FINAL REPORT

EXPLORATION LICENCES 25373

LIMBLA PROJECT

FOR THE PERIOD 09/02/07 to 21/12/09

by

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B ASc (Hons)

GDA 94 – Zone 53
1:250,000 Illogwa Creek

1:100,000 Limbla

March 2010
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SUMMARY

This report summarizes work carried out on the Limbla project group of tenements up to December 21, 2009 with particular reference to EL 25373 which was surrendered during the current year.

The Limbla project tenements, comprising Exploration Licences 25331, 255332, 25373, 25402 and 25554, are located about 120km east of Alice Springs in the southern part of the Northern Territory.

EL 25373 was granted to A W Mackie on 9th February 2007. The licence was purchased by Red Desert Uranium Pty Ltd (now Red Desert Minerals Pty Ltd), a wholly owned subsidiary of Western Desert Resources Ltd, on 2nd May 2007.

The Limbla project area is located over the contact between the Aileron Province of the Arunta Block of Palaeoproterozoic to Mesoproterozoic age to the north and the Amadeus Basin of Neoproterozoic age to the south.

The project area has been previously explored for uranium, diamonds, base metals, gold and heavy minerals.

An airborne radiometric and magnetic survey was flown by UTS geophysics for WDR during the first year of tenure. Interpretation of the radiometric data indicated that there were a number of uranium anomalies that required ground follow-up.

In May 2008 a helicopter was used to visit and sample a number of the radiometric anomalies delineated by the 2007 airborne survey. The samples were analysed for a suite of 38 elements by ICP-MS. All of the sites visited within EL 25373 (5 Mile Creek Prospect) were underlain by laterised gossanous material within dolomitic sediments of the Bitter Springs Formation.

A detailed airborne radiometric survey of the Tourmaline Gorge, Hale River (EL 25373) and Albarta prospects was conducted during the current year.

EL 25373 was surrendered on 21st December, 2009.
INTRODUCTION

BACKGROUND

The Limbla project area consists of Exploration Licences 25331, 25332, 25373, 25402 and 25554. The Exploration Licence of interest in this report is 25373, this tenement was surrendered during the current year. EL 25373 was granted to A W Mackie on 9th February 2007 and was acquired by Western Desert Resources Ltd in May 2007. The tenements cover ground prospective for uranium and base metal mineralisation.

LOCATION AND ACCESS

The Limbla project tenements are located about 120km east of Alice Springs in the southern part of the Northern Territory (Figure 1). EL 25373 is one of the central eastern tenements in the Limbla project group.

Access is by the sealed Ross Highway from Alice Springs, and thence by an unsealed road to Ringwood Station. The Ringwood Homestead is located near the southwest corner of the project area. Access within the project area is by station tracks. Some parts of the area are inaccessible to vehicles.

Figure 1. Location EL 25373 – Limbla Project
CLIMATE
The climate is arid, sub-tropical with cold winters and hot summers. The average annual rainfall is 230mm with most falls in summer months.

TOPOGRAPHY AND VEGETATION
The project area is located at the eastern end of the Folded Central Ranges geomorphologic division. The Simpson Desert borders the area to the south.

Steep quartzite ridges form topographic highs in the central part of the project area, and are separated by narrow alluvial valleys and grass plains.

The hills and ridges are lightly to moderately wooded with stunted eucalypts, gidgee, mulga and acacia.

TENURE
MINING/MINERAL RIGHTS
EL 25373 was granted to A W Mackie on 9th February 2007. The licence was purchased by Red Desert Uranium Pty Ltd (now Red Desert Minerals Pty Ltd), a wholly owned subsidiary of Western Desert Resources Ltd, on 2nd May 2007. The tenement was reduced by 50% on the second anniversary of grant.

LAND TENURE
The Limbla project tenements are located within the boundaries of Perpetual Pastoral Leases 995 (Loves Creek). The Ruby Gorge National Park lies on the north western boundary of the tenement.

NATIVE TITLE
The Limbla project does not currently fall within the area of a registered Native Title Claim. Part of the project area is subject to an Aboriginal land claim under the Aboriginal Land Rights (NT) Act.

