



EL25077
Partial Relinquishment Report
Chilling Project
9 November 2006 – 8 November 2012

Author: Matthew Buskas

Tenure Holder: Crossland Mines Pty Ltd

Submitter of Report: Crossland Uranium Mines Ltd

NT 1:100,000 Map Sheets: Daly River 5070 & Reynolds River 5071

NT 1:250,000 Map Sheet: Pine Creek SD52-08

Map Datum: GDA 94 MGA Zone 52

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SUMMARY

This report details exploration work conducted between 9 November 2006 and 8 November 2012 on a relinquished portion of EL 25077. EL 25077 (Litchfield) was granted for a six year term on 9 November 2006 (expiring 8 November 2012). The title originally covered an area of 99 sub-blocks (278.5 km²). A Waiver of Reduction was granted on 23 December 2008 allowing all sub-blocks to be retained. On 9 November 2009, 50 sub-blocks were relinquished. On 23 December 2009 a partial waiver was granted to retain 49 sub-blocks. In November 2012 Crossland applied for renewal and reduced the license to the current 24 blocks.

During tenure, exploration activities related to the relinquished portions consisted of:

- Literature research of previous exploration, geological and geophysical surveys over the EL and surrounding district
- Data compilation
- Acquisition and reinterpretation of NTGS airborne geophysical data sets
- Processing and interpretation of results
- Geological Reconnaissance
- An airborne radiometric and magnetics survey
- GA sponsored Airborne EM
- Ground based radiometric survey

1 INTRODUCTION

The Chilling region was initially selected because of the presence of a ‘Primary Hub’, which was identified using confidential technology supplied by Paradigm Geoscience, (now Global Geoscience Limited). The aim of the technology is to identify targets for mineral exploration with the same signatures as major mineral deposits. The method offers a means to identify important mineral resources without the need to acquire title to broader areas, with the resultant demanding access and land use challenges. Because of the restricted areas selected, more intensive exploration than would be normal in greenfields exploration can be focused on the limited area by even junior mineral explorers such as the holders. The Hubs have responded to the selection process in a similar fashion to major mineral deposits. It is to be expected that in most cases the target deposits do not outcrop, or they would already have been discovered, so it will be necessary to penetrate the overburden to make discoveries. The selection technique does not permit identification of target commodities, and these must be determined by consideration of regional metallogenic factors and field reconnaissance.

EL 25077 was acquired with the intention of exploring for unconformity related uranium deposits (URD). The dominant geological structure in the vicinity is the Giant’s Reef Fault, which strikes NNE just to the west of the southern part of the licence. The oldest rocks present are the Finnis River Group, represented by the Burrell Creek Formation, which is exposed along the western side and NE part of the EL. The dominant geological unit on the property is the Tolmer group represented predominantly by the Depot Creek Sandstone member, with minor Stray Creek Sandstone. These rocks form a wide N-S trending incised plateau area between the two mapped exposures of the Finnis River Group. The Reynolds River Granite, which can be found intruding the Finnis River Group, is located in the NE corner of the property and is known to underlie the Tolmer sandstone near Alligator Creek, just north of the Daly River road.

2.1 Tenure

EL 25077 (Litchfield) was granted for a six year term on 9 November 2006 (expiring 8 November 2012). EL 25077 (Litchfield) was granted for a six year term on 9 November 2006 (expiring 8 November 2012). The title originally covered an area of 99 sub-blocks (278.5 km²). A Waiver of Reduction was granted on 23 December 2008 allowing all sub-blocks to be retained. On 9 November 2009, 50 sub-blocks were relinquished. On 23 December 2009 a partial waiver was granted to retain 49 sub-blocks. In November 2012 Crossland applied for renewal and reduced the license to the current 24 blocks.

2.2 Location and General Description

EL 25077 is located wholly within the confines of Litchfield Park and for the most part is coincident with the southernmost portion of the Park south of latitude 13° 20’ S. Access may be gained from Darwin by following the Stuart Highway to Adelaide River and then following the Dorat Road to the Daly River Road and continuing west towards the Daly River Crossing. About 48 kms east of the Crossing the Daly River Road follows west along

part of the southern Park boundary and the EL border for about 15 kms before veering off to the south. Despite good access to the property access within the property is somewhat limited in part due to Park regulations prohibiting off road driving with 4WD vehicles within the Park. The only access track within the EL is the Reynolds River Road a 4WD dirt road which joins the Daly River Road about 31 kms east of the Daly River Crossing. This road, which is maintained by the Park Authority, follows the western border of the tenement quite closely leaving the vicinity of the EL north of Mistake Creek. A station track which joins the Daly River Road about 15 km east of the Reynolds River Road is present, running north-northeast within about 3 kms of the Park's eastern boundary. However no access tracks have been found leading west from it onto the property. The lease covers part of Litchfield National Park and lies within NT Parcel 3424 which is held by the Conservation Land Corporation. The tenement is subject to a Land Claim, LC 169, Litchfield Region, under the Aboriginal Land Rights Act (NT), and to a Native Title Claim FC No. NTD24/05, Litchfield National Park.

