



ANNUAL TECHNICAL REPORT
Group Reporting GR 358
“ENTIA PROJECT”

01 January 2016 to 01 March 2017

Exploration Licences

29347,29389 & 29512

Yambla, Mt George, & Daicos

| | |
|-------------------|---|
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| Tenement Holders: | DBL Blues Pty Ltd (100%) |
| Tenements: | EL 29347, 29389 & 29512 |
| Reporting Period: | 01 January 2016 – 01 March 2017 |
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| Keywords: | Uranium, Amphibolite, REE |

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1 SUMMARY

This is the second Group Reporting of Core Exploration's (CXO) Entia Project (GR358) comprising three exploration licences (EL's 29347, 29389 & 29512) which are held 100% by DBL Blues Pty Ltd a wholly owned subsidiary of Ioration Limited. Each of these tenements are now in their fourth operational year. The previous report included Exploration Licence 29514 (Mt Emma) which has since been surrendered (November 2016).

Previously GR348 has been reported on for the period commencing 1 January to 31 December, this was amended in February 2017 allowing CXO to spread their reporting commitments over a three, rather than the existing two months prior.

In the current reporting period, the company did not undertake any new on-ground work in the project area, beyond a review of the project data by the new Exploration Manager. This resulted in the surrender of Exploration Licence 29514 reducing the project to three Exploration Licences.

2 INTRODUCTION

This report covers the second year of joint reporting of exploration activities completed within GR 358 "Entia" up until 1 March 2017. GR 348 comprises EL's 29347, 29389 & 29512, which are all in their fourth operational year and now held 100% by DBL Blues Pty Ltd.

GR 358 is located within the Illogwa Creek 1:250,000 sheet (SF5315) and Quartz 1:100,000 sheet (5951).

The previous report included Exploration Licence 29514 (Mt Emma) which has since been surrendered in full (November 2016).

Previously GR348 has been reported on for the period commencing 1 January to 31 December, this was amended in February 2017 allowing CXO to spread their reporting commitments over a three-month period, rather than the existing two months.

The project is located approximately 140 kilometres northeast of Alice Springs, midway between the Harts Range and Illogawa Creek. Light vehicle travel time to the area is just under 2.5 hours from Alice Springs (Figure 2.1) via the Ross Highway, through the Arltunga Historical Reserve to Ambalindum Station, past Claraville Homestead and then by station tracks.

Access within the project area is limited; the general area is hilly with only a few vehicle tracks available. The rivers are prone to flooding during heavy rainfalls over the summer months. Accommodation can be found at Ambalindum Station (approximately 1-hour drive from the project area). The climate is typical of central Australia, hot summers and mild winters.

