Executive Summary

A review of all available public information on EL 25691 Davenport Range, was completed. Large areas of radiometric anomalism are evident in areas underlain by Proterozoic acid volcanics of the Newlands volcanics most prominently occurring within the core of the Elkedra Dome. A further area of anomalism occurs in the north east of the area and based on published mapping is also coincident with mapped Newlands volcanic however as this area was outside the area of the Dome ground investigations during 2008 were targeted in this area with the possibility of calcrete hosted uranium deposits.

The radiometric anomalies were found also to be sourced from underlying felsic volcanics of the Newlands Volcanics and no further work was deemed justified.

Subsequent to the completion of the 2008 field program Aster imagery was examined for the area. This highlighted several areas including a mapped area of granophyre in the southeast part of the Elkedra Dome. These areas have been earmarked for reconnaissance followup in the next field season.
1 Introduction

The Davenport Range project was identified as a prospective area by examination of publicly available geophysical datasets. This report covers exploration work undertaken by Tianda Resources (Australia) Pty Ltd over the EL 25691 for the period from the 5th of September 2008 to 5th of October 2009.

2 Location and access

Access to the exploration license is via a dirt road turning off from Stuart Highway 44 kilometres north of Barrow Creek. From Stuart Highway, it is about a hundred kilometres to EL25691.

The tenement is entirely within Elkedra Station, contact details being:-
Elkedra Pastoral Company
Alice Springs 8556 9889
elkedrastn@bigpond.com.au
3 Tenement Status

EL 25691 has its boundaries as shown on Figure 2. It is altogether 91 graticular blocks, covering a total of 291.6 square kilometres. It was granted to Tianda Resources on the 18 October 2007 for a period of 6 years.

The 91 sub-blocks are as follows:

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<th>BID MAP</th>
<th>Block No</th>
<th>Sub-Blocks</th>
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4 Regional Geology

Davenport Province (1840 – 1700 Ma) represents an extension of the North Australian Platform Cover and includes volcano sedimentary successions of the Davenport and Murchison Ranges. In comparison to other Proterozoic Basins to the north it is more deformed and is metamorphosed to lower greenschist facies. It unconformably overlies the Palaeoproterozoic Warramunga Province and is unconformably overlain by the Palaeozoic Georgina and Wiso Basins to the east and west, respectively. Stratigraphic equivalents of Davenport Province extend into the Aileron Province of the Arunta Region. The Davenport Province is highly prospective for ore deposits and contains a number of mineral occurrences of gold, silver, tungsten, tin, copper, lead, zinc, nickel, tantalum and niobium.

5 Local Geology

The Davenport Range project area, consisting of ELA25691, is dominantly covered by Newlands Volcanics and a sequence of sandstones, arenites and siltstones of the Coulters Sandstone and the Andagera Formations. These two sedimentary formations, together with a basalt unit (Kudinga Basalt), form the Davenport Ranges in the north eastern part of the area (Figure 39).

The Newlands Volcanics consisting of porphyritic dacites, basalts, ignimbrites and tuff occupies a third of the project area and poorly outcrops. In contrast, the quartz arenites with subordinate feldspathic and kaolinitic arenites and siltstones of the Coulters Sandstone as
well as thick bedded quartz sandstones and conglomerates of the Andagera Formation are well exposed in outcrop over the project area.

![Figure 3 EL 25691 Elkedra dome 250k geology overlaid with Au geochem (rockchips red, stream sed black)](image)

The 250k geological map(s) for the Davenport Ranges project on Elkedra Station. Overlaid on these (the adjacent Barrow sheet occupies the western quarter of the area) are some rockchip and stream sediment sampling results. The annotated values are for Au, though some other elements were acquired for the stream sediments. Unfortunately these did not include uranium. The assay results were reported for historic tenement EL 5505.

Elkedra Pound is a dome comprised of Proterozoic sandstones, siltstone and shale, interbedded with volcanics: the Kudinga Basalt and Newlands Volcanics (ignimbrite, lava and tuff). The Newlands Volcanics show a strong total count anomaly.

Along the southern margin of the dome are considerable expanses of Cambrian Andagere Formation, a conglomerate with a pebbly sandstone towards the top.

The northeastern corner of the tenement is within the Barrow 250k geological sheet. A fault separates the dome from another terrain, also comprised of Proterozoic volcanics and sandstone. As is the case within the Elkedra Dome, the volcanics show a strong radiometric anomaly.
Patches of Quaternary alluvium and Cainozoic colluvium occur along the drainage channels within the tenement. A small patch of calcrete exists on another tributary outside the EL and there may be opportunity for development of the same within the boundaries.

Extensive historic geochemistry, both stream sediment samples and rock chips, have been taken within the tenement. One of the rock chip samples was of lead mineralisation in a quartz blow within the dome.
6 Geophysics

Radiometric image files were downloaded from the NT Mines database. As the tenement crosses the boundary of two airborne surveys, there were problems with compatibility of data files which remain unresolved. In particular, the line data format and magnitudes are quite different. For this reason, the image files are more helpful for getting an impression of the entire exploration license.

When this image is overlaid on the 250k geological map, it is plain that the central high corresponds with the Newlands Volcanics. Similarly, two parallel radiometric highs in the northwestern corner are formational, though one of them is Quaternary alluvium. Another band of Quaternary alluvium produces a weak high in the northeastern corner.
Point data arranged on flight lines has been overlaid on the geology for the Elkedra survey (the Barrow Survey is incompatible for some reason). This shows the exact locations of anomalous point data. There appears to be some disagreement with the gridded data in the northwestern sector, which may be a projection problem. This conclusion is supported by the fact that geological maps for Barrow and Elkedra do not register correctly.

7 Exploration Completed
This project, located on Elkedra Station, was investigated on 7 and 8<sup>th</sup> of July, 2008. There were two areas of interest: one containing a sole geochemical assay of 4740ppm of cobalt at 501778E 7660925N; the other being a number of radiometric anomalies in the northwestern corner of the exploration tenement which were apparently at or near a creekbed.

7.1 Exploration Model

The 1:250,000 geological map showed felsic volcanics and a creek corresponding to a series of radiometric anomalies on the northwestern corner of the tenement. The possibility of calcrete uranium deposits was investigated. Otherwise, the felsic volcanics were similar in radiometric character to the Newlands Volcanics within the Elkedra Dome, which are of a formational nature.

8 Conclusions

The radiometric anomalies on EL25691 were all over unprospective felsic volcanics. The two locations were spectrometer determinations were made of potassium, uranium and thorium abundance showed the heavy nucleides to be of elevated levels, but not by any means enough to excite further interest.

Interpretation of Aster imagery has indicated an area of low radiometric response within the Elkedra Dome as being coincident with an area of apparent alteration and a presumed granophyres. This may also have a structural association and field work will focus on this area as a possible source of gold and other metals.

9 Further work

Priority 1 – Granophyre – This unit is clearly delineated in the ASTER and is shown as a granophyre on the 1:250 000 map. Granophyres are associated with many forms of mineralisation and this area is worth closer examination. Initial mapping of the unit along with a couple of lines of soil and rockchip sampling is planned. If there is good indications of mineralisation at surface then the soil program should be expanded to cover these areas in detail and if warranted a ground magnetics grid could be established over the key areas.