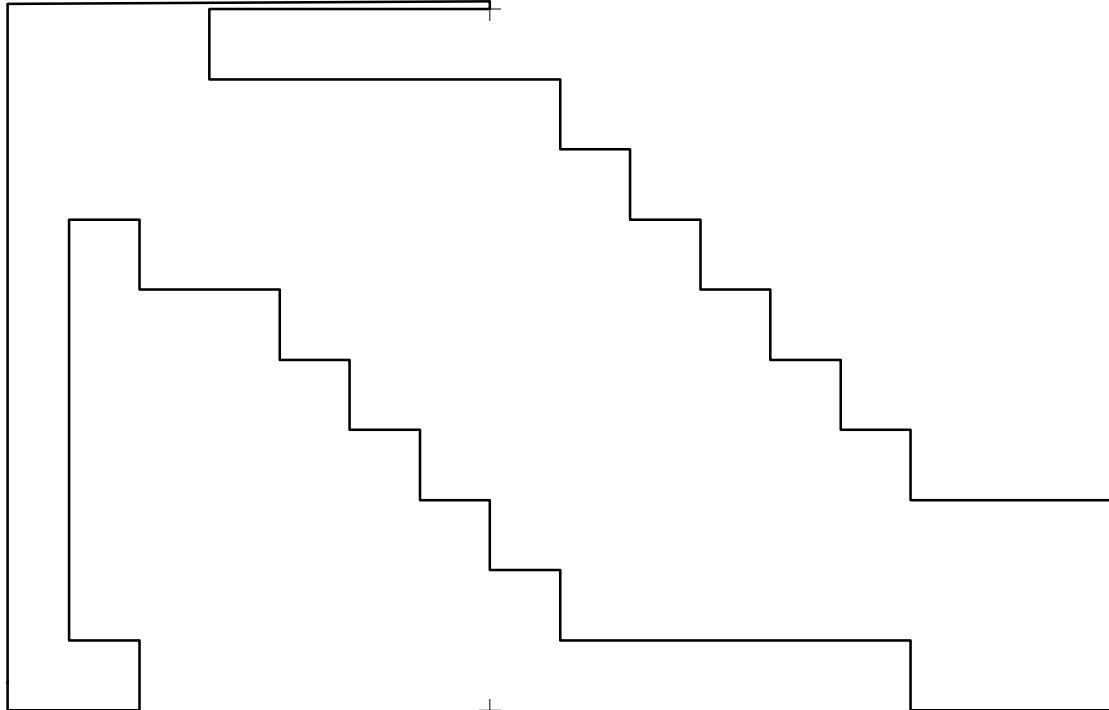
135°10'0"E

22°10'0"S

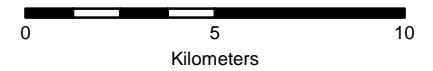
22°20'0"S

Legend

 Tenement boundary



GDA94
1:200 000



Quantum Resources Limited

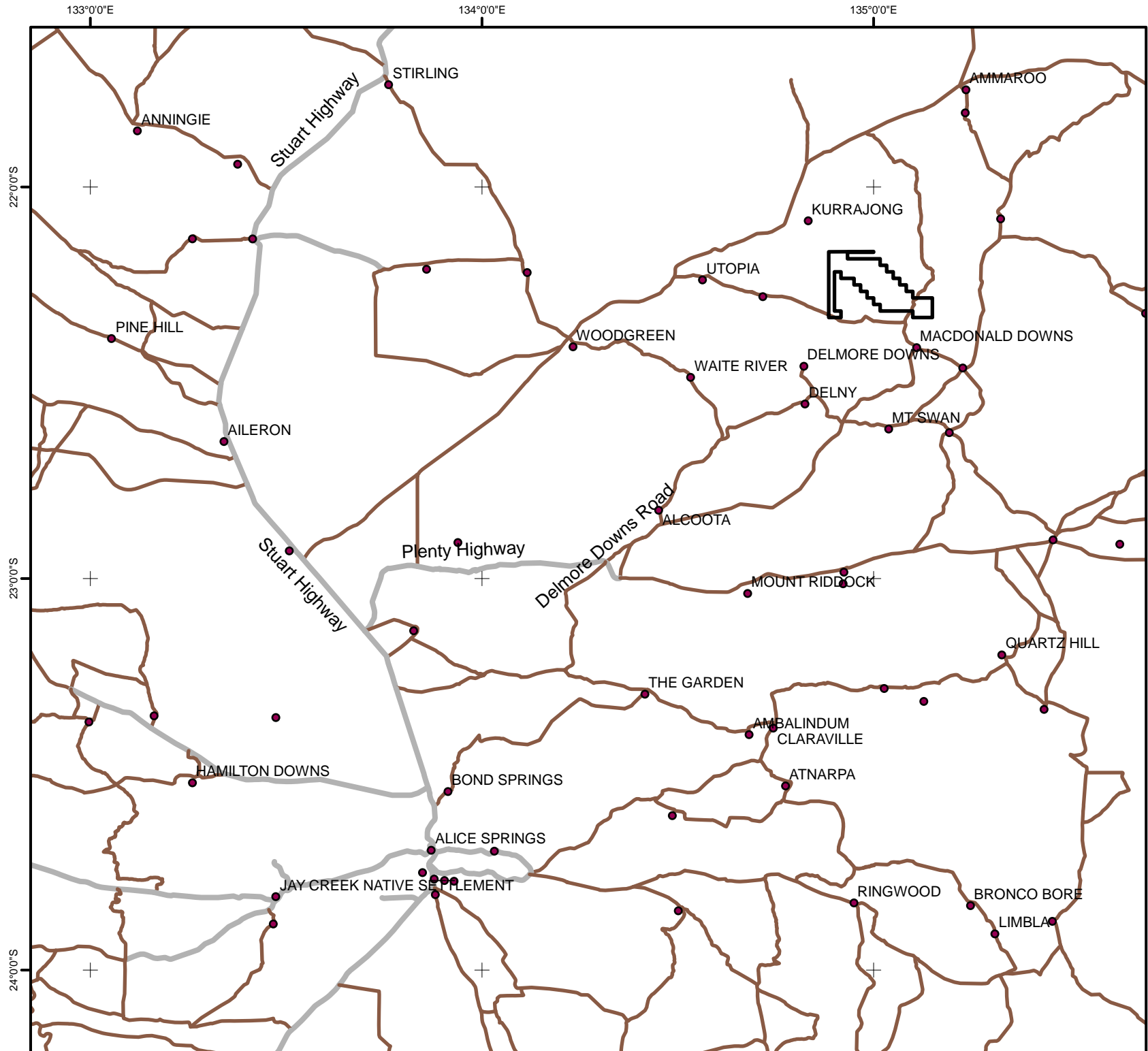
**EL23390
BARROW CREEK**

Date: 12/01/09

Author: BW

Figure: 1

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Barrow Creek\EL23390\EL23390_final_surrender.mxd



133°0'0"E 134°0'0"E 135°0'0"E

22°0'0"S

23°0'0"S

24°0'0"S

Legend

- Tenement boundary
- Population centres
- Unpaved roads
- Paved roads

GDA94

1:200 000

0 30 60

Kilometres

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**EL23390
Barrow Creek
Location Plan**

Date: 29/04/09	Author: BW	Figure: 2
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4. GEOLOGY

4.1. Regional Geology

The oldest units exposed in the region are extensively deformed Early Proterozoic metamorphic and igneous rocks of the Arunta Inlier and Hatches Creek Group of the Davenport Province.

The Late Proterozoic to Palaeozoic unmetamorphosed sequence of the Georgina Basin rests unconformably on the Early Proterozoic basement and is essentially flat-lying except at places where it is faulted and drag folded adjacent to larger faults. The Georgina Basin is one of several sedimentary basins that developed during the Late Proterozoic in central Australia. The southwestern extremities of the Georgina Basin are exposed in the eastern portion of the Barrow Creek 1: 250,000 geological map sheet.

