

RELINQUISHMENT REPORT YEAR 4

EL 25239

FOR PERIOD ENDING 5th FEBRUARY 2011

‘Woolner’

Darwin NT

Darwin SD5204	1:250,000
Koolpinyah 5173	1:100,000
Noonamah 5172	1:100,000

Titleholder: Territory Uranium Company Limited

Report No. 2011-014
Prepared for Territory Uranium Ltd
By A Chapman
May 2011

CONTENTS

CONTENTS	2
List of Figures	2
1. SUMMARY	3
2. LOCATION AND ACCESS	3
3. TENEMENT STATUS AND OWNERSHIP	5
4. GEOLOGY	8
5. PREVIOUS EXPLORATION	14
6. EXPLORATION ON RELINGUISHED GROUND	18
8. REFERENCES	23

List of Figures

Figure 1: EL25239 Tenement Location	5
Figure 2: EL25239; Areas retained.....	7
Figure 3: EL25239 1:250,000 NTGS Darwin Geology	11
Figure 4: EL25239 Pine Creek Orogen Basement Geology	12
Figure 5: EL25239 NTGS Darwin 1:100,000 Extractive Geology	13
Figure 6: Airborne EM Survey flight lines	18
Figure 7: Total Magnetic Intensity Image showing EL25239 and the Archaeon Woolner Dome.....	19
Figure 8: EL25239 showing the relinquished Project area 2	20
Figure 9: A CDI Section along line 6102401.....	20
Figure 10: A CDI Section along line 6102701.....	21
Figure 11: A CDI Section along line 5101801.....	21
Figure 12: A map showing the extents of Project Areas 1 and 2, and the EM survey lines.....	22

1. SUMMARY

EL 25239 is roughly 30 kilometres to the east of Darwin. Territory Uranium Company Limited is primarily focussing on the potential for mineralisation associated with the Archaen Woolner Dome to the north east.

The tenement underwent compulsory reduction in year 2 (180 blocks to 90 blocks), year 3 (29 blocks retained) and year 4 (12 blocks retained).

Work during Year 1 and 2 of tenure consisted of a review of both NTGS data, and compilation of significant results from Industry reports. They all explored for uranium, base metals, gold, commercial clays and manganese.

Work during Year 3 consisted of a review of the Airborne Electromagnetic Survey conducted by Geoscience Australia in 2008. Associated with this was an interpretation of the geophysical data, and proposed drill targets. Two project areas were identified; project area 2 was within the ground relinquished at the end of year 4.

2. LOCATION AND ACCESS

EL 25239 is roughly 30 kilometres to the east of Darwin, NT (Figure 1). Access to the centre of the tenement is via dirt road to Gunn Point and the south of the tenement is accessible via the road through Lambells Lagoon.

Topography is basically flat with swamps and black soil plains occupying the lower elevations. The central region is dotted with lagoons and depressions up to two kilometres across (possible collapse structures). The tenement is bounded on the east by the Adelaide River. Storms over the summer period (December to May) can make the region impassable.

Most of the region is covered by gum trees three to five metres apart. Paperbark trees occur near swamp and where ever the water table is at a shallow depth. Jungle like vegetation occurs around freshwater springs. The swamp and black soils regions characteristically have no trees and feature buffalo grass. It is also noted in some reports that the region contains abundant water resources (springs, streams, lagoons, and ground water).

The area has a monsoonal climate. Rainfall peaks over the summer period (December to February) with up to 1500mm of rain falling in this period. Temperatures can range from an average of 23°C during the winter into the high 30s for extended periods during summer.

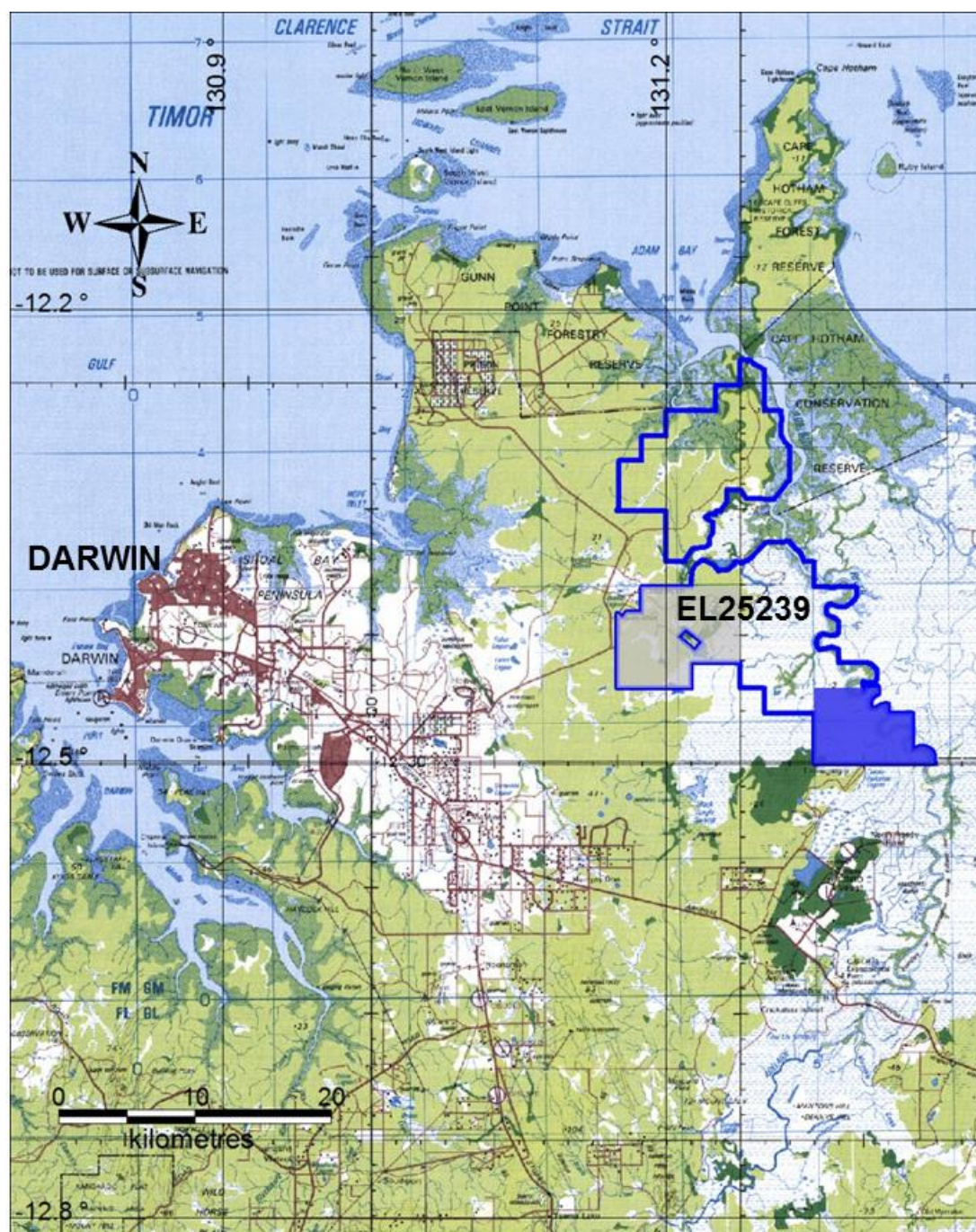


Figure 1: EL25239 Tenement Location

3. TENEMENT STATUS AND OWNERSHIP

EL 25239 was granted to Territory Uranium Company Ltd on 6th February 2007 and expires on 5th February 2013. The tenement originally comprised 180 graticular sub blocks which was reduced to 90 blocks at the end of year 2. There has been no expenditure on this tenement in year 4 and in consideration of Territory Uranium's ability to meet expenditure on the tenement and the need to free up ground for other

