EXPLORATION LICENCE 4676 MT. TURNER

NORTHERN TERRITORY

FINAL REPORT - 26TH SEPTEMBER, 1985

ILLOGWA CREEK SF 53-15

CR 86/027A

NORTHERN TERRITORY GEOLOGICAL SURVEY

R. J. TAYLOR,
ADELAIDE.

NOVEMBER 1985
CONTENTS

1. GENERAL STATEMENT

2. TITLE

3. FIELD INVESTIGATIONS
   3.1. Aeromagnetic Survey.
   3.2. Aboriginal Sacred Sites.
   3.3. Groundmagnetic Survey.

4. CONCLUSIONS

5. EXPENDITURE

FIGURES

1. EL 4676 Mt Turner, N.T.
   Location Map. A4-83

2. EL 4676 Mt Turner, N.T.
   Summary of Exploration A1-256
1. GENERAL STATEMENT

Exploration Licence 4676 was taken up to test the kimberlite potential of the area. An aeromagnetic anomaly, IC35a, was selected from the BMR published aeromagnetics as being a potential kimberlite. A low level aeromagnetic survey was flown over a small area three by four kilometres. This was followed up by a ground magnetic survey. The data was re-assessed at this stage and it was decided that further exploration was not warranted and the licence was relinquished on 26th September, 1985.

2. TITLE

Exploration Licence 4676 over an area of 16 blocks was granted to BHP Minerals Ltd. on 22nd November, 1984 for a period of six years. The area was relinquished on 26th September, 1985. Its location is shown in Figure 1.

3. FIELD INVESTIGATIONS

3.1. Aeromagnetic Survey

This area was selected for kimberlite investigation after an examination of the BMR Illogwa Creek 1:250,000 Aeromagnetic Map. A low level aeromagnetic survey was flown for BHP Minerals Limited by Aerodata Services Pty. Ltd. over an area of twelve square kilometres. The survey was flown at a height of 70 metres with 200 metre spacing between north-south flight lines. The total field magnetic contour map and stack profiles are shown on Figure 2.

3.2. Aboriginal Sacred Sites

The Sacred Sites Protection Authority and the Central Land Council were consulted with regard to sacred sites within the licence area.
This E.L. falls within the Simpson Desert Land Claim. The C.L.C. inspected the location of anomaly IC35a and advised that it contained no sacred sites.

3.3. Groundmagnetic Survey

This anomaly, IC35a, is composed of northern and southern sections. Only the southern part was fully covered by ground magnetics as it was considered that both parts are similar enough to be caused by the same rock type. The southern section was located by four 1 kilometre east west ground magnetic lines and one similar line was read from east to west across the northern section. Readings were taken every 10 metres using a Scintrex MP2 and an automatic base station magnetometer was used for diurnal corrections. The corrected ground magnetic contours and profiles are shown in Figure 2.

4. CONCLUSIONS

Upon completion of the ground magnetics the kimberlite potential of this anomaly was re-assessed. It was decided that further exploration was not warranted and the area was relinquished on 26th September, 1985.

5. EXPENDITURE

Expenditure debited to Exploration Licence 4676 was:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages and Salaries</td>
<td>$1,497</td>
</tr>
<tr>
<td>Field Support</td>
<td>218</td>
</tr>
<tr>
<td>Vehicles</td>
<td>202</td>
</tr>
<tr>
<td>Tenement Fees</td>
<td>142</td>
</tr>
<tr>
<td>Aeromagnetic Survey</td>
<td>1,500</td>
</tr>
<tr>
<td>Geophysics</td>
<td>870</td>
</tr>
<tr>
<td>Drafting</td>
<td>500</td>
</tr>
<tr>
<td>Central Land Council</td>
<td>333</td>
</tr>
<tr>
<td>Administration and Overheads</td>
<td>526</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$5,788</td>
</tr>
</tbody>
</table>