



## FINAL REPORT

### “MT RIDDOCK”

20 August 2013 to 14 August 2020

EL29689

<b>Author:</b>	David Rawlings, Amy Lockheed and Andrea Hodgson
<b>Date:</b>	12 October 2020
<b>Tenement Holders:</b>	DBL Blues Pty Ltd (100%)
<b>Tenements:</b>	EL 29689
<b>Reporting Period:</b>	20 August 2013 to 14 August 2020
<b>Distribution:</b>	Core Lithium Ltd (1) Northern Territory Department of Primary Industry and Resources (1)
<b>Map Sheet:</b>	1:250,000 sheet – Alice Springs (SF53-14) 1:100,000 sheets – Riddoch (5851)
<b>Target Commodity:</b>	Copper, Gold, Base Metals, Rare Earth Elements, Lithium
<b>Keywords:</b>	Copper, Base-Metals, Soil Geochemistry, Rock-Chip Geochemistry, Geological Mapping, Pegmatite, LCT-Type

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## 1. SUMMARY

This report details exploration activities completed within tenement EL29689 “Mt Riddock” by Core Lithium Ltd (CXO) from 2013 to 2020. EL29689 is comprised of 47 blocks located 110km northeast of Alice Springs.

The area is dominated by parts of the Aileron and Irindina Provinces and their contact in the Central Arunta Region. The basement in the area consists of sedimentary and igneous rocks of the Aileron Province of Palaeo-Proterozoic age (1865-1500 Ma). The Aileron Province rocks mostly comprise of variably metamorphosed sediments, volcanics, calc-silicates, amphibolites and granite.

The Proterozoic Aileron Province is recognised to be prospective for Cu-Au mineralization, possibly with iron oxide copper gold (IOCG) affinities, whilst the Neoproterozoic to Cambrian aged Irindina Province is a highly deformed and amphibolite to granulite grade metamorphosed province which has recently been found to be prospective for copper-nickel-cobalt.

During the first years of this tenure CXO collected surface geochemistry, IP and VTEM datasets over Mt Riddock and completed RC drilling at Copper Royals and Virginia targeting copper mineralisation.

In recent years of reporting, exploration activities in EL29689 have been limited to office-based studies due to a substantial commitment of resources and funds by CXO to the Finnis Lithium Project area, proximal to Darwin.

Following a review of CXO’s exploration tenure holding in the NT the company has decided to relinquish this license so it can focus on progressing the Finnis Lithium Project.

## 2. INTRODUCTION

This report details exploration activities completed within EL29689 “Mt Riddock” by Core Lithium Ltd (CXO) between 20 August 2013 and 14 August 2020. The tenement area is approximately 110km northeast of Alice Springs between the Harts Range and Hale River. EL29689 is located within the Riddoch (5851) 1:100,000 map sheets and within the ALICE SPRINGS (SF53-14) 1:250,000 map sheet.

Access from Alice Springs is north via the Stuart Highway, before heading east along the Plenty Highway or alternatively east along the Ross Highway to Arltunga then north on station tracks (Figure 1).