explorers TUC relinquished 78% of the total blocks in year 3 (29 blocks remaining) and 60% in year 4 (12 blocks remaining). There are no other current mining leases or mineral claims shown within the Licence boundaries. One sensitive area – Darwin Water control district - has been excised from the tenement. The native title claim schedule covers part of the region – Koolpinyah Central. The date effective 03/05/2002.

Underlying cadastre is all Perpetual Pastoral Lease, tenure number 1147. Landowners are as follows:

000 04476 Koolpinyah Station Pty Ltd (ACN009 597 406)
PO BOX 1021, Howard Springs NT 0835

The expenditure covenant set for the year 4 was \$23,000.

Blocks relinquished are shown in Figure 2.

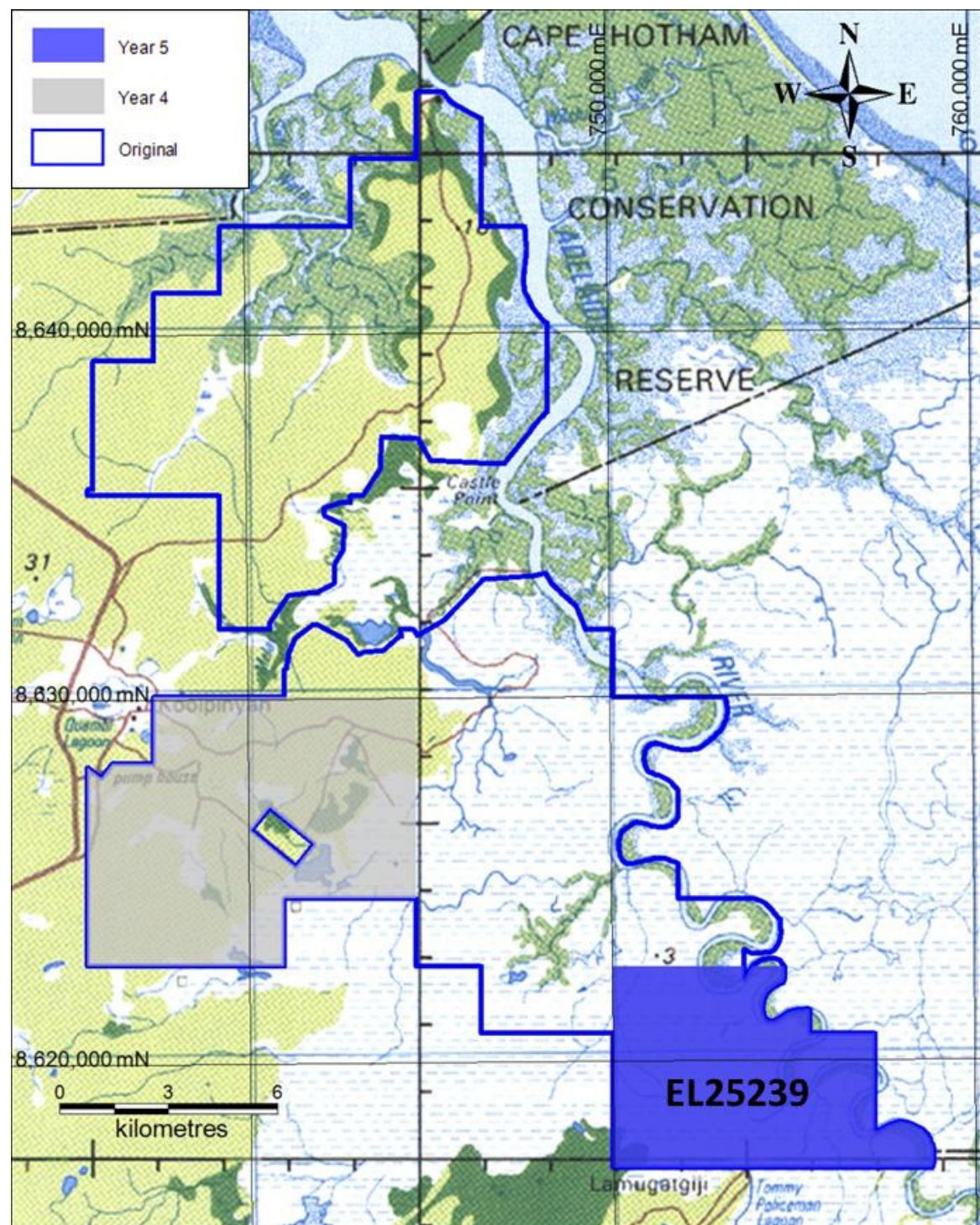


Figure 2: EL25239; Areas retained.

4. GEOLOGY

EL 25239 is situated in the northern mid section of the Darwin 1:250,000 SD5204 geological mapsheet. The region is covered by a 'well developed veneer of Cainozoic sediments'. The western half of the tenement is dominated by soils and laterite. The eastern half of the tenement is dominated by black soil plains. The Adelaide River is bounded by shelly, coralline sand on the west bank. Two outcrops of Koolpinyah dolomite are noted at 131°13'2", -12°25'40" and 131°13'51", -12°27'25". Figures 3-5 show the geology maps for the tenement.

Beneath the Cainozoic lies a thick cover of flat lying Mesozoic (Cretaceous) sediments. Within the Darwin mapsheet Pietsch & Stuart-Smith (1987) estimated that their thickness is up to 80 metres and in localized areas up to 130 metres thick. These sediments are seen to thicken to the north. Described as the Bathurst Island Formation the predominantly sandy claystones and clayey sandstones are divided into three members, the Darwin member, Marligur member and the Wangarlu Mudstone member. The former two are thought to extend through EL25239. The basal Darwin member grades laterally into the Marligur Member. The basal unit of the Darwin member is a polymict conglomerate ranging in thickness from 0.5 metres to 4 metres. This unit grades out towards the east and the base unit changes to a glauconitic sandstone (2 metres thick) (Pietsch & Stuart-Smith 1987).

The Mesozoic sediments overlie an undulating surface of 'steeply dipping rocks of Lower Proterozoic and Archean ages'. Within EL25239 the Mount Partridge Group are predominant. Drillholes completed by the NTGS and Urangesellschaft have intersected predominantly Koolpinyah Dolomite. This has been described as massive dolomitic marble (minor graphite and pyrite), dolomitic mica schists, mica quartz schists (chlorite, mica with common accessories of graphite and talc) and phyllites (carbonaceous and dolomitic in places) (Pietsch 1985). These lithologies are 'conformable with and in places facies variants of Wildman Siltstone and Whites Formation' (Pietsch 1985). The Koolpinyah dolomite is correlated to the Coomalie Dolomite in the Rum Jungle district. The depositional environment of the Koolpinyah dolomite is shallow marine.

