FINAL REPORT FOR

MLCs 272 TO 275 INCLUSIVE

PINNACLES NORTH PROSPECT

FOR THE PERIOD 31/01/96 TO 16/3/98

TENNANT CREEK MAP SHEET NO 53-14

VOLUME 1 OF 1

AUTHOR:

P MOUCHET
ADMINISTRATION GEOLOGIST

DATE:

APRIL 1998

AUTHORISED BY:

NT DEPARTMENT OF MINES AND ENERGY
- TENNANT CREEK/DARWIN OFFICE

NORMANDY GOLD LIMITED
- TENNANT CREEK OFFICE

NORMANDY EXPLORATION LIMITED
- KENT TOWN LIBRARY

The contents of this report remain the property of Normandy Gold Pty Limited and may not be published in whole or in part nor used in a company prospectus without the written consent of the Company.
MLCs 272-275 (Pinnacles North Prospect) are located approximately 20 km west of Tennant Creek township. MLCs 272-275 (previously MLC'897E to 900E) were originally pegged by Nobelex in February 1975 and granted on 23 December 1975 for a period of 21 years. The leases were renewed for a period of ten years on 29/9/95.

This report details work undertaken on the lease during the period 31/1/96 to 16/3/98.

Work undertaken over MLCs 272-275 during the life of tenure comprised a review and reinterpretation of all available data. MLCs 272-275 (Pinnacles North) is defined by a large 'bullseye' positive aeromagnetic anomaly at an interpreted depth of 2000 feet (>600 meters). The area is characterised by east-west trending Warramunga Formation greywackes, siltstones and porphyry. MLCs 272-275 do not show much potential for economical mineralisation at shallow (less than 100 meters) to moderate (less than 300 meters) depths.

MLCs 272-275 are covered by Normandy Gold Pty Limited’s Exploration Licence Application 9915 (Chinchilla Prospect). For cost saving reasons it was recommended to surrender MLCs 272-275 and conduct exploration under Exploration Licence 9915 as soon as the latter is granted.
CONTENTS

1. CONCLUSIONS & RECOMMENDATIONS  1
2. INTRODUCTION  1
3. LOCATION & ACCESS  1
4. TENURE  1
5. REGIONAL GEOLOGY  2
6. LOCAL GEOLOGY  2
7. PREVIOUS WORK  2
8. WORK CARRIED OUT DURING REPORTING PERIOD  3
9. EXPENDITURE STATEMENT FOR THE PERIOD 31/1/96 TO 16/3/98  3
10. ENVIRONMENTAL/REHABILITATION REPORT  4
11. REFERENCES  5

LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure No</th>
<th>Title</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MLCs 272-275, Location Plan</td>
<td>1:100,000</td>
</tr>
</tbody>
</table>

LIST OF TABLES

<table>
<thead>
<tr>
<th>Table No</th>
<th>Title</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Estimated Exploration Expenditure for MLCs 272-275 for the period 31/1/96 to 16/3/98</td>
<td>3</td>
</tr>
</tbody>
</table>

LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix No</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bibliographic Data Sheet</td>
</tr>
</tbody>
</table>
1. CONCLUSIONS & RECOMMENDATIONS

MLCs 272-275 (Pinnacles North) is defined by a large 'bullseye' positive aeromagnetic anomaly at an interpreted depth of 2000 feet. The area is characterised by east-west trending Warramunga Formation greywackes, siltstones and porphyry. MLCs 272-275 do not show much potential for economical mineralisation at shallow (less than 100 meters) to moderate (less than 300 meters) depths. The depth of the Pinnacles North magnetic anomaly (>600 meters) rules out any inexpensive testing. The two nearby magnetic anomalies defined by ground magnetics survey may be associated with ore grade mineralisation, although the RAB geochemistry does not support this.

MLCs 272-275 are covered by Normandy Gold Pty Limited's Exploration Licence Application 9915 (Chinchilla Prospect). For cost saving reasons it was recommended to surrender MLCs 272-275 and conduct exploration under Exploration Licence 9915 as soon as the latter is granted.

2. INTRODUCTION

MLCs 272-275 (Pinnacles North Prospect) are located approximately 20 km west of Tennant Creek township. This report details work undertaken on the lease during the life of tenure.

3. LOCATION & ACCESS

MLCs 272-275 (Pinnacles North Prospect) are located approximately 20 km west of Tennant Creek township. Access is gained from the TC8 Mine via the NTG pipeline access track for 11 km, thence NW along a station track for 5 km to the leases (Figure 1).

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.

4. TENURE

MLCs 272-275 (previously MLC'897E to 900E) were originally pegged by Nobelex in February 1975 and granted on 23 December 1975 for a period of 21 years. The leases cover each 16 hectares and form a contiguous block of 64 hectares.

In accordance with Section 68/2 of the Mining Act, a report in support of renewal of these leases was lodged on 29 September 1995 (Chambers, 1995).

MLCs 272-275 are covered by Normandy Gold Pty Limited's Exploration Licence Application 9915 (Chinchilla Prospect). The leases were therefore surrendered on 13 March 1996.
5. 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 voluminous 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 area is characterised by east-west trending Warramunga Formation greywackes, siltstones and porphyry. It lies approximately four kilometers northwest of the Extension Prospect on the Enterprise-Mount Samuel Fault. Suboutcropping haematite/jasper rubble has been mapped in the vicinity of the magnetic anomaly (ADL, 1985).

