FINAL REPORT

FOR EXPLORATION LICENCE 9143

FOR THE PERIOD 4/9/95 TO 3/2/98

TENNANT CREEK DISTRICT, NORTHERN TERRITORY

BUGS PROSPECT

TENNANT CREEK 1:250,000 SHEET SE 53-14

VOLUME 1 OF 1

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DATE: APRIL 1998

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Exploration Licence 9143 is located approximately 30 kilometers NNW of Tennant Creek and approximately 6 kilometers NE of the Gecko Mine. Exploration Licence 9143 consists of two graticular blocks granted to Normandy Gold Pty Limited on 4 September 1995 for a period of four years. Work undertaken on Exploration Licence 9143 (Bugs Prospect) returned negative results and the latter is not considered prospective to host economic mineralisation.

Work completed by Normandy Gold Pty Limited during the life of tenure included:

- a geological interpretation;
- an interpretation from a combined photogeological survey, regional aeromagnetic survey and previous geochemistry;
- compass and hip chain gridding; and
- vacuum drilling.

The licence was surrendered on 3 February 1998.
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CONCLUSIONS & RECOMMENDATIONS

Work undertaken on Exploration Licence 9143 (Bugs Prospect) returned negative results and the latter is therefore not considered prospective to host economic mineralisation. The licence was surrendered on 3 February 1998.

INTRODUCTION

Exploration Licence 9143 (Bugs) was explored for Tennant Creek style Au-Bi mineralisation. Airborne magnetics show subtle lineaments striking NNE-NE, extending from the Golden Slipper and Queen of Sheeba workings, through EL 9143.

This report covers exploration work carried out on EL 9143 during the life of tenure.

LOCATION & ACCESS

Exploration Licence 9143 is located approximately 30 kilometers NNW of Tennant Creek and approximately 6 kilometers NE of the Gecko Mine (Figure 1). Access to the licence is via a dirt road between the Gecko and the Northern Star mines. Several station tracks provide vehicle access throughout the majority of the licence area.

The climate of the Tennant Creek district is mild and dry through most of the autumn to spring months. The summer period is hot with seasonal heavy rainfall between January and March making access very difficult during these periods.

TENURE

Exploration Licence 9143 consists of two graticular blocks granted to Normandy Gold Pty Limited on 4 September 1995 for a period of four years. EL 9143 was reduced to one graticular block on 23 July 1997 in accordance with Section 26 of the Mining Act. The Licence was surrendered on 3 February 1998.

REGIONAL GEOLOGY

The geological understanding of the Tennant Creek Inlier has been recently advanced by detailed geological mapping over the Tennant Creek and Flynn 1:100,000 map sheets (Donnellan et. al. 1995), precision dating of stratigraphic components of the region (Compston, 1995) and regional geophysical interpretations.

The oldest exposed Proterozoic lithofacies in the Tennant Creek Inlier are the metasedimentary rocks of the Warramunga Formation, which are the hosts to the ironstone Au-Cu-Bi mineralisation of the Tennant Creek Goldfield. These Palaeoproterozoic metasediments were deposited approximately 1860 Ma. Deformation and intrusion of the Warramunga Formation by volumous porphyries and granitoids occurred during the Barramundi Orogeny (1858 Ma to 1845 Ma).

Following deformation and uplift the volcanics and volcaniclastics of the Flynn Sub-Group were erupted (1845 Ma to 1827 Ma), with intrusion of porphyries and minor granitoids into the Warramunga Formation. An additional deformation event preceded the deposition of the Hatches Creek Group/Tomkinson Creek Sub-Group (1820 Ma to
1785 Ma) and the intrusion of late-stage granitoids and porphyries into both the Warramunga Formation and Flynn Sub-Group at 1650-1712 Ma.

6 LOCAL GEOLOGY

The rocks within EL 9143 belong to the Warramunga Formation, which is represented dominantly by fine-grained siltstone with lesser greywacke and shale. The licence is located in a favorable gravity gradient between Northern Star and Gecko mines which hosts many small workings including the Golden Slipper and Queen of Sheeba. Most of the workings north of Gecko are controlled by structural intersections, with the major structures striking NNE-NE. Airborne magnetics show subtle lineaments striking NNE-NE, extending from the Golden Slipper and Queen of Sheeba workings, through EL 9143.