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

GEOLOGY
REGIONAL GEOLOGY
The Limbla project area is located over the contact between the Aileron Province of the Arunta Block of Palaeoproterozoic to Mesoproterozoic age to the north and the Amadeus Basin of Neoproterozoic age to the south, see Figure 2. The older rocks have been thrust over the younger rocks along a series of NW-SE trending thrust zones, of which the Oolera Fault Zone (Burt Plain – Albarta Shear Zone) is the most important.
Figure 2. Regional Geology and structures
LOCAL GEOLOGY

The northern part of the Limbla project area is underlain by metamorphic rocks of the Aileron Province of the Palaeoproterozoic Arunta Block, see Figure 3. The Harts Range Group consists of the Bruna Gneiss of igneous origin and the Riddoch Amphibolite Member; parts of this group are now thought to be of Neoproterozoic to Cambrian in age. These rocks are separated from the Albarta Metamorphics to the south by the Illogwa Schist Zone. The Albarta Metamorphics are a sequence of metasediments, amphibolites and quartzo-feldspathic gneiss. The Illogwa Schist Zone is a major structural zone and contains basement rocks which have been subject to retrograde metamorphism. The Albarta Metamorphics have been intruded by the Atneequa Granitic Complex, which includes the Tourmaline Gorge granite. EL 25331 is located over rocks of the Harts Range Group, in particular the Riddoch Amphibolite Member.

Figure 3. Local Project Geology – original Limbla Project Group tenements
Rocks of the Amadeus Basin crop out in the southern half of the Limbla project area. The northern boundary of the Basin is marked by the major Oolera Fault Zone (Burt Plain – Albarta Shear Zone) which contains fault blocks of the lower members of the Amadeus Basin and the underlying Arunta Block. The faulting within this zone is reverse or overthrust, and granitoid rocks that occur within the zone are the noses of small nappes preserved as klippen.

The lowest member of the Amadeus Basin is the Heavitree Quartzite which forms steep ridges in the central part of the project area. The Bitter Springs Formation overlies the Heavitree Quartzite and is a sequence of shales, sandstones and carbonates. The Areyonga and Aralka Formations are exposed in the Limbla Syncline, and consist of siltstones, sandstones and carbonates with minor diamicite of possibly glacial origin. The youngest members of the Amadeus Basin exposed in the area are the Gaylad Sandstone and the Pertatataka Formation which occur within a syncline NE of Ringwood Station.

A Tertiary laterite capping has been preserved in some areas. Quaternary sediments occur within the Illogwa Creek drainage system.

**PREVIOUS EXPLORATION**

**EXPLORATION BY PREVIOUS COMPANIES**

**Esso Minerals Australia (1976-78)**
Esso explored the area for uranium between 1976 and 1978. Two airborne radiometric surveys were flown and 56 radiometric anomalies were followed up. Four of these anomalies were found to be due to outcropping uranium mineralisation.

The Albarta prospect is related to a shear zone and associated chloritic alteration. Secondary uranium minerals occurred in outcrop with rock chip assays to 0.9% U₃O₈. Trenching of the shear zone gave results up to 260 ppm U₃O₈. Drilling along the length of the radioactive zone gave results similar to those found in the trenches.

The H41 prospect is located to the north of the Albarta prospect. The anomaly is associated with a shear in leucogranite. Rock chip samples assayed up to 320 ppm U₃O₈ and one drill hole was completed.

The Tourmaline gorge prospect is associated with tourmaline granite which poorly outcrops in a steep sided valley. Secondary uranium minerals were located in association with minor sulphide veins in altered granite. No trenching or drilling was undertaken.

**AGIP Australia (1977-78)**
AGIP explored the Illogwa Creek catchment for channel uranium deposits with little encouragement.

**Stockdale Prospecting Ltd (1979-80)**
Stockdale explored the southern part of the project area for diamonds. No anomalous results were reported.

**Esso Minerals Australia (1980)**
Esso continued exploration on the Albarta prospect during 1980. No drilling was done.
Afmeco Pty Ltd (1980)
Exploration for sandstone-type uranium was carried out in the Illogwa Creek area. Drilling did not intersect any uranium mineralisation.

BHP Minerals (1982-84)
Exploration for diamonds and base metals was carried out. Activities included geological mapping, stream sediment sampling, rock chip sampling and ground magnetic traverses. The results of the diamond exploration activities were negative for kimberlitic indicators. Some stratiform gossanous units were sampled and found to contain sporadic high Zn values (up to 5500ppm Zn). The gossanous units were thought to be originally quartz-magnetite-pyrite/pyrrhotite bands. BHP did not consider them to be worthy of further exploration.

