Eclipse Uranium Project

Partial Surrender Report
EL24637 and EL24625.

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Date: 10th February 2009

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Distribution:

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Summary

This report details the exploration activities carried out over recently relinquished parts of Cauldron Energy Ltd's licences EL25625 and 24637, part of the Eclipse Project in the Northern Territory, during the period 8th December 2005 to 7th December 2009. Work included research, data base compilation, field reconnaissance, airborne geophysical surveying and Aircore drilling.

Exploration conducted within the relinquished parts of EL 24625 and 24637 included three Aircore drilling programs comprising 274 holes for 6,247m (ECAC001 – 004, ECAC007 – 050, ECAC065 – 068 and ECAC184 – 405).

A trail airborne Tempest EM survey was conducted during July 2007. A total of 42 line km was completed within the relinquished parts of EL 24625 including one 30km long E/W line and three isolated N/S line segments 3 to 5 km long. Within the relinquished parts of EL 24637, a total of 57 line km was completed, including one 18km W/W line and five isolated N/S line segments 5 to 9 km long.

An airborne radiometric/magnetic survey was completed by UTS Geophysics in November 2007 as part of a larger survey conducted in association with neighbouring explorers Toro Energy Ltd and Energy Metals Ltd. The survey on 100m line spacing' comprised 16,939 line kilometres (approx 1,500 km^2) over Cauldrons tenements. Only a small section of the survey covers the central and southern part of the relinquished area.

During late November 2009 these licences were subjected to compulsory fourth year partial surrender requirements by the DRDPIFR. Consequently, EL 24625 was reduced by 17% and EL 24637 was reduced by 50%.

1. Introduction

Cauldron Energy's Eclipse Uranium Project covers parts of the Ngalia Basin and Arunta Block granites, which are prospective for uranium mineralisation. The licences cover a number of active stream systems that drain uranium enriched granites to the north. Interpretation of airborne radiometric imagery indicates that these drainages are depositing uranium within their channels and around the margins of Lake Lewis. The New Well uranium deposit is located on one of these drainages in ground adjacent to Cauldron's licences.

During late November 2009 these licences were subjected to compulsory fourth year partial surrender requirements by the DRDPIFR. Consequently, EL 24625 was reduced by 17% and EL 24637 was reduced by 50%.

This report details the exploration activities carried out over recently relinquished parts of EL24625 and 24637 during the period 8th December 2005 to 7th December 2009. Work included research, data base compilation, field reconnaissance, airborne geophysical surveying and Aircore drilling.

2. Location, Access and Tenure.

The Eclipse Uranium Project is located approximately 200 km northwest of Alice Springs and lies astride the Tanami Hwy on the Napperby and Narwietooma Pastoral Leases. (Figure 1)

Table 1. Eclipse Project Tenement Details

Licence	Holder	Date Granted	Expiry Date	Area km²	Minimum Expenditure
EL 24625	Cauldron Energy Ltd 100%	19/12/2005	18/12/2011	1188	$140,000
EL 24637	Cauldron Energy Ltd 100%	08/12/2005	07/12/2011	926	$80,000

3. Regional Geology.

The Eclipse project covers the southern part of the Ngalia Basin and parts of the surrounding Arunta Block. The Ngalia Basin is a large 300 km long by 70 km wide east west trending intra-cratonic basin, which contains up to 5000 metres of late Proterozoic to Carboniferous aged fluvial and marine sediments. These sediments were derived from the surrounding uranium enriched early to mid Proterozoic granites and metamorphic rocks of the Arunta Block. (Figure 1)

The Ngalia Basin developed around 900mya and comprises a succession of basal late Proterozoic continental and possibly marine sediments overlain by continental fluvioglacial sediments. Later sedimentation during the Cambrian and Ordovician

resulted in epicontinental sediments including carbonates. Uplift during the Alice Springs Orogeny resulted in the deposition of Devonian to Carboniferous fluvial sediments. Subsequent deformation of the basin has resulted in folding and faulting, with major thrust faults, strong folding and over turning of lithology along the northern margin of the basin. Deformation in the south is less intense with only gentle folding along the southern margin. (Freeman et al 1990)

The Arunta Block is composed of metamorphic basement lithology's, which have been intruded by later granites. Three areas are recognised within the Arunta Block, The northern, central and southern provinces. The Ngalia basin sits between the northern and central provinces. Formation of the Arunta Craton is divided into three stages. The earliest phase (2000mya) comprises mafic, felsic and aluminous granulite and calc-silicate rocks of the Strangways Metamorphic Complex, which comprises most of the Central Province. The second phase of formation is dominant in the northern and southern provinces and comprises aluminous and silicious sediments with a few mafic flows and sills. The third phase is less extensive and is found as ortho-quartzite outliers scattered around the northern and southern provinces. (Shaw 1990)

The Arunta Block underwent deformation and metamorphism during the Proterozoic, including the intrusion of granites, some of which are highly uriniferous, particularly those from around 1750mya. During the late Devonian and early Carboniferous the Arunta Block was extensively disrupted by thrust faulting, particularly along the boundary between the northern and central provinces. (Shaw 1990)

