



**EL 26543 MILLIONAIRES WELL CENTRAL**

**PARTIAL RELINQUISHMENT REPORT**

**FOR THE PERIOD**

**9 JULY 2008 TO 8 JULY 2011**

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Intercept Minerals Ltd, Perth Office

## **EXECUTIVE SUMMARY**

The Millionaires Well Tungsten Project is located about 200km north of Alice Springs and comprises four tenements that occur to the east of the Wilora Uranium Project and the Mt Skinner Base Metal Project. EL 26543 hosts the historical Millionaires Well tungsten workings, which were mined initially in the 1940's.

The tenement was granted to Uramet Minerals Limited (now Intercept Minerals Ltd) on the 9<sup>th</sup> July 2008. Work to date within the surrendered portion of the tenement from time of grant until surrender includes a literature search of open file reports and other available data.

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# 1 INTRODUCTION

EL 26543 is located about 200km north of Alice Springs (Figure 1). The tenement hosts the historical Millionaires Well tungsten workings (also known as Stirling tungsten prospect), which were mined initially in the 1940's.

This report details work undertaken by Uramet/Intercept between 9 July 2008 and 8 July 2011 on the surrendered area.

## 2 SITE ATTRIBUTES

### 2.1 Location

The tenement is located on the Stirling cattle station, approximately 200 km north of Alice Springs and 60km east of Ti-Tree in the Northern Territory (Figure 1). The project area falls within the Barrow Creek (SF5306) 1:250,000 map sheet.

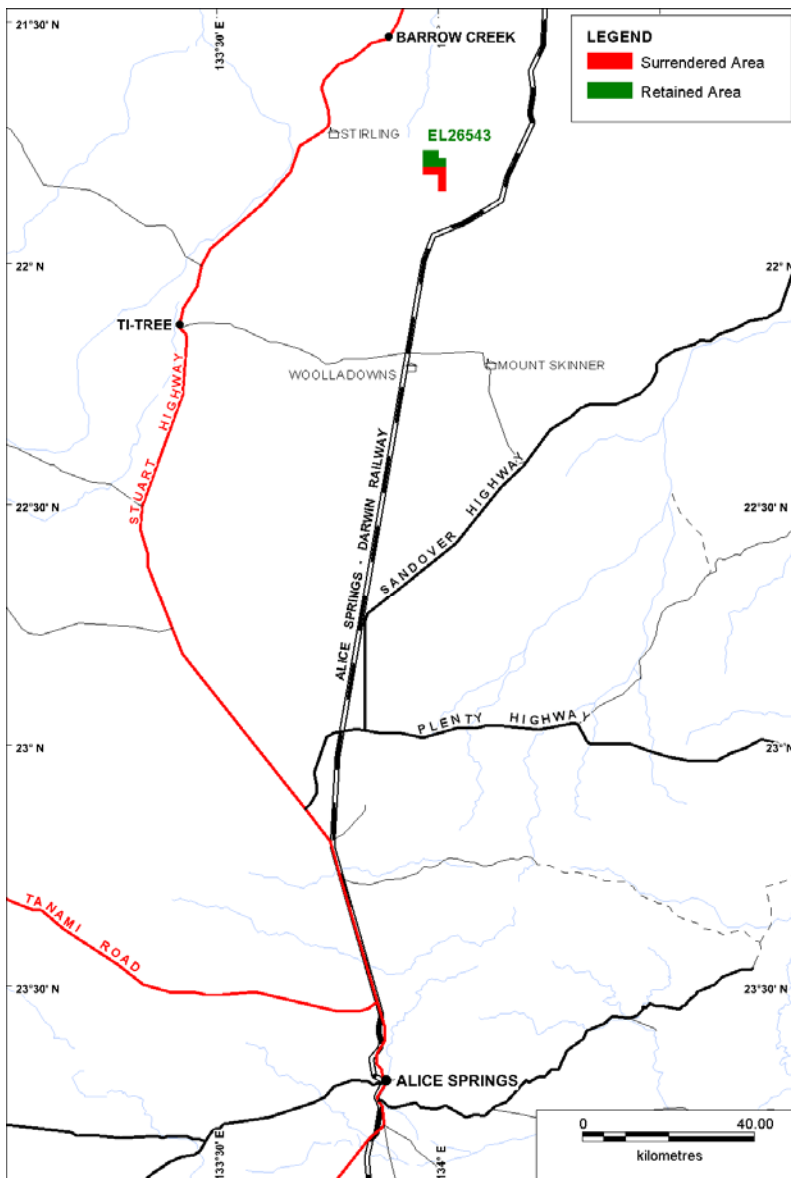


Figure 1 Millionaires Well Central Location

## **2.2 Climate**

The project area is situated in the Central Australian Desert climatic zone with a variable wet season from November to March. As for most of the southern Georgina Basin the area is classified as semi-arid with between 250 mm and 500 mm of rainfall per year, however, rainfall can be highly variable within a season and from season to season. The climate of the project area can be loosely divided into a dry season generally from April to October, and a wet season from November to March. Unseasonal rain can however occur at any time. Maximum daily temperatures generally exceed 35°C between October and April. The normal exploration field season runs from April to October.

