Combined Annual Report
13th March 2009 – 12th March 2010

EL24178, EL23934, EL24166

Tanami Granites Project

April 2010

Operator: Afmeco Mining and Exploration
Licensee: Washington Resources Ltd

Commodity: Uranium
250,000 K Mapsheet: TANAMI
100,000 K Mapsheet: Mallee, Breaden, Tanami

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SUMMARY:

Location: The Tanami-Granites project, comprising Exploration Licences EL24178, EL23934 and EL24166 is located in the northern part of the Tanami Desert, approximately 600 kilometres to the northwest of Alice Springs.

Geology: The Project area covers the Paleoproterozoic McFarlane Peak metamorphics to the north, the Paleoproterozoic Dead Bullock Formation and the Paleoproterozoic Coomarie Suite granites to the southwest and to the east. These formations are overlain by Mesoproterozoic Birrindudu Groups of the Proterozoic Birrindudu Basin. Locally (eastern portion of EL23964 and EL24166) Cambrian flood basalts (Antrim Plateau Volcanics) overlie Mesoproterozoic Gardiner Sandstones of the Birrindudu Basin.

Work done: AFMECO Mining & Exploration became operator of the Tanami-Granites project the 1st of May 2007 following the formation of a Strategic Alliance Agreement between Northern Uranium, AREVA NC Australia and AFMECO Mining & Exploration the 13th of February 2007.

In 2007, AFMECO Mining & Exploration completed airborne geophysical surveys including a helicopter-borne time-domain electromagnetic survey with a VTEM system, an airborne hyperspectral mapping survey (HyMap) and an airborne radiometric and magnetic survey. On-ground exploration work consisted of helicopter-borne geological reconnaissance during which rock chip samples were taken for geochemical analysis.

Exploration work undertaken by AFMECO Mining & Exploration during the second year of operating consisted of a ground EM survey along lines perpendicular to conductors identified by the airborne survey. On-ground exploration work consisted of helicopter-borne geological reconnaissance during which rock chip samples were taken for geochemical analysis.

No exploration work was completed during the reporting year.

Results: No results were obtained during the reporting period.

Conclusions: The work program for the next reporting period will include reprocessing and modelling of previous geophysical data to determine if further work will be conducted on this project.
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- Relinquished Area (January 2010)
- Tenement boundary (retained area)

Tenement Locations:
- EL 23934
- EL 24166
- EL 24178

Map showing the Tanami-Granites Project, with the relinquished area and tenement boundaries highlighted.
1 INTRODUCTION

1.1 Location and access

The Tanami-Granites Project (also referred to internally as the Suplejack Project) currently comprises Exploration Licences (EL) 24178, 23934 and 24166 located approximately 600 kilometres northwest of Alice Springs in the Northern Territory (Figure 1). All of the tenements are located within the Suplejack pastoral lease. Access to the tenement area from Alice Springs is northwest via the Tanami Road for approximately 600 kilometres, then north-northeast for approximately 90 kilometres along the Lajamanu road to Suplejack Station homestead. Access from Suplejack Station homestead is via a limited number of station tracks heading westwards.

1.2 Tenure and agreements

Exploration Licence 23934 was granted to Norman McCleary on 13 February 2004 whereas EL24178 and EL24166 were granted to Norman McCleary on 10 February 2005. Ferrum Crescent Limited (FCL) (formerly known as Washington Resources Limited (WRL)) is now the registered holder having purchased a 100% interest following listing of the Company on the ASX on 14 November 2005. ELs 23934, 24178 and 24166 constitute the Tanami-Granites Project.