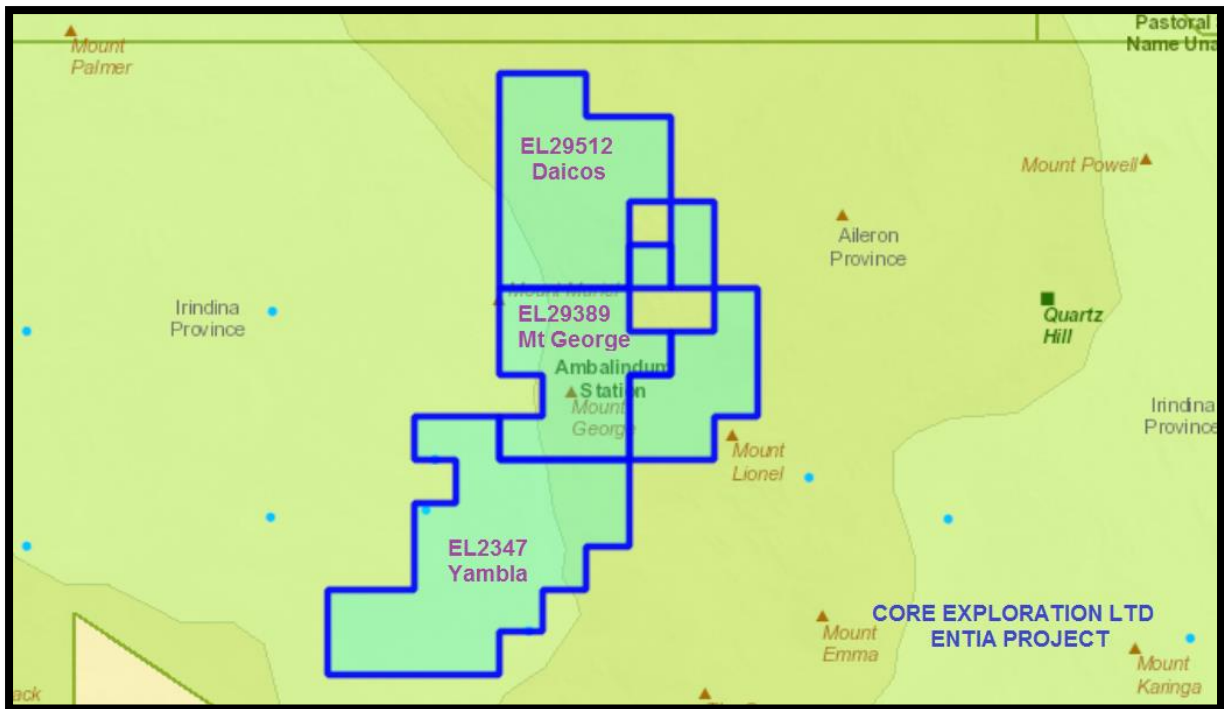


Figure 2.1: Location Map of GR 358 Tenure

3 TENURE

As listed in Table 3.1 the three tenements that comprise GR358 were granted to DBL Blues Pty Ltd a wholly owned subsidiary of CXO Exploration Ltd in 2012 and have just completed their fourth operational year.

| TENEMENT | HOLDER | GRANT DATE | BLOCKS | AREA (KM ²) |
|----------------|------------------------|------------|-----------|-------------------------|
| EL29347 | DBL Blues Pty Ltd 100% | 13/09/2012 | 24 | 75.71 |
| EL29389 | DBL Blues Pty Ltd 100% | 13/09/2012 | 13 | 41.03 |
| EL29512 | DBL Blues Pty Ltd 100% | 20/12/2012 | 26 | 82.10 |
| TOTAL | | | 63 | 198.84 |

Table 3.1: Tenure Details for GR358

4 GEOLOGY AND MINERALISATION

EL 29389 is located in the Proterozoic Aileron Province of the Central Arunta Region. The rocks here mostly comprise variably metamorphosed sediments, volcanics, calcsilicates, amphibolites and granite. The dominant late structures appear to trend NW.

Parts of the Project Area area are underlain by the Palaeoproterozoic Irindina Gneiss (schistose garnet-biotite gneiss; sillimanite gneiss; amphibolite; biotite gneiss) and Riddock Amphibolite (layered to massive amphibolite; minor garnetiferous quartzofeldspathic gneiss, garnet-biotite gneiss; rare sillimanite gneiss, hornblende or clinopyroxene-bearing plagioclase-rich gneiss) which forms part of the Aileron Province. The eastern portion of the area is underlain by Bruna Gneiss (porphyroblastic-feldspar granitic gneiss, granitic gneiss) and the Entia Gneiss (quartzofeldspathic gneiss with conspicuously interlayered amphibolite). Later ultramafic intrusives are major features on EL 29512 with significant ultramafic intrusives mapped at the western and eastern end of the tenements, intruding into the Aileron Province geology (Figure 4.1).

The Daicos Prospect, located within EL 29512, is a uranium and REE target hosted in pegmatites within the Aileron Province. The target was identified in the 2000's and has never been drilled. The Entia Dome has been identified as highly prospective for uranium mineralisation with four separate mineralisation styles identified. These mineralisation styles are; *Uraninite-style* which is characterized by macroscale uraninite nodules (i.e. Yambla); *Epidosite-type* which is microscopic uraninite coating epidote and quartz-apatite-sulphide pockets (i.e. Haddock, Midori, Swallow); *Retgressed-type* which is clay-silica alteration and *Pegmatite-type* which is commonly uranium and REE rich (i.e. Daicos) (Scrimgeour IR, 2011).

5 PREVIOUS EXPLORATION

Numerous old prospects (mica) occur within the area but little production of any worth has been recorded. BMR geologists prospected the area for uranium in the late 1940's and discovered minor high grade zones within pegmatites.

The earliest modern exploration in the area was conducted on AP 1991 by Placer Prospecting between 1968 and 1970. The work included scintillometer prospecting, stream sediment sampling for base metals and rock chip sampling. The target minerals were tantalite and rare earth elements. No economic mineralisation was discovered.

The area was explored for rubies and industrial minerals by Hillrise Properties/Mistral Mines between 1978 and 1983 under ELs 1801 and 1956. CRA Exploration conducted a stream sediment survey over these ELs in 1980 under a joint venture agreement with the tenement holder. Some significant anomalies were reported but there is no record of any follow-up being done.

Western Mining Corporation undertook exploration for diamonds in ELs 2657 and 3115 between 1981 and 1984. The catchment of Entire Creek was sampled and the results were disappointing.