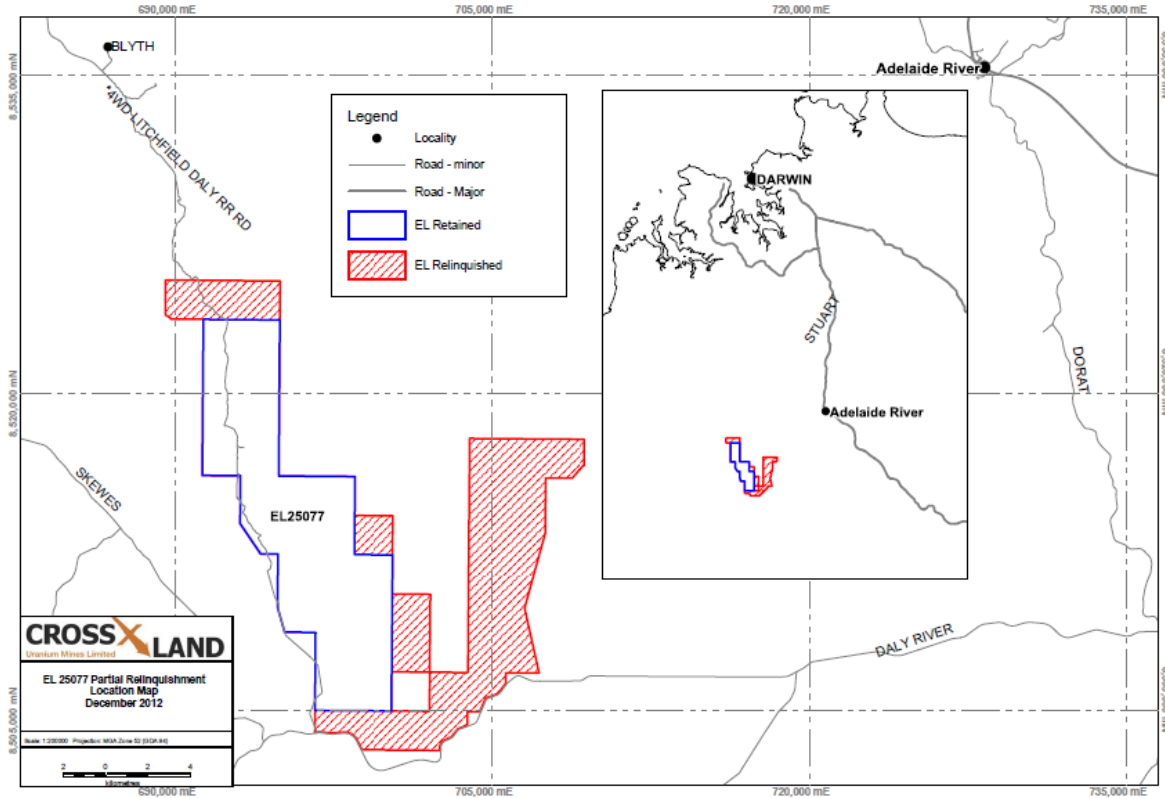


Figure 1. Location Map

2 GEOLOGY

The dominant geological structure in the vicinity of EL 25077 is the Giant's Reef Fault. This structure strikes north-northeast just to the west of the southern part of the EL cutting across its northwest corner. The oldest rocks on the EL are the Finnis River Group which is

represented by the Burrell Creek Formation. The Burrell Creek Formation is exposed along the western side and northeast part of the EL. The dominant geological unit on the property is the Tolmer group represented by the Depot Creek Sandstone member and minor Stray Creek Sandstone. The Tolmer Group is present as a wide north south running band present between the two occurrences of Finnis River Group. The next youngest rocks on the licence are the Reynolds River Granite which can be found intruding the Finnis River Group in the northeast corner of the property. The youngest rocks present are Jurassic aged sandstones which occur as rare isolated pockets within the Depot Creek Sandstone. Primarily, the Tolmer Group outcrops in the relinquished portion of the EL. (See Figure 2. Regional Geology)

