

**EL 24007**

**PARTIAL RELINQUISHMENT REPORT**

for period ending

**October 7, 2009**

**1:250,000 map sheet: SE53-14 Tennant Creek**

**Licensee: Red Metal Limited**

G. McKay

Red Metal Limited

4 January 2010

## TENEMENT REPORT INDEX

HOLDER / OPERATOR: Red Metal Limited

TENEMENT: EL 24007

REPORTING PERIOD: October 8, 2004 to October 7, 2009

AUTHOR: G. McKay

STATE: NT

LATITUDE: 134° 44' to 134° 51'

LONGITUDE: -19° 26' to -19° 31'

1:250,000 SHEET: Tennant Creek SE53-14

1:100,000 SHEET: Barkly 5859

MINERAL PROVINCE: Tennant Creek Inlier

COMMODITIES: Cu Au

KEYWORDS: Gravity survey, RC-diamond drilling

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## List of Digital Files

EL24007 Partial Relinquishment Report 2009.pdf (This report)
EL 24007 Gravity data relinquished 2009.txt

## **SUMMARY**

EL 24007 was acquired to investigate magnetic anomalies west of Tennant Creek within the Palaeoproterozoic basement rocks with potential for ironstone associated gold-copper-bismuth mineralisation.

The work carried out on the relinquished portion of EL 24012 included a gravity survey comprising 718 stations at 100m intervals on 400m spaced lines.

Two RC-diamond holes totalling 508 metres on combined gravity/magnetic anomalies were completed.

## 1.0 INTRODUCTION

This report summarises exploration activities undertaken over the relinquished portion of Exploration Licence 24007 to October 7, 2009.

## 2.0 LOCATION AND LAND USE

EL 24007 is located 65 km northeast of Tennant Creek. Access is via unsealed roads and tracks within a pastoral lease. The tenement area has generally low relief, with the dominant historical and current land use being cattle grazing.

## 3.0 TENEMENT STATUS

EL 24007 was granted to Red Metal Limited on 8 October 2004 over 31 blocks for a period of six years. It covers vacant crown land under native title claim.

Details of EL 24007 are shown in Table 1. Location of the tenement is shown in Figure 1.

**Table 1: Tenement Details**

TENEMENT	HOLDER	GRANTED	EXPIRY	Blocks Relinquished October 2009
EL 24007	Red Metal Limited	October 8, 2004	October 7, 2010	16

## 3.0 TENEMENT GEOLOGY

The tenement covers an area of thin Cainozoic cover overlying Middle Cambrian Gum Ridge Formation (chert, limestone, calcimudstone). Palaeoproterozoic basement units are considered to be the source of the magnetic and gravity anomalies and the potential host to ironstone associated gold-copper-bismuth mineralisation.

## 4.0 HISTORICAL EXPLORATION

Licence	Years	Company	Reports
EL 4251	1983-89	AOG Minerals	CR1985-0038; CR1986-0068
EL 4254	1983-89	Ashton Mining	CR1985-0039; CR1986-0070
EL 4258	1983-89	Aust Diamond Expl	CR1985-0006; CR1986-0075

## 5.0 EXPLORATION PROGRAM

In 2005, Red Metal Limited conducted a regional gravity survey to rank the magnetic targets and define low magnetic gravity anomalies related to hematitic ironstones. Stations were at 100m intervals on 400m spaced lines.

In 2006, two RC-diamond holes for 508 metres were completed to test gravity/magnetic anomalies.

**Table 2: Drillhole Summary**

EL	HOLE	Start Date	Completion Date	MGA52_E	MGA52_N	AZIM	DIP	Depth
24007	RMTCK03	30/09/2006	2/10/2006	478270	7846032		Vertical	255.7
24007	RMTCK04	28/09/2006	29/09/2006	478050	7846475		Vertical	252.5

## 6.0 CONCLUSIONS

EL 24007 was acquired to investigate airborne magnetic features under shallow cover east of Tennant Creek targeting both magnetite or hematite associated copper-gold mineralisation.

A gravity survey was conducted to rank the magnetic targets and define low magnetic gravity anomalies related to hematitic ironstones.

Two RC-diamond holes were completed in the relinquished area. Calcite-chlorite veins with trace sulphides and specular hematite was observed. No ironstones typical of the Tennant Creek mineral field were intersected.

## 7.0 References/Bibliography

Donnellan, R S., *et al*, 1999 Tennant Creek SE 53-14 Geological Map and Explanatory Notes. *Northern Territory Geological Survey*.

