

Project Name: Kitchen Creek, Queensland  
Tenement Number: EPM16431  
Tenement Operator: Regalpoint Resources Ltd  
Tenement Holder: Regalpoint Resources Ltd  
Report Type: Partial surrender Report  
Report Title: Partial surrender report for EPM16431 2012  
Author: Nigel Wilson  
Date of Report: October 17th 2012  
1:250,000 map sheet: Georgetown SE/54-12  
1:100,000 map sheets: Georgetown 7661  
Target Commodity: Uranium  
Keywords: Uranium, Newcastle Range Cauldron Complex  
Prospects Drilled: None  
List of Assays: Au, Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr, Dy, Er, Eu, Gd, Ho, Lu, Nd, Pr, Sm, Tb, Tm, Yb.

**ABSTRACT:**

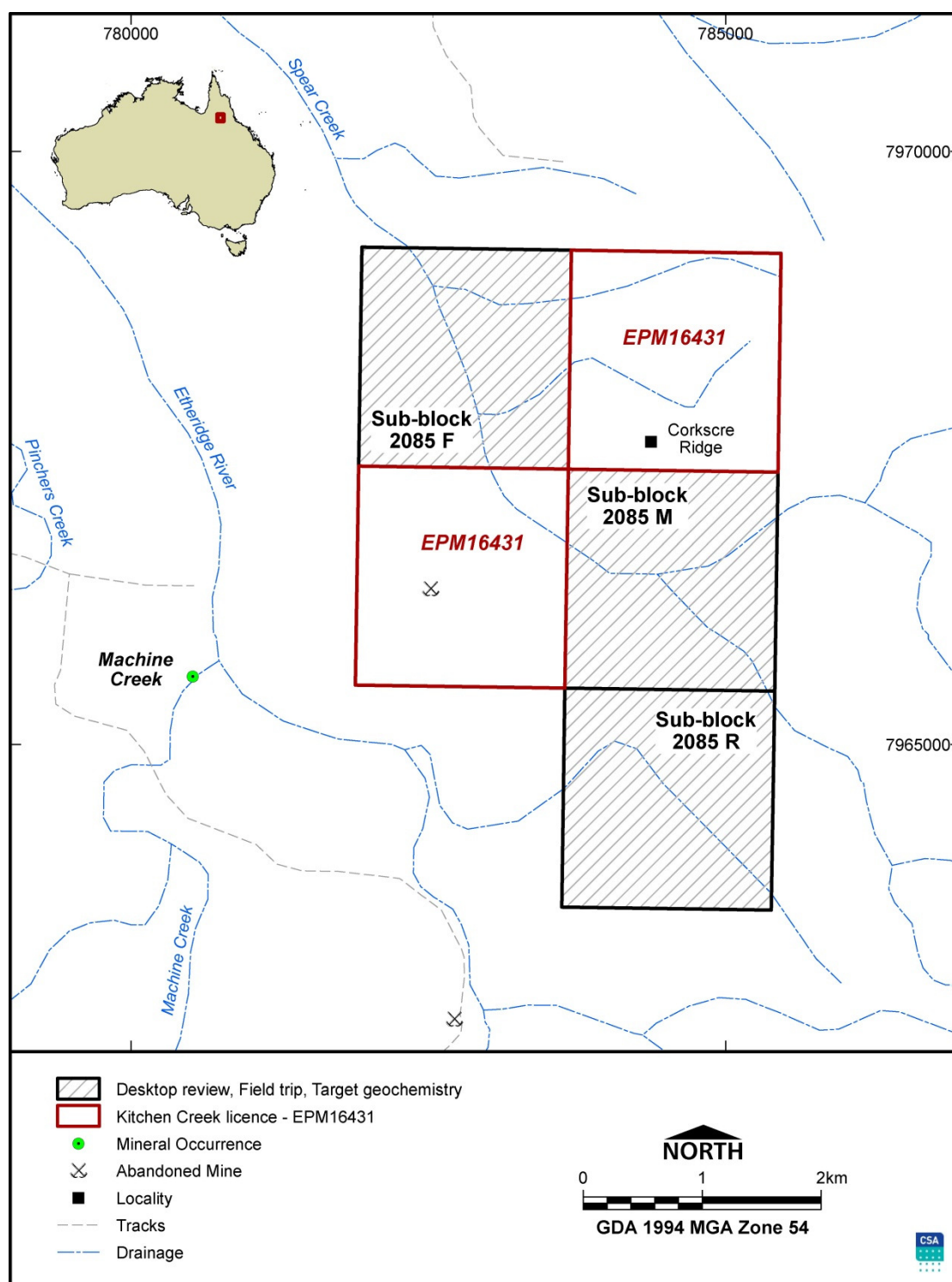
**Locations:** The tenement is located in northeastern Queensland, approximately 16 km southeast of Georgetown and 270 km southwest of Cairns.

