

**REDUCTION REPORT
YEAR 7 (Non-Compulsory)**

EL 25222

BAMBOO CREEK

FOR PERIOD ENDING: 8 November 2013

DALY RIVER PROJECT NT

FERGUSON RIVER SD5212	1:250,000
Wingate Mountains 5069	1:100,000
Jinduckin 5169	1:100,000

Titleholder: Spectrum Rare Earths
(previously TUC Resources Ltd)

Target Commodities: Rare Earth Elements and Uranium

Report No. 2014-006
Prepared for Spectrum Rare Earths Limited
By Laura Petrella
January 2014

This report and its contents are strictly confidential. All rights to the report and its contents, including, without limitation, rights to confidential information and copyright in all works whether at common law or statute (including photographs, diagrams, charts, maps and graphs) comprised in the report, remain the property of Spectrum Rare Earths Limited. No part of this report or the information contained in it may be disclosed to any person without the consent of Spectrum Rare Earths Limited. No part of this report or the information contained in it, may be disclosed, reproduced (including being stored in any form), transmitted, published or used for any other purpose without the prior written consent of Spectrum Rare Earths Limited. As per Regulation 126(3)(a) of the *Mineral Titles Regulations* the Minister is authorised to copy and distribute the report and associated data.

CONTENTS

1.	SUMMARY	1
2.	LOCATION AND ACCESS	2
3.	TENEMENT STATUS AND OWNERSHIP.....	4
4.	GEOLOGY	5
5.	PREVIOUS EXPLORATION.....	7
6.	SPECTRUM EXPLORATION	12
6.1.	Exploration during Year 1(2007).....	12
6.2.	Exploration during Year 2 (2008).....	14
6.3.	Exploration during Year 3 (2009).....	14
6.4.	Exploration during Year 4 (2010).....	14
6.5.	Exploration during Year 5 (2011).....	14
6.6.	Exploration during Year 6 (2012).....	14
6.7.	Exploration during Year 7 (2013).....	14
7.	REFERENCES	15
8.	APPENDIX A, List of Company Reports from Previous Tenure	16
9.	APPENDIX B, Drill and Sample Data.....	16

LIST OF FIGURES

Figure 1	Location Map with underlying cadastre.....	3
Figure 2	Geology of Daly River Project NTGS 2500K map.....	6
Figure 3	Independent Geologist's Report showing 'Magnetic Anomaly 6 and 7 within EL 25222.....	13

1. SUMMARY

EL 25222 is 220km south of Darwin (by road). Spectrum Rare Earths Limited (Spectrum Previously TUC Resources Ltd.) has primarily been exploring for uranium and rare earth elements on this licence. The Seventh year reduction was undertaken with 57 blocks kept and 38 blocks dropped. This report details exploration carried out by Spectrum on the year 7 relinquished ground for the duration that it was held.

Work during Year 1 of tenure consisted of a review of both NTGS data, compilation of significant results from Industry reports and geophysical data review.

Work during Year 2 included an airborne radiometric and magnetic survey (7,116 line km) on ELs 25222 & 25223, partly over the relinquished ground.

No exploration was completed on the relinquished ground in years 3 to 7.

2. LOCATION AND ACCESS

EL25222 is 170km due south of Darwin, and approximately 220km south of Darwin by road. Access from Darwin is via the Stuart Highway onto the Douglas Daly Road to Ooloo Crossing, then a track to Fish River transects the southern and western portion of the Licence. Access is possible in the dry season only as the crossings at Ooloo Crossing and Cattle Creek are impassable after rains.

The EL25222 Licence is displayed in Figure 1 as well as the dropped blocks for year 7. Most of the ground is open and with low relief and numerous sinkholes. To the south, series of ridges and mesas trend SE along the southern boundary of the tenement.