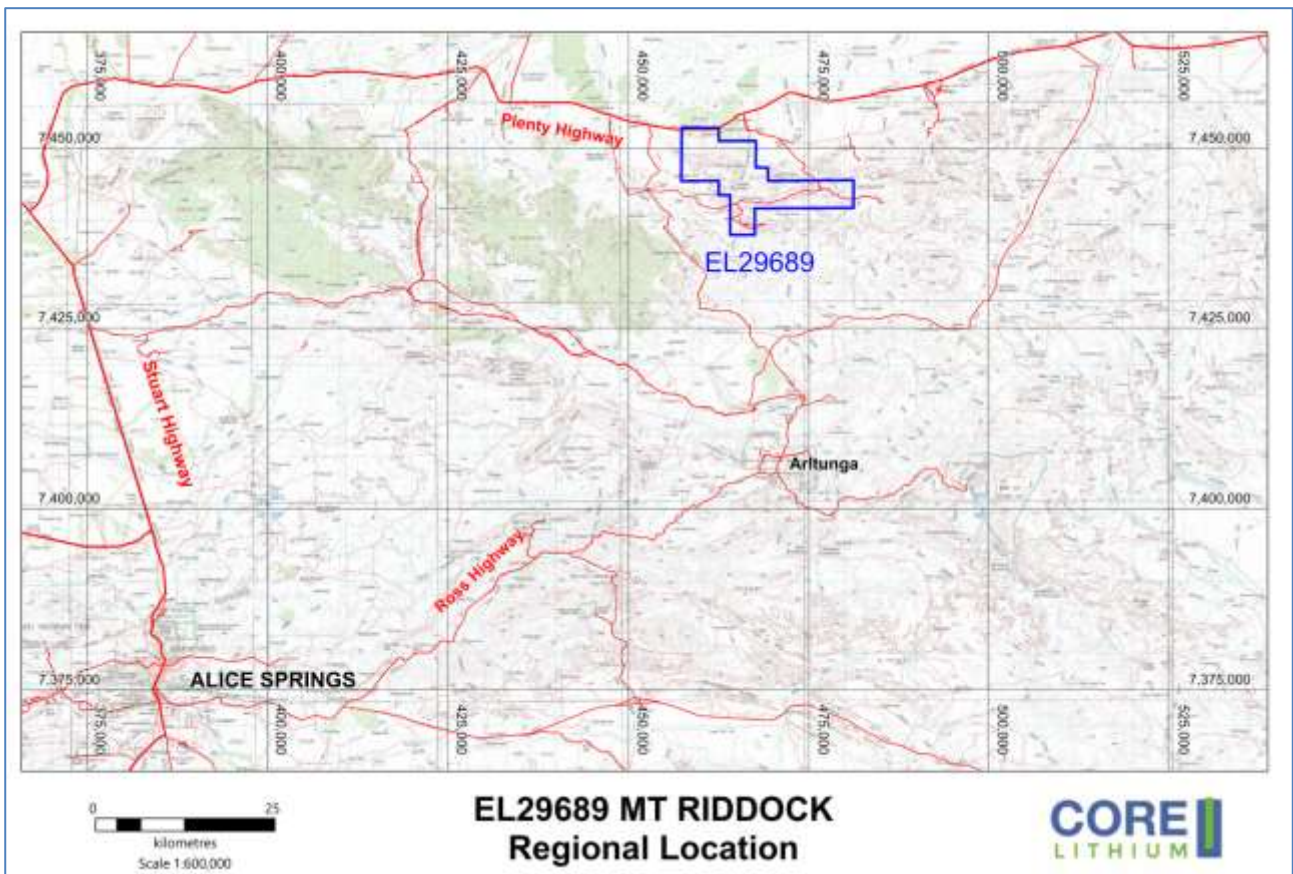


Figure 1: Regional Location map of EL29689 Tenure

## 3. TENURE

EL29689 was originally granted to DBL Blues Pty Ltd, a wholly owned subsidiary of CXO on 20 August 2013. In July 2017 CXO voluntarily surrendered 52 graticular blocks after studies indicated some areas of the tenement held no potential for CXO’s portfolio. EL29689 overlies the Riddock and Amberlindum Pastoral Leases. Tenure details at the time of cessation are tabulated in Table 1 and illustrated in Figure 1.

Group reporting of the CXO Albarta North Project, which includes EL29689, was granted by the NT DME on 19 February 2015 with a reporting year defined 1 February to 31 January in the following year. A bridging report addressed the time difference in reporting periods.



CXO has studied the recent investigations undertaken by Geoscience Australia (GA) and the Geological Survey of the Northern Territory, in conjunction with other explorers in the region, all of whom suggest Iron Oxide Copper Gold (IOCG) affinities can be attributed to the Aileron Province. This recently suggested IOCG terrain represents a newly-recognised Proterozoic copper – gold province characterised by a long belt of structurally deformed granite and sedimentary sequences that contain variable amounts of quartz veining, strong iron and fluorite alteration, and outcropping copper-silver-gold mineralisation.

The Irindina Province has become an area of greater interest for mineral exploration in the last decade due to some recent discoveries by exploration companies. Mithril Resources (MTH) have identified several Cu-Co and Cu-Ni prospects within the Irindina Province including at Basil where an inferred resource of 26.5 Mt @ 0.57 % Cu, 0.05 % Co at a 0.3 % Cu cut off was identified (MTH ASX release 21-03-2012). Studies of the Basil Cu-Co deposit (Sharrad et al., 2013) suggest a volcanic–exhalative (VHMS) on the seafloor emplacement history for the deposit which was metamorphosed by the Ordovician Larapinta Event, making it a metamorphosed VHMS style deposit hosted within the Riddock Amphibolite.