Pancontinental Mining (1990)
The target for exploration was heavy minerals in the Hale River catchment. Surface sampling and widely spaced drilling failed to discover any economic concentrations.

Normandy explored the area for stratiform sediment –hosted base metal mineralisation within the Amadeus Basin succession.

Exploration activities included stream sediment sampling, lag sampling, RAB, RC and diamond drilling. Geophysical techniques used included airborne magnetic, gravity and reconnaissance IP.

Numerous anomalous samples were followed up but no economic base metal mineralisation was discovered.

Roebuck Resources (1993)
Exploration activities including stream sediment and rock chip sampling tested two magnetic anomalies for gold and base metals. Weak gold values (13 and 26 ppb Au) were found in -80# stream sediments draining the southern anomaly. Little follow-up sampling was completed with negative results.

Rio Tinto Exploration (1996-98)
RTE targeted stratiform base metals, unconformity uranium and diamonds in their exploration of the area. The work was concentrated in the Amadeus Basin sediments. Aeromagnetics were flown over the area. Ground magnetic surveys were done to follow-up airborne magnetic anomalies. Stream sediment and rock chip samples were collected.

Regional RAB drilling was undertaken to test the contact between the Heavitree Quartzite and the overlying Bitter Springs Formation. Some of the RAB holes returned anomalous base metal values. RC drilling was undertaken to test the best area of RAB drilling. Further anomalous base metal values were reported (best intersection: 4m at 1500 ppm Cu), however RTE considered the continuity of the mineralisation to be poor.

Gutnick Resources (2001-2003)
Exploration was conducted for Witwatersrand gold mineralisation. Stream sediment samples were collected and analysed for BLEG gold. No anomalous values were found.
EXPLORATION BY WESTERN DESERT RESOURCES LTD

2007
An airborne radiometric and magnetic survey was flown by UTS geophysics during November and December 2007.

Interpretation of the radiometric data indicated that there were a number of uranium anomalies that required ground follow-up, see figure 4.

2008
In May 2008 a helicopter was used to visit a number of the radiometric anomalies delineated by the 2007 airborne survey. This included sampling the 5 Mile creek area in the east of the tenement, see figure 4.

Figure 4. Radiometric Image Uppm – Rock Chip Sampling location
2009 (CURRENT YEAR)
In March 2009 Aerosystems P/L were contracted to complete an aeromagnetic and radiometric survey over several areas of the Limbla Project and also a WDR Tennant Creek tenement. Within the Limbla project three surveys were conducted, over the Hale River Prospect, Albarta and Tourmaline Gorge. The Hale River Prospect is located in EL 25373. The airborne survey was conducted using a helicopter at an elevation of 25 metres with line spacing of 25 metres and a tie line spacing of 250 metres.

RESULTS AND EXPENDITURE

Discussion of results for entire tenure period

The logistics report and images produced from the 2007 aeromagnetic/radiometric survey over EL 25373 (including the 5 Mile Creek area) are contained in Appendix 1. The assay results from rock chip sampling, and images of the sampling location and tenement are contained in Appendix 2.

A processing report for the 2009 Aeromagnetic/Radiometric survey specific to EL 25373 (Hale River Prospect) is included in Appendix 2. Images produced are also included in the appendix. The Hale River Prospect Total Magnetic Intensity & Radiometric Total Count images are shown below, see figures 5 and 6.

The licence was surrendered on 21st December, 2009.
Figure 5. Radiometric Total Count Image – Hale River Prospect – EL 25373
Figure 6. Total Magnetic Intensity image – Hale River Prospect – EL 25373
Expenditure

The expenditure commitment for EL 25373 was $20,000 to 8th February 2010.

EL 25373 was surrendered during the current year. The actual expenditure on EL 25373 for the current year was $3290, and is detailed on the accompanying expenditure report.

References

Western Desert Resources Ltd, 2007.  

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Annual Report - Exploration Licences 25331, 25332, 25373, 25402 and 25554, Limbla Project, for the period 9/2/07 to 8/2/08, Year 1, by John Fabray.

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Relinquishment Report - Exploration Licence 25373 - Limbla Project, for the period 9/2/07 to 8/2/09, by John Fabray.