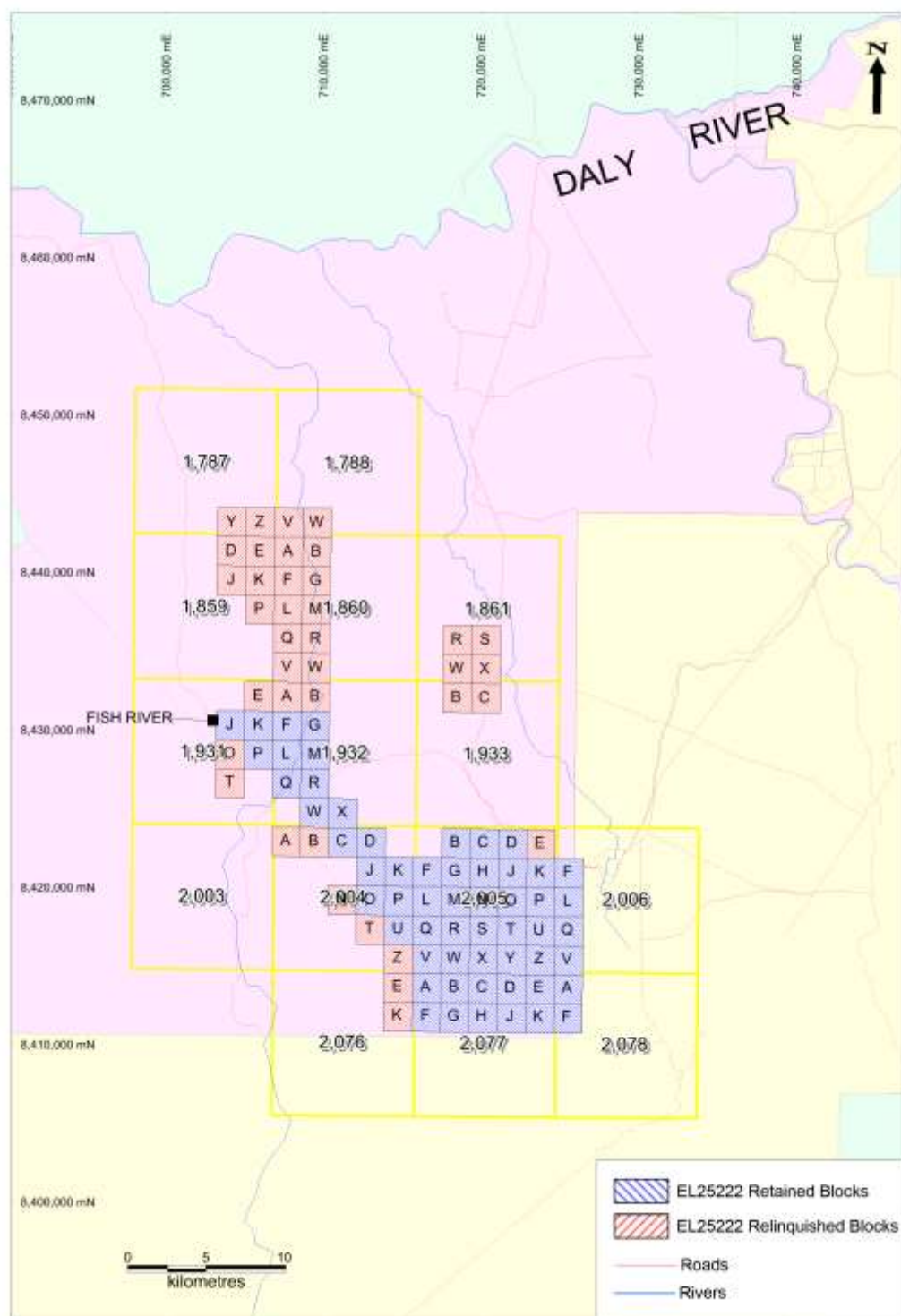


Figure 1 Location Map with underlying cadastre

3. TENEMENT STATUS AND OWNERSHIP

EL 25222 was granted on 9 November 2006 and expires on 8 November 2014 (renewed for an additional 2 years in 2012). It originally comprised of 500 graticular blocks (1,557sq km). There are no other mining leases or mineral claims shown within the Licence boundaries.

Underlying cadastre (Figure 1) is crown lease in perpetuity held by:
CLP; 02700 Northern Territory Land Corporation (Fish River)
CLP 815 Tovehead Pty Ltd (Daly River Crown Lease)
PPL 1004 Tovehead Pty Ltd (Tipperary Station)
PL 903 Tovehead Pty Ltd (Douglas)

Tenement Reductions:

	Blocks retained	Blocks relinquished
Second Year Compulsory Reduction	360	140
Fourth Year Compulsory Reduction	151	211
Sixth Year Compulsory Reduction and Renewal	95	56
Seventh Year Non-Compulsory Reduction	57	38

This report details exploration carried out by Spectrum on the year 7 relinquished ground for the duration that it was held.

4. GEOLOGY

EL 25222 is situated near the western margin of the Pine Creek Orogen. The northern part of the tenement is within the SD5208 Pine Creek sheet, while most of the tenement is on the SD5212 Fergusson River sheet. Descriptions of the regional geology can be found in several texts, including Ahmad et al., 1993; Ahmad, 1998; Pontifex & Mendum, 1972; Dundas et. al., 1987; and Edgoose et. al., 1989.

Middle Proterozoic sediments of the Tolmer Group are mapped as overlying the western portion of EL 25222. The Tolmer Group is a sequence of arenite, siltstone and dolomite up to 1600m thick unconformably overlying Early Proterozoic Finniss River Group sediments. The Stray Creek Sandstone and Hinde Dolomite are the most common stratigraphic units of the Tolmer Group within EL 25222. Fault splays from the Giants Reef Fault to the west offset and thrust blocks of Stray Creek Sandstone adjacent to Hinde Dolomite within EL 25222.

