EXODUS MINERALS LIMITED
(ACN 007 701 715)

Annual Report

Warburton

Exploration Licence
9277

For the period 3 October 1996 to 2 October 1997

Napperby 1:250,000 Sheet SF53-09
Mt Doreen 1:250,000 Sheet SF52-12

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Operator: Exodus Minerals Limited
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Date: November 1997
Approved:
Distribution: Exodus Minerals Limited (2)
Department of Minerals & Energy, Perth (1)
Normandy Gold Pty Ltd (1)
LOCALITY MAP

ABSTRACT

Exodus Minerals Limited reached a joint venture agreement with Normandy Gold Pty Ltd on 6 August 1997 in which Exodus may earn a 60% interest in the “Reynolds Range” project (of which Warburton E9277 is a part), by spending $1.5 million by August 2001.

Exploration for the period included a full data review by Exodus, a Geomorphological Interpretation and a Digital Elevation Mapping (DEM) Survey over the project area.
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1.0 **INTRODUCTION**

Exodus Minerals Limited reached a joint venture agreement with Normandy Gold Pty Ltd on 6 August 1997, in which Exodus may earn a 60% interest in the “Reynolds Range” project (of which E9277 – Warburton is a part) from Normandy by spending $1.5 million by August 2001.

Exploration Licence 9277 was applied for to target structurally controlled gold mineralisation within the Lower to Mid Proterozoic metamorphosed units of the Arunta Orogenic Domain, namely the Lander Rock Beds.

This report covers work completed by Normandy and Exodus for the period 03.10.96 – 02.10.97 (being the third year of tenure).

2.0 **LOCATION AND ACCESS**

Exploration Licence 9277 is located on the Napperby (SF53-09) and Mt Doreen (SF52-12) 1:250,000 sheets. Situated some 200 kilometres north-west of Alice Springs the project area covers parts of the Conniston and Napperby pastoral leases (Figure 1).

Access to the tenement is from the Stuart Highway, north of Aileron Roadhouse, via the unsealed Conniston Station Road to Mt Denison. Alternative access is via the Tanami Road from Alice Springs to Yuendumu, and then east via the unsealed Connston Station Road.

Station tracks provide some access within the project area.

3.0 **TENURE**

Exploration Licence 9277 was granted to Normandy Gold Pty Ltd on 3 October 1995 and consists of 69 blocks (222km²).

Currently Warburton E9277 forms part of Substitute Exploration Licence Application 9500 (SELA 9500) which was submitted on 5 March 1996 and includes adjoining Exploration Licences 7343, 8420 and 9278.

4.0 **PHYSIOGRAPHY**

The tenement surrounds the north-western portion of Reynolds Range with the peak of Mt Gardner (999m ASL) rising about 500 metres above the dominantly granitic sand plains and alluvial wash developed over granites that constitute the majority of the lease.

Drainage in the area is dominated by the Warburton Creek that drains north out of the tenement.
Vegetation consists of spinifex, cassia shrubs and low mallee and acacia (mulga) trees with isolated ghost gum, river red gums and tea tree thickets along the main intermittent water courses.

5.0 REGIONAL AND TENEMENT GEOLOGY

The tenement lies within the north-western portion of the Early to Mid Proterozoic Arunta Orogenic Domain.

The Arunta Orogenic Domain comprises meta-morphosed sediments and igneous rocks that have been extensively intruded by a range of granitic bodies. The Granites-Tanami and Tennant Creek Inliers are located to the north-west and north respectively. On all other sides, the Arunta Orogenic Domain is surrounded by, and forms basement to, younger Late Proterozoic to Mid Paleozoic sedimentary basins.

The Arunta Orogenic Domain is structurally complex and is interpreted to contain lithological correlatives with the Granites-Tanami and Tennant Creek Inliers – both of which host significant gold mineralisation.

The regional project area covers the Central and Northern Tectonic Zones of the Arunta Domain and contains greenschist to granulite lithologies (Figure 2).

Within the project area, the rocks have been divided into three groups:

Division 1 : Aileron Metamorphics
               Felsic and Mafic Granulites

Division 2 : Mt Freeling Schist
               Muscovite-biotite schist, quartz-rich meta-sediment, silimanite schist.

               : Wicksteat Creek Beds
               Calc-silicate rock, marble, gneiss, schists.

               : Lander Rock Beds (LRB)
               Schistose pelitic meta-sediments and quartz-feldspathic gneisses.

Division 3 : Reynolds Range Group
               Schistose pelitic meta-sediments, meta-quartzite and dolomite.