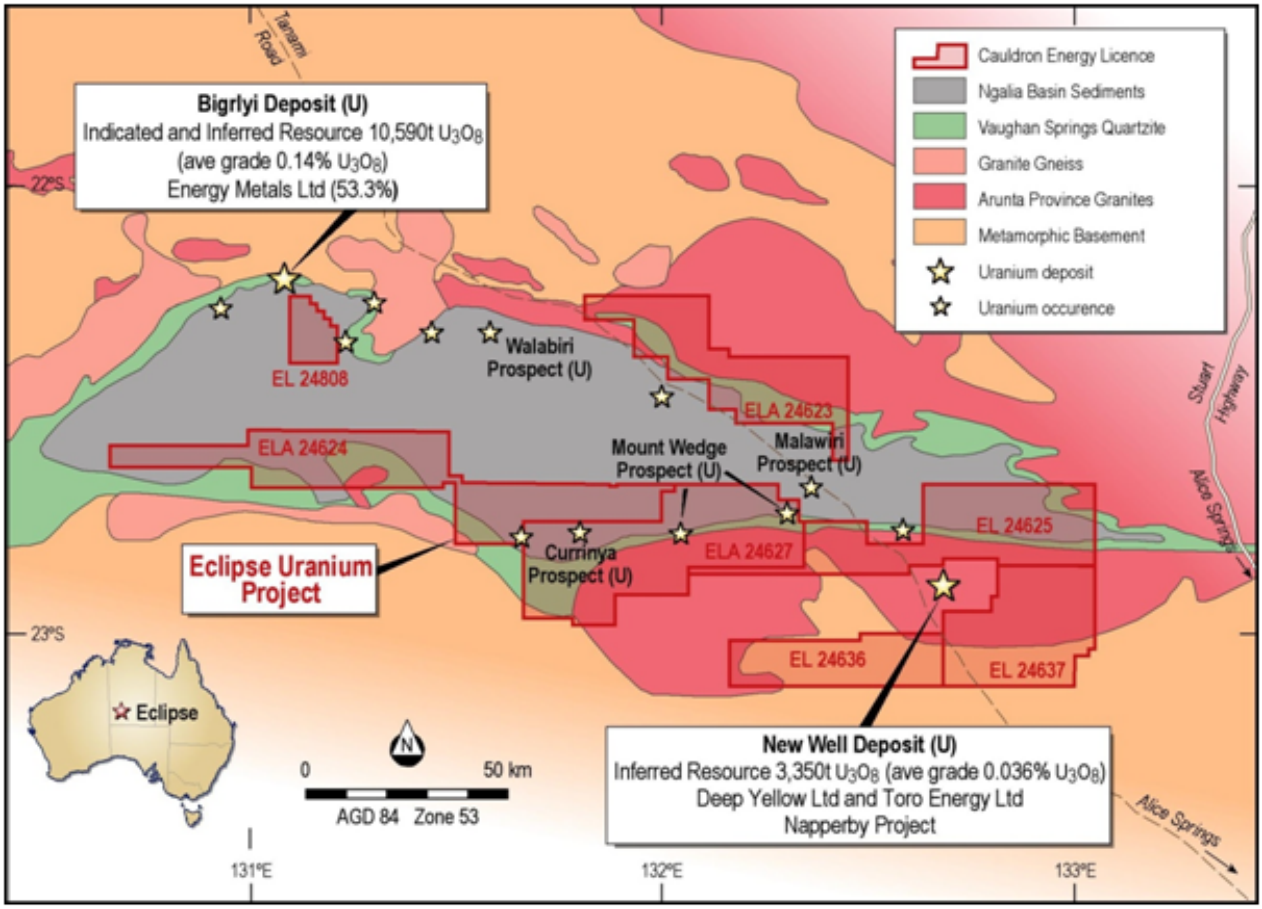

Figure 1: Regional geology of the Eclipse Uranium project.

4. Project Geology.

The project area is typified by flat sandy plains overlying granites of the Arunta Block. Sandy and calcrete soils are found extensively within the Ngalia basin to the North and overlying the Arunta Block of the tenement area. A number of isolated granite hills emerge from the plain within the project area, especially in the east where granite hills, including Mount Harris, appear to flank a buried salt lake. The vegetation in the area consists of acacia scrubland associated with grasslands and minimally modified pastures in places. Taller eucalypts are present within and along the main drainage systems.

The project area includes the northern part of the Lake Lewis salt lake. This lake is fed by two large ephemeral creek systems, the Napperby and Day Creeks, which drain uranium enriched granites along the northern boundary of the Ngalia Basin. A number of smaller less continuous drainages feed the lake along its western margin.