## **2.3 Environment**

The project area occurs within the Stirling pastoral lease, with the primary land use being cattle grazing.

A search of the Sacred Site Registry has shown a number of sacred sites to occur within and adjacent to the tenement. Uramet does not yet hold an Authority Certificate from the Aboriginal Areas Protection Authority (AAPA), however it is planned to have an AAPA survey within the area as soon as possible.

## **2.4 Infrastructure**

Access from Alice Springs is normally by travelling north via the sealed Stuart Highway, then via station tracks (Figure 1). Most of the station tracks are generally in good condition however the 15km section of track leading to the historical workings at Millionaires Well is in poor condition, with much of it overgrown. The track is badly eroded in places adjacent to drainages.

## **3 TENURE**

EL 26543 was granted on the 9 July 2008, originally comprising of 10 blocks, covering an area of 32km<sup>2</sup>. A 50 % reduction was made in 2011 and is detailed in this report. Figure 2 shows the original and current tenement boundaries..

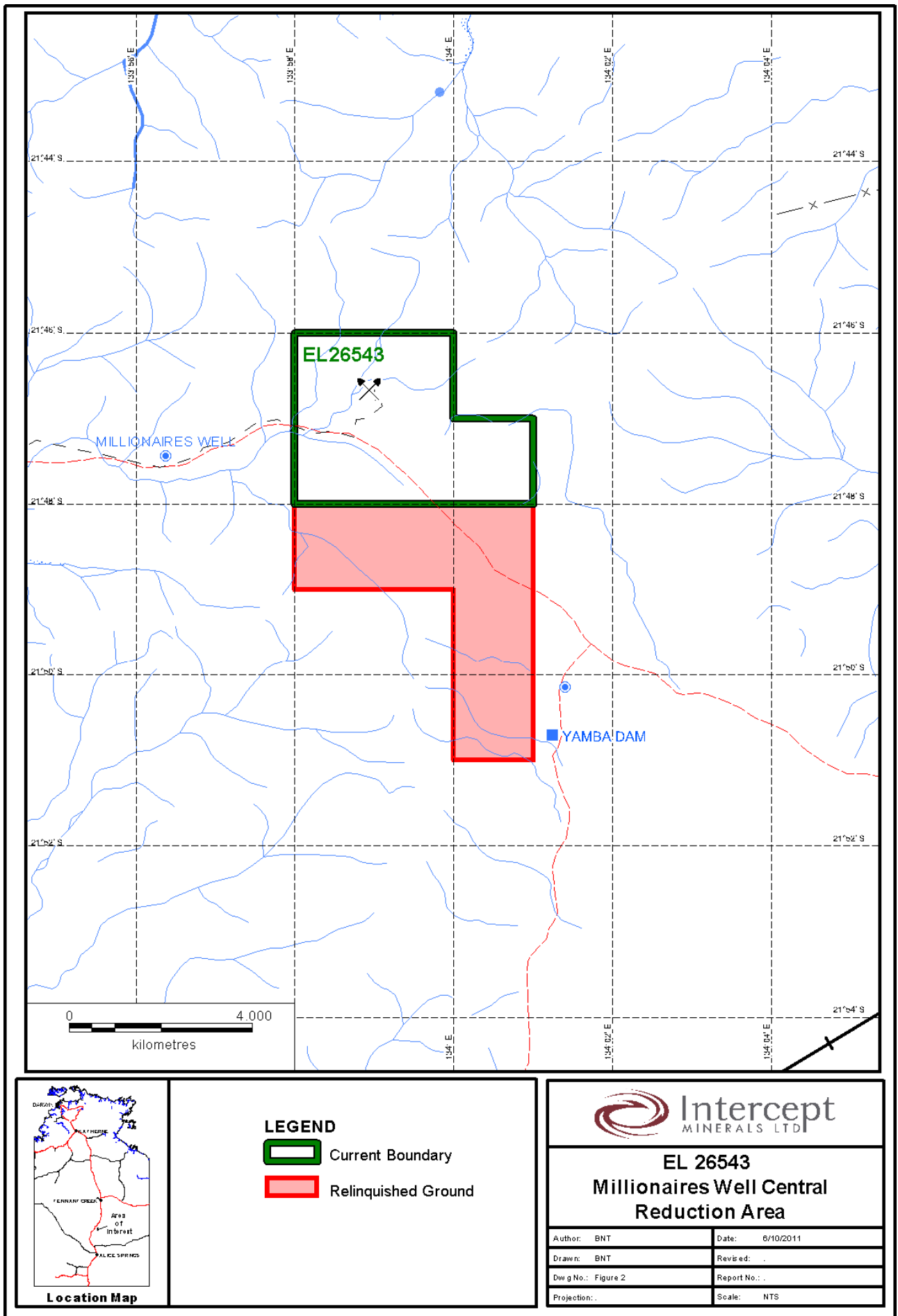


Figure 2 Original and Current tenement Boundaries

