ANNUAL TECHNICAL REPORT
Group Reporting GR 359
"ALBARTA NORTH PROJECT"

1st February 2015 to 31st January 2016

EL's 27369, 28029, 29304, 29667, 29668, 29689 & 30793

Author:	Colin Skidmore
Date:	3rd March 2016
Tenement Holders:	DBL Blues Pty Ltd (100%)
Tenements:	EL's 27369, 28029, 28546, 28852, 28853, 28854, 29280, 29304, 29667, 29668, 29687, 29688, 29689, 30793
Reporting Period:	1st February 2015 to 31st January 2016
Distribution:	Core Exploration Ltd (1) Northern Territory Department of Mines & Energy (1)
Map Sheet:	Alice Springs 1:250,000 sheet (SF5314) Riddock & Laughlen 1:100,000 sheets (5851 & 5751)
Target Commodity:	Copper, Gold, Base Metals
Keywords:	CSIRO, Copper, Base-metals, Geological mapping, Soil Geochemistry

CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICIES

1 SUMMARY

This is the first Group Reporting of Core Exploration's (CXO) Albarta North Project (GR359) comprising fourteen exploration licences (EL's 27369, 28029, 28546, 28852, 28853, 28854, 29280, 29304, 29667, 29668, 29687, 29688, 29689, 30793) which were held 100% by DBL Blues Pty Ltd a wholly owned subsidiary of Core Exploration Limited. Previously each tenement was reported individually with Bridging Reports lodged to align with the Group Reporting dates in 2014. During 2015, seven of these tenements were surrendered and one was reduced.

The project area is dominated by parts of the Aileron and Irindina Provinces as well as the Amadeus Basin. The basement in the area consists of sedimentary and igneous rocks of the Aileron Province of Palaeo-Proterozoic age (1865-1500Ma). The rocks have been metamorphosed to upper green-schist to lower amphibolite facies during the Strangways Orogeny (1740-1690 Ma).

In previous years CXO has collected surface geochemistry on a number of tenements, collected IP and VTEM datasets over Mt Riddock and completed RC drilling at Copper Royals and Virginia targeting copper mineralisation.

During the 2015 reporting year exploration work on the Albarta North Project has been limited whilst the company focused on its Jervois and South Australian Projects. Work undertaken was limited to desktop studies including detailed magnetic modelling by CSIRO for new target generation.

It is anticipated exploration work will recommence on GR359 during 2016 and will likely include soil geochemistry and geological mapping to assess targets identified by the CSIRO study and assist generating new targets. As discussed above, CXO will have a focus on the lithium potential of the Arunta pegmatites.

2 INTRODUCTION

This report covers first year of joint reporting of exploration activities completed within GR 359 "Albarta North" up until 31st January 2016. GR 359 in 2015 comprised EL's 27369, 28029, 28546, 28852, 28853, 28854, 29280, 29304, 29667, 29668, 29687, 29688, 29689, 30793. GR 359 is located within the Riddock (5851) and Laughlin (5751) 1:100,000 map sheets, and is located within the ALICE SPRINGS (SF53-14) 1:250,000 map sheet.

Access from Alice Springs is north via the Stuart Highway then east along the Plenty Highway or alternatively east along the Ross Highway to Arltunga then on station tracks.

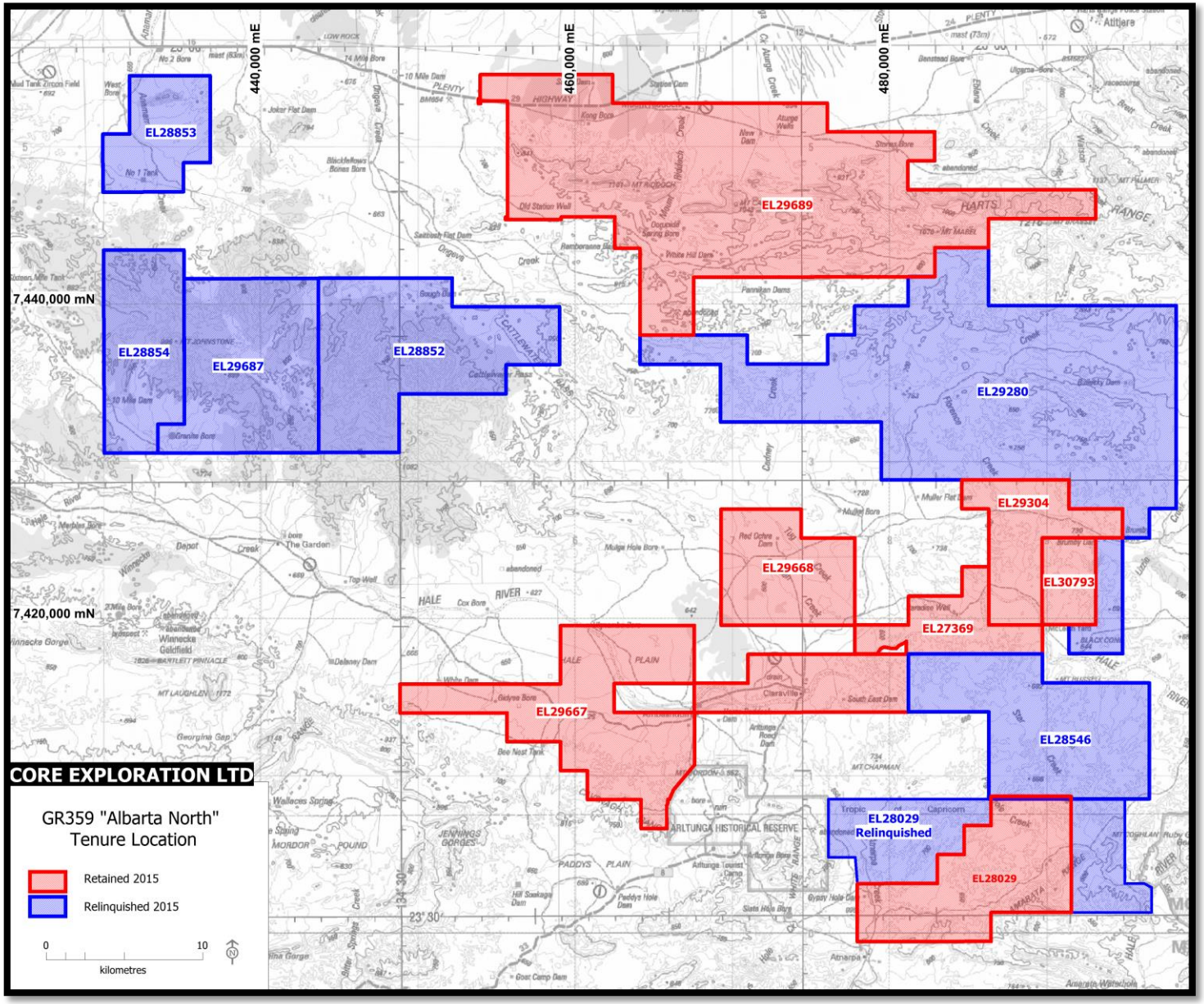

Figure 2.1: Location Map of GR 359 Tenure

3 TENURE

GR359 includes EL's 27369, 28029, 28546, 28852, 28853, 28854, 29280, 29304, 29667, 29668, 29687, 29688, 29689 and 30793 that are all held by DBL Blues Pty Ltd, a wholly owned subsidiary of Core Exploration Ltd (CXO).

During the year a number of these tenements were surrendered as listed in Table 3.1; one new tenement was granted; and a partial reduction was made on EL 28029 reducing it from 49 to 25 Blocks. In 2016, GR359 will comprise only seven tenements.

Originally, a number of these tenements were held in Joint venture with other third parties, however CXO negotiated outright purchase of all joint venture tenements covered by GR359 on 28th October 2014. Group Reporting of the Albarta North tenure was granted by NT DME on 19th February 2015 with a reporting year defined 1st February to 31st January in the following year. Bridging reports were submitted for each individual tenement in March 2015.

