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<b>Tenement:</b>	<b>EL 23791 &amp; EL 23921</b>
<b>Project Name:</b>	<b>Mount Goyder</b>
<b>Report Title:</b>	<b>Combined eighth annual report for EL 23791 &amp; EL23921, Mount Goyder NT, period ended 18/12/2011</b>
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<b>Target Commodity:</b>	<b>Uranium, gold, base metals</b>
<b>Date of Report:</b>	<b>18/02/2012</b>
<b>Datum/Zone:</b>	<b>GDA94/ Zone 52</b>
<b>250K mapsheet:</b>	<b>Darwin SD 5204</b>
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## **SUMMARY**

During the eighth year of tenure, drill holes were pegged to commence drilling at the Merv's prospect (EL 23921). Unfortunately due to delays to DoR approval of the MMP, a rig could not be sourced in time before the onset of the wet season, hence drilling has been postponed until the 2012 field season. No work other than some desktop target generation has been done for EL 23791 for the reporting period.

Expenditure on EL 23791 was \$6,804 against a covenant of \$53 000

Expenditure on EL 23921 was \$10,640 against a covenant of \$75 000

## LOCATION AND ACCESS

EL 23791 and EL 23921 are located 110 km ESE of Darwin along the Arnhem Highway straddling the Mary River. They are located on the Darwin 1:250 000 Geological Map and the Mary River-Point Stuart 1:100 000 sheet. Rum Jungle Resources' co-ordinates are captured in GDA94 datum.

## HISTORY OF TENURE AND JOINT VENTURES

EL 23791 and EL 23921 were granted to Territory Iron Limited for 6 years on the 21<sup>st</sup> January 2003. The two tenements together cover 129 square km (23 graticular blocks on EL 23971 and 16 on EL 23921) and were evaluated in the first four years for iron ore by Territory Iron Ltd. On the 30/5/2008 Rum Jungle Uranium Limited signed a uranium joint venture agreement with Territory Resources over three tenements at Mary River (EL 24468, 23791 and 23921) and three south of Batchelor (EL 24412, 25203 and 25204) in return for shares and share options.

Rum Jungle upgraded the joint venture to include all minerals excluding iron ore and manganese on the 23/12/2008 in return for giving Territory Resources a further four million shares. EL 23921 & 23791 was transferred from Territory Resources Limited to Rum Jungle Resources Ltd on 22 March 2011.

EL 23791 was partially relinquished in 2008 and EL 23921 has not been reduced.

Group reporting for these ELs has previously been approved by DoR.

