ANNUAL REPORT

EXPLORATION LICENCES 25658

MUELLER CREEK

FOR THE PERIOD 30/8/08 to 29/8/09

YEAR 2

by

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B ASc (Hons)

GDA 94 – Zone 53
1:250000 Alcoota
1:100000 Alcoota

September 2009
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SUMMARY
The tenement is located about 120km northeast of Alice Springs in the southern part of the Northern Territory.

EL 25658 was granted to Alistair Mackie on 30th August 2007. The licence was transferred to WDR Base Metals Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on 17th June 2008.

The Exploration Licence is included in the “Bushy Park” joint venture with NuPower Resources Ltd.

The project area is underlain by the Aileron Province of the Palaeoproterozoic Arunta Block. It is prospective for uranium, gold, rare earths and base metal deposits.

Previous exploration in the area has included Aeromagnetic surveys, follow up ground magnetic surveys, reconnaissance geochemical programmes of surface sampling, and aircore drilling.

Stream sediment sampling, airborne EM and regional gravity surveys have been completed in the current year.

The proposed exploration programme for year 3 (2009/10) will include infill stream sediment sampling, reconnaissance geological mapping and a rotary mud drilling programme.
INTRODUCTION

BACKGROUND
The Exploration Licence is included in the “Bushy Park” joint venture with NuPower Resources Ltd. It is prospective for uranium, gold, rare earths and base metal deposits.

LOCATION AND ACCESS
The tenement is located about 120km northeast of Alice Springs in the southern part of the Northern Territory (Figure 1).

Access is by the sealed Stuart Highway north from Alice Springs, and thence by the unsealed Plenty Highway and unnamed roads to Alcoota Station. Access within the project area is by station tracks.

CLIMATE
The climate is semi-arid, sub-tropical with cold winters and hot summers. The average annual rainfall is 300mm with most falls in summer months.

TOPOGRAPHY AND VEGETATION
The topography of the area is subdued and is dominated by alluvial flats of the Mueller and Waite Creeks and their tributaries.

The alluvial flats contain open woodland with ghost gums and other eucalypts with some acacias.
Figure 1. EL 25658 – Mueller Creek – location plan
TENURE

MINING/MINERAL RIGHTS
EL 25658 was granted to Alistair Mackie on 30th August 2007. The licence was transferred to WDR Base Metals Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on 17th June 2008.

Western Desert Resources Ltd and NuPower Resources Ltd entered into the “Bushy Park” joint venture on 5th February 2008. NuPower have to spend a total of $1,000,000 on this EL and EL25338 within 3 years from commencement to earn a 51% interest in the tenements.

LAND TENURE
The tenement is located within the boundaries of Perpetual Pastoral Leases 972 (Atartinga), 1032 (Alcoota) and 1122 (Bushy Park).

NATIVE TITLE/ABORIGINAL LAND CLAIMS
The Mueller Creek project does not currently fall within the area of a registered Native Title Claim.

The project area lies within an Aboriginal land claim pursuant to the Aboriginal Land Rights (Northern Territory) Act 1976.

ABORIGINAL SACRED SITES
There are no known sacred sites within the project area.

GEOLOGY

REGIONAL GEOLOGY
The project area is underlain by the Aileron Province of the Palaeoproterozoic Arunta Block, see figure 2. The Aileron Province forms part of the North Australia Craton and is aged between 1865-1740 Ma.
Figure 2. EL 25658 – Mueller Creek Regional Geology

LOCAL GEOLOGY

The Arunta Block consists of three groups within the area, see figure 3. The Strangways Metamorphic Complex crops out in the south of the tenement and is probably the oldest group of rocks. It consists of felsic and mafic granulite and gneiss. Further to the north rocks of the Reynolds Range Group and the Landers Rock Beds occur. Both these groups consist of metasediments. Proterozoic-age granite/gneiss intrudes the metamorphic sequence in two areas.