## 4 GEOLOGY

### 4.1 Regional Geology

The Project area lies at the boundary between Proterozoic-aged basement of the Arunta domain and the younger southern Georgina Basin (Figure 3.). Kruse et al have described the Georgina Basin as a 330,000km<sup>2</sup> erosional remnant of a series of originally interconnected central Australian intracratonic basins that range in age from Neoproterozoic to Palaeozoic. In excess of 1.5km of Neoproterozoic sedimentary rocks are preserved in downfaulted blocks and half-grabens on the southern margin of the Georgina Basin in the NT. Depocentres and synclines contain up to 2.2km of Cambrian to Devonian section.

The Arunta basement is dominated by folded and faulted Palaeoproterozoic-age felsic gneiss and metasedimentary rocks (biotite schist, quartzite and calcsilicate), intruded by syn- to post tectonic granitoids.

In early Palaeozoic times the area was a stable platform on which carbonate, clastic and evaporitic units were deposited. The intracontinental, compressional Alice Springs Orogeny (370-310 Ma) affected the Georgina Basin and other central Australian Basin but resulted in little metamorphism (Dunster et al. 2007).

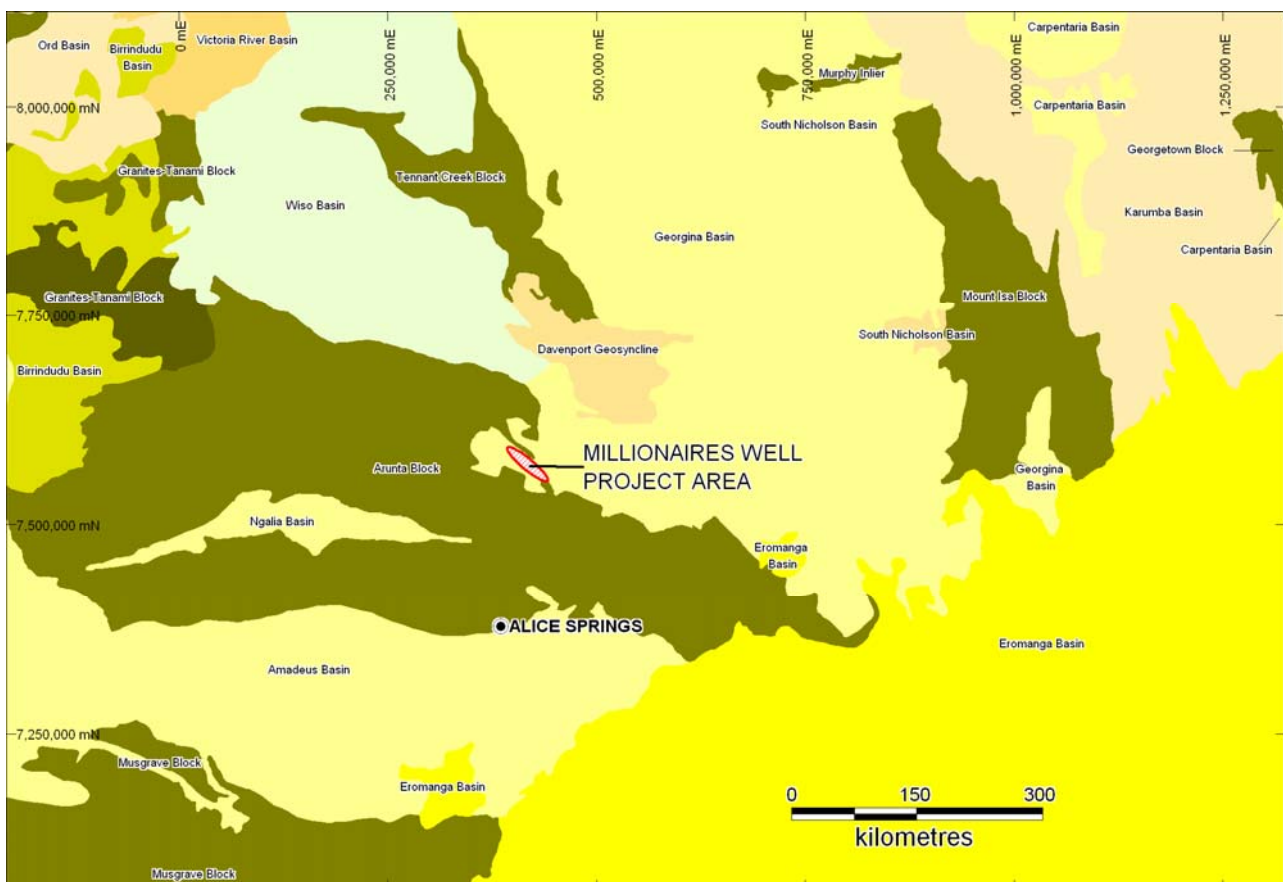


Figure 3 Major Sedimentary Basins and Metamorphic Blocks, and Millionaires Well Project Area