On 11th May, 2006 Polaris Metals NL and Washington Resources Limited announced their intention to combine uranium assets, to form a new dedicated uranium company, Northern Uranium Ltd, to be funded through an initial public offering (“IPO”) and new listing on the ASX. Subsequently on 2nd August the Uranium Tenements and Uranium Rights Assignment Deed was signed by Polaris Metals, Washington Resources and Northern Uranium, whereby certain uranium rights and uranium tenements of Washington Resources and Polaris Metals would be vested into Northern Uranium in exchange for shares in Northern Uranium. Under the terms of the Uranium Tenements and Uranium Rights Assignment Deed, the Tanami-Granites Project tenements remain in the name of, and the non-uranium rights are retained by, Washington Resources Limited.
On 15th November 2006, Northern Uranium Limited was listed on the Australian Stock Exchange having completed an Initial Public Offer and raising $4 million for the purposes of exploring and developing uranium deposits on tenements which include the Tanami-Granites Project.

On 13th February 2007 a strategic alliance agreement was signed by Northern Uranium Ltd, AREVA NC Australia Pty Ltd and AFMECO Mining and Exploration whereby AFMECO Mining & Exploration become operator of the Tanami-Granites Project.

Table 1 provides details of the current Tanami-Granites Project exploration licences.

<table>
<thead>
<tr>
<th>TENEMENT</th>
<th>DATE GRANTED</th>
<th>AREA (Blocks)</th>
<th>COMMITMENT</th>
<th>HOLDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL23934</td>
<td>13/02/2004</td>
<td>33</td>
<td>$46,000</td>
<td>Ferrum Crescent Ltd.</td>
</tr>
<tr>
<td>EL24178</td>
<td>10/02/2005</td>
<td>16</td>
<td>$45,000</td>
<td>Ferrum Crescent Ltd.</td>
</tr>
<tr>
<td>EL24166</td>
<td>10/02/2005</td>
<td>23</td>
<td>$45,000</td>
<td>Ferrum Crescent Ltd.</td>
</tr>
</tbody>
</table>

Combined reporting status was applied for the Tanami-Granites project by FCL/WRL and granted on 25/05/2007 by the Department of Primary Industry, Fisheries and Mines (DPIFM). A request of exemption from partial surrender for EL23934, 24178 and 24166 was sent to the DPIFM on the 10th January 2008. A renewal application for EL23934 was submitted on the 6/01/2010, which included a reduction in the tenement area. Approval of the renewal application is currently still awaited. A partial surrender of EL24166 and EL24178 was submitted on the 10/02/2010 (Figure 2).
Tanami-Granites Project
Relinquished and Retained Areas
1.3 Geological setting

In the Tanami Region, one of the most important tectonic units is the North Australian Craton, the stratigraphic succession of which shows similarities with the Pine Creek and Halls Creek Orogens, other Palaeoproterozoic successions in northern Australia.

Within the region, the MacFarlane Peak Group, which is interpreted to be the basal unit of the Palaeoproterozoic sequence, is dominated by volcanic and volcaniclastic rocks, along with clastic and calc-silicate sediments. These are overlain by siltstone, carbonaceous shale, calc silicates and BIF of the Dead Bullock Formation. This in turn is overlain by a thick sequence of turbidites, the Killi Killi Formation. Interbedded siltstone, greywacke and chert west of Tanami are included in the Twigg Formation. The latter three units are grouped together in the Tanami Group.

The Pargee Sandstone and the Mount Charles Formation occur in small extensional basins. A period of wider extension follows, accompanied by felsic volcanism in the Mount Winnecke Group and Nanny Goat Volcanics. Five main granitic suites are recognised in the Tanami Region, the most important being the Coomarie and Frederick Suites. The youngest granites in the area belong to The Granites Suite.

Archaean rocks identified from drilling comprise the Browns Range Metamorphics and the Billabong Complex.

Deposition in the Birrindudu Basin began with sandstone transgressing over the metamorphic and crystalline basement probably at about 1.7 Ga. This was accompanied by regionally extensive north-trending growth faults and volcanism, possibly indicating rifting. The Birrindudu and Tolmer Groups represent the exposed basal section of this basin and may be as much as 6,000m thick locally. Apart from minor felsic volcanic rocks (tentatively assigned to undifferentiated Birrindudu Group) and carbonate rocks and shale in the upper Tolmer Group, these units are dominated by coarse clastic sedimentary rocks.
The eastern portion of the project is covered by Cambrian flood basalts (Antrim Plateau Volcanics), which overlie Mesoproterozoic Gardiner Sandstones of the Birrindudu Basin.

