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E.L. 19/77 GREAT NORTHERN PLAIN

AND

CONSOLIDATED LEASE 42M/76

QUARTERLY EXPLORATION PROGRESS REPORT  
FOR THE PERIOD ENDING 11 JANUARY, 1983.

HELLYER MINING & EXPLORATION PTY. LTD.

Submitted by S.D. Lee  
Snr. Geol. for Hellyer Min. &  
Expl. P/L

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Figure 1 Tenement Map showing Mineralized Zones.

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## 1.0 TENEMENT STATUS

The current title to E.L. 19/77 expires on 11 April, 1983 and C.M.L. 42M/76 is valid until 31 October, 1997.

Under the terms of an agreement with Mineral Holdings Australia Pty. Ltd. (MHA), Hellyer is required to hold on behalf of MHA all its right title and interest in any non metallic minerals discovered in the licence area.

MHA is now contemplating undertaking exploration for clay minerals within the licence area and accordingly, Hellyer has applied for an amendment to the licence so as to include stone as defined in the Mining Act (1929).

The location of E.L. 19/77, C.M.L. 42M/76 and adjacent E.L.A. 17/82 are shown on Figure 1.

## 2.0 WORK COMPLETED

### 2.1 Environmental Studies

A programme of environmental studies has been planned for the combined area of E.L. 19/77, C.M.L. 42M/76 and E.L.A. 17/82. This programme has now been submitted to and approved by the Department of the Environment and the Department of Mines and comprises the following work:

- (a) **Vegetation Survey:** The area in question contains heath species considered by the Tasmanian Conservation Trust to be one of the last remnants of a distinctive heath community and preservation of this heath was recommended in "The Disappearing Heath" by Dr. J. B. Kirkpatrick. The peripheries of both the important heathland areas and the most likely exploration/mining areas appear to be closely adjacent but not overlapping and it is intended to employ Dr. Kirkpatrick and/or his associates to undertake a survey designed to provide information on the specific nature and location of heath and wetland areas.
- (b) **Hydrological Survey:** A surface and subsurface hydrological survey of the operational area and of areas within the licence that may have a bearing on operational and conservation matters will be undertaken.

It is hoped that this survey will provide information on the possible impact of mining on water tables and consequently on the vegetation of the heath and wetland as well as providing some geological engineering input concerning water table elevation throughout the year and the ease/difficulty of water table control.

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It is envisaged that Dr. Adrian Bowden of Australian Groundwater Consultants Pty. Ltd. will undertake this work. Dr Bowden is familiar with the Ringarooma River area and has worked with Dr. Kirkpatrick in the past.

- (c) Archaeological Survey: A survey will be undertaken in order to produce a report on the type, density and distribution of archaeological sites within the licence area. It is intended that the results of the survey will be used to formulate a predictive model (based on a 15% random sample) which can be used to assess and minimise the impact of future exploration and mining operations on the archaeological resources.

It is intended that a professional consultant archaeologist, Ms. Angie Lister will undertake this survey in consultation with Don Ransom of the National Parks and Wildlife Service (Sandy Bay).

Aerial photo mosaics have been prepared for use during the environmental surveys and the above-mentioned consultants have been briefed as to the survey requirements.

## 2.2 Commercial Studies

Further to the preliminary feasibility studies reported in the previous Quarterly Report, the Company has completed an assessment of the commercial viability of a dredging operation based upon the potential reserves in the E.L. 19/77 - C.M.L. 42M/76 - E.L.A. 17/82 area.

A principal conclusion of the study was that an early start up for the project appears unlikely. Current export prices are below those estimated to be required for a viable operation, export quotas are in operation and there are significant surplus stocks of tin on the world market. Quotas seem likely to remain in force for at least another year and price projections from the Metals Research Unit and the Institute of Applied Economic and Social Research indicate that prices are likely to remain depressed at less than A\$13,000/tonne for the next 3 or 4 years (1986/87).

In the long term the Company considers that there is potential for development of a moderate size low grade operation.

## 2.3 Hydrology

Water table elevation measurements were made at 70 locations during October as part of an on-going monitoring of water table conditions in the licence area.

## 2.4 Meeting with Australian Heritage Commission Representatives

Company representatives met the Assistant Director (Dr. Nicholls) and Commissioner B. Davis from the Australian Heritage Commission and Dr. R. Groves (Assessor appointed by the A.H.C. from the CSIRO) in Launceston on 24 November, 1982 to discuss the Commission's proposal to list a portion of the Great Northern Plain in the National Register and the Company's objection to that proposal.

The Commission's representatives expressed favourable reactions to the Company's attitude, its proposal for environmental studies and its choice of environmental consultants. A field inspection of the main zone of potential land use conflict indicated only minor areas of heath vegetation and the Commissioner expressed confidence that, should registration of a part of the area be considered desirable, then the boundaries of that area could be chosen so as to cause a minimum of hindrance to both mining and environmental interests.

## 2.5 Office/Storage Facilities

A timber office block and tin storage shed have been purchased in order to provide facilities for future field work on the tenements. These buildings are currently located on M.L. 84M/70 belonging to Kibuka Mines Pty. Ltd., close to the southern boundary of C.M.L. 42M/76.

## 3.0 PROPOSED WORK

### 3.1 Churn Drilling

Drilling has been suspended since August, 1982 due to a combination of factors including access conditions, concern over environmental issues relating to the Australian Heritage Commission and the Tasmanian Conservation Trust and consideration of the status of the project by Company management. Figure 1 indicates the extent of previous drilling within the combined tenement area.

It is hoped to resume churn drilling in the first quarter of 1983 and a programme of 37 drillholes, designed to test the continuity of a previously outlined zone of higher-grade mineralization and to search for extensions to areas of known mineralization, has been formulated.