## 4.2 Local Geology

The geology of the project area (Figure 4) is dominated by Neoproterozoic and Cambrian clastic sedimentary rocks of the Central Mount Stuart and Octy Formations, and Paleoproterozoic Barrow Creek Granite Complex, with localised occurrences of early to mid Proterozoic Bullion Schist, and Ledan Schist. The latter three units are part of the Arunta Domain, and generally outcrop poorly in comparison with the Central Mt Stuart Formation.

Strike directions mainly trend NW-SE, sub-parallel to regional faults and shears such as the northwest trending Stirling Fault Zone. A secondary set of faults cross-cut the stratigraphy with a northeast strike.

The Neoproterozoic Central Mount Stuart Formation covers most of the north-eastern and eastern part of the area. The Cambrian Octy Formation is unconformable on the Neoproterozoic sandstones. The succession is part of a tilted fault block dipping gently towards a major geophysically defined bounding fault trending NW-SE. The Neoproterozoic sedimentary rocks range in thickness from a veneer at the base of the Cambrian (Dunster et al., 2007) in the north, to an interpreted 1200m depth to the south.

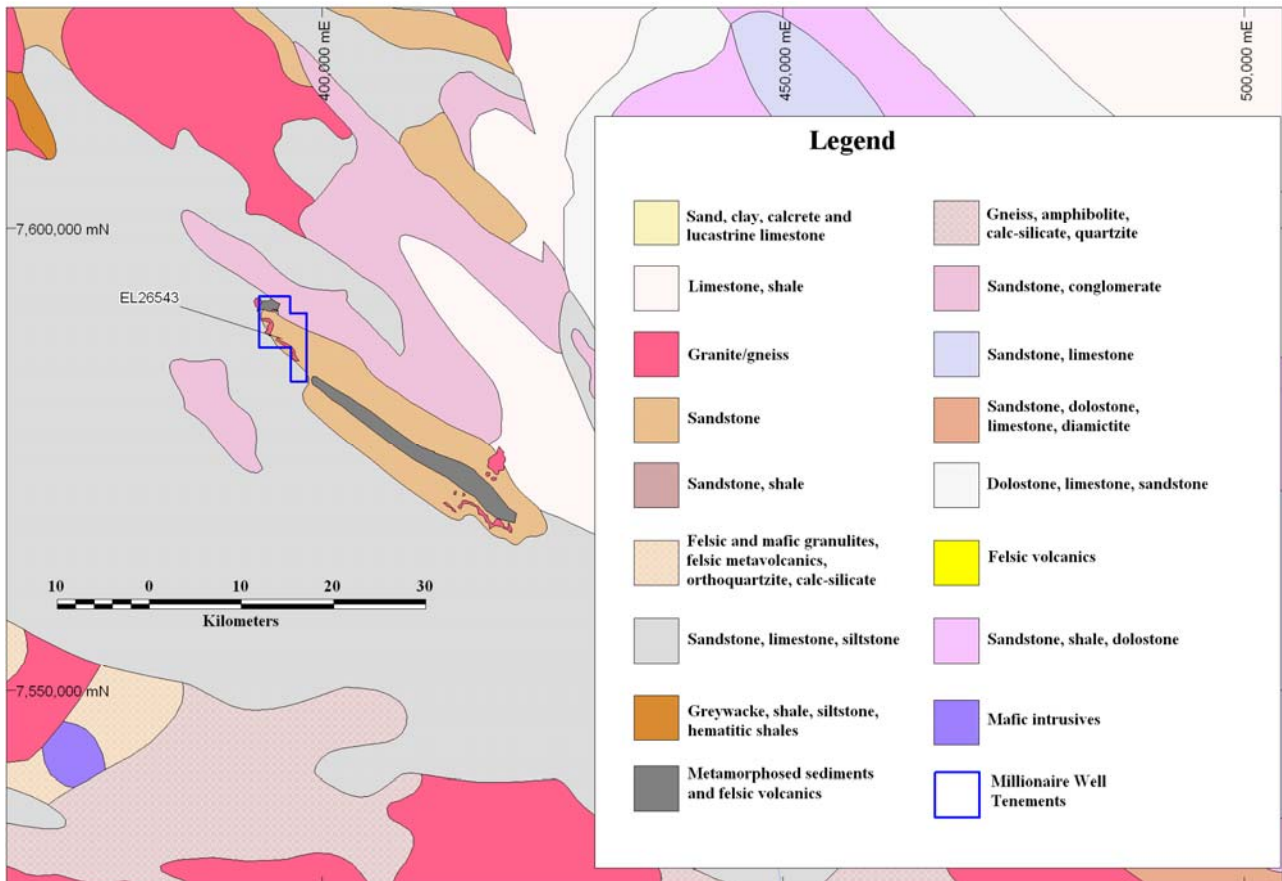


Figure 4 Simplified Geology of Project Area (compilation of various published maps)

## 4.3 Geomorphology

The Landsat image of Figure 5 highlights the variable geomorphology of the area. The topography is generally dominated by the hills of the outcropping Central Mount Stuart and Octy Formations represented as dark blue in the Landsat image.



Sand-plains usually show as light green to light brown, to light purple in the image. The sand-plain shown in the very southern part of the image (light purple) converges into the calcretised Wilora Paleochannel to the west of EL 26543.

Sand dunes can be seen in the north-eastern part of Figure 5.

Part of the alluvial plain, channels and clay pans of the Hanson River (white colour), being the largest drainage system in the area, can be seen in the north-western part of Figure 5.

The vegetation ranges from savanna woodland near the creeks, to gidgee and acacia scrub to annual grasslands. The vegetation is consistent with a semi-arid regime.