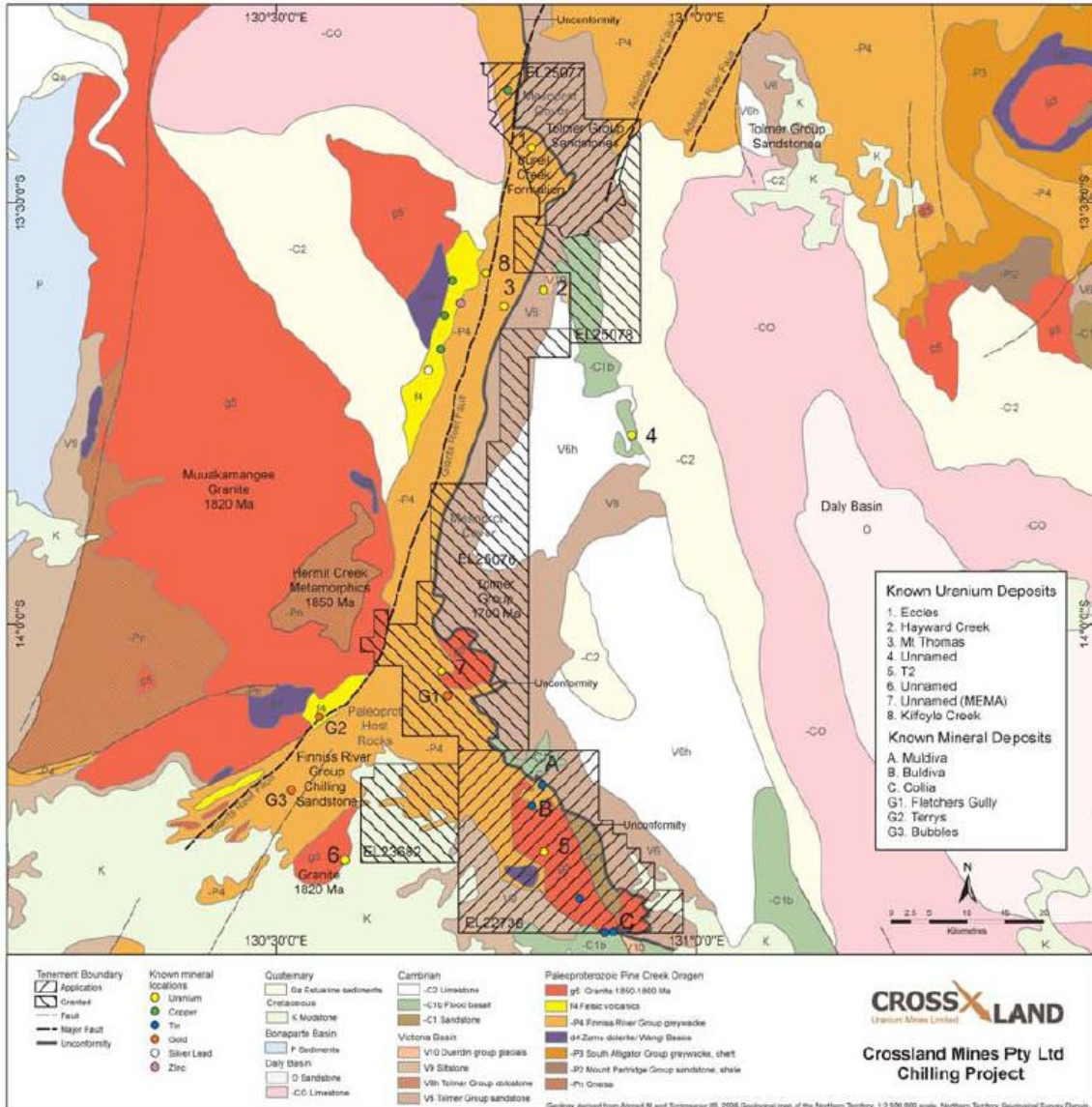


Figure 2. Regional Geology Map.

3 EXPLORATION

3.1 Exploration Rationale

The geological setting of the Chilling Project suggests that a wide variety of deposit styles could be present. The greater region has produced both gold and tin, the latter intimately related to granites e.g. the Soldiers Creek granite and to associated pegmatite swarms, which invade the lower Proterozoic Burrell Creek formation. The best known example of gold mineralisation is the historical Fletcher's Gully Mine located within EL 25076, where incomplete records indicate that 70 kg or 2250 oz gold were produced. Tin, as alluvial concentrations and lode deposits is known from Buldiva, Muldiva and Collia in ELs 25076 and 22738. Base metals deposits have been prospected / mined in a structurally prepared meta-sediment-volcanic environment assigned to the basal Burrell Creek formation at Daly River and also in carbonate rocks of the Daly Basin. The district also has basic intrusives which could have a potential to host nickel-copper or platinoid mineralisation.

Examples of uranium mineralisation with a spatial relationship to the unconformity occur at March Fly in EL 24557 and at Eccles in EL 25077, both part of the Chilling project. Both occurrences are hosted by the lower Proterozoic Burrell Creek Formation and associated with pegmatitic and/or tourmaline-rich quartz veining.

3.2 Exploration Conducted by Crossland

During the period that Crossland has held EL 25077 exploration undertaken on the tenement falls into two categories office based studies and field work. From 2006 to the time of relinquishment, exploration activities related to the subject blocks consisted of:

- Literature research of previous exploration, geological and geophysical surveys over the EL and surrounding district
- Data compilation
- Acquisition and reinterpretation of NTGS airborne geophysical data sets
- Processing and interpretation of results
- Geological Reconnaissance
- An airborne radiometric and magnetics survey
- Airborne EM
- Ground based radiometrics

3.3.1 Results of Literature Research

A search of the Northern Territory Geological Survey's "STRIKE" (Spatial Territory Resource Information Kit for Exploration) data base revealed 9 historical APs (Application to Prospect) and 79 historical ELs overlap geographically with the ELs of the Chilling Project. Naturally a large number of companies and individuals have explored for a variety of commodities including gold, base metals, barite, cobalt, chromium, diamonds, fluorite, limestone, nickel, PGE's, silver, tin, tantalum and uranium. The "STRIKE" database indicates that there are 234 open file annual reports describing exploration undertaken by lease holders on these historical tenements.

Companies involved in historical exploration in the region from the late 1960s onwards include Kewanee Australia Pty Ltd, Le Nickel Exploration Pty. Ltd., and Sutton's Motors. The latter entered into a joint venture with Mobile Energy Minerals Australia to explore for gold, tin and uranium. In the 1980s both Ashton Mining Ltd and Stockdale Prospecting Ltd. sampled the region for diamonds. Carpentaria Exploration Company conducted regional work for gold resulting in the discovery of several localised high grade but uneconomic occurrences.

From the late 1980s to the early 1990s both Renisons Goldfields Consolidated Ltd and Northern Gold NL explored within the district including parts of the project area for gold. Total Mining Australia Pty Ltd in joint venture with PNC Exploration (Australia) Ltd conducted a program of uranium exploration along the Tolmer Sandstone trend from the mid to late 1980s.