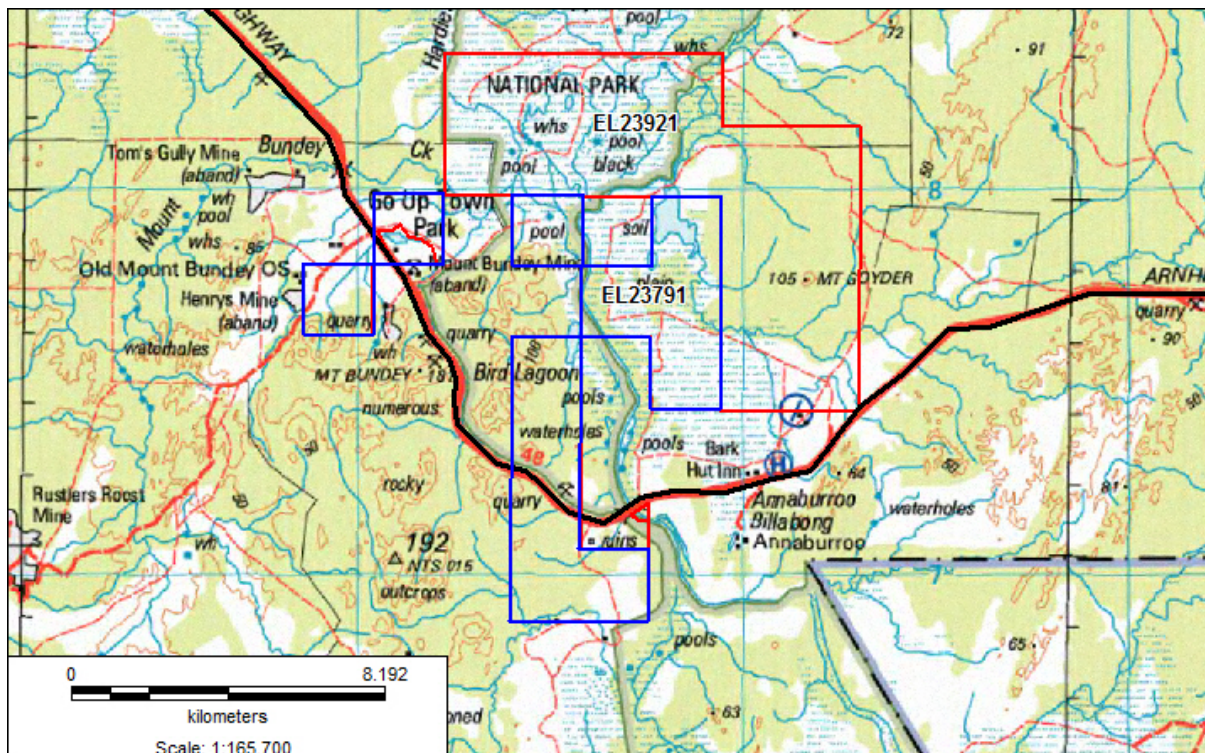


Figure 1. Location Map

## **EXPLORATION RATIONALE**

Rum Jungle Resources Ltd holds the area in high regard due to its spatial relationship with both the Mt Bunday Granite and Mt Goyder Syenite. Common geological models for the deposition of gold, basemetals, uranium and iron in the area are fundamentally related to the emplacement of these intrusive bodies and their subsequent release of mineral-rich fluids into the surrounding country rock. Because of these circumstances, the tenement is thought to be high in prospectivity with regards to concentrations of economic mineral wealth.

## **GEOLOGICAL SETTING**

EL 23791 and EL 23921 are located in the central domain of the Proterozoic Pine Creek Orogen (PCO) in the Top End of the Northern Territory. The tenement geology primarily consists of graphitic-carbonaceous siltstone and dolomitic siltstone of the Palaeoproterozoic Wildman Siltstone which is intruded by the Mount Bunday Igneous Suite (1831 Ma) which comprises the Mount Bunday Granite, Mount Goyder Syenite and associated lamprophyre dykes.

In the centre of EL 23921 (Figure 2), the thorium-rich and magnetic Mount Goyder Syenite intrudes Wildman Siltstone. The Mount Goyder Syenite is a pink-brown medium to coarse grained porphyritic syenite and comprises about 30% of the Mount Bunday pluton which also includes the Mount Bunday Granite (70% by volume), a pink medium to coarse grained biotite-hornblende monzogranite with minor fine grained porphyritic monzogranite which intruded at 1831 Ma (Sheppard 1995).

EL 23791 is mainly comprised of the Mt Bunday Granite and the surrounding Wildman Siltstone. In the south and east of the tenement the granite is bordered by the South Alligator Group which overlies the Wildman Siltstone and is composed of the iron rich Koolpin Formation, the Gerowie Tuff (1862 Ma) and the overlying Mount Bonnie Formation. The Mount Bonnie Formation conformably grades into the overlying Burrell Creek Formation of the Finnis River Group which occupies a large area of the central domain of the PCO, although not present on EL 23791.

A 300 m wide hornfels zone exists around both the Mount Goyder and Mount Bunday intrusions. The hornfelsed sediments were originally carbonaceous and dolomitic siltstones of the Koolpin Formation and Wildman Siltstone. Within the hornfels zone, particularly on the western flank of Mount Goyder, skarn mineralisation consisting of magnetite, pyrrhotite, chalcopyrite and allanite, occurs in lenses dipping away from the syenite contact.

The Mount Bunday igneous suite also comprises K-rich shoshonitic lamprophyres and felsic dykes. The intrusion injected gold, uranium, base metal and iron bearing fluids into surrounding country rocks producing Tom's Gully Gold Mine, the Quest gold and base metal deposits and the Mount Bundy Iron Ore mine.