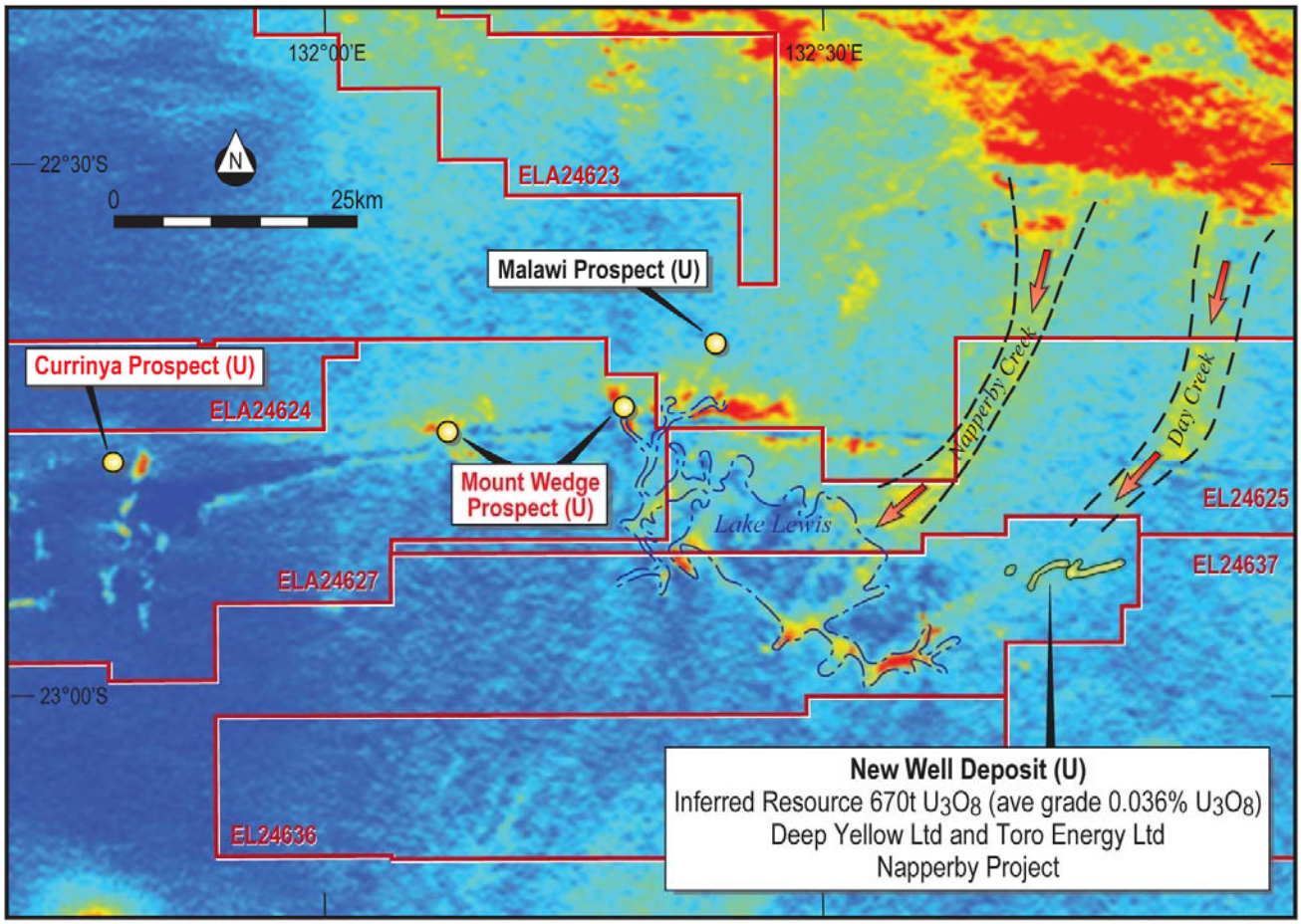

Figure 2: Regional Radiometric profile of the Eclipse Uranium project

5. Previous Exploration.

Historical work conducted during the 1970's and 1980's involved broadly spaced drilling targeting sandstone and calcrete hosted uranium mineralisation within the Ngalia basin and overlying the granites of the Arunta Block.

In 1973, CRA Exploration Ltd. (CRAE) undertook exploration over the north eastern part of EL24625, around Mount Harris. A program of mapping and sampling over the outcropping granites indicated that they were uraniferous and hence potential source rocks for secondary uranium mineralisation. Sampling returned values up to 40ppm uranium from the granites. Mapping of the surrounding plains failed to locate any suitable sediments or calcrete likely to host secondary uranium mineralisation. (Hughes 1973)

During 1981 Alcoa Australia Ltd. (Alcoa) held a large exploration licence covering the southern parts of EL 24636 and 24637. The company was targeting sandstone and calcrete hosted uranium within calcrete and tertiary sands of the Narwietooma Basin, which overlies the granites of the Arunta Block. Eleven mud rotary holes (NA001-NA011) were completed for 1,555m within and to the south of EL 24636 and 24637. The drilling intersected a thick sequence of oxidised tertiary sediments, clays, sandy clays and minor unconsolidated sand units. This suggested that oxidising fluids had moved through all the permeable beds in the area, diminishing the prospect of locating uranium mineralisation. All holes were gamma probed and a number of sections were assayed for uranium. The highest result was 2m @ 7ppm uranium from hole NA011. (Howard 1981)

The most detailed and successful exploration within the immediate project area was carried out by Uranerz at the New Well uranium prospect, adjacent to Cauldrons licences. Shallow auger drilling conducted during the 1970's identified a mineralised near surface palaeodrainage system over 20 km long and up to 4km wide that drains into Lake Lewis along the Day creek. An economic scoping study on the New Well prospect, indicated that it could contain up to 6,000 tonnes of U_3O_8, based on a grade range of 360-380ppm U_3O_8. This prospect is in the drainage adjacent to Cauldrons licences and is currently the focus of resource drilling by Toro Energy Ltd. (Toro), the current operators of the project.

6. Work Completed.

Exploration of EL 24625 and EL 24637 was undertaken as part of field investigations on the Eclipse project by Cauldron Energy. The work included a number of reconnaissance field trips, a trial Tempest EM survey, an airborne Radiometric/Magnetic survey and Aircore drilling programs.

Office studies included acquisition of historical reports and associated data. Collation and reinterpretation of historical data has continued throughout the year and compiled within a project database. The company has completed a Radiation Management Plan, Environmental Management Plan and Mining Management Plan for the Eclipse project

Investigation of open file reports and the available geophysical data and imagery identified a number of target areas that are prospective for calcrete hosted uranium mineralisation, similar to that at the adjacent New Well uranium deposit. The Day and Napperby Creeks drain uranium enriched granites from the northern margin of the Ngalia Basin. Airborne radiometric data indicates that uranium enriched material is present in these drainages and is depositing around the margins of Lake Lewis and at trap sites along the drainage system.

Interpretation of Landsat TM imagery indicates that these two drainages debouche into Lake Lewis and also into areas formerly covered by salt lakes to the east, below Mount Harris. This indicates that the present Lake Lewis has migrated over time and was probably rather more extensive than its present location suggests. This interpretation provides further potential mineralisation sites for Cauldron in areas overlooked by previous workers and is backed up by geological information from recent drilling.