**Geology:** The project area covers part of the Newcastle Range Cauldron Complex and cauldron-related fault system. Regalpoint selected the project area because of its potential for volcanic-hosted and intrusion-related uranium deposits, and secondary deposits of leached, remobilized and reprecipitated uranium, in particular (1) at or close to the contact between volcanic rocks of Kungaree Volcanic Subgroup and adjacent igneous or metasedimentary rocks, (2) within NW-SE structures that cut the Kungaree Volcanic Subgroup

**Work Done:** Work undertaken during the tenure has included a review of past exploration activities, compilation of a landholder database, data compilation into a GIS, and a reconnaissance field visit.

**Results:** In-situ assays with a hand-held RS 125 Super Spec spectrometer of the principal rock types in the westernmost portion of the permit area yielded very low uranium values ranging from 1.4 to 7.6 ppm eU. Continuous surveying with the spectrometer of radiation levels within the investigated area also failed to detect any anomalies.

Conclusions: The tenement is failing to live up to up to expectations. However two more anomalies are still to be checked out thoroughly.



**Figure 1: Exploration completed in the Kitchen Creek Project (Partial surrender – EPM16431) in the period 2008-2012.**

Table 1: File Verification List

Exploration Work Type	File Name	Format
Office studies		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
General research		
Report preparation	R368_2012 - Partial Surrender Report EPM16431	PDF
Other (specify)	Field evaluation R285.2012	PDF
Airborne exploration surveys		
Aeromagnetism		
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
Remote sensing		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Other (specify)		
Ground exploration surveys		
Geological Mapping		
Regional		
Reconnaissance		
Prospect		
Underground		
Costean		
Ground geophysics		
Radiometrics		
Magnetics		
Gravity		
Digital terrain modelling		
Electromagnetics		
SP/AP/EP		
IP		
AMT		
Resistivity		
Complex resistivity		
Seismic reflection		
Seismic refraction		
Well logging		
Geophysical interpretation		
Other (petrophysics)		
Geochemical surveys		
Drill sample		

Exploration Work Type	File Name	Format
Stream sediment		
Soil		
Rock chip	KC_WASG4_SURF2012A.txt	WASG4
Laterite		
Water		
Biogeochemistry		
Isotope		
Whole rock		
Mineral analysis		
Other (specify)		
Drilling		
Diamond		
Reverse circulation		
Rotary air blast		
Air-core		
Auger		
Groundwater drilling		
All drilling		



# Contents

Contents .....	VI
1 Introduction and Tenements .....	1
2 Geology and Mineralisation .....	3
3 Tenement Exploration 2008–2012.....	7
4 References.....	11
5 Appendices.....	12

## Figures

Figure 1: Exploration completed in the Kitchen Creek Project (Partial surrender – EPM16431) in the period 2008-2012. ....	II
Figure 2: Tenement location map of EPM16431 showing Regalpoint’s the three relinquished graticules and the two retained graticules. ....	2
Figure 3: Simplified geological map of the Kitchen River project area showing the original EPM16431 before any relinquishment.....	4
Figure 4: Geology of the original permit and its vicinity.....	5
Figure 5: Local geology of the relinquished and retained areas of EPM16431. ....	6
Figure 6: Magnetic and radiometric anomalies identified in EPM16431. ....	10

## Tables

Table 1: File Verification List.....	III
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# 1 Introduction and Tenements

Access from Georgetown is east along the sealed Gulf Development Road towards Mt Surprise for 18 kilometres to the Routh Station turn off. A formed gravel road is then followed for 4.7 kilometres to the Routh Station homestead owned by Mr Ken Cameron. The field area is accessed by a station vehicular track from Routh homestead to Spear Creek, a distance of 5.9 kilometres. This track is difficult to follow as it is used sparingly.

The permit was granted to Regalpoint Exploration Ltd on 18 May 2008, covering an area of 17 sub-blocks. Reduction to 10 blocks was undertaken following the Year 2 of tenure. At the end of the third year this was reduced to 5 blocks and in the present surrender this is reduced to 2 blocks. The three blocks to be relinquished are NORM/2085/f, m, r and the retained blocks are NORM/2085/g, l.