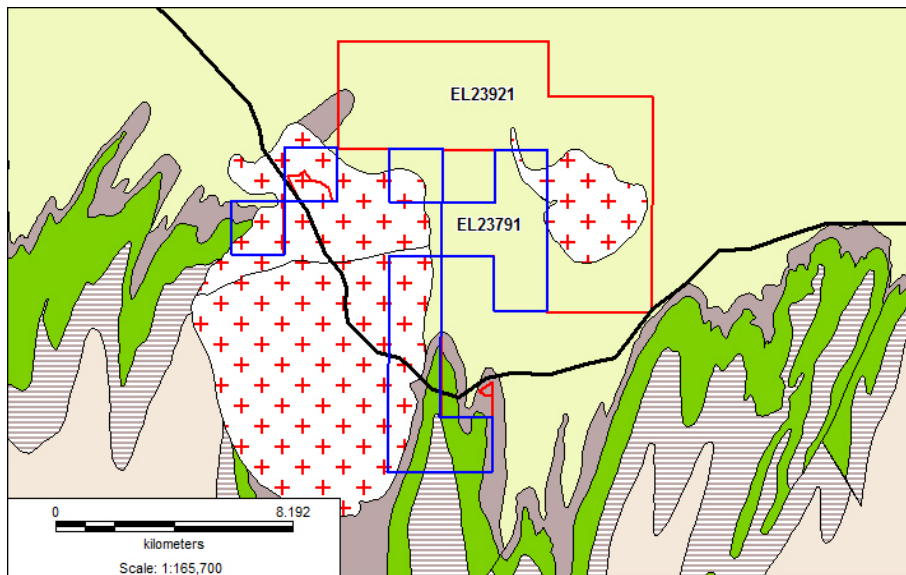


Figure 2. Local Geology of EL 23921 and EL 23791

## PREVIOUS EXPLORATION

During the first four years of tenure, Territory Resources conducted a review on the historical literature and geophysical data. UTS Geophysics flew a 2547 line km magnetic /radiometric survey at 80 m line spacing (25 m flying height over the tenement). The survey identified up to nine magnetic anomalies to follow up, targeting iron mineralisation. As a result, 4 RC holes were drilled on what is now known as Anomaly 2 and Anomaly 3 in 2006. Drilling intersected pyritic and pyrrhotitic siltstone and dolomite below clay overburden on Anomaly 2, which returned anomalous copper and cobalt at depths less than 40 m (Vivian 2007).

Rum Jungle Uranium Ltd (now Rum Jungle Resources Ltd) commenced exploration in the second half of 2008 after signing a uranium joint venture agreement with Territory Resources Ltd in May 2008.

The following work was carried out during the fifth year of tenure in the dry season of 2008 (Doyle 2008),:

### **EL 23791**

- 6 rock chip samples collected. The best rock chip result was from a jarosite-altered greisen outcrop in the Billabong area, 1 km north-west of Mount Goyder, where MG08001 returned assay results of 59 ppb Au, 1150 ppm Bi, 1140 ppm Cu and 39.1% Fe.
- 31 RAB holes for 652 m. Shallow reconnaissance RAB drilling, targeting gossanous outcrop at the Billabong area 150 m from the above jarosite outcrop reported a best intercept of 2 m @ 0.2 g/t Au, 1.85 g/t Ag, 2.5% As, 4030 ppm Cu and 1067 ppm Bi.
- 16 RC holes (1128 m) were drilled. Low grade polymetallic radioactive skarn mineralisation was intersected in seven of the 16 RC holes on the western fringe of Mount Goyder. Mineralisation contains uranium, copper and rare earth oxide with anomalous cobalt, vanadium, silver, iron and sulphur (refer to Table 3).