Work completed by the company included an initial Aircore drilling program, during early December 2006, comprising 48 holes for 1,144m (ECAC001 - 004 and ECAC007 - 050). A follow up program was undertaken during November and December 2007. A total of 19 Aircore holes (ECAC065 - 068 and ECAC184 - 198) for 711m were completed, targeting calcrete hosted uranium mineralisation at the Tilmouth Well and Bloodwood Bore prospects. (Figure 3.) (Appendix 1, 2 & 3)

The drilling intersected a general stratigraphy comprising

- Red brown sandy silty soil (thickness 1-10m)
- Calcrete (acid fizz). Grey or cream in colour, closely resembling the calcrete gravel and cobbles found on the surface. (thickness 2-12m)
- Silcrete. Resin-like and with conchoidal fracture. The silcrete is nearly always present within the calcrete layer, but ranges greatly in thickness and development.
- Partly silicified light brown or grey green silty clay (thickness 2-8m)
- In some holes, silt, sand and clay beds with multiple lithologies (for the coarser sands) were present. These are interpreted to represent a wandering river channel. (thickness 4-6m)
- Brown clay with grey to green mottling. Although this thick clay sequence is quite consistant, there are changes in the proportion of brown and green mottling. Such changes are often on the scale of 3-8m with one color dominant, then the other. (thickness 20-40m)
- Silt, sand and clay sequence. This unit varies between the holes. It consists predominantly of 1 or more silt beds up to several metres thick, usually separated by brown clays that are identical to the overlying beds. Well-sorted fine to medium sand beds occur in some, but not all, holes. Sands have multiple lithologies including granite, qz and FeOx. Calcrete paleosurfaces are also present in some holes, developed on top of the silt or the underlying gypsum-halite beds. The sequence is interpreted as deposits from a wandering river channel system with clay deposited during periods of low energy. (thickness 4-9m)

- Evaporite sequence. This consists of an upper 1-4m thick layer of medium to large gypsum crystals (c-axes to 3cm) overlying dark greenish black clay. Highly saline water infiltrates the holes when these beds are encountered, so halite is almost certainly present with the gypsum. In some holes the dark greenish black clay is interbedded with the gypsum-halite. The unit clearly represents a palaeo-salt lake that was subsequently buried by the channel deposits and clay.

Results from this second phase of drilling returned some encouraging uranium values. Elevated uranium results were associated with a buried calcrete horizon (at between 6-15 metres in depth) to the east of the New Well deposit at the Bloodwood Bore Prospect. Results included 55 ppm U from 9-12m in drill hole ECAC 192 and 34 ppm U from 12-15m in drill holes ECAC 190 and 191. (Figure 4)

During April and May of 2008, a third Aircore drilling program was conducted over EL 24625 and EL 24637 comprising a total of 207 holes for 4392 metres (ECAC199 – 405). The drilling targeted near surface calcrete hosted uranium mineralisation (similar to the adjacent New Well Uranium Deposit) within a large regional drainage system and potential targets interpreted from the 2007 TEMPEST electromagnetic survey including buried channels and palaeo-lake margins.

The drilling intersected surficial red-brown sandy soil (thickness 1-6m), overlying up to 9m of red-brown calcrete and silts with a basal calcrete layer. This horizon is the host to uranium anomalism at Bloodwood Bore and overlies transported silts, clays and sands which in some places attain depths of greater than 70m. Best results from this program included 50 ppm U from 6-9m from drill hole ECAC 199, 44 ppm U from 6-9m in drill holes ECAC 200 and 217, and 42 ppm U from 6-9m from drill hole ECAC 251. (Fig. 4)