The Whites Formation conformably overlies the Koolpinyah Dolomite. These sediments consist of graphitic, dolomitic mica quartz schists, dolomitic shale and phyllite and are commonly carbonaceous and pyritic.

The Wildman Siltstone overlies the Whites Formation and is described as a slightly pyritic siltstone with shale and phyllites. Cleavage is well developed in the phyllites. The Acacia Gap Quartzite Member is a 'sequence of medium to coarse grained,

pyritic, grey quartzite and minor coarse grained to gritty sandstone interbedded with shale'. This member occurs stratigraphically midway within the Wildman Siltstone about midway.

Aeromagnetics in the region indicate that linear responses are generally dolerite dykes (near vertical of 20 metre thickness) or faults (Pietsch 1985). Radiometrics show a low total count across the Cretaceous sediments. Pietsch (1985) notes that a Uranium anomaly of 24ppm eU occurs at coordinates GM232241, two kilometers north of Howard Springs. 'This anomaly coincides with 0.5% potassium response and a -60nT magnetic response related to a west northwest trending dyke'. It was suggested that the source could be up to seven kilometers south of Howard Springs at a possible contact between the Whites Formation and the Koolpinyah Dolomite. Another Uranium anomaly two kilometers south of Howards Springs is thought to have the same source. Pietsch and Stuart-Smith (1987) note that an unexposed unit at the base of the Koolpinyah Dolomite consisting of conglomerate and dolomitic breccia exists, at least 15 metres thick and contains Dirty Water metamorphics and Woolner Granite. This is proof of an unconformity at the base of the Mount Partridge Group. The Koolpinyah Dolomite unconformably overlies and tectonically reworked into Nanambu Complex.

The Woolner Granite lies some ten kilometres to the east of EL25239. It is the oldest of the Archaen rocks within the region at 2675+/-14Ma and is the probable source of a strong negative gravity anomaly within the Darwin 1:250,000 mapsheet. The Woolner Dome is concealed by 50-80m of Cretaceous and Cainozoic sediments.

Pietsch (1985) suggests several economic targets within the Koolpinyah mapsheet (1:100,000). These include uranium where the principal target zone is the contact zone between the Koolpinyah Dolomite and Whites Formation. The contact between Archaen granite and Archaen/Early Proterozoic sediments has been targeted in the Woolner district.

Pietsch and Stuart-Smith (1987) state that uranium targets in the Darwin district are

- Post orogenic hydrothermal alteration and tectonism occurring near the carbonate/metapelite contact in Early Proterozoic rocks of the Mt Partridge Group, peripheral to the Rum Jungle and Waterhouse complexes (Archaen). The Uranium can be associated with a base metal (copper) and can be associated with a major shear zone.
- Uranium mineralisation (Dysons and Mt Burton) occurs in the Acacia Gap Quartzite member at a sheared contact with Coomalie Dolomite.
- Mineralisation at Whites Deposit is located at the brecciated contact between the Coomalie Dolomite and Whites Formation.

- At the Mt Fitch prospect uranium is found as 'disseminated amorphous oxides in carbonaceous schist and anastomosing veinlets in the matrix of magnesite breccias.

Pietsch and Stuart-Smith (1987) state that gold and base metal targets in the Darwin district are as follows

- Base metal mineralisation in the Rum Jungle Uranium Field occurs in sheared or brecciated zone close to the carbonate/metapelite contact within the Mt Partridge Group. Copper is found with minor Uranium.
- Browns deposit is located in sheared and altered graphitic, sericitic and pyritic, carbonaceous shales.
- Woodcutters occurs in the Whites Formation well above the Coomalie Dolomite. The ore bodies are associated with carbonitised lamprophyric dykes.
- Base metals and gold are located in the contact aureole of the Mt Bundey granite. Also mineralisation occurs in the shear zones, dykes and chloritic zones within the Hornfelsed sediments of the Koolpin Formation.

Quartz Sand is also another potential target within EL25239. These deposits are located adjacent drainage areas as thin sheets with little or no topsoil. The base usually passes into ferricrete sandy clay or gravelly sand.

Iron and phosphates are other possible targets within EL25239. The phosphates are nodular within the Cretaceous claystones and at 0.3 metre thick do not appear economic. Also deposits are found within the Buckshee Breccia (Early to Mid Proterozoic).

There are no recorded MODAT occurrences within EL25239.

