### EL 27429 Karns
#### Annual Technical Report for Period
5\(^{th}\) January 2012 to 4\(^{th}\) January 2013

<table>
<thead>
<tr>
<th>Titleholder</th>
<th>Toro Energy Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator</td>
<td>Toro Energy Ltd</td>
</tr>
<tr>
<td>Tenement Agent</td>
<td>Toro Energy Ltd (Perth)</td>
</tr>
<tr>
<td>Title</td>
<td>EL27429 Karns</td>
</tr>
<tr>
<td>Project</td>
<td>McArthur</td>
</tr>
<tr>
<td>Report Title</td>
<td>EL27429 Karns Annual Technical Report for period 5(^{th}) January 2012 to 4(^{th}) January 2013</td>
</tr>
<tr>
<td>Author(s)</td>
<td>David Rawlings, Regional Exploration Manager, BSc(Hons), PhD, AUSIMM</td>
</tr>
<tr>
<td>Corporate Author</td>
<td>Toro Energy Ltd</td>
</tr>
<tr>
<td>Target Commodity</td>
<td>Uranium</td>
</tr>
<tr>
<td>Date of Report</td>
<td>10(^{th}) February 2013</td>
</tr>
<tr>
<td>Datum</td>
<td>GDA94 Zone 53</td>
</tr>
<tr>
<td>250k Mapsheets</td>
<td>Robinson River SE5304</td>
</tr>
<tr>
<td>100k Mapsheets</td>
<td>Robinson 6365, Calvert River 6465, Pungalina 6364, Selby 6464</td>
</tr>
<tr>
<td>Contact Details</td>
<td>Toro Energy Ltd, 3 Boskenna Avenue Norwood SA 5067</td>
</tr>
<tr>
<td></td>
<td>Phone: 08 8132 5600</td>
</tr>
<tr>
<td></td>
<td>Fax: 08 8362 6655</td>
</tr>
<tr>
<td></td>
<td>Web: <a href="http://www.toroenergy.com.au">www.toroenergy.com.au</a></td>
</tr>
<tr>
<td>Email (technical)</td>
<td><a href="mailto:david.rawlings@toroenergy.com.au">david.rawlings@toroenergy.com.au</a></td>
</tr>
<tr>
<td>Email (expenditure)</td>
<td><a href="mailto:linda.skender@toroenergy.com.au">linda.skender@toroenergy.com.au</a></td>
</tr>
</tbody>
</table>
Summary

This third Annual Technical Report for EL27429 covers work carried out during the twelve month period from 5th January 2012 to 4th January 2013. Exploration activities during the period have involved:

- Continuing historical data review comprising assessment of all available open file reports and data.
- Reprocessing and interpretation of Toro’s new aerial magnetic/radiometric dataset.
- Liaison with stakeholders, specifically the Australian Wildlife Conservancy, who operate Pungalina Station as a wildlife reserve.
- Collection of 278 soil samples (including 12 duplicates) throughout the tenement. Chemical analysis of 181 samples, including 8 duplicates, from this set.
- Collection of 27 rockchip samples throughout the tenement and chemical analysis of these.
- Recognition of a strong “labile” uranium signature in basal sandstones of the Karns Dolomite that is coincident with broad radiometric anomalies in the northern and eastern part of the tenement.
- Up to 280 ppm U3O8 and 1360 ppm Cu in rockchips of quartz sandstone that is elsewhere chemically ‘bland’. Coincident anomalous Ag, As and Pd up to 10 times background.
- Anomalous soil and rockchip element suite of U, Ag, Au, As, Cu, Co, Mo, Pt and Pd, similar to that at the top part of some established breccia pipes at Running Creek, suggesting a genetic link.
- Interpreted to be a large-scale geochemical alteration system, and the broad surface expression of fertile breccia pipes in the underlying Gold Creek Volcanics.
- Analogous with the Arizona Strip Uranium Province that comprises clusters of high grade uranium deposits that previously supported significant mining in the USA.
Table of Contents

1 INTRODUCTION ............................................................................................................................................. 5
2 TENEMENT ...................................................................................................................................................... 10
3 GEOLOGICAL SETTING AND DEPOSIT MODEL .............................................................................. 11
4 PREVIOUS EXPLORATION ........................................................................................................................ 17
5 EXPLORATION CARRIED OUT ............................................................................................................... 18
6 EXPLORATION EXPENDITURE ............................................................................................................... 26
7 CONCLUSIONS AND RECOMMENDATIONS ................................................................................... 26
8 APPENDICIES .................................................................................................................................................. 26
9 REFERENCES ................................................................................................................................................... 26