The Cambrian Antrim Plateau Volcanics is mapped as overlying portions of the Tolmer Group. Further east, limestones and quartzarenites of the Cambro-Ordovician Daly River Group (comprising Tindall Limestone and Jinduckin formation) form the Daly Basin. Figure 2 shows the geology.

The region has also been incorporated in the NTGS mineral resource projects. These include regional phosphate prospectivity which has been analysing selected rockchips from water bores in the district (Khan et al., 2007). No significant phosphate anomalies were noted in the Daly Basin.

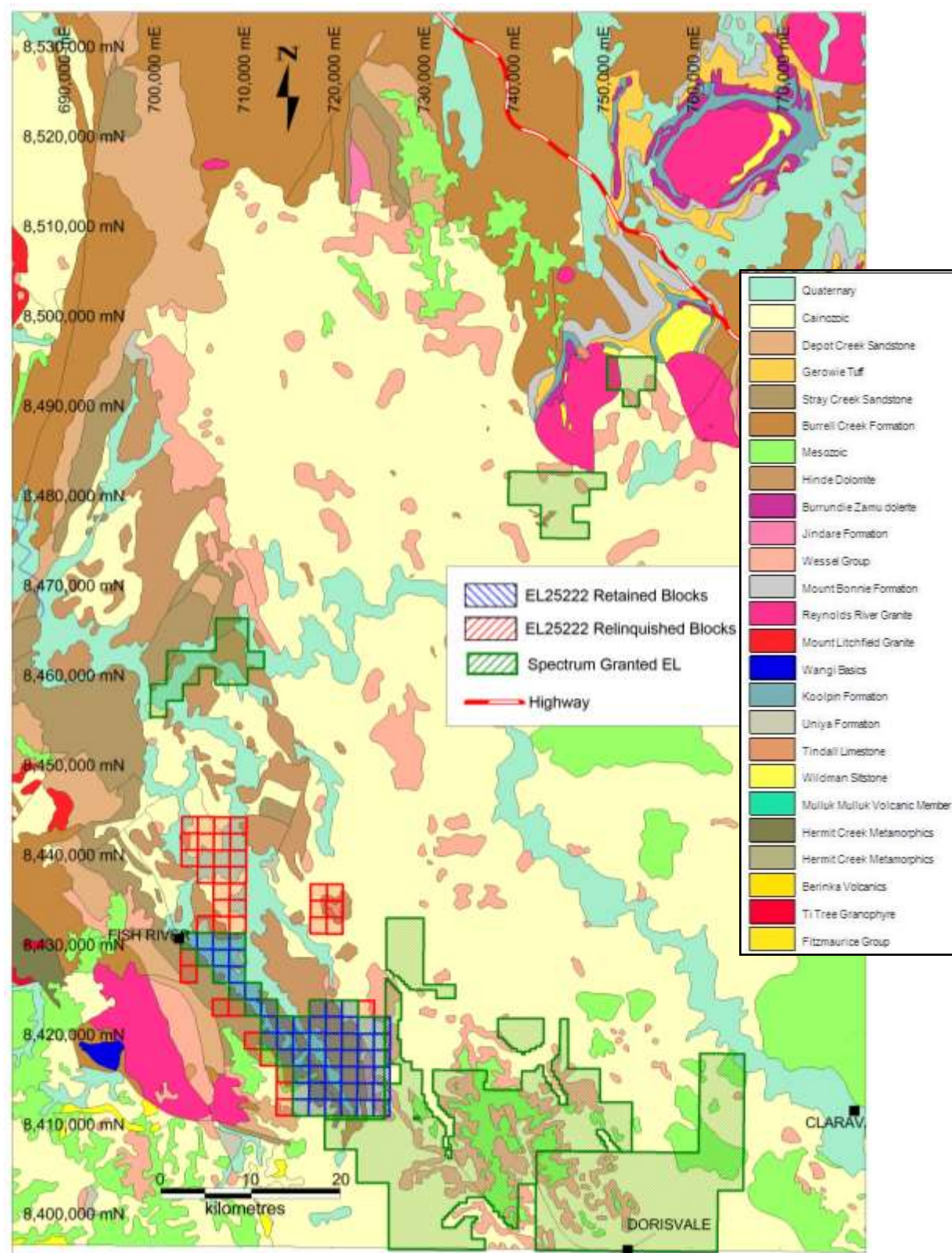


Figure 2 Geology of Daly River Project NTGS 2500K map.

5. PREVIOUS EXPLORATION

A portion of the work done on EL25222 for year 1 consisted of a literature review and data compilation. The results are presented in the section below. Appendix A contains the list of previous tenure.

AP 1682 covered the northeast portion of EL 25222, but most of the AP Licence was outside of EL25222, extending in a southeast direction. IMC Development Corporation explored the AP for the phosphatic potential of the limestones. Samples were qualitatively tested for phosphate in the field with ammonium molybdate solution, with selected samples sent for qualitative analysis. No anomalous radioactivity was associated with the phosphate. The best phosphate assay value of 0.75% P_2O_5 was obtained from Ooloo Limestone outside of EL25222.