Within EL29689, a number of existing prospects were identified when CXO were granted the tenement Figure 3. Copper Queen, Copper King and Skippy Hole had been previously identified and reconnaissance drill tested by Tanami Gold in the early 2000’s. These prospects are all located within the Aileron Province within the Strangways Metamorphic Complex. The Virginia and Selins Prospects were also identified as historic copper prospects which had never been drill tested, these two prospects are hosted in the Riddock Amphibolite of the Irindina Province.

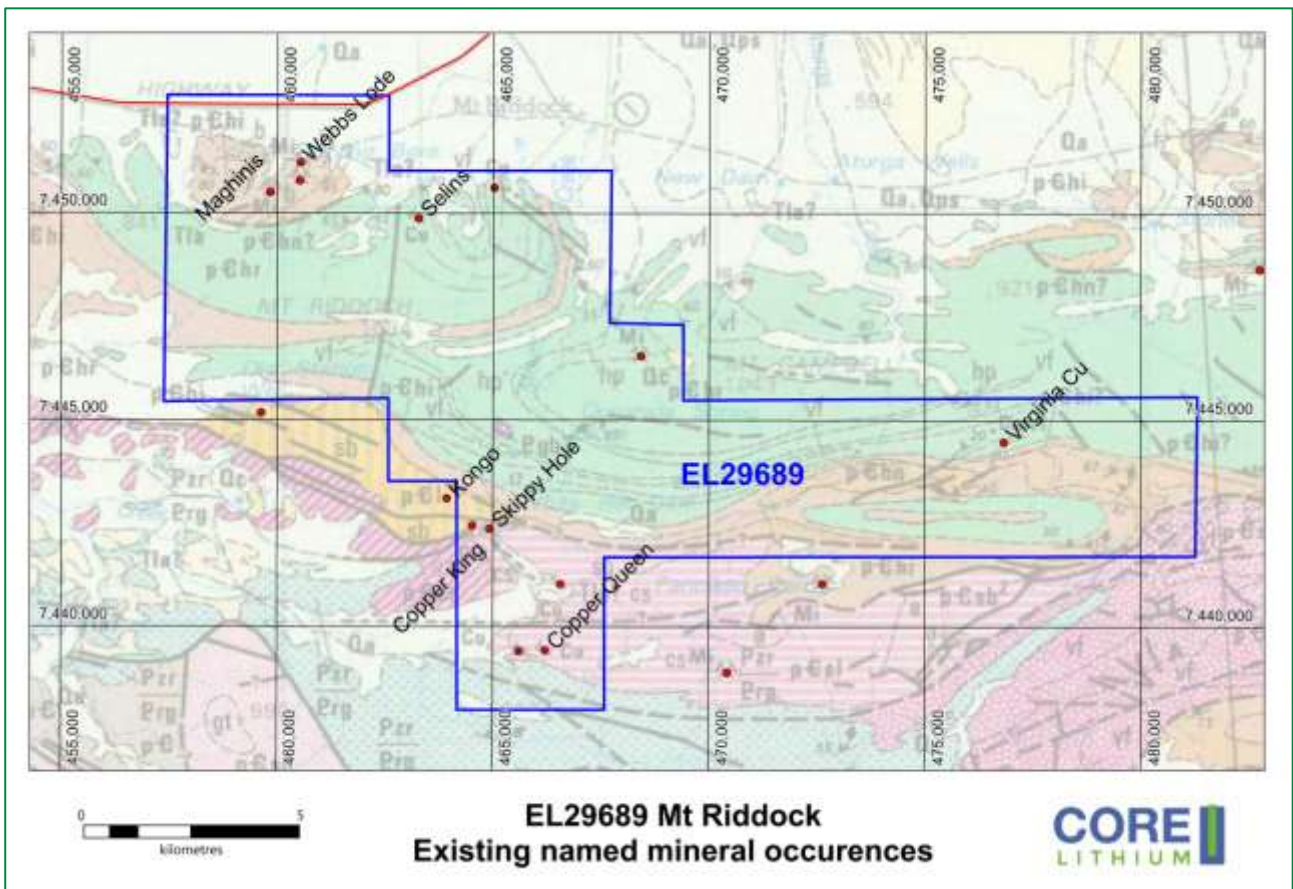


Figure 3 : Existing Mineral Occurrences in EL29689 - only named Occurrences are labelled.

## 5. PREVIOUS EXPLORATION

### *Mt Riddock EL 29689*

The earliest modern exploration in the area was conducted on EL 346 by Russgar Minerals NL during the early 1970's. The work included geological mapping and extensive rock chip sampling for base metals and gold. Most of the work was concentrated on the Oonagalabi prospect which had been discovered in the 1930's.