Figures

Figure 1  Location EL27429 Karns in NT ...............................................................................................................6
Figure 2  EL27429 Tenement location over 250k and 100k mapsheets .........................................................6
Figure 3  EL27429 Regional location (other Toro tenure in grey) ...............................................................7
Figure 4  EL27429 Road access from Tennant Creek and Highway Inn .........................................................7
Figure 5  EL27429 Proximal location and access .............................................................................................8
Figure 6  EL27429 Location of pastoral properties .............................................................................................8
Figure 7  EL27429 Topography and internal access .............................................................................................9
Figure 8  EL27429 over NTGS Geological Provinces ............................................................................... 12
Figure 9  EL27429 on NTGS 2.5m scale geology. Blue is Karns Dolomite resting on brown Tawallah Group sandstones in EL27429 ........................................................................................................12
Figure 10  Local NTGS 250k scale geology (Rawlings, 2006) ...........................................................................13
Figure 11 Running Creek-Karns project area on Govt regional radiometrics (U channel), showing mineral occurrences and planned soil traverses for 2012 .............................................................................. 15
Figure 12  Toro’s detailed gridded uranium channel survey data over NTGS surface and interpreted geology layers ............................................................................................................................................................. 16
Figure 13  Left: Typical outcrop of basal Karns sandstone, where scintillometer readings are uniformly 10 times background. Right: Liesegang banded sandstone with higher-than-average CPS on scintillometer ............................................................................................................................................................. 18
Figure 14  Left: Secondary copper mineral malachite on a fracture surface in sandstone. Right: subtle pale green horizons in quartz sandstone ............................................................................................................................................................. 19
Figure 15 Toro’s detailed 2011 radiometrics U channel (left) and U2/Th ratio (right) images showing 2012 soil and rockchip sample locations (those analysed only).

Figure 16 Toro 2012 partial digest soil grid for uranium (left) and arsenic (right). Main radiometric anomaly outlined in black.

Figure 17 Toro 2012 partial digest soil grid for silver (left) and copper (right). Main radiometric anomaly outlined in black.

Figure 18 Bottom: Airborne U2/Th radiometric grid showing the location of rockchip samples, labelled with ppm U3O8. Top: Uranium partial-digest soil geochemistry grid draped on U radiometrics grid, showing close spatial match. Red is high, blue is low. Sample points in black.

Tables

Table 1 EL27429 tenement details.

Table 2 Summarised rockchip analysis results for EL27429. Not all elements shown.
INTRODUCTION

This report outlines the work conducted within the exploration tenement EL27429 during 2012 (third year of tenure) by Toro Energy Limited (“Toro”; ticker code “TOE”). EL27429 is located in the northeastern corner of the NT, approximately 40km from the Queensland border on the Robinson River 1:250,000 mapsheet (Figure 1; Figure 2). Tennant Creek lies around 500km to the southwest and Mount Isa lies 500 km to the southeast. Access from Alice Springs is 500 km north on the Stuart Highway to Tennant Creek, then another 25km north to Three Ways, then east on the Barkly Highway for approximately 185km, turning north at Barkly Roadhouse onto the Tablelands Highway for approximately 200 km. From this highway, turn right on the Calvert Hills Road and travel northeast for a further 220km to the Borroloola-Burketown Road (Figure 3; Figure 4; Figure 5). From this intersection, travel east 10 km to the Pungalina access road, then travel northwest along this road (sandy 4WD only) that runs to Pungalina Homestead (80 km distance), via EL27429 (40 km distance) (Figure 7). Alternative access to Pungalina from Darwin is via the Stuart Highway to Daly Waters, then along the Carpentaria Highway to Borroloola, then east along the Borroloola-Burketown Road to the Pungalina turnoff, as described above. Either way, these routes are a good day and half drive from Darwin or Alice Springs. Access could also be gained from Mount Isa, 500 km to the southeast, via Doomadgee (Figure 3).

The Gulf region (bioregion) is characterised by gently undulating coastal plains along the southern Gulf of Carpentaria with scattered rugged areas of Proterozoic sandstones. Soils are predominantly sandy red earths and shallow gravelly sands. The climate is tropical with annual rainfall between 800 and 1200mm falling mostly between December and March; cyclones are a frequent phenomenon. Eucalyptus woodlands with grassy understory dominates the region with significant areas of tidal flats mangroves and littoral grassland. The field season generally runs from May/June to October in order to avoid monsoonal activity. The area encompassing EL27429 is locally quite swampy all-year-round, and herds of buffalo and feral cattle are common. Access is somewhat difficult, especially when crossing creeks. It is wise to leave exploration until later in the year if possible. Vegetation ranges from open to closely spaced heavy trees, so careful planning using GoogleEarth imagery is advised.

EL27429 lies largely within Pastoral Lease 774, Pungalina (Figure 6), which is owned and managed by the Australian Wildlife Conservancy (“AWC”). Toro has liaised with both the head office and on-site managers at Pungalina, and access has been restricted only in terms of timing and on conditions relating to wildlife preservation. As exploration work progresses toward ground disturbing, this relationship will become more difficult to manage.