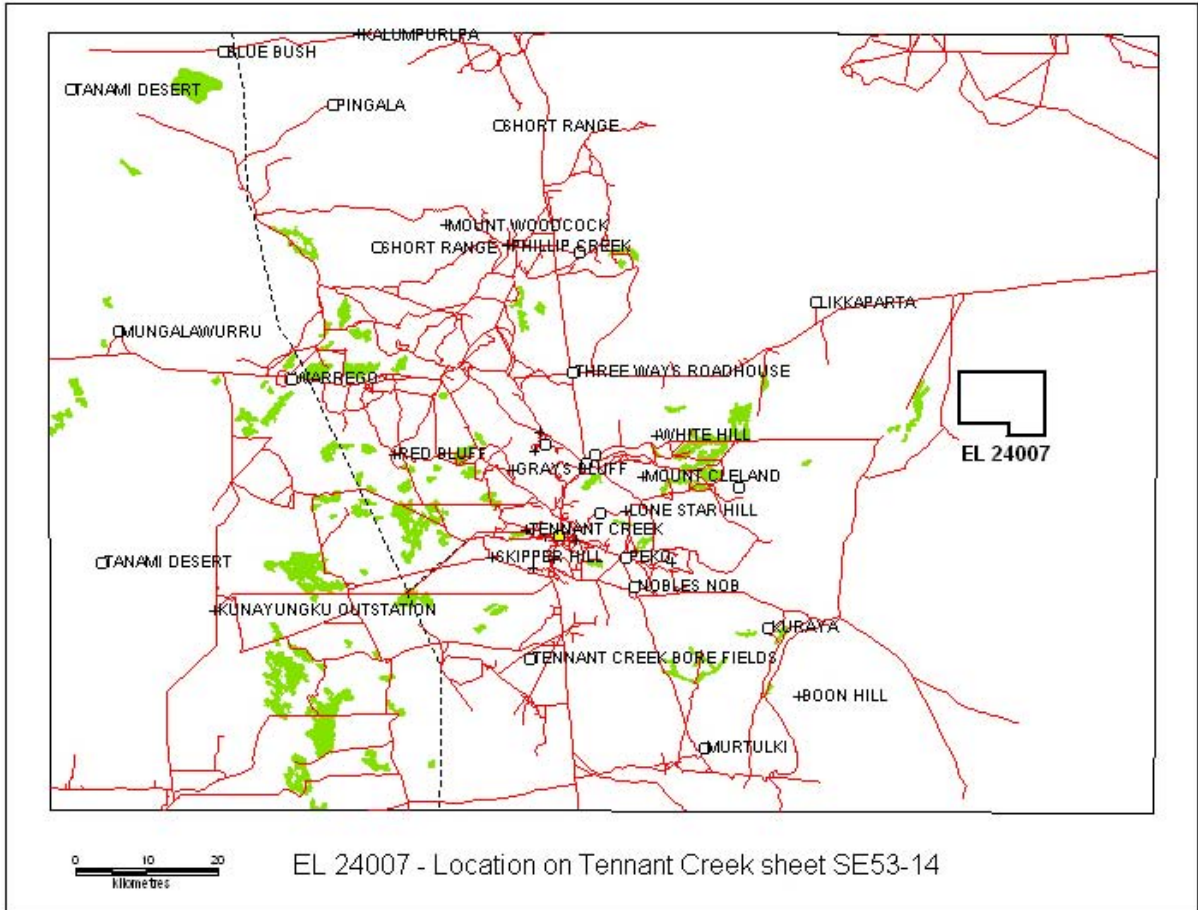


Figure 1

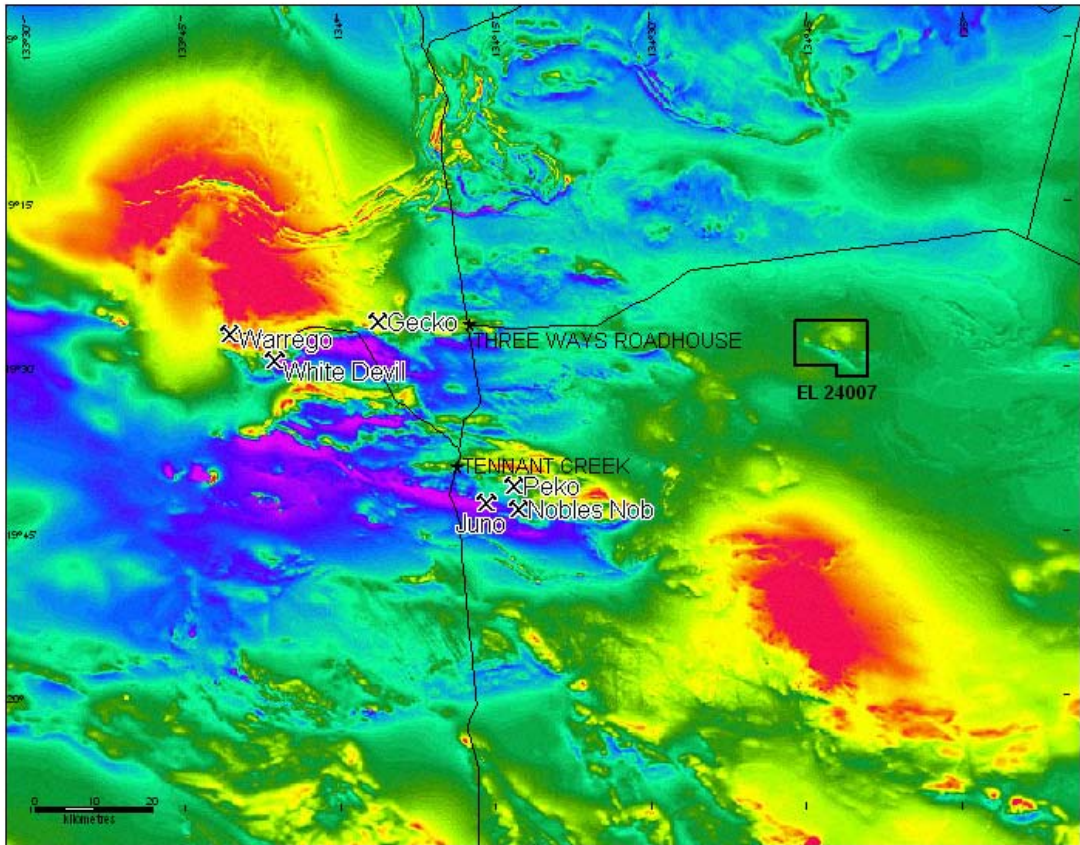


Figure 2: EL 24007 on regional TMI image



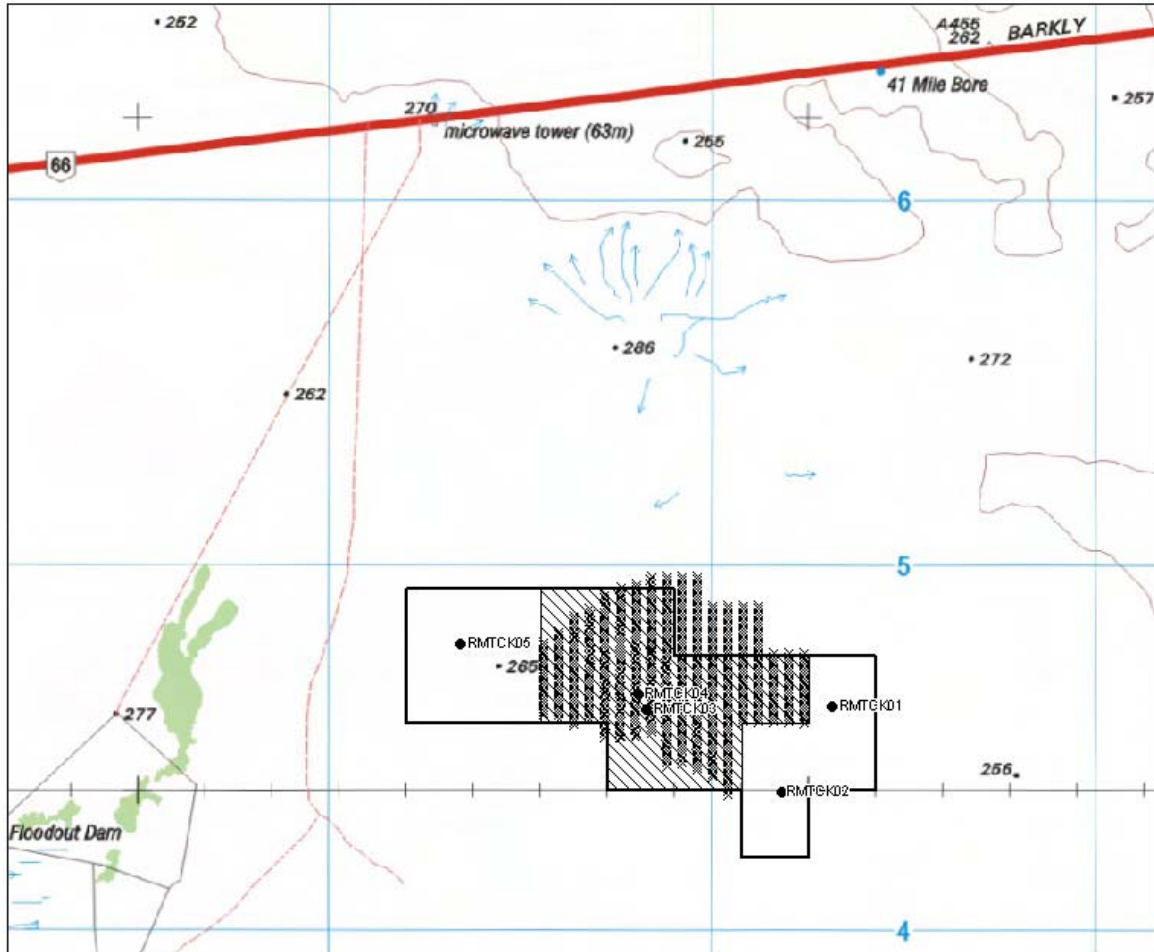


Figure 3  
 EL 24007 relinquished area hatched  
 with 2006 drillhole locations  
 and 2005 gravity stations

## APPENDIX: DRILL LOG SUMMARIES

Tennant Creek 2006 Drilling Programme: Drillhole Summaries EL 24007

### **Drill Hole RMTCK03**

#### **Cover Sequence**

0-6m	Aeolian sand cover
6-18m	Khaki sandy to gritty claystone
18-35m	Chert, quartzitic fragments and clay
35-54m	Weathered felsic volcanics with porphyry textures
54-185m	Red-brown felsic volcanic with some porphyry and possible fragmental textures. End of RC percussion section
185-255.7m	Diamond core. Includes lapilli tuff horizons. [Lithological logging pending]

#### **Description**

The only recorded mineralisation within the percussion section of this hole comprises trace chalcopyrite as paint on a fragment of laminated sericite-chlorite-calcite veinlet recorded within interval 166-168m.

The volcanics are weakly overprinted with sericite-chlorite alteration and host to minor calcite +/- chlorite +/- sericite +/- trace fluorite +/- trace hematite veinlets. Minor quartz-feldspar-chlorite and feldspar-sericite veinlets were also recorded.