### **EL 23921**

- 21 rock chip samples collected.
- 11 RC holes drilled for 810 m. Skarn mineralisation was intersected in a number of holes at anomaly 1 and 4 at Mount Goyder (refer to Table 3).
- 28 RAB holes drilled for 641m

Seven petrographic samples consisting of RC drill chips were submitted to Pontifex & Associates to make polished thin sections and for detailed petrographic analysis. Analysis indicates the mineralised samples are either magnetite skarn or sulphide skarn dominant with one sample MGRC021-041 being a greisen with visible arsenopyrite. The skarn samples variously contain magnetite, pyrrhotite and clinopyroxene with minor chalcopyrite. Rare earths and uranium are most probably contained in allanite. Two types of hornfels were described; a dark grey hornfels and a light grey hornfels and differ in mineralogical content. A sample taken from the Billabong prospect was confirmed to be scorodite and jarosite with visible arsenopyrite.

During the sixth year of tenure (Doyle and Nowland, 2009);

### **EL 23791**

- Six rock chip samples were taken at the Billabong prospect during the year from an area of a green scorodite and jarosite altered outcrop with visible arsenopyrite and the immediate surrounds. Best results include 14.4 g/t Au, 4.3 g/t Ag, 28.3% As, 1.1% Bi, 314 ppm Cu and 0.88% W. A number of samples were also analysed in-house with a Niton XLT3 hand held XRF analyser which indicated highly anomalous copper, cobalt, bismuth, tungsten and arsenic at the Billabong gossan and a large arsenic anomaly over the jarosite prospect nearby.
- 16 RC drill holes for 1461 m targeting:
  1. The Mount Goyder skarn prospect - uranium and Polymetallic mineralisation in magnetite skarn and sulphide skarn rocks and dark green-grey hornfels at the Mt Goyder skarn prospect. Nine holes for 951 m
  2. Billabong prospect - gold and polymetallic mineralisation in a thin gossan and a scorodite and jarosite greisen outcrop at the Billabong prospect. Six RC holes were drilled in 2009 for 510 m (BBRC001-006).
  3. Goanna Park base metal prospect - on the north western side of Mount Bunday on the western side of the Mary River. Three RC holes were drilled in 2009 for 312 m (MBRC019-021).
- Borehole Wireline Pty Ltd were contracted to run gamma and density probes down drill holes as well as down hole surveys (dip and azimuth) and optical imaging of selected holes. One of the logged holes were captured with a down hole optical camera for 118 m, where structural information could then be measured from the image. In some cases Borehole Wireline could not survey the complete hole due to collapsing and caving at depth.

### **EL 23921**

- 13 RC drill holes for 1143 m targeting the Mount Goyder skarn prospect - uranium and Polymetallic mineralisation in magnetite skarn and sulphide skarn rocks and dark green-grey hornfels at the Mt Goyder skarn prospect.
- Borehole Wireline Pty Ltd were contracted to run gamma and density probes down drill holes as well as down hole surveys (dip and azimuth) and optical imaging of selected holes. One of the logged holes was captured with a down hole optical camera for 48 m, where structural information could then be measured from the image. In some cases Borehole Wireline could not survey the complete hole due to collapsing and caving at depth.

Processed TEMPEST data was received during the sixth year of tenure. Ninety line km of airborne TEMPEST surveying was flown at 333 m line spacing by Fugro Airborne as part of a larger survey over the entire Pine Creek Orogen. TEMPEST was also flown to the south, over EL 23791 and EL 23921 in an E-W direction for 56 line km. Initial inspection of the conductivity depth images (CDI's) indicates that the TEMPEST system maps the graphitic black siltstone unit of the Wildman Siltstone very well.

A Heli –VTEM electromagnetic survey was flown by Geotech Airborne in May 2009. The Mt Bunday Survey comprised 6 areas flown in various directions at 200 m line spacing. Section A571-4aM was then chosen for infill at 100 m line spacing exists over the Mt Goyder skarn and Billabong areas. Profiles for each flight line were received in July 2009 after processing by Southern Geoscience Consultants.

Four holes were drilled late in July (MGRC042 – 044 & MGRC048) targeting three VTEM anomalies under black soil floodplains. Graphitic black siltstone and minor sulphide mineralisation were intersected explaining the VTEM anomalies but nothing substantial was discovered. The holes intersected siltstone and carbonate units with sulphides (mainly pyrite).