Exploration over this licence will focus on determining the extent to which phosphate lithologies, as indicated by the NT Government mapping and radiometrics, are continuations of the Selby phosphate beds, namely the basal Karns Dolomite, which is enriched with uranium and rare earth elements. Toro is also exploring for Arizona Strip analogue uranium deposits, within breccia pipes stratigraphically below the Karns Dolomite.
Figure 1  Location EL27429 Karns in NT

Figure 2  EL27429 Tenement location over 250k and 100k mapsheets
Figure 3  EL27429 Regional location (other Toro tenure in grey)

Figure 4  EL27429 Road access from Tennant Creek and Highway Inn
Figure 5  EL27429 Proximal location and access

Figure 6  EL27429 Location of pastoral properties
Figure 7 EL27429 Topography and internal access
2 TENEMENT

EL27429 was granted on 5th January 2010 to Toro Energy Ltd for a period of 6 years (Table 1). This report refers to work carried out during the third year of grant. At the date of this report, it is entering its fourth year of tenure and consists of 151 blocks covering a total area of 496.84 square kilometres.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Tenement Name</th>
<th>sub blocks</th>
<th>sq km</th>
<th>Tenement Licensee</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Licence Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL27429</td>
<td>Karns</td>
<td>151</td>
<td>496.84</td>
<td>Toro Energy Ltd</td>
<td>5-Jan-10</td>
<td>4-Jan-16</td>
<td>Toro Energy Ltd</td>
</tr>
</tbody>
</table>

Table 1 EL27429 tenement details
3 GEOLOGICAL SETTING AND DEPOSIT MODEL

EL27429 lies within the Proterozoic McArthur Basin (Figure 8; Figure 9), a 12km thick unmetamorphosed sedimentary succession containing dolostone, sandstone and shale units with minor felsic and mafic volcanics (Rawlings, 1999). The McArthur Basin unconformably overlies the Palaeoproterozoic Pine Creek Orogen to the northwest, Murphy Inlier to the southeast and Arnhem Inlier to the northeast and is host to the McArthur River (“HYC”) Zn-Pb-Ag mine, the Westmoreland uranium deposit and spatially associated with the uranium deposits of the Alligator Rivers region, including Ranger and Jabiluka. The basin also hosts numerous other occurrences of base metals, iron ore, manganese and uranium. Bauxite is mined at Gove and manganese is mined on Groote Eylandt from World-class Cenozoic deposits.

The geology of EL27429 is largely encompassed by four main geological units (Figure 10; Rawlings, 2006):

- **Palaeoproterozoic Echo Sandstone**, a 150m thick coarse-grained lithic sandstone unit of the upper Tawallah Group, which is flat lying to shallow dipping throughout the tenement.
- **Mesoproterozoic Karns Dolomite**, which in EL27429 is largely comprised of a ~30-50 m thick basal sandstone facies, but also locally includes the overlying variably-chertified dolostone facies. The basal unconformity is a very low angle truncation of the underlying Tawallah Group that is difficult to recognise in many places. The basal sandstone is mostly fine-grained “tempestite” quartzose to lithic sandstone, which is locally very phosphatic, especially at the Selby prospects to the southeast, where it is comprised of up to 20% P2O5 (Figure 10).
- **Cambrian conglomerate and sandstone outliers**, with a basal breccia regolith of chert.
- **Tertiary sand and soil covers about 50% of the tenement; a veneer thought to be no more than 20 m thick.**

Proximal to EL27429, there are a number of important prospects and a mine (Figure 10; Figure 11):

- **10 km to the southeast is the Selby P-U-REE prospect (on Toro’s EL29636)**
- **40 km to the south is the Redbank breccia pipes and Copper mine (Redbank Operations Ltd; historically mined; now on care and maintenance). There are over 20 recorded Cu-mineralised pipes.**
- **20 km to the east are the Stanton-Running Creek breccia pipes and Cu-Co-Ni prospects (partly within Toro’s EL28567). CRAE identified about 10 individual pipes, but not all are substantially mineralised.**

The most notable features in the tenement are the large radiometric anomalies present at the stratigraphic level of the basal Karns Sandstone. Some of these anomalies cover 10’s of square kilometres in area. The radiometric anomalies continue through to Selby prospects on EL29636 (Figure 11; Figure 12). These radiometric anomalies generally coincide with phosphatic sandstone and chert that is developed at the basal unconformity of the Karns Dolomite, but apparently only on the Wearyan Shelf.
Figure 8  EL27429 over NTGS Geological Provinces

Figure 9  EL27429 on NTGS 2.5m scale geology. Blue is Karns Dolomite resting on brown Tawallah Group sandstones in EL27429
Figure 10  Local NTGS 250k scale geology (Rawlings, 2006)
On the ground, phosphate with high background uranium is clearly evident from hand-held scintillometer surveys and this is an ideal local mapping tool. The phosphatic unit is flat lying to shallow dipping and is only sparsely covered. Previous explorers had noted these attributes and pursued the unit as a bulk phosphate mining opportunity with low strip ratios. Previous exploration and NTGS mapping at the Selby prospects had also identified locally elevated U, Cu and REE in the phosphate (Rawlings, 2006). However, sparse exploration drilling showed that the unit is not very thick or continuous, and the tenement has been dropped by successive explorers. Toro maintains that the area of EL27429 and EL29636 still has potential for surficial phosphate with by-product uranium, copper and rare earth elements (REEs). We believe that previous drilling has been ill-directed at the small vegetation anomalies at Selby, rather than the regional extent of the basal Karns unit. There were also concerns about the “contaminants” in the phosphate rendering it an unsalable fertilizer product. However, modern technologies are being developed and commercialised by Cameco Corporation to strip these valuable by-products out of the phosphate during fertilizer production.