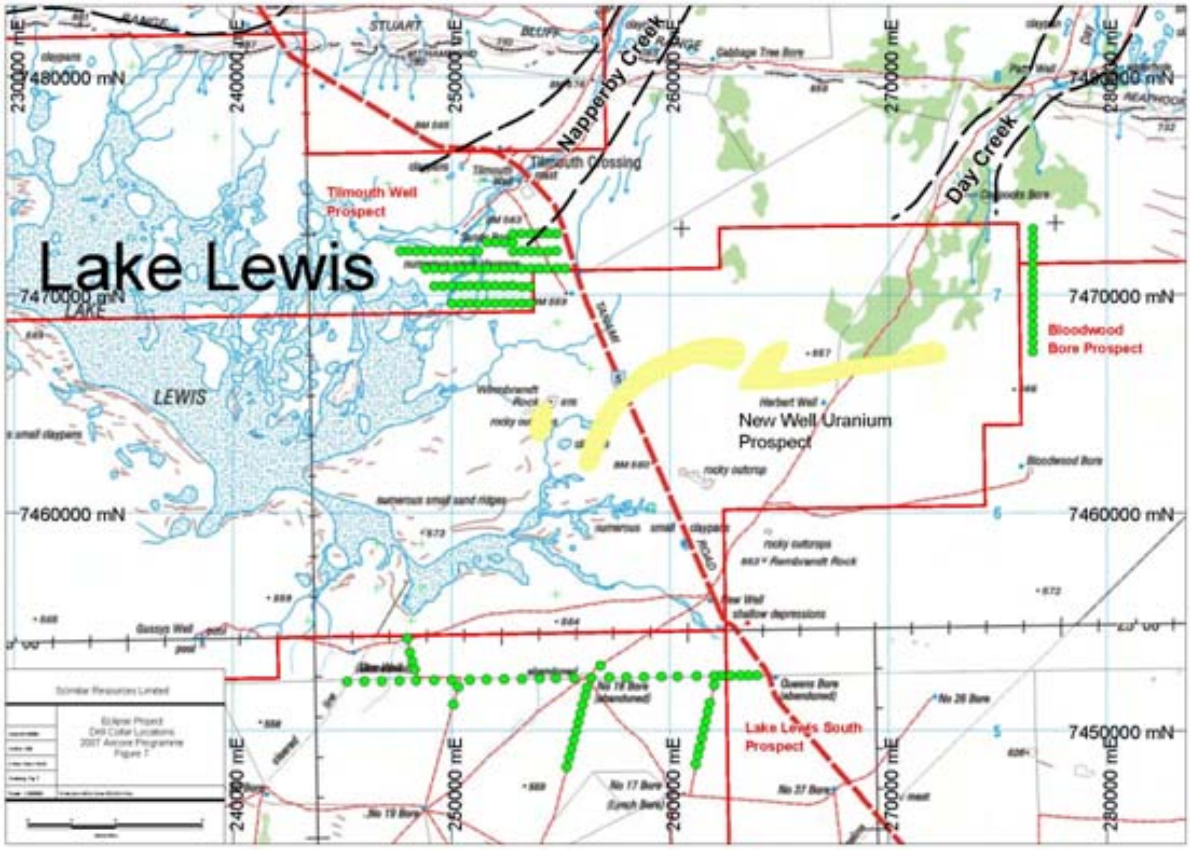

Figure 3: Eclipse Project Drill Collar Locations

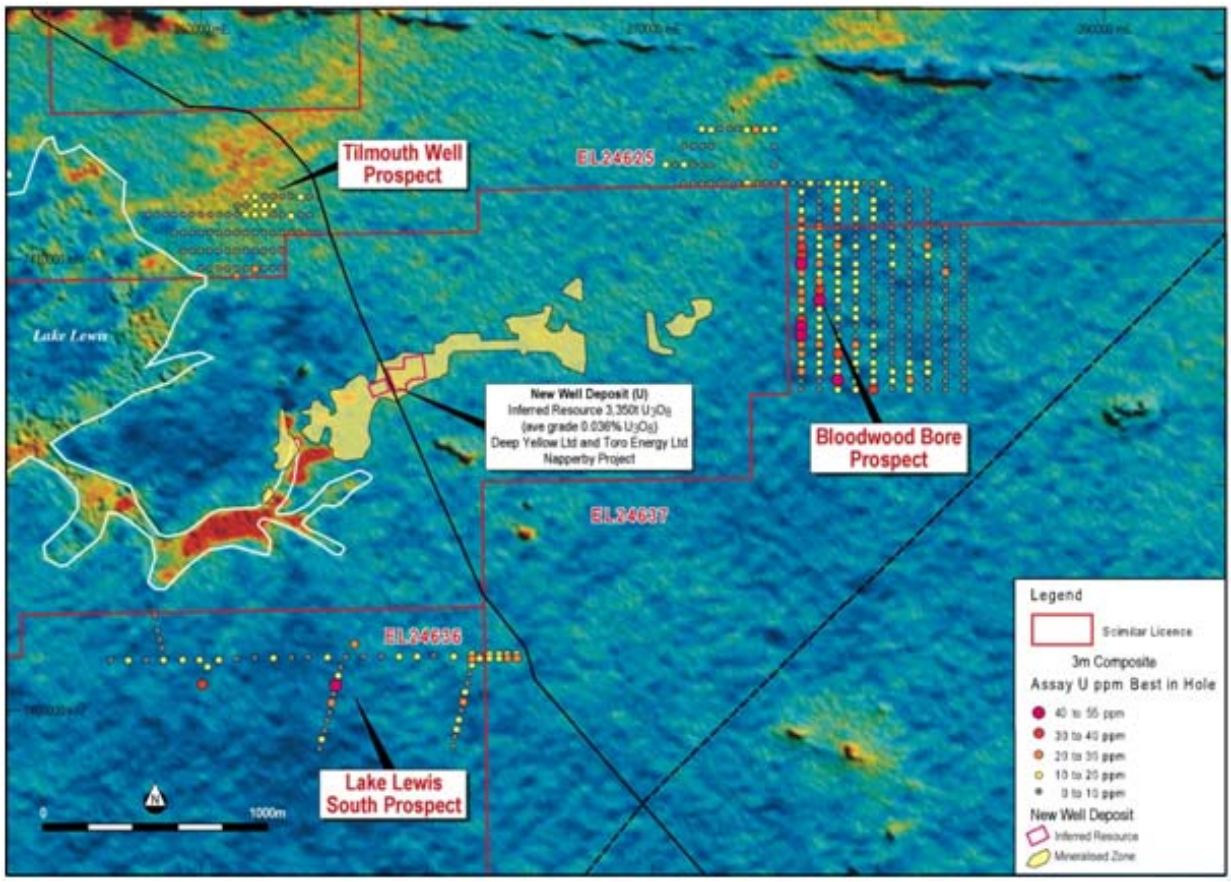

Figure 4: Drill collar positions and Uranium Intersections.

The drilling was completed by Pine Creek based Johannsen Drilling P/L, with a Gemco H13 rig mounted on an Isuzu 4 x 4 truck utilising both an onboard compressor and occasionally a separate truck mounted compressor.

Holes were drilled using a 4 inch open face coring bit. In areas where hard calcrete or silcrete was encountered near the surface, the first 6-12m was drilled using reverse circulation (RC) before switching back to Aircore. The average hole depth was approximately 38 metres, although a few holes were drilled deeper (up to 78 metres) to intersect basement. The holes were collared using 1-2 metres of PVC pipe, which was removed at the completion of each hole. All holes were immediately capped below ground using plastic cone plugs, in accordance with Northern Territory Guidelines. Spoil from the drill collar and outside return was returned to the drill hole before capping. Drill hole collar co-ordinates were recorded using a Garmin 12XL GPS which has a horizontal accuracy of ± 5 metres.