Kinex held EL 1337 over the area between 1977 and 1983. Geopeko, Amoco Minerals and Pan D'Or Mining farmed into the tenement at various times. Most of the work was concentrated on the Oonagalabi prospect where geophysical surveys and drilling were carried out.

White Industries and BHP Minerals jointly explored EL 2648 between 1981 and 1984 primarily for diamond. Stream sediment samples were collected, and the silt fraction was analysed for base metals. No significant anomalous values were found.

Astron Resources carried out a heavy mineral survey over EL 4462. The aim of the survey was to determine if gold or gahnite (zinc spinel) were present in the stream sediments. Gahnite was found in several samples and may indicate the presence of Oonagalabi style mineralisation. No further work was done.

Clarence River Finance Group held the ground under EL 6940 and EL 9420 from 1990 to 2000. They are also the current holders of the mining lease over the Oonagalabi prospect. Exploration was mainly conducted for industrial minerals (garnet). Some minor exploration work was done on the Oonagalabi prospect.

Tanami Gold explored the area under EL 10078 and EL 22917 between 2001 and 2006. Soil, rock chip sampling and RAB drilling were carried out targeting the Florence Creek Shear Zone and related structures. Hyperspectral airborne surveys (Hymap) were completed which identified outlined anthophyllite and carbonate-chlorite anomalies which were then sampled. No significant assay results were received with the conclusion being that mineralisation in the area is likely confined to known Cu-Ag prospects (Potter, 2003; Rohde, 2005). Work was completed at the Virginia Prospect which was described as "a stratiform copper horizon over 1 km strike hosted by a 3-5 m thick leucocratic garnet gneiss band within mafic gneisses" of the Riddoch Amphibolite. Rock chip sampling of the malachite stained rocks returned values in the 1-5 % Cu range. Soil sampling showed a strong copper anomaly extending along strike from the main prospect. The prospect does not appear to have been drilled.

The Copper King prospect was identified from regional 400 x 40 m soil traverses. An area of abundant malachite staining measuring 10 x 30 m returned rock chip assays <1 % Cu with a peak gold value of 38.5 g/t Au. Two other prospects lie close to Copper King – Skippy Hole and MR3. 51 RAB holes were drilled on these prospects. Narrow zones of anomalous copper were intersected with the best result being 3 m at 0.25 % Cu from 6 m in hole MRB029 at Copper King.

The CSIRO undertook some investigations of the Oonagalabi prospect in 2004 and showed that the mineralisation had a distinct geochemical signature – Au-Bi-Cd-Cu-Pb-Sn-W-Zn.

Most of the previous exploration work conducted in this area has been concentrated on the Oonagalabi Prospect. The mineralisation at Oonagalabi is stratabound in a distinct package of rocks which also trends southwest. Primary mineralisation consists of chalcopyrite and sphalerite patches, disseminations and veinlets in calc-silicate rocks, minor pyrrhotite, pyrite and galena are also found. The mineralisation is thought to have either a syngenetic volcanogenic or epigenetic origin.

## 6. CXO EXPLORATION WORK 2013 – 2020

### Year 1 (20 August 2013 – 19 August 2014)

During the first year of tenure, Core Exploration completed the following exploration activities within EL 29689:

- Historical literature and data review which formed the basis for the geology, mineralisation and previous exploration sections of this report.
- Field reconnaissance was completed to perform targeted mapping and rock chip sampling, investigate accessibility and to meet stakeholders. A total of 43 rock chip samples were collected and assayed from within EL29689.
- Induced Polarisation (IP) surveys were completed at the Copper Queen and Virginia Prospects (Figure 4 and Figure 5). Two IP lines were completed at each prospect, with lines between 1-1.5km long. The lines of IP identified chargeable bodies underneath outcropping mineralisation at the Virginia Prospect, which dip parallel with the measured dip of surface outcrops at depth. This lead to the interpretation that the chargeable feature may represent the observed surface mineralisation (disseminated malachite) at depth, represented by chargeable disseminated copper sulphides.

Data from the work completed during the first year of reporting was submitted with the 2014 Annual Technical Report.