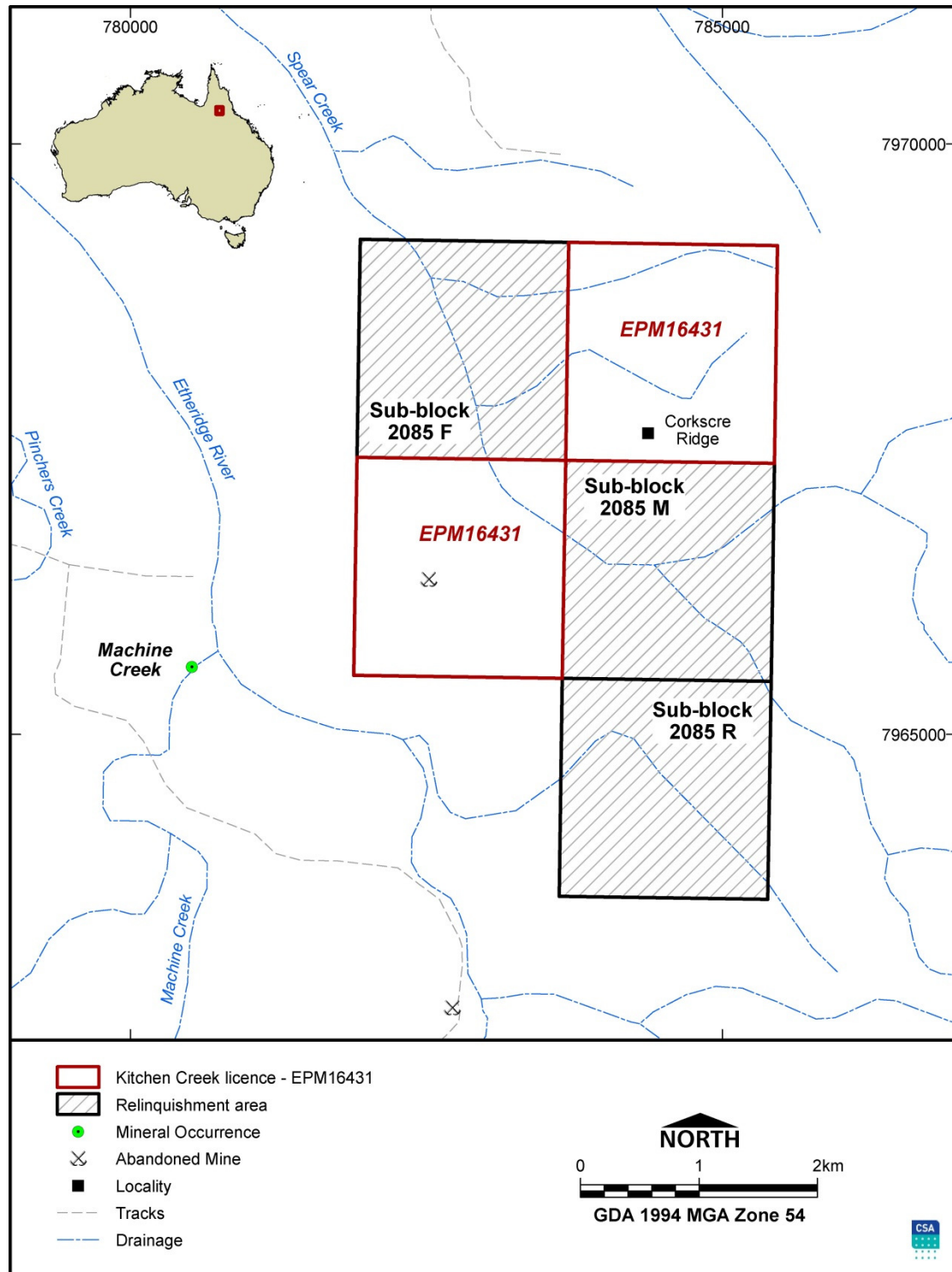


Figure 2: Tenement location map of EPM16431 showing Regalpoint's the three relinquished graticules and the two retained graticules.



## 2 Geology and Mineralisation

The project area covers part of the Newcastle Range Cauldron Complex, a large (c. 100 km long and up to 20 km wide), composite, middle Carboniferous to early Permian volcano-tectonic subsidence structure (Kennedy Province in Figure 3). This complex consists of five partially overlapping collapse structures that are bound by “classic” ring fault structures and dykes. The Newcastle Range Cauldron Complex is made up of rocks of the Newcastle Range Volcanic Group, a succession of mainly rhyolitic ignimbrites and dacites, and co-magmatic granitoids.

The project area lies within the central portion of the Newcastle Range Cauldron Complex within an elongated subsidence structure known as the Kungaree Trough, which is host to the Kungaree Volcanic Subgroup: a 2 km thick succession of middle to late Carboniferous, mainly I-type rhyolitic ignimbrite and porphyritic dacite. The geological units in the project area (Figure 3) that belong to the Kungaree Volcanic Subgroup include the Routh Dacite (porphyritic dacite and dacitic ignimbrite), Corkscrew Rhyolite (porphyritic rhyolite) and Kitchen Creek Rhyolite (rhyolitic ignimbrite). These units unconformably overlie the Mesoproterozoic Mistletoe Granite (Forsayth Supersuite) and the Palaeoproterozoic gneiss, schist, quartzite and amphibolite of the Einasleigh (Etheridge Group) that crop out in the western portion of the project area.

