ANNUAL REPORT
E.I. 2088 COX PENINSULAR
TO 9TH JANUARY, 1984

FOR GREENEX
A DIVISION OF GREENBUSHES TIN LTD.

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1. **INTRODUCTION**

This report details work carried out by Greenbushes Tin Ltd., on Exploration Licence 2088 during the period to the 9th January, 1984.

The work was carried out by Company Geologists J. Brigden and R. Birrell under the supervision of Exploration Manager R. Thomson.

The lease covers an area of 77.3 square kilometres between the Finniss River and Bynoe Harbour approximately 50 kilometres south west of Darwin (Figure 1.)

2. **LEASING**

The registration of transfer of Exploration Licence 2088 from K.L. Day to Greenbushes Tin Ltd., took place on the 21st February, 1983 and the Licence Document was received by Greenbushes Tin Ltd., on the 6th May, 1983. Exploration Licence 2088 expired on the 9th January, 1984 and a renewal application was made on the 15th November, 1983.
5. HISTORY

Within Exploration Licence 2088 the Leviathan is the only mine on which production data is available, although several other outcrops of pegmatite are known. The Leviathan was discovered in 1886 by C. Clarke. By 1890, 400 tonnes of ore had been mined for two tonnes of cassiterite. (ie. 0.5% Cassiterite recovered). In 1900, the Bynoe Harbour Tin Mining Company was formed to work the Leviathan. The lode was 15 feet (4.6 metres) wide at the surface, but narrowed to six feet (1.83 metres). The lease was abandoned in 1909, with a recorded production of 170 tonnes of concentrate. Although production records were sketchy, the Leviathan was second to Hang Gong (189.5 tonnes) in the mineral field. No tantalite was recorded.
4. WORK CARRIED OUT

Initially a base sheet of Exploration Licence 2088 was prepared. This was followed up with ground work carried out by helicopter and 4 x 4 drive ground survey.

4.1 Using Aerial Photographs, Bynoe runs 8W 111 - 117
    9W 096 - 102

A 1:50,000 scale base map was prepared to outline main drainages, access roads, outcrop patterns and geological trends, and topographic features. (Figure 2.)

4.2 The base map was used to select sites within Exploration Licence 2088 for geochemical bedrock evaluation. Sixteen samples were collected as part of a regional geochemical investigation. At this time results of these samples have not been reported. The locations of these samples are shown in Figure 2.

4.3 R. Birrell carried out a chain and compass mapping programme in the vicinity of the Leviathan Mine, but lack of outcrop due to alluvial deposits, tailings disposal areas and weathering of the pegmatite severely restricted this work. The results are shown in Figure 3. Visual inspection of dumps suggest the deposit is a tin occurrence with minor tantalite.
5. **1984 PROGRAMME**

The 1984 programme will be carried out in conjunction with an extensive exploration and mineral development programme being carried out by Greenbushes Tin Ltd., in the Cox Peninsular area.

The proposed programme will consist of:

4.1 Helicopter supported geological mapping to confirm the granite - metasediment contact west of the Leviathan Mine. An investigation of possible country rock rafts within the batholythic granite in the west of Exploration Licence 2088.

4.2 Costeaming, mapping and sampling of the Leviathan tin/tantalite deposit.

4.3 Power auger drilling of the Leviathan Creek to investigate potential alluvial accumulations in this drainage system.
LOCALITY PLAN
Showing E.L. 2088

Fig. 1