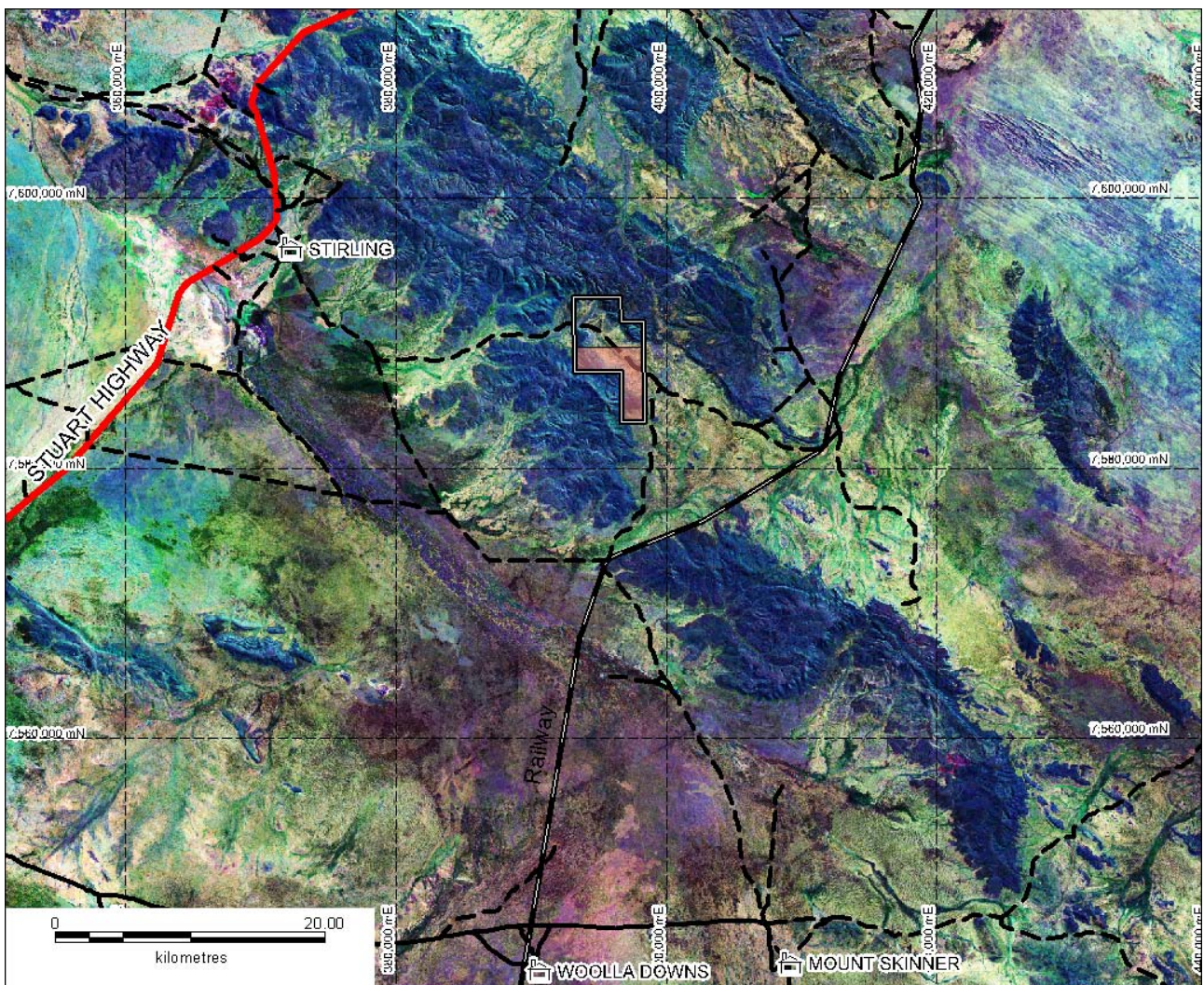


Figure 5 Landsat image (742) of the project area, (relinquished area in red).

#### 4.4 Geological Model

The style of mineralisation being targeted is quartz vein-hosted tungsten (scheelite/wolframite). At the historical Millionaires Well workings a WSW-trending quartz-carbonate vein set hosts the tungsten mineralisation. The vein system occurs near a contact between Barrow Creek Granite and what is interpreted to be Bullion Schist. Other tourmaline-rich vein sets appear to be barren.

Past exploration work indicates the project area may also be prospective for calc-silicate-skarn-hosted tungsten, for shear-zone-hosted gold, and for vein-hosted uranium within granitoid basement.

## **5 PREVIOUS WORK (by Other Companies)**

Previous work within the area includes the small-scale mining at Millionaires Well in the 1940's, CRA in the early 1990's, and Normandy mid to late 1990's.

No production statistics have been located for the Millionaires Well workings; however the workings are of relatively small scale, following veins up to 0.5m wide over a total strike length of about 170m. In a brief report for the Northern Territory Geological Survey (NTGS) by D. Moore in 1978, Moore suggested that a lack of permanent water in the area may have been a contributing factor for the abandonment of the mining.

CRA explored the area for stratabound base metals and uranium in the late 1970's (mostly to the south of the tenement). Work by CRA included mapping and rock chip sampling. CRA reported uranium rock chip results up to 620 ppm U, and a rock chip sample with 780 ppm W, supposedly within a calc-silicate rock.

Normandy explored for shear hosted gold between 1995 and 2000 to the south of the tenement. Work by Normandy included:

- 97 rock chip samples, with one sample returning 5.52ppm Au, another returning 1.36 ppm Au.
- 130 lag samples (no significant gold or base metal values).
- vacuum drilling; 457 holes, usually on a 200m by 800m pattern (no significant gold or base metal values were reported).
- RAB; 36 holes for 896m (no significant gold or base metal values).

It should be noted that Normandy did not assay for tungsten in any of the drill samples.

## **6 URAMET ACTIVITIES**

Work undertaken by Uramet/Intercept to date includes a data review.

### **6.1 Data Review**

Data reviewed by Uramet includes the following open file reports:

GS1978-014 (NTGS 1978)

CR19800027 (CRA 1979)

CR20010003 (Normandy 1995 to 2000)

Other available data sets including satellite imagery (Figure 5), and government gravity (4km spaced stations), aeromagnetic (400m line spaced), and radiometric data were utilised.



The gravity data (Figure 6) is useful for regional interpretation, but being too coarse to be of use for detailed interpretation.

The regional magnetics show the rocks of the Arunta Domain as generally having a much stronger magnetic signal than the sediments of the Georgina Basin (Figure 7).

The radiometric data corresponds well with the uranium anomalies located on the ground by CRA (Figure 8).