The tenement package overlies the Riddock and Amberlindum Pastoral Leases. Tenure details are tabulated in Table 3.1 and illustrated in Figure 2.1.

EL	Owner	Date Granted	Year	Blocks	Area (km^2)	Expenditure Commitment	Status
27369	DBL Blues (100%)	28/05/2009	6	11	33.88	$25,000	Held
28029	DBL Blues (100%)	12/04/2010	5	25	78.76	$60,000	Partial Relinquishment
28546	DBL Blues (100%)	04/01/2011	4	32	100.87	$25,200	**Surrendered**
28852	DBL Blues (100%)	20/06/2011	4	36	113.66	$27,600	**Surrendered**
28853	DBL Blues (100%)	20/06/2011	4	13	41.08	$11,845	**Surrendered**
28854	DBL Blues (100%)	20/06/2011	4	20	63.14	$15,000	**Surrendered**
29280	DBL Blues (100%)	19/12/2011	4	100	315.67	$51,000	**Surrendered**
29304	DBL Blues (100%)	27/08/2012	3	15	47.32	$12,750	Held
29667	DBL Blues (100%)	19/07/2013	3	49	152.37	$20,700	Held
29668	DBL Blues (100%)	19/07/2013	3	18	56.77	$11,400	Held
29687	DBL Blues (100%)	03/06/2013	3	31	97.87	$15,300	**Surrendered**
29688	DBL Blues (100%)	03/06/2013	3	8	25.22	$8,400	**Surrendered**
29689	DBL Blues (100%)	20/08/2013	3	99	310.46	$35,700	Held
30793	DBL Blues (100%)	21/10/2015	1	6	18.93	$11,000	New
Group Reporting				463	1456	$330,895	

Table 3.1: Tenure Details for GR359

4 GEOLOGY AND MINERALISATION

GR 359 covers both the Proterozoic Aileron Province and the Neoproterozoic Irindina Province and there contact in the Central Arunta Region. The Aileron Province rocks mostly comprise variably metamorphosed sediments, volcanics, calcsilicates, amphibolites and granite (Figure 4.1). Detailed geology of the Aileron Province is covered by Murrell (1989) and Zhao & Cooper (1992).

The Irindina Province is a Neoproterozoic to Cambrian aged province that has been highly metamorphosed and multiply deformed by the Larapinta Event and the Alice Springs Orogeny. The bulk of the units within the Irindina Province are interpreted as forming the Harts Range Metamorphic Complex which includes Irindina Gniess (which includes the Naringa Calcareous Member, the Stanovos Gneiss Member and the Riddock Amphibolite) and the stratigraphically overlying Brady Gneiss (Maidment 2005). The Virginia Prospect is interpreted to be within the Riddock Amphibolite. The Riddock Amphibolite is described as a variably deformed metagabbro or metadolerite, interlayered with layered, quartz rich amphibolite, metapsammopelitic rock, and minor marble calc-silicate rock and quartzo-feldspathic gneiss (Scrimgeour IR, 2013). It is also interpreted to be interlayered with the Irindina Gneiss in places.

Core 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 a number of 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.

Rare earth mineralisation associated with thorium bearing Allanite has been documented at Blueys Folly on EL 28029. It can in a number of settings, local examples being pegmatite dykes (plug-like to lenticular sub-vertical bodies and sheet-like apophasis that intrude the surrounding amphibolite facies metamorphic rocks and within amphibolite and marble (calcsilicate?) units adjacent to these pegmatites (Murrell, 1988). Murrell estimated that Blueys Folly contained several million tonnes of pegmatite grading about of 0.4% allanite. This is a sub-economic grade. The north-east strike extent of the Blueys Folly REE geology continues up EL 28029, where two anomalous areas are identified.

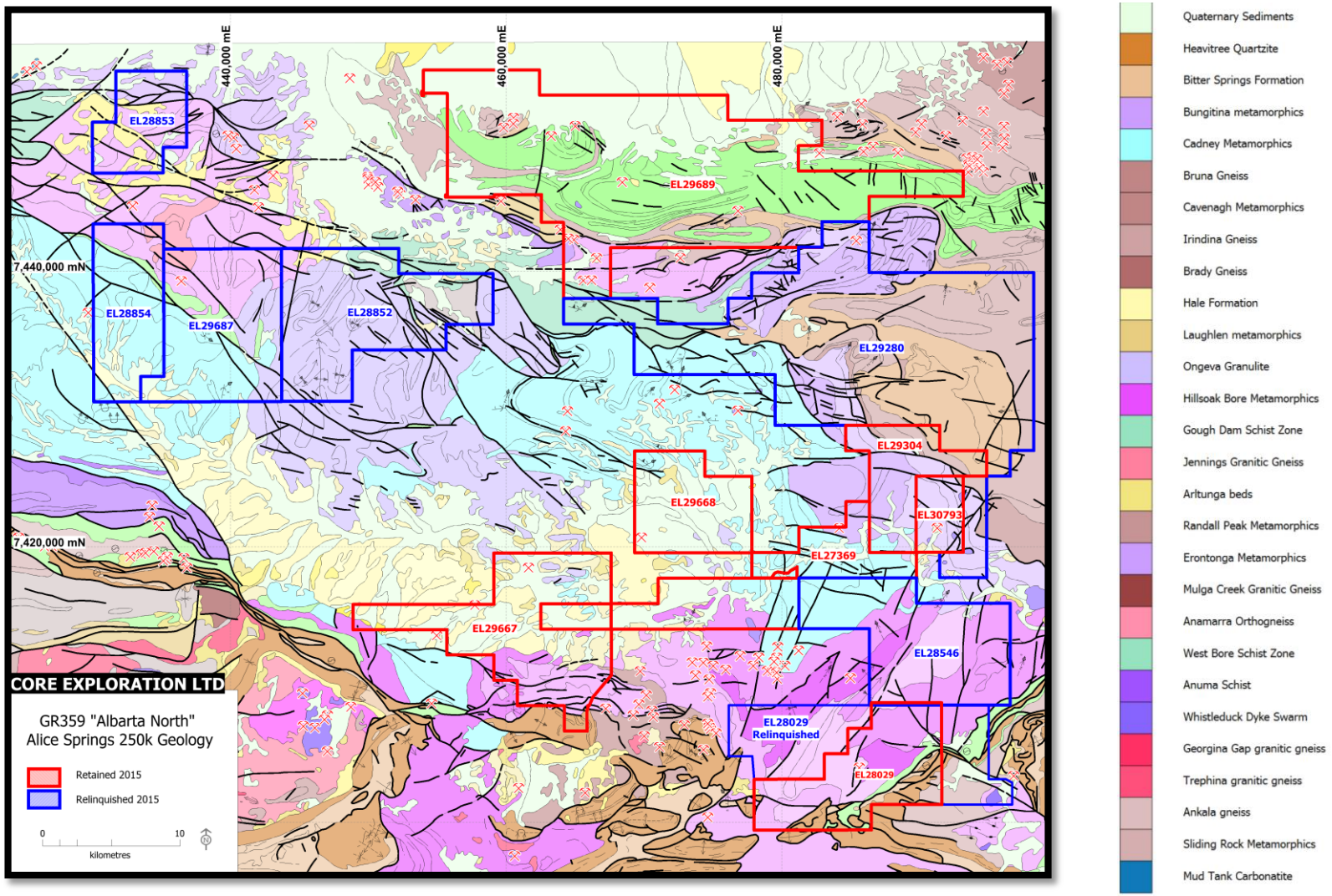

Figure 4.1: GR 359 on an extract from Alice Springs 1:250,000 Geology

5 PREVIOUS EXPLORATION

Mt Riddock EL29689

The earliest modern exploration in the area was conducted on EL346 by Russgar Minerals NL during the early 1970's. The work included geological mapping and extensive rock chip sampling for base metals and gold. The majority of the work was concentrated on the Oonagalabi prospect which had been discovered in the 1930's.

