ROBERTSON RESEARCH (AUSTRALIA) PTY. LIMITED
REPORT NO. 555
PROJECT NO. 124

OPEN FILE

NORTHERN TERRITORY EXPLORATION
LICENSE 1358 ('FISH RIVER') ANNUAL
AND FINAL REPORT TO 7.VIII. 1979

MINES BRANCH
GEOLOGICAL LIBRARY.

by

C.M. Thomas, B.Sc.

OPEN FILE

Prepared for:

Sutton Group of Companies,
114 Bourke Street,
EAST SYDNEY, N.S.W. 2011

November 1979

NORTHERN TERRITORY
GEOLOGICAL SURVEY

CR79/165
5th November, 1979

Dear Sir,

Yearly Reports

Enclosed please find review of activities during the year ended 7th August 1979 for the following Exploration Licenses:

<table>
<thead>
<tr>
<th>E. L. No.</th>
<th>Holder</th>
<th>Expenditure Undertaken</th>
<th>Actual Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1355</td>
<td>Suttons Motors (Darwin) Pty. Ltd.</td>
<td>20,000</td>
<td>22,000</td>
</tr>
<tr>
<td>1356</td>
<td>Suttons Motors (Arncliffe) Pty. Ltd.</td>
<td>20,000</td>
<td>86,000</td>
</tr>
<tr>
<td>1357</td>
<td>Sydney Motor Auctions Pty. Ltd.</td>
<td>20,000</td>
<td>22,000</td>
</tr>
<tr>
<td>1358</td>
<td>Autopool Pty. Ltd.</td>
<td>12,000</td>
<td>4,000</td>
</tr>
<tr>
<td>1359</td>
<td>Gilbert &amp; Roach Pty. Ltd.</td>
<td>20,000</td>
<td>84,000</td>
</tr>
<tr>
<td>1597</td>
<td>Autopool Pty. Ltd.</td>
<td>6,000</td>
<td>8,000</td>
</tr>
<tr>
<td>1598</td>
<td>Autopool Pty. Ltd.</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>1599</td>
<td>Suttons Motors (Arncliffe) Pty. Ltd.</td>
<td>12,000</td>
<td>9,000</td>
</tr>
</tbody>
</table>

$113,000   $238,000

Yours faithfully,
SUTTONS MOTORS MANAGEMENT

F. P. Coyne
PROPERTY MANAGER
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TITLE</td>
<td>1</td>
</tr>
<tr>
<td>2. LOCATION OF THE AREA</td>
<td>1</td>
</tr>
<tr>
<td>3. PREVIOUS WORK</td>
<td>2</td>
</tr>
<tr>
<td>4. EXPLORATION WORK 1977-79</td>
<td>2</td>
</tr>
<tr>
<td>4.1 1977 - 1978</td>
<td>2</td>
</tr>
<tr>
<td>4.2 1978 - 1979</td>
<td>3</td>
</tr>
<tr>
<td>5. FUTURE EXPLORATION</td>
<td>3</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>4</td>
</tr>
</tbody>
</table>

## FIGURE

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Geographical Co-ordinates of EL 1538</td>
<td>1</td>
</tr>
</tbody>
</table>
Title

Exploration Licence No. 1538 was granted by the Deputy of the Administrator to Autopool Pty. Ltd., a member of the Suttons Group of companies, for one year on the 8th August 1977. The Minister for Mines and Energy granted renewal of the whole area for a further year from the 8th August 1978. The title covers 494 square kilometres.

Location of the Area

Figure 1: Geographical Co-ordinates of EL 1538.
Figure 1 provides the geographical co-ordinates of the Exploration Licence, which covers the southern part of Tipperary Station. The Licence covers a remote part of the Daly River Basin in the headwaters of the Fish River, which is a major tributary of the Daly River to the north. Access to the area is limited to station tracks - accessible only during winter months - via Tipperary Station from north of the Daly River, or by way of Dorisvale in the east.

Topographically it comprises typical low, thickly wooded, ground of the Daly River Basin.

3. PREVIOUS WORK

No previous Exploration Licences have been held over this area prior to the granting of such rights to Autopool Pty. Ltd. in 1977, nonetheless the Cambrian sediments in the area may well have been examined in reconnaissance surveys for phosphate (Barrie, 1978).

4. EXPLORATION WORK 1977-79

4.1 1977 - 1978

Exploration of the licence area during the first year comprised:

(a) airborne radiometric and magnetic surveys,

(b) photointerpretation using the National Mapping RC9 photo series, and

(c) geological review reports of the mineral potential of the area.

Dewar (1978) summarised and interpreted the major aspects of the regional airborne geophysical surveys and photointerpretation study, and a copy of that report has been submitted to the Mines Branch to which reference should be made.
1978 - 1979

No detailed field exploration has been undertaken in the area as a follow-up of previous surveys. However, further geological assessment of the area has been made in the light of the results of detailed exploration of the lead-zinc-barite-fluorite mineralisation in the Cambrian Tindall Limestone in the area to the north (EL 1357, Daly River).

FUTURE EXPLORATION

The geological data-base for the area is seriously inadequate to make an informed appraisal of the mineral exploration potential of the area. Nonetheless, the Cambrian Tindall Limestone sediments, if present, are prospective for lead, zinc and barite. Perhaps the greatest potential might be barite since this material is being exploited south of the area near Dorisvale, and probable faulting of the Cambrian sequence in the area might be conducive to structural rather than stratigraphic control of mineralisation.

Future exploration will require the following programme of work:

- geological mapping
- ground geochemical surveys and prospecting
- drilling of possible target areas.
REFERENCES