Only one block of **AP 1693** (SD521647S) was within EL25222 and all work by Continental Oil Company in exploring for phosphate was outside the tenement area.

AP 1771 covered 27 blocks in the far south of EL25222. Continental Oil Company reviewed the stratigraphic and facies variations in the sediments of the Daly River Basin for their phosphatic potential. The Company concluded that the 'Middle Cambrian and perhaps the Ordovician seas of the Daly River Basin area contained a relatively high phosphorous content' with favourable conditions for phosphatic deposition noted from the presence of carbonate beds, chert accumulations and apparent favourable warm climatic conditions. However there is no distinct change in facies towards phosphogenic shales and siltstones and interbedded cherts, with the Tindall Limestone showing a 'consistent lithologic nature'. Continental Oil Company agreed with earlier conclusions by the BMR that while the phosphate potential could not be ruled out entirely, there was not enough potential to warrant further investigation.

AP 1774 covered 27 of the northeastern-most blocks of EL25222. Tipperary Land Corporation explored for phosphates by examining outcrops and rotary drilling. Results showed several thin horizons containing a maximum of 1% P_2O_5 over 5ft. No diagnostic phosphatic lithologies were found and no further work is justified. However, anomalous copper was noted in the Cambrian basalts and 'traces of lead and zinc occur in Tertiary laterites'. No other work was carried out.

AP 1996 covers approximately 19 blocks on the central northern portion of EL25222. Tipperary Land Corporation found ferruginous, gossanous material in small fractures in an outcrop of Hinde Dolomite (then called Waterbag Creek Formation) at Goose Lagoon. Assays by a prospector returned 65ppm Ni, 5ppm Co, 0.85% Pb, 0.19% Zn and 6 dwts/short ton Ag. Follow-up work did not show extensive gossans or other signs of mineralisation, with phosphate testing on nearby Tindall Limestone returning negative results.

AP 2057 covers less than 2 blocks of EL 25222, but cuts across the middle of Spectrum's adjoining tenement EL25223. This was explored by Tipperary Land Corporation in conjunction with AP1774 (see above) who concluded that no diagnostic phosphatic lithologies were found and no further work was justified.

AP2545 covers portions of 3 blocks on the south-eastern boundary of EL25222. The single report on work carried out concentrates on the 'lead prospect' at Dorisvale, which is hosted in altered rocks overlying the Waterbag Creek Formation (Hinde Dolomite). This work appears to be outside EL25222. **EL 235** also covered the

same area. Work during the EL 235 tenure by Euralba Mining delineated a new lode of anomalous outcrop which appeared stratabound. A lack of interest in a JV by other companies meant further planned work such as a drilling programme was not carried out and the Licence relinquished.

CRA Exploration followed up on work by Continental Oil Company of Australia in evaluating the phosphate potential in the area on **AP2596**, but CRA also evaluated bauxite potential ('no interest as potential bauxite') by hand augering. AP 2596 covered most of the eastern portion of EL25222. A programme of soil and stream sediment sampling tested for base metals, F, Au as well as P₂O₅. The work confirmed Continental's conclusion that phosphorous is more abundant in the Tindall Limestone. Weakly elevated Pb and Zn were associated with the Antrim Plateau volcanics. Base metal, uranium, phosphorous and bauxite were below the level of interest and gold values were below the limit of detection.

EL 1281 consisted of 70 blocks, of which only 7 blocks are within in the SW corner of EL 25222. There is only one report outlining the results of a stream sediment sampling programme that gave a best result of 0.01% Sn in 1977.

EL 1340 consisted of 173 blocks, with 27 blocks on the western boundary of EL25222. Placer Austex were exploring for stratabound uranium mineralisation with field work to determine whether lithologies similar to the Koolpin Formation were present underlying the Noltenius Formation (now mapped as Burrell Creek Formation on 100k mapsheets). Detailed reconnaissance was outside the area of EL25222 and it does not appear that any exploration took place within EL25222.

Suttons Motors explored **EL's 1355, 1357 and 1358** in conjunction with 5 other Licences in the area. EL 1358 covered most of the southern portion of EL25222, while EL's 1355 and 1357 covered the NE and NW portions of EL25222 respectively. The 3 Licences covered most of EL 25222. Initial work included a preliminary assessment of the uranium potential, with the Company concluding that the potential for large deposits is low, but small uranium deposits may exist. Radiometric anomalies exist in both the Cambrian and Upper Proterozoic sequences, but were not considered 'attractive exploration targets'.