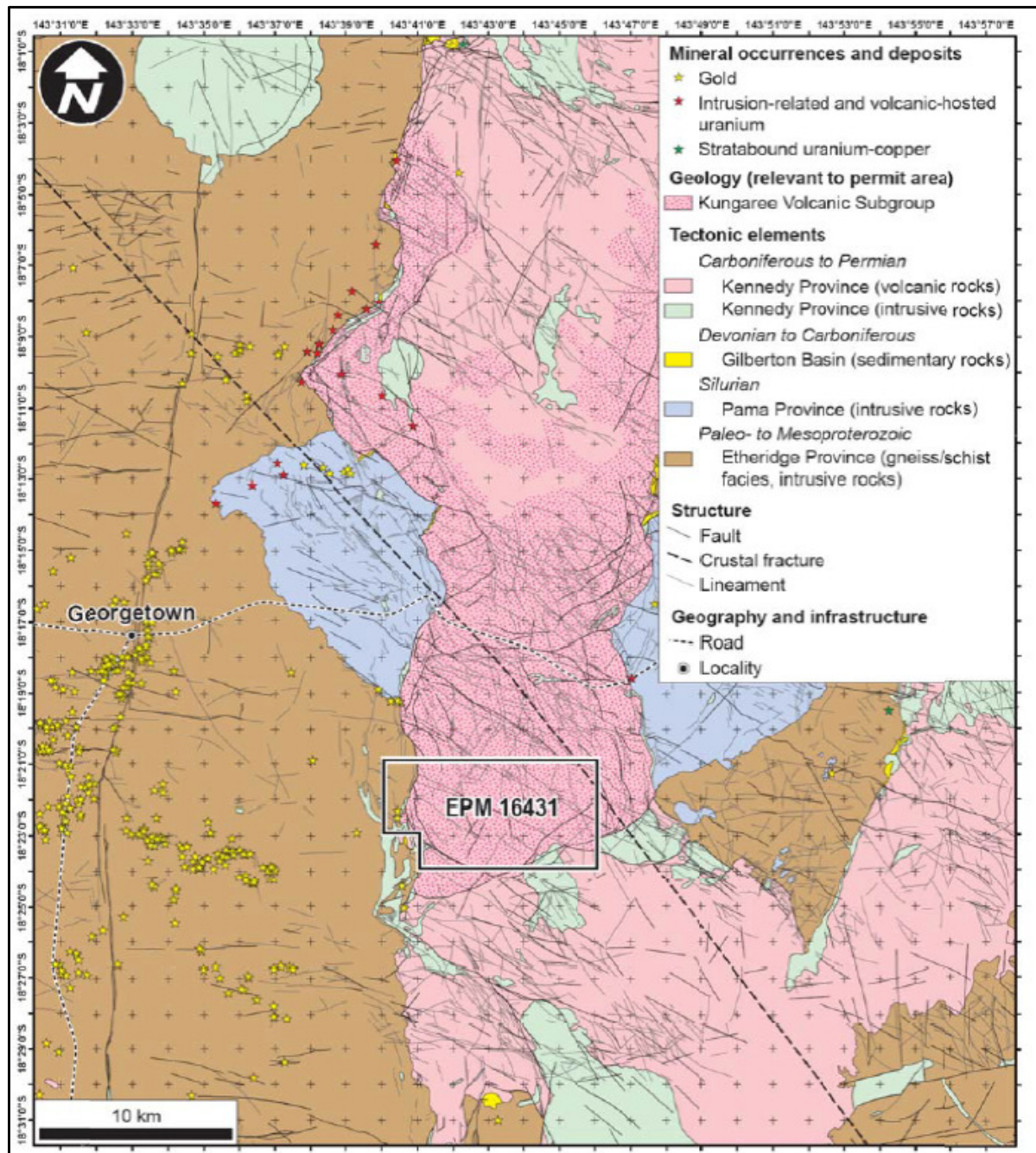
The region (Figure 3) is characterised by several structural trends;

- NW-SE and NE-SW structures mainly cut intrusive rocks of the Silurian Pama Province and volcanic and intrusive rocks of the Palaeozoic Kennedy Province
- N-S structures mainly cut metamorphic rocks of the Proterozoic Etheridge Province and volcanic and intrusive rocks of the Palaeozoic Kennedy Province
- E-W structures mainly cut metamorphic rocks of the Proterozoic Etheridge Province.

The dominant structural trends within the project area (Figure 4 and Figure 5) are NW-SE and NE-SW, although some ring fractures at the margin of the Kungaree Volcanic Subgroup are present also. The northeastern portion of the project area is traversed by a deep-seated NW-SE crustal fracture.

Most of the uranium occurrences in the region appear to be spatially associated with the generally N–S trending boundary between volcanic rocks of the Palaeozoic Kungaree Volcanic Subgroup and the metamorphic rocks of the Proterozoic Etheridge Province, in particular where NW-SE striking faults cut or terminate against this boundary. Other uranium occurrences are localised near the boundaries between (1) intrusive rocks of the Silurian Pama Province and the metamorphic rocks of the Etheridge Province, (2) volcanic rocks of the Kungaree Volcanic Subgroup and co-magmatic intrusive rocks of the Kennedy Province. The nearest uranium occurrence is located approximately 5km north-northeast of the project area. According to the MINLOC database of Geoscience Australia, the project area contains two unnamed gold occurrences. However, none of these occurrences in

gneisses or schists of the Palaeoproterozoic Einasleigh Metamorphics (Etheridge Province) are recorded in the relevant DME databases and, therefore have to be regarded as doubtful.