Toro also applied for the Karns (EL27429), Running Creek (EL28567) and Selby tenements (EL29636) due to the geological similarity to the Arizona Strip in the USA, where uranium has been mined from multi-commodity breccia pipes for over 50 years. The individual deposits of the Arizona Strip, whilst relatively small tonnage at less than 10 Mlb U₃O₈, are high grade (>0.5% U₃O₈) and occur in dense clusters that are able to support sustainable mining operations (Pool and Ross, 2007). The breccia pipes are slender vertical features with a cylindrical shape, circular in section and transgressing several 100s of metres of vertical stratigraphy. They occur within flat-lying and bland sequences of Palaeozoic age (mostly Permian), adjacent to the Grand Canyon in Arizona. Most workers believe they are formed by collapse, as a result of dissolution of carbonate units in the lower part of the sequence, allowing mixing of oxidised and reduced fluids within the conduit. They may ultimately be controlled by subtle structures at depth. Many have a well-developed mineralogical zonation from pyrite zone to Cu sulphides-uranium oxide zone to a Ni-Co sulphide zone to a Mo-Zn zone.

Toro believes there is a high-probability of similar or hybrid targets in the McArthur Basin because breccia pipe clusters are already well known in the region (e.g., Redbank, Running Creek and Stanton pipe sets; Figure 11) and have supported copper mining over the last 20 years. The geological and geochemical commonalities with the Arizona Strip are remarkable. This includes the associated trace element suite, which includes U, Ag, As, Au, Ba, Cd, Co, Cr, Cs, Cu, Hg, Mo, Ni, Pb, Sb, Se, Sr, V, Zn and REEs. Evidence of zonation in the McArthur pipes is the presence of Cu-rich and Ni-Co-rich mineralised systems.

Toro flew detailed 100m-spaced magnetics and radiometrics over Karns in 2011 (Rawlings and Sullivan, 2012), further refining a number of large high-amplitude anomalies in the total count and uranium channels that were evident in Government geophysical datasets (Figure 12).
Figure 11 Running Creek-Karns project area on Govt regional radiometrics (U channel), showing mineral occurrences and planned soil traverses for 2012
Figure 12  Toro’s detailed gridded uranium channel survey data over NTGS surface and interpreted geology layers
4 PREVIOUS EXPLORATION

Previous exploration has been detailed in previous annual reports. The following is a summary. Most of the historical mineral exploration was centred around diamonds (CRA and Ashton). Microdiamonds and indicators are present on a regional scale but no volcanic pipes have been discovered. The breccia pipes at Redbank and Running Creek are of a completely different type and probably relate to deformation of the sediment package while still incompletely lithified (Rawlings, 2006).

In the recent past, the area encompassed by EL27429 was covered by EL22251, granted to Astro Diamonds N.L. in 2003 and subsequently transferred to Legend International Holdings Inc in 2007. From 2003 to 2007, Astro conducted desktop studies, bulk geochemical samples for indicator minerals, 1392 line km of high resolution airborne EM and small areas of ground gravity. Most of this work (including all of the geophysics) was from the Selby prospect to the east of Toro’s current tenement EL27429. It was concluded that the EM anomalies were caused by clay-rich Tertiary sediment infill. From 2007 onwards, Legend International sought phosphate and Redbank-style breccia pipe-hosted base metals. Legend recognised the potential for phosphate and base metals in the basal unit of the Karns Dolomite, which rests unconformably over the Echo Sandstone. Outcrop of the Karns Dolomite was extensively mapped and sampled from EL22251; the best result being 32% P2O5 in rock chip. Ninety seven RC holes for 4710m were drilled around the Selby prospect but failed to confirm continuity or grade of the phosphate. Best results for rock chips were 10,001 ppm Cu in Proterozoic sandstone/dolostone, with up to 1620ppm Cu along a fault within Toro’s licence EL27429. Uranium up to 677 ppm was assayed from the same lithologies as the copper, but also off the Toro licence. Drilling assays included up to 260 ppm uranium. Exploration work on the western side of EL22251 (within the conservation area that is Toro’s tenement EL27429) was expected to meet with opposition and/or delays with the purchase of this part of the pastoral lease by the environmental group; Australian Wildlife Conservancy (AWC) in 2009. Toro has contacted the group, both locally and at head office regarding ground access and have perceived some negativity, but an understanding has been reached.