Prospectors held ELs 4673, 6133 and 7914 over the area between 1984 and 1996. Most of the work undertaken was prospecting for gemstones and industrial minerals with little success.

Between 1993 and 1996 PNC Exploration (Australia) Pty Ltd undertook an extensive exploration program in the area for uranium. The Harts Range project covered nine exploration licences and field activities included airborne radiometric/magnetic surveys, ground spectrometer surveys, geological mapping, rock chip sampling and trenching. Seventeen prospects were subject to detailed work. The Yambla prospect on EL 7967 was tested with 22 trenches and 13 diamond drillholes. Results showed that although high grade uranium mineralisation occurred it was extremely poddy in nature and was not economic (Figure 5.1).



Figure 5.1: Example of uranite porphyroblast/concretion from PNC's Trench 4 at Yambla (UXA Structural Geology Report CR2011-1170). Note clay alteration/radiation damage surrounding crystal.

Hussey (2003) reviewed all of the rock chip assays from the PNC work. Significant values for uranium, thorium, barium, phosphorus, and rare earth elements were reported, some examples are shown in Table 5.1.

| Sample | Prospect | U% | Th% | P% | Ba% | Ce% | La% | Nb% | Y% |
|--------|--------------|------|------|-------|------|------|-------|------|------|
| 5566 | Brumby | 2.20 | 0.25 | 0.72 | 0.03 | 1.8 | 0.94 | 0 | 0.60 |
| 2168 | Holsteins | 0.05 | 3.90 | 3.00 | 1.00 | 12.4 | 7.25 | 0 | 0.05 |
| 1346 | Yambla | 66.1 | 7.05 | 0.29 | n/a | n/a | n/a | .35 | .24 |
| 3462 | Yambla | 0.03 | 0.55 | <0.01 | 0.02 | 4.52 | 3.07 | n/a | n/a |
| 5229 | Asp | 6.85 | 0.94 | 0.05 | n/a | 0.12 | 0.02 | 19.0 | 7.55 |
| 5237 | Cusp | 9.7 | 1.37 | 0.02 | n/a | 0.12 | ,0.01 | 22.4 | 6.95 |
| 1425 | Sitting Bull | 2.65 | 0.49 | 0.03 | 0.12 | 0.09 | 0.03 | 8.85 | 5.05 |

Table 5.1: Anomalous uranium and REE results at Yambla Prospect reported by PNC

The ground was further explored for uranium by Paladin Resources Ltd and Deep Yellow Ltd under EL 9890 between 2002 and 2007. Little ground work was done in the first four years of tenure. Deep Yellow completed a thirteen hole RC percussion drilling programme in 2006 in the Yambla area. No uranium mineralisation was intersected.

Between 2008 and 2011 Cullen Resources in joint venture with UXA Resources explored EL 26142 over the Yambla area. Stream sediments and rock chips were collected and a drill programme was proposed but never completed. Both companies also held tenements in their own rights but only desk top studies and minor reconnaissance work were completed (ELs 25716, 27850 and 27852). No significant new discoveries were reported.

Hale Energy Ltd held four ELs (24735, 24736, 24765 and 24766) in the Entia Dome region from 2007 to 2012. Detailed rock chip sampling, soil sampling and mapping were carried out over three prospects during the second year of tenure. Very high values were found in samples of pegmatite from the Daicos Prospect – Hale reported one sample with 19.4%U, 26.5%Nb, 6.2%Ta and 2.7%Y.

However further systematic sampling of the prospect in year 5 failed to replicate these high values. An airborne EM survey was conducted over portions of the Hale tenements in 2009. Some bedrock conductors were identified but no ground follow up has been completed.

Newera Uranium Ltd held EL 25674 and 26047 in the area from 2008 to 2009. A few rock chips were taken with poor results and the ground was dropped.

The recent announcements by Mithril Resources on their Huckitta project to the south east of the Entia Dome led to some increased interest in the area for base metals. Independence Group held EL 27646 from 2010 to 2012 however no work was completed except for a brief field visit. The mafic to ultramafic target lithologies were not sampled.