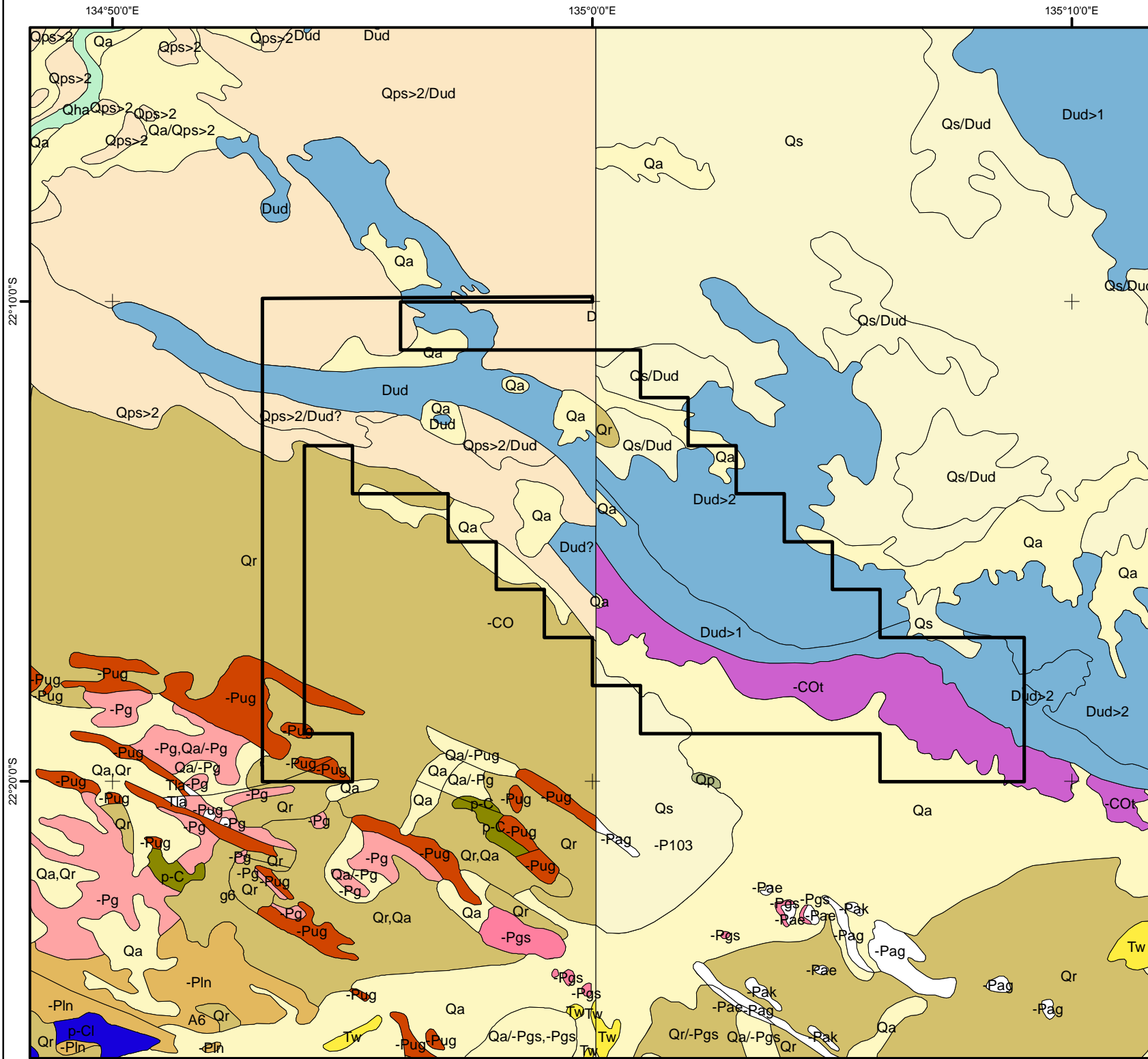
The absence of a Carboniferous to Tertiary geological record in the Barrow Creek area suggests that the region remained tectonically inactive and the major geological process was predominantly erosional. During the Cainozoic, mild movements along pre-existing major faults resulted in the formation of small basins containing up to two hundred metres (200m) of non-marine sediments. Deep weathering has produced silcrete and ferricrete profiles in the region. Lowland areas are blanketed by the skeletal Quaternary cover of soil, sand and gravel (Haines, Bagas, Wyche, Simons and Morris, 1991).














