

# **CopperOz Pty Ltd**

## **EL31421 DC West Project**

Partial Relinquishment report for the period:  
23 June 2017 to 22 June 2019

**Target Commodities: Rare Earth Elements, Uranium, Base Metals**

Fergusson River SD5212 (1:250,000)  
Jinduckin 5169 (1:100,000)

Prepared by CopperOz Pty Ltd  
22 August 2019

### **Abstract**

- EL31421 (Project) is located approximately 130km WNW of Katherine and 100km SW of Pine Creek.
- Previous exploration and mineral development activities in the Project area have highlighted base metal, uranium, REE and barite occurrences.
- A total of 14 sub-blocks were voluntarily relinquished from the Project during August 2019, leaving 11 sub-blocks.
- Work on the relinquished blocks was limited to reviews of previous exploration activities and publicly available remote sensing and geophysical datasets. This work suggested that the relinquished blocks have low potential to host economic mineralisation.

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## 1. Introduction

EL31421 (Project) is located approximately 130km WNW of Katherine and 100km SW of Pine Creek (Figure 1).

Access to the Project is via the Stuart Highway and various roads and tracks heading southwest from Ooloo Crossing. Most of the project area is characterised by subdued to hilly topography with sporadic rocky outcrops. Due to seasonal flooding of rivers, access to the Project is generally only possible in the dry season

The Project is located on Perpetual Crown Lease land.

All maps in this report are shown using the GDA94 datum using the Zone 52 projection.

## 2. Tenure

EL31421 was granted for a 6 year period commencing on 23 June 2017, and originally covered 25 sub-blocks as follows (Figure 2):

<b>BIM</b>	<b>Block</b>	<b>Sub-Blocks</b>
SD52	2005	B C G H J K N O P Q R S T U V W X Z
SD52	2006	L Q V
SD52	2077	B C H
SD52	2078	A

At the end of year 2, a total of 14 sub-blocks over areas lacking significant mineralisation potential were surrendered from EL31421, as follows:

<b>BIM</b>	<b>Block</b>	<b>Sub-Blocks surrendered</b>
SD52	2005	B C G K P Q U V Z
SD52	2006	L Q
SD52	2077	H
SD52	2078	A

As at 23 June 2019, EL31421 comprised 11 sub-blocks (Figure 2).

## 3. Geology

The general application area is cut by several NW-trending faults, including the Dorisvale Fault (Figure 3). This fault divides the geology into two main areas: the eastern part is mainly covered by the Daly River Basin sediments estimated as Cambrian to Ordovician age. The western part is largely covered by the Victoria Basin with Carpentarian intrusive bodies. These formations are partially covered by flat-lying Mesozoic and Cainozoic cover.