These divisions are separated by unconformities. The increasing maturity of the sediments reflects the evolution of the basin.
6.0 PREVIOUS EXPLORATION

Exploration completed prior to Exodus’s involvement with the project has included:

- Airborne Magnetic and Radiometric Survey
- Regional Reconnaissance RAB Drilling
- Regional Reconnaissance Vacuum Drilling
- Regional Gravity Survey

As the majority of the Warburton licence is under alluvial cover, surface sampling techniques are of limited value. The regional geophysical surveys were used to “see through” this cover and outline areas of possible meta-sediments. Shallow reconnaissance drilling (both vacuum and RAB) was used to test these areas. This drilling revealed that the majority of the project area consisted of granite or granitic derived rocks and failed to uncover any Lander Rock Beds.

7.0 EXPLORATION FOR THE PERIOD 03.10.96 – 02.10.97

7.1 Data Review

On becoming operators of the Exploration Licence 9277 (Warburton), the first stage of exploration by Exodus was to conduct a full and thorough review of work completed and data collected. The aim of this review was to determine what exploration techniques are amenable to the project area; what the areas of mineralogical interest are and what needs to be done to further enhance these areas.

7.2 Geomorphological Interpretation

A geomorphological interpretation over the project area was completed at 1:50,000 scale from aerial photography (Plate 1). This interpretation was validated in the field via a series of traverses across the project area during an orientation and general prospecting trip.

The aim of this interpretation was to gain a greater understanding of the regolith within the area and hence provide a base for interpreting surface geochemical data.

7.3 DEMS

A Digital Elevation Mapping (DEM) Survey, covering the entire regional project area was initiated in September 1997.

Processing and computer enhancement of the digital data obtained by this survey has enabled the generation of an orthophoto mosaic, a detailed contour plot and shaded relief images over the project area. These products have proven useful in the further interpretation of geomorphological features. They also help to define subtle changes in elevation that may indicate the presence of otherwise undetectable structures.
At the time of writing of this report, final images and products were not available due to unforeseen delays in final processing and printing. As a result, interpretation and hard copies of these images will be included in subsequent reports.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Work carried out to date has shown that the project area is dominated by granitic rocks with very little, if any, Lander Rock Beds.

The northern portion of the licence appears, from magnetics, to be similarly dominated by granitic rocks, however further work including general prospecting, mapping and shallow vacuum or RAB drilling will be required to test the areas of cover for metasediments.

9.0 EXPENDITURE FOR 03.10.96 – 02.10.97

Expenditure by Normandy and Exodus for the 03.10.96 – 02.10.97 tenement year totalled $20,457.

Expenditure by Normandy for EL 9277 (Warburton) for the period 3 October 1996 to 2 October 1997 totalled $8,645 as detailed below:

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<th>Normandy Expenditure for 03.10.96 – 02.10.97</th>
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<tr>
<td>Office Supplies/Printing</td>
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<tr>
<td>Courier/Freight/Postage</td>
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<td>Travel/Accommodation/Meals</td>
</tr>
<tr>
<td>Field Supplies/Consumables</td>
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<tr>
<td>Equipment Maintenance/Repairs</td>
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<tr>
<td>Equipment Purchases (under $500)</td>
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<tr>
<td>Vehicle Hire/Lease</td>
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<tr>
<td>Communications</td>
</tr>
<tr>
<td>Computing Services and Supplies</td>
</tr>
<tr>
<td>Regional Office Allocation</td>
</tr>
<tr>
<td>Depreciation</td>
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<tr>
<td><strong>TOTAL</strong></td>
</tr>
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</table>

Expenditure by Exodus for EL 9277 (Warburton) for the period 3 October 1996 to 2 October 1997 totalled $11,991 as detailed below.
10.0 FORWARD WORK PROGRAMME AND EXPENDITURE FOR 03.10.97 – 02.10.98

Exodus proposes to undertake additional modelling of aeromagnetic and DEMS data, along with field validation to better interpret the geology and geomorphology. Stress mapping and a structural interpretation will be included in this remodelling and interpreting process. Reconnaissance sampling will follow-up both the geological and geomorphological interpretations. Dependent on the outcome of these programmes, a surface or shallow vacuum drilling regional geochemical sampling programme would be undertaken over areas considered most prospective. An approximate costing is given below:

- Remodelling/interpretation of aeromagnetic data $2,000
- Stress mapping $2,000
- Orientation geochemical studies $3,000
- Integrated geological interpretation involving:
  - DEMS
  - aeromagnetics
  - aerial photography
  - general reconnaissance prospecting $3,000
- Surface/shallow geochemical sampling $5,000

**TOTAL** $15,000

PLATES