During the seventh year of tenure, consulting geochemist Richard Mazzuchelli, spent three days with the exploration team looking at the best sampling medium and discussed the best analytical techniques for this project. The purpose of the visit was to try and differentiate between mineralised VTEM conductors and non-mineralised VTEM conductors, many of which are due to graphitic black shales and many of which are buried under black soil floodplains. It was decided that soil was the best sampling medium and Aqua Regia Digest (ARM10) method at Amdel Laboratories was the best and most cost-effective analytical method.

During August 2010, Rum Jungle Resources completed orientated soil sampling grids over two prospects on EL 23921 collecting a total of 196 samples. Soil sampling was conducted at Mt Goyder East and a VTEM anomaly at Merv's using a pick to dig small holes approximately 20-30 cm deep. Soil was collected by a scoop and sifted through a <2mm sieve, where a small amount of undersize was then bagged.



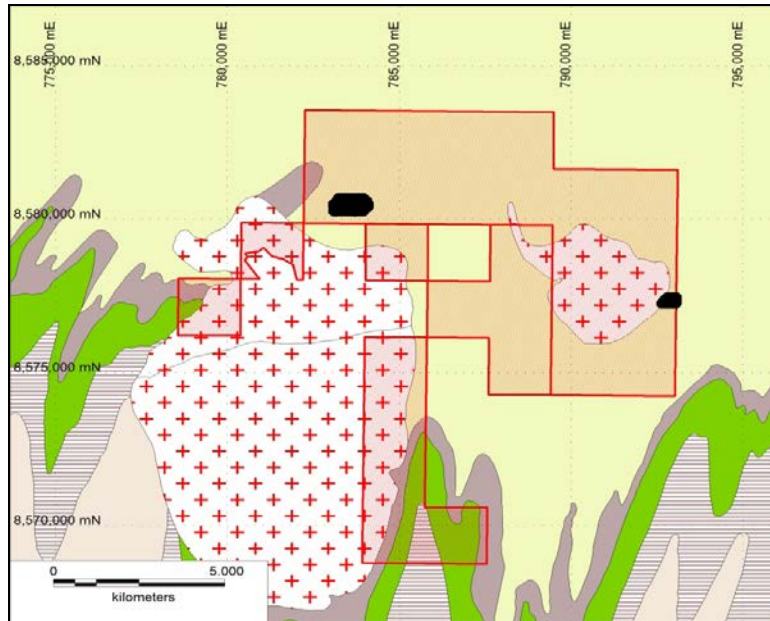


Figure 3 Soil Sampling grids over EL 23921

## Mt Goyder East

A 50 m x 50 m grid was used over Mt Goyder East collecting a total of 89 samples. After analysing the results, only some statistically significant results were found. These included elevated Fe, Mn, Zn and one anomalous Au sample with 15 ppb Au (123029). It was decided however, that these results were not good enough to warrant an RC drilling program.