During November 2011, Toro commissioned Thompson Aviation to carry out 4174 line kilometres (362 sq km) of magnetic/radiometrics (Figure 12). A distinct “ridge” of elevated radiometric activity is defined, corresponding with the NTGS-mapped unconformable lithological boundary between the Echo Sandstone and Karns Dolomite, parallel to the NW/SE regional structural trend.
5 EXPLORATION CARRIED OUT

As a first-pass test of the exploration model, Toro undertook the following work in September 2012:

- Geological observations of outcrops through the tenement, aimed at identifying structures and outcrops that are “out of the ordinary”.
- Wide-spaced soil sampling over the extent of the most obvious geophysical features in the tenement, namely high-amplitude radiometric anomalies, both large and small.
- Opportunistic rockchip sampling within radiometrically anomalous outcrops or gossanous outcrops to determine if there are anomalous levels of uranium and other elements present in the tenement.

Reconnaissance geological investigations

The most interesting observation from the main area of the radiometric anomaly is how “average” looking the rocktypes and structure is. There are no obvious surface expressions of faulting (stria, veins, offsets etc), no obvious gossanous outcrops and no circular features. Basal Karns sandstone is flat lying to very gently dipping, white to pale yellow, fine-grained, quartzose to lithic and locally glauconitic, with typical tempestite features such as hummocky cross-stratification, runzel marks, current lineation, synaeresis cracks etc (Figure 13). The scintillometer characteristics are a uniformly elevated CPS averaging ten times background, very unusual for an apparently ordinary looking sandstone, and even more unusual for its consistency across the outcrop belt. Some subtle features that are locally observed include:

- Local areas where CPS rises up to 30 times background, usually associated with liesegang banding or weak fracture/joint surfaces (Figure 13).
- Local facture coatings of malachite (Figure 14).
- Vague bedding-parallel horizons of pale green, probably copper secondaries (Figure 14).

Figure 13  Left: Typical outcrop of basal Karns sandstone, where scintillometer readings are uniformly 10 times background.  Right: Liesegang banded sandstone with higher-than-average CPS on scintillometer. 767300e 8164900n (GDA94, zone53)
Soil sampling

Toro collected coincident -5mm and -80# sieved samples at 139 locations (Figure 15), including 6 duplicate “locations”. A total of 278 samples were collected, including 12 duplicates and 4 replicates. Toro attempted to collect -5mm+2mm lag samples, but these proved to be unsuccessful because some areas had little material of this size range.

As an orientation test, 42 of the -5mm and 42 of the -80# samples (inc duplicates) were processed by ALS Laboratories in the following manner:

- -5mm samples were partly digested using a typical laboratory “exploration style” leach and analysed for a large multielement suite including Au and Pb isotopes.
- -80# samples were fully digested in 4 acid solution and analysed for a large multi-element suite, including gold and PGEs.

Results of the two methods were compared to determine which has the most sensitivity and best matches the radiometric anomalies. Both methods proved to generate the same spatial patterns. The -5mm partial digest, while generating relative values only, showed greatest sensitivity over a number of elements. Uranium in partial digest showed three orders of magnitude variation and excellent repeatability of duplicates at different concentrations. On this basis, another 97 samples of the -5mm material were sent to ALS for another batch of partial digest geochemistry. The remaining 97 untested -80# soil samples have been kept in storage in Toro’s Alice Springs warehouse in case they are required in the future.

Subsequent to the aggregation of data, there are 181 individual analyses, 8 of which are duplicates; only the remaining 173 unique analyses are presented in Appendix. The various figures reflect this aggregated dataset.

Soil samples indicate common geochemical trends in Karns (EL27429) and Running Creek (EL28567), utilising both partial digest and full digest techniques. Uranium is 5-10 times background, as are elements such as Ag, Au, As, Cu, Co, Mo, Pt and Pd. Additionally, the ratio of pathfinder isotopes...
$\text{Pb}^{208}/\text{Pb}^{206}$ and $\text{Pb}^{207}/\text{Pb}^{206}$ indicate a radiogenic source of Pb in the system, consistent with a buried uranium parent source. Heavy versus light rare earth elements ("REEs") display a zonation typical of hydrothermal alteration systems.

Grids of various elements are shown in Figure 16, Figure 17 and Figure 18. The elements listed above show a remarkable correlation with the outline of the radiometric anomalies.

Figure 15 Toro’s detailed 2011 radiometrics U channel (left) and U2/Th ratio (right) images showing 2012 soil and rockchip sample locations (those analysed only).
Figure 16 Toro 2012 partial digest soil grid for uranium (left) and arsenic (right). Main radiometric anomaly outlined in black.
Figure 17 Toro 2012 partial digest soil grid for silver (left) and copper (right). Main radiometric anomaly outlined in black.
Figure 18 Bottom: Airborne U2/Th radiometric grid showing the location of rockchip samples, labelled with ppm U3O8. Top: Uranium partial-digest soil geochemistry grid draped on U radiometrics grid, showing close spatial match. Red is high, blue is low. Sample points in black.
Rockchip sampling

Toro collected 27 rock chip samples within EL27429, which were analysed at ALS Laboratories for a large multielement suite including Au and PGEs (Figure 15). Results from rockchip samples show that U, Cu, Ag, As and Pd are consistently elevated within a large high-amplitude radiometric anomaly overlying the exposed basal sandstone of the Karns Dolomite (Table 2; Figure 18).