The Proterozoic age rocks have been deeply weathered during Cretaceous to early Tertiary times forming a thick lateritic profile over most of the licence, see figure 4. The Late Tertiary Waite Formation consisting of limestone, mudstone and sandstone occurs in two north trending palaeo-channels.
Figure 3. Mueller Creek – EL 25658 – Interpreted Geology

Figure 4. Mueller Creek – EL 25658 - Geology
PREVIOUS EXPLORATION

MINING HISTORY
No mining has been carried out in the area.

EXPLORATION BY PREVIOUS COMPANIES

Central Pacific Minerals AP 1726 (1968-69) CR1969/010
Exploration of the area was conducted for base metals, uranium and phosphate. No mineral occurrences were noted.

Otter Exploration EL 1456 (1977-78) CR1978/143
Otter Exploration explored the north western part of the area for uranium and base metals. Radiometric anomalies from government airborne surveys were ground checked. Some geochemically anomalous uranium values were found in areas underlain by granite/gneiss.

Negri River Corporation EL 8710 (1983-84) CR1985/259
Diamond exploration was carried out. No kimberlitic indicators were found.

Exploration for garnet resources was carried out. No economic concentrations were found.

Exploration was carried out within these ELs for IOCG and Tennant Creek-style copper/gold deposits. Small programmes of surface sampling and aircore drilling were carried out with no significant results.

EXPLORATION COMPLETED DURING PREVIOUS YEAR

GEOCHEMICAL SURVEYS

Water bore sampling.
Six water bores were sampled and the results were detailed in previous year’s annual report. The uranium values found were not considered to be very anomalous.

EXPLORATION COMPLETED DURING CURRENT YEAR

GEOCHEMICAL SURVEYS
Reconnaissance Sampling Program
A reconnaissance sampling program which gathered 72 stream sediment and 2 rock chip samples was conducted during the current year over the Mueller Creek EL. Figure 5 below shows the locations of samples collected.
Figure 5. Mueller Creek EL 25658 – stream sediment sample locations
GEOPHYSICS

Airborne Electromagnetic (EM) Survey
Fugro Airborne Surveys completed an airborne EM survey in September 2008. The survey covered 124.4 square kilometres at 1 kilometre line spacing and orientated E-W. Figure 6 shows survey flight lines.

Figure 6. AEM Flight Lines over Mueller Creek EL 25658
Gravity Survey
A regional Geoscience Australia and NTGS gravity survey at 4 x 4 kilometre grid was completed over the area early in this current year, with infill of 2 x 2 kilometres completed over the western half of the EL. Figure 7 shows the gravity station locations.

Figure 7. Mueller Creek EL 25658 – Gravity survey stations

RESULTS AND EXPENDITURE

Discussion of results

Reconnaissance Sampling Program
Several multi-element stream sediment anomalies in the southern area of the EL were identified through assay of the stream sediment samples. This will require follow up reconnaissance geological mapping and sampling to identify the source. The assay data is included in Appendix 1.
Airborne Electromagnetic (EM) Survey

The Airborne EM data was interpreted for basement modelling by Montana GIS in January 2009. The interpretation and raw data is included in Appendix 2. Figure 8 shows the AEM basement interpretation image.

Figure 8. EL 25658 – Tempest AEM Basement Interpretation image
Gravity Survey

The gravity data and station information over the Mueller Creek tenement is included in Appendix 3. Figure 9 below shows the gravity image over the EL.

![Gravity Image](image_url)

Figure 9. Gravity image over EL 25658

Expenditure

The expenditure commitment for EL 25658 for year 2 was $75,000. Actual expenditure was $48,275 as shown on the accompanying exploration expenditure form.
PROPOSALS FOR FUTURE WORK

Proposed work programme for 2009/10 – Year 3

The proposed exploration programme for year 3 will include infill stream sediment sampling and reconnaissance geological mapping to locate sources of multi-element stream sediment anomalies in the southern area of the EL, and a rotary mud drilling programme may be undertaken.

The proposed expenditure on EL25658 for year 3 will be $85,000.

References


Western Desert Resources Ltd, 2008. *Annual Report - Exploration Licence 25658 – Mueller Creek – for the period 30/8/07 to 29/8/08 - Year 1*, by J.F Fabray