YEAR 2

ANNUAL & FINAL REPORT
31/05/2012 to 14/04/2014
EUROWIE CREEK SOUTH
(EL 29147)

Title Holder: NATURAL RESOURCES EXPLORATION PTY. LTD.
Operator: Natural Resources Exploration Pty. Ltd.
Tenement Manager: Emma Dodd, Natural Resources Exploration Pty. Ltd.
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Project Names: Eurowie Creek South
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Summary

Section 94 of the *Mineral Titles Act* requires the submission of an Annual Report prepared by the titleholder for each exploration licence. The purpose of the following Annual Report for Exploration Licence (EL) 29147 is to provide a summary of the activities carried out over the permit in the past 12 months, including results produced by those activities.

Natural Resources Exploration (‘NRE’) has carried out a detailed geological assessment of its Lucy Creek Prospect, Exploration Licence (EL) 29147, during the first year of grant. To delineate prospective areas for base metal and phosphate mineralisation and define the next phase of exploration, NRE carried out extensive office-based studies including desktop reviews of all previous exploration across EL29147 and its surrounding tenures. Research included review and compilation of the data in the Northern Territory Geological Services’ (‘NTGS’) open file reports, air photo imagery and examination of the latest geological maps.

During the second term it was decided that Eurowie Creek South Title be surrendered.
1. Introduction

Natural Resources Exploration (‘NRE’) has conducted extensive office-based studies during the first year of Exploration Licence (EL) 29147, known to NRE as its ‘Eurowie Creek South’ Project. EL 29147 was granted to NRE on 31 May 2012, consisting of a total of 4 sub-blocks.

During the reporting period, NRE’s exploration rationale and objectives for its Eurowie Creek South Prospect considered the evaluation of potential base metal and phosphate mineralisation.

NRE conducted extensive desktop reviews of all previous exploration across the tenement. Investigations were intended to locate any outcropping of mineralisation and any indicators of any sub-surface mineralisation within the tenement based on desktop reviews.

2. Tenure

NRE’s exploration licence (EL) 29147, is more commonly known by NRE as its ‘Eurowie Creek South Prospect’. The Eurowie Creek South Prospect was granted to NRE on 31 May 2012 consisting of 4 sub-blocks. Table 1 lists the pertinent tenement details.

Table 1. Tenement Details

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Tenement Name</th>
<th>Title No. (EL)</th>
<th>Sub-blocks</th>
<th>Sq. Km</th>
<th>Status</th>
<th>Grant Date</th>
<th>Term (Yrs)</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Georgina</td>
<td>Eurowie Creek South</td>
<td>29147</td>
<td>4</td>
<td>12.7</td>
<td>Granted</td>
<td>31 May 12</td>
<td>6</td>
<td>30 May 18</td>
</tr>
</tbody>
</table>

Native Title

There are currently no Native Title Claims over the Eurowie Creek South Prospect area.

Recorded Sites

There are no sacred sites located within EL29147.

2.1 Location and Access

Location & Access

The Eurowie Creek South Prospect is located approximately 260 kilometres north east of Alice Springs. Access to the tenure is via the Stuart Highway, followed by the Plenty Highway and then via unsealed station tracks. Figure 1 represents the location of EL29147 and ways to access the area.
Pastoral Leases

NRE’s Eurowie Creek South Prospect overlies two (2) Pastoral Leases, namely ‘Lucy Creek’ NT Portion 88 and ‘Jervois’ NT Portion 326. Figure 2 shows these leases in relation to the Eurowie Creek South Prospect area.
2. Geology

2.1 Regional Geology

The Eurowie Creek South Prospect is located in the Southern Georgina Basin. The Georgina Basin is a large intracratonic sedimentary basin in central and northern Australia, lying mostly within the Northern Territory and partly within Queensland. It is named after the Georgina River which drains part of the basin. Deposition of locally up to ca. 4 kilometres of marine and non-marine sedimentary rocks took place from the Neoproterozoic to the late Paleozoic.

Along with other nearby sedimentary basins of similar age such as the Amadeus Basin and Officer basin, the Georgina Basin is to believe to have once been part of the hypothetical Centralian Superbasin, that was fragmented during episodes of tectonic activity. The Georgina Basin overlies the Aileron Province, Tennant Region, Murphy Inlier, McArthur and South Nicholson Basins and Lawn Hill Platform. It is interpreted to be contiguous at depth with Wiso and Daly Basins and Conformably overlies the Kalkarindji Province. The regional geology is shown in Figure 3.
The Georgina Basin is a broad, northwest-southwest trending intracratonic depression which underlies an area of some 325,000 square kilometres of the Northern Territory and Queensland. Approximately 60 percent of the basin area lies within the Northern Territory.

The Georgina Basin has a maximum sediment thickness in the south (Toko and Dulcie Synclines) including the area covered by NRE’s Eurowie Creek South tenement, and east (Bruke River Belt), with a much thinner succession in the central and northern parts of the basin (Barkly and Undilla Sub-basins).