Several ESE, SE and N-trending structures have been identified within the project area, which represent subsidiary structures to the major regional ESE-trending structures, such as the Trans-Tanami Fault and the Bluebush Fault.

Large portions of the project area are covered by ferricrete as well as surficial deposits including alluvium, lateritic lag and windblown sand. The Gardiner Formation outcrops are frequently capped by a silcrete layer of variable thickness.

EL24178 is located in the northwest part of the Tanami-Granites Project. Clastic sediments of the Proterozoic Birrindudu group underlie the greater portion of the tenement. The northeast corner laps onto Coomarie Suite granites whilst McFarlane Peak metamorphics border the northern boundary.

EL23934 and EL24166 are located in the southeast part of the Tanami-Granites Project, overlying the Coomarie Suite granodiorites and flanking Birrindudu Group sandstones. The eastern portion of EL23934 and EL24166 is covered by Cambrian flood basalts (Antrim Plateau Volcanics), which overlie Mesoproterozoic Gardiner Sandstones of the Birrindudu Basin. In this part of the tenements, the Gardiner Sandstones are interpreted to unconformably overlie lithologies of the Dead Bullock Formation and granodiorite of the Coomarie suite.

Figure 3 shows the outcrop geology of the project area taken from the NTGS 1:250,000 scale geological mapping of the area.
Banded chert, partly silicified shale and siltstone, greywacke, lithic to sublithic arenite, basalt and haspilite; gossanous (Ptc)

Phyllitic shale, siltstone and greywacke (Ptn)

Phyllitic greywacke, sublithic and lithic arenite; shale mudstone, siltstone, tuff, acid porphyry, ironstone, and minor quartz arenite (Ptk)

Mica schist, chert, conglomerate (Pt)

Sublithic arenite, quartz arenite, conglomerate, shale and siltstone (Pdg)

Medium to coarse biotite and muscovite granite (Pg)

Biotite granophyre, biotite adamellite, intrusive porphyry (Pgw)

Stromatolitic chert, cherty arenite, siltstone, mudstone, limestone, arenite (Pdt)

Sublithic arenite, minor quartz arenite, siltstone and shale (Pdk)

Sand, silt, clay, minor gypsum and halite; fluvial and lacustrine (Qa)

Quartz arenite, sublithic arenite, mudstone, chert, limestone, dolomite (C)

Tholeiitic basalt, minor tuffaceous sandstone, lithic arenite and chert (Cla)

Calcrete, partly silicified (Tt)

Sand, silt: aluvial and aeolian (Qs)

Sand, gravel: aeolian and piedmont deposits (Qz)

Sandstone, siltstone, conglomerate (Kl)

Silcrete (Ts)

Mount Charles Beds

Killi Killi Beds

Nanny Goat Creek Beds

Nongra Beds

Tanami Complex

Sublithic and lithic arenite, quartz arenite, conglomerate, greywacke (Plg)

Phyllite, phyllitic siltstone and greywacke; gossanous bands (Ptc1)

Extrusive acid porphyry, non-porphyritic and porphyritic basalt (Ptw)

Glauconitic sandstone (Pdgg)

Sublithic arenite, quartz, quartz arenite, minor shale and siltstone (Pls)

Tuffaceous sandstone, siltstone and conglomerate (Plwt)

Porphyritic and non-porphyritic acid lava (Plwa)

Pargee Sandstone

Sublithic arenite (Plw)

Winnecke Granophyre

Mount Winnecke Formation

Supplejack Downs Sandstone

Antrim Plateau Volcanics

Proterozoic

Cambrian

Palaeozoic

Carpentarian

Mesozoic

Cretaceous

Tertiary

Cainozoic

Quaternary

Amphibolite, basalt (Ptc2)