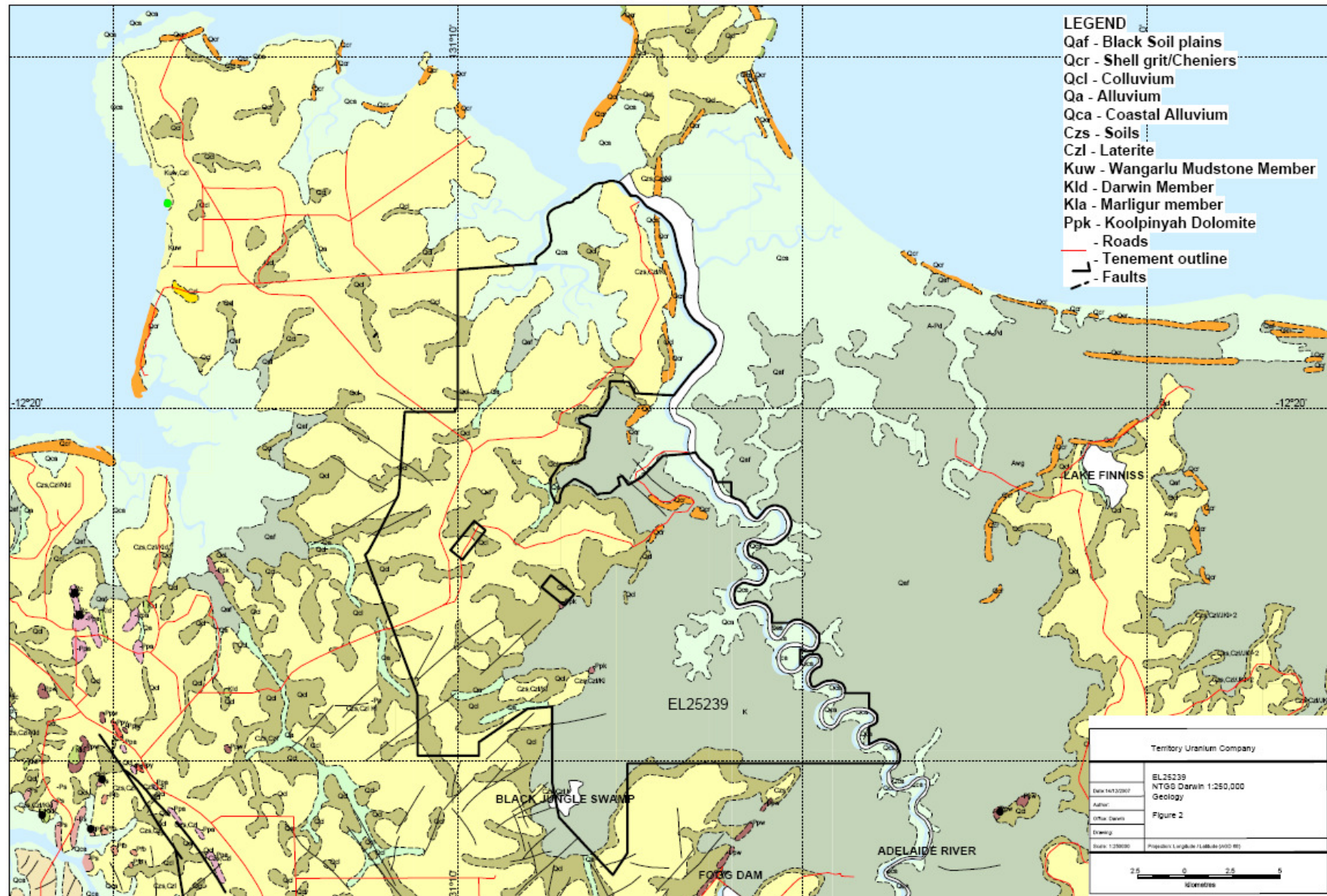


Figure 3: EL25239 1:250,000 NTGS Darwin Geology

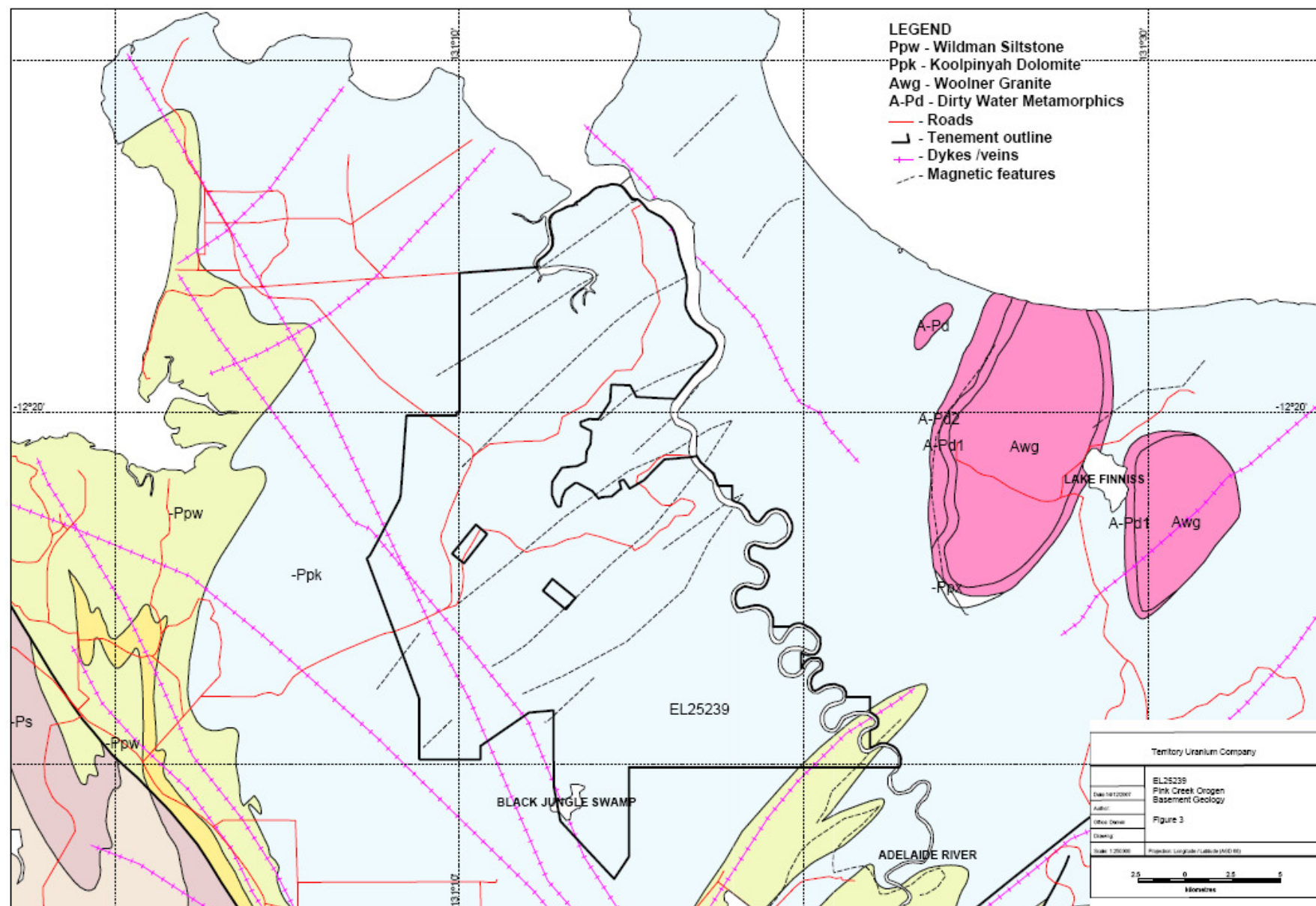


Figure 4: EL25239 Pine Creek Orogen Basement Geology

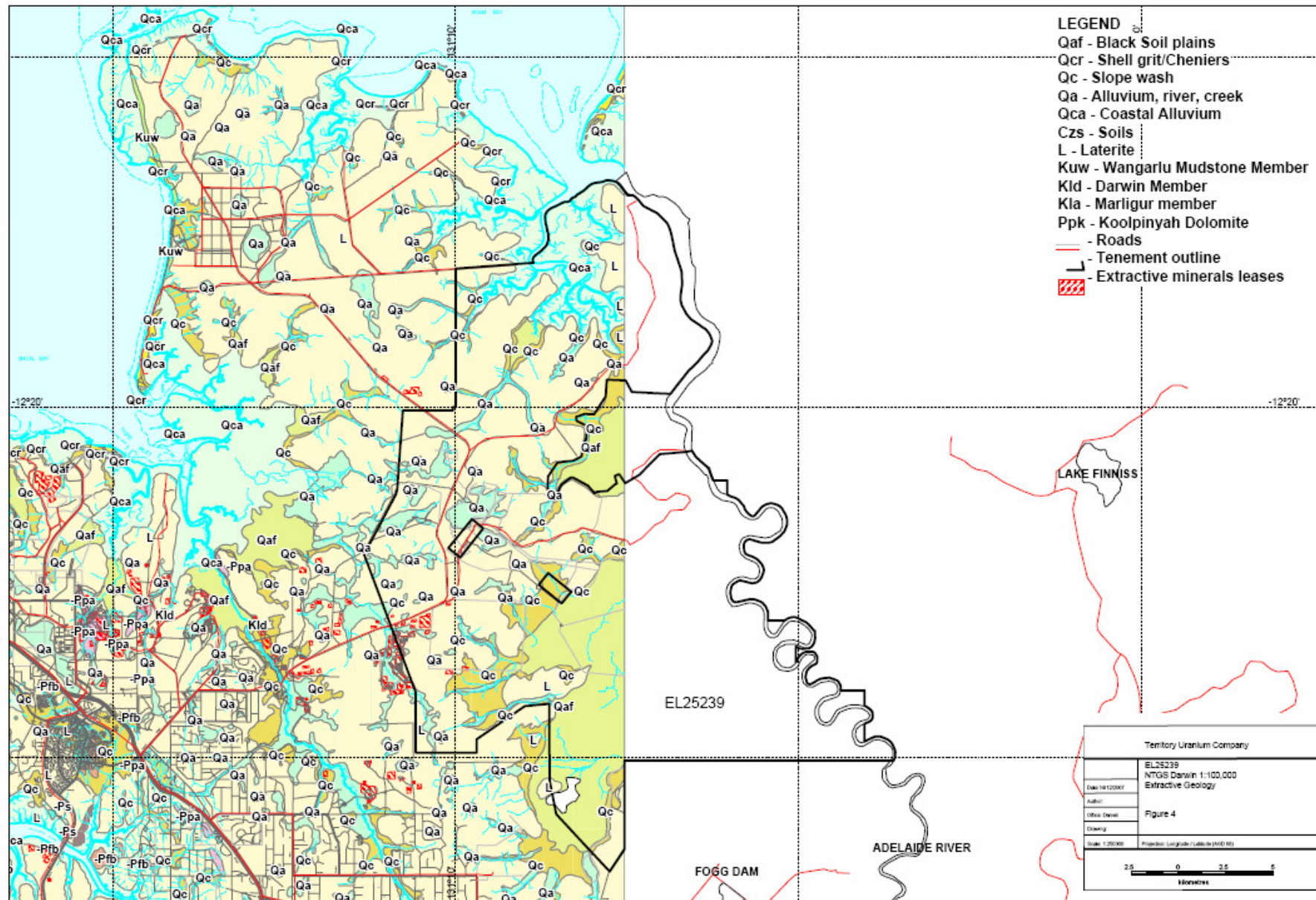


Figure 5: EL25239 NTGS Darwin 1:100,000 Extractive Geology

5. PREVIOUS EXPLORATION

Part of the work done on EL25239 in the first year included a literature review and data compilation and the results are in the section below.

EL1709 covers the central and south western portion of EL25239. Urangeschellschaft Australia Pty Ltd explored for uranium in the 1980s. They completed gridding, a gravity survey, airborne radiometric and magnetic survey and drilling. They describe a licence with basement Proterozoic Coomalie Dolomite and phyllites overlain by a thick sequence of flat lying Cretaceous/Jurassic sediments that are often laterised. The dolomites are seen as steeply dipping with a strike north of east. These dolomites have been renamed in Pietsch (1985) to Koolpinyah Dolomite.

Gravity was thought important to map basement highs and map density contrast between black shales and dolomite. Aeromagnetics identified dykes five to 30 metres thick, steeply dipping with a north east trend. Radiometrics identified a uranium anomaly over the Howard Springs Reserve. The uranium anomalies were coincident with a 'negative linear magnetic anomaly' which trends south east into the exploration licence (the anomaly is thought to extend 100km to the south east through Mt Bundey where it has been mapped and a uranium prospect is proximal – the dyke has a radiometric age of 400my, somewhat younger than the Pine Creek mineralisation thus the mineralisation may have occurred before the dyke was emplaced). No thorium is associated with this anomaly and it is thought to have a strike length of 700 metres. The anomaly was not inspected because of difficulty access to the region (jungle/swamp). Further study of the detailed radiometric maps determined that the anomalies were not located on the dyke but on a north south trending cross structure.

Urangeschellschaft targeted Uranium mineralization at the contact between the 'Masson Fm' and the Coomalie Dolomite as at Rum Jungle, possible concentrations within brecciated parts of the dolomite, magnetic lineaments (?dyke) with associated radiometrics (eg howard springs reserve) and in favourable host rocks at the margins of any basement highs. In the final report they believe that favourable Alligator River type lithologies occur at greater than 400m depth.

CR1980-0246 notes that uranium was discovered at Howard Springs in 1954 but no details are given. Also Tertiary sands are mined in the region and where they occur they are immediately above the Coomalie Dolomite. Note was also made of an EM survey flown by Geoterrex in 1979 in conjunction with an aeromagnetic survey.

