



**MITHRIL**  
**RESOURCES LTD**

**EL 28471 – COGGAN BORE**

**YEAR 2 ANNUAL REPORT**

**For the Period**

**27 July 2012 to 26 July 2013**

**Compiled By**

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MAP REFERENCE: Illogwa Creek 250K - Sheet SF53/15

Target Commodities: Nickel and Copper

Report submitted on: 12 September 2013

All data provided is of GDA94 Datum, Zone 53.

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## **SUMMARY**

This report presents work completed during the second year of tenure on the Coggan Bore Tenement (EL 28471), granted to Mithril Resources Ltd (Mithril) on 27 July 2011.

EL 28471 is centred approximately 165 km northeast of Alice Springs. The tenement area has been held by numerous other companies who have explored for gold, base metals, industrial minerals and Uranium.

Mithril first applied for the ground with a view to explore for Nickel sulphide deposits whilst remaining open minded to opportunities provided by other commodities.

Work completed during the reporting period included:

- Helicopter assisted stream sediment sampling – 20 samples.
- Re-assay of pulps – 2 samples
- Review of all Mithrils historic data by MMG

This work identified a number of moderate Ni targets that will be followed up on the ground in the next reporting period with this work consisting of ground truthing geochemical anomalies and possible ground geophysics to delineate drill targets.

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## APPENDICES

**Appendix 1:** Surface sample locations and geochemical data  
Digital file: E28471\_2013\_A\_02\_SurfaceGeochem.txt

**Appendix 2:** Surface sample QAQC geochemical data  
Digital file: EL28471\_2013\_A\_03\_QAQCGeochem.txt

**Appendix 3:** File listing information  
Digital file: EL28471\_2013\_A\_04\_FileListing.txt

## 1.0 INTRODUCTION

This report presents work completed on the Coggan Bore Tenement (EL 28471) by Mithril for the second reporting year, ending 26 July 2013.

EL 28471 is located approximately 165 km northeast of Alice Springs (Figure 1). The tenement can be accessed from the north via the Plenty Highway and station tracks or the east via the Ross Highway and station tracks. Station tracks provide for reasonable access to much of the tenement area.

