

# Kentor Minerals (NT) Pty. Ltd.

(a wholly owned subsidiary of KGL Resources)

## EL28340 – BUSHY PARK

### *Block Relinquishment Report*

*August 2017*

Project Name: Yambah  
Map Sheets: Alice Springs SF5314, 1:250,000  
Commodities: Copper, Silver, Lead, Zinc, Gold  
Licensee: Kentor Minerals (NT)  
Author: R. Lennartz  
Date: August 2017

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## **SUMMARY**

Kentor Minerals (NT) acquired the Yambah Project (EL28340) from Mithril Resources in April 2015. The project lies within the Aileron Province of the Arunta Region. Outcropping basement geology is comprised of the Palaeoproterozoic (1.8–1.7 Ga) Strangways Metamorphic Complex (SMC) and mafic intrusives. Known base-metal occurrences (Cu-Zn-Pb±Ag±Au) are stratabound and have largely experienced the same metamorphic history as their host rocks of the SMC. Numerous companies and individuals have explored in the general area covered by the Yambah Project for metamorphosed polymetallic (Cu-Pb-Zn-Ag-Au) massive sulfide deposits. KGL acquired the project because of similarities between the sedimentary packages and mineralisation at the Kentor Minerals (NT) Jervois polymetallic project and Yambah.

A literature review and data compilation was conducted to supplement information provided by Mithril. The data was compiled in a GIS platform and interpreted to generate priority targets for field inspection.

On 3 July 2017, 27 blocks were relinquished from EL28340 with the key areas of the tenement retained blocks were relinquished that were deemed to be of limited exploration potential.

### 1.0 INTRODUCTION

In April 2015 Kentor Minerals (NT) a wholly owned subsidiary of Brisbane based KGL Resources acquired Bushy Park (EL28340) from Mithril Resources. These tenement formerly comprised part of Mithril’s Yambah Project. The tenements are located to the north and north east of Alice Springs, as shown in Figure 1.