There were problems with flight line orientation. Seventeen drillholes were completed within EL1709. Fourteen were completed intersecting Coomalie dolomite, two were abandoned and one intersected 'Mt Masson Formation'. A note has been made that drilling was often difficult with up to 35 metres of water laden unconsolidated sands. Four more holes were drilled the subsequent year. Also only five outcrops of Lower Proterozoic sediments were located roughly half a metre by three metres in size.

Cretaceous and Jurassic cover rocks are generally thinner in the west of the EL (30-40m), with the centre being 60-80m and the eastern portion of the EL being calculated at 40-50m.

Radiometric logging was completed down seven holes with no anomalous radioactivity recorded. Water sampling was undertaken as well from seven water bores with all uranium values being less than 1ppb.

They conclude that the region is not prospective for Alligator River style Uranium mineralisation.

Eupene provides a report for the region and states that there are two main chances for Uranium mineralisation in the region:

- On the contact between the Coomalie dolomite and the 'Masson formation' after the mode of the Rum Jungle orebodies.
- In favourable host rocks (Cahill type sediments that appear to underlie the Coomalie dolomite) in the vicinity of granite/gneiss domes in the area eg Alligator River type Uranium deposits.

He also states that surficial techniques are virtually useless considering the extensive cover in the region. Some techniques that could be applied are as follows

- Drilling is the only way to directly assess the potential of the region
- Need to target areas using regional geology and geophysics, detailed geophysics and EM (where ground conditions permit), gravity (regional) and these on a local scale with the occasional stratigraphic drillhole to correlate findings.
- Follow up by testing geophysical anomalies especially gravity features and indications of favourable structural conditions. Location of zones of chloritic alteration (often associated with Uranium mineralisation). Other signs include carbonaceous schists, carbonates, brecciation and silicification if associated with increases in uranium.

EL 2958 was explored by Union Oil Development Corporation during 1980 -1981. They undertook an interpretation of the regional geophysical data available from the BMR at that time (aeromagnetic, radiometric and gravity). On radiometric anomaly is described as relatively weak. During 1981, a helicopter gravity survey was undertaken over the Point Stuart area in the east of the tenement. No pronounced features were outlined, some weak features were visible. Two ROAC lines combined with radiometrics were carried out in the east of the tenement and a geological reconnaissance of the region. Two slightly high ROAC results were recorded but there significance was not determined. Five petrology samples were submitted, all samples were orthoquartzites (?Acacia Gap Quartzite?).