**Figure 3: Simplified geological map of the Kitchen River project area showing the original EPM16431 before any relinquishment.**



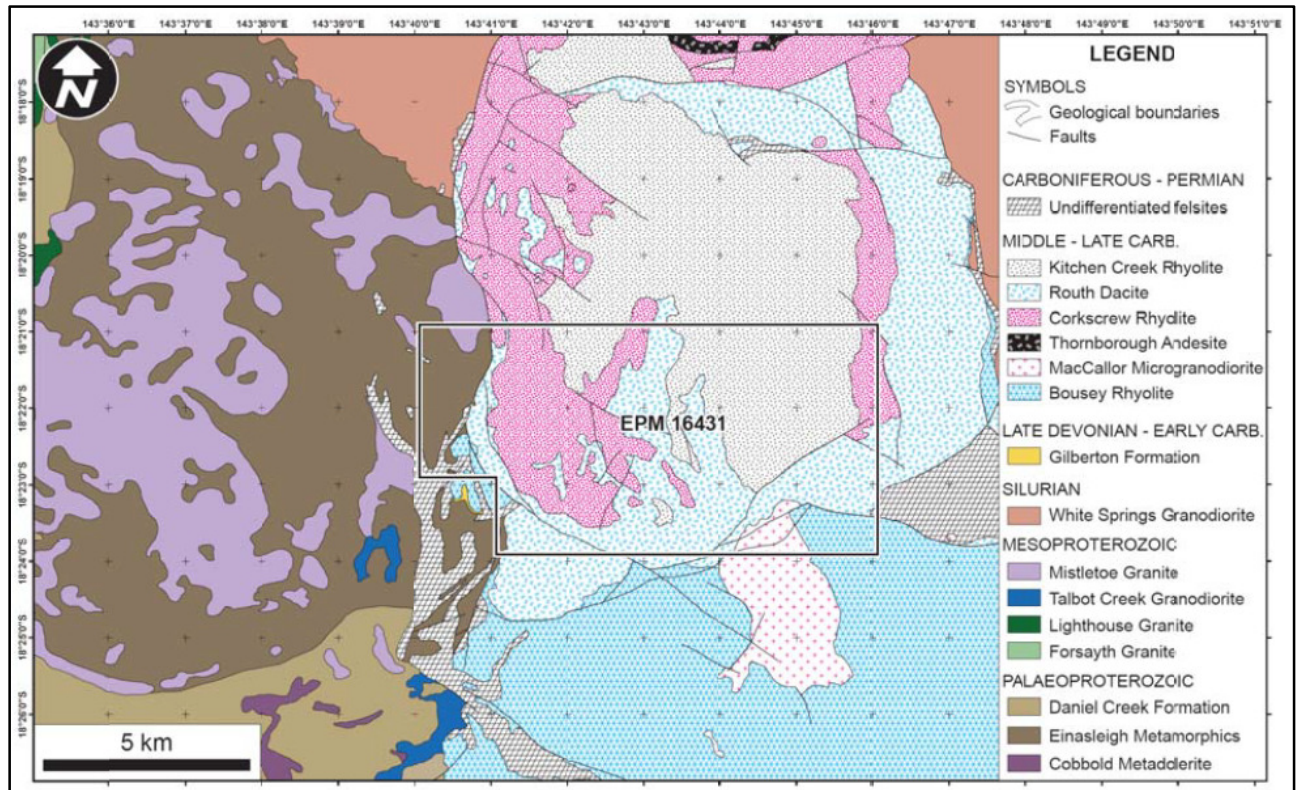


Figure 4: Geology of the original permit and its vicinity.