3.3.2 Reprocessing of NTGS Airborne Geophysical Datasets

Geophysical data covering the title was acquired by NT Geological Survey in 1984. This was flown on 500 m line spacing at 100 m ground clearance.

3.4 Field Work

3.4.1 Tenure Year 1

Initial reconnaissance by 4WD vehicle was undertaken to identify access and complete first past radiometric prospecting. Geological observations were noted at various points within the EL. Some parts of the relinquished blocks may have been included in this activity.

3.4.2 Tenure Year 2

An airborne magnetics and radiometric surveys was flown late in the year. Details of the survey are recorded below.

3.4.2.1 Airborne Geophysics

Crossland Uranium Mines contracted GPX Aeroscience Pty Ltd (GPX) of Perth WA to conduct the surveys. The survey was carried out between 9 November 2007 and 4 December 2007 with the crew operating out of the town of Batchelor.

The surveys were flown using a Cessna 210 fixed wing aircraft. Equipment used to conduct the survey included a Billingsley Ultra Miniature TFM 100G2 fluxgate magnetometer, a Pico Envirotec G-Mag with Scintrex CS-3 Cesium vapour sensor base magnetometer, a Pico Envirotec GRS-410 gamma ray spectrometer and a Rockwell Collins ALT-50A radar altimeter.

The survey was originally planned to be on 100 m line spacing but because the survey was started late in the season after rains had commenced the line spacing was increased to 200 m with tie lines spaced at 1000 m intervals running north – south. The survey was conducted at a height of 60 m.

Additional information on the survey including general survey information, survey equipment specifications, equipment calibrations and data acquisition checks, in field data verification and data processing can be found in GPX's logistic report which has been included herein as Appendix 1.

During the course of the airborne geophysical survey a Rockwell Collins ALT-50A radar altimeter was used to collect altitude data. The digital terrain model was generated by subtracting the data collected by the radar altimeter from the GPS heights. See Figures 3-6 for results of survey.

3.4.2.2 Ground Based Geophysical

Following processing of the airborne radiometric data, 1 anomaly within the relinquished ground was identified as a priority for follow-up ground assessment. Ground assessment was completed and on ground traversing with a spectrometer was completed. The geological environment was also described. See Figures 7,8 and Appendix 2.

3.4.3 Tenure Year 3

No activities were carried out within the relinquished blocks.

3.4.4 Tenure Year 4

A GA instigated regional TEMPEST survey was carried out over the region. This survey would have covered the relinquished blocks. Results of the survey were made public by GA in 2011.