Drill cuttings were collected, via a rig mounted cyclone, into green plastic mining bags. Sample was collected over one metre intervals and laid out sequentially at the drill site. A total of 930 three metre composite samples (ECC 014-028, ECC 528-1069 and ECC 1601-1979) were collected on EL 24636 using an aluminium sampling scoop to give a sample of approximately 3 kg. The three metre composite samples were collected into individual 10 x 14 inch calico bags. The calico bags were then collected into green plastic mining bags, with five samples per bag. These bags were placed into black plastic No. 10 Nally crates (52 litres) with sealable lids for transport to ALS Laboratories in Alice Springs.

The samples were analysed by ALS. The method included drying and pulveriseing to 85% passing 75 µm (Method Code PREP121) before being analysed for the full suite of analytes available using multi acid digest with HF, ICPAES and ICPMS finish (Method code ME-MS61). (Appendix 3)

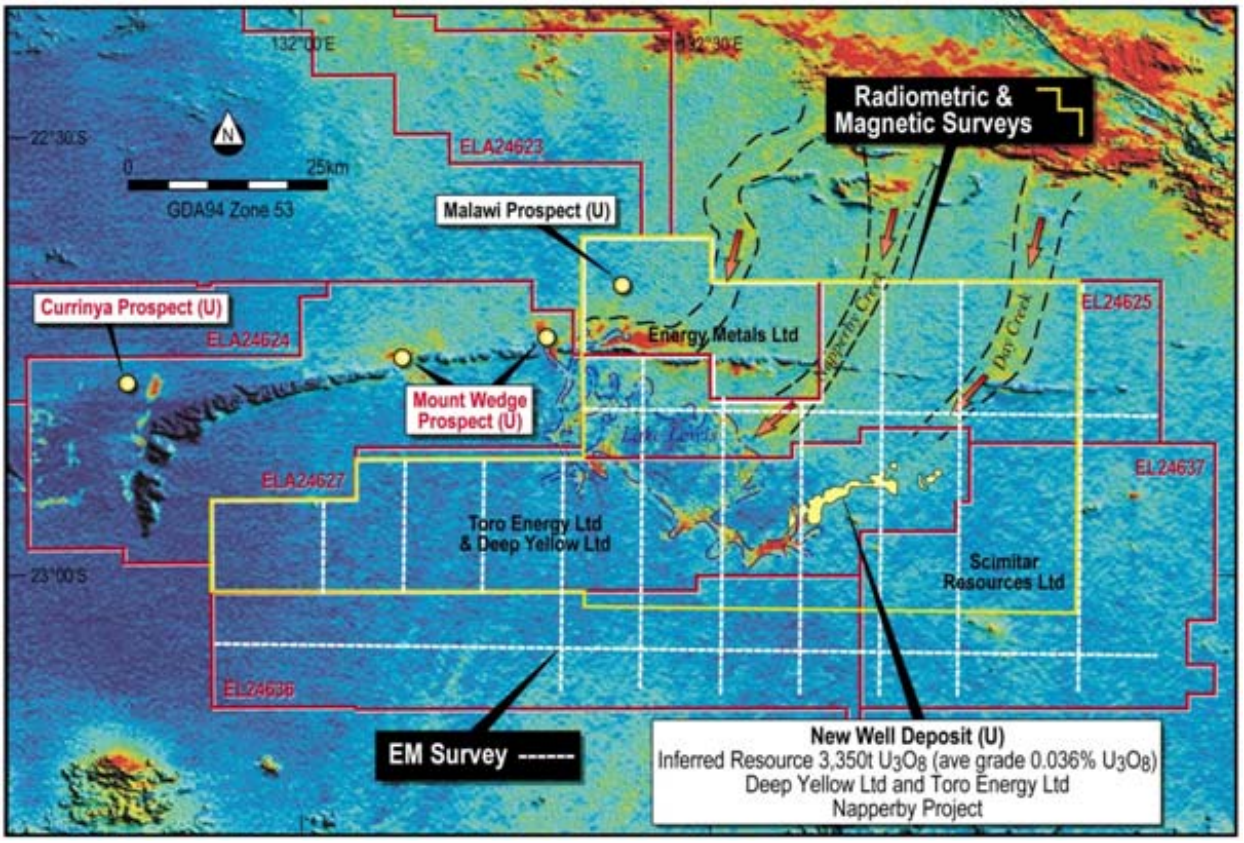

Figure 5: Area covered by 2007 Radiometric, Magnetic and Electromagnetic Surveys.

In July 2007, Fugro Airborne Surveys Pty Ltd undertook a broadly spaced trial airborne TEMPEST electromagnetic survey for Cauldron over part of the Eclipse Project to further define basement topography. This survey was part of a larger survey involving Cauldron's neighbour Toro Energy Ltd. The total coverage for the survey amounted to 550 line kilometres, of which 413 line kilometres was over Cauldrons licences. Interpretation of results from this survey identified additional buried channels and potential target areas for uranium mineralisation, which were tested by drilling.(Figure 5)

A total of 42 line km was completed within the relinquished parts of EL 24625 including one 30km long E/W line and three isolated N/S line segments 3 to 5 km long. Within the relinquished parts of EL 24637, a total of 57 line km was completed, including one 18km W/W line and five isolated N/S line segments 5 to 9 km long. (Figure 6)

An airborne radiometric/magnetic survey was completed by UTS Geophysics in November 2007 as part of a larger survey conducted in association with neighbouring explorers Toro Energy Ltd and Energy Metals Ltd. The survey on 100m line spacing' comprised 16,939 line kilometres (approx 1,500 km^2) over Cauldrons tenements. Only a small section of the survey covers the central and southern part of the relinquished area. (Figure 6)