### 3.2 Environmental Studies

The programme of environmental studies outlined in Section 2.1 above will be implemented when approval to resume exploration activities has been obtained.

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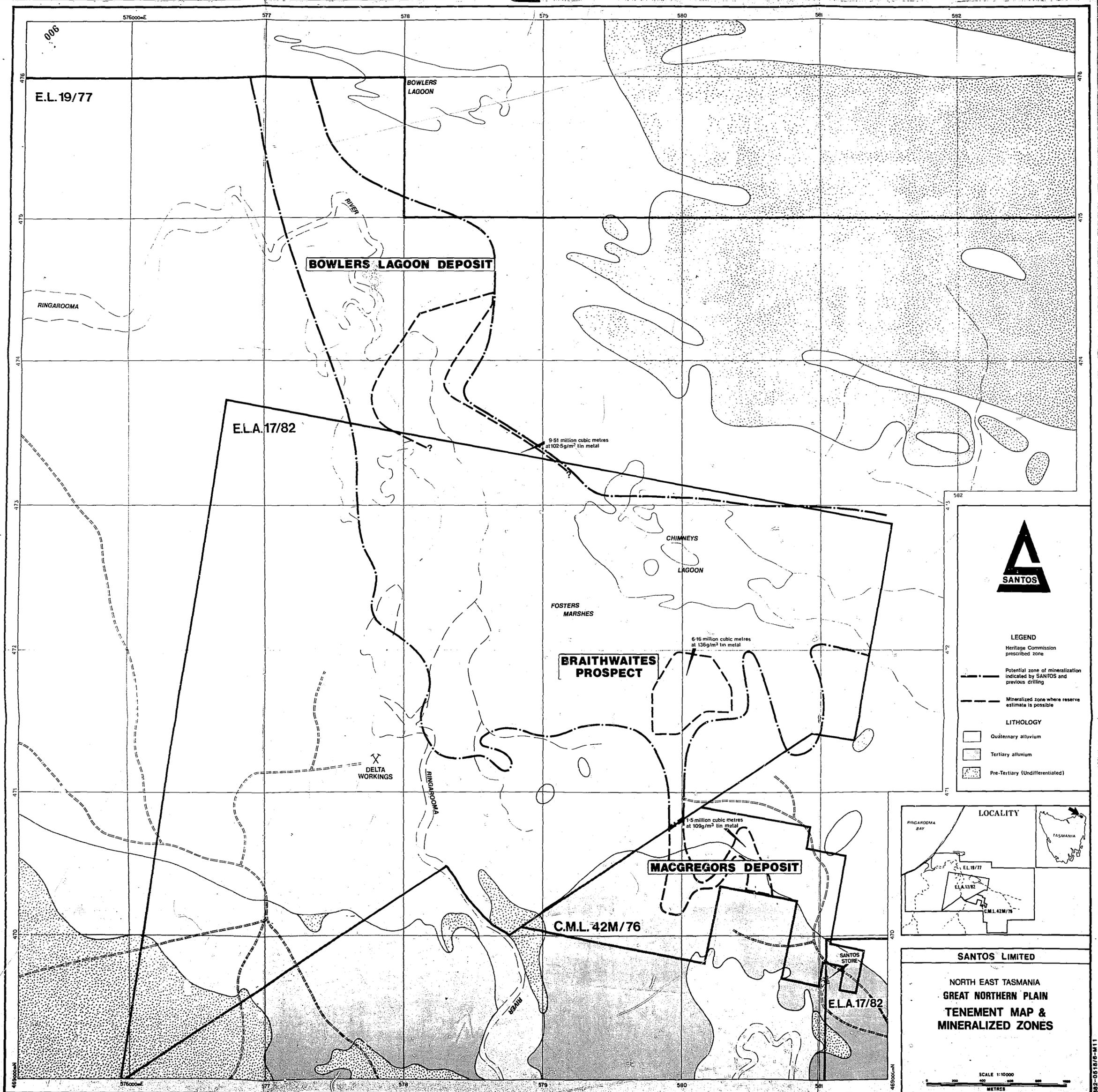
3.3 Hydrological Studies

Monitoring of water table elevations will continue in conjunction with other field work.

4.0 EXPENDITURE

Expenditure during the 3 months ending 31 December, 1982 has been as follows:

<u>Item</u>	<u>E.L. 19/77</u>	<u>C.M.L 42M/76</u>
Salaries	1096	-
On Costs	328	-
Aust. Travel & Accommodation	(238)	196
Direct Purchase	438	112
Rent	-	140
Utilities	-	10
Telephone	86	111
Data Reproduction	102	-
Drilling	120	30
Laboratory Services	1190	-
Licence Fees	722	34
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SUB TOTALS	\$ 3844	633
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TOTAL	\$ <u>4477</u>	

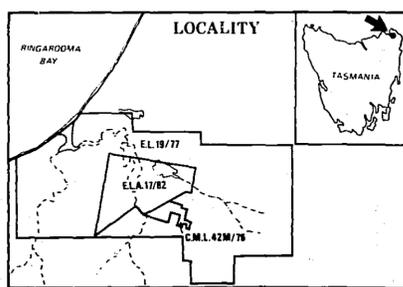


**LEGEND**

- Heritage Commission prescribed zone
- Potential zone of mineralization indicated by SANTOS and previous drilling
- Mineralized zone where reserve estimate is possible

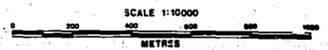
**LITHOLOGY**

- Quaternary alluvium
- Tertiary alluvium
- Pre-Tertiary (Undifferentiated)



**SANTOS LIMITED**

**NORTH EAST TASMANIA  
GREAT NORTHERN PLAIN  
TENEMENT MAP &  
MINERALIZED ZONES**



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