Kinex held EL1337 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 EL4462. The aim of the survey was to determine if gold or gahnite (zinc spinel) were present in the stream sediments. Gahnite was found in a number of the 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 EL10078 and EL22917 between 2001 and 2006. Soil and rock chip sampling, RAB drilling and a hyperspectral airborne survey (Hymap) were completed. Unfortunately, these ELs were part of a project group for a number of years and the group annual reports were not included in the compilation. 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 400x40 soil traverses. An area of abundant malachite staining measuring 10x30m 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. Fifty-one RAB holes were drilled on these prospects. Narrow zones of anomalous copper were intersected with the best result being 3m at 0.25% Cu from 6m 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

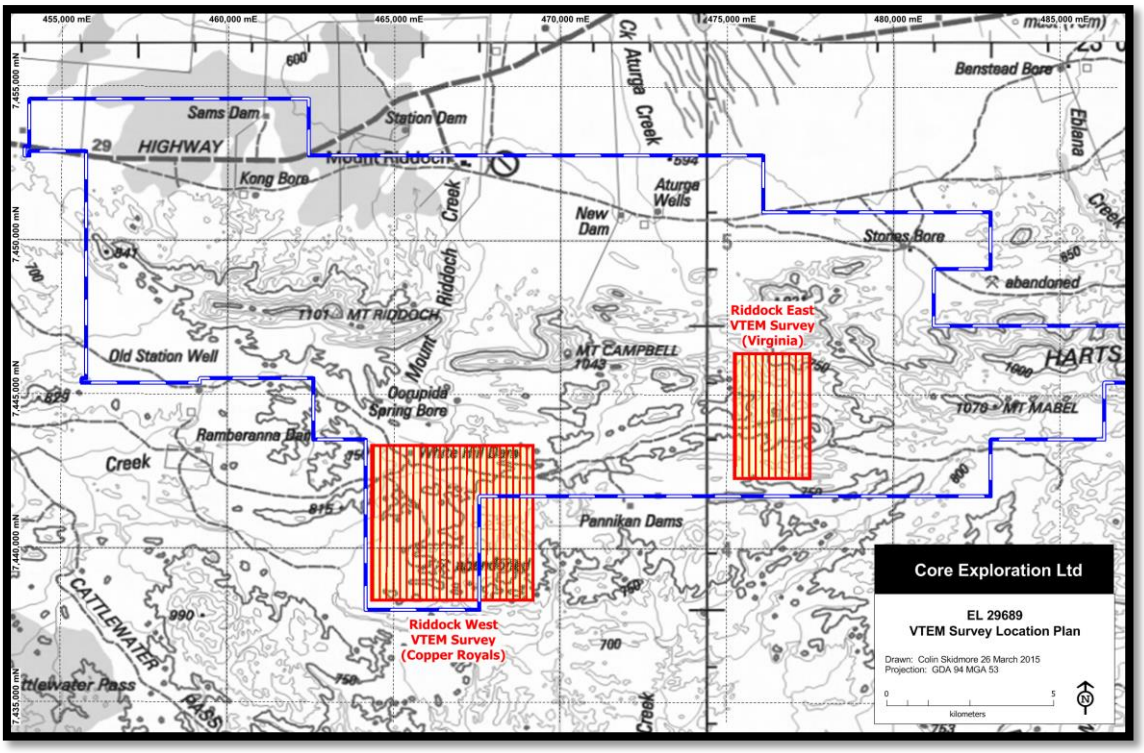

Figure 5.1: Mt Riddock VTEM areas (2014)