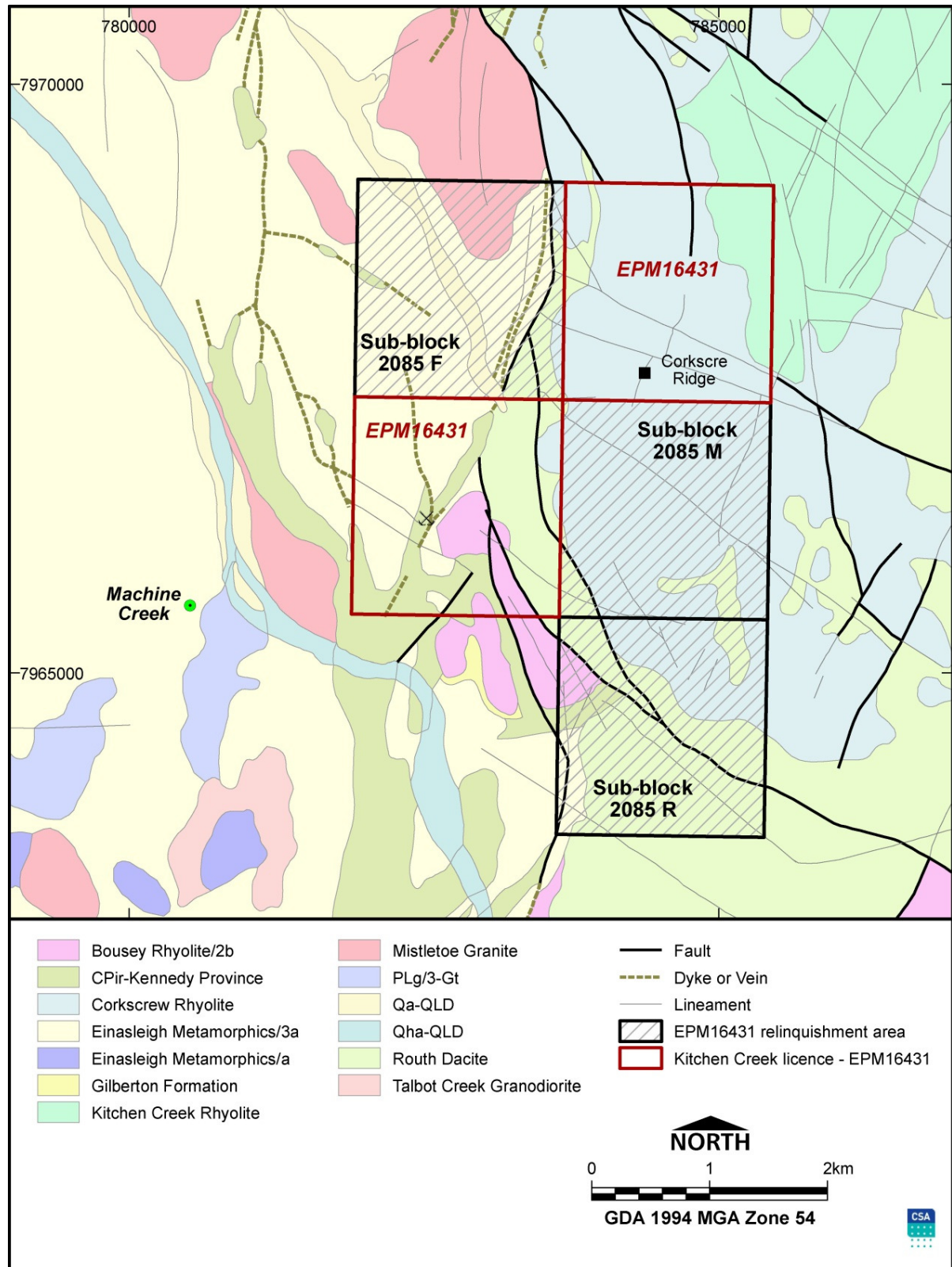


Figure 5: Local geology of the relinquished and retained areas of EPM16431.

## 3 Tenement Exploration 2008–2012

### 2008-2009

A desk top review indicated that the prospectivity of the tenement is low as uranium has not been found in the Carboniferous volcanics, which is the predominant rock type in the tenement area. However in the western part of the tenement area rocks of the Etheridge Group outcrop which host veins trending at 020° within the tenement area. A ground reconnaissance scintillometer survey over the veins in the rocks of the Etheridge Group should be undertaken.

It is recommended that regional reconnaissance be undertaken in the area. The unconformity between the McDevitt Metamorphics of Lower Proterozoic age and the Einasleigh Metamorphic of Middle Proterozoic age corresponds to the unconformity associated with the vein unconformity uranium deposits of Ranger and Jabiluka in the Pine Creek Geosyncline. In this area the East Alligator uranium field model can be applied can be applied to locate prospective areas for uranium mineralisation. This unconformity should be examined as a potential area where vein unconformity mineralisation may be found.

The uranium mineralisation model of Maureen and Dagworth-Trident uranium mineralisation model implies that the uranium occurs around the margin of the Carboniferous cauldrons. If more tenements are to be taken in the area they should be taken over areas of cauldron boundaries rather than the volcanics themselves.

### 2009-2010

Work undertaken during the tenure has included a review of past exploration activities, compilation of a landholder database, data compilation into a GIS, and a reconnaissance field visit. In-situ assays with a hand-held RS 125 Super Spec spectrometer of the principal rocks types in the westernmost portion of the permit area yielded very low uranium values ranging from 1.4 to 7.6 ppm eU. Continuous surveying with the spectrometer of radiation levels within the investigated area also failed to detect any anomalies. In addition, no other vectors to uranium mineralisation were located.

### 2010-2011

During the current period, Regalpoint has been preparing an initial public offering (IPO) and the listing was finalised in May 2011.

### 2011-2012

A targeting study highlighted several prospective zones within the three blocks that are being relinquished area (**Figure 6**). EPM 16431 consists of 5 sub-blocks covering the western flank of the Routh Dacite (part of the Newcastle Range Volcanics) in the Kungaree Trough. Regalpoint has reduced its holdings from the original 17 sub-blocks in successive partial relinquishments. Initial Regalpoint field reconnaissance only returned very low uranium values of between 1.4 and 7.6 ppm eU.

Perversely, this remnant tenement is the easiest tenement to ground prospect (by far) and has potential for Laura Jean style uranium mineralisation. The Laura Jean U-Mo-F deposit (QDEX Report 12635: p89-91, and Report 5589) is a haematized and fluoritised volcanic breccia pipe (Routh Dacite) extending vertically for at least 100m. It is less than about 7km from the northern boundary of EPM 16431. The breccia pipe has been structurally emplaced in extensively sheared White Springs Granodiorite, near the margin of the Newcastle Range Volcanics. Laura Jean and its immediate environs are now under Application EPM 19333 lodged by Queensland Uranium on 15/08/11.

