

ACN 102 912 783

Amadeus Project

EL24704

Partial Surrender Report for the Period

2nd March 2006 to 1st March 2012.

Date: 22nd July 2012

Cauldron Energy Ltd

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Distribution:

- 1. Department of Resources**
- 2. Cauldron Energy Ltd**

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Summary.

This report details the exploration activities carried out over recently relinquished parts of Cauldron Energy Limited's Exploration Licence EL 24704, part of the Amadeus Project in the Northern Territory, during the period 2nd March 2006 to 1st March 2010. Work completed has included research, data base compilation, field reconnaissance and target generation.

Exploration licence EL 24704 was granted to Cauldron in March 2006 and underwent second year 50% surrender in February 2008. A partial waiver (30% reduction) for third year compulsory reduction was approved in early 2009. A waiver of fourth year 50% compulsory partial surrender was granted to Cauldron for 12 months in February 2010. A waiver of fifth year partial reduction (34%) was granted in April 2011.

Sixth year compulsory 50% reduction was requested by the Department of Resources in early 2012. Cauldron requested a partial waiver of reduction for 13 sub blocks (32%) which was approved on the 20th July 2012. The relinquished area covers 41km² of ground that is deemed not to be prospective for sediment-hosted uranium mineralisation.

1. Introduction.

Cauldron Energy Limited's (Cauldron or the Company) Amadeus Uranium Project covers the central and eastern parts of the Amadeus Basin, to the south of Alice Springs, which is prospective for sandstone uranium mineralisation. EL 24704 covers the north eastern corner of the basin and is located 10 km to the east of the Pamela and Angela uranium deposits.

This report details the exploration activities carried out over recently relinquished parts of Cauldron Energy Limited's Exploration Licence EL 24704 during the period 2nd March 2006 to 1st March 2010. Work completed has included research, data base compilation, field reconnaissance and target generation.

2. Location, Access and Tenure.

The Amadeus Uranium Project is located 25 to 50 km southeast of Alice Springs. Access to the area is provided by a number of major unsealed roads, including the Old South Road and the Santa Teresa Road (see Figure 1 below).

Exploration licence EL 24704 was granted to Cauldron in March 2006 and underwent second year 50% surrender in February 2008. A partial waiver (30% reduction) for third year compulsory reduction was approved in early 2009. A waiver of fourth year 50% compulsory partial surrender was granted to Cauldron for 12 months in February 2010. A waiver of fifth year partial reduction (34%) was granted in April 2011.

Prior to the recent relinquishment EL 24704 covered 129 km² (41 Sub-blocks) located on the Alice Springs SF 53-14 and Rodinga SG 53-02 1:250,000 map sheets and centred on 413000 E / 7355500 N (GDA94). The tenement was subject to a compulsory 50% reduction early in 2012. The Company requested a partial waiver of 32% reduction and 13 Sub-blocks (approximately 41 km²) were relinquished on the 27th February 2012 (see Figure 3 below).

Table 1. Amadeus Project – EL 24704 Tenement Details.

Licence	Holder	Date Granted	Expiry Date	Area km ²	Expenditure Covenant
EL 24704	Cauldron Energy Ltd 100%	02/03/2006	01/03/2012	129	\$103,000