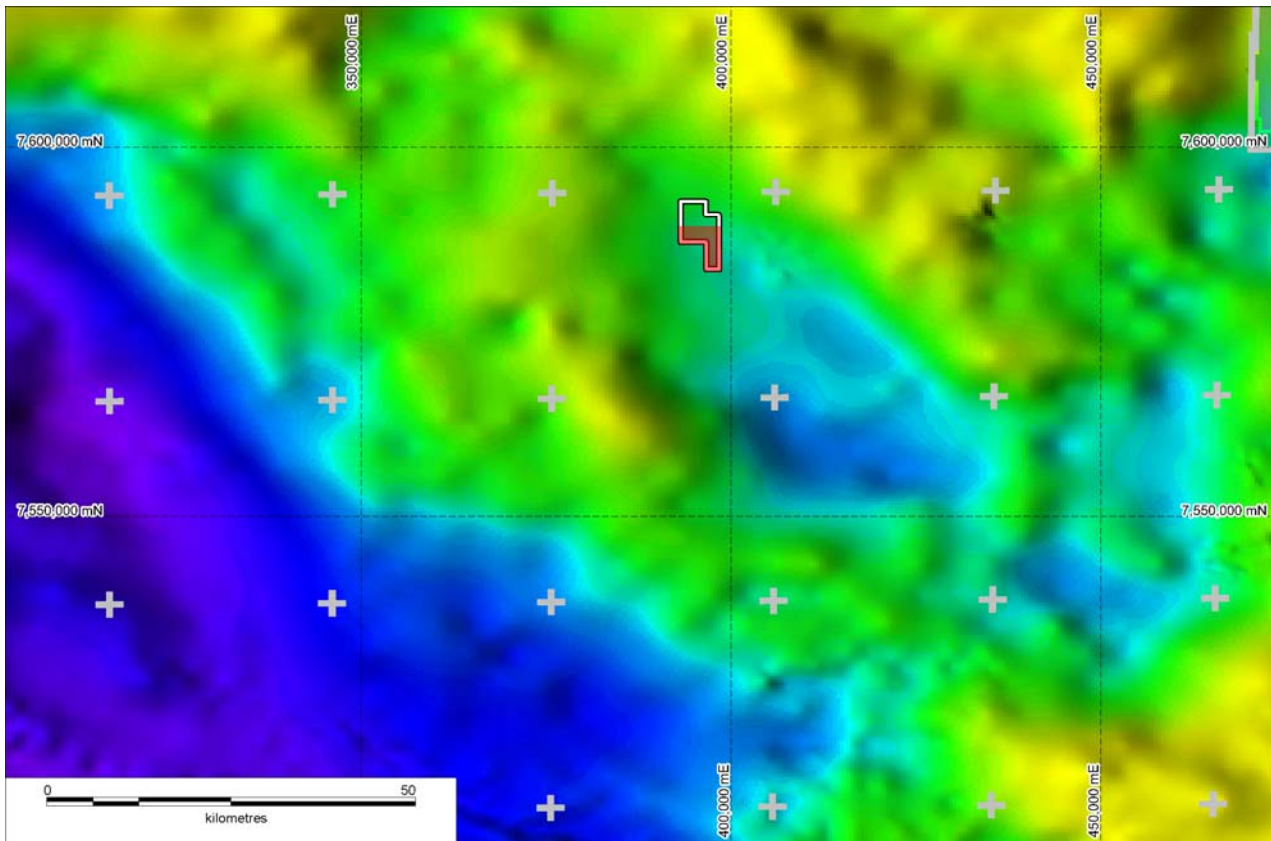


Figure 6 Regional (4km spaced stations) bouguer gravity image ( Reduction area in red)