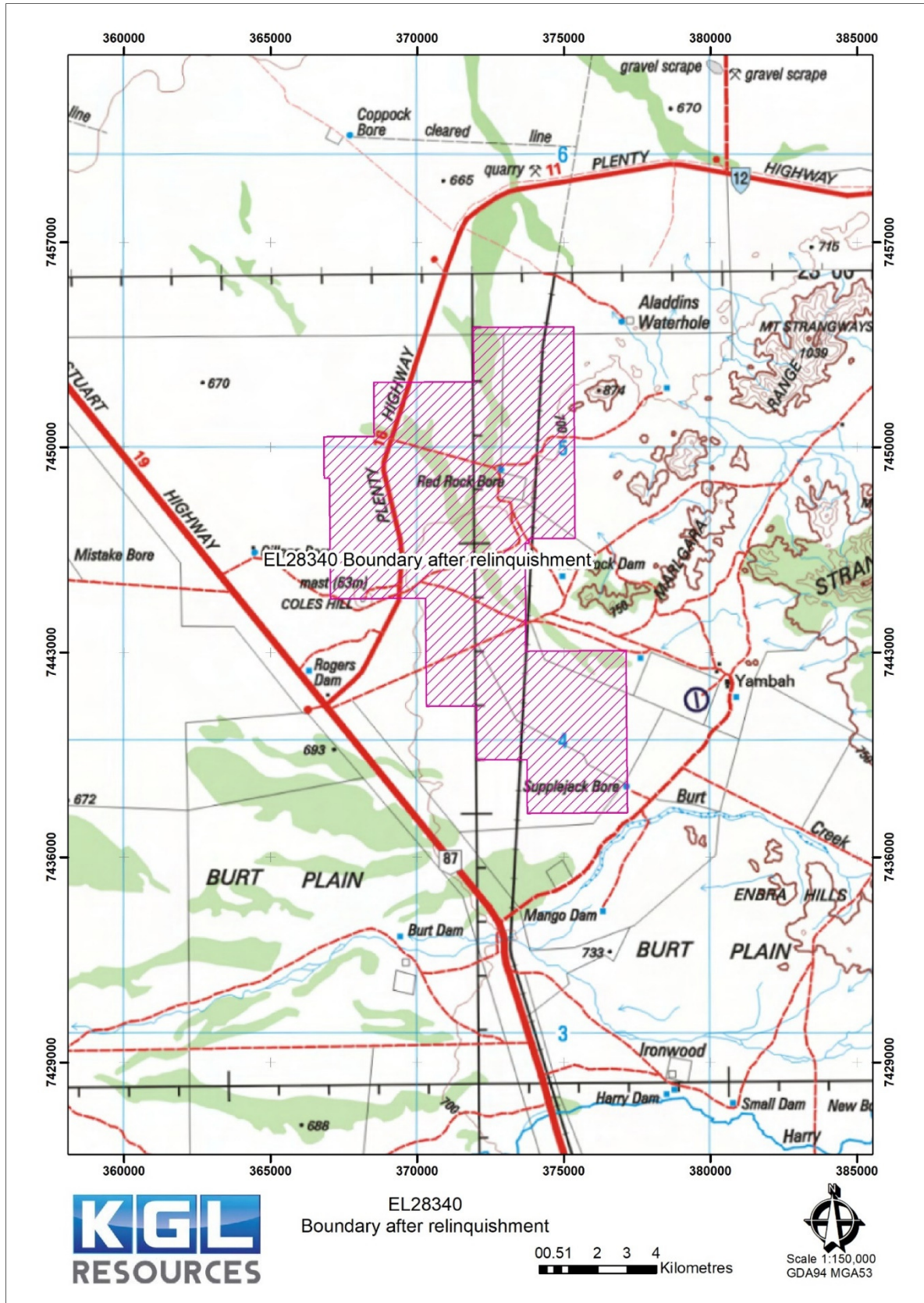


Figure 1. EL28340 Location Plan

## 2.0 LOCATION and ACCESS

Access to the tenements is via the Stuart and Plenty Highways, the Arltunga Tourist Drive and good station-tracks. The terrain varies from grassy and scrubby flats and plains to rugged hills rising some 300m above the surrounding plains, most of which cannot be traversed by vehicle. The tenements cover parts of the Yambah, Bond Springs and Garden pastoral stations

## 3.0 RELINQUISHMENT AREA

EL 28340 was originally granted on 4/7/2011 and consists of 27 blocks (97 sq. km) after a relinquishment of 31 blocks on renewal on 3 July 2017 as shown in Figure 2.