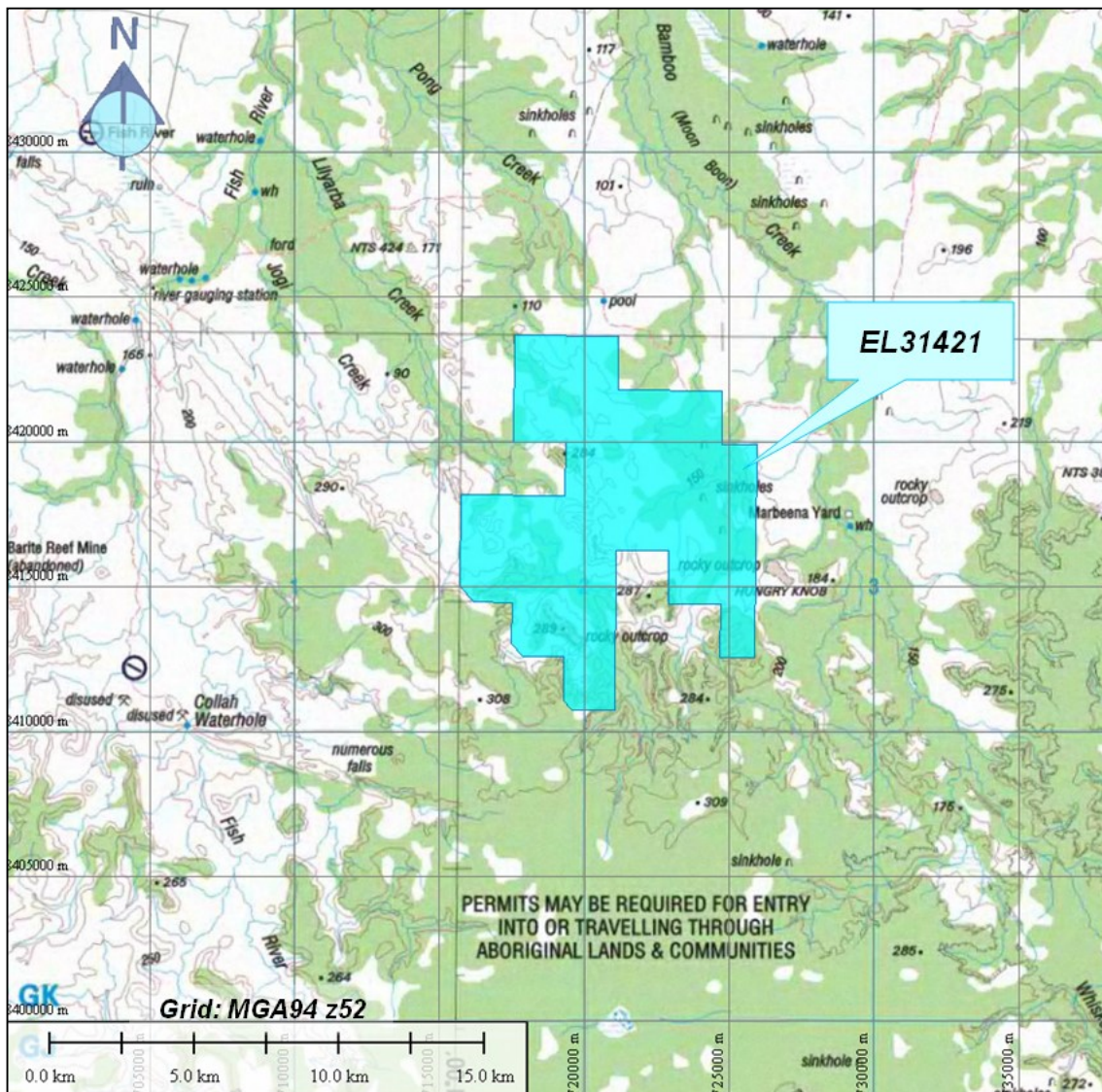
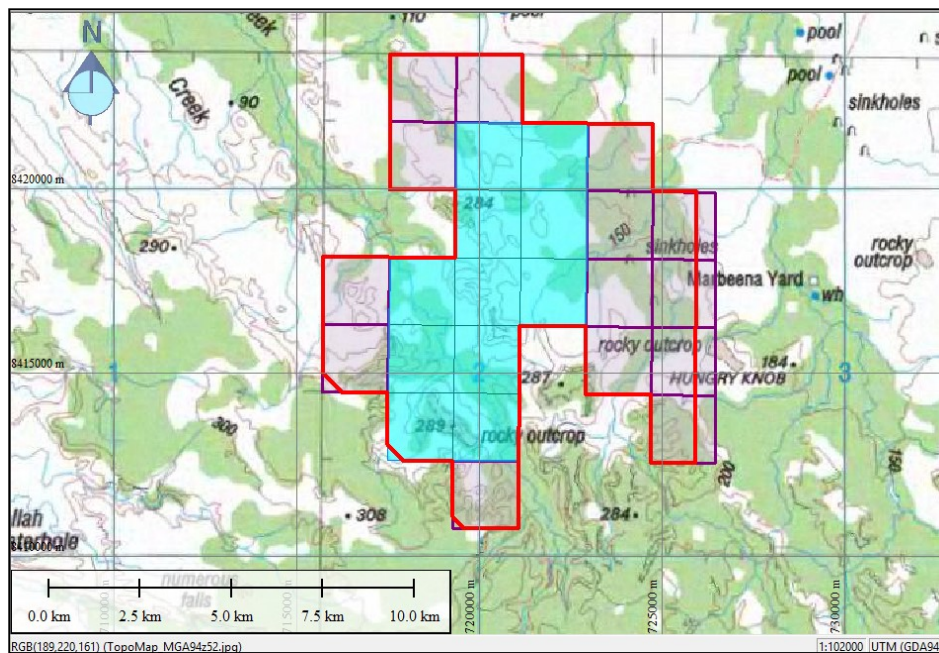