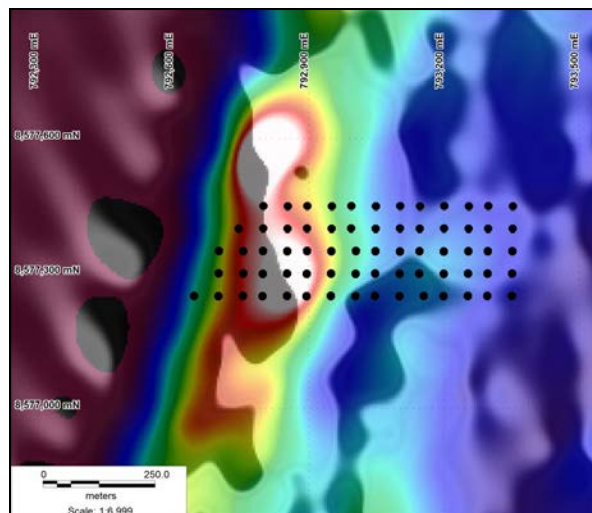


Figure 4 Soil sampling over VTEM anomaly at Mt Goyder East

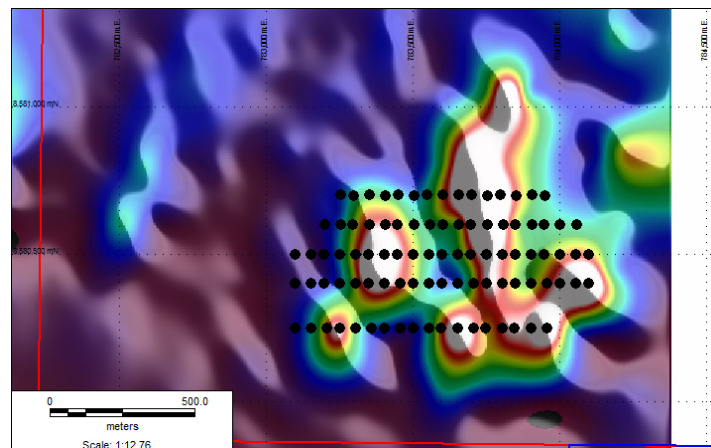
## Merv's

A 50 m x 100 m grid was completed over a VTEM anomaly at Merv's on a black soil floodplain of the Mary River. Only statistically anomalous Au was returned, with two samples assaying 22 ppb (123106) and 24 ppb (123122) Au.

It is uncertain if the soil geochemical program can successfully detect mineralisation below at least 20 m of black soil overburden.

Merv's VTEM anomalies were included as part of the 2010 Mt Bunday RC drilling program however due to early rains flooding the black soil floodplain, the target area became inaccessible and was not drilled. During 2011, there were considerable DoR delays to approving the amended MMP. The originally scheduled drilling had to be cancelled. When the MMP was finally approved, a rig could not be sourced in time before the onset of the wet season, hence drilling has been delayed until the 2012 field season.

Rum Jungle Resources plans to drill this area and other high-priority VTEM anomalies nearby during the ninth year of tenure.



**Figure 5 Merv's soil sampling grid over VTEM image and showing VTEM high-priority anomalies**

## CURRENT EXPLORATION

During the year, little work on ground was done on the two tenements. Holes were pegged ready for drilling at the Merv's Prospect in August with rig availability scheduled for September. A significant delay in the approvals for the DoR's Mine Management Plan however (14th August 2001-submittal and 14th October- approval), did not allow RUM to procure another suitable rig; this plus the onset of the wet season made access on the black soil plains of the Merv's prospect extremely unlikely and hazardous.

## PROPOSED EXPLORATION ACTIVITY AND EXPENDITURE YEAR 9

Work proposed for Year 9 of EL 23791 will involve the investigation of VTEM and magnetic anomalism on the eastern flank of the Mt Bundey Syenite. The model for mineralisation would be similar to that of the Mt Goyder skarn mineralisation which was found on the immediate flanks of the intrusive system and surrounding metasediments (Figure 1).

The program will consist of initial geochemical exploration methods such as rockchip sampling and more systematic soil sampling which would be grid controlled. Any anomalous geochemical patterns will be followed up by RC drilling.

An exploration budget of \$34,000 will be allocated for this work to proceed in the 2012 field season with a breakdown as follows:

Geochemical sampling	\$25,000
Salaries and wages	\$7,000
Travel / Accommodation	\$2,000
<b>Total Expenditure</b>	<b>\$34,000</b>