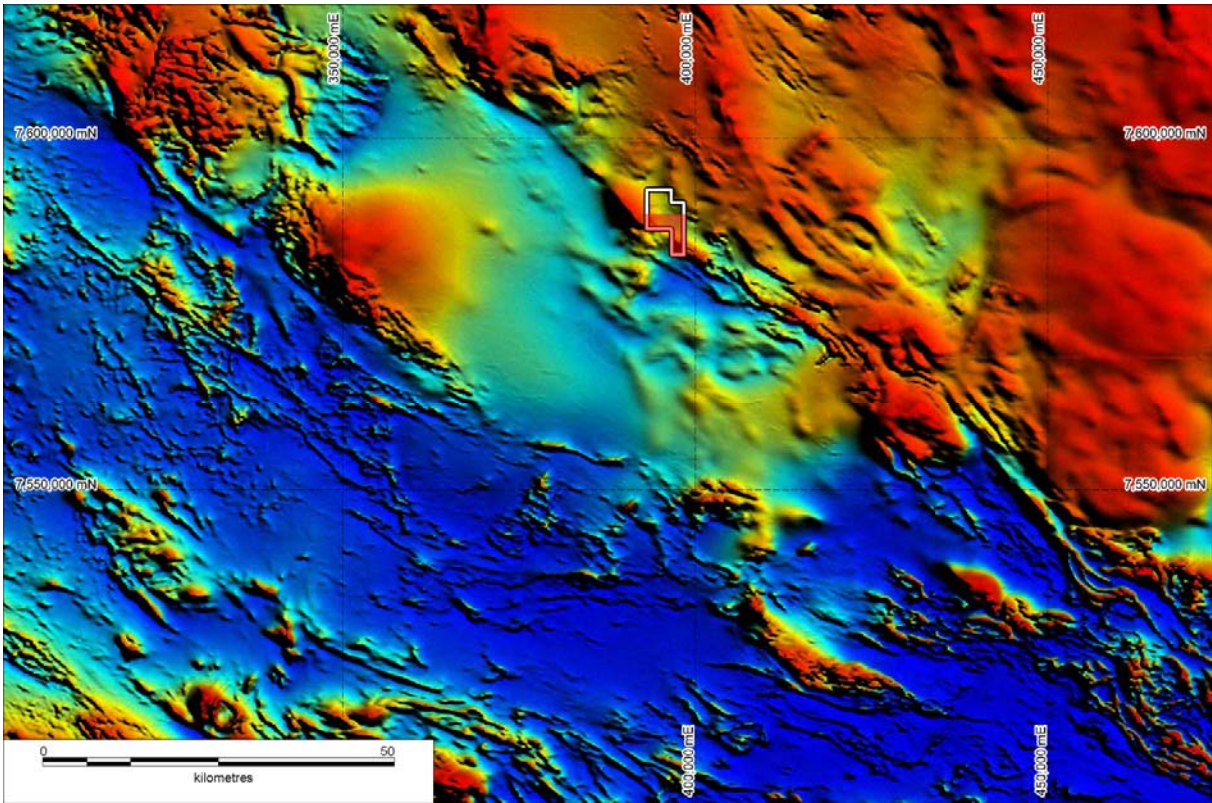


Figure 7 Regional (400m line spaced) aeromagnetic TMI image

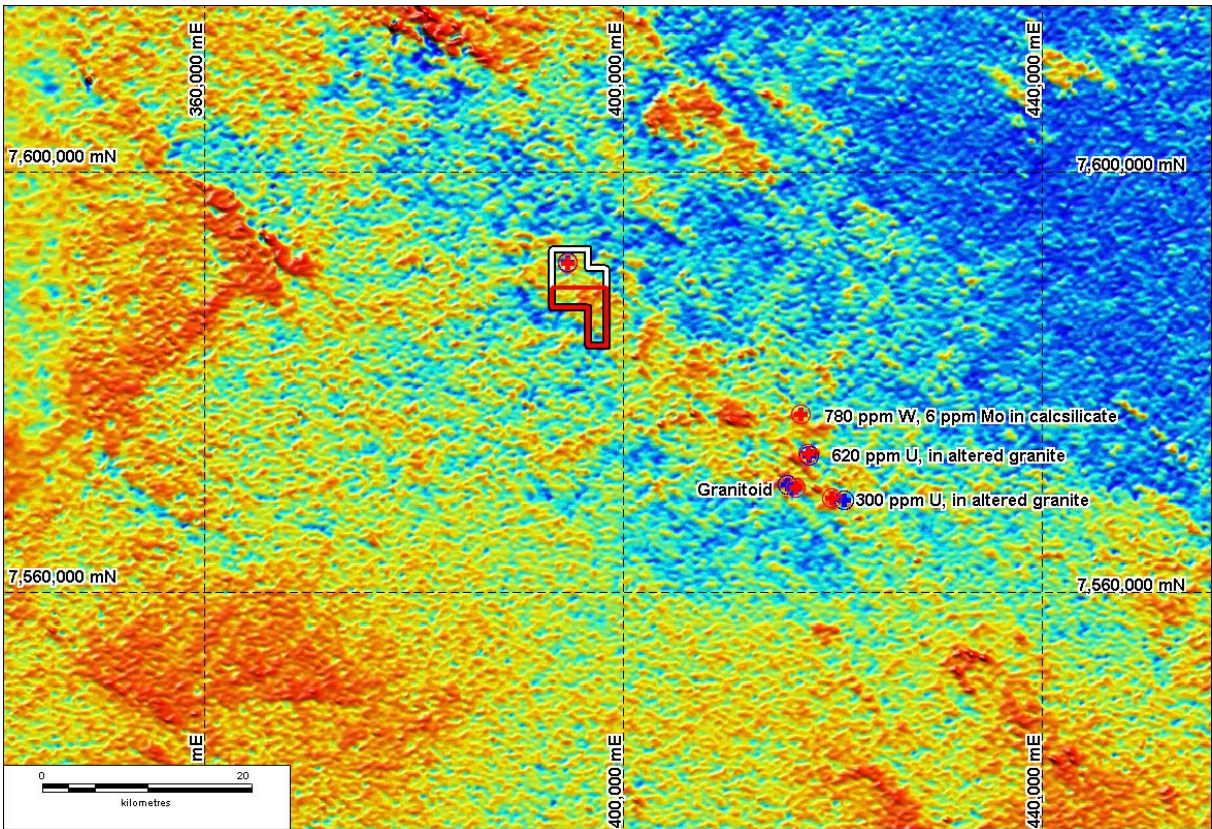


Figure 8 Regional (400m line spaced) uranium count image

## **7 CONCLUSIONS AND RECOMMENDATIONS**

A review of available data along with field reconnaissance failed to define any exploration targets within the surrendered area, hence the area was relinquished.

## **8 REFERENCES**

Dunster JN, Kruse PD, Duffett ML and Ambrose GJ. 2007. Geology And Resource Potential Of The Southern Georgina Basin, Northern Territory, NTGS.

Moore D. 1978. Northern Territory Geological Survey Report. A Preliminary Report On The Stirling Tungsten Prospect.