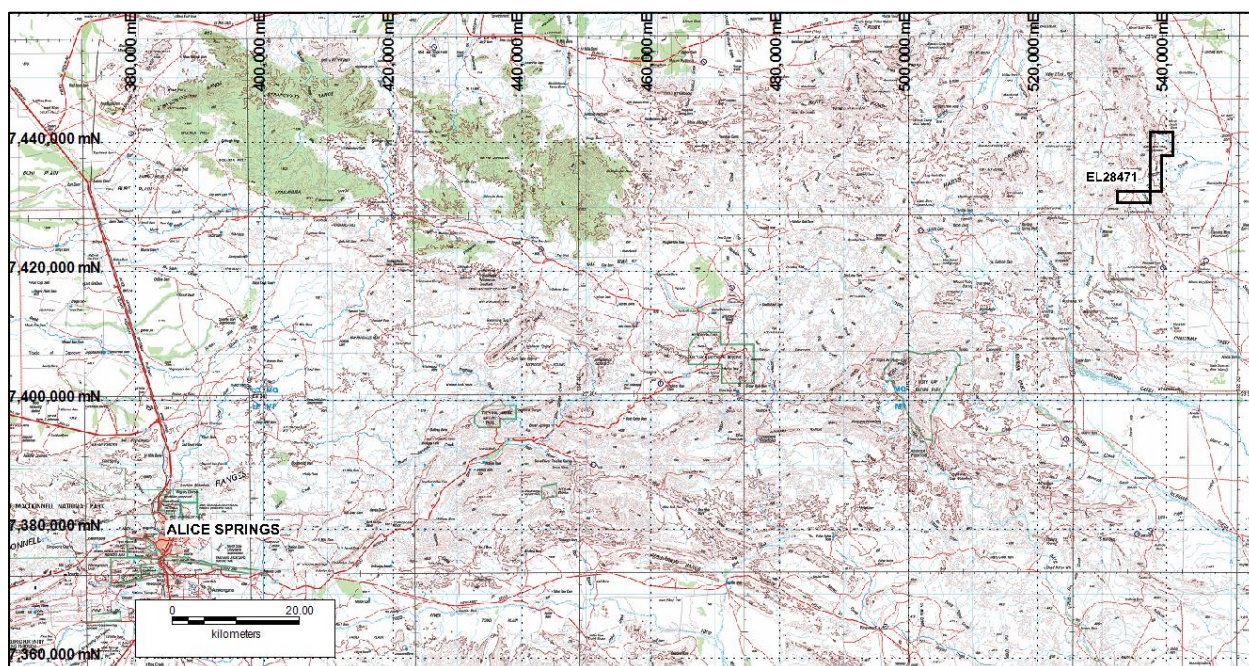


Figure 1: Location of EL 28471 (Coggan Bore).

Mithril initially targeted the area for Ni-Cu-PGE sulphide deposits associated with mafic and ultramafic magmatic rocks. This style of mineralisation has been identified on adjacent tenements. However, recent exploration on the adjacent licence (EL 26942) has identified significant sulphide hosted Cu-Co mineralisation at the Basil Prospect.

## 2.0 TENURE

Mithril Resources Limited (ACN 099 883 922) was granted exploration license EL 28471 for a six year period due to expire 27 July 2017.

Table 1: EL 28471 (Coggan Bore) tenure.

Project	Tenement Name	Tenement No	Application Date	Grant Blocks	Area (km <sup>2</sup> )	Grant Date	Grant Period
Huckitta	Coggan Bore	28471	24/11/2010	10	32	27/07/2011	6 years

### **3.0 GEOLOGY**

#### **3.1 Regional Geology**

EL 28471 lies within the Proterozoic Irindina Province of the south-eastern Arunta Inlier.

The Irindina Province comprises the Harts Range Group, a volcano-sedimentary succession that was metamorphosed to granulite facies during the Ordovician Larapinta Event (475-460 Ma).

#### **3.2 Project Geology**

EL 28471 contains approximately 75% outcrop/subcrop with recent cover from colluvial sand and gravel (Figure 2).

Where outcrop is available the dominant stratigraphic units are the Brady Gneiss, Entia Gneiss and the Inkamulla Granodiorite.

The area has been subjected to intense deformation and metamorphism (as outlined in regional geology above).

The area is considered prospective for;

- Ni-Cu-PGE mineralisation associated with mafic and ultramafic intrusions
- “Basil type” Cu-Co semi-massive sulphides
- Vein-style REE-Th mineralisation
- Uranium mineralisation
- Vein style gold mineralisation

