FINAL ANNUAL TECHNICAL REPORT
EL 28852
“GOUGH DAM”

6th February 2012 to 5th February 2016

Author: Colin Skidmore
Date: 3rd March 2016
Tenement Owners: DBL Blues Pty Ltd (100%)
Tenements: EL 28852
Reporting Period: 6th February 2012 to 5th February 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
Copyright Statement

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1 SUMMARY

EL 28552 Gough Dam comprising 36 graticular blocks is located between the Cadney Fault Zone (north) and the Mt Johnstone Fault Zone (south), two south east-trending, mantle-tapping structures traversing across the eastern Arunta Inlier. The licence area is dominated by Ongeva Granulite of lower Cadney Metamorphics assigned to the 1810 - 1790Ma Strangways Metamorphic Complex. The Ongeva Granulite is overprinted by late stage potassic alteration which may potentially represent a pathfinder to significant Cu-Au mineralisation within the licence area.

Tenure was initially granted to Gempart (NT) Pty Ltd in 2012 and CXO entered into a joint venture and became operators in late 2012. In 2014 CXO purchased EL 28852 outright from Gempart.

Exploration work over the life of EL 28852 has been limited to desktop studies with no fieldwork undertaken. After final review and in reaction to poor investor sentiment over the last twelve months the company has decided to surrender EL 28852 whilst it focuses on lithium and its Jervois Projects.

2 INTRODUCTION

This is the final report for exploration activities completed within EL 28852 “Gough Dam” between 1st February 2015 and 5th February 2016. EL 28552 is located within the Harts Ranges area and straddles the Laughlen (5751) and Riddoch (5851) 1:100,000 map sheets, and is located within the ALICE SPRINGS (SF53-14) 1:250,000 map sheet.

Access from Alice Springs is east via the sealed Ross Highway for 80km, then north on a tourist road for 40km to the Arltunga Historical Reserve where the road continues on to Claraville homestead. Continue 12km further north before swinging west along the flat lying Hale Plain for 11km where the turnoff north to Cattlewater Pass is situated on the north bank of the Hale River. The Cattlewater Pass track is rugged and steeply winds its way north westwards for 12km passing through the western side of the licence area providing the only vehicle access. The Cattlewater Pass track continues northward following Oneva Creek until merging with Blackfellow Bones Bore - White Hill Dam track, 40km east south east of the Plenty Highway. Vehicle access within the licence area is very limited due to the ruggedness of the terrain.
Figure 2.1: Location Map of EL 28852 Tenure
3 TENURE

EL 28852 was granted to Gempart (NT) Pty Ltd on the 6th February 2012. During the 2014 reporting period Core Exploration became 100% owner operators of EL 28852 after a purchase agreement with the former tenement owners. EL 28852 overlies pastoral leases Ambalindum (PPL 1124), The Gardens (PPL 1095) and Mt Riddock (PPL 995). Tenure details are tabulated below.

<table>
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<tr>
<th>EL</th>
<th>Owner</th>
<th>Date Granted</th>
<th>Year</th>
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<th>Area (km²)</th>
<th>Expenditure Commitment</th>
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<td>4</td>
<td>36</td>
<td>113.66</td>
<td>$27,600</td>
<td>Surrendered</td>
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</tbody>
</table>

Table 3.1: Tenure Details for EL28852

4 GEOLOGY AND MINERALISATION

The licence area is located within the southeast Arunta Inlier, a major ensialic Palaeoproterozoic to Mesoproterozoic mobile belt of multiply deformed polymetamorphic basement terrain covering 200,000 square km of central Australia. It differs from other north Australian Proterozoic inliers by intensity and frequency of apparent deformation, the high grade of metamorphism and the abundance of granite, it is thus more akin to mobile belts in southern Africa and the Baltic Shield. A tectonic setting of older 2.5-2.0 Ma continental crust, nowhere exposed, beneath Palaeoproterozoic rocks (1850Ma) is the current model. The overall style of deformation and subsequent basin development across central Australia is similar to other continental settings where thick-skinned deformation and rifted or sag continental basin development are the norm. The mobile belt evolved over 1500Ma commencing with mafic and felsic volcanism, mafic intrusions within a latitudinal rift, followed by marine deposition of shale and limestone, followed by subsequent deformation, metamorphism and emergence. Flysch sedimentation accompanied by volcanism continued within geosynclinal troughs flanking the latitudinal ridge of meta-igneous rocks followed by shallow-marine platform deposition, more deformation/metamorphism plus granitic intrusion all of which point towards a proposed extensional continental setting. Furthermore, the recent interpretation of geochemical and isotopic data, combined with remapping of mafic rock units, indicate an abundance of 1810 – 1800 Ma high level tholeiitic mafic intrusions with geochemical signatures representative of continental margin subduction or back-arc related magmatism.