4.2. Local Geology

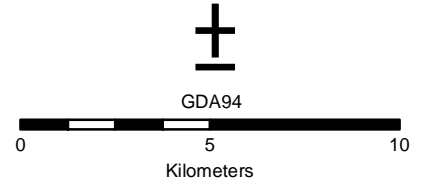
The geological description of the formations given below has been derived from Haines, et al. (1991) and Freeman (1986).

The exposed pre Cainozoic geology within the tenement consists of units from the Tomahawk Beds and the Dulcie Sandstone.

The Tomahawk Beds are of Late Cambrian to Early Ordovician age, and consist of a sequence of sandstone, siltstone, dolostone and limestone. The sandstones are well sorted, fine to medium grained quartz arenites with minor greywacke. Most of the Tomahawk Beds were deposited under open marine, well circulated, intertidal to subtidal environments, however, the presence of glauconite in units near the base of the formation suggest their deposition in restricted marine conditions. Fossils are common, including trilobites, molluscs, brachiopods, gastropods and conodonts. The Tomahawk Beds rest disconformably over the Arrinthrunga Formation and are disconformably overlain by the Devonian Dulcie Sandstone.



- Legend**
-  Tenement boundary
 -  -Pg Granite
 -  -Pug White and grey quartz feldspar sandstone
 -  Dud Cross bedded sandstone; minor pebble conglomerate
 -  Qa Alluvium, eluvium, colluvium, soil, scree
 -  Qps>2 Pale brownish, yellow quartz sand; aeolian dunes
 -  Qr Red clayey soil and sand
 -  p-C Gneiss; minor schist
 -  -COt Quartz sandstone; quartz arenaceous limestone and dolostone
 -  Dud>1 Quartz arenite, fine to medium grained
 -  Dud>2 Quartz arenite, medium grained, thin to medium bedded
 -  Qp Grey clay soil: in flood out areas and playas
 -  Qs Sheet and dune sand; sandy soil



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**EL23390
Barrow Creek
Geology**

Date: 29/04/09	Author: BW	Figure: 3
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The Dulcie Sandstone, of Devonian age, lies unconformably over the Tomahawk Beds. The sandstone consists of prominently cross-bedded, fine to medium grained, medium to very thick-bedded quartzarenite, with rare beds of orthoconglomerate and calcareous silty quartz sandstone. The unit was formed under predominantly lacustrine conditions, and the upper part of the formation has been characterised as aeolian in nature.

The formation has been divided into two facies, identified as Dud₁ and Dud₂, where Dud₁ is less resistant to weathering and outcrops as thinner beds separated by more weathered rock while the upper Dud₂ unit is more resistant, and consists of thicker beds that produce escarpments up to fifty metres (50m) high. Dud₁ is thought to be principally clay cemented, while Dud₂ may be silica cemented

Quaternary Aeolian sand plains and dunes cover a large part of the tenement and are up to twenty metres (20m) thick. The Quaternary units form only a superficial veneer and none are believed to be present in any great thickness.

5. EXPLORATION

A preliminary data review was conducted during 2003 to catalogue previous exploration work conducted in the area.

In 2006, ground reconnaissance mapping was conducted across the tenement. High uranium and potassium anomalism has been reported within the Tomahawk Beds and granitic rocks to the south. These anomalous units were visited and loose rock samples collected for assay.

In 2007, staff changes triggered a second review of historical data, in order to familiarise new staff with the Barrow Creek project area.

6. CONCLUSIONS

Exploration on this tenement was limited, results from the few grab samples taken were not encouraging. The tenement is not considered to have a high prospectivity for base metals or uranium, as such, no extension was sought on the exploration licence, and the tenement was allowed to expire at the 6th anniversary.



7. BIBLIOGRAPHY

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