General notes of interest from this report include;

- Total Count from the BMR radiometric data reflect lithology; Tolmer Group sediments and Antrim Plateau Volcanics all give lows, the Litchfield Complex a high and Burrell Creek Fm seds are intermediate with local highs.
- Litchfield Complex has an irregular but high background of 5-17cps U, with possibly 1 or 2 U anomalies
- U count of 5-6cps in Burrell Ck Fm seds; higher values associated with faulting. U anomalies are small; only 1 – 2.5x bkgnd. Some variation in regional background which may reflect gradual facies changes; U channel response also affected by weathering and superficial cover

The report considered that Upper Proterozoic sediments had limited prospectivity because they were deposited after the last major phase of uranium mobilisation and concentration, although recent isotopic data indicates several episodes of uranium mineralisation between 1740 and 500Ma (Ahmad 1998) which negates this conclusion.

The report also notes uranium anomalies within EL25222 which may be the result of laterisation of Antrim Plateau Volcanics. It may also represent uranium mobilisation along the northern extension of the Dorisvale Fault and requires further investigation. The prospective areas within EL25222 were summarised as;

- Small tonnage, vein-type (such as the U anomalies in SE corner of EL25222) hosted in faults and shears extending from Dorisvale fault, and
- Roll-front type on margins of Daly River Basin

Both prospective areas were rated as a 'long shot'.

Suttons Motors also commissioned a report on the mineral potential of their Licences by Robertson Research. The Tindall Limestone was considered prospective for MVT-style base metal mineralisation. Minor copper mineralisation was known on the unconformity between the Antrim Plateau Volcanics with the underlying Proterozoic Waterbag Creek Formation (now Stray Creek Sandstone?). The sandstone-siltstone facies at the base of the Depot Creek Sandstone is considered prospective for uranium. Only the Jinduckin Formation could be considered a host for U mineralisation within the Daly River Group sediments as it contains sandstone and siltstone sequences that may act as permeability traps.

Exploration work for base metal mineralisation consisted of a 170 line km EM survey; a ground IP survey and limited ground mag survey plus geochemical sampling. There was no indication of massive sulphides in the vicinity of surficial massive barites and stratiform barite-fluorite mineralisation, but there were some anomalous Pb-Zn geochemistry in calcareous fine-grained clastics in the Tindall Limestone. Some primary lead sulphides (galena) were identified in thick restricted silicified black shales.

CRA explored **EL 1743** (on eastern edge of EL25222 and covering western portion of EL25229). CRA acquired the ground after hearing that adjacent Licences had found base metal mineralisation. Work consisted of a literature review and field reconnaissance with one deep diamond hole planned for a location outside Spectrum Licences. The work was not carried out as CRA changed its focus from exploring for carbonate-hosted base metal deposits in Australia and the ground was relinquished.

EL 1768 mainly covered the Dorisvale fault outside of EL25222. Work by Euralba Mining and Ashton Mining evaluated the base metal potential SE of EL25222, with only 8 stream sediment samples taken on the eastern boundary of EL25222 (which had no significant results.)

EL 1997 covered 12 (out of 98) blocks on the western side of EL25222. Tin/tantalite mineralisation was found on Spring Creek (outside EL25222) and work concentrated on evaluating this area, although the planned programme of costeaning did not go ahead due to the lack of available earthmoving equipment.

EL 2056 covers the area in the NW corner of EL25222 and extending westwards. Mobil Energy Minerals Australia carried out geochemical sampling and drilling; all on the western portion of the tenement and therefore west of EL25222. Cassiterite, gold and secondary uranium mineralisation was found in the area, but nothing extensive (and nothing within EL 25222).

Territory Mining explored **EL2541** and EL 2842. On **EL2541** the Company reported tin and tantalite alluvial gravels and some 'economically insignificant' tin pegmatites (areas not shown; no map).

All but 2 blocks of **EL 2842** are within EL 25222, on the western side. Greenbushes Tin explored for tin/tantalum for one year in 1981, which is surprising as no granite has been mapped in the area. The exploration was part of an overall exploration programme that also covered the Muldiva, Collija and Buldiva tin fields further west. Heavy mineral sampling did not uncover any mineralisation and the ground was relinquished.

Peko Wallsend explored **EL's 3010 and 3011** for diamonds, but did not find any indication of alluvial diamonds or kimberlites. The Licences are along the northern boundary of EL 25222. There is mention of 'gossanous outcrops on the southern boundary of the Licence may have significance for base metal potential' and although the area wasn't specified, the probable area has been captured (Possible_Gossanous_Area_CR19820351.tab).

BHP held **EL 4162** (which straddles the central part of EL's 25222 and 25223); **EL 4205** (which adjoined the southern boundary of EL4162 and covered the central portion of EL25222, plus **EL 4526** (southern portion of EL 25222). Exploration consisted of stream sediment samples for base metals and heavy mineral concentrates (diamonds). The stream sediment samples were not assayed for gold or for uranium. No notable results were found on EL 4162 and the ground was dropped after a year. On EL 4526 a local unconformity (chert breccia) is located in the Hinde Dolomite, and there are indications that it was also a paleo regolith (BHP_breccia_disconformity.tab). The breccia was weakly mineralised with base metals and also showed limited hydrothermal mineralisation, possibly related to faulting (BHP_Fault_Interp.tab). BHP did not see potential for a major stratiform mineral deposit and dropped the ground.