The southeast Arunta region is assigned to the Aileron Province locally referred to as the Ongeva package (1810 – 1790) of which the Strangeways Metamorphic Complex (SMC) is the major outcropping unit within the ALICE SPRINGS map sheet. The SMC is bounded to the south by an apparently long lived zone of tectonism which trends east-southeast for approximately 140km and hosts the Winnecke goldfield, Aritunga Nappe Complex and White Range goldfield. SMC crops out northwards for 40km truncated by Florence Creek Shear Zone juxtaposing older SMC against 1765Ma Oonagalabi tongue rocks assigned to upper Bungitina metamorphics. The remaining northerly limit of exposed SMC forms a sheared
unconformable contact with 743Ma Irindina Province Harts Range Group Riddoch Amphibolite which trends west-northwest for approximately 60km before disappearing beneath onlapping Tertiary sediments of the Waite Formation.

The SMC is of unknown thickness (estimates from mapping of 5 to 15km) is a package of complexly folded Palaeoproterozoic mafic/felsic granulite and metasediments. Basement to the SMC is not exposed in the region and is unknown. However, age dating of intrusives indicate that most of the SMC is older than 1780Ma. Parts are deposited in a deeper water setting based on chrono-stratigraphic correlations with turbiditic Lander Rock beds in NAPPERBY (i.e. Pelites of Erontonga and Yambah granulites are deep-water mudstones and greywackes). The Utnalanama Zn-Cu prospect (formerly Phlogopite mine) located 30km west of EL28852, is an interpreted volcanic hosted massive sulphide deposit (VHMS) which also supports a mooted deep water depositional setting, occurring at depths of at least 1000 metres. Recent convention suggests SMC changes from a bimodal volcanic sequence upward to a pelitic succession overlain by siliciclastics and carbonates however, caution is warranted as many of the felsic/mafic extrusives appear to be intrusive. The presence of extrusive/pyroclastic volcanic rocks cannot be dismissed however; locally intrusive units are more common within the SMC.

Intense deformation, metamorphism and accompanying anatexis (partial-melting) have largely obliterated all primary sedimentary/igneous rock features. Additionally, the wall rocks of mineral deposits such as the Johnnies Cu-Au deposit were extensively altered prior to high grade metamorphism, and thus, generally protolithic rock-type classifications are educated guesses.

Locally, the license area is dominated by a complexly folded protolith felsic/basic volcanic pile assigned to the lower Cadney Metamorphics, 1810 - 1800 Ma. Magmatism was accompanied by compressional deformation interpreted as closure of backarc basin and subsequent development of a continental arc i.e. subduction zone setting. The dominant structural trend observed on Landsat 7 4 2 image is 305/125, the same orientation as the Cadney Fault retrogressive schist zone which forms a sheared/faulted contact with the Ongeva Granulite (i.e. the metamorphosed felsic/basic volcanics pile. The Mount Johnstone Fault follows a similar trend passing though the southwest corner of EL 28852 before swinging due east forming another retrograde schist zone. The dominant compressional orientation is NW-SE overprinting a secondary inferred compressional orientation of NNE – SSW, resulting in a classic refolded fold and interference pattern of discrete doming (i.e. inverted egg carton geometry). Hillsoak Bore metamorphics quartzofeldspathic/biotite schists and gneisses (extensively retrograded) are faulted against Ongeva Granulite trending southeast across the northern licence area.