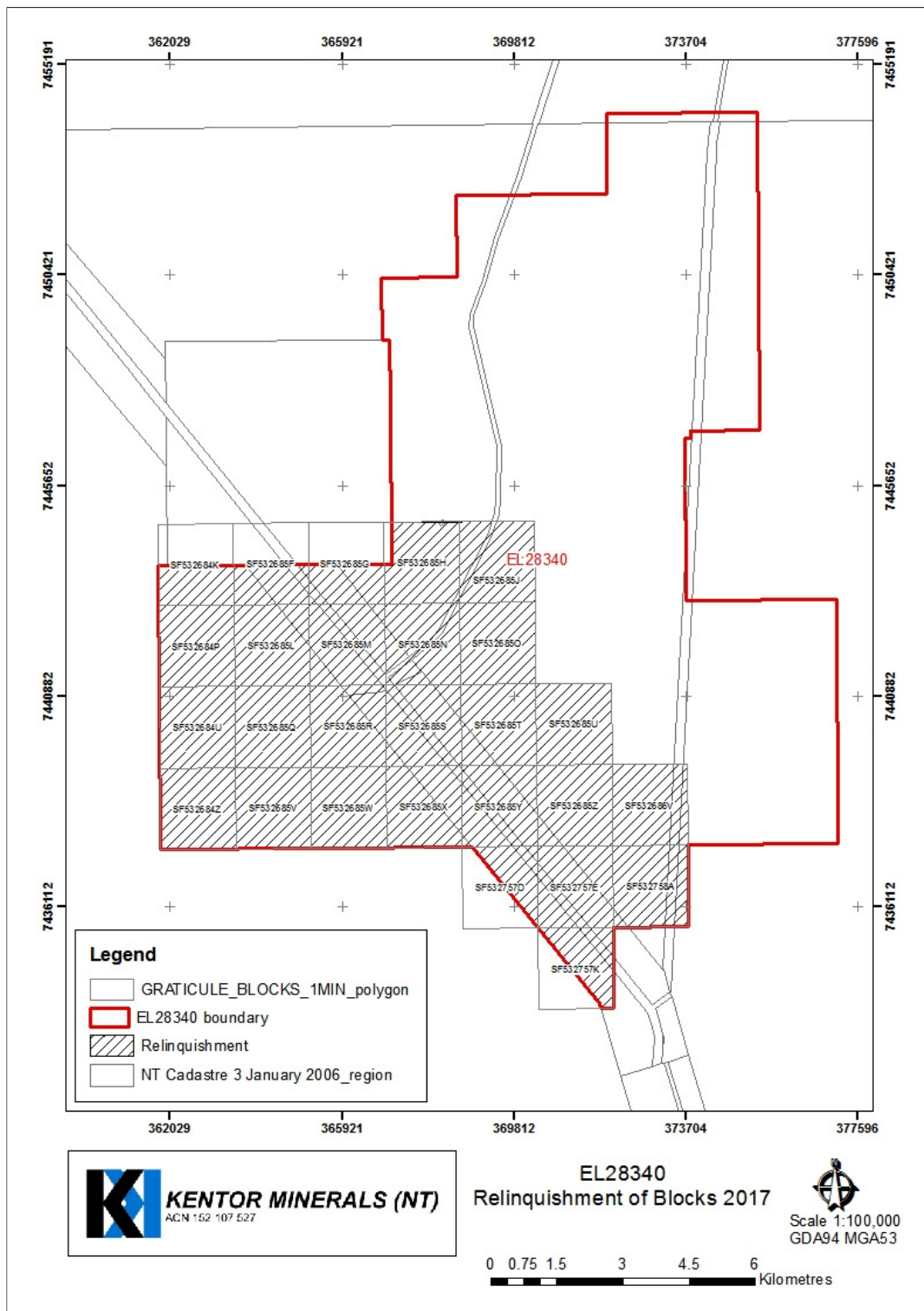


Figure 1. EL28340 Relinquished blocks

## 4.0 GEOLOGY

The Yambah Project lies within the Aileron Province of the Arunta Region. Outcropping and interpreted basement geology is comprised of the Palaeoproterozoic (1.8–1.7 Ga) Strangways Metamorphic Complex (SMC) and mafic intrusives. The SMC consists of felsic and mafic granulites, orthogneiss, paragneiss, minor calc silicates, iron formations, and granitoids. Retrograde schists and mylonites are found in high-strain zones formed during the Palaeozoic Alice Springs Orogeny. Quaternary aeolian sands, alluvium, and calcrete generally cover low-lying areas and plains.

Known base-metal occurrences (Cu-Zn-Pb±Ag±Au) are stratabound and have largely experienced the same metamorphic history as their host rocks of the SMC. The protoliths to the host rocks are mostly considered to have been volcanics and there is evidence that the mineralisation was syngenetic (Hussey *et al.*, 2006). Details of the known mineralisation can be found in Hussey *et al.* (2006).

Surface expressions of mineralisation vary from localised copper-carbonate coatings on joint surfaces to lode-horizons (±alteration) 1-20m thick with a strike length of a kilometre or more (e.g., Rankins, Red Rock Bore). Mineralisation intersected in drill holes at Red Rock Bore occurs as sulphides in veins and disseminations (Hussey *et al.*, 2006).

## 5.0 PREVIOUS EXPLORATION

Numerous companies and individuals have explored in the general area covered by the Yambah Project. Previous exploration has been undertaken for metamorphosed polymetallic (Cu-Pb-Zn-Ag-Au) massive sulfide deposits, while more recently, the potential for iron oxide copper gold (IOCG) mineralisation in the area has been recognised. The following summary is taken from the Mithril Resources 2014 Annual Report for the Yambah Project (Mizow, D. 2014).

### 5.1 Bushy Park EL28340

- Mid 1960s: Northern Territory Mines Branch drilled three diamond holes into the Coles Hill Prospect. Disseminated Zn-Pb-Cu mineralisation was intersected.
- Mid 1970s: Planet Mining NL targeted the Coles Hill Prospect with geo-chemical surveys, costeaning, a ground magnetic survey and an Induced Polarisation survey.
- 1988: McMahon Construction completed a ground electromagnetic survey of the Coles Hill Prospect. Weak anomalies were defined. Some were tested with costeaning only.
- 1995-1997: Roebuck Resources and Pasmaenco Exploration completed lag/ soil (MMI)/ stream sediment sampling and RAB drilling. 28 drill holes were drilled into the Coles Hill Prospect, including 2 diamond holes. Sub-economic Zn-Pb-Ag mineralisation was intersected over 1km of strike.
- 2002: Teck / BHP conducted a single line of Ground EM over a discrete magnetic anomaly north of the Coles Hill Prospect. A potential basement conductor was detected at the southern margin of this magnetic anomaly.
- 2011-2014: Mithril conducted data compilation and acquired Aster data. Ground magnetic data was acquired at the Red Rock Bore prospect which was followed by an orientation soil sampling program. Four RC holes (YBRC006-10) were drilled to test the western extension of the Red Rock Bore prospect.