U₃O₈ is up to 280ppm (ave 80ppm) and Cu is up to 1360ppm (ave 320 ppm), whilst Ag, As and Pd are generally 10 times background (Table 2). Scintillometer readings throughout the anomaly area are also uniformly 10 times background. The sandstone generally contains less than 1% P₂O₅ and over 80% SiO₂, consistent with field observations of a sublithic to quartzose character. This suggests U and P are genetically unrelated to a large degree. Secondary copper minerals are locally developed on fracture surfaces (Figure 14), which is supported by the analytical data (Table 2).

Anomalous samples were collected over a stratigraphic thickness exceeding 10m. These results are considered extremely anomalous, as beyond the radiometric anomaly this sandstone has a uniform background range of only 1-5ppm U₃O₈ and 5-10ppm Cu, consistent with oxidised sandstones globally. Rockchips also indicate that the same element suite is anomalous at the upper margins of breccia pipes sampled on Toro’s Running Creek tenement EL28567 (Stout, Saltlick and Felix Prospects; Figure 11). This suggests a close genetic connection to the stratigraphically-higher Karns hydrothermal system described here.

A small (100 m diameter) but distinctive “outlying” radiometric anomaly within certified Karns Dolomite in the south of the tenement at 764600e 8142700n was found to have a notably high (3 times background) scintillometer signature. Rockchips of gossanous certified dolostone contain up to 23% P₂O₅, 45 ppm U₃O₈, 0.1% Zn, 0.5% Mn as well as elevated Cd and Te (Table 2). Soil results are characterised by elevated U/Th, Zn, Pb, Mn, Mo and Au, together with anomalous lead isotopes.

Interpretation

The distribution of anomalous uranium and other pathfinder elements in rockchips and soil samples at EL27429 faithfully mirrors the spatial signature of the airborne radiometrics (Figure 18). Toro is therefore confident that the large (11 km²) radiometric anomaly in the northern part of the Karns tenement reflects a broad alteration halo associated with breccia pipes in the underlying fertile Gold Creek Volcanics. Based on the physical dimensions and concentration of uranium in rockchips, the alteration halo has a substantial inventory of uranium in itself, more than sufficient to potentially promote formation of economic uranium mineralisation. Further “plumes” are interpreted over similar large radiometric anomalies in eastern Karns and within the recently acquired Selby tenement (ELA29636; Figure 11), which incorporates the historic Selby P-U-Cu-REE prospects. Grades at these prospects reach 1120ppm U₃O₈ and 0.81% Cu, hosted within phosphatic sandstone. The Karns Dolomite also hosts a number of base metals occurrences in the area, including the ‘Mississippi Valley style’ Thor prospect (Zn-Pb-Ag).

Based on the vertical zonation of metals in the Arizona Strip model, Toro predict that uranium should be concentrated stratigraphically above base metals within the McArthur breccia pipes. On
this basis, it appears that this model has not yet been tested in the region, as drilling has concentrated on the exposed lower parts of the breccia pipes where there is obvious copper mineralisation at Redbank and Stanton.

**Stakeholder liaison**

During the soil sampling program, Toro liaised with the property managers at Pungalina Station and the Australian Wildlife Conservancy (AWC) head office. Whilst the AWC would prefer Toro not to be exploring in the area, they acknowledged the rights Toro has under the Mining Act. Toro also acknowledged that the area has conservation values and we would work with them to maintain a suitable compromise. The AWC has given Toro a list of conditions that would allow exploration to continue in the future, including ground disturbing works such as drilling. The exploration methods may have to be modified to some extent to further minimise disturbance.

While in the area, Toro undertook a broader assessment of the access issues in the tenement for future works. Some exploration difficulties may arise from the lack of decent access tracks, the presence of swampy areas, locally thick trees, tall grass and feral animals. There is plenty of surface water. Fire is considered a major future threat.