The Georgina Basin contains Cambrian and Ordovician, predominantly marine carbonate and clastic sediments, Devonian continental sediments and, in places, Neoproterozoic clastics. After an initial period of rift filling, sediments were deposited in a series of subtidal to supratidal environments over part of an extensive epicontinental shelf. The Palaeozoic sequence progressively thickens in a south-southeasterly direction, rarely exceeding 400 metres in the northern half of the basin, and reaching about 5000 metres in the southeast of the basin. The sedimentary sequence has been neither metamorphosed nor intruded by igneous rocks.
In the latest Cambrian, the Delamerian Orogeny caused a change to predominantly marine siliciclastic deposition in the southwest, with carbonate deposition continuing in the southeast. This pattern persisted until deposition ceased during the Middle Ordovician. In the Early to Late Devonian, the Arunta Block was uplifted during a phase of the Alice Springs Orogeny and fluvial siliciclastics deposited along the southern margin of the basin. Despite extensive potential source rocks in the early Middle Cambrian of the southern part of the basin, numerous oil shows and an uneconomic gas flow in Ethabuka 1, little exploration has been undertaken.

The basin has been deformed by minor to moderate folding and faulting, especially in the south and east, with moderate to severe folding and faulting and extensive overthrusting along the southern and southwestern margin. Most of the structural deformation occurred during the Late Devonian to Early Carboniferous Alice Springs Orogeny. The northern part of the Georgina Basin sequence is gently undulating with no pronounced folding recognised other than supratenuous (drape) folding.

2.2 Permit Geology

The permit / local geology within the Lucy Creek Prospect is generally poorly outcropping. The geology includes Cambrian units of the Georgina Basin with some remnant Cretaceous of the Dunmarra Basin and regolith (silcretes and calcretes) of Tertiary and Quaternary age. The southern region contains the thickest basinal successions, and demonstrates the strongest structuring related to distal effects of the 320Ma Alice Springs Orogeny. In contrast to the southern region, the central Georgina Basin, north of latitude 21°S, contains a relatively thin stratigraphic succession, up to 450 m thick, deposited on a tectonically quiescent platform. Deposition in the central region commenced with a marine transgression in the early Middle Cambrian and may have extended into the Late Cambrian.

This central platform has been subdivided into an eastern Undilla Sub-basin and a western Barkly Sub-basin, separated by the Alexandria-Wonarah Basement High. The northern Georgina Basin is largely concealed beneath Mesozoic sedimentary rocks of the Dunmarra Basin (NTGS, 2010). Locally overlying the Palaeozoic rocks are thin deposits of flat lying late Palaeogene (c. 25Ma) limestone. Thin deposits of Cretaceous marine sediments also locally occur on the northern margin of the Barkly Tableland (Edgoose, 2003). Phosphatic marine sediment (phosphorite) occurs in the Middle Cambrian and Middle Ordovician rocks of the Georgina Basin. Australia’s largest deposits of sedimentary phosphorite are situated in the Cambrian stratigraphy across this region (Freeman et al., 1990). A model outlining the interpreted phosphatic horizon extent has been developed, extending in to the the Dunmarra and Wiso Basins. The geology has been mapped and interpreted across the
Huckitta 1:250,000 geological sheets by government geologists. The permit geology is illustrated in Figure 4 below.

**Figure 4. Permit Geology Map**

Economic phosphate deposits in Middle Cambrian rocks are being mined at Phosphate Hill across the border in Queensland. Development and exploration is being carried out at a series of further phosphate deposits and prospects across the basin within the Northern Territory.

3. **NRE’s Exploration Activities during the Reporting Period**

In order to define the next phase of exploration, NRE’s exploration program for the first term of its Eurowie Creek South Prospect consisted of extensive desktop studies and a historic review of previous exploration over the tenure area. Our studies during this first term have allowed us to delineate prospective areas for mineralisation. Little was completed during the second term of the tenement as an application for amalgamation was submitted and then subsequently withdrawn as a result of Investor decisions. It was also decided that this tenement be surrendered.
3.1 Exploration Studies

NRE has conducted an extensive review of historic exploration over its Eurowie Creek South Prospect during the first term. A review of all previous exploration within the project area has been completed including:

- Review of previous exploration data from NTGS open file company reports; and
- Review of aeromagnetics, of radiometrics and gravity survey provided by NTGS; and
- Review of satellite imagery, of ASTER imagery, Google Earth Imagery.

Historic

Previous exploration has been summarised in Table 2 and location of historic tenements is shown in Figure 5.

Table 2. Historic Tenures and Previous Companies’ Exploration Reports

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Period</th>
<th>Company Reports</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 24365</td>
<td>2005-2005</td>
<td>CR2005-0483</td>
<td>Alterra Services</td>
</tr>
<tr>
<td>EL 4619</td>
<td>1984-1990</td>
<td>CR1985-0272</td>
<td>CRA Exploration</td>
</tr>
<tr>
<td>EL 128</td>
<td>1972-1973</td>
<td>CR1974-0103</td>
<td>Petrocarb Exploration</td>
</tr>
</tbody>
</table>
5. **Reports lodged during the reporting period**

NRE believes that no other reports were required to be lodged during this reporting period.

6. **Conclusions**

Natural Resources Exploration’s exploration activities during the first term of its Eurowie Creek South Prospect have been focused on delineating targets for follow up exploration. During the second term it was decided that Eurowie Creek South Title be surrendered.
8. Bibliography