The southeast trending parallel Cadney and Mt Johnstone Fault zones (approximately 12km apart) are deemed as long lived mantle tapping structures which have undergone several reactivations. Commencing initially with Yambah Event (1780 - 1770 Ma) and followed by the Strangeways Event

(1730 - 1690 Ma), the major event of eastern Arunta, terminating north dipping subduction/pervasive high grade metamorphism, W-Mo-Sn mineralising fluids, and gold mobilisation. The 480 - 460 Ma Larapinta Event (only recognised in Irindina), produced
granulite facies metamorphism accompanied by mafic/ultramafic plug intrusion in an extensional setting. The 450 - 300Ma Alice Springs Orogeny was a multiphase event which commenced with inversion of the Irindina Province and followed by thick skinned deformation and exhumation directed along major crustal scale structures (i.e. Cadney/Mt Johnstone Fault zones). This was accompanied by amphibolite facies metamorphism, felsic magmatism, the intrusion of voluminous pegmatite, accompanied by regional scale fluid flow responsible for widespread REE mineralisation and possibly the district-scale potassic alteration overprint of the Ongeva Granulite.

Figure 4.1: EL28852 on an extract from Alice Springs 1:250,000 Geology
5 PREVIOUS EXPLORATION

1969 - 79
Stockdale Prospecting (SPL) systematically completed drainage/stream sediment sampling within central Australia from 1969 to 1973. During their programs eleven active channel samples were collected from within EL 28854 and ten samples from within EL 28852. No kimberlitic indicators or diamonds were recovered however, a geochemical split from BCO 1735 collected from a tributary of the Oneva Creek draining within EL 28852 assayed at 4ppb Au. The next immediate drainage to the east, Cadney Creek, was also highly anomalous for gold with results of 383, 57 and 25ppb Au returned. These samples were, subsequently resampled by SPL in 1992.

EL 110 granted to Russgar Minerals in 1973 included the area of EL 28853. Russgar Minerals mapped the area (1:26 000 airphotos) and conducted an aerial "mercury sniffing" geochemical survey over a large part of the Harts Range delineating nine areas of elevated mercury readings.

1980 - 1988
Hillrise Minerals joint ventured EL 1802 to CRAE in 1981 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 active creek alluvium samples were collected, observed for KIs, assayed for 14 elements, and returned 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 which encompassed EL 28852 and EL 28854, from which ten (10) drainage samples were collected (RTO955 to 96), 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 within EL 3498 (including lower reaches of Anamarra Creek, draining catchment area of EL 28853) by Negri River Corporation (NRC) from 1982 to 1985 positively identified several KIs from initial sampling downstream of EL 28853. Unfortunately, a twenty-two sample follow-up program did not repeat the positive results of the initial program. Likewise, previous minus 80 mesh geological splits returned highly anomalous gold values from two localities downstream of EL 28853 (SNG 3: 0.216ppm Au and ONG 5: 0.16ppm Au) which also proved unrepeatable.

1989 - 1998
EL 6013 was granted to G K Bogie in 1989 centered on Cattlewater Pass covering the western half of EL 28852. Bogie conducted a gyrocopter drainage sampling program over extremely rugged and inaccessible terrain collecting forty-seven samples from within the EL 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 overbank samples (648 – 658) were collected from drainages within the EL 28852 licence area, and returned AAS Cu assays of 50 - 70 ppm. Cadney Creek (~20km east of EL 28852) was also sampled, with results delineating a weak gold anomaly (WH608: 0.008, WHHA: 0.006, WH11b: 0.006, WHHC:
0.006, and WH11D: 0.001ppm Au), contrasting with results reported by SPL twenty years previously.

In 1992 Clarence River Finance P/L prospected the area immediately east of EL 28853, including rock chip sampling of the Camp Hill Cu deposit, and three other copper shows, which trend south-southeast away from Camp Hill (EL 6941). Clarence River Finance P/L also prospected the Mt Johnstone area Ciccones Find Samarskite bearing pegmatite (24m x 7m) and reported anomalous REEs, U, Nb, Th, Ta and Ba results.