EL7966 was explored by Normandy Metals group for gold, copper, lead and zinc, As, Sb, Bi, Mo, Ni, Co, Sn and W using a geochemical lag programme (of roughly 500m x 500m) during 1993-1994. The tenement covers the southern most block of EL25239. Analysis of the regional results lead to the discovery of a weak coincident As, Ni, Co, Cu, Pb, Zn and Mo anomaly. The anomaly is believed to be lithological in nature (?Mafic). The existing samples were samples for Fe and Mn as well. A note was made about overlying younger sediments hindering past exploration efforts. The northern portion of EL7966 is dominated by the Black Jungle swamp. RAB drilling in the third year of tenure failed to outline any mineralisation. Four lines of RAB holes (500mx100m) were drilled in the south west of EL7966 to bedrock (up to 34m). Assays and logs can be located in the following, CR19940610, CR19950574 and CR19960644.

EL3478 was held by Mobil Energy Minerals Australia Inc during the mid 1980s. The licence was sought to explore for Alligator River type uranium gold deposits. Geophysics, seismic profiles (to asses cover depth and basement depth), EM and ground magnetics and determination of the age of the Woolner granite were undertaken. Five drillholes were completed each with a component of core. No anomalous radioactivity was recorded. A large amount of work was completed on the Woolner granite and associated sediments, none within EL25239. A study was completed by the CSIRO into the potential of the granite as a source for uranium for redistribution or enrichment into adjacent ore bodies. The study was inconclusive to whether 'labile' uranium was present or was remobilised during metamorphism and metasomatism. "The granites were originally peraluminous ilmentite-series granitoid very low in opaque accessory minerals but containing fine grained zircons. The relatively high uranium content of some zircons indicates part of the granitemay have crystalised as fertile source rock. Also the overall whole rock content is low suggesting that the potentially labile uranium was leached or remobilised during metamorphism."

EL3189 covers the northern end of EL25239. Exploration was carried out by Minatome Australia Pty Ltd during the early 1980s. After a desktop study on data available in the public domain the ground was relinquished because of thick Cretaceous cover and difficulty of using geophysical methods in the district. The target mineralisation was Rum Jungle Uranium deposits. Minatome reinterpreted five drillhole completed by Dampier Mining in the 1970s exploring for manganese. They also note that the Geological Survey drilled two holes one at Koolpinyah Homestead and Fisher Lagoon (this hole intersected Lower Proterozoic magnesite – possibly Coomalie dolomite or part of the Masson Formation).

EL1906 was explored for manganese during the early 1980s by a subsidiary of BHP, Dampier Mining. Five holes were drilled for 257 metres to explore for the source of loose manganese at Lee Point. No manganese was intersected in the sandy clays/clays drilled. Palaeontological examination suggests the area is in line with the rich mid Cretaceous Aptian - Cenomanian period. One sample of a sandstone pebble lag deposit at the Proterozoic/Cretaceous contact with pyritic coatings was analysed.

The base of hole sample from KM2 (ppm) was as follows: Ni – 200, Cu – 5, Zn – 80, Ag - 0.5, Pb – 5. The hole locations are not provided in this report but detailed logs are. Will use locations provided in the Annual report for EL3189.

EL1642 was explored for Alligator River/Rum Jungle type Uranium deposits and base metal deposits by CRA Exploration, Peko and EZ exploration during 1978 - 82. During the first year ground magnetics, geological traverses and ten drill holes were completed. Successive years saw extensive drilling and geophysical surveys around the Woolner dome. Over 10000 metres of drilling was completed east of the Alligator River with no uranium mineralisation and no hydrothermal chloritic alteration discovered and only minor gold anomalism.

Gold values (1ppm Au and 3.4ppm Au) were intersected in the quartz magnetite horizons of hole 78WORD8. All holes were radiometrically logged with no positive results. These drillholes were completed roughly ten kilometres to the east of EL25239 eastern boundary.

A CRA project review highlights that the most important factors in mineralisation are graphitic rocks and fault brecciation plus proximity to the unconformity.

AP 2498 was explored during the early 1970s by North Broken Hill Ltd for base and precious metal deposits, Uranium and gold. A variety of techniques were used including geobotany and mercury halo but with no success. Subsequently aeromagnetism and scintillometry were used to assess geology and any more

obvious near surface uranium deposit. One drill hole was completed in the Fogg Dam district and did not intersect any economic mineralisation. The drill hole was targeted above structural deformation and minor geochemical anomalies.

AP 1840 was explored during 1970 for kaolin and ball clays thought to be of commercial purity and extent. The region covered the Gunn Point locality. Twenty six auger holes were completed, no suitable clays were discovered. None of the holes lie within EL25239.

6. EXPLORATION ON RELINQUISHED GROUND

During the first and second year of tenure Territory Uranium completed a review on both NTGS data, and compilation of significant results from Industry reports. The results of this study are detailed above.

During the third year of tenure Territory Uranium reviewed Airborne Electromagnetic Data which was recently released by Geoscience Australia. This work targeted two key areas in the southern regions of the tenement. The details for this study are given below for the relinquished ground:

In light of the recent airborne electromagnetic (EM) survey flown by Geoscience Australia over part of the tenement (see **Figure 6**) Territory Uranium utilised the data to help define potential drill targets.

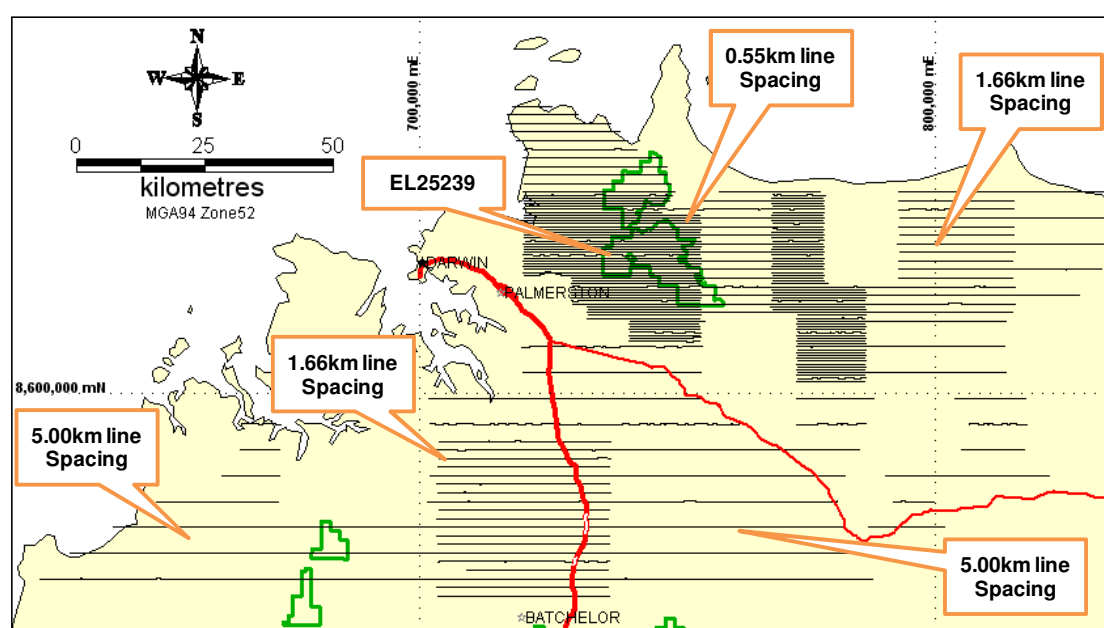


Figure 6: Airborne EM Survey flight lines

The following findings were made:

Airborne Electromagnetic Survey

The Total Magnetic Intensity (TMI) Image (see **Figure 7**) reveals the Archaean Woolner Dome to the East of EL25239, plus also a deeper Archaean Dome to the South of the tenement. Intersecting the tenement are a series of dolerite dykes (near vertical of 20 metre thickness) or faults (Pietsch 1985).