3. Regional Geology.

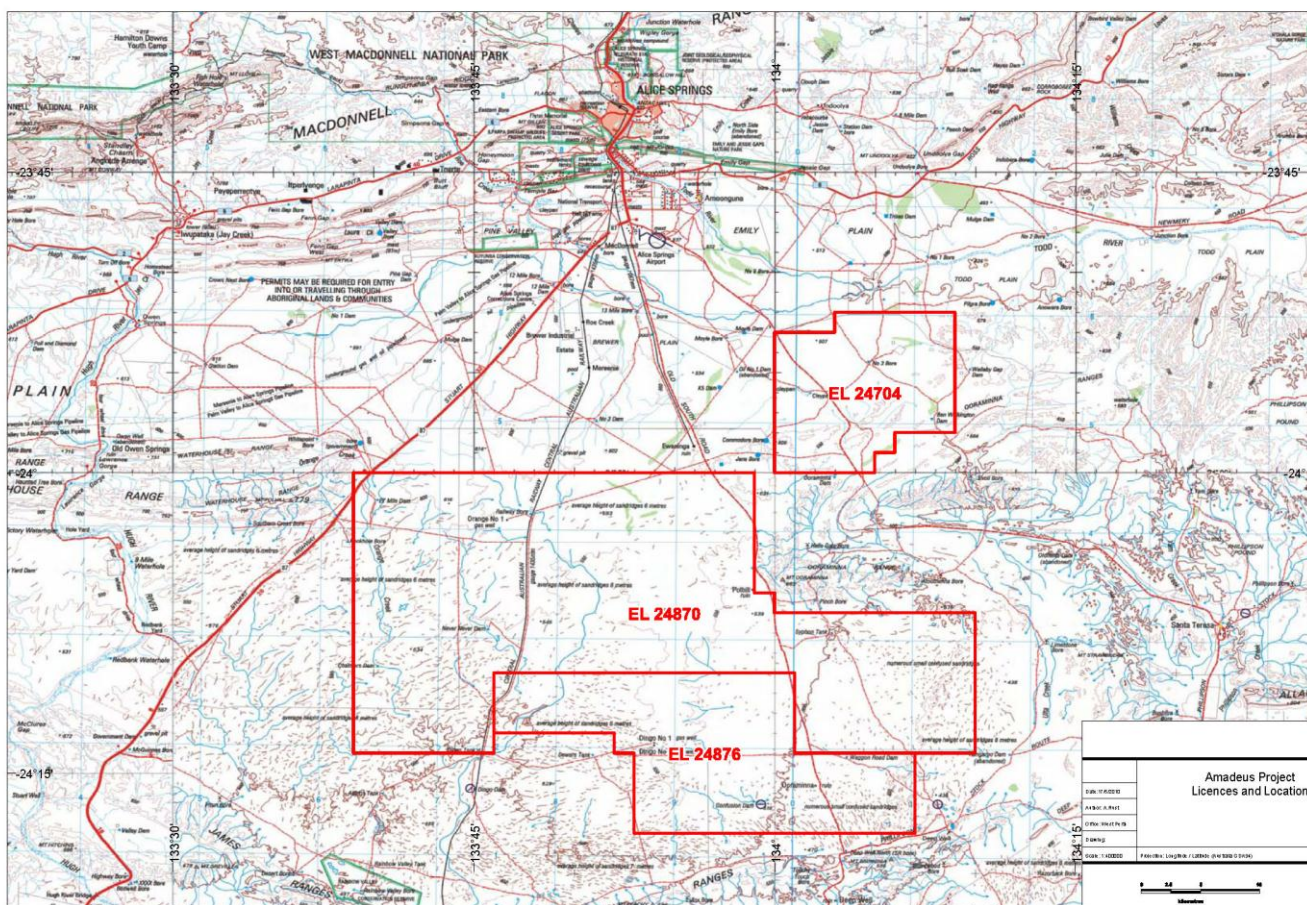
The Amadeus Basin is a large east west trending intra-cratonic basin of Late Proterozoic to Carboniferous aged marine and continental sediments. These were derived from the surrounding early to mid Proterozoic granites and metamorphic rocks of the Arunta Block to the north and Musgrave Block to the south.