Suttons Motors (through Mobil Energy Minerals Australia) explored **EL 4421** for base metal mineralisation (northern boundary of EL25222). Mapping by the NTGS outlined fluorite and galena on a ridge south of the area previously explored by Suttons on EL 1355. The Company surmised the size of the disseminated deposit required to be economic would have to be in a horizon 15-20m thick and over 15-20km strike length. IP and ground mag anomalies were tested by drilling. Hole BCD-1 was drilled to 99m without intersecting obvious mineralisation. BCD-2 was terminated at 50m with no visible sulphides.

Carpentaria Exploration Company held **EL4693** (covering NW part of EL25222) as part of a regional landholding (mainly further south and west of EL25222) exploring for gold. CEC delineated a radiometric uranium anomaly at MGA52 697600E / 8455000N from the regional NTGS geophysics data and named it 'Anomaly 17'. Pulps from stream sediment samples were reassayed for uranium and thorium, with all 8 samples returning <8ppm U and 4-12ppm Th. However, CEC noted that the samples were taken 2km downstream and probably wouldn't detect a uranium source. Higher than background Pb (60ppm) and Zn (50ppm) were noted from these samples, with no explanation for the higher values. CEC intended to investigate this anomaly but then decided that companies specialising in uranium may want to explore via a farm-in. This did not happen and the ground was dropped with no further exploration on the uranium potential.

A JV between Total Mining Australia and PNC Exploration explored **ELs 4858 and 4870, 5586** (southern and western portions of EL25222) for uranium by locating favourable lithologies using ground radiometrics and geological traversing combined with interpretation of geophysical and spectrometric data. Thermoluminescence studies were carried out on the basal Tolmer Formation sediments. The theory is that if sufficient amounts of uranium (>10ppm U) have resided in the sandstone over a sufficient amount of time (>100Ma) then the quartz lattice will be damaged. Artificial thermoluminescence will detect paleoradiation or cumulative radiation effects in the quartz grains of the sandstone. No details of results were presented in the reports. An INPUT survey did not indicate occurrences of graphitic schist beneath sandstone cover. Anomalies from the INPUT survey within Spectrum tenements were digitised in TOTAL_PNC_INPUT_EM_Anomalies.tab. Anomalies

were located on the Stray Creek and Hinde Dolomite outcrops rather than the basal Depot Creek Sandstone, so the anomalies were considered associated with small scale structures. The JV relinquished the ground in 1989 after these poor results from the INPUT EM survey.

The Tipperary JV consisted of Normandy exploring for base metals and Stockdale exploring for diamonds over a series of tenements covering the Daly River area. Normandy drilled 8 RC holes targeting MVT-style mineralisation within NNW-trending Tindall Limestone units in the Buldiva Creek area of **EL 6649** (SW portion of EL25222; EL6649_7380_7382_Drilling.tab). The holes targeted a 2km x 0.7km soil anomaly with maximum rock chip samples to 1.8% Pb, 23ppm Ag and 19.2% Ba. Results from drilling indicated the outcropping galena / barite mineralisation to be of limited extent with a maximum result of 4m @ 4% Pb in FRC1 over the outcropping mineralisation, with several other results of +1000ppm Pb and Zn. Drilling on **EL 7983** was outside EL 25222. Stockdale diamond sampling on **EL 7671** is already recorded in the DIM Database.

Newmont held **EL 6602** for a year over the old Suttons tenement EL1355, to follow up on the potential for sediment-hosted pervasive gold mineralisation. Sampling of the Suttons drillcore at BCD2 (which had 1m @ 3.0g/t Au assay value) was not possible due to insufficient core. Newmont carried out outcrop sampling and stream sediment sampling with 'disappointingly low' gold values, concluding that the system was not gold-mineralised but that the system was extensively base metal (Pb-Zn) and Ag mineralised, with vertical metal zonation. Newmont recommended grid-based soil sampling over the central ridge area, geological mapping (with emphasis on structure), with percussion drilling to test the downdip down plunge anticlinal crest positions (to be highlighted from geochemical sampling and geological mapping) but the ground was dropped before the work was carried out.

North Exploration carried out exploration for sediment-hosted stratiform base metals in a dolomitic shale unit near the base of the Hinde Dolomite. Work carried out included a QUESTEM Survey at 250m line spacings over the whole of **EL 8331**, with follow-up soil sampling and drilling targeting conductive units from the QUESTEM survey. The Hinde Dolomite is regionally elevated in Zn and sometimes Pb but with little variation in thickness or grade over a large area. Average grade is around 54m @ 345ppm Zn in the Hinde Dolomite and a maximum value of 3m @ 2690ppm Zn and 1190ppm Zn was recorded in the Cambrian limestone. North concluded that the area had 'been adequately tested for base metal mineralisation' and dropped the Licence.