In 1992, the late Dr Burton Murrell of Saturn Resources was granted EL 6899 and completed an extensive overbank drainage sampling program including thirty-four samples from the southern drainages located within EL 28854 (592, 617 - 619, 621 - 627, 701 - 717, 722 - 724). Gold assays ranged from 0.001 to 0.003 ppm Au, whilst copper values varied from 30 to 90ppm Cu.

During 1993 Bogie/Murrell completed rock chip sampling of a ‘magnetite gossan’ located approximately 6km south-southeast of the western boundary of EL 28852 (EL 6013) which returned an assay of 0.028ppm Au (CP223A).

Normandy Exploration completed heavy mineral sampling of Anamarra Creek, from the headwaters within EL 28854 (draining Mt Johnstone) to the Plenty Highway, over a distance of 17km. This sampling program traversed over EL 28853, collecting fifty-three samples in 1994. The samples were observed for KIs from disproportionally large high-grade metamorphic terrain concentrates for negative results (EL 7932).

Pasminco were granted EL 8787 in 1995, which encompassed the Cadney Creek catchment including the western third of EL 28852. A 200 metre line space AMAG geophysical survey was flown over the licence area along north-south orientated flight lines at a nominal altitude of 80m. Late stage northeast - southwest trending cross faults were recognized as prominent magnetic linear features within the overall dataset, increasing in both intensity and frequency towards the Copper Queen Cu workings located slightly north of EL 8787. A total of twenty-two -80 mesh drainage samples were collected, nine of which namely (133247 to 133250, 133358, 133059, 133060, 133083 and 133087) were located within EL 28852.

Table 5.1 of sample populations and anomalous geochemistry thresholds highlights the difficulty of interpreting geochemistry datasets from different sources in the eastern Arunta.

<table>
<thead>
<tr>
<th>Company / Data</th>
<th>Pb ppm</th>
<th>Zn ppm</th>
<th>Cu ppm</th>
<th>Ni ppm</th>
<th>Cr ppm</th>
<th>Au ppm</th>
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<td>52</td>
<td>52</td>
<td>2</td>
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<td>0.006</td>
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<tr>
<td>Endras Arntunga</td>
<td>40</td>
<td>215</td>
<td>105</td>
<td>47</td>
<td>110</td>
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<tr>
<td>Pancon Arntunga</td>
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<td>475</td>
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<td>Pasminco Western data</td>
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<td>62</td>
<td>52</td>
<td>66</td>
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Table 5.1: Previous Exploration Geochemistry Thresholds
1998 - 2007

EL 22292 was granted to Oneva Exploration P/L in 2001 who prospected the area between EL 28853 and EL 28852, along the east-southeast trending Cadney Fault zone for 16km discovering multiple occurrences of hitherto unknown malachite – dominated Cu mineralisation (25 localities). All localities were rock chip sampled (158) and three, namely Diana’s Block 1, Rip Hill and Bikini Basin, were also soil sampled (73).

Diana’s Block 2 to 8 is a continuum of Cu (Au) mineralisation/alteration hosted within quartz-magnetite iron formation within enveloping magnetite schists that trend northeast for approximately 2km. Diana’s Block 2 was tested by two RAB drillholes (43m and 42m respectively) returning no elevated Cu values. Likewise, at Diana’s Block 8, two RAB drillholes (27m and 35m) also returned no elevated Cu geochemistry.

Corner Post Hill prospect was tested by a single RAB drill hole (34m), and twenty-seven samples were assayed for Au, Cu, Pb, Fe, Bi, K, Mg, Na, Ti. No elevated values were returned. The area is currently being worked by Genesis Resources (GES).

Tanami Gold (TGNL) moved into the Harts Range area in 2002. EL 10078 was pegged over the Copper Queen Cu workings, located approximately 8km east of EL 28852. TGNL interpreted Harts Range to be 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, located approximately 12km west of Copper Queen and discovered by PNC in 1996. TGNL collected fifty-three rock chip, fourteen lag, 1,597 soil, and eighty-three drainage samples. TGNL also collared 230 RAB drillholes for 6,843m. 2,613 drill spoil samples were analysed. The net result of the above geochemical sampling was the delineation of 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 the Riddoch Amphibolite (765Ma) within EL 10078 was completed using the Hymap Thematic mapper airborne remote sensing system. Potentially, the 'mineral mapping' was useful for deliniating:

- ultramafic plugs ± PGE mineralisation
- carbonate/chlorite/muscovite alteration ± Au associated retrogressive shear zones common throughout the Harts Range area
- anthophyllitic units which commonly host Cu - Zn - Pb - Ag- Au mineralisation
- gossanous zones ± Au and base metals.