This author (and Qld Uranium!) does not agree that “the prospectivity of the area is low.” The structurally controlled western margin of the Kungaree Trough Routh Dacite, near the contact with the Palaeoproterozoic Etheridge Group (Einasleigh Metamorphics), within EPM 16431, is a very favourable target zone for both uranium and gold.

An un-named gold mine (very small, less than 0.5 tonnes; QDEX Site Number 480601) occurs in the target geology within EPM 16431, at 782,520mE/7,966,306mN. Several similar small mines exist just to the south of the tenement (egg Site numbers 480602 and 480603 at 782,720mE/7,962,676mN and 782,820mE/7,961,566mN respectively).

All have similar geology to the Kitchen Reef Gold Mine (Site Number 480434 at 782,750mE/7,972,266mN), about 200m south of Routh Homestead, just to the north of the tenement.

The Mn-Fe stained quartz veins at Kitchen Reef are near the contacts with extensively faulted and sheared metamorphics and volcanics showing later stage silica alteration (QDEX Report 2116: p2-3). A “cherry-picked” sample returned 149 g/t Au.

All known gold occurrences mentioned above follow the western flank of the N-S trending Kungaree Trough. In fact, these gold sites can be used to map the contact.

Regalpoint plan to conduct rock chip and stream sediment sampling in the target area (with reconnaissance ground radiometrics and mapping?). Consideration must first be given to image analysis of fracture densities with the planned follow-up radiometric and rock chip/stream sediment work to also include multi-scan portable XRF (Niton or InnovX) reconnaissance linked to a GPS (3 person field team?). Geophysical inspection (and re-processing?) of existing airborne radiometry may be useful, but any surface expression is likely to be small. Any anomalous areas should be later gridded and XRF surveyed, with the possibility of subsequent radon emanometry and/or Mobile Metal Ion (MMI) survey.

EPM 16431 covers highly prospective ground that is easily accessible.

These anomalies were inspected during a field visit (Rolf 2012 – Appendix 1). Twenty five rock chip samples were taken. Samples were analysed by ALS for the following elements; Au, Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr, Dy, Er, Eu, Gd, Ho, Lu, Nd, Pr, Sm, Tb, Tm, Yb.

Six magnetic lows were highlighted, to test the potential for altered and brecciated porphyry intrusives into the caldera structures associated with the pyroclastic volcanics. Two of these anomalies Mg1 & 2 occur along the western rim of the Newcastle Ranges. The other



anomalies Mg3 - 6 occur within the caldera. Anomalies Mg 4, 5 & 6 occur within quartz rich ignimbrite. The pumice fragments within the ignimbrite of Mg4 are white clay altered.

These anomalies were generally weak. Better definition would be to ratio the uranium and thorium digital data, which was not available.

Seven anomalies are located along the western edge of the Newcastle Ranges. Anomalies KUTh 1, 5, & 7 occur within the Einasleigh Metamorphics. These anomalies are coincident with quartz-feldspar-biotite-mica pegmatite within associated granitoid or migmatite. Samples 06-08 were collected from pegmatite outcrops of Anomaly KUTh1. Scintillometer readings of this material peaked at 370cps. Pegmatite material from anomaly KUTh7, just outside the tenement had scintillometer readings up to 515cps. Anomalies KUTh 2, 3, 4 & 5 together with associated uranium anomalies U1, 2 & 3 are associated with the magnetic low anomalies Mg1 & 2. The radiometric anomalies are associated with the feldspar rich ignimbrite and dykes. The rocks are generally not altered and only weakly fractured. The ignimbrite of KUTh 4 however exhibits chlorite-epidote and clay alteration with minor quartz. The scintillometer readings over this material range up to 400cps.

In the northwest section of the tenement there is a thorium anomaly associated with pegmatite within granitoid. This pegmatite resulted in scintillometer readings to 500cps.

South from the northern edge of the tenement there is a distinctive potassium anomaly extending south for approximately 2 kilometres and 50 - 200m wide. It coincides with Units A and B, which are silica-clay-limonite altered lava and pyroclastics. Unit B has been mapped as quartz veined and brecciated lava associated with a north trending shear structure. Sulphides +/- limonite occur within the quartz veins. Limonite after pyrite occurs in the wallrock of the veins and within the brecciated lava.

Field review of anomalies in EPM 16431 indicates:

- The magnetic low anomalies are associated with quartz and quartz-feldspar rich ignimbrite. A sample from the Mg1 anomaly contains 347ppm Ce, 146ppm Y and 99ppm Mo. This data may indicate monazite or similar mineralogy present but the origin of the 100ppm Mo is uncertain.
- The KUTh anomalies occur associated with feldspar-quartz-biotite-mica pegmatite in the basement rocks.
- KUTh and U anomalies are also associated with feldspar rich ignimbrite located at the edges of the magnetic low anomalies.
- A potassium anomaly north of Spear Creek is associated with quartz-clay-sulphide alteration and sulphide and quartz-sulphide veins in sheared ignimbrite and lava. The sulphides are weathered to limonite boxwork. These shear controlled veins are associated with silica-clay altered breccia. The elevated K assays (+4% K) support the high K radiometric data and the clay alteration. However the only significant assays are of cerium (to 222ppm) and yttrium (to 93ppm), most likely indicating monazite.