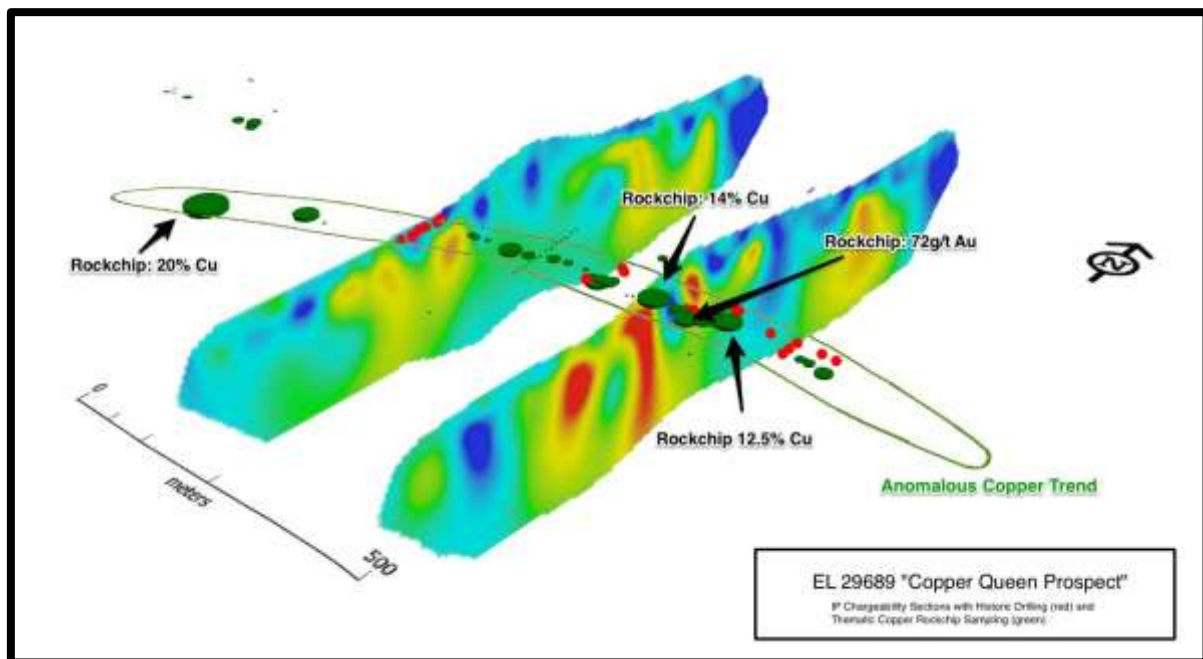


Figure 4: IP chargeability sections underneath locations of copper bearing rock chips from Copper Queen Prospect:



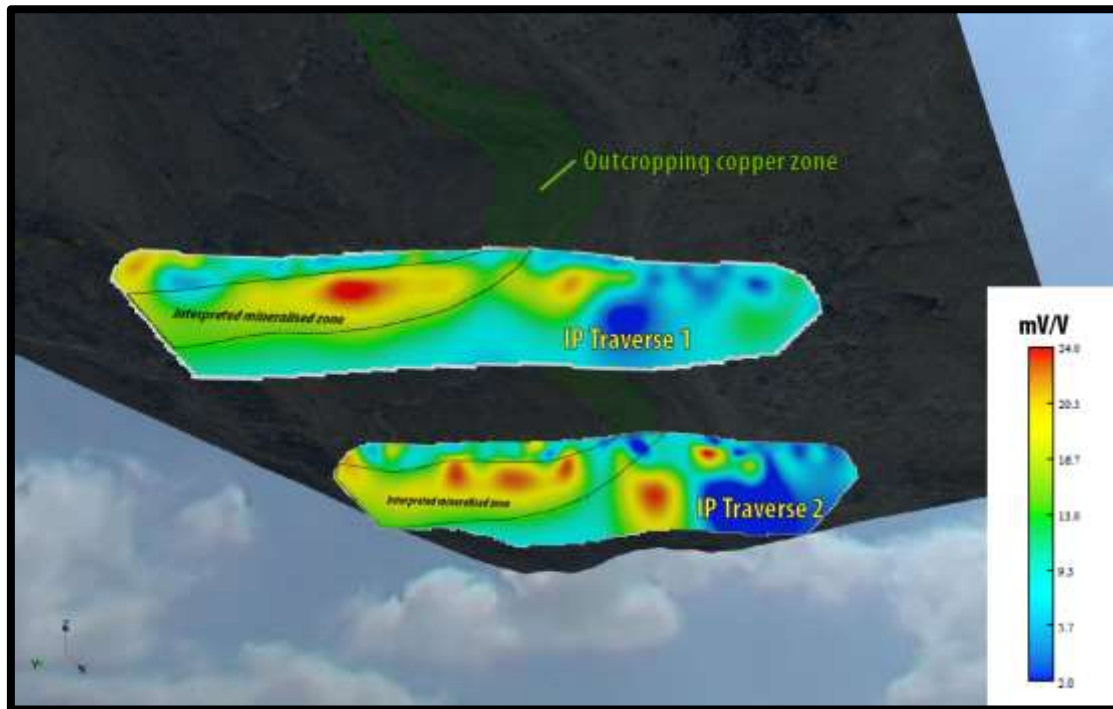


Figure 5: IP chargeability sections underneath outcropping copper bearing rock chips at the Virginia Prospect