EL 23184, which straddles the Cattlewater Pass track and abuts the northern boundary of EL 28852, was hyperspectrally surveyed however, no anomalous areas were delineated.

The closest known significant mineral occurrence to EL 28852 is the Johnnie’s Reward–Black Angus area, currently held by Arunta Resources (Arunta). Arunta have recognised a strong coincident gold-copper-arsenic geochemical response from soil sampling in the Johnnie’s Reward–Black Angus area. The Johnnie’s Reward Prospect is a copper-gold prospect associated with magnetite rich units of the Cadney Metamorphics. Proterozoic Cadney Metamorphics have been identified within EL28852, and as such, Core Exploration intends to use soil geochemical sampling, and possibly airborne magnetics,
EL28852 Final Annual Technical Report 2012-2016

to target copper-gold mineralisation within the tenement. The acquisition of airborne magnetic data will prove useful in the delineation of prospective magnetite-rich horizons and mapping structural features within the area.

6 EXPLORATION WORK 2012-2015

Year 1 – 2012
EL 28852 was initially granted to Gempart (NT) Pty Ltd. CXO entered into a joint venture over EL28852 in October 2012 and became operators.

Exploration work included:

1. Regional reconnaissance comprised traversing western portion of licence area via Cattlewater Pass track from south to north, several quartz-muscovite-chlorite-filled narrow north west trending fault zones were observed.
2. Desktop studies included preparation of contours of eppm U from NTGS 2004 compilation Image. Minimum contour = 4 eppm U. Mineral occurrences from MODAT are shown in blue. Likewise on gravity and TMI images. Regional gravity, TMI, Ternary Radiometrics and Geology images were prepared from NTGS GIWS site.
3. Consultant geophysicist acquired relevant Alice Springs - Alcoota geophysical survey located digital data - modelled, imaged processed and interpreted i.e TMI, TMI R to P, Total Count, U, Th, K.

Year 2 – 2013
Exploration work was limited to detailed reviews and data compilation. Surface sampling and regional geophysics was planned but not undertaken.

Year 3 – 2014
CXO entered into a purchase agreement with Gempart and took over 100% ownership of EL 28852 through its wholly owned subsidiary DBL Blues Pty Ltd.

No exploration work was undertaken aside from project reviews.

Year 4 - 2015
During the 2015 reporting period no field work was undertaken on EL28852.

One significant activity undertaken in 2015 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 across the entire Arunta Block tenure. 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 that cannot at this time be reported here.

Ongoing review of exploration potential and prospectivity. CXO has decided to become more active in the lithium commodity space and has determined to surrender EL 28852.
7 CONCLUSIONS & RECOMMENDATIONS

Disappointingly very little exploration work was done on EL 28852 as the focus of activity for the company was other tenure in the NT including Jervois and tenure in SA. 2015 was a particularly bad year for investor sentiment in the mineral exploration sector. Subsequently seven of the fourteen tenements that make up CXO's Albarta North Project have been selected for relinquishment including EL 28852.

The work undertaken by CSIRO in 2015 as part of the Research-in-Business collaborative study has unfortunately not contributed much to advance the Albarta North Project to date. In part this was due to internal issues, including poor communication, within the CSIRO Group. Final reports and deliverables of CSIRO's work are still outstanding and are not available.

8 REHABILITATION

No ground disturbing work was undertaken on EL 28852.
## 9 EL 28852 EXPENDITURE SUMMARY

<table>
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<th>Year 1 2012</th>
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<td>F. Rehabilitation</td>
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<td>G. Pre-feasibility inc. Metallurgical and Environmental</td>
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</tr>
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</table>

Table 8.1: EL 28852 Expenditure Details for 2012-2015 Reporting Periods
10 REFERENCES