Talbot Well Formation

Coomarie Sandstone

Gardiner Sandstone

Birrindudu Group

Clements Sandstone

Lower Proterozoic

Wintonite Granophyre

Windjana Group

Macedon Sandstone

Pilbara Group

Mount Borradaile Formation

Luddenham Formation

Nuggleous Group

Henty Formation

Surficial Geology

250k NTGS

Figure 3

Tanami-Granites Project

Surface Geology

Ref: AGSO NTGS 250k Scale: 1:300000

Limit of PG L

Scale: 1:300000

ABN 44 009 758 481

Author: R. Wilson

Date: 31/3/2010

Projection: MGA Zone 52 (GDA 94)

Relinquished Tenement Boundary (January 2010)

Retained Tenement Boundary
2 Exploration Target Rationale

High-grade and high-tonnage unconformity-type uranium deposits located in Canada and Australia provide more than one third of the world’s uranium production (about 38% in 2005).

Unconformity-type deposits occur close to the unconformity between an Archean to Paleoproterozoic crystalline basement and an overlying clastic sandstone cover of either Proterozoic, or less commonly Phanerozoic age. Most of the uranium deposits are associated with graphite-rich structures cross-cutting the unconformity.

The Tanami-Granites Project area shares a number of geological similarities with known geological provinces that host significant uranium mineralisation, including the Athabasca Basin in Canada and the Alligator River region in the Northern Territory.

Within the project area, highly deformed Paleoproterozoic Granites-Tanami complex–related metasedimentary Dead Bullock beds are unconformably overlain by flat-lying to gently dipping arenites of the Middle Proterozoic Gardiner Range Sandstone, the lower member of the Carpentarian Birrindudu Group.

The exploration strategy is to survey the project area with different airborne geophysical techniques in order to help generate drilling targets. The geophysical surveys were comprised of a helicopter-borne time-domain electromagnetic survey with a VTEM system, an airborne hyperspectral mapping survey (HyMap) and a detailed airborne radiometric and magnetic survey.

The VTEM system is used to detect conductors below a thick cover. It has been used successfully in the Athabasca Basin (Canada) where graphitic conductors are associated with large high grade unconformity-type uranium deposits under a thick sandstone cover.

The hyperspectral survey is able to detect superficial mineral alteration zones that may correspond to alteration haloes surrounding unconformity-type uranium deposits.

The detailed airborne radiometric and magnetic survey has closer line spacing than previous surveys, therefore it will allow for refining the shape and location of already
known radiometric anomalies and may help identify new ones. It will also help understand in more detail the structural and geological framework of the project area. The ground EM survey is used to define more accurately the conductors identified during VTEM survey and therefore define accurate drilling targets.

3 Exploration Activities

Field work on EL23934, EL24166 and EL24178 was not conducted during the reporting period due to the inconclusive interpretation obtained after the first-pass modelling of the airborne VTEM data. Budgetary constraints imposed by Northern Uranium as a result of the global financial crisis in early 2009 resulted in a much reduced budget for exploration on the Tanami-Granites Project.

In the upcoming reporting year, it is expected that work will recommence on the Tanami-Granites Project in the form of reprocessing and modelling of geophysical data obtained from previous years. More advanced exploration activities are planned to recommence when the surrounding tenements, which are currently still under negotiation with Aboriginal freehold landowners and the CLC, are granted. Prior to drilling of targets on the Tanami-Granites Project, the surrounding tenements will require exploration activities in order to obtain an understanding of the regional exploration targets.
4 CONCLUSIONS

Northern Uranium, with its operator Afmeco Mining and Exploration, is committed to further advance the exploration of the Tanami-Granites Project.

A prioritisation of the targets will be obtained following the reprocessing and modelling of the airborne data previously acquired on this project.

Preliminary targets on the Tanami-Granites Project tenements remain untested and more advanced exploration activities are likely to occur when the surrounding tenements, which are currently still under negotiation, are granted.
5 REFERENCES

• Tanami, 1:250,000 scale NTGS geology map Sheet SE5215.