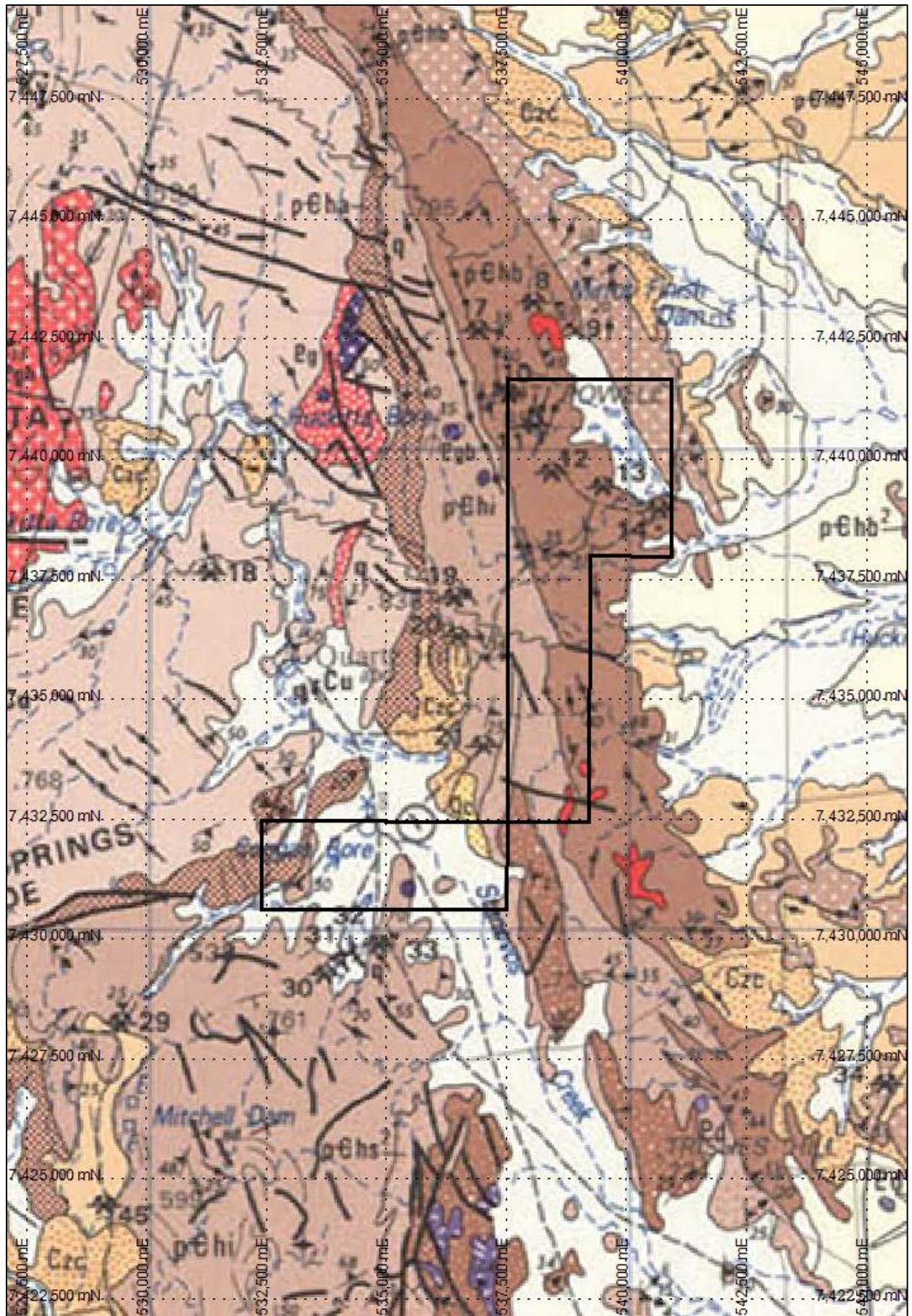


Figure 2: Geology of EL 28471 (from published geology map sheet – Illogwa Creek 250K).

#### **4.0 HISTORICAL EXPLORATION WORK COMPLETED**

Few companies and individuals have explored in the general area covered by EL 28471.

##### **4.1 Mithril work completed during 2011 – 2012**

Work completed during this period included

- Float and rock chip samples.
- VTEM Survey

Comprehensive details of all work completed is included in previous annual reports.

#### **5.0 WORK COMPLETED DURING THE REPORTING PERIOD**

For the reporting period in question, completed exploration programs included a reconnaissance surface geochemical sampling program and re-analysis of existing pulps from previous rock chip sampling.

##### **5.1 Surface Geochemical Sampling**

Aim of the surface geochemical survey was to identify the presence of coincident Ni-Cu-PGE anomalism that may represent magmatic nickel sulphide mineralisation. Due to the undulating topography and well incised valleys, stream sediment sampling was considered to be an effective targeting technique. In total, 20 stream sediment (SSed) samples were collected over the tenement over a 2 week period in August 2012 (Figure 3). Each sample involved in-field collection of 15kg of -1.56mm material. The fine fraction of each sample was analysed for trace element geochemistry. Unfortunately, none of the samples displayed any coincident Ni-Cu-PGE anomalism. A few samples displayed anomalous values of Ni. These anomalies are scheduled for follow-up but are ranked as a low priority. Without any coincident Cu and PGE anomalism, the Ni anomalism is interpreted to be sourced from known mafic rocks within and adjacent to the tenement. The heavy mineral concentrate of samples with anomalous Ni was picked for PGE and sulphide grains. None of the samples showed any signs of PGE or sulphide grains, consistent with their fine fraction results.

One of the methods of differentiating the different mafic suites in the project area is through lithochemistry – specifically REE and some trace elements. Previous rock samples collected on the project had been not been analysed for REE elements or did not have high resolution data for a number of key trace elements. In order to assist interpretations, 2 pre-existing pulps from rock chip samples were re-analysed for the required elements and REEs. Data from these samples has been included in this report (Appendix 2 and 3).

