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REPORT No. KI/84/1

**MICROFILMED**

ANNUAL REPORT TO THE MINES DEPARTMENT

E.L. 15/66

By

S.Grieve Brown

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INTRODUCTION

1.

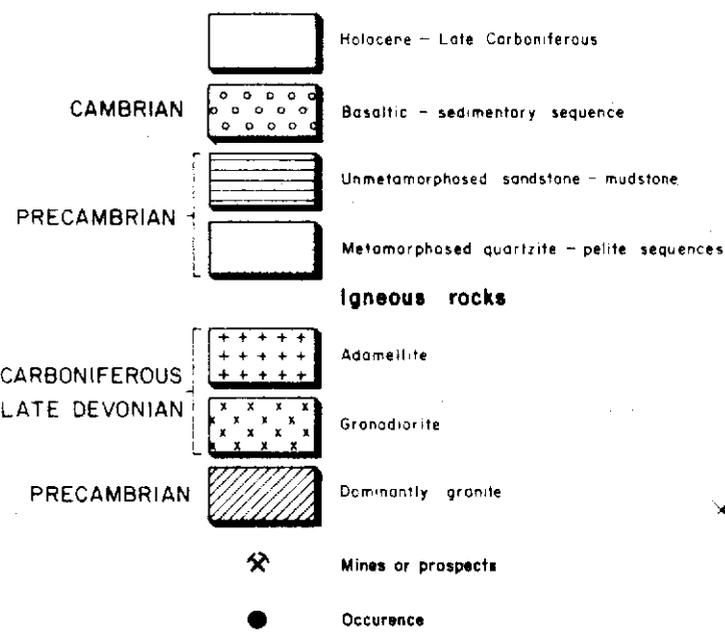
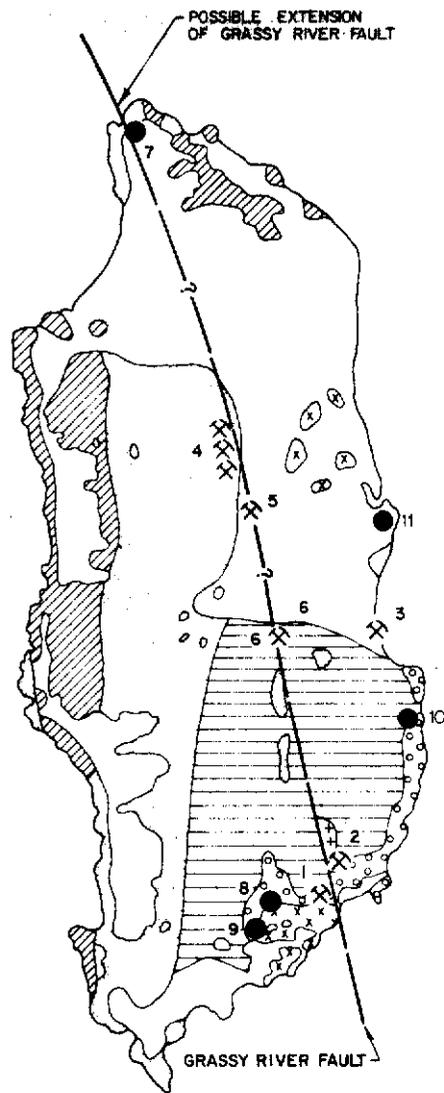
Exploration Licence 15/66 is held by Warman Services Limited in respect of an area of 130 square kilometres in south-east King Island.

In October 1983, this licence was amalgamated with E.L.21/78 and the combined area reduced by 30 sq km to the current size. The Licence covers the Bold Head Adamellite and Grassy Granite Contact Zones (Figures 1 and 2).