The basin is rimmed by the Phanerozoic Canning Basin to the west, The Musgrave block to the south, the Palaeozoic Pedirka Basin to the east and the Arunta Block to the north. Sedimentation commenced about 900 Mya and resulted in a sequence up to 10,000 metres thick. The basal (Late

Proterozoic) sequence comprises shelf, sediments, lagoonal and continental fluvio-glacial deposits which are disconformably overlain by Cambrian continental to shallow marine sediments including carbonates and evaporate. Late Cambrian and Ordovician marine sediments disconformably overlie parts of the basin, with Devonian – Carboniferous continental sediments unconformably overlaying other areas. (Freeman et al 1990)

Extensive broad folding and thrusting along the northern basin margin, during the Alice Springs Orogeny (Devonian-Carboniferous) and along the southern margin during the late Proterozoic Petermann Orogeny, has given rise to the broad regional synclines and anticlines that are visible today. (Freeman et al 1990)

Figure 1. Amadeus Project Location.



4. Project Geology.

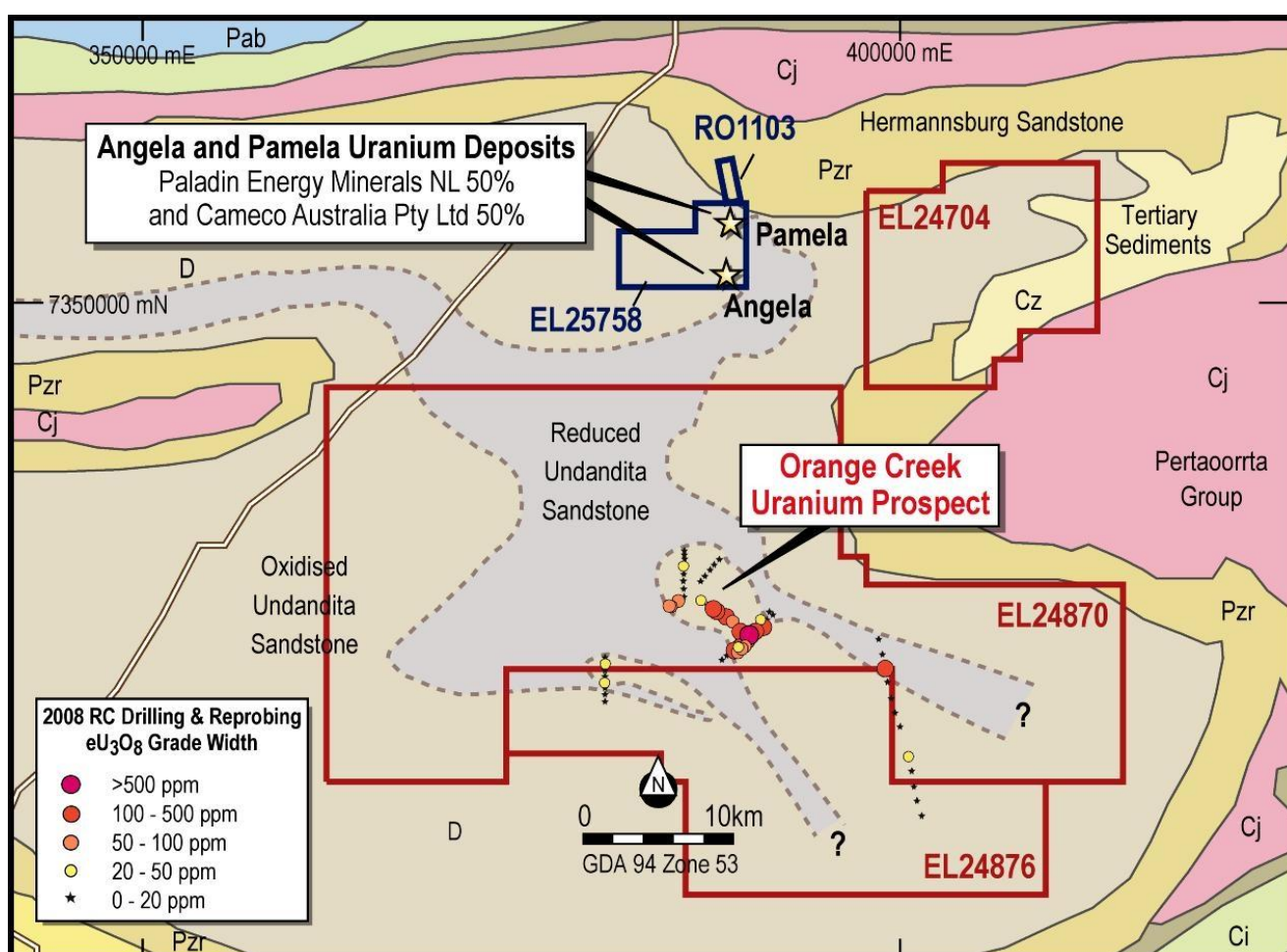
The project area is typified by undulating sandy plains overlying the Devonian Undandita sandstone Member of the Brewer Conglomerate, part of the Pertnara Group. Exposures of the Undandita Member are common in the northern part of the basin but lacking over much of the project area.

