TENNANT CREEK JOINT VENTURE
EXPLORATION LICENCE E.L.7410
"NOBLE'S SOUTH"

ANNUAL REPORT ON EXPLORATION COMPLETED DURING THE 12-MONTH PERIOD TO 15TH SEPTEMBER 1992

OPEN FILE

Prepared for
Roebuck Resources NL

by
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FIGURES

Scale

Figure 1  E.L. 7410 "Nobles South" Tenement Location Plan  1:100,000
1. INTRODUCTION

Exploration Licence 7410 comprises 15 graticular blocks and part graticular blocks. It covers a total area of about 30 square kilometres.

Good access can be gained via the graded Noble's Nob - Gosse River road.

About 95 percent of the tenement area is covered by soils which are very thick in many places. Exploration was deferred pending development of a cost effective surface sampling technique. A suitable method was identified late in the year being reported on and a sampling programme is planned for early 1993.

2. PROPOSED EXPLORATION METHODS

2.1 SURFACE SAMPLING

A large proportion of the Tennant Creek Goldfield area is soil covered. These soils are often thick and are generally transported.

A review of all published data relating to geochemical exploration done in the field prior to about 1987 was completed. This revealed that bedrock geochemical techniques appeared to be reliable as an indicator of near surface mineralisation. The review also suggested that conventional soil sampling methods produced reliable results only in areas of residual soil. Such areas are generally confined to elevated ground with scattered outcrop and are comparatively rare.

Since 1987 a number of explorers have conducted first pass exploration using the BLEG (bulk leach extractable gold) technique in which 2 to 5 kilograms of surface soil which has been screened to remove large rocks is treated in an unprepared state. All available data was reviewed and particular emphasis was placed on those of Newmont Australia Limited from sampling over areas now held by the Joint Venture.

It was noted that substantially high clearly anomalous BLEG results were relatively rare. Most of these were from samples proximal to either roads, well used tracks, or old mine workings. Some were located in areas of thin soil close to previously known mineralisation. Almost all of the anomalous BLEG values were discounted as being a product of contamination of one kind or another. Few anomalies had been followed up and then only by single line RAB traverses. In some areas of mineralisation recently located by Joint Venture Exploration the BLEG values were somewhat elevated but such 2 x background type values which fall within the normal distribution range could never be adjudged to be anomalous.
The writer is not aware of any discovery of Tennant Creek type mineralisation which can be attributed to BLEG survey results.

The BLEG sample technique has been concluded to be inappropriate to the Tennant Creek environment.

In the second half of 1991 Roebuck Resources NL commenced a series of orientation surveys in a number of areas of known mineralisation. These surveys included some areas of thick soil cover and one in which soil cover 5 to 15 metres thick included gravels in a drainage system.

Samples were collected from 30 centimetres depth, from the soil surface and from above the soil surface (biologically derived). The samples included various size fractions of soils collected in a variety of ways. This work continued throughout the early part of 1992 when the company’s consultant geologist, Dr. N. Marshall introduced some novel techniques of sample collection. These methods, resulting from Dr. Marshall’s considerable knowledge as both an analytical chemist and exploration geochemist remain the property of Marshall Geoscience Services. They are safeguarded by confidentiality agreements which have been signed by all members of the Roebuck exploration team.

The Marshall "M" sampling technique appears to be an extremely effective and powerful exploration tool which enables the identification of mineralisation in areas of both thick and thin soil cover.

### 2.2 BEDROCK GEOCHEMICAL RAB DRILLING

Anomalies resulting from surface sampling and areas of favourable structure will be followed up by bedrock sampling.

### 3. PROPOSED EXPLORATION PROGRAMME

FOR THE YEAR ENDING 15TH SEPTEMBER, 1993

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Surface sampling (~ 500 samples)</td>
<td>12,500</td>
</tr>
<tr>
<td>Analyses</td>
<td>6,500</td>
</tr>
<tr>
<td>Interpretation and reporting</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$22,000</strong></td>
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