Magnetite and hematite occur throughout as trace disseminations.

The diamond core section of this hole is characterized by iron oxide stained chlorite and carbonate coated fractures, occasionally with trace pyrite > chalcopyrite. Rarely, the trace pyrite occurrences are associated with specular hematite. Pyrite associated with this fracture controlled style of mineralization is most prevalent within the interval 234.65-254.8m.

Chalcopyrite occurs locally as trace occurrences on fractures within the interval 215-225.25m where it is occasionally associated with chlorite and hematite stained calcite.

Vein fill mostly comprises a calcite-chlorite assemblage with rare trace sulphides and specular hematite. The veining is occasionally laminated and is frequently stained with hematitic iron oxide. Breccia veining is not common and within the interval 211.5-211.7m is characterized by a matrix of pink calcite and selvedge alteration of chlorite-hematite.

Quartz-chlorite dominated veining is rare and at 242.7m an occurrence is associated with calcite and disseminated specular hematite and selvedge bleaching. Talc-carbonate veining was also rarely recorded.

A feature of the contact of lapilli tuff horizon at 242m is the minor replacement of fragments with specular hematite.

## **Drill Hole RMTCK04**

### **Cover Sequence**

0-3m	Aeolian sand
3-38m	Variably ferruginous chert and clay
38-41m	Saprolite /clay

### **Basement Volcanics**

41-59m	Weathered, well fractured fine grained felsic volcanic
59-184m	Felsic volcanics with some porphyry textures and including fragmentals. End of RC Percussion section.
184-252.5	Diamond core [Lithological logging pending]

### **Description**

The basement volcanics have a weak sericite and chlorite alteration overprint and trace carbonate veining was recorded over the logged interval.

Pyrite in trace amounts was recorded within the interval 102-122m and trace visible magnetite +/- pyrite in altered percussion chips occurs within interval 142-154m. Trace hematite on fractures was recorded within the interval 122-142m.

Incomplete observations within the diamond core section of this drill hole shows local trace pyrite associated with occasionally laminated chlorite-calcite veinlets. Some of these vein occurrences have slickensided marginal breaks. Trace fracture controlled chalcopyrite was recorded at 196.05m