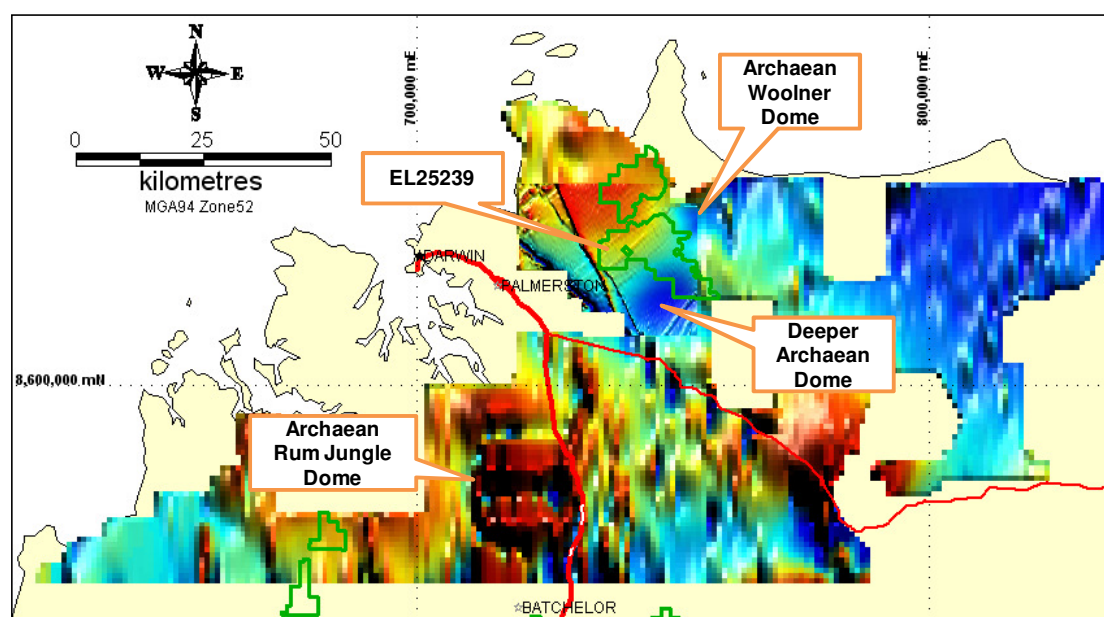


Figure 7: Total Magnetic Intensity Image showing EL25239 and the Archaeon Woolner Dome.

Two Project areas were defined in the study. Project area 2 was within the relinquished ground. Project area 2 covers the northeast trending magnetic anomalies. The main purpose of this target area was to investigate how deep these anomalies were and to see if drilling them was a feasible option.

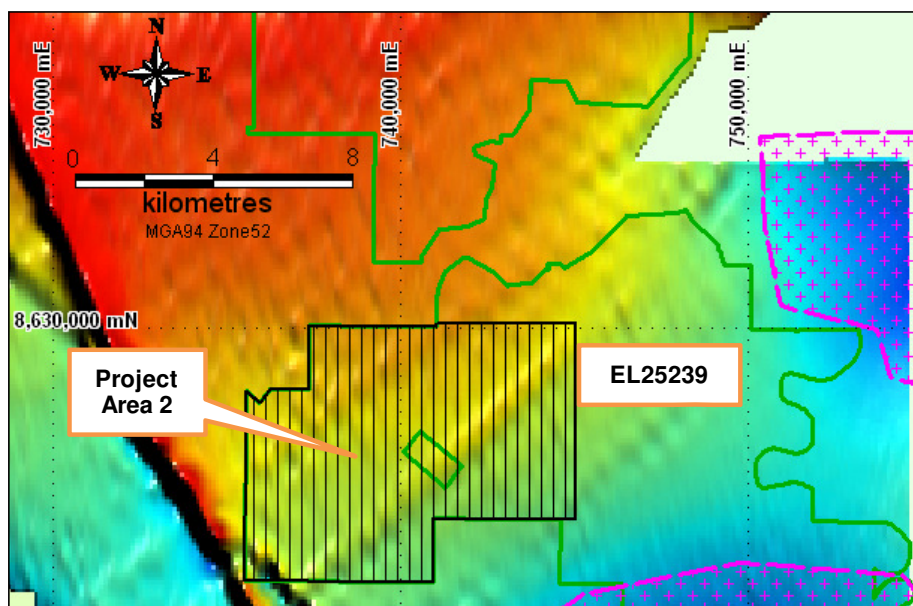


Figure 8: EL25239 showing the relinquished Project area 2

The results from Project Area 2 indicate that the anomalous response seen on the plans is actually caused by a near surface conductive feature, probably a specific lithological unit. This is most likely caused by the sediments from the Adelaide River Floodplain. The apparent deeper response beneath the contact between this unit and the resistive geology to the north-west is not a real feature, being an artefact of the processing of this kind of data. The CDI sections through Project Area 2 can be seen in **Figure 9**, **Figure 10**, and **Figure 11**, the location of the lines can be seen in **Figure 12**.