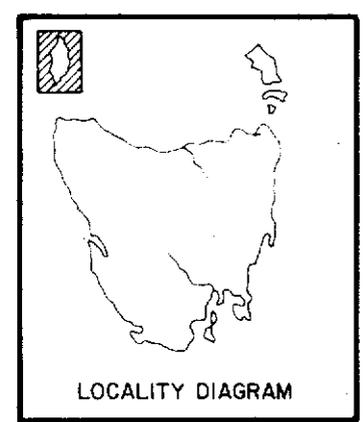
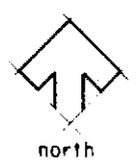
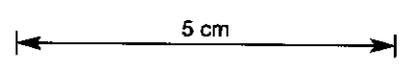
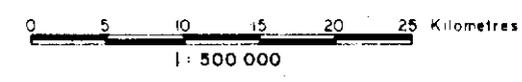
Mineral Lease 17M/79 with an area of 22.98 square kilometres, covering the Dolphin and Bold Head Mine areas is included within the boundaries of E.L. 15/66.

Exploration within E.L.15/66 has been severely restricted due to the current economic situation. Data obtained from in mine drilling at Dolphin has allowed some reassessment of the exploration potential adjacent to the Grassy River Fault to be made.

This report is written to record the current ideas on exploration potential at Grassy and to put forward a proposed exploration programme for the next twelve months.



1. DOLPHIN/Nº1 OREBODY - W, Mo
2. BOLD HEAD - W, Mo
3. NARACOOPA - Beach Sands
4. REEKARA - W, Sn
5. HAWKES ALLUVIAL - Sn, W
6. FRASER RIVER - Au
7. VICTORIA COVE - W
8. LOOP ROAD - W, Mo
9. INVESTIGATOR 21 - W, Mo
10. BARRIER CREEK - Au, Ag, Pb, Cu, As
11. COWPER POINT - Beach Sands



KING ISLAND GEOLOGICAL MAP  
FIGURE 1



SUMMARY

2.

Since the last report (Brown, September 1983), only very minor work has been carried out on E.L.15/66 (Figure 3).

Economic considerations precluded any diamond drilling work and severely restricted all other exploration effort.

The only practical work carried out within the mine areas, aimed directly at exploration of untested areas, has been the drilling of two percussion drill holes from the S8 (-290mRL) drive in the Lower Wedge.

Construction of the 1:1,000 and 1:2,000 scale cross sections, long sections and plans for the whole Bold Head-Investigator 1 area was commenced.

Reinterpretation of the diamond drill cores from the Lower Wedge area in Dolphin mine was undertaken to more accurately position the Grassy River Fault in that area.