7. PREVIOUS WORK

A detailed aeromagnetic survey was flown over five areas in the Tennant Creek field in 1966 and ground magnetic traverses were surveyed across some of the aeromagnetic anomalies to assist interpretation. The detail of this work is presented in Finney (1966). The BMR identified a magnetic anomaly (named C5) which was thought to be due to a cylindrical body dipping to the south, with its top 2000 ft below the surface.

Geophysical Resources Development Pty Ltd using a fluxgate magnetometer flew four areas in the Tennant Creek field in 1969. The purpose of the survey was to outline in greater detail the magnetic anomalies on the BMR’s survey of the area. The results are discussed in Webb (1969).

During September to October 1973 Australian Development Limited (ADL) carried out a number of ground magnetic traverses over the C5 anomaly under EL 868. The survey revealed a single magnetic anomaly (‘bullseye’) named C5 with an amplitude of 360 gammas. (Nobelex, 1974). During 1973-1974 ADL contracted Geometric International Corporation Pty Ltd to conduct a low-level aeromagnetic survey over areas of EL 868 including MLCs 272-275. A proton magnetometer was used for data collection, and more information is found in Roach (1975).
During the period 1975 to 1995 Australian Development Limited (ADL) conducted a ground magnetic survey (1988) over the leases with a follow-up survey in 1989. The survey comprised 20 NS oriented lines ranging from 40-80 meters. During 1988 ADL completed also a programme of costean mapping and sampling to investigate the subsurface geology of the Pinnacles North anomaly (Davenport, 1990).

The ground magnetic survey defined five magnetic anomalies. Three of the anomalies define a linear feature parallel to and east of a quartz ridge while the other two lie near the 'bullseye' anomaly. The first three magnetic anomalies are probable down-dip expressions of the quartz-ridge where magnetic bodies intersect it, while the latter two may represent up-plunge extensions of the 'bullseye' magnetic anomaly. During 1989, ADL drilled 110 vertical RAB holes for 1332 meters on a 80 x 80 metre grid. Three metre composite samples were taken and assayed for Au and Cu.

Assays showed two areas of geochemical anomalism; one almost over the centre of the magnetic anomaly and another defining a NNW-SSE linear feature to the south of the magnetic anomaly (in Chambers, 1995).

8. WORK CARRIED OUT DURING REPORTING PERIOD

Work undertaken over MLCs 272-275 during the life of tenure comprised a review and reinterpretation of all available data. MLCs 272-275 (Pinnacles North) is defined by a large 'bullseye' positive aeromagnetic anomaly at an interpreted depth of 2000 feet (>600 meters). The area is characterised by east-west trending Warramunga Formation greywackes, siltstones and porphyry.

MLCs 272-275 do not show much potential for economical mineralisation at shallow (less than 100 meters) to moderate (less than 300 meters) depths. The depth of the Pinnacles North magnetic anomaly (>600 meters) rules out any inexpensive testing. The two nearby magnetic anomalies defined by ground magnetics survey may be associated with ore grade mineralisation, although the RAB geochemistry does not support this.

9. EXPENDITURE STATEMENT FOR THE PERIOD 31/1/96 TO 16/3/98

During the life of tenure, MLCs 272-275 incurred an estimated expenditure of $4,900. A breakdown of this expenditure follows (Table 1):

Table 1: Estimated Exploration Expenditure for MLCs 272-275 for the period 31/1/96 to 16/3/98

<table>
<thead>
<tr>
<th>EXPENSE</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Costs</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Overheads</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Drilling</td>
<td>$0.00</td>
</tr>
<tr>
<td>Assays</td>
<td>$0.00</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$500.00</td>
</tr>
<tr>
<td>Specialist Services</td>
<td>$0.00</td>
</tr>
<tr>
<td>Tenement Costs</td>
<td>$1,400.00</td>
</tr>
<tr>
<td>Research</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$4,900.00</strong></td>
</tr>
</tbody>
</table>
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

ADL (1985): **Prospect Book, Volume 1 of 1.** Australian Development Limited Internal Report 85006


Roach, LF (1975): **Completion Exploration Report for Exploration Licence 868, Pinnacles North Prospect, for the two Years ended 15/3/75, Volume 1 of 1.** Australian Development Limited Report to NTDMECR75/64 (75011).

APPENDIX ONE

BIBLIOGRAPHIC DATA SHEET
BIBLIOGRAPHIC DATA SHEET

REPORT NUMBER: TENNANT CREEK: 98038 ADELAIDE: 23183

REPORT NAME: FINAL REPORT FOR MLCs 272 TO 275 INCLUSIVE, PINNACLES NORTH PROSPECT, FOR THE PERIOD 31/01/96 TO 16/3/98, TENNANT CREEK MAP SHEET NO 53-14, VOLUME 1 OF 1.

PROSPECT NAME: PINNACLES NORTH

TENEMENT NUMBERS: MLCs 272 TO 275

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 SE53-14

1:100,000 MAP SHEET: TENNANT CREEK 5758

KEYWORDS: EXPLORATION REVIEW