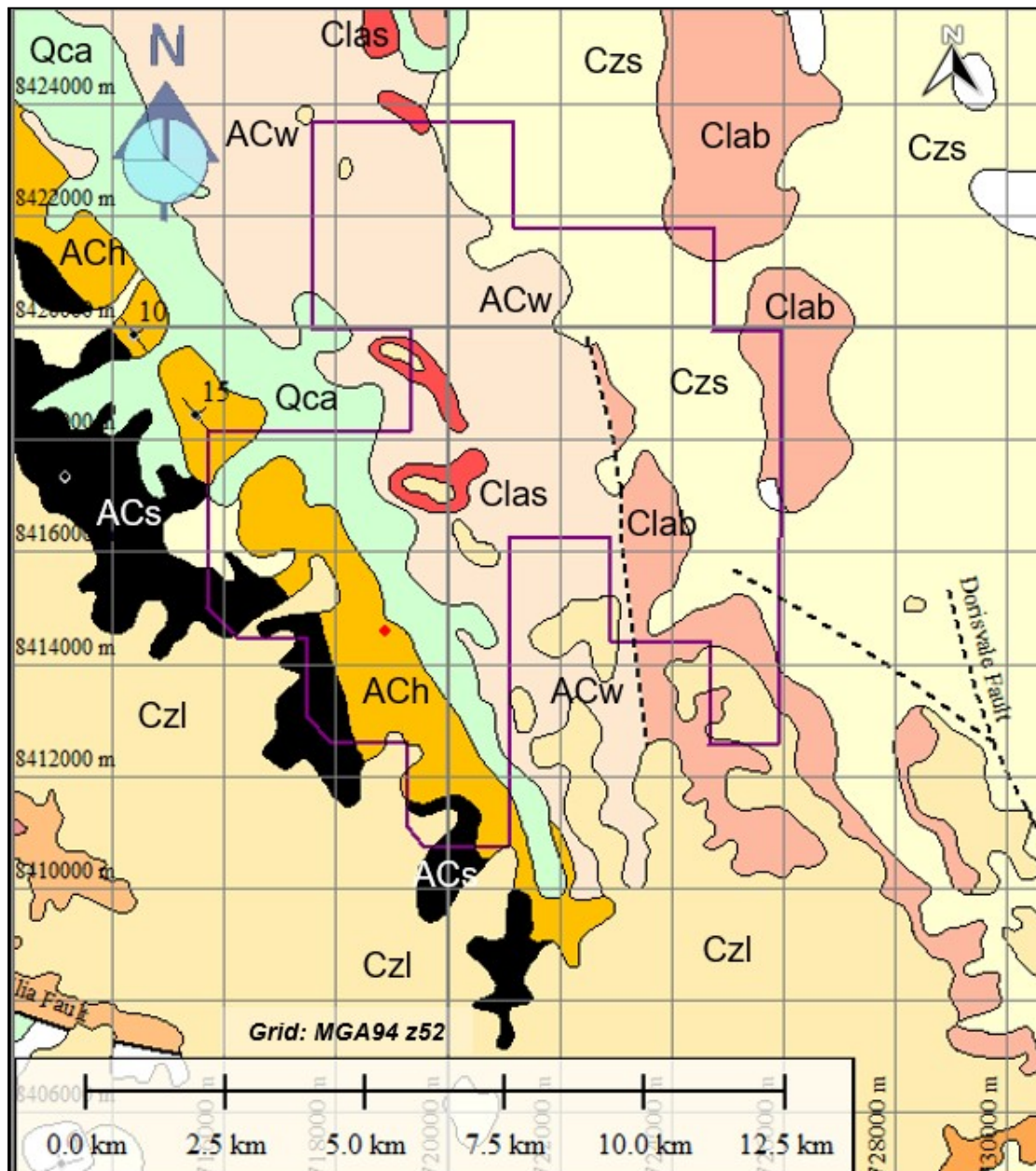
Figure 1: Location map

SD52 2004 D	SD52 2004 E	SD52 2005 A	SD52 2005 B	SD52 2005 C	SD52 2005 D	SD52 2005 E	SD52 2006 A	SD52 2006 B
SD52 2004 J	SD52 2004 K	SD52 2005 F	SD52 2005 G	SD52 2005 H	SD52 2005 J	SD52 2005 K	SD52 2006 F	SD52 2006 G
SD52 2004 O	SD52 2004 P	SD52 2005 L	SD52 2005 M	SD52 2005 N	SD52 2005 O	SD52 2005 P	SD52 2006 L	SD52 2006 M
SD52 2004 T	SD52 2004 U	SD52 2005 Q	SD52 2005 R	SD52 2005 S	SD52 2005 T	SD52 2005 U	SD52 2006 Q	SD52 2006 R
SD52 2004 Y	SD52 2004 Z	SD52 2005 V	SD52 2005 W	SD52 2005 X	SD52 2005 Y	SD52 2005 Z	SD52 2006 V	SD52 2006 W
SD52 2076 D	SD52 2076 E	SD52 2077 A	SD52 2077 B	SD52 2077 C	SD52 2077 D	SD52 2077 E	SD52 2078 A	SD52 2078 B
SD52 2076 J	SD52 2076 K	SD52 2077 F	SD52 2077 G	SD52 2077 H	SD52 2077 J	SD52 2077 K	SD52 2078 F	SD52 2078 G
SD52 2077 N	SD52 2077 O	SD52 2077 P	SD52 2078 L	SD52 2078 M				