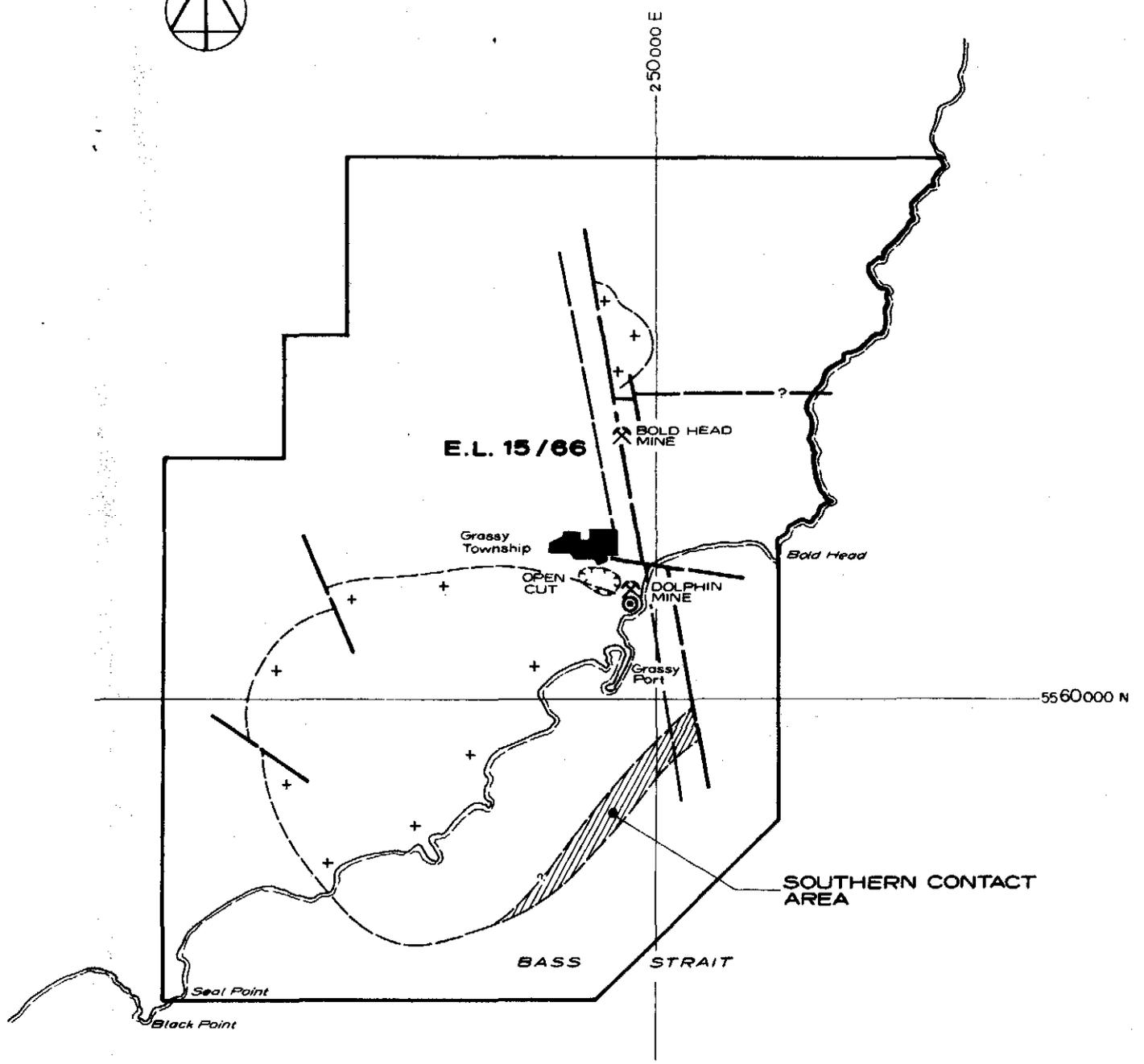


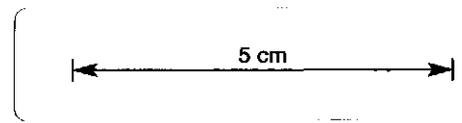
figure 3

**EXPLORATION LICENCE 15/66**  
 SHOWING LOCATION OF WORK  
 CARRIED OUT TWELVE MONTHS TO 30-9-84

Scale 1:100 000

**LEGEND**

⊕ - PROBE DRILLING



DISCUSSION

3.

The various areas within E.L.15/66 considered to have potential for economic deposits of scheelite are shown on figure 4. The names used have been defined in previous reports (Brown, 1982 and 1983).

a) Grassy River Fault/Decline Prospect

The re-examination of the cores from the Lower Wedge area, W50 and W54 stopes, has shown that the true position of the Grassy River Fault is considerably further east than previously interpreted.

This realignment of the fault has the effect of eliminating the westward bend in this fault shown in previous reports (Brown, 1982, KI/82) and hence increases the separation between this fault and the Decline Fault in the southerly direction.

Such an increase in separation of these two faults enhances the possibility that the inter-fault zone will contain mine series rocks and hence increases the potential for the Decline Prospect (South) area to contain economic mineralization.

Any increase in the separation between the Decline and Grassy River Faults must also increase the chances of continuity between the known mine series rocks at the Dolphin Mine and the mine series rocks inferred as present at the southern granite contact (TEREDO).

The two percussion drill holes, drilled east from the S8 Lower Wedge-290mRL drive (figure 5), to test the interfault zone, encountered no major drilling difficulties. This suggests that the Decline Fault in this area is not the major breccia zone which occurs further north. In addition, examination of the chips indicated that the rock types encountered east of the Decline Fault were mine series containing at least some scheelite mineralization.