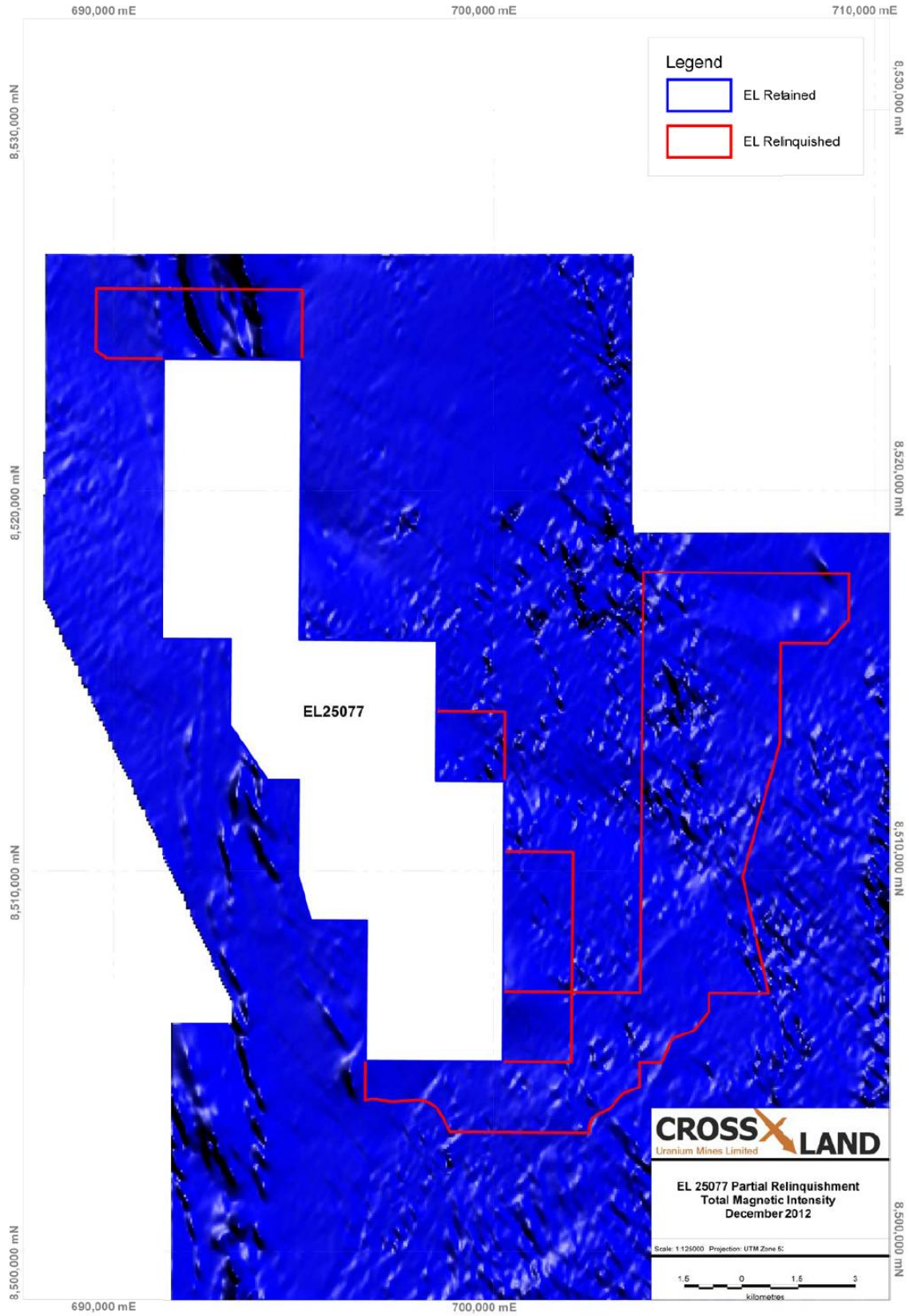


Figure 3. Airborne Total Magnetic Intensity

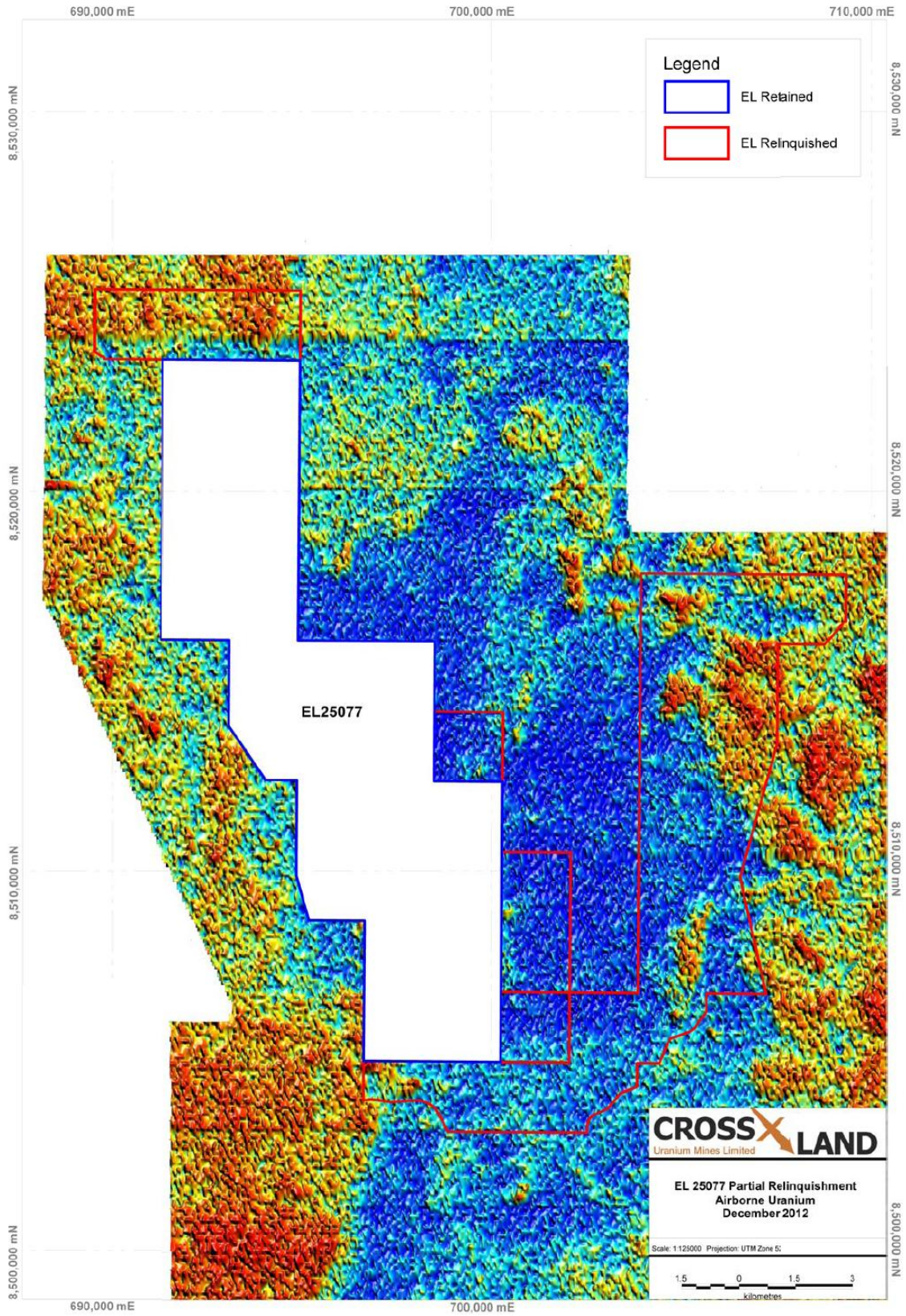


Figure 4. Airborne Uranium

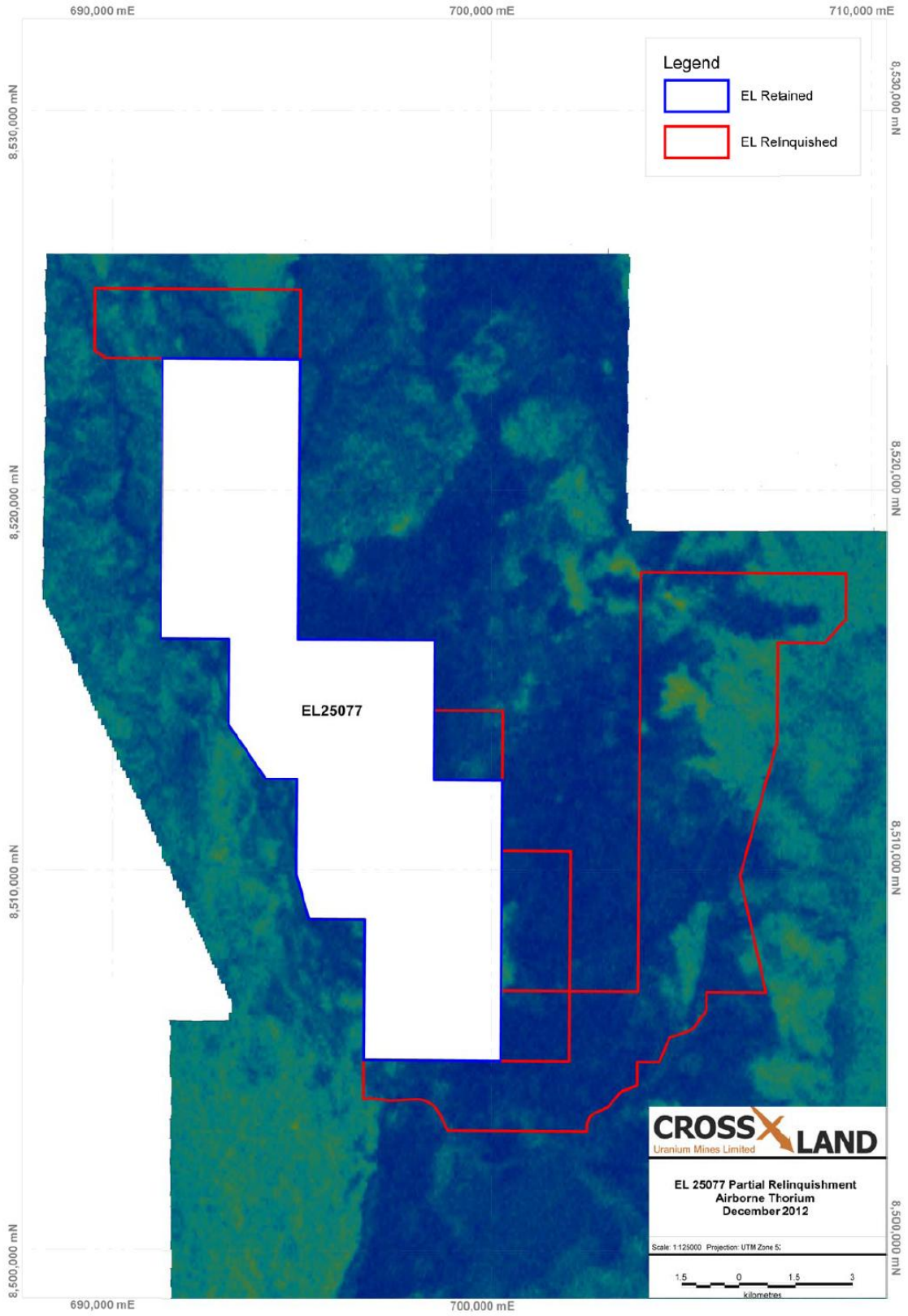


Figure 5. Airborne Thorium

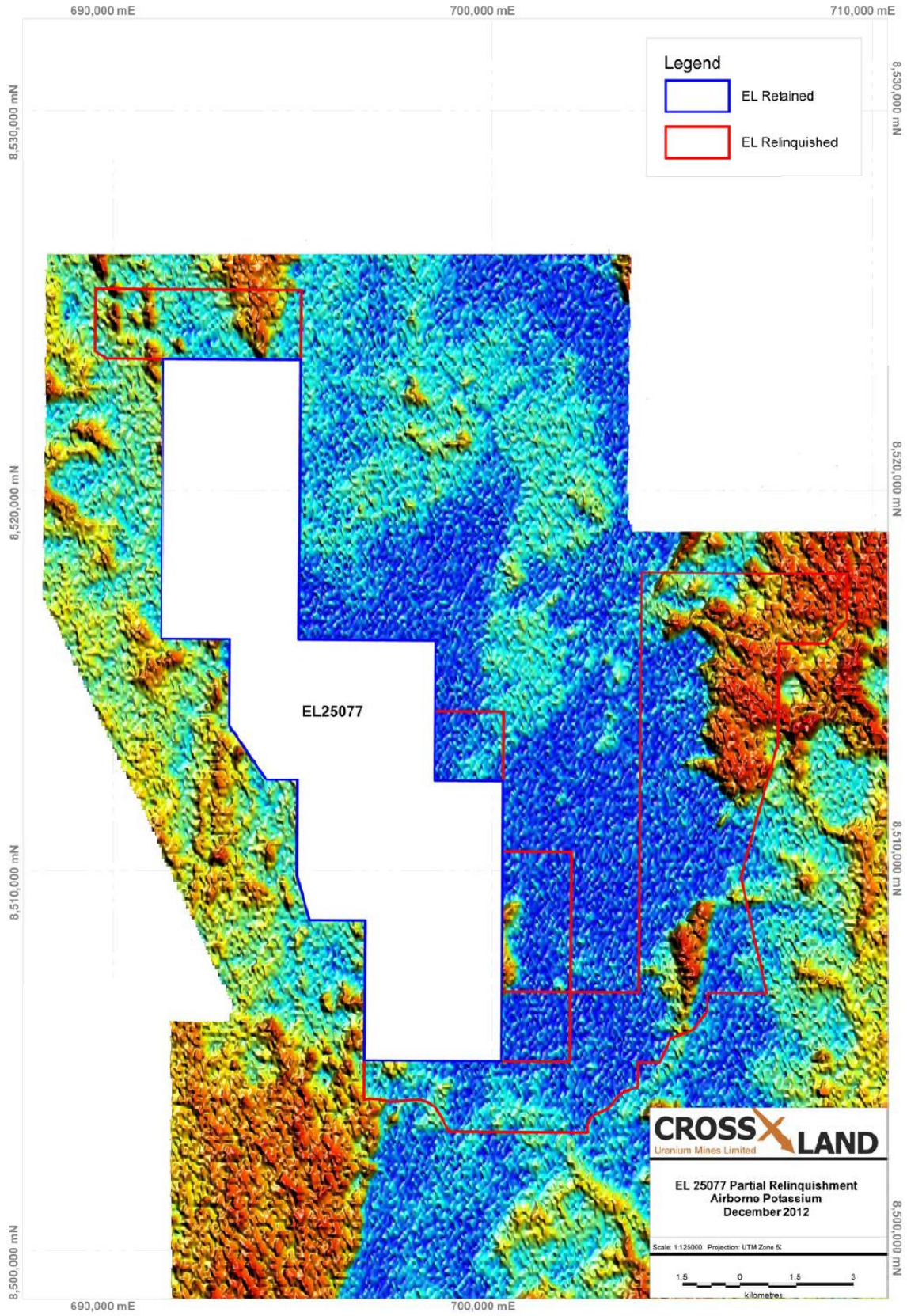


Figure 6. Airborne Potassium