The Undandita Member is the youngest unit in the Amadeus Basin and is the host for the Angela and Pamela uranium deposits as well as a number of other uranium prospects throughout the basin. It was deposited in a fluvial braided channel environment and ranges from fine to coarse grained lithic arenite through to medium to coarse grained lithic arkose. Thin mudstone and siltstone units

are common. The sandstone interfingers with the Brewer Conglomerate and reaches a maximum thickness of 3,000m in the Missionary Syncline, 15 km south west of Alice Springs. (Borshoff & Farris 1990) Source rocks for the Brewer Conglomerate include uranium enriched granitic orthogneiss of the Iwupataka Metamorphic Complex and the Teapot Granite Complex. (Lally and Bajwah, 2006)

The Undandita Member is generally oxidised but contains a wedge of reduced sediments between regionally extensive upper and lower redox boundaries. This reduced wedge is extensive throughout the basin and is found both in the Missionary Syncline, where it is associated with uranium mineralisation at Pamela and Angela, and in the Orange Creek Syncline where it is associated with mineralisation at the Orange Creek Prospect (see Figure 2 below).

Figure 2. Amadeus Project Geology and Tenements.



The Angela and Pamela uranium deposits are located at the eastern end of the missionary syncline, 10 km east of Cauldrons licence EL 24704. The deposits are hosted within a sequence of pebbly sandstone, minor siltstone and conglomerates, deposited within a braided stream system. (Borshoff & Farris 1990)

The main Angela ore body has an east-west strike in excess of 5,700 metres and has a gentle plunge of 9° to the west. The uranium mineralisation remains open down plunge. The Angela deposit consists of a series of stacked horizons made up of one or more small roll front uranium

occurrences. Uranium mineralisation consists of uraninite and pitchblende with minor coffinite on grain coatings and in voids. Secondary carnotite mineralisation occurs within the weathered profile and at depth due to decomposition of the primary uranium minerals.

Uranium mineralisation is primarily hosted within medium to coarse grained feldspathic lithic arenites that are partly cemented by calcite. The lithic fragments were primarily derived from the metasediments, schists, gneiss and granites of the Arunta Complex to the north. Detailed ground mapping in association with historic shallow vacuum drilling indicated that uranium mineralisation is associated with gently north dipping redox boundaries within the Undandita Sandstone.

The redox boundary forms an irregular interdigitation of oxidised and reduced facies along which the uranium occurrences are found. Enrichment of uranium occurs at noticeable steps in the redox boundary between higher and lower stratigraphic levels. These steps are in the order of 5-40 metres and are interpreted to be associated with an east trending fault or structural break. (Borshoff & Farris 1990)

5. Previous Exploration.

During the 1970's and early 1980's the Amadeus basin was the centre of active uranium exploration, with the focus on sandstone hosted roll front uranium mineralisation within the late Devonian aged Undandita Sandstone. A number of significant uranium deposits and occurrences were identified including the Pamela and Angela uranium deposits located along the northern basin margin and the Orange Creek prospect on Cauldron's licence EL 24870.