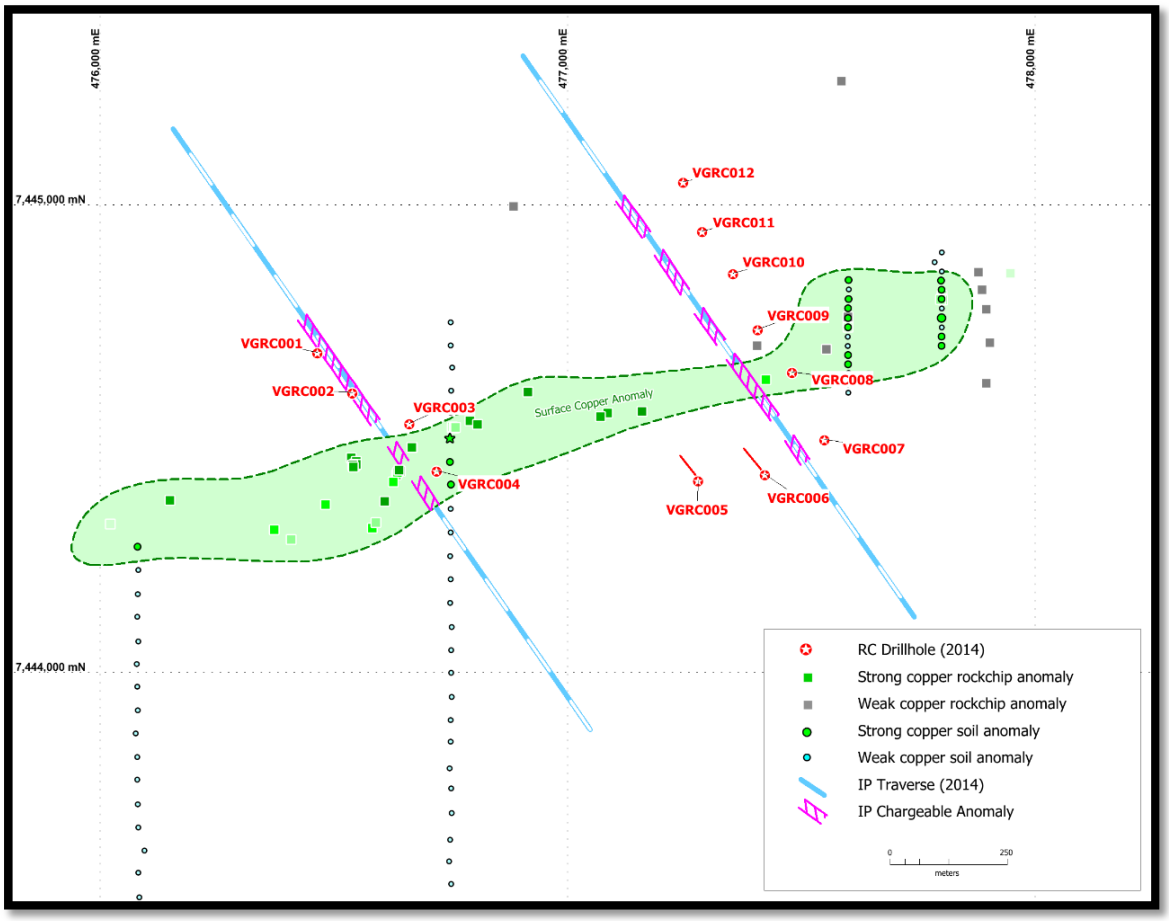

Figure 5.2: Virginia Prospect drill hole location plan

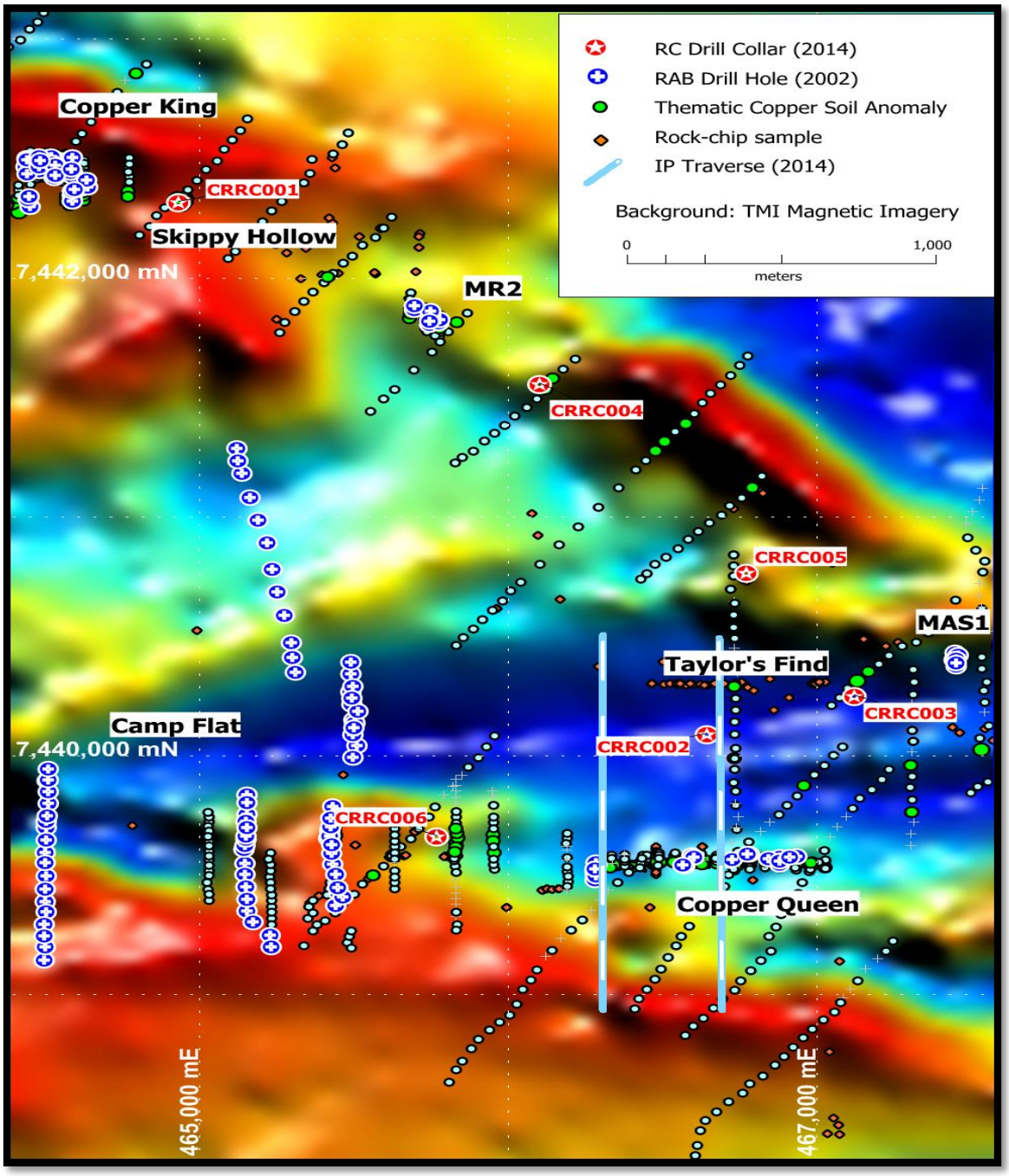

Figure 5.3: Copper Royals drill hole location plan on RTP Magnetic Imagery

Oonagalabi Prospect. The mineralisation at Oonagalabi is stratabound in a distinct package of rocks which also trends southwest into Core's adjoining tenement EL 29280. 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. Soil sampling should identify any outcropping zones of mineralisation. Blind zones of mineralisation may be detectable by IP or EM surveys.

On EL 29689 CXO has undertaken historical literature and data reviews including reconnaissance field visits and meetings with landholders. Rock-chip sampling and four lines of IP were collected at Virginia and Copper Queen. In the second year CXO collected 176 line kilometres of VTEM over Virginia and the Copper Royals area and completed 18 RC holes for 1,745 metres (12 holes at Virginia & 6 holes at Copper Royals). Whilst low tenor copper mineralisation was encountered at Virginia the results were generally disappointing.

Mt Russell EL27369

A summary of the first five years' exploration on EL27369 is detailed as follows:

After reviewing relevant literature and the additional interest in REE's during 2011, it was decided to follow up this previous work, and at the same time, hopefully generate a new target. Some of the reports on the Arltunga area documents the historic quartz veins, (<1m wide) which carry upto 40 g/t Au. Some of these veins and workings extend onto EL27369 near Claraville, but given their small size (<1m) and likelihood of being uneconomic, these were not followed up in any great detail.

The REE potential is highlighted by a report from Pontifex and Associates (1989), they describe three rocks and associated thin sections identified as Paradise Well 1, 2 and 3. No locations are given for these samples in this or the annual report it was appended too (Murrell, 1989). Pontifex describes the samples as being monazite rich (up to 40%) with significant allanite and magnetite. Monazite is also a source of REE and provides an interesting target to explore.

A total of 35 soils (PWS series) and 5 rock chips (PWR series) were taken during the second year. The soils comprised the -80mesh fraction from about 30cm depth. Soils were taken from roadside and across an east-west traverse amongst the granites. The samples were then sent to the ALS sample preparation facility in Alice Springs. The rocks chips comprised mostly samples seen from alongside the road cutting, they were not in situ, but had probably been exposed and transported a little during the track building. Some mapping and traversing with a scintillometer was undertaken.

Twenty-three new soil samples were taken across the central area of the tenement. The aim was to confirm the second year results and provide greater detail. Most of the outcrops in the survey were identified as gneiss and amphibolite. Additional work was completed by acquiring new magnetic and radiometric airborne data. The survey was undertaken by Daishsat Pty Ltd and processed by Baigent Geosciences Pty in May 2012. Flight lines were 100m spaced along a 135/315 flight line.

Late in the third year of the EL27369 license (2013) the tenement holders (Riding Resources Pty Ltd (50%) & Bralich Holdings (50%) entered into a joint venture agreement with DBL Blues PL which is a fully owned subsidiary of Core Exploration Pty Ltd ('Core'), with Core earning into the tenement. Core's exploration model for the broader Arunta Region (Aileron Province within EL 27369) is focused on the Iron Oxide Copper Gold (IOCG) potential of the area within the Proterozoic basement in line with the results of Geoscience Australia IOCG report (Schofield et al; 2013).

Core began it exploration program in year 4 on the tenement with reconnaissance fieldtrips to the area to access the Cu rock chip and soil anomaly at Paradise Well identified by the joint venture partners in years 2 and 3 of the license period. Core then organized Euro Exploration Services to undertake a soil sampling program over the identified Paradise Well target and extend the survey into the surrounding area. A total of 314 soil samples were collected generally at 100m spacing with a 50m spacing central section at the Paradise Well Prospect. The samples were assayed for Ag, Cu, Pb and Zn.

Core then engaged a contract geologist to map at prospect scale the Paradise Well Prospect and rock chip sample the area to access its Cu-Au potential. A total of 42 rock chip samples were collected sampling both observed mineralisation and the variations in rock type. After the contract mapping had been completed Core reassessed results at Paradise Well and interpreted the Paradise Well Prospect to be formed from remobilization of copper along structures as demonstrated by the copper being commonly found with fractures or with late stage silica rich melts within the structural trend. The contract geologist report also briefly touched on mineralisation south of Hale River which is also thought to have formed during a similar or equivalent remobilization event.