It is considered that these holes may have intersected 'B' lens type biotite proxene hornfels with minor scheelite. This would be compatible with the current geological interpretation of this area which predicts possible 'C' lens rocks at about -320 to -350mRL.

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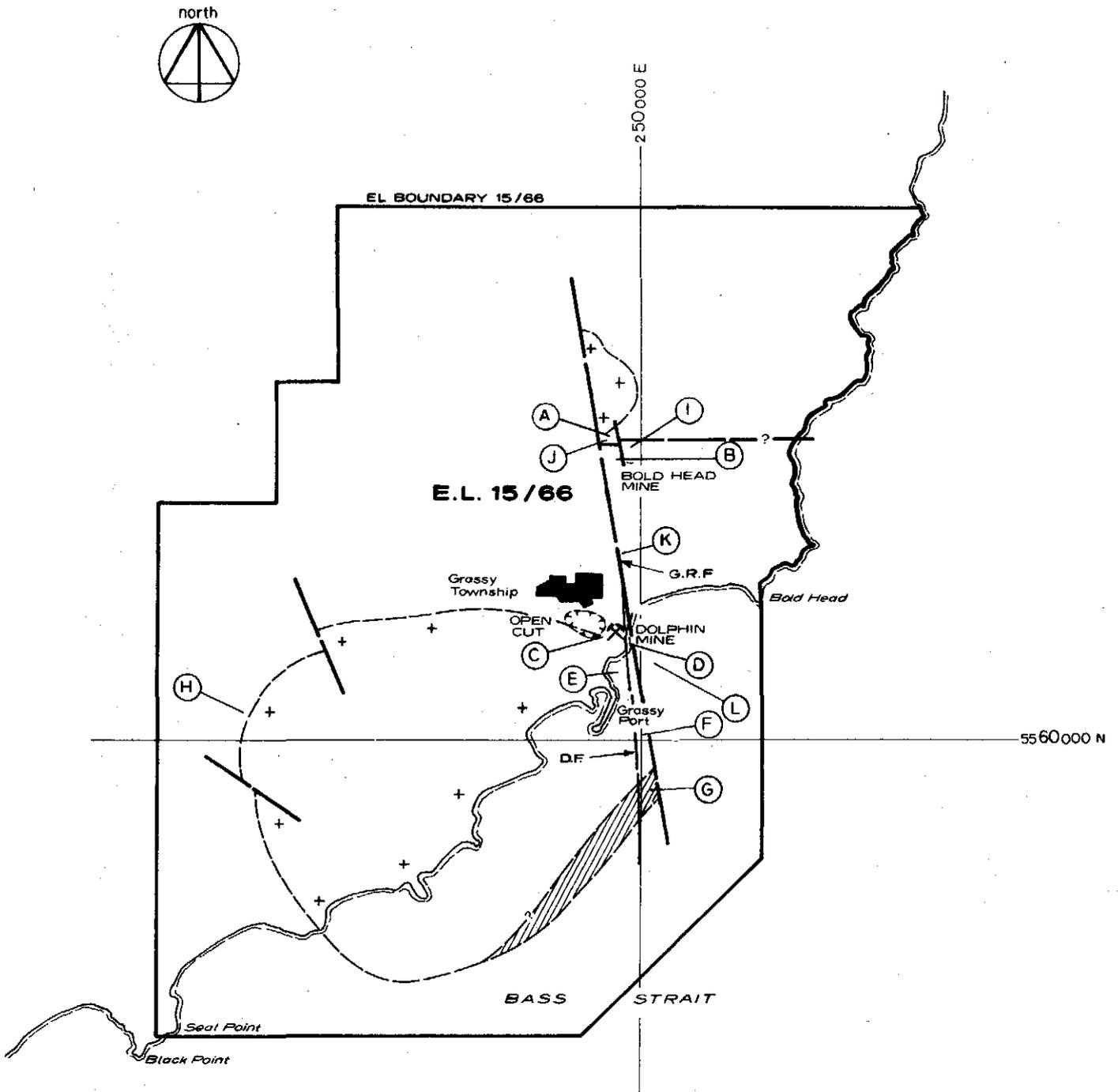