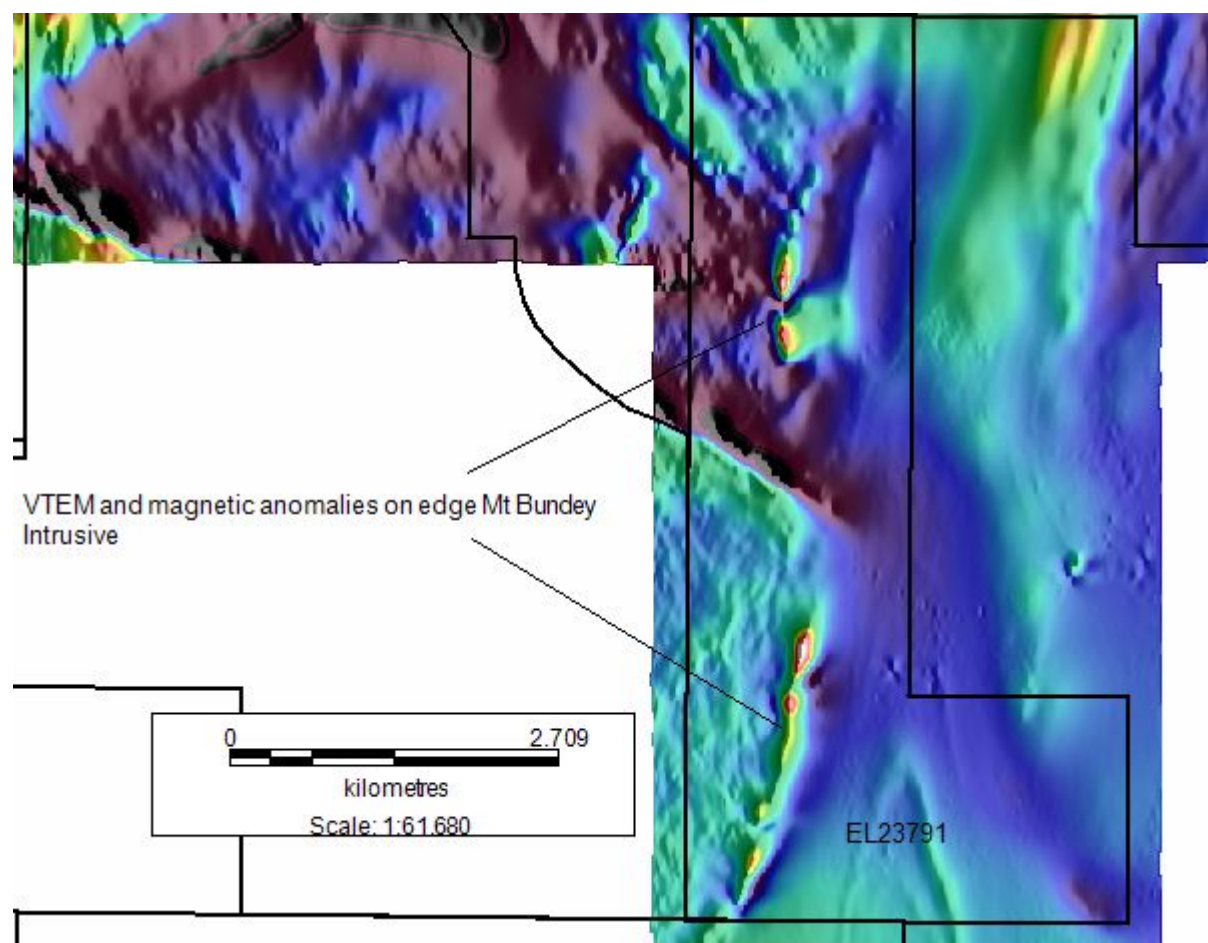


Figure 6 VTEM and Magnetic anomalies on edge of Mt Bunde Syenite

Work proposed for Year 9 of EL 23921 will include RC drilling of the Merv's VTEM anomalies. A total of four (4) holes have been planned and, at the time of writing, were pegged and awaiting site preparation. A current Mine Management Program (MMP) has also been approved for the drilling.

Further follow up of the Mt Goyder Skarn and Newmont's (1990's) anomaly 7 could also be incorporated into next year's program.

A planned budget for the drilling is set out below.

RC Drilling	\$22 000
Wages	\$10 000
Travel /Accommodation	\$4000
Soil sampling/assaying program	\$3500
Earthmoving	\$3000
<b>Total Expenditure</b>	<b>\$42 500</b>