Core followed up this work with further rock chips and soil sampling over a broader area encompassing the Paradise Well – Hale River region. A further 27 rock chip samples and 134 soil samples were collected. Two new areas of observed malachite mineralisation were identified. The first loosely termed Paradise Well South follows a NE-SW striking trend with malachite associated with coarse (2-3mm) garnets, commonly within a micaeous schist. This target is once again interpreted to be formed as a result of late stage copper remobilization along an existing NE-SW striking structural zone (Figure 3). The second new target, loosely termed (‘New Paradise Well’) comprises a NW-SE striking, generally <1m wide, very coarse garnet (4-5mm) + quartz ± carbonate unit with abundant malachite grading up to 6.16% Cu with 0.84g/t Au. The unit sporadically outcrops of approximately 150m and has at least one local repetition striking parallel approximately 15m to the south possibly due to a faulted offset. This malachite rich unit is found within foliated amphibolite and is thought to represent a metamorphosed primary mineralized layer, possibly with a calc-silicate or skarn related proto-lith. Core believes this is an encouraging discovery increasing the prospectivity of subunits within the commonly outcropping amphibolites within the tenement.

During year 4 of the license Core has collected 72 rock chip samples and 449 soil samples within EL27369. Core has identified four separate copper bearing (malachite) at surface prospects. Three of these occurrences are interpreted to be the result of a late remobilization of copper rich fluid along existing structures whilst the forth occurrence is interpreted to be a metamorphosed primary mineralized lithology/layer within a foliated amphibolite.

Whilst in isolation these occurrences appear to be small in scale their relatively small distance to each other coupled with the interpretation that three of them formed during remobilization of copper rich fluid, means the area remains prospective for a currently unknown larger scale mineralized body or bodies. The ‘New Paradise Well’ discovery of Cu ± Au within mineralized unit(s) within a foliated amphibolite increases the prospectivity of the amphibolites within the region. Whilst little direct evidence of IOCG style alteration or mineralisation has been identified to date within EL27369, Core’s initial prospecting and

sampling has identified previously unknown copper occurrences making it still a priority Cu + Au tenement for the company.

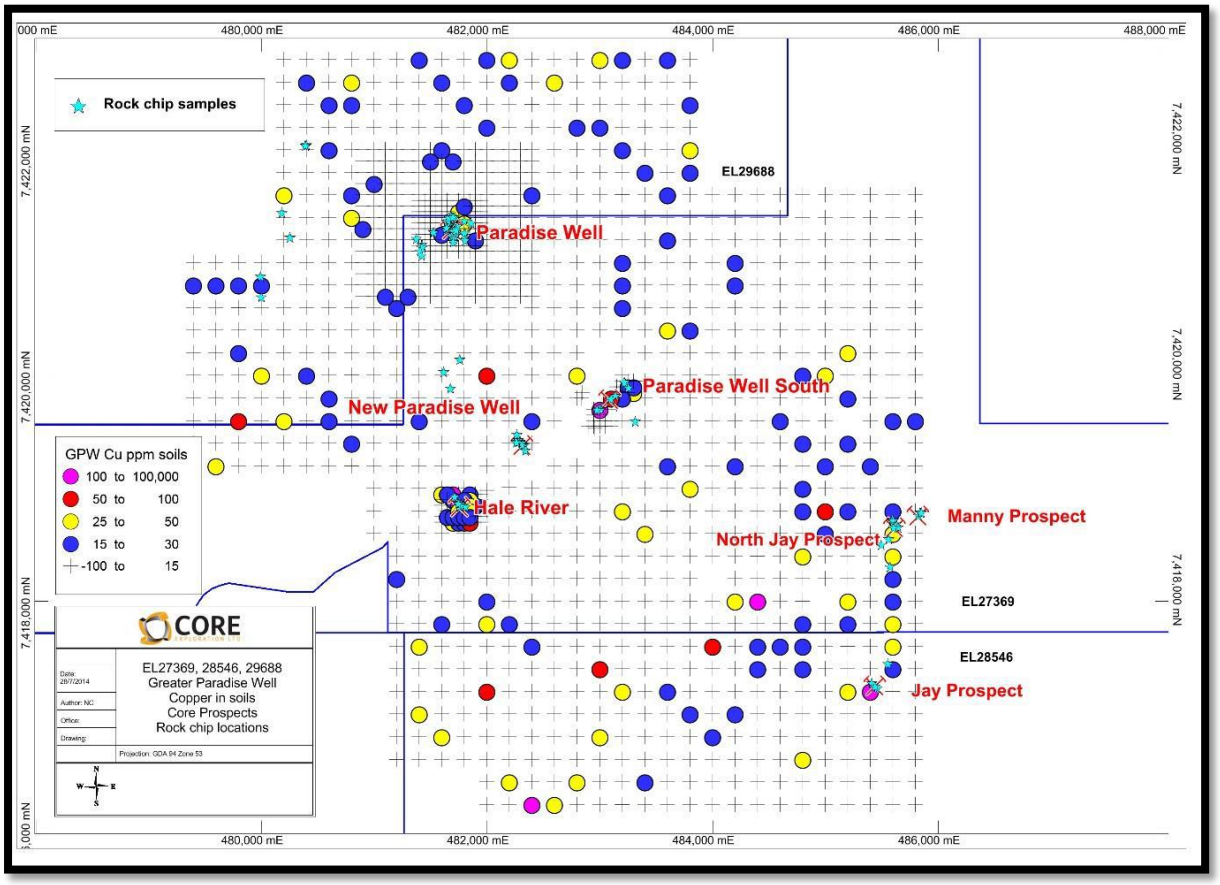

Figure 5.4: Copper in soils at the Greater Paradise Wells Project

Blueys Folly EL 28029

Bluey's Allanite Prospect (also known as Bluey's Folley) is located in the middle of EL 28029. An area about 2.5 x 3.0 km was identified where pegmatite and amphibolite units have unusually high abundances of allanite. In CR1988-0452, a non-JORC resource estimate of 200,000 tonnes at >1 % allanite, or several million tonnes at >0.4 % allanite is reported. Allanite is an important source of REE at Arafura Resources' Nolans Bore Project.

The archive information about Bluey's Allanite Prospect is very patchy. There was clearly a lot of work preceding the first report about the prospect (CR1988-0452). There are reams of very detailed information, including two comprehensive CSIRO reports about the mineralogy (S-series of rock chips; includes probe work), but basic information, such as sample locations and useful maps, is limited. A number of samples are described in these reports as carbonatites. The only data for the area in STRIKE are the stream sediment samples, although widespread and detailed rock chip sampling and Airtrack (34 holes REAT-1 to -34), RC (26 holes RERC-1 to -26), RAB and diamond (1 hole REDDH-1) drilling were completed.

Mr Pu Yuan completed his PhD thesis in 2002 at James Cook University; A study of allanite mineralogy and mineralisation in Bluey's Folley, Arltunga area, Central Australia (supervisor Professor PJ Stevenson). The thesis is listed on the JCU library website. None of Pu's work is

in the historic report archive except for three 1:500-scale geology maps covering Bluey's Folley (CR1990-0005; Section 35). The maps show the detailed geology, but also the location of rock chip samples (D-series) and RAB drill holes (RAB08-24). Unfortunately the map has a local grid, but given the amount of detail it would be possible to relocate the map and recover the data. Moreover, if the local grid can be reclaimed into UTM then much of the previous work could be reclaimed.

The ASTER multi-spectral imagery does not show anything distinct in any channel for the general Bluey's Allanite Prospect, though this should be revisited once the actual mineralised outcrops have been located.

During the Year 4 2014 reporting period Core acquired 100% ownership of EL28029 from the joint venture partners Gempart Pty Ltd. Core also had a partial relinquishment of 18 blocks of EL28029 during the reporting period. Core assessed the exploration potential of the tenement utilizing ASTER data and other regional datasets assessing the uranium allanite potential as well as its potential for Pb-Zn mineralization within intensely deformed Bitter Springs Formation. A reconnaissance field trip was undertaken to assess the Blueys Folley Allanite prospect. Core's determination is that the allanite prospect is currently not a high priority.