figure 4

Scale 1:100 000

**LEGEND**

- G.R.F. - GRASSY RIVER FAULT
- D.F. - DECLINE FAULT

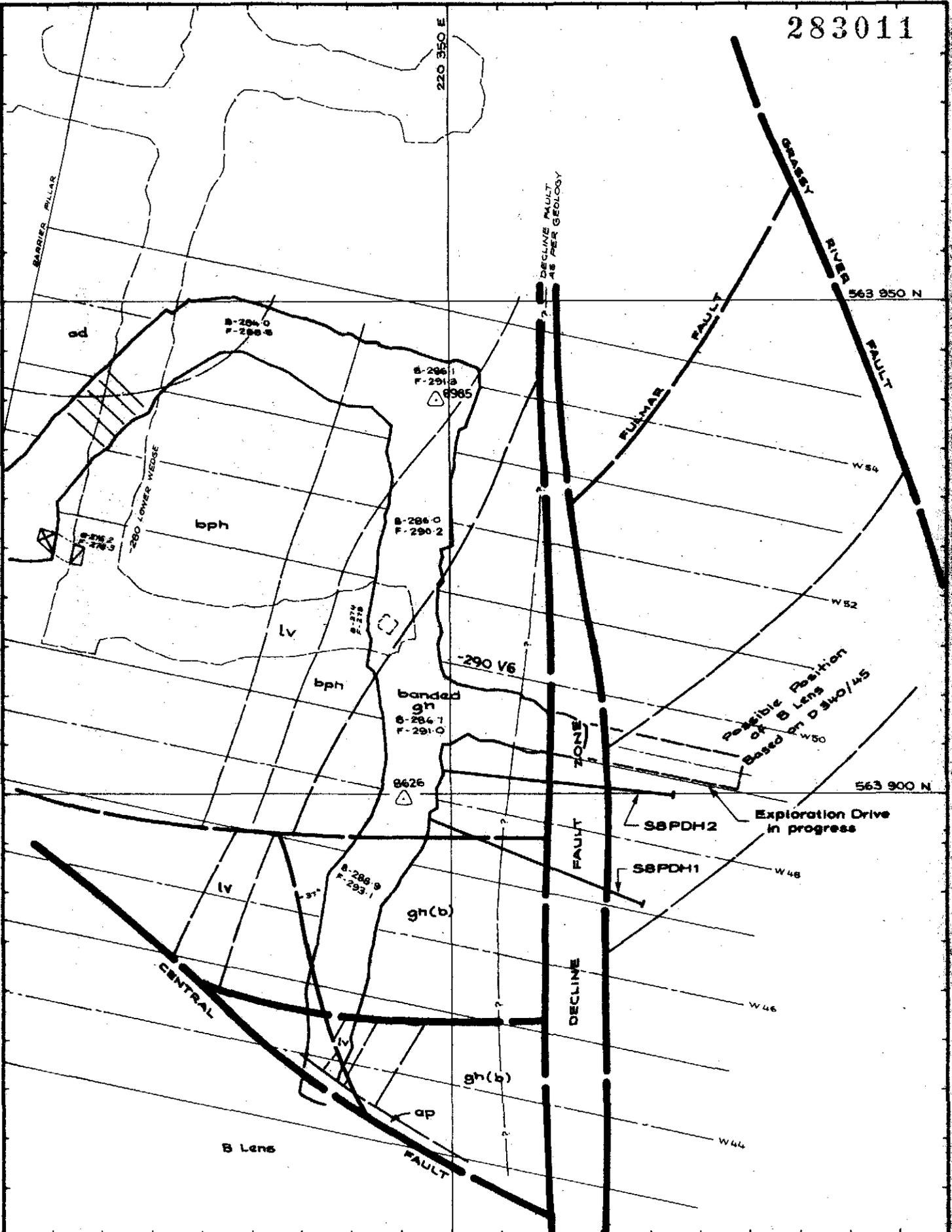
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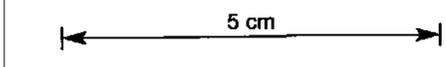
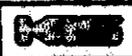
**EXPLORATION LICENCE 15/66  
SHOWING EXPLORATION POTENTIAL**