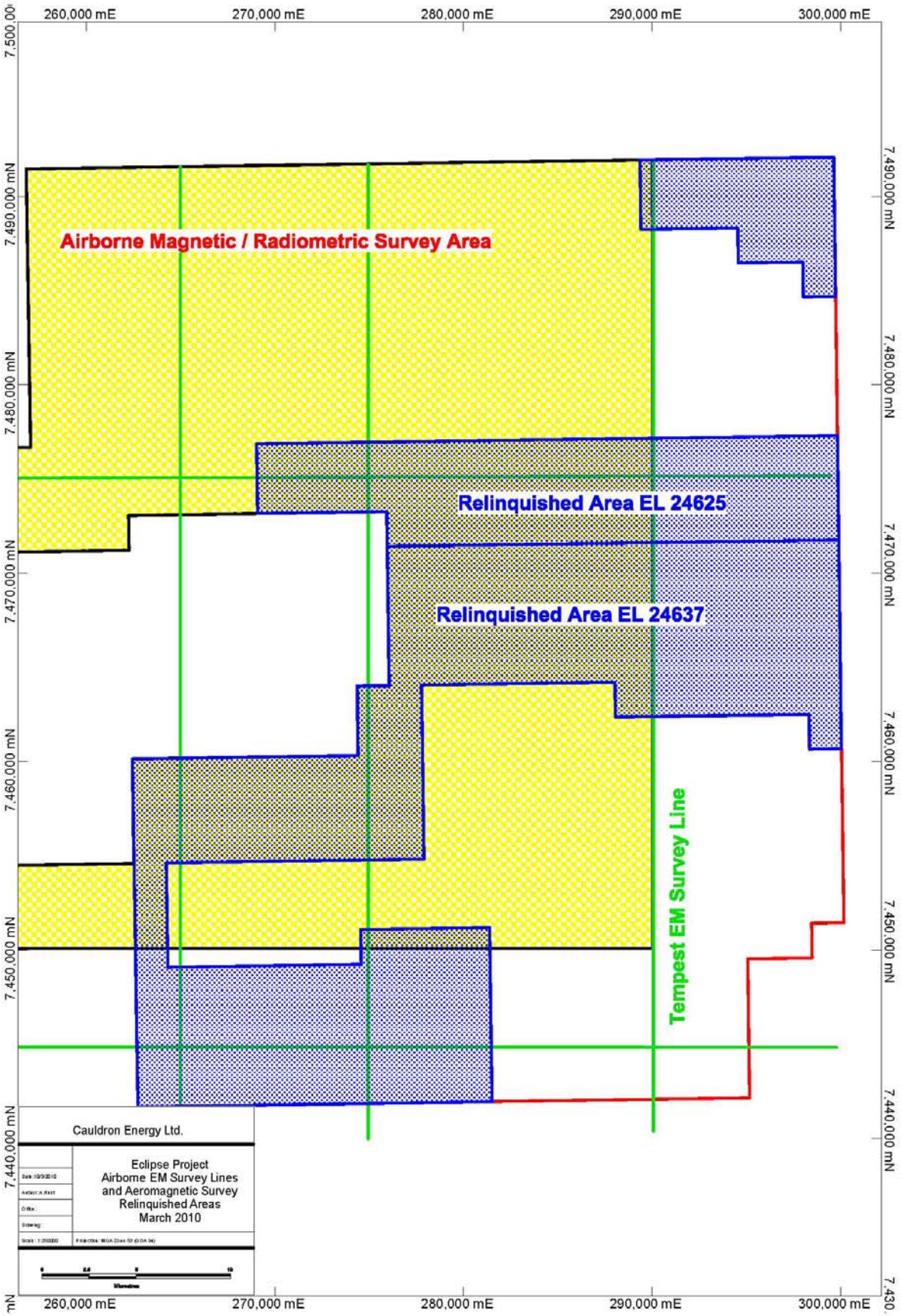

Figure 6. Airborne survey coverage within Relinquished Areas

7. Conclusions and Recommendations.

Work conducted within the relinquished areas has comprised 274 Aircore drill holes for 6,247m targeting near surface calcrete hosted uranium The results of this work, indicates that while some sub-economic uranium mineralisation occurs within the relinquished areas, there is little likelihood for the identification of economic mineralisation.

As a result, these areas that were tested by drilling have been relinquished as part of the compulsory fourth year licence reductions. EL 24637 was reduced by 50% (146sub-blocks) and EL 24625 was reduced by 17% (66 sub-blocks). (Figure 7 & 8)

