Tenements and Location

Exploration Licences 5448 and 5457 comprised the Fletchers Creek and Muldiva Prospects. The Exploration Licences had a combined area of 84 square kilometres and lay 120 kilometres west-southwest of Pine Creek.

Their location was in the remote extreme southwest of the Pine Creek Geosyncline which is very difficult to access during the wet season (see Figure 1). Accordigly the district is relatively unexplored and past mining activity has been small scale and sporadic.

Geological Setting

Geologically the areas comprise quartz sandstone, greywackes and siltstones belonging to the Chilling Sandstone and Noltenius Formation of the upper Early Proterozoic succession, which are intruded by the Soldiers Creek Granite in the south and Allia Granite in the north. These rocks are overlain unconformably by flat lying Late Proterozoic, Palaeozoic and Cretaceous sediments. The region is affected by major northeast and northwest trending faults. Figure 2 shows the main geological features of the areas.

Previous Exploration and Production

The main known mineral deposits are gold at Fletchers Gully and tin at Muldiva, Buldiva and Collia.

The old gold mining area at Fletchers Gully was excluded from the Exploration Licence. The mine operated intermittently from 1905 to 1935 yielding approximately 2,500 ounces of gold from high grade, narrow, but persistent quartz veins occupying shears in carbonaceous shale in the axial region of an anticlinal fold.

In its structural and stratigraphic setting the mine is analogous to many other gold deposits in the main Pine Creek field including Pine Creek and Goodall.
At Muldiva, Buldiva and Collia cassiterite was worked between 1922 and 1929 for a recorded production of 43.6 tons of tin. At Muldiva-Buldiva tin occurs in pegmatites which cut granite and Noltenius Formation in a zone which is probably continuous over an 800 metre length partly concealed by Cretaceous capping between the two locations. Pegmatites were up to 1.5 metres wide and 45 metres long. Cassiterite was also won from detrital deposits in the basal Cretaceous and from Cainozoic alluvials. Collia was an alluvial field and no primary views were discovered.

Conclusions

In view of the favourable geological setting of the known gold mineralisation, and the relatively remote unexplored nature of the country, it is considered that the Exploration licences had prospects for new gold discoveries particularly gold deposits of the quartz stockwork type along anticlinal hinge lines. The properties were situated at the southern end of a major belt of tin/tantalite pegmatitic mineralisation which continues north for 200 kilometres to the Bynoe area near Darwin. The known tin occurrences have been relatively little developed and exploration has been very limited. There is potential for discovery of new tin and possibly tantalite resources in both hardrock and detrital situations.

Exploration Programme

Systematic reconnaissance exploration principally for gold was considered appropriate for the first year and should have included the following work:-
1. Preparation of photogeological base maps at 1:10,000 scale.
2. Geological mapping and rock chip sampling of quartz, ironstone and gossan, with assay for gold, arsenic and base metals.
3. Drainage geochemical surveys taking pan concentrates, bulk sediment (BLEG) samples, and minus 80 mesh sediment sampling, to be analysed for gold, tin, arsenic and base metals.

Exploration Budget

It was estimated that this work would cost $20,000 for EL5448 and $20,000 for EL 5457.

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,000</td>
<td>Aerial Photography</td>
</tr>
<tr>
<td>8,000</td>
<td>Airborne Magnetics &amp; Radiometrics</td>
</tr>
<tr>
<td>5,000</td>
<td>Geological Reconnaissance, Mapping &amp;</td>
</tr>
<tr>
<td></td>
<td>Outcrop Sampling</td>
</tr>
<tr>
<td>7,000</td>
<td>RAB Sampling</td>
</tr>
<tr>
<td>4,000</td>
<td>Assaying</td>
</tr>
<tr>
<td>3,000</td>
<td>Transport &amp; Accommodation</td>
</tr>
<tr>
<td>2,600</td>
<td>Consumables</td>
</tr>
<tr>
<td>4,400</td>
<td>Administration</td>
</tr>
</tbody>
</table>

$40,000
Summary of First Year Exploration

As advised in my letter to Mines and Energy (copy attached) the joint venture partner Monsonia Nominees were unable to meet their financial obligations under the expenditure covenants of the exploration licences. A further joint venture agreement was actively pursued to overcome the cash shortages due to Monsonia Nominees liquidity problems. Unfortunately this did not come to fruition.

The services of prospector Mr. Dave Langley were engaged during the 1988 'Dry Season' but due to mechanical problems with his vehicle he was forced to abandon the trip only a few kilometres from the exploration licence areas. A later trip proved impractical due to other work commitments delaying his availability and subsequent rain in the area.

Two previous field trips to the area were carried out earlier in the year for initial reconnaissance purposes and some rock chip samples and panned concentrates were obtained but were not of any significance.

Investigations revealed the possibility of platinum base mineralization in the vicinity of an outcrop of dolerite S.S.West of the Muldiva/Buldiva mine sites.

A study of aerial photographs indicated the possibility of an extension of the fault line through Fletchers Gully mine site South East into E.L. 5488.

Mr. Langley was to have initially investigated those two possibilities in particular.

Trusting the foregoing is satisfactory and that any future applications will be considered favourably.

Yours faithfully

Neville J. Manhire
EXPLORATION LICENCES
5448 & 5457

GEOLOGICAL MAP

FIGURE 2
The Registrar
Department of Mines and Energy
G.P.O. Box 2901
DARWIN NT 0801

ATTENTION: TITLES OFFICER

Dear Sir,

RE: EXPLORATION LICENCES 5448 & 5457

Reference is made to your letter ref: EL54448 of 16.6.89 and EL5457 of 20.6.89 wherein you have advised me of the cancellation of the abovementioned exploration licences.

Please note that due to Monsonia Nominees Pty. Ltd. not being able to meet their financial obligations under the joint venture agreement I had no option but to allow the licence to be cancelled.

You are assured that it was my genuine intention to meet the expenditure covenants for both licences.

I trust that the Department of Mines and Energy will take the foregoing into consideration for any future dealings they have with me.

Yours Faithfully

Neville J. Manhire

N.J. Manhire
P.O. Box 41635
CASUARINA NT 0811

Rec'd 22/9/89