## **6.0 WORK DONE DURING THE YEAR**

The Yambah project was acquired from Mithril Resources because of similarities between the sedimentary packages and mineralisation at KGL's Jervois polymetallic project and Yambah. Work by the NTGS has correlated the Bonya Metamorphics at Jervois with the Strangways Metamorphic Complex at Yambah. The Strangways Metamorphics is at a higher metamorphic grade but otherwise resembles the metamorphosed siltstones, sandstones and limestone at Jervois. Recent research by CSIRO and the NTGS has determined that Jervois is a hybrid SEDEX-VMS system. This suggests that Jervois has similarities with the base-metal prospects at Yambah that have been described as lead-zinc VMS.

KGLs exploration rationale is to explore for hybrid SEDEX-VMS mineralisation at Yambah using techniques that have been developed and proven successful at Jervois. The research at Jervois has improved the understanding of the geological and structural setting of Jervois and the alteration patterns that can be directly applied to exploration at Yambah.

### **6.1 Data Compilation**

A literature review and data compilation continued during the year to supplement information provided by Mithril. The data was added to the existing GIS platform and interpreted to generate priority targets for field inspection.

Topographic information is available in the public domain and 1:250,000/ 1:100,000 scale geological mapping and mineral occurrence data is available from the NT Geological Survey. Historic company reports are available on GEMIS the NTGS digital library.

### **6.2 EL28340 (Bushy Park)**

Field reconnaissance work was undertaken during the reporting period to inspect the key prospects and mineral occurrences on EL28340 (*labeled incorrectly in Figure 1 as EL28175*) and to introduce the holding to key KGL personnel. The main prospect is Red Rock Bore that was formerly called the Coles Hill prospect where drilling has previously taken place by Pasminco.

Mineralisation is hosted by magnetite quartzite that has a strike length of over 1km. The best intersection was 13.35m @ 3.3% Zn, 0.5% Pb from 131m in hole RRK031 including 1m @ 13.6% Zn from 132.3m.

A low rubbly ridge of siliceous rock marks the location of the prospect. Evidence of previous drilling programs and trenching can still be seen at the site.

## **7.0 WORK PLANNED**

The exploration program planned for the area retained on EL28340 at the Yambah project is as follows:

- Continue and expand detailed mapping of the main prospects and reconnaissance level mapping of the entire tenement.
- Further rock chip sampling of new occurrences discovered during mapping.
- Regional and prospect scale soil and stream sediment sampling.
- Possible geophysical survey of prioritized areas identified from office and field studies.

The area relinquished from EL28340 was very sparsely traversed and could offer further potential for mineralization, however, based on the limited exploration of the area, it was determined that exploration should be prioritized on areas of greater potential for mineralisation.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

Initial compilation and interpretation of previous exploration data and fieldwork suggests the Yambah project is prospective for hybrid sediment-hosted/ VMS style mineralization similar to mineralization at KGLs Jervois project. The main difference is the grade of the metamorphism which is high at Yambah (granulite-amphibolite) and upper greenschist to amphibolite grade at Jervois.

Further work is planned at the main prospect areas applying knowledge gained from exploration at Jervois. Additional reconnaissance exploration will be conducted with a focus on data compilation, stream sediment sampling, soil sampling and geological mapping.

## **9.0 REFERENCES**

- Mizow, D. 2014. Yambah Project Year 4 Annual Report. Mithril Resources unpublished company report.
- Skrzeczynski, R., 1987. 1986 Annual Report and Final Report on Exploration Licence 4723, Ankala, Northern Territory. BHP Minerals unpublished company report. Northern Territory Geological Survey, Report CR87/73.
- Walters, S.G. and Bunting, F., 1986. Annual Report, Exploration Licence 4723, Ankala, Northern Territory. BHP Minerals unpublished company report. Northern Territory Geological Survey, Report CR86/139.