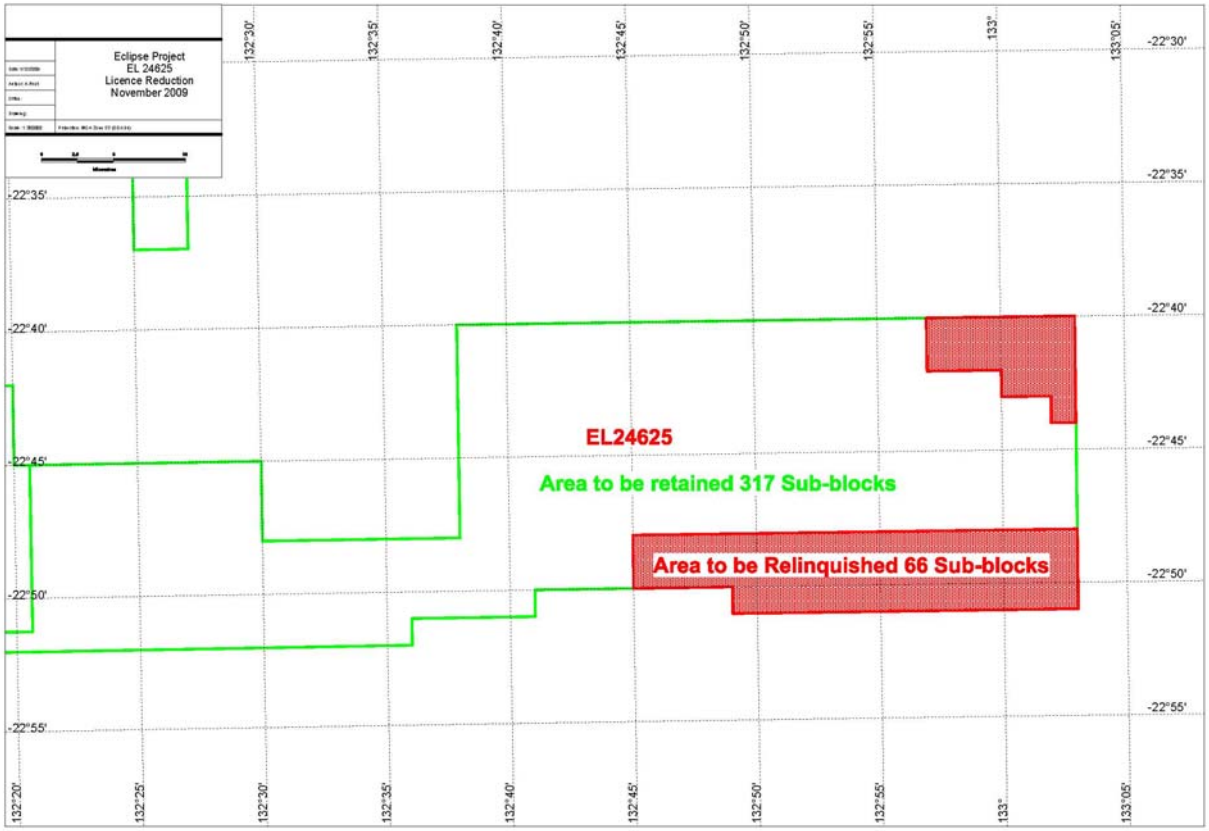

Figure 7: Eclipse Project – EL 24625 17% Reduction

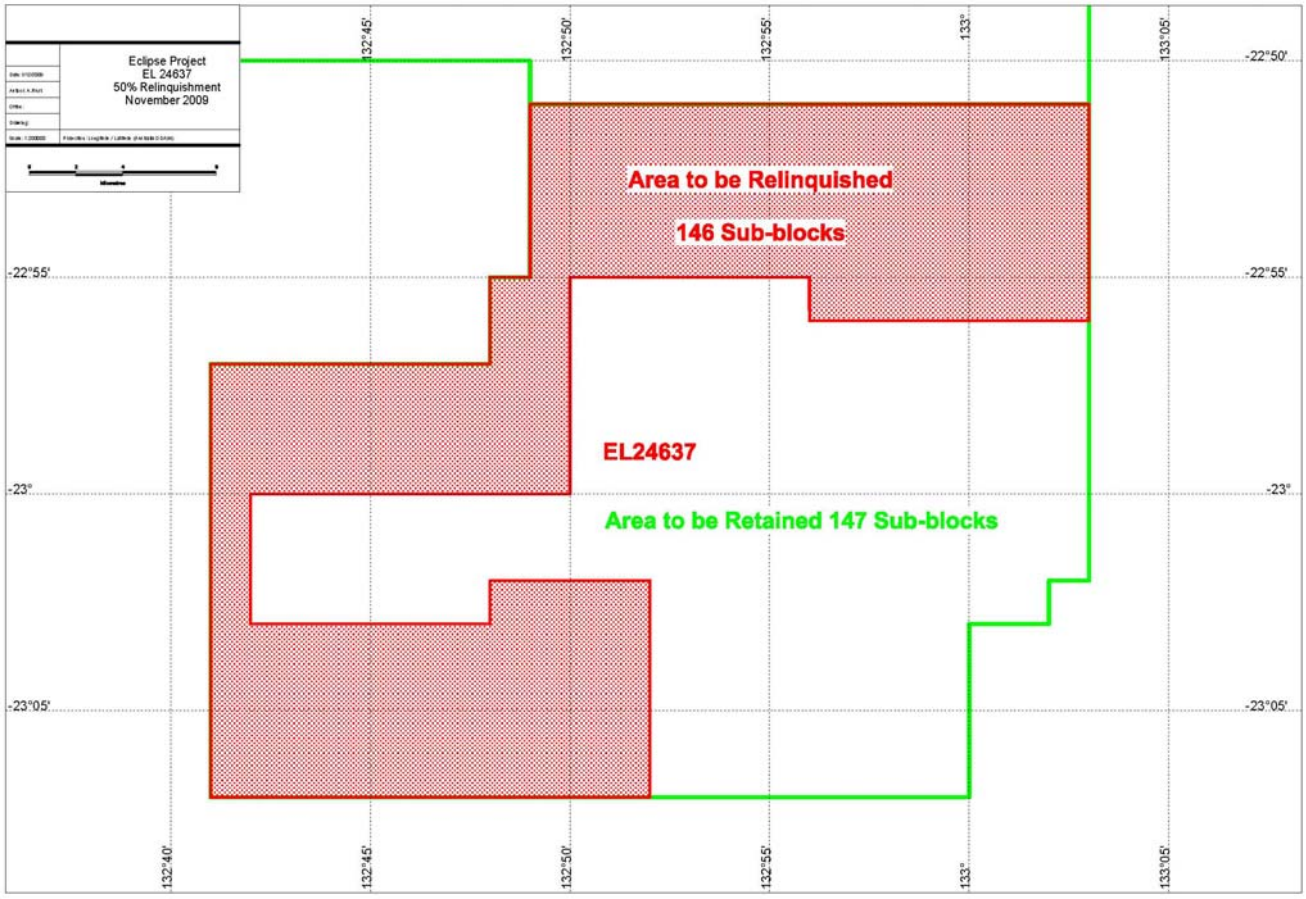

Figure 8: Eclipse Project – EL 24637 50% Reduction

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