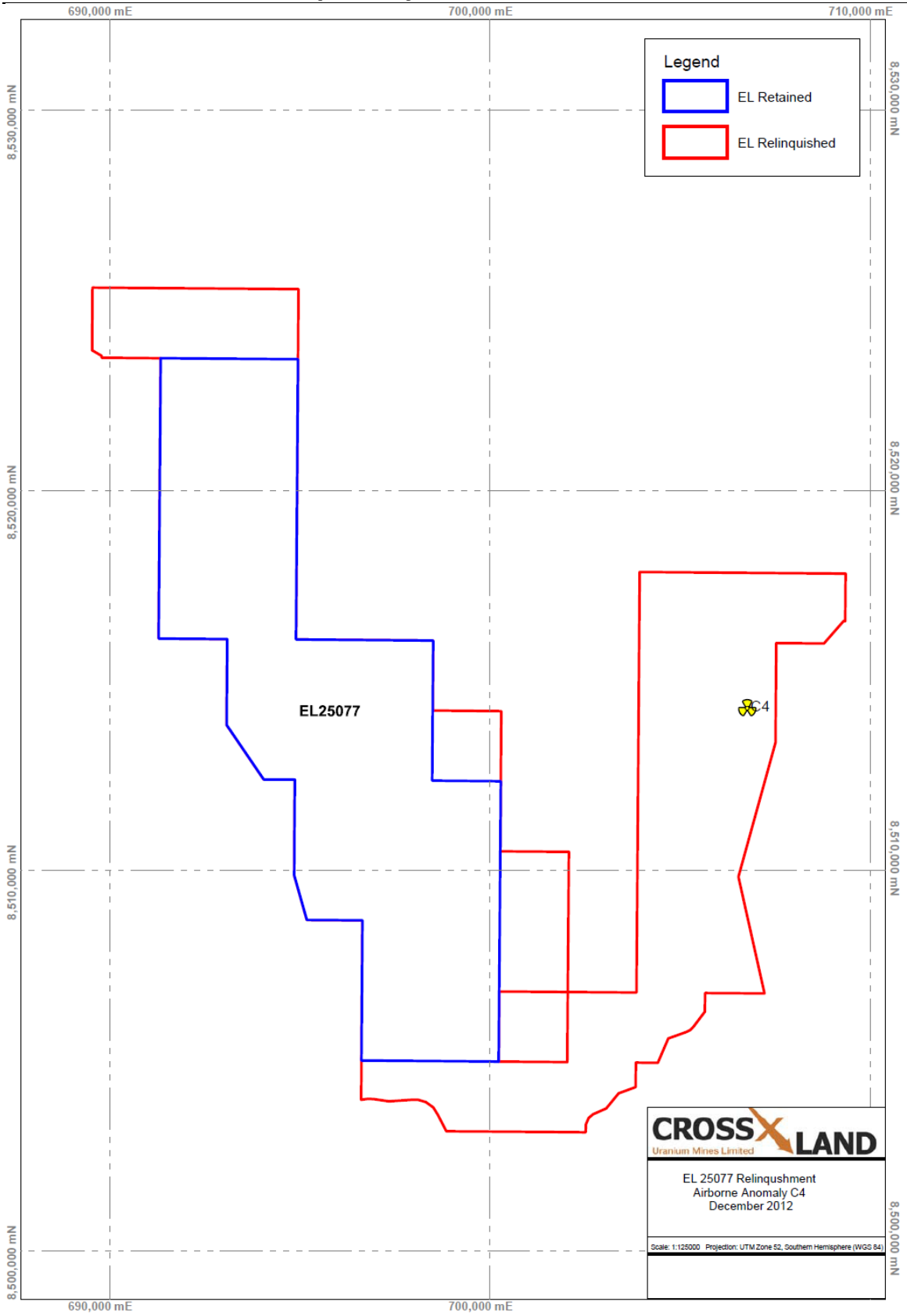


Figure 7. Anomaly C4 Location

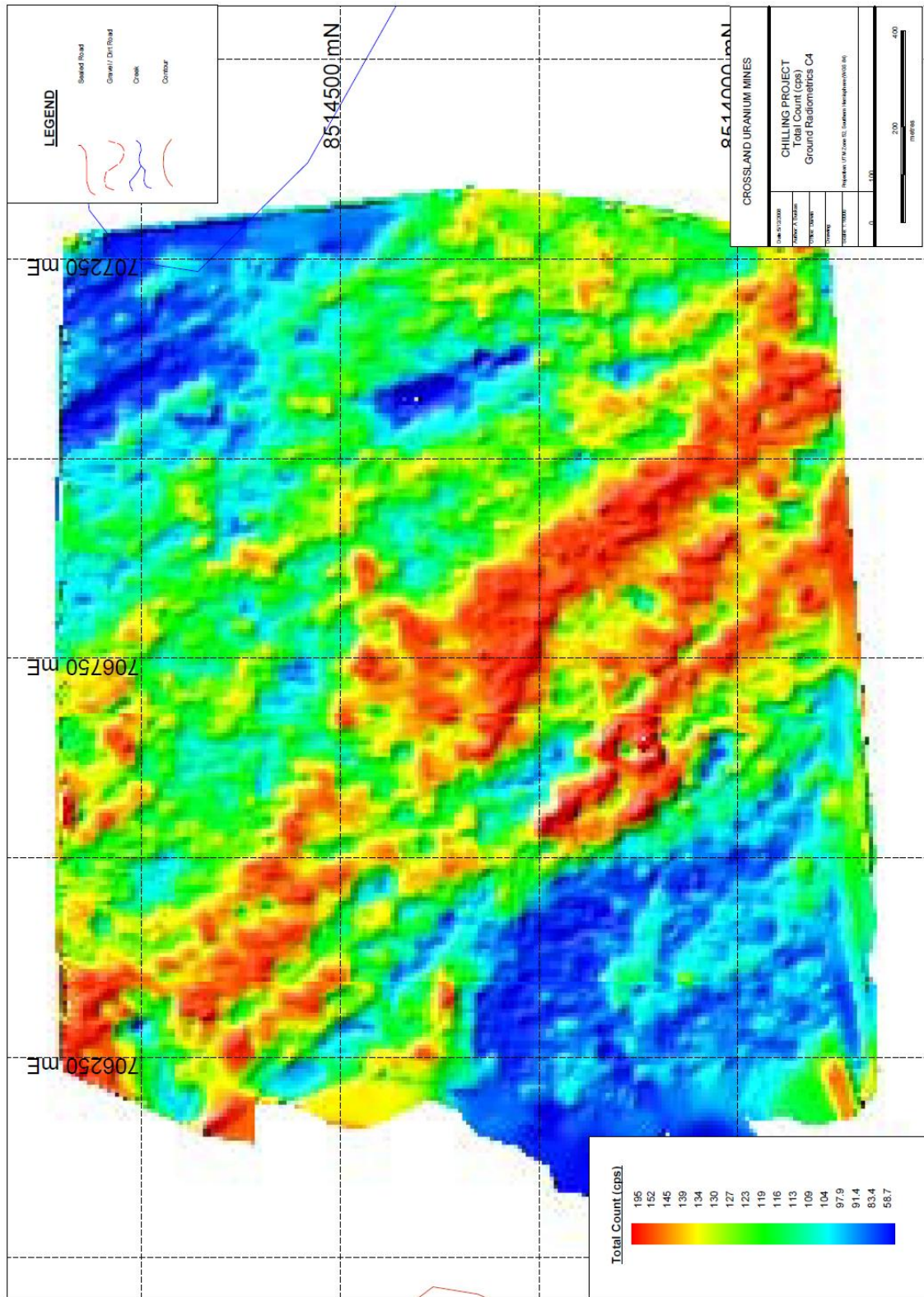


Figure 8. Anomaly C4 Total Count

3.4.5 Tenure Year 5

No work was carried out within the relinquished blocks.

4 CONCLUSIONS

Majority of the field work completed has taken place on the retained parts of the licence. Activities completed within the relinquished ground initially included some ground reconnaissance and assessment of NTGS airborne geophysical data. Following acquisition of further licences in the region, Crossland undertook an airborne radiometric and magnetic survey to further define the regional radiometrics. A government funded TEMPEST EM survey was flown in 2009.

Based on interpretation and assessment, Crossland has relinquished the ground in lieu of other more promising prospects.

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