Bridging Period (20 August 2014 – 31 January 2015)

During the reduced bridging period CXO’s exploration activities included:

- Further field reconnaissance
- 176-line kilometres of Airborne Electro-Magnetics (VTEM) were collected over the Virginia and the Copper Royals areas (Table 2, Figure 6) as part of a Research in Business collaborative project with CSIRO.
- Completion of an RC drilling program totalling 18 holes for 1,745m (12 holes at Virginia and 6 holes at Copper Royals (Figure 7 and Figure 8).

Details and methodology of the VTEM and the associated collaboration project were outlined in the Bridging report, with data from the reporting period being submitted as an Appendix.

Table 2: Mt Riddock VTEM traverses east and west

Survey Block	Line Spacing (m)	Area (Km2)	Planned Line-km	Actual Line-km	Flight Direction	Line Numbers
Riddock East	Traverse:200	9	48	49	N 0° E / N 180° E	L4000-L4110
Riddock West	Traverse:200	24	125	127	N 0° E / N 180° E	L5000-L5240

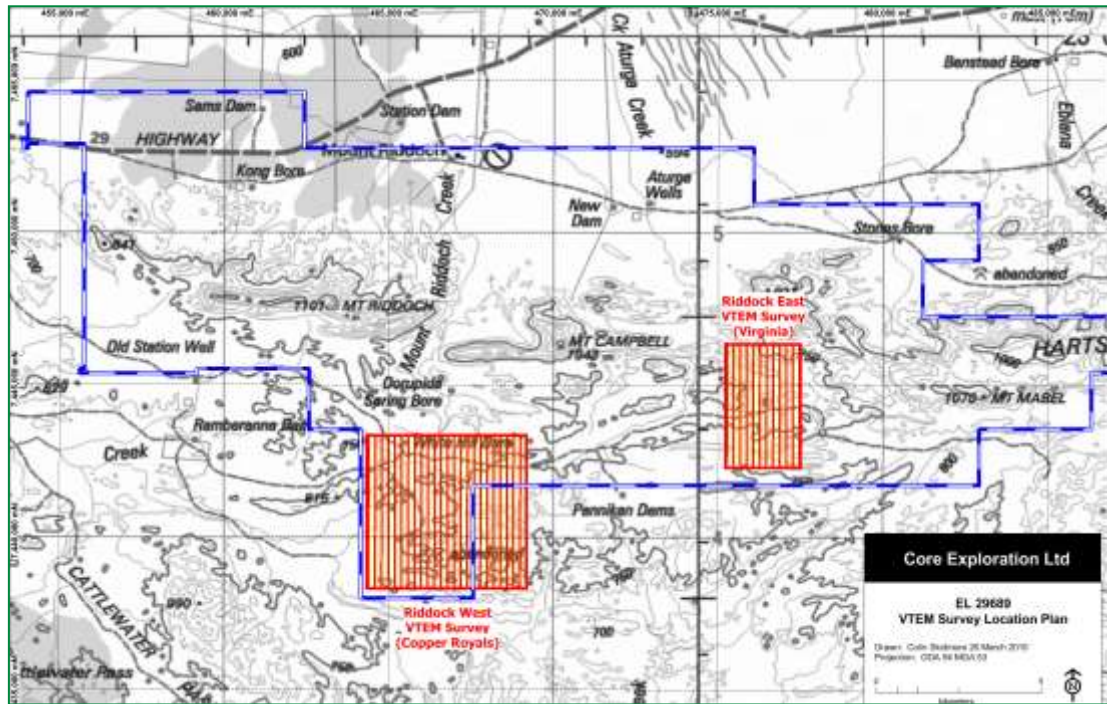


Figure 6: Mt Riddock VTEM areas 2014

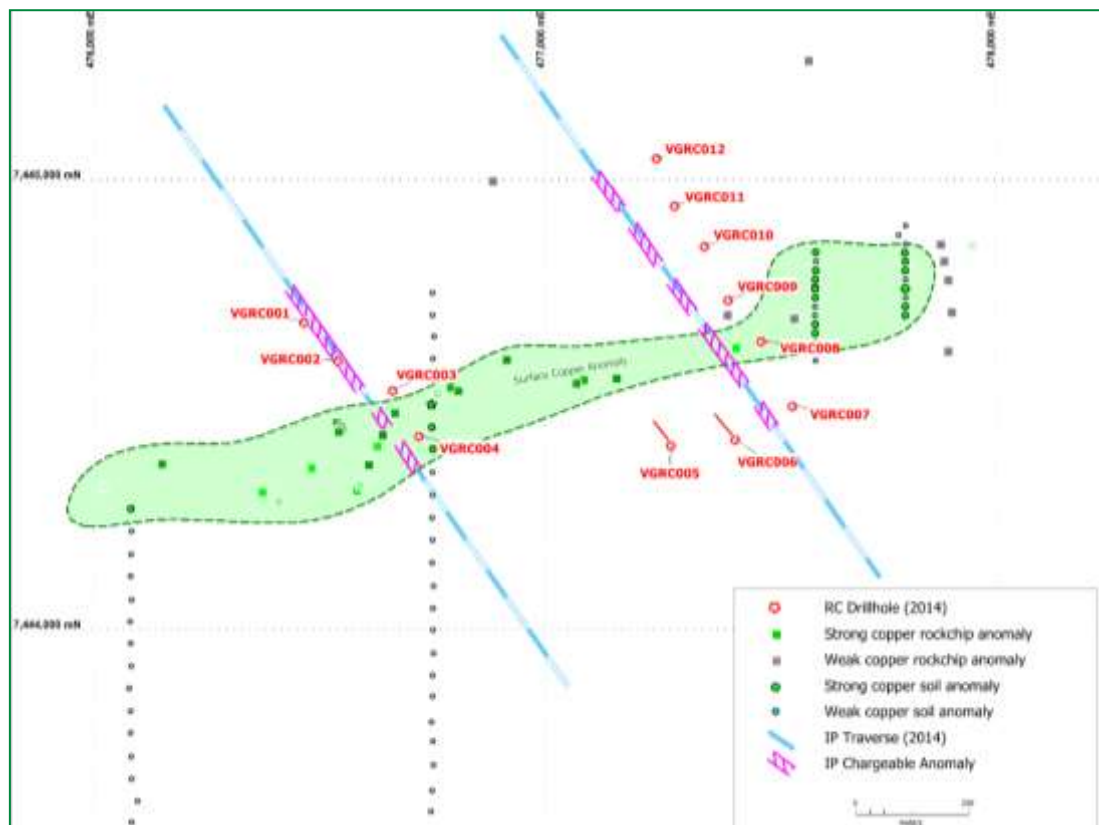


Figure 7: Virginia prospect drill hole location

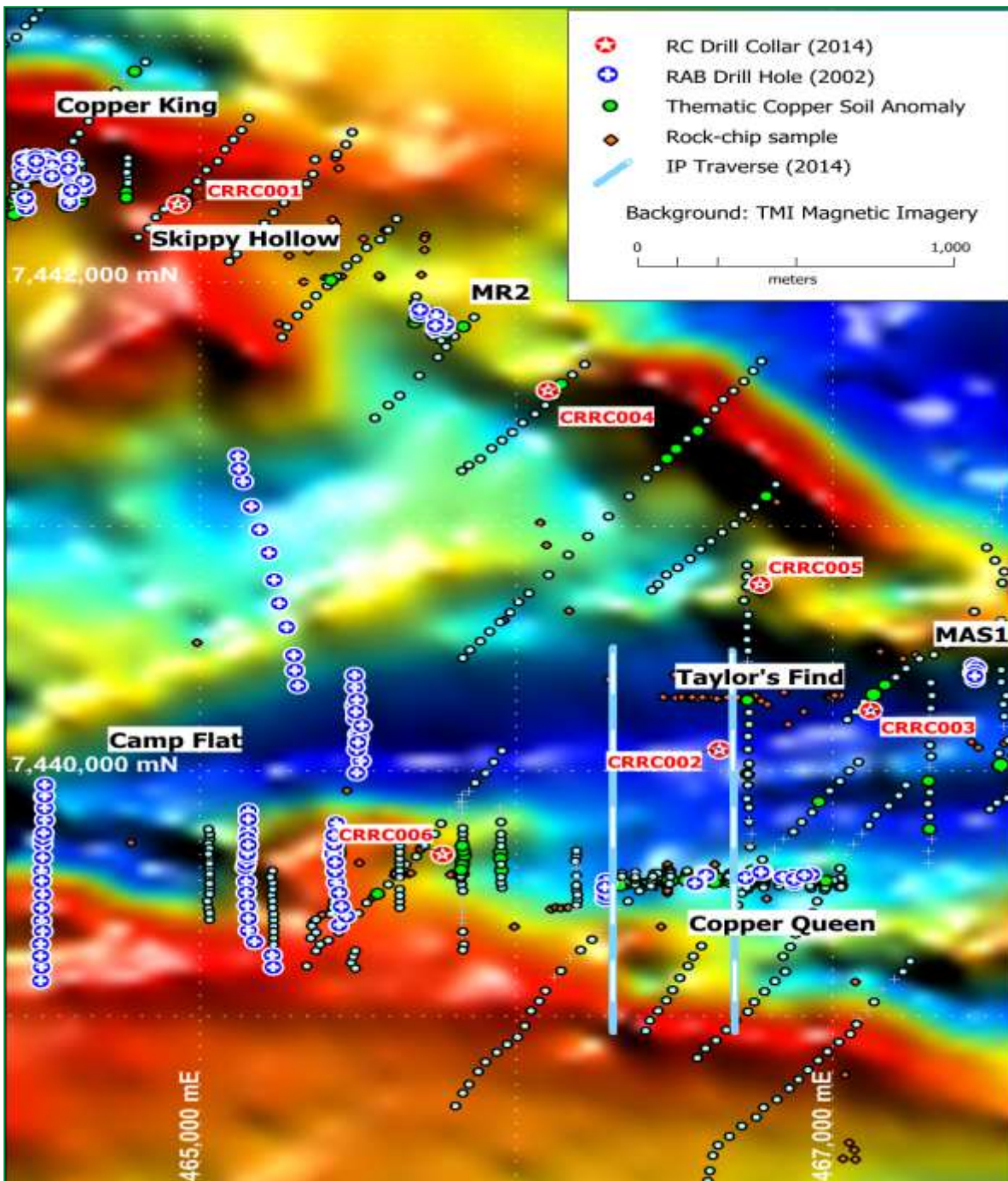


Figure 8: Copper Royals drill hole location plan on RTP Magnetic Imagery