<table>
<thead>
<tr>
<th>Sampled ID</th>
<th>EastMGA94</th>
<th>North</th>
<th>Ag ppm</th>
<th>As ppm</th>
<th>Cu ppm</th>
<th>P2O5 %</th>
<th>SiO2 %</th>
<th>Th ppm</th>
<th>U3O8 ppm</th>
<th>Zn ppm</th>
<th>Au ppm</th>
<th>Pt ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>137935</td>
<td>767141</td>
<td>8160887</td>
<td>0.47</td>
<td>77.7</td>
<td>1140</td>
<td>0.83</td>
<td>13</td>
<td>99</td>
<td>13</td>
<td>0.002</td>
<td>0.0042</td>
<td></td>
</tr>
<tr>
<td>137936</td>
<td>767069</td>
<td>8160926</td>
<td>1.45</td>
<td>56.2</td>
<td>355</td>
<td>2.77</td>
<td>85.1</td>
<td>11.2</td>
<td>110</td>
<td>17</td>
<td>0.001</td>
<td>&lt;0.0005</td>
</tr>
<tr>
<td>137937</td>
<td>767181</td>
<td>8161202</td>
<td>1.64</td>
<td>168</td>
<td>813</td>
<td>2.13</td>
<td>85.3</td>
<td>14</td>
<td>156</td>
<td>14</td>
<td>0.001</td>
<td>0.0009</td>
</tr>
<tr>
<td>137938</td>
<td>767054</td>
<td>8161173</td>
<td>1.18</td>
<td>107</td>
<td>617</td>
<td>0.75</td>
<td>85.8</td>
<td>13.5</td>
<td>281</td>
<td>18</td>
<td>0.012</td>
<td>0.0087</td>
</tr>
<tr>
<td>137939</td>
<td>767037</td>
<td>8161201</td>
<td>0.64</td>
<td>87.1</td>
<td>585</td>
<td>1.27</td>
<td>14.6</td>
<td>49</td>
<td>14</td>
<td>0.002</td>
<td>0.0020</td>
<td></td>
</tr>
<tr>
<td>137940</td>
<td>767015</td>
<td>8161236</td>
<td>0.49</td>
<td>99</td>
<td>683</td>
<td>0.81</td>
<td>12.2</td>
<td>35</td>
<td>17</td>
<td>0.001</td>
<td>0.0008</td>
<td></td>
</tr>
<tr>
<td>137941</td>
<td>767032</td>
<td>8161264</td>
<td>0.87</td>
<td>110</td>
<td>492</td>
<td>1.55</td>
<td>14.4</td>
<td>102</td>
<td>9</td>
<td>0.005</td>
<td>0.0044</td>
<td></td>
</tr>
<tr>
<td>137942</td>
<td>767280</td>
<td>8161782</td>
<td>1.78</td>
<td>142</td>
<td>312</td>
<td>1.59</td>
<td>15.8</td>
<td>95</td>
<td>7</td>
<td>0.001</td>
<td>0.0016</td>
<td></td>
</tr>
<tr>
<td>137943</td>
<td>767727</td>
<td>8161449</td>
<td>1.54</td>
<td>87.3</td>
<td>178</td>
<td>1.29</td>
<td>15.4</td>
<td>84</td>
<td>17</td>
<td>0.002</td>
<td>0.0024</td>
<td></td>
</tr>
<tr>
<td>137944</td>
<td>767630</td>
<td>8160957</td>
<td>1.5</td>
<td>17.1</td>
<td>123</td>
<td>2.06</td>
<td>81.4</td>
<td>15.5</td>
<td>120</td>
<td>19</td>
<td>0.001</td>
<td>0.0030</td>
</tr>
<tr>
<td>137945</td>
<td>767808</td>
<td>8160890</td>
<td>0.13</td>
<td>3.4</td>
<td>16.7</td>
<td>0.05</td>
<td>3.7</td>
<td>3</td>
<td>4</td>
<td>0.001</td>
<td>0.0009</td>
<td></td>
</tr>
<tr>
<td>137946</td>
<td>767808</td>
<td>8160890</td>
<td>0.11</td>
<td>1.3</td>
<td>23.3</td>
<td>0.04</td>
<td>3.5</td>
<td>2</td>
<td>14</td>
<td>0.001</td>
<td>0.0006</td>
<td></td>
</tr>
<tr>
<td>137947</td>
<td>767808</td>
<td>8160890</td>
<td>0.12</td>
<td>1.2</td>
<td>14.1</td>
<td>0.02</td>
<td>3.7</td>
<td>2</td>
<td>6</td>
<td>0.001</td>
<td>&lt;0.0005</td>
<td></td>
</tr>
<tr>
<td>137948</td>
<td>764612</td>
<td>8142631</td>
<td>0.16</td>
<td>7</td>
<td>97.1</td>
<td>13.6</td>
<td>56.9</td>
<td>5</td>
<td>25</td>
<td>143</td>
<td>0.001</td>
<td>0.0006</td>
</tr>
<tr>
<td>137949</td>
<td>764612</td>
<td>8142631</td>
<td>0.15</td>
<td>7</td>
<td>314</td>
<td>23.1</td>
<td>29</td>
<td>3.3</td>
<td>45</td>
<td>1140</td>
<td>0.001</td>
<td>0.0018</td>
</tr>
<tr>
<td>137950</td>
<td>764466</td>
<td>8162466</td>
<td>1.78</td>
<td>58.4</td>
<td>1360</td>
<td>1.29</td>
<td>15</td>
<td>117</td>
<td>22</td>
<td>0.002</td>
<td>0.0022</td>
<td></td>
</tr>
<tr>
<td>144951</td>
<td>767798</td>
<td>8165014</td>
<td>0.5</td>
<td>78.6</td>
<td>87.2</td>
<td>0.75</td>
<td>22.4</td>
<td>35</td>
<td>12</td>
<td>0.001</td>
<td>&lt;0.0005</td>
<td></td>
</tr>
<tr>
<td>144952</td>
<td>767857</td>
<td>8165146</td>
<td>0.13</td>
<td>3</td>
<td>32.8</td>
<td>0.99</td>
<td>14.9</td>
<td>49</td>
<td>10</td>
<td>0.001</td>
<td>0.0008</td>
<td></td>
</tr>
<tr>
<td>144953</td>
<td>767785</td>
<td>8165207</td>
<td>2.06</td>
<td>46.8</td>
<td>243</td>
<td>0.38</td>
<td>12.6</td>
<td>116</td>
<td>14</td>
<td>0.001</td>
<td>0.0005</td>
<td></td>
</tr>
<tr>
<td>144954</td>
<td>767785</td>
<td>8165207</td>
<td>2.73</td>
<td>25.3</td>
<td>188</td>
<td>0.24</td>
<td>12.1</td>
<td>284</td>
<td>13</td>
<td>0.002</td>
<td>0.0006</td>
<td></td>
</tr>
<tr>
<td>144955</td>
<td>767785</td>
<td>8165207</td>
<td>3.08</td>
<td>66.2</td>
<td>575</td>
<td>0.48</td>
<td>11.3</td>
<td>179</td>
<td>16</td>
<td>0.002</td>
<td>0.0005</td>
<td></td>
</tr>
<tr>
<td>144956</td>
<td>767183</td>
<td>8165320</td>
<td>0.11</td>
<td>1.9</td>
<td>26.2</td>
<td>1.37</td>
<td>17</td>
<td>17</td>
<td>11</td>
<td>0.001</td>
<td>0.0011</td>
<td></td>
</tr>
<tr>
<td>144957</td>
<td>767195</td>
<td>8165163</td>
<td>0.13</td>
<td>1.7</td>
<td>27.5</td>
<td>2.43</td>
<td>82.7</td>
<td>18.1</td>
<td>16</td>
<td>12</td>
<td>0.001</td>
<td>0.0006</td>
</tr>
<tr>
<td>144958</td>
<td>767281</td>
<td>8164888</td>
<td>0.2</td>
<td>1.5</td>
<td>25.9</td>
<td>1.13</td>
<td>6.5</td>
<td>25</td>
<td>10</td>
<td>0.001</td>
<td>0.0015</td>
<td></td>
</tr>
<tr>
<td>144959</td>
<td>767262</td>
<td>8164923</td>
<td>0.46</td>
<td>1.8</td>
<td>188</td>
<td>2.94</td>
<td>82.3</td>
<td>17.6</td>
<td>73</td>
<td>26</td>
<td>0.001</td>
<td>0.0010</td>
</tr>
<tr>
<td>144960</td>
<td>767193</td>
<td>8164425</td>
<td>0.16</td>
<td>2</td>
<td>21.6</td>
<td>0.39</td>
<td>15</td>
<td>12</td>
<td>9</td>
<td>0.001</td>
<td>0.0013</td>
<td></td>
</tr>
<tr>
<td>144961</td>
<td>774865</td>
<td>8154046</td>
<td>0.41</td>
<td>6.2</td>
<td>71.8</td>
<td>0.40</td>
<td>15.9</td>
<td>10</td>
<td>20</td>
<td>0.001</td>
<td>0.0012</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2** Summarised rockchip analysis results for EL27429. Not all elements shown.
6 EXPLORATION EXPENDITURE