| Sample ID | Prospect | Observations | Au g/t | Ag g/t | Cu % | Zn ppm |
|-----------|-----------------------------|---|--------|--------|------|--------|
| 1245 | Boots | weathered qrtz + feld 2-5mm porphs in strongly foliated micaeous anastomosing fabric +- fe oxide + feld, with qrtz melt veining common, qrtz + bio wthered metasediment, 040/40W mineral aligned fabric | X | 0.3 | 0.08 | 131 |
| 1246 | Boots | adjacent to 1245, c.g 5-10mm yellow qrtz dominant pegmatite? With red brown staining? Fe oxide? REE? | X | X | 0.04 | 1 |
| 1247 | Boots | c.g biotite after pyx? Amph? 2-10mm + feld mafic, gabbro? | X | X | 0.01 | 116 |
| 1248 | Boots/ Irindina Mafic | biotite (after amp or pyx) f.g 1-2mm + qrtz + feld + fe oxides wthered red, no obvious fabric, amphibolite | X | X | 0.01 | 56 |
| 1249 | Boots /Irindina Mafic | east side of mafic body surrounded by garnet + qrtz porph metased, f.g biotite rich mafic high lusture with apparent mineral aligned, red wthered fe oxides, fabric 052/80W fracture fabric | X | X | 0.01 | 53 |
| 1250 | Boots | dirty hematite altered garnet + qrtz coarse grained up to 1cm + tourmaline granite melt, part fe gossaneous deep green amph + fe oxide + qrtz +- biotite | X | X | 0.01 | 653 |
| 1251 | Boots | green amphibolite + qrtz granite melt + fe oxides | X | X | 0.01 | 2149 |
| 1252 | Yambla | strongly sheared coarse up to 5mm bio (from pyx? Amph?) with qrtz melts, sheared gabbro, 008/50W mineral foliation | X | X | 0.01 | 137 |
| 1253 | Yambla | at possible old drill track, black high lustureous foliated 1-3mm biotite mafic, high lusture f.g biotite amphibolite | X | X | 0 | 133 |
| 1254 | Irindina Mafic | malachite staining + interstitial (possible chyrscicola) in qrtz dominant foliated granite, amongst amphibolite, isolated granite outcrop | 0.17 | 24.1 | 4.44 | 180 |
| 1255 | Irindina Mafic | f.g 2-3mm garnet porphs with biotite defined fabric +- qrtz +- feld, garnet mafic?, adjacent to micaeous metasediment with N/S striking fabric | X | 0.3 | 0.03 | 99 |

Table 5.2: Description and results of rock chip samples from within EL29347 collected in the 2014 reporting period

CXO undertook active exploration in the form of reconnaissance field trips to EL29347 to ground truth the Yambla uranium prospect, Boots Prospect as well as mapped Riddock Amphibolite or ultramafic within the Irindina Province. CXO was unable to locate any significant mineralisation at the reported location of the Boots Prospect with a best received rock chip assay grading 0.2% Zn. CXO's most encouraging rock chip result was 4.4% Cu, 0.17 g/t Au and 24.1 g/t Ag (sample 1254) from an isolated malachite bearing foliated granitic unit within the Riddock Amphibolite in the south-eastern corner of the tenement.

| Sample ID | Observation | Au ppm | Ag ppm | Cu % |
|-----------|--|--------|--------|------|
| 1256 | insitu malachite in garnet porph 2-8mm biotite micaeous metasediment with qrtz rich melts, mineral foliation 015/40W | 0.04 | 0.8 | 0.54 |
| 1257 | local float, azurite + malachite predominantly staining in micaeous black biotite + qrtz gneiss | 0.07 | 3 | 1.04 |

Table 5.3: Results of rock chip sampling on EL29389 in the 2014 reporting year

During the second year of tenure, 13th September 2013 to 12th September 2014, CXO Exploration as managers of EL 29347 completed a reconnaissance field trip within the Entia tenements, geochemical analysis of collected surface samples (rock chip), and completed desktop works including planning and logistics, data analysis, report preparation and exploration targeting.

During the reporting period CXO Exploration continued its review of the past exploration covering the Entia tenements with an assessment of the current mineralisation models applicable for the tenements geological setting. The Project covers the contact between the Neoproterozoic Irindina Province and the southwestern corner of the Entia Dome in the Aileron Province (Figure 5.1). Recent exploration successes within the Irindina Province have focused on the Cu - Ni ± Co potential within the Riddock Amphibolite as well as in post Cambrian undeformed ultramafic intrusives (Lloyd Gabbro) which intrude into the Irindina Province. A number of reported metal occurrences are located within mapped Riddock Amphibolite, including the Boots Prospect. CXO believes the Irindina Province Cu- Ni ± Co mineralisation models to be encouraging and decided to explore for this style within the Entia Project.

In March 2015, a field visit to the Yambla uranium prospect, where reconnaissance mapping, sporadic handheld XRF analysis of rock-chips and systematic handheld scintillometer readings failed to identify the historic anomalies even though evidence of the historic now backfilled and rehabilitated costeans was present.