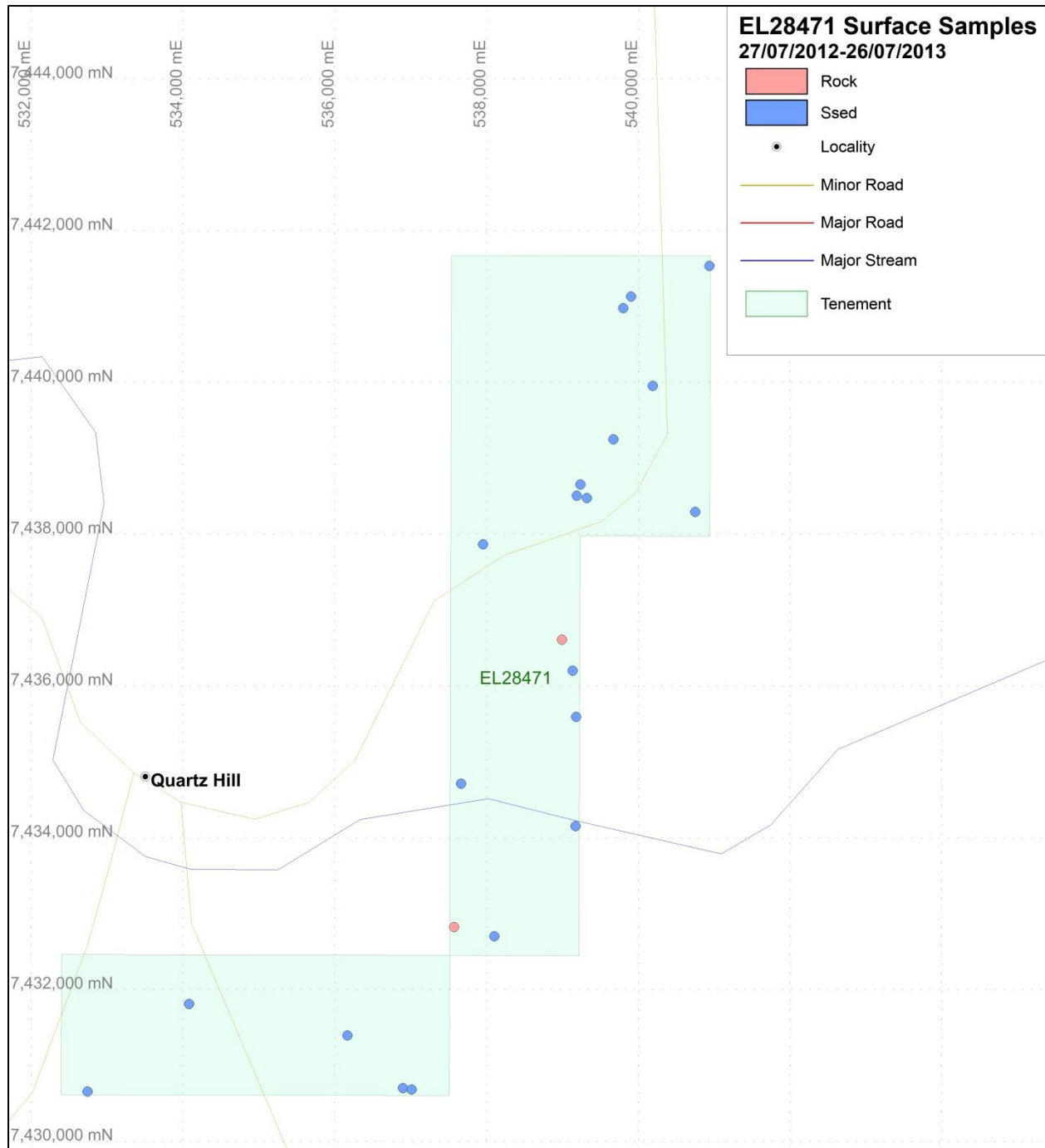


Figure 3: Surface sample locations on EL 28471.

## 6.0 CONCLUSIONS AND PLANNED WORK 2013-14

Due to the poor stream sediment results, much of the exploration focus has shifted elsewhere within the project area. However, the plan is to ground truth the moderate Ni anomalies encountered and validate that the anomalism is not related to mineralised mafic intrusives within the tenement. This work is planned for the end of the next reporting period.



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