PNC Exploration held EL 9532 for Proterozoic Iron Oxide Cu-Au-U mineralisation type (Olympic Dam model). In this model, Cu-Au-U mineralisation occurs within large hydrothermally altered breccia/diatreme complexes, genetically related to granitoid emplacement. The tenement was relinquished within 4 months of being granted, along with another tenement further west (outside EL 25222).

6. SPECTRUM EXPLORATION

6.1. *Exploration during Year 1(2007)*

Work done during Year 1 of tenure consisted of a historic data compilation. The results of previous work are outlined in the previous section ('Previous Work'). Work done included checking:

- a) historic tenure in MapInfo, using a MapInfo file supplied by DPIFM (containing exploration tenure, but not mining tenure)
- b) checking NTGS datasets, such as COREDAT, MODAT
- c) checking open file company reports submitted for previous tenure covering EL 25222
- d) checking the sacred sites register (AAPA)

From this work;

- a) a list of previous tenure and Industry reports are in Appendix A.
- b) there is one unnamed Pb-Ag-Zn occurrence near the central northern border of EL25222
- c) one drillhole (86/1) on eastern side of EL25222; 53 stream sediment samples from Mobil and Carpentaria Exploration on western portion of EL25222 in Explorer 3 database (uranium and gold values either not assayed or not recorded)
- d) one COREDAT hole (NTGS 83/2A)
- e) two positive results from DIM Database (microdiamonds at MGA53 713700E / 8445900N; 719200E / 8446000N)
- f) 10 sacred sites recorded within the Licence

The data compilation work shows that;

- the phosphate potential appears limited, with only thin horizons carrying just over 1% P_2O_5 , and different companies concluded that the phosphatic lithologies were either limited or non-existent. Recent studies by the NTGS (Khan et al., 2007) noted 'no significant phosphate anomalies were noted' from the Daly Basin
- a couple of areas have base metal mineralisation,
- a unconformity breccia horizon discovered by BHP in the southern portion of the tenement has not been tested for gold or uranium potential. The trend of the breccia horizon also parallels U/Th anomalism.
- Anomaly 17 (U radiometric anomaly named by CEC) has had no further work
- Suttons JV produced a series of radiometric anomalies that need further evaluation
- There are indications of base metal mineralisation in various areas of the tenement (notably around Beebom Crossing where Suttons Motors drilled BCD-1 and 2; plus Tipperary JV area) that has not been reviewed as part of the one project across EL 25222.
- Suttons Motors and the Total / PNC JV explored for uranium on EL 25222. Suttons Motors delineated low level U radiometric anomalies throughout the tenement. The Total / PNC JV used INPUT EM and thermoluminescence to evaluate the uranium, with most work focussed west of EL 25222. This work needs further reviewing to determine whether the uranium potential has been fully evaluated.

Other activities during Year 1 included;

- a) production of radiometric images and TMI / analytic signal images by Lindeman Geophysics
- b) planning an airborne geophysics survey, and obtaining a quote from GPX Surveys
- c) familiarisation with mapped geology

Original work evaluating the potential of EL 25222 was produced by the Independent Geologist (Al Maynard and Associates Pty Ltd) that was included in the Territory Uranium Prospectus. This work delineated 'discrete magnetic anomalies' on the regional TMI within EL 25222 (Figure 3).