7 PREVIOUS WORK


8 WORK CARRIED OUT DURING REPORTING PERIOD

This report summarises work conducted by Normandy Gold Pty Limited during the life of tenure.

8.1 Period 4/9/95 to 3/9/97

A geological interpretation from photogeological, aeromagnetics and geochemical databases was undertaken by Normandy Gold Pty Limited during the first year of tenure (Mujdrica, 1996).

The second year of tenure saw the completion of a vacuum drilling programme (Ward, 1997a). The drilling was conducted by Tracey's Drilling, a Tennant Creek-based firm, utilising a tractor mounted Edison vacuum drill rig. The holes targeted saprolite and then proceeded a further 3 meters into the bedrock. A sample of approximately 3 kilograms was taken for each hole from within the saprolite.

The programme comprised 48 drill holes, totaling 267 meters. Results from the drilling program were disappointing with a peak gold result of only 0.6ppb Au, 12.96ppm Cu and 0.36ppm Bi (Ward, 1997a).

At the end of year two of tenure the eastern block has been relinquished in accordance with Section 26 of the Mining Act (Ward, 1997b).

8.2 Year Three of Tenure

During the third and final year of tenure, work included a review of all available data. This review lead to the conclusion that the geological setting within EL 9143 is not considered prospective to host economic mineralisation.

EL 9143 incurred an expenditure of $27,000 (Mujdrica, 1996) during the first year of tenure and $11,645 during the second year of tenure (Ward, 1997a). The licence incurred an expenditure of $756.35 against a covenant of $18,000. A breakdown of this expenditure follows (Table 1).

Table 1: Exploration Expenditure for EL 9143 from 4/9/97 to 3/2/98

<table>
<thead>
<tr>
<th>EXPENSE</th>
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<td>Employee Costs</td>
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<td>Overheads</td>
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<td>Operating Costs</td>
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<td>Specialist Services</td>
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<tr>
<td>Tenement Costs</td>
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<tr>
<td>Research</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$756.35</strong></td>
</tr>
</tbody>
</table>

During the life of tenure, EL 9143 incurred a total expenditure of $39,401.35.

10 ENVIRONMENTAL/REHABILITATION REPORT

Normandy Gold has commenced an active rehabilitation programme over much of the Tennant Creek field. This commitment has been reinforced within the Normandy Group with the appointment of a Group Environmental Engineer to oversee and implement the Group's guidelines and objectives. In addition to this an Environmental Superintendent has been engaged at Tennant Creek to design and implement the Group's objectives throughout the Tennant Creek area.

As an example of the Group's commitment to environmental issues several active rehabilitation programmes are currently being undertaken in the Tennant Creek field. These include programmes at Nobles Nob, Eldorado, White Devil and Warrego.

An Environmental Management Plan for the Company's Tennant Creek Operations (Fowler, 1993) has been submitted to the Department of Mines and Energy under separate cover (March 1993). This plan details the strategies to be implemented over various areas following completion of exploration programmes and mining operations.
11 REFERENCES


APPENDIX ONE

BIBLIOGRAPHIC DATA SHEET
REPORT NUMBER: TENNANT CREEK: 98025 ADELAIDE: 23144

REPORT NAME: FINAL REPORT FOR EXPLORATION LICENCE 9143 FOR THE PERIOD 4/9/95 TO 3/2/98 TENNANT CREEK DISTRICT, NORTHERN TERRITORY, BUGS PROSPECT, TENNANT CREEK 1:250,000 SHEET SE 53-14, VOLUME 1 OF 1.

PROSPECT NAME: BUGS

TENEMENT NUMBER: EL 9143

OWNER/JV PARTNERS: NORMANDY GOLD PTY LIMITED

AGREEMENT: 

COMMODITIES: GOLD, COPPER

TECTONIC UNITS: TENNANT CREEK INLIER

STRATIGRAPHIC UNITS: WARRAMUNGA FORMATION

1:250,000 MAP SHEET: TENNANT CREEK SF 53-14

1:100,000 MAP SHEET: FLYNN 5759

KEYWORDS: EXPLORATION REVIEW