Comments from Core's Exploration Manager after his visit to Blueys Folley were; Colin Skidmore visited the Blueys Folly Prospect area during the reporting period. Impressions were not particularly positive with only scant outcrops of an altered pegmatitic allanite bearing granitoids in contact with amphibolites and calc-silicate facies that no doubt host the REE mineralisation. There was little evidence of historical work aside from small pad earthworks that probably relate to the early drilling (reported as 34 airtrack holes, 26 RC holes and 1 diamond hole). At this stage it is difficult to contemplate doing anything with this project especially in this commodity space.

Brumby Dam EL 29304

The eastern part of EL29304 was held by PNC Exploration under EL 7990 from 1993 to 1996. PNC explored the tenement for uranium and flew airborne radiometric surveys with ground follow-up of anomalies. The Brumby and Bantam prospects (Bantam is within EL29304) were discovered and tested by rock chipping and some trenching.

Historical exploration by PNC Exploration (Australia) Pty Ltd, in 1995, at the Bantam prospect identified rock chip samples of up to 46% uranium along with highly elevated REE's and base metals. These results are worthy of follow up exploration.

Recent exploration in the area has been conducted by Newera Uranium Ltd on ELs 25169 and 25700, Uranium Oil and Gas on ELs 25329 and 25894, and Iron Mountain Mining Ltd on ELs 28217, 28228 and 28228.

EL 25700 covered the Brumby uranium prospect and little work was done on it during its tenure. EL 25329 covered the same ground as EL 29304; it was also explored by Uranium Oil and Gas (United Orogen) with results recorded as not encouraging.

Iron Mountain Mining Ltd held three tenements (ELs 28217, 28227 and 28228) surrounding but not covering the Brumby uranium prospect. No field work was carried out on these tenements.

Within EL29304 only rock chip samples collected by PNC Exploration are captured in the publically available rock chips database.

During the second year of tenure, 27th August 2013 to 26th August 2014, Core Exploration as managers of EL 29304 completed a thorough review of historical exploration work previously completed within the Brumby Dam tenement.

CXO continued to undertake desktop assessments of EL29304 to ascertain its likelihood to contain IOCG style affinities to determine if undertaking exploration strategies (soil sampling, rock chip sampling and ground reconnaissance) could be effectively used within EL29304. These exploration tools have been used within Core Explorations adjacent Greater Paradise Well Project and have identified a number of previously unknown copper occurrences in the area.

EL 29667 & 29668

The earliest modern exploration in the area was conducted on EL49 by Centamin Ltd during the early 1970's. Alcoa Australia explored the Hale River Basin from 1979 to 1983 under EL1860. Exploration was undertaken for roll-front uranium deposits (Howard, 1980 and 1981). Some zones of uneconomic uranium mineralisation were discovered but they are located outside of EL29667.

EL3558 was held by Uranerz Australia during 1982. Some reconnaissance work was done for uranium within the strongly sheared retrogressed zones in the basement, no anomalies were found (Booth et al, 1983).

EL4674 was explored from 1985 to 1989. Exploration for gold was undertaken by two local prospectors (G. Bohning and E. Bowman). Initial work included prospecting and metal detecting (Carthew, 1986). Further prospecting of the Cavenagh Range area was undertaken during the second year. The John Bull prospect was also visited and sampled (Carthew, 1988). A drilling programme was undertaken in late 1987-early 1988 to test the Pattersons Gully (John Bull) prospect and the Cavanagh Range/Whites Gully area (Murrell, 1988). Thirty seven RC percussion holes were completed. The best results were from hole PG-3 at Pattersons Gully with 3m at 1.9g/t Au from 46m downhole. This hole also had elevated base metal values (Pb up to 0.11%). No work was undertaken in the final year and the EL was surrendered (Murrell, 1989).

EL5100 was held by Conapaira Metals. Some reconnaissance activities were carried out during 1988 but nothing substantial was achieved (Garside, 1988).

Ramsgate Resources explored EL5486 during 1988 (James, 1988). Some rock chip sampling was completed however Ramsgate concentrated their activities on the Mordor Complex.

EL5809 was explored by White Industries from 1988 to 1990. Stream sediment sampling (-80#, heavy mineral and BLEG) was undertaken but the results were disappointing. Some reconnaissance rock chip sampling also proved discouraging (Stidolph, 1989).

In 1990 White Industries was granted EL6596 which covered the same ground previously held under EL4674. A field inspection of the Cavenagh Range area was carried out, however the most prospective ground was held under claim and the EL was surrendered (Murrell, 1991).

Shandona Pty Ltd (Alice Springs prospectors) held EL8785 from 1996 to 1998. Some stream sediment samples were collected and panned for gold with poor results. The reports on this work were not available.

CRA Exploration explored the Mordor complex under EL9371 from 1995 to 1997. CRA followed up a GEOTEM conductive anomaly near the fault contact between basement and Heavitree Quartzite (McCoy et al, 1997). Limonitic float in the vicinity returned 0.12% Cu. CRA postulated that the anomaly might be related to mineralisation within the Amadeus Basin sequence (Bitter Springs Formation). No further work was done.

EL22625 was held by Tanami Exploration from 2001 to 2005. Little exploration was carried out by Tanami during this period. Minor rock chip sampling was carried out during a visit to the John Bulls Surprise gold prospect. The best result was 3.5g/t Au from a sample of the mullock (Rohde, 2005).

Cullen Resources undertook some reconnaissance work in the area during 2008 under EL25620. The Pattersons Gully prospect was visited and rock chip samples collected which returned low values for gold – maximum 45ppb Au (Hamilton et al, 2008).

Core Exploration completed a thorough review of historical exploration work on the Riddock tenement during the 2013-2014 reporting period in conjunction with EL 27709. The Arltunga-Winnecke Goldfields have been extensively explored for gold by various companies, including well-funded modern gold explorers Normandy NFM and Tanami Gold. The gold at Arltunga and Winnecke is contained within massive white quartz veins which contain pyrite and rare chalcopyrite. The veins are hosted by various rock units in the Arunta basement and overlying Amadeus Basin. Their emplacement has been interpreted to be related to the ca.320 Ma Alice Springs orogeny. These auriferous veins extend beyond and between the two known goldfields, including at Pattersons (also known as John Bulls Surprise). The greatest problem with this gold system is the extreme variability of results from the same vein and between adjacent prospects. Rock chips from known prospects can frequently return >10 g/t Au, but drilling results have consistently failed to return economic grades and widths, despite intersecting the veins.

Core Exploration undertook a detailed review of GIS datasets and mineral potential modelling based on epigenetic vein hosted gold systems. A number of geological features were identified has potentially having an important role in the development of gold bearing epigenetic quartz veins:

- North-easterly structures
- Retrogressive alteration

- Outcropping quartz dominant vein systems
- Contacts between the Heavitree Quartzite and Palaeoproterozoic basement
- Zones of dilation along regional structures including inflections and fault jogs
- Zones of demagnetization associated with retrogressive alteration

Each of these features were identified within various datasets (Landsat, Google Earth, regional magnetics, Aster data) and incorporated into a mineral potential model within the company's GIS system. Each geological feature was given a weighting according to how likely it is to influence the development of the targeted epithermal quartz veins.

A comparison was then made between know occurrences of epithermal gold mineralisation, elevated gold in rock chip samples from previous explorers and the geological environment as determined from the interpretation exercise. The results indicated a number of areas that were previously unidentified as target areas for further work including soil sampling, rock chip sampling and mapping. No field work was undertaken by CXO.

EL's 28852, 28853, 28854 & 29687

Stockdale Prospecting (SPL) systematically drainage sampled central Australia from 1969 - 1973 including EL 29687. No kimberlitic indicators or diamonds were recovered. However, in a neighbouring tenement a geochemical split (BCO 1735) collected from a tributary of Oneva Creek assayed 4ppb Au. The next immediate drainage to the east, Cadney Creek, was also highly anomalous for gold with results of 383, 57 and 25 ppb Au returned. These samples were subsequently resampled by SPL in 1992.