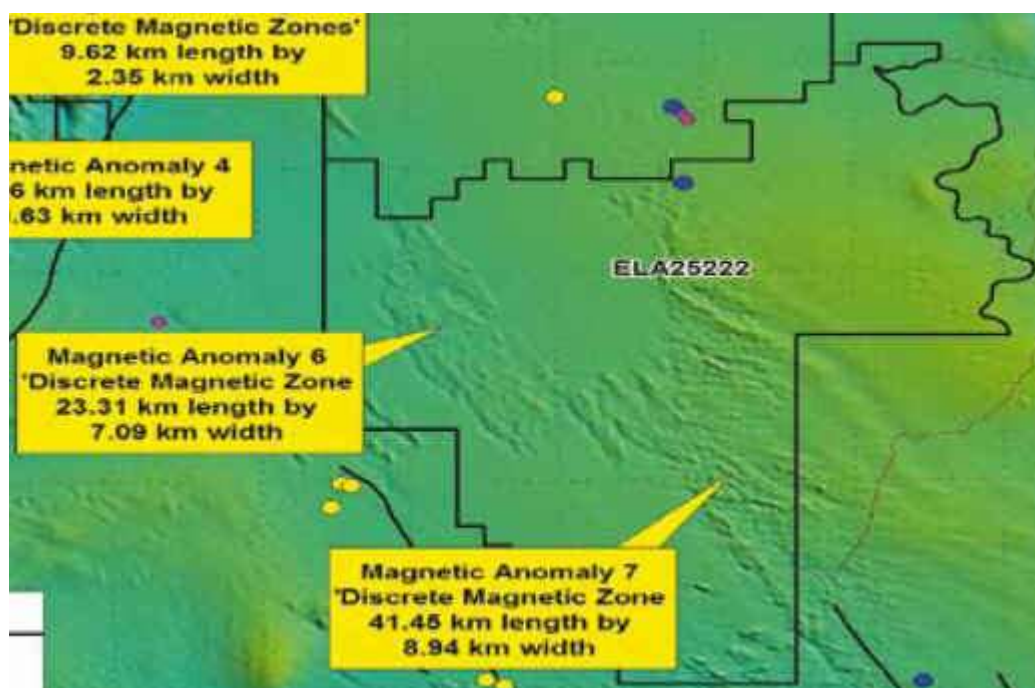


Figure 3 Independent Geologist's Report showing 'Magnetic Anomaly 6 and 7 within EL 25222.

As part of due diligence, Spectrum conducted an independent geophysical review of the 'discrete magnetic anomalies' to determine their prospectivity as well as to review the publicly available regional geophysical data over EL 25222. Lindeman Geophysics carried out the following:

- a) produce 1VD TMI, Analytic Signal images
- b) examine the potential of the 'discrete magnetic anomalies'
- c) produce U, Th, TC and U/Th geophysical images with colour ranges clearly identified for the U channel radiometric image.

Lindeman Geophysics used the regional geophysical surveys of Litchfield South (1984; EW; 500m line spacings) and Jinduckin (1992; NS; 200m line spacings). The data was obtained from GADDS website and had been gridded.

6.2. Exploration during Year 2 (2008)

Geophysics

An airborne radiometric and magnetic survey was completed (7,116 line km) on ELs 25222 & 25223 partly over the relinquished ground. The survey concentrated on areas of structural complexity which provide potential trap sites for uranium mineralisation. Processing of this more detailed, higher quality data (200m line spacing) highlighted a number of new targets for follow up work. Clipped images of the results are provided in Appendix B.

Surface Geochemistry and Drilling

No sampling or drilling was done in the relinquished blocks.

6.3. Exploration during Year 3 (2009)

During Year 3 Spectrum exploration focussed heavily on the Daly River Group. Further geochemical work was undertaken in EL25222 but nothing was done in the relinquished blocks

6.4. Exploration during Year 4 (2010)

During Year 4, exploration was undertaken on EL25222, EL25223, and EL25229 of the Daly River Group, however nothing was done in the relinquished blocks.

6.5. Exploration during Year 5 (2011)

No exploration was completed on the relinquished ground.

6.6. Exploration during Year 6 (2012)

No exploration was completed on the relinquished ground.

6.7. Exploration during Year 7 (2013)

No exploration was completed on the relinquished ground.

7. REFERENCES

Ahmad, M., 1998. Geology and mineral deposits of the Pine Creek Inlier and McArthur Basin, Northern Territory. *AGSO Journal of Australian Geology and Geophysics*, 17(3), pp1-17.

Ahmad, M., Wygralak, A.S., Ferenczi, P.A., and Bajwah, Z.U. 1993. Explanatory Notes and Mineral Deposit Data Sheets. *1:250,000 Metallogenic Map Series*, Department of Mines and Energy, Northern Territory Geological Survey

Dundas, D.L., Edgoose, C.J., Fahey, G.M., and Fahey, J.E., 1987. Daly River 5070 Explanatory Notes *1:100,000 Geological Map Series*; Northern Territory Geological Survey.

Edgoose, C.J., Fahey, G.M., and Fahey, J.E., 1989. Wingate Mountains 5069 Explanatory Notes *1:100,000 Geological Map Series*; Northern Territory Geological Survey.

Khan, M., Ferenczi, P.A., Ahmad, M., and Kruse, P.D., 2007. Phosphate testing of waterbores and diamond drillcore in the Georgina, Wiso and Daly basins, Northern Territory. *Northern Territory Department of Primary Industry, Fisheries and Mines Geological Survey Record 2007-003*.

Pontifex, I.R., and Mendum, J.R., 1972. Fergusson River 1:250,000 Geological Series – Explanatory Notes. *BMR 250,000 Geological Series*.

8. APPENDIX A, List of Company Reports from Previous Tenure

Files include:

- *EL25222_2012_R_02_HistoricalTenure*

9. APPENDIX B, Drill and Sample Data

Files include:

- *_1988_TCount_clipped*
- *_1988_Thorium_clipped*
- *_1988_K_clipped*
- *_1988_TMI_clipped*
- *_1988_Uranium_clipped*
- *_1988_Uranium_Linear_Stretch_clipped*