CATEGORY I	PROSPECT	A	BOLD HEAD MINE
		C	DOLPHIN MINE
		E	SOUTHERN OREBODY
		H	INVESTIGATOR 21
CATEGORY II	PROSPECT	B	BOLD HEAD SOUTH
		D	DECLINE OREBODY
		G	'TEREDO'
CATEGORY III		F	'WINDOW'
		I	INVESTIGATOR I
		J	BOLD HEAD N°4 AREA
		K	'HORST'
		L	DOLPHIN EAST

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REF PLAN 	GEOLOGY		1 : 500 SCALE	 KING ISLAND SCHEELITE GRASSY KING ISLAND
	SURVEY			
	PLANNING		DOLPHIN MINE LOWER WEDGE STOPE -290 m ZONE	
	ROCK.MEC.			
	GRADE CON.			
	DRAFTING			
T.S.S.		FIGURE 5		

A drive, currently being pushed east from the S8, is planned to pass through the Decline Fault into the Decline Prospect (South) area. This drive will allow a better understanding of the geology and, should the subsequent re-interpretation of the area warrant it, serve as a diamond drill site for holes to test for a presence of 'C' lens within that fault block.

b) Bold Head South Area/Investigator 1

Construction of the 1:1,000 and 1:2,000 scale sections and plans over this area was commenced. It is intended to construct the level plans at 100m intervals. Rough drafts of the level plans have been completed and these have shown that the geological interpretation presented previously (Brown, 1983), is consistent with all available data.

Modelling of the subsurface contours of the contact and the base of the volcanics, using the results of the gravity and magnetic surveys carried out over this area in 1982/83, has to date not been very successful as too many unknowns exist as to the distribution of rock types outside of the Bold Head Mine area.

The use of stratigraphic diamond drilling in the area south of Bold Head mine, when economic conditions permit, will be a major aid to unravelling the structure of this area.

The south eastern portion of King Island containing the Grassy and Bold Head Granite contacts is still considered to be an area of high potential for additional scheelite resource. All work carried out over the past two years has served to increase confidence in this assessment.

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FUTURE WORK PROGRAMME

5.

The actual work programme to be carried out over the next 12 months will be dependent on the availability of funds for expenditure on major exploration work.

The following items are currently planned for the next twelve months.

1. Complete the study of the Phase II geophysical data and if possible produce preliminary plans of the theoretical base of the volcanics and granite contact.
2. Assess the geophysical interpretation in the light of the currently available drilling data and reinterpret as required.
3. Complete construction of the 1:1,000 and 1:2,000 scale sections and plans for the Bold Head/Investigator 1 area.
4. Dependent on the ability to achieve access through the Decline Fault zone at Dolphin Mine, diamond drill 2 holes to test the stratigraphy of the zone between the Decline Fault and the Grassy River Fault.

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EXPENDITURE

Exploration Licence 15/66 twelve months to 31st August, 1984.

Geology	\$1,987.00
Drafting	500.00
Drilling	Nil
Licence Renewal	3,400.00
Geophysics	644.00
Field Expenses	836.00
Administration	715.00
	<u>\$8,082.00</u>

The drilling figure is Nil as although the results obtained from the percussion drilling in the Lower Wedge were directly relevant to the exploration of E.L.15/66, the holes were drilled primarily for mining purposes.

The drafting figure is estimated, since some was carried out by King Island Scheelite staff, and not costed separately to mine oriented work.

S.Grieve Brown,  
Supervising Geologist

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7.

- |            |      |   |
|------------|------|---|
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| Brown S.G. | 1982 | Annual Report to the Mines Department E.L.21/78. Unpublished Company Report.                          |
| Brown S.G. | 1982 | An assessment of the Overall Tungsten Potential of King Island. Unpublished Company Report.           |
| Brown S.G. | 1983 | Annual Report to the Mines Department E.L.15/66. Unpublished Company Report.                          |