EL 110 was granted to Russgar Minerals in 1973. Russgar Minerals mapped the area (1:26,000 airphotos) and conducted an aerial "mercury sniffing" geochemical survey over a large area of Harts Range delineating nine areas of elevated mercury readings.

Hillrise Minerals joint ventured EL1802 to CRAE in 198, who conducted a drainage sampling program over a 20km by 10km area commencing from Mt Campbell in the east to Blackfellow Bones Bore in the west. Thirty-five (35) active creek alluvium samples were collected, observed for KIs, assayed for 14 elements for a best result of 55ppm Cu, 60ppm U (822132) and 20ppm W (822080).

White Industries (WIL)/ BHP were granted EL 2648 in 1982 over an area also covering EL 29687. In the region of the current tenement ten (10) drainage samples were collected (RTO955 to 964). Five (5) samples were observed for KIs and assayed for As, Ce, La, Ba, Nb, Zr, Cu, Pb, Zn, Co, Ni, Cr. No anomalous results were reported.

Huntings carried out a photo-interpretation of EL 2648 identifying five circular features of possible kimbertitic origin. Heavy mineral sampling of EL 3498 (includes lower reaches of Anamarra Creek) by Negri River Corporation (NRC) from 1982 to 1985 positively identified several KIs from initial sampling downstream of EL 28853.

Unfortunately, a twenty-two (22) sample follow-up program was unable to repeat the positive results of the initial program. Likewise, minus 80 mesh geochemical splits returned highly

anomalous gold assays from two localities downstream of EL 28853, namely SNG 3 (0.216ppm Au) and ONG 5 (0.16ppm Au), which also proved unrepeatable.

EL 6013 was granted to G K Bogie in 1989, centered on Cattlewater Pass covering EL 29687. Bogie conducted a gyrocopter drainage sampling program over extremely rugged inaccessible terrain collecting fourty-seven (47) samples from the 28852 licence area i.e. Ongeva and Oneva Creek drainages. The following field season Bogie contracted the late Dr Burton Murrell to conduct an 'overbank silt' drainage sampling program, a technique Dr Murrell was pioneering in the Alice Springs region. Eleven (11) overbank samples (648 – 658) were collected from drainages within the licence area of 28852 returning AAS Cu assays of 50 – 70 ppm. Interestingly, Bogie drainage sampled Cadney Creek (25km east of EL 29687) delineating a weak gold anomaly i.e. WH608 (0.008), WHHA (0.006), WH11b (0.006), WHHC (0.006), and WH11D (0.001) ppm Au contrasting starkly with the bonanza values obtained by SPL 20 years previously.

In 1992 Clarence River Finance P/L prospected the area north of EL 29687, and rock chip sampled the Camp Hill Copper deposit, and three other copper shows trending south-southeast away from Camp Hill (EL 6941). They also prospected Mt Johnstone (Ciccones Find) Samarskite bearing pegmatite (24m x 7m), which is anomalous in REEs, U, Nb, Th, Ta and Ba.

Also in 1992, the late Dr Burton Murrell of Saturn Resources was granted EL 6899 conducting an extensive overbank drainage sampling program including thirty-four (34) samples from the southern drainages of EL 28854 (samples 592, 617 - 619, 621 - 627, 701 - 717, 722 – 724). Gold assays ranged from 0.001 to 0.003 ppm while copper values varied from 30 to 90 ppm.

During 1993, Bogie/Murrell rock chip sampled a 'magnetite gossan' located approximately 6km south-southeast of the western boundary of EL 29687 (EL 6013) which assayed 0.028ppm Au (CP223A). Normandy Exploration heavy mineral sampled 17km of Anamarra Creek, draining Mt Johnstone to the Plenty Highway, and traversing north of EL 29687. Fifty-three (53) samples were collected in 1994 and were observed for KIs from disproportionally large high grade metamorphic terrain concentrates for negative results (EL 7932).

Pasminco were granted EL 8787 in 1995 over the Cadney Creek catchment including the EL 29687 tenure area. A 200 metre line space AMAG geophysical survey was flown over the licence area on north-south orientated flight lines, with an altitude of 80m. Late stage northeast - southwest trending cross faults are prominent magnetic linears within the overall dataset, increasing in both intensity and frequency towards the Copper Queen copper deposit located slightly to the north of the 8787 licence area. A total of twenty-two (22) minus 80 mesh drainage samples were collected, nine (9) of which (133247 to 133250, 133358, 133059, 133060, 133083 and 133087) are located within EL 28852.

EL 22292 was granted to Oneva Exploration P/L in 2001 who prospected the area around EL 29687, including the southeast trending Cadney Fault zone, discovering multiple occurrences of hitherto unknown malachite - dominated copper mineralisation (25 localities). All localities were rock chip sampled (158) and three (Dianas Block 1, Rip Hill and Bikini Basin) were soil sampled (73). Interestingly, Dianas Block 2 to 8 is a continuum of copper (± gold)

mineralisation/alteration trending northeast for approximately 2km, hosted by quartz-magnetite iron formation enveloped by magnetite schists. Dianas Block 2 was tested by two RAB drillholes with drill hole depths of 43m and 42m respectively, returning no elevated copper values. Likewise, Dianas Block 8, was tested by two RAB drillholes with drill hole depths of 27m and 35m respectively, again no elevated copper geochemistry was returned. The Corner Post Hill prospect was tested by a single RAB drill hole (34m) twenty-seven (27) samples were assayed for Au, Cu, Pb, Fe, Bi, K, Mg, Na, Ti. No elevated values were returned.

Tanami Gold (TGNL) moved into the Harts Range area in 2002. EL 10078 was pegged over the Copper Queen copper workings located approximately 8km east of EL 28852. TNGL believed Harts Range was potentially prospective for Selwyn-type Cu-Au and/or Coronation Hill-type Au – PGE mineralisation, primarily based on Au-Cu-PGE mineralised carbonate veins discovered at the Kongo prospect, 12km west of Copper Queen by PNC in 1996. TGNL collected fifty-three (53) rock chip, fourteen (14) lag, 1597 soil, and eighty-three (83) drainage samples. 230 RAB drillholes were also collared and drilled for a total of 6,843m. 2613 drill spoil samples were assayed. The geochemical sampling program delineated a 20km x 15km area of geochemical anomalism structurally constrained by the northwest - southeast trending Florence Creek Shear Zone, and the east - west Copper Queen trend.

During 2003 detailed analysis of hyperspectral data over Riddock Amphibolite (765Ma) within EL 10078 was completed using the Hymap Thematic mapper airborne remote sensing system. The 'mineral mapping' was useful for delineating ultramafic plugs ± PGE mineralisation, carbonate/chlorite/muscovite alteration ± Au associated with retrogressed shear zones common throughout Harts Range area. Also, anthophyllitic units which commonly host Cu - Zn - Pb - Ag- Au mineralisation, gossanous zones ± Au and basemetals.

Core Exploration commenced a thorough review of historical exploration work completed within EL 29687, as part of the companies “Riddock” tenement package during the 2013-2014 reporting period, in conjunction with Joint Venture tenement EL 27709.

The Arltunga-Winnecke Goldfields have been extensively explored for gold by various companies, including well-funded modern gold explorers Normandy NFM and Tanami Gold. The gold at Arltunga and Winnecke is contained within massive white quartz veins which contain pyrite and rare chalcopyrite. The veins are hosted by various rock units in the Arunta basement and overlying Amadeus Basin. Their emplacement has been interpreted to be related to the ca.320 Ma Alice Springs orogeny. These auriferous veins extend beyond and between the two known goldfields, including at Pattersons (also known as John Bulls Surprise). The greatest problem with this gold system is the extreme variability of results from the same vein and between adjacent prospects. Rock chips from known prospects can frequently return >10 g/t Au, but drilling results have consistently failed to return economic grades and widths, despite intersecting the veins.

Core Exploration completed a detailed review of GIS datasets and mineral potential modelling for CXO’s Riddock tenements based on epigenetic vein hosted gold systems but did not undertake any field work.