Expenditure incurred during the third year of term for EL27429 was approximately $98,569 (see associated Expenditure Report).

7 CONCLUSIONS AND RECOMMENDATIONS

Exploration activities during the reporting period have involved collection of 278 soil samples (including 12 duplicates) and 27 rockchip samples throughout the tenement and chemical analysis of these. From this, there is recognition of a strong “labile” uranium signature in basal sandstones of the Karns Dolomite that is coincident with broad radiometric anomalies in the northern and eastern part of the tenement. Up to 280 ppm U3O8 and 1360 ppm Cu were recorded in rockchips of quartz sandstone that is elsewhere chemically ‘bland’. Coincident anomalous Ag, As and Pd are up to 10 times background. The anomalous soil and rockchip element suite of U, Ag, Au, As, Cu, Co, Mo, Pt and Pd, is similar to that at the top part of some established breccia pipes at nearby Running Creek, suggesting a genetic link. The various data suggest the presence of a large-scale geochemical alteration system, which broadly coincides with the surface expression of fertile breccia pipes in the underlying Gold Creek Volcanics. This model is analogous with the Arizona Strip Uranium Province that comprises clusters of high-grade uranium deposits that previously supported significant mining in the USA. This outcome is in line with predictions.

It is recommended that Toro undertake further soil and rockchip sampling at EL27429 in concert with the adjacent Selby tenement (EL29636). Ground electromagnetics has been used successfully in the Arizona Strip to identify individual breccia pipes under cover and Toro believes it will also be successful in the McArthur Basin in defining drill targets. Induced polarisation should also be considered. The collection of more detailed ground and/or airborne electromagnetics and an initial reconnaissance drilling program should be considered after this work. Toro is not yet in a position to markedly reduce the size of this tenement.

8 APPENDICIES

A – Surface Geochemical data

9 REFERENCES