Year 1 Group Reporting (1 February 2015 – 31 January 2016) GR359

During the 2015 reporting period very little field work was performed.

The only significant activity undertaken was a desktop study by Dr James Austin at CSIRO, as part of the “Research-in-Business” collaborative study that was finalised in late 2014. This study used existing Open File magnetic datasets to generate and model targets for future exploration work. The study was scheduled for completion in July 2015 however much of the originally proposed work was not undertaken and only a draft report of Dr Austin’s work was received, which was included with the Annual Technical Report at the time.

### Year 2 Group Reporting (1 February 2016 – 31 January 2017) GR359

Minimal work was undertaken on EL29689 during this period. Ongoing review of exploration potential and prospectivity was conducted by CXO's exploration manager of existing data held.

During this time CXO decided to become more active in the lithium commodity space so resources were focussed on lithium based exploration around the Bynoe and Barrow Creek regions of the NT.

### Year 3 Group Reporting (1 February 2017 – 31 January 2018) GR359

No on the ground work was undertaken during this reporting period. Office based studies were conducted to assess the general East Arunta region (including EL29689) for lithium pegmatite potential. Studies indicated some areas within the tenement held no potential for CXO's portfolio therefore 52 graticular blocks were surrendered in July 2017.

### Year 4 and 5 Group Reporting (1 February 2018 – 31 January 2020) GR480

No on ground work was undertaken on EL29689 during these reporting periods due to CXO's key objective being to make Darwin and CXO's Finnis Lithium Project near Darwin a central processing and global transport hub for NT lithium and spodumene production.

## 7. REHABILITATION

The only disturbance performed was associated with the RC drilling program at Virginia and the Copper Royals area. CXO minimized this disturbance by utilizing existing station tracks as much as possible. Any new tracks and drill pads were rehabilitated during the drilling program with all rehabilitation completed before staff left site.

## 8. CONCLUSIONS

Following a review of Core Lithiums tenure in the Northern Territory the company has decided to relinquish Exploration Licence 29689. This review takes into consideration previous work carried out on the tenement in addition to CXO's ongoing activity and resource commitment to progressing the Finnis Lithium Project.

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