6 EXPLORATION WORK 2015

During the 2015 reporting period very little field work was undertaken on the Albarta North Project.

One 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. Even though the study was scheduled for completion in July 2015 much of the originally proposed work was not undertaken and to date the company has only received a draft report of Dr Austin's work which is included as Appendix 1.

Ongoing review of exploration potential and prospectivity. CXO has decided to become more active in the lithium commodity space and in particular considers the pegmatites of the Arunta Block prospective.

7 CONCLUSIONS & RECOMMENDATIONS

Very little work was done in the reporting year on the Albarta North Project as the focus of activity was Jervois and other company tenure. 2015 was a particularly bad year for investor sentiment in the mineral exploration sector. Subsequently seven of the fourteen tenements have already been relinquished and one of the remaining has been reduced by 50%.

The work undertaken by CSIRO as part of the Research-in-Business collaborative study has unfortunately not contributed much to advance the Albarta North Project. In part this was due to internal issues, including poor communication, within the CSIRO Group.

It is anticipated exploration work will recommence on GR359 during 2016 and will likely include soil geochemistry and geological mapping to assess targets identified by the CSIRO study and assist generating new targets. As discussed above, CXO will have a focus on the lithium potential of the Arunta pegmatites.

8 REHABILITATION

No ground disturbing work was undertaken in the reporting period on GR 359.

Ongoing 3-monthly photo monitoring of the RC drilling at Mt Riddock was completed and the final closure report for EMMP 8010-01 was submitted on 29th October 2015. Unfortunately, whilst all rehabilitation work had been completed in accordance with the EMMP, the landholder has installed a water bore and significant infrastructure over and around VGRC002's collar without the consent of the company.

After considerable negotiation with the Groundwater Management Group of NT Department of Land Resource Management and the Landholder, the landholder has confirmed he will take full responsibility and ownership of the water well. It is thus expected EMMP 8010-01 will be closed and the security bond refunded to CXO.

9 YEAR THREE (2015) EXPENDITURE

Admissible Expenditure	27369	28029	28546	28852	28853	28854	29280	29304	29667	29668	29687	29688	29689	30793
Status	Held	Partial Surrender	Full Surrender	Full Surrender	Full Surrender	Full Surrender	Full Surrender	Held	Held	Held	Full Surrender	Full Surrender	Held	New
Reporting Period	01/02/2015 – 31/01/2016	01/02/2015 – 31/01/2016	01/02/2015 – 13/09/2015	01/02/2015 – 05/02/2016	01/02/2015 – 05/02/2016	01/02/2015 – 05/02/2016	01/02/2015 – 12/08/2015	01/02/2015 – 31/01/2016	01/02/2015 – 31/01/2016	01/02/2015 – 31/01/2016			01/02/2015 – 31/01/2016	21/10/2015 – 31/01/2016
A. Geological Activities and Prospecting	-	-	-	-	-	-	-	-	-	-	-	-	$2,904	-
B. Geochemical Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C. Geophysical and Remote Sensing Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D. Drilling	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. Bulk Sampling and Earthworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F. Rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-	$3,900	-
G. Pre-feasibility inc. Metallurgical and Environmental	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H. Office Studies	$6,000	$5,742	$3,470	$1,982	$2,748	$1,347	$1,362	$13,983	$5,128	$2,218	$257	$188	$13,397	$2,948
I. Overheads (not to exceed 15% of the sum of A to H above)	$900	$861	$521	$297	$412	$202	-	$2,095	$769	$333	-	-	$3,030	$442
J. (Preliminary Exploration – Yr 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K. Total Expenditure Claimed	**$6,900**	**$6,603**	**$3,991**	**$2,279**	**$3,160**	**$1,564**	**$1,362**	**$16,078**	**$5,897**	**$2,551**	**$257**	**$188**	**$23,231**	**$3,390**
L. Covenant for this reporting period	$25,000	$60,000	$25,200	$27,600	$11,850	$15,000	$51,000	$12,750	$20,700	$11,400	$15,300	$8,400	$35,700	$11,000

Table 8.1: GR 359 Expenditure Details for the 2015 Reporting Period

10 REFERENCES

BARTRAM, G.D., 1985. Astron Resources Ltd. *Oongalabi regional heavy mineral investigation – Exploration Licence 4462.* NTGS Open file report CR1985-0260.

CLARENCE RIVER FINANCE GROUP, 2000. *Final Report – Exploration Licence 9420 – for the period to 6/7/2000.* NTGS Open file report CR2000-0331.

HUSSEY, KJ. 2003. Rare earth element mineralisation in the eastern Arunta Region. Northern Territory Geological Survey Record 2003-004

MACCULLOCH, I.R. AND NEILSEN, K.I., 1983. Kinex Pty Ltd. *Annual and final report – Exploration Licence 1337.* NTGS Open file report CR1983-0338.

MAIDMENT, D.W., HAND, M., WILLIAMS, I.S., 2005. Tectonic cycles in the Strangways Metamorphic Complex, Arunta Inlier, central Australia: geochronological evidence for exhumation and basin formation between two high-grade metamorphic events. Aust. J. Earth Sci. 52, 205–215

MITHRIL RESOURCES LTD., 2012. Inferred Mineral Resource Estimate for the Basil Copper–Cobalt Deposit. ASX Press Release (21 March 2012, 5 pp. (http://www. mithrilresources.com.au)

MURRELL B. 1988. Annual Report – Exploration Licence 4674 – for the period 21/2/1987 to 20/2/1988. NTGS Open file report CR1988-0070.

MURRELL B. 1989. Report on Exploration Activities EL4850, 29 October 1986 to 28 October 1989 (Final Report)

ROHDE, C., 2004. Tanami Gold. Partial Relinquishment Report – Exploration Licence 22917 – Eldorado –for the period 10/7/2002 to 9/7/2004. NTGS Open file report CR2004-0504.

ROHDE, C., 2005. Tanami Gold. Final Report – Exploration Licence 10078 – Mount Riddock – for the period 5/9/2001 to 4/9/2005. NTGS Open file report CR2005-0445.

RUSSGAR MINERALS NL, 1973. Oonagalabi Copper-zinc prospect – stage one exploration programme. NTGS Open file report CR1973-0067.

SCRIMGEOUR IR, 2013. Chapter 12: Aileron Province: in Ahmad M and Munson TJ (compilers). 'Geology and mineral resources of the Northern Territory'. Northern Territory Geological Survey, Special Publication 5

SCRIMGEOUR IR, 2013. Chapter 29: Irindina Province: in Ahmad M and Munson TJ (compilers). 'Geology and mineral resources of the Northern Territory'. Northern Territory Geological Survey, Special Publication 5

SHARRAD, K.A, MCKINNON-MATTHEWS, J, COOK, N.J, CIOBANU, C.L, HAND, M, 2014. The Basil Cu–Co deposit, Eastern Arunta Region, Northern Territory, Australia: A metamorphosed volcanic-hosted massive sulphide deposit. *Ore Geology Reviews* 56, 141-158

SKIDMORE C.P. 2014. EL 28029 Partial Relinquishment Report 14th August 2014. Core Exploration Ltd *Unpublished*

SKWARNECKI, M.S., 2004. *Oongalabi Base Metal Prospect, NT.* CRC LEME open file report 82.

WHITE INDUSTRIES/BHP MINERALS, 1984. *Final Report – Exploration Licence 2648.* NTGS Open file report CR1984-0102.

Yuan P. 1992. A study of allanite mineralogy and mineralisation in Blueys Folly, Arltunga Area, NT. PhD thesis at James Cook University , North Queensland.

ZHAO, J.-X & COOPER, J.A., 1992. The Atnarpa Igneous Complex, S.E. Arunta Inlier, central Australia: implications for subduction at an early-mid Proterozoic continental margin. *Precambrian Research,* 56, 227-253.