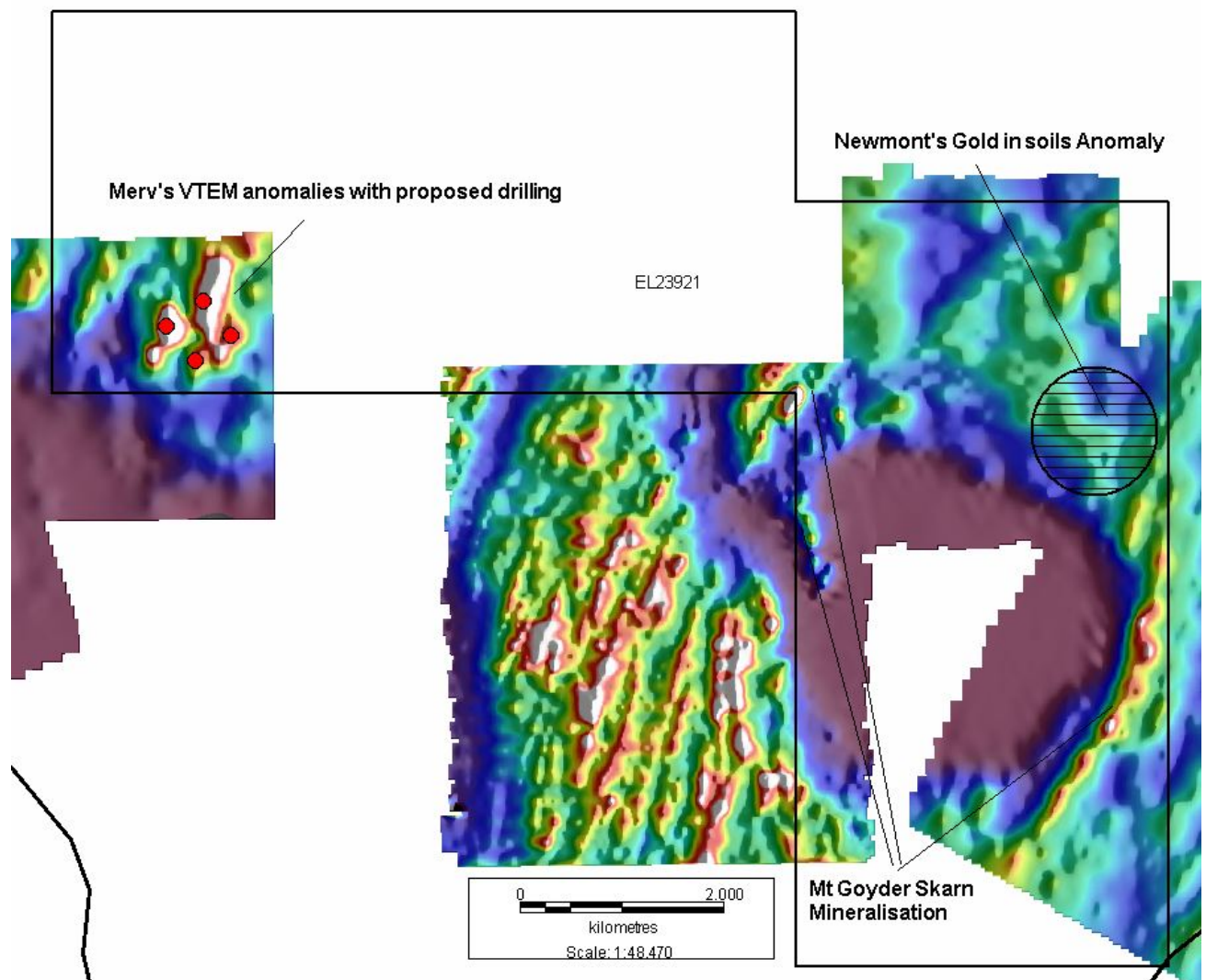


Figure 7 EL 23921 – Proposed drilling and anomalies.

## **CONCLUSION**

No dedicated field work was undertaken on EL 23921 or 23791 due to the focus on RUM's phosphate discovery at Barrow Creek (utilising all RUM staff), and the delay of Department approvals for the drilling of the Merv's prospect on EL 23921. This effected rig schedules for the project and left Rum Jungle Resources in the position that no rigs were available in the short timeframe before the wet season made access impossible.

It is anticipated that renewed focus on the area will be implemented during 2012 and the Merv's prospect is to be drilled and geochemical sampling and ongoing target generation of EL 23791 be employed during 2012.

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