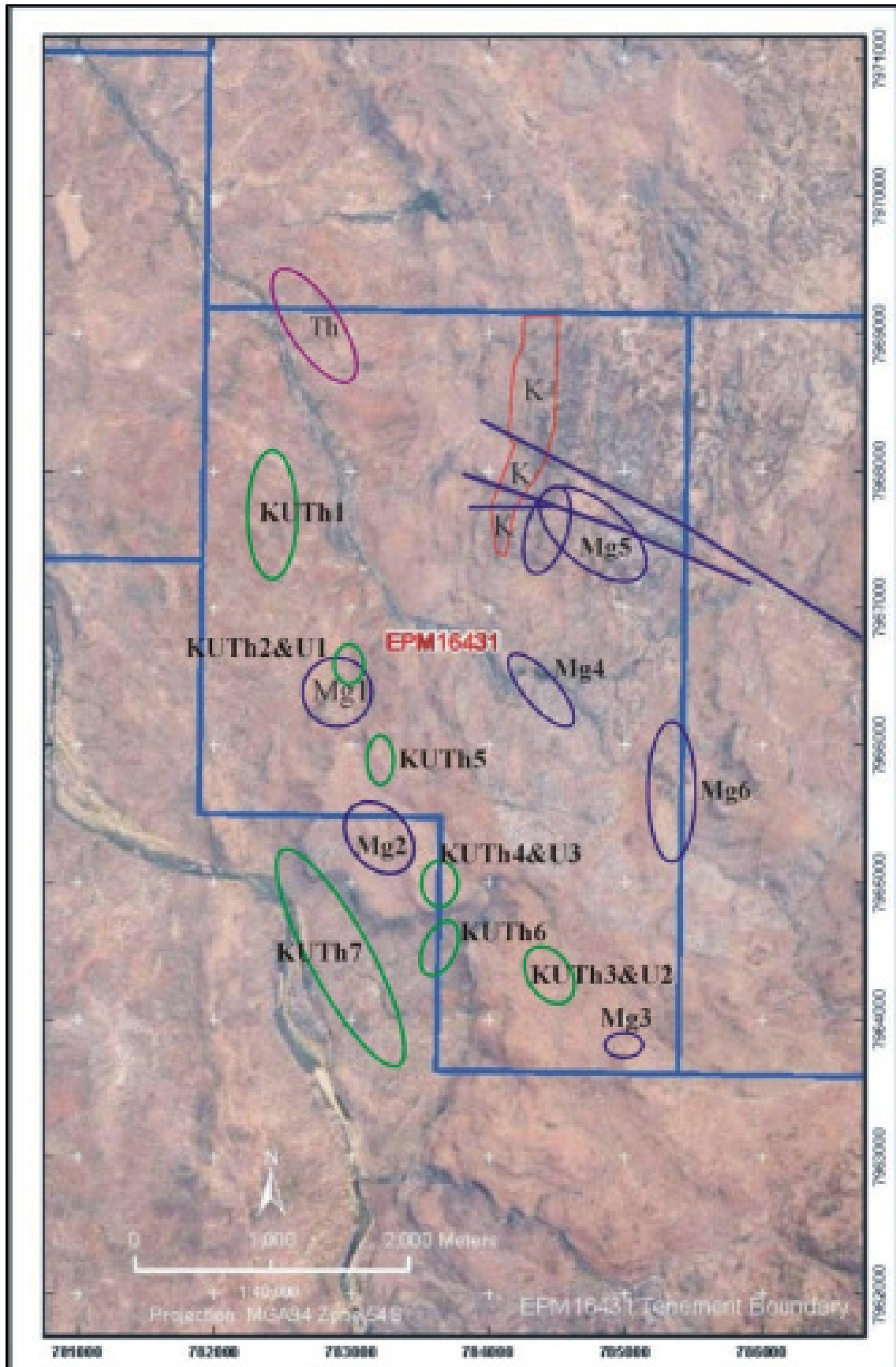


Figure 6: Magnetic and radiometric anomalies identified in EPM16431.



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## 4 References

Kreuzer, O., Porwal, A., and Markwitz, V. 2007. Rational for Area Selection for Regalpoint Uranium Prospects.

Pearcey, D. 2012. North Queensland Review. Report by CSA Global for Regalpoint Resources Ltd – R304.2012

Rolfe, G. 2012. A field evaluation of EPM16431, Kitchen Creek Project. Report R285.2012 by CSA Global for Regalpoint Resources Ltd.



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## 5 Appendices

Appendix 1: A field evaluation of EPM16431 R285.2012