BHP explored the eastern part of the current EL 24704 during 1976. The target was phosphate mineralisation within the Todd River Dolomite. A total of eleven holes for 1049 metres of rotary percussion, were completed in the area. Only three (PD 9, 10 & 11) occur in the current licence. The drilling intersected a package of phosphatic and calcareous sandstone, siltstones and dolomite. The best result was 2m @ 4.13% P₂O₅ from PD2. (Anon 1976)

AGIP Australia Ltd undertook exploration for uranium, over the Emily Plain, to the east of the Pamela and Angela deposits during 1978. Two holes for 164 metres (AER1 & 2) were completed. The drilling failed to intersect the Brewer Conglomerate and the ground was relinquished. (Anon 1978)

During 1981 Magellan Petroleum Ltd. completed a wild cat oil and gas hole (Wallaby1) within the current licence area. The hole of 2,425m total depth encountered insignificant gas and fluorescence within the target early Cambrian dolomite and only small gas shows within late Proterozoic to early Cambrian sandstones. (Gorter et al 1982)

Uranerz Australia P/L (Uranerz) held a large ground position within the Amadeus Basin during the 1970's to the early 1980's and undertook basin wide exploration for uranium mineralisation. The target was roll front mineralisation within the Undandita sandstone Member. Most of this work was concentrated to the immediate west of the current licence EL 24704.

5.1 Angela and Pamela Deposits.

First pass airborne and ground based radiometric surveys, during 1972, identified three surface uranium anomalies. Follow up trenching and drilling led to the recognition of the Pamela and Angela prospects in 1973 and 1974. Detailed ground mapping in association with shallow vacuum drilling indicated that uranium mineralisation is associated with gently north dipping redox boundaries within the Undandita Member.

Follow up exploration over a 10 year period by Uranerz Australia P/L (Uranerz) and joint venture (JV) partners Carpentaria Exploration Company P/L delineated a measured resource of 4,700 tonnes eU_3O_8 (average grade 0.13%) to a depth of 650m within the Angela deposit and associated satellite ore bodies. A further 1,950 tonnes at an average grade of 0.1% U_3O_8 is stated as an indicated resource. (Borshoff & Farris 1990) The Angela deposit was recently awarded to the Angela Project Joint Venture, between Paladin Energy Minerals NL (50%) and Cameco Australia P/L (50%).