**Figure 2: Tenement map and sub-block map showing areas retained (blue; 11 sub-blocks) and surrendered (purple; 14 sub-blocks) from EL31421 (all maps in MGA94 zone 52).**





**Figure 3: Summary geology map.**

- Qca – Quaternary alluvium
- Czs – Cenozoic regolith with elluvial and alluvial deposits
- Czl – Cenozoic laterite
- Clas - Lower Cambrian Antrim Plateau Volcanics sandstone
- Clab - Lower Cambrian Antrim Plateau Volcanics basalt
- ACw - Adelaidean or Carpentarian Waterbag Creek Formation
- ACh – Adelaidean or Carpentarian Hinde Dolomite
- ACs – Adelaidean or Carpentarian Stray Creek Sandstone Member

#### **4. Exploration history**

In the 1970s to 1990s, the general application area was explored for diamonds, base metals, gold and uranium by a number of companies including Esso, Euralba, Consolidated Global Investments and Australian Minera Resources. More recently, the Rare Earth Element (REE) potential of the application area was assessed by Spectrum Rare Earths Limited (Spectrum), with some encouraging results. The previous work is best summarised in CR2015-0950 and CR2015-0968

Previous exploration has included stream sediment, soil and rock chip sampling, mapping, structural analysis, geophysical surveys, RAB, AC, RC and DC drilling, small-scale trial pitting, and metallurgical testing. This work highlighted several base metals, uranium and REE anomalies. The general area of this application also contains a number of barite occurrences.

Spectrum focused its efforts on the Stromberg and Scaramanga REE prospects both of which contain near surface REE-enriched horizons. Spectrum undertook geological mapping, surface geochemistry, trenching, drilling, airborne geophysics, and metallurgical and mineralogical test work.

#### **5. Summary of work undertaken**

The following desk-top review work was undertaken on the relinquished sub-blocks in Years 1 and 2:

- Reviewed open-file company reports and other public domain documents (ASX announcements, company annual reports and presentations) and geological papers outlining historical exploration activities.
- Assessment of publicly available geophysical, Landsat, SPOT, ASTER and SRTM/GDEM data over the region.
- Assessment of potential mineralisation features and exploration targets on EL31421.

#### **6. Conclusion and recommendations**

The review suggested that the relinquished sub-blocks have low potential to host economic mineralisation.

In light of the currently depressed prices for REE and U, a decision was made to relinquish 14 sub-blocks lacking significant mineralisation potential.



## **7. Confidentiality Statement**

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## 8. References

Ahmad, M., 1998. Geology and mineral deposits of the Pine Creek Inlier and McArthur Basin, Northern Territory. AGSO Journal of Australian Geology and Geophysics, 17(3), pp1-17.

Ahmad, M., Wygralak, A.S., Ferenczi, P.A., and Bajwah, Z.U. 1993. Explanatory Notes and Mineral Deposit Data Sheets. 1:250,000 Metallogenic Map Series, Department of Mines and Energy, Northern Territory Geological Survey.

Dundas, D.L., Edgoose, C.J., Fahey, G.M., and Fahey, J.E., 1987. Daly River 5070 Explanatory Notes 1:100,000 Geological Map Series; Northern Territory Geological Survey.

Crick, I., 1980. Geology of the Batchelor-Hayes Creek Region. BMR 1:100,000 Geological Special.

Young, B., and Prince, K. E., 2013. Mineralogy of the Stromberg Deposit STDH03 Sample. TECHNICAL MEMORANDUM: AM/TM/2013\_06\_18. Ansto Minerals.

GR042-09 (CR109) Combined Annual Technical Report for period ending 8th November 2011. TUC Resources Limited Report No. 2011-20 EL30136 Annual and Final Technical Report Report N°2016-004

GR042-09 (CR109) Combined Annual Technical Report for period ending 8th November 2012. TUC Resources Limited Report No. 2012-05

GR042-12 Combined Annual Technical Report for period ending 8th November 2013. TUC Resources Limited Report No. 2014-001

GR042-12 Combined Annual Technical Report for period ending 8th November 2014. Spectrum Rare Earths Limited Report No. 2015-002.

EL30136 Annual & Final Technical Report for period ending 21st December 2015. Spectrum Rare Earths Limited Report No. 2016-04.