6 YEAR FOUR EXPLORATION

During the 2016 reporting period, no ground-based work was undertaken on the Entia Project. Ongoing review of exploration potential and prospectivity was conducted by CXO's new Exploration Manager of the existing data held. CXO has decided to become more active in the lithium commodity space and has undertaken significant exploration in the Finnis project area near Darwin.

7 CONCLUSIONS & RECOMMENDATIONS

The historic uranium anomalies at Yambla are evidently difficult to replicate post-rehabilitation of the trenches and the metasomatic style does not relate to recognised significant uranium mineralisation styles such as sandstone-hosted or unconformity styles but are limited to small pegmatite and metamorphic/metasomatic occurrences. Globally there are currently no other examples where these styles of uranium mineralisation have been found to be economic with known resources invariably <1,000t U₃O₈ and occurring with only localised sporadic pods of higher grade (Dahlkamp 1991). The mafic amphibolite host is also not considered a fortuitous environment to host uranium mineralisation which is normally derived from felsic crustal material and it is considered its weak occurrence at Yambla relates to localised entrapment of highly-mobile uranium in the reduced amphibolite package which was regionally mobilised during deformation of the Arunta basement granites.

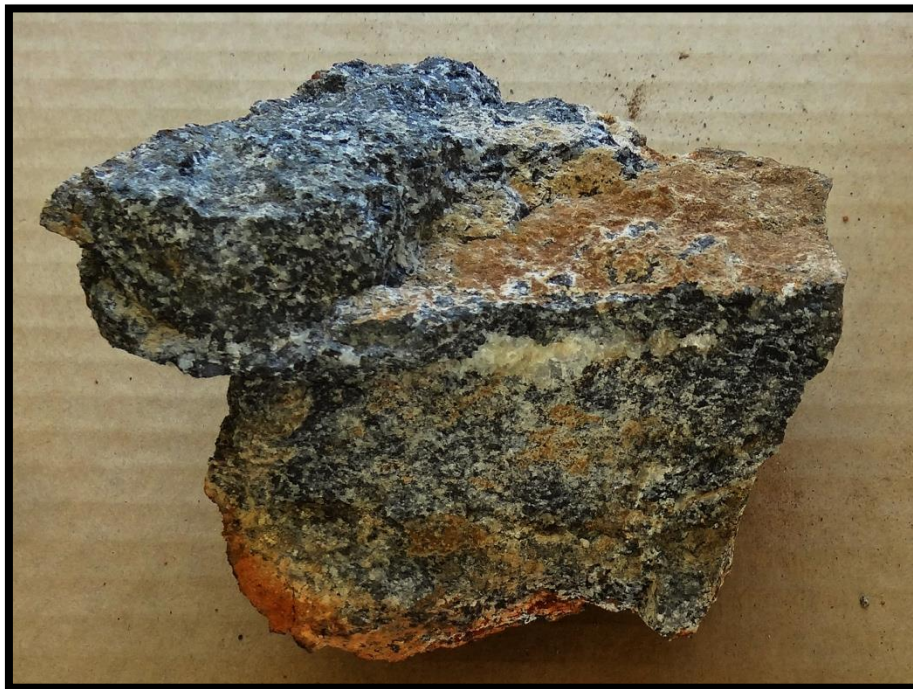


Figure 6.1: Altered amphibolite from Yambla Prospect

Given the extensive and evidently high quality exploration work by PNC, which discounted the economic potential of the metasomatic mineralisation, and the subsequent work by Deep Yellow which addressed alternative cross-cutting mineralisation styles it is currently not possible to recommend any sensible additional exploration work to immediately upgrade the uranium prospectivity of the Yambla prospect. The project is remote thus a reasonably sized target would be required to justify any exploration expenditure which this mineralisation style will simply not yield. Exploration in this terrain would be very expensive given the random poddy distribution of uranium mineralisation and no modern exploration tool will assist in its discovery aside from extensive very close-spaced, large-diameter drilling.

During 2017 CXO will assess the potential for lithium bearing pegmatites (LCT-type) and uranium in the Entia Project Area. CXO has noted an improvement in the uranium market, although not yet sufficient to warrant serious exploration. Pegmatites in the Entia District exhibit features that suggest they are fertile for lithium, but generally these features are weaker than observed at Finniss and Barrow Creek, where CXO has significant on-going exploration programs. CXO will continue its review of geochemical and remote sensed data for the Entia District and may undertake reconnaissance prospecting and soil/rock sampling as the opportunities arise.

CXO also notes modest improvement in the uranium market that may justify exploration at this project in the years to come.

8 REHABILITATION

No earth disturbing activities were undertaken within the tenements during the reporting period. No rehabilitation was required.

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