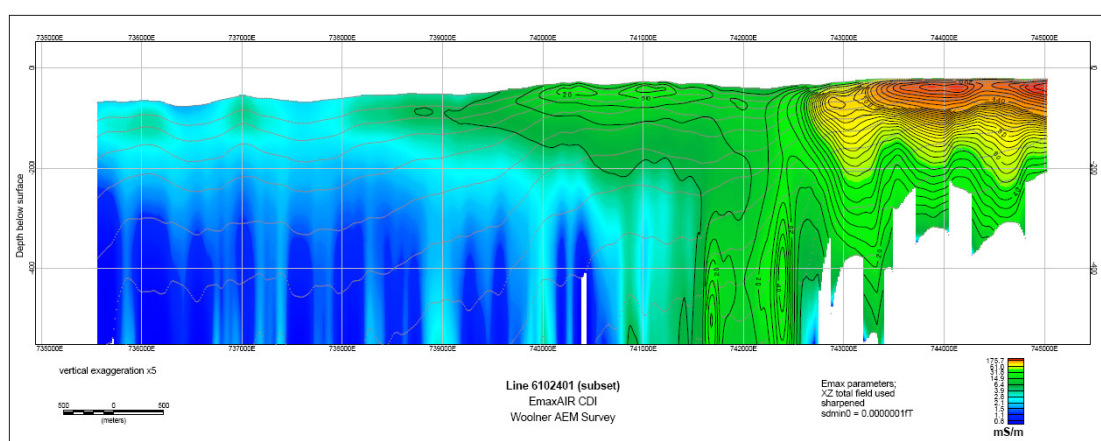


Figure 9: A CDI Section along line 6102401

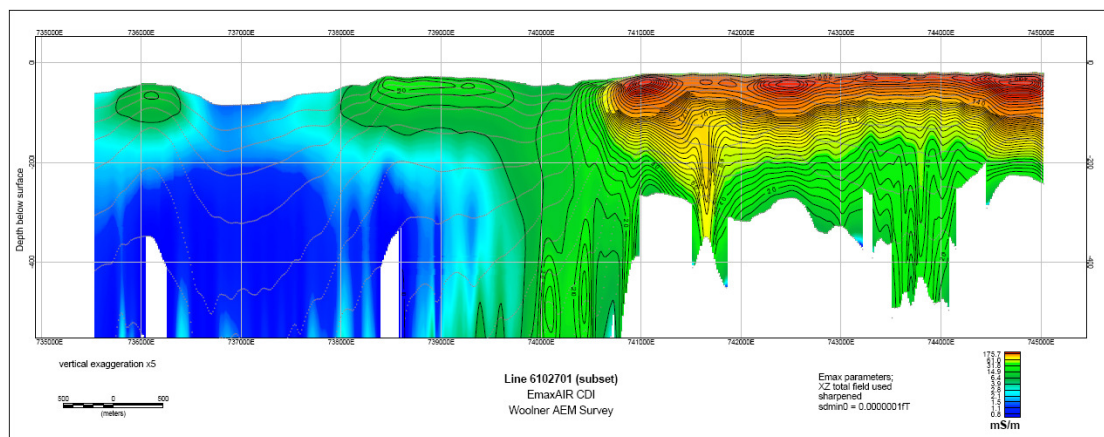


Figure 10: A CDI Section along line 6102701

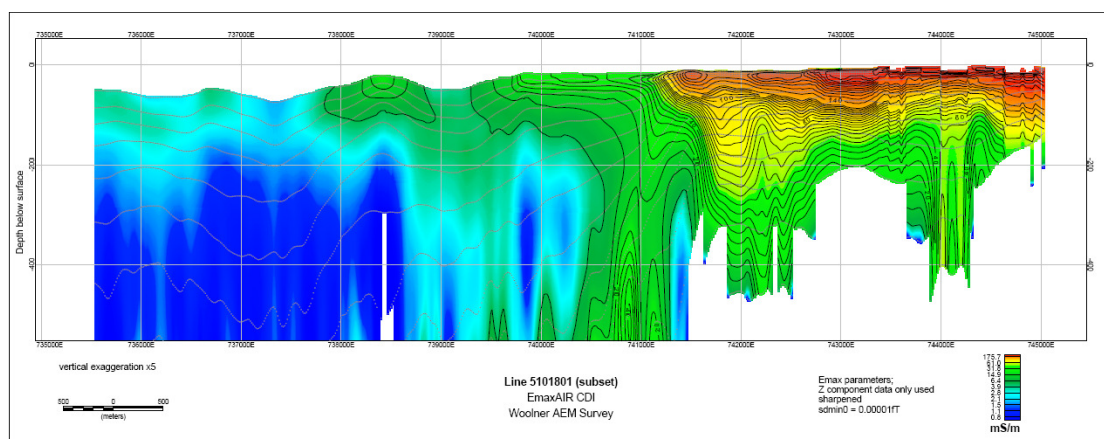


Figure 11: A CDI Section along line 5101801

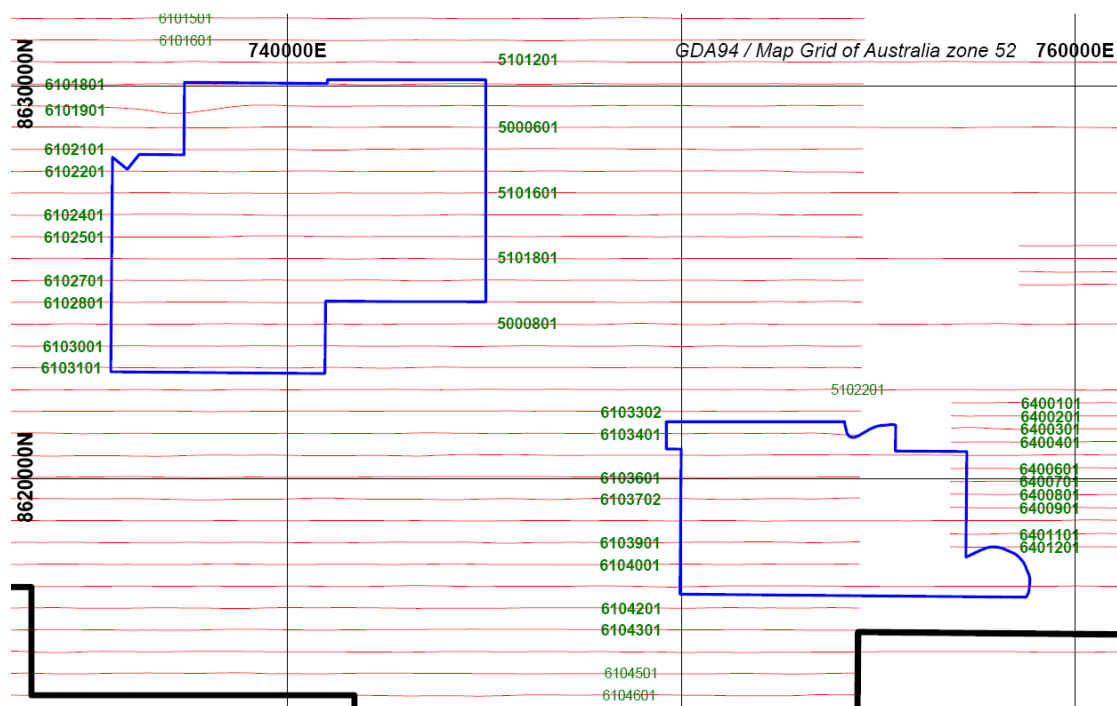


Figure 12: A map showing the extents of Project Areas 1 and 2, and the EM survey lines.

There was no expenditure on this tenement in year 4 and in consideration of Territory Uranium's ability to meet expenditure on the tenement and the need to free up ground for other explorers TUC relinquished 78% of the total blocks in 2010 and 60% in 2011.

8. REFERENCES

McKay, A.D., and Miezeitis, Y., 2007. Australia's Uranium Resources, geology and Development of deposits. AGSO Geoscience Australia, Mineral Resource Report 1.

Pietsch, B.A., 1985. Explanatory Notes Koolpinyah 5173, 1:100,000 Geological Map Series. *Department of Mines and Energy, Northern Territory Geological Survey.*

Pietsch, B.A., and Stuart-Smith, P.G., 1987. Explanatory Notes Darwin SD5204, 1:250,000 Geological Map Series. *Department of Mines and Energy, Northern Territory Geological Survey.*