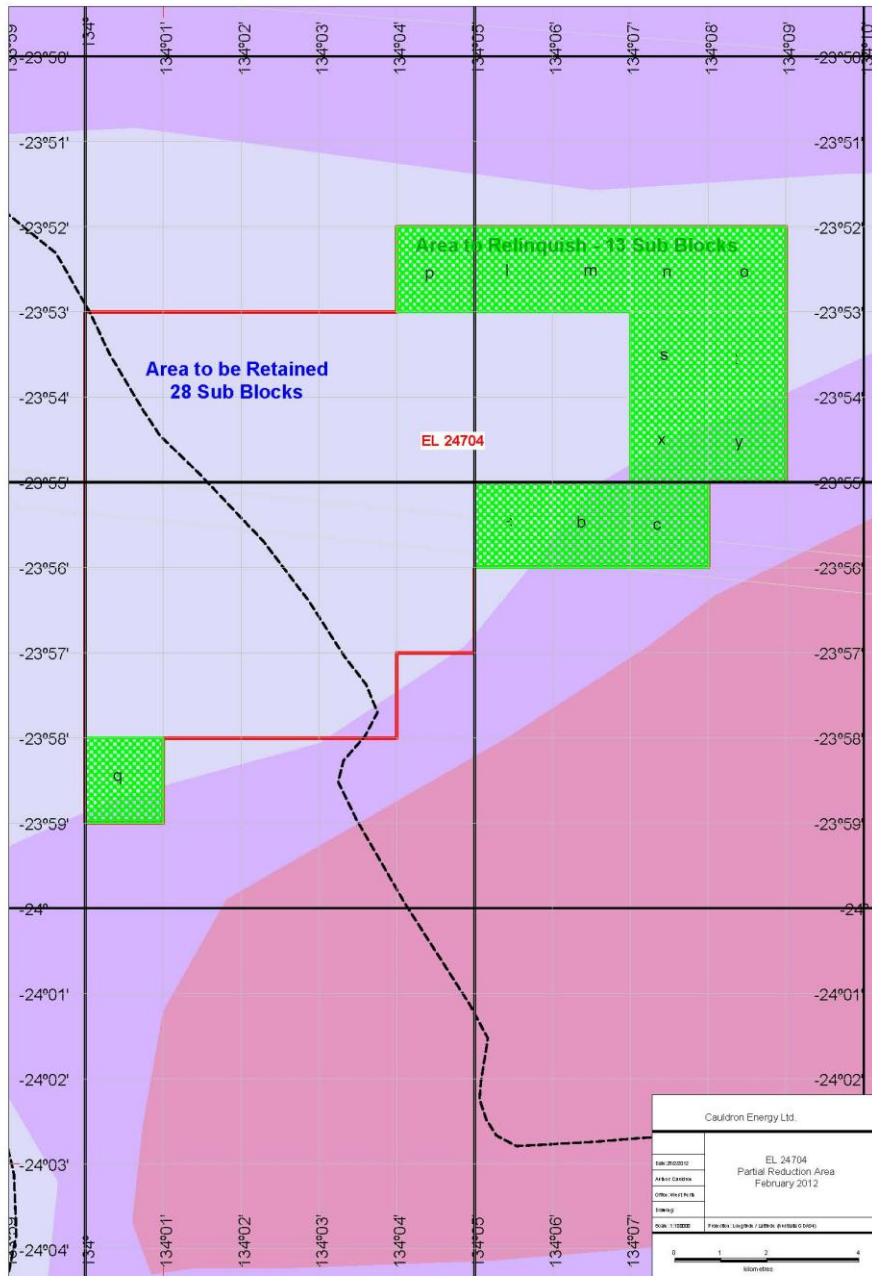
6.0 Work Completed.

During the six years of tenure, Cauldron has undertaken a review of the available open file reports and data, acquired airborne radiometric imagery, undertaken data entry and the creation of a project data base, undertaken a number of reconnaissance field trips and generated targets for follow up drilling programs.

As part of a basin wide review of data and the creation of an up to date electronic data base for the Amadeus Project, all the available historical reports were acquired from the NT government. The data from these reports has been entered into a data base, which references drill collar data with down hole information including geology, assays and radiometric data. Plans from the historical reports were scanned and geo-referenced in Mapinfo. Collar positions in UTM coordinates were extracted from these plans so that the data could be used in modern GIS computing packages. Results from percussion and vacuum drilling targeting uranium were reviewed and incorporated into Cauldron's database.

Work completed within the relinquished part of EL 24704 has included a number of reconnaissance field trips undertaken during mid to late 2006, late 2007, 2008 and 2011. No drilling has been completed within the relinquished area.

Figure 3. Amadeus Project – EL 24704 Relinquished Area



7. Conclusions and Recommendations.

Investigation of open file reports has indicated that very little exploration for uranium has been undertaken within the licence area. The work completed during the early 1970's consisted of limited car-borne radiometric surveys and limited drilling along the western boundary of the licence.

Based on the lack of conclusive historical work, particularly the lack of drilling, Cauldron believes that there is still potential for uranium mineralisation to be hosted within EL 24704.

32% of the tenement (comprising 13 sub blocks) was subject to sixth year compulsory relinquishment. The areas shown on Figure 3, above, were assessed to not be prospective for sediment-hosted uranium mineralisation and were relinquished on the 27th February 2012.

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Appendix 1- Graticular Details of Relinquished Area.

Map Sheet 1:100,000	Blocks	Sub Blocks
Alice Springs	3337	p
Alice Springs	3338	l m n o s t x y
Alice Springs	3409	q
Alice Springs	3410	a b c

Total number of Sub Blocks relinquished 13

Datum GDA94, zone 50