

000

J of M	A.O.	C.G.	E.O.	D.S.M.E.
				Registrar
Received - 8 SEP 1982				E & IL
DEPT. OF MINES				
REF. No. 7267/82				

MICROFILMED

EXPLORATION LICENCE 19/78

WELDBOROUGH

FINAL REPORT

82-1865

OPEN FILE

Distribution: Department of Mines
Hawthorn
Burnie

Compiled by: J. R. Sise
Project Geologist
August, 1982

TABLE OF CONTENTS

	<u>Page No.</u>
SUMMARY	1
INTRODUCTION	1
INITIAL PROGRAMME	2
CREAM CREEK MAPPING PROGRAMME	2
CREAM CREEK DRILLING PROGRAMME	2
REGIONAL MAPPING PROGRAMME	3
FURTHER EXPLORATION	3
SURRENDER OF THE EXPLORATION LICENCE	3
REHABILITATION	4
CONCLUSIONS	4
EXPENDITURE	5
REFERENCES	6

LIST OF PLATES

<u>Plate No.</u>	<u>Title</u>	<u>Scale</u>
WELD 2 (In text)	Locality Plan	1:100,000
WELD 2A (In text)	Locality Plan	1:100,000
WELD 3 (In text)	Summary Plan	1:50,000

SUMMARY

This report represents the final report on Exploration Licence 19/78 (Weldborough) and is submitted following written notification being given to the Director of Mines on 8th July, of Aberfoyle Exploration Pty. Ltd.'s intention to surrender the licence.

In accord with the requirements of the Department of Mines for final reporting, a summary of exploration during the term of the licence is presented, with reference to the relevant six monthly reports for details of the appropriate exploration activities.

During the period of tenure of the licence, geological mapping, rock chip sampling and percussion drilling were utilised to define and partially test two areas of weak greisen veining. Further exploration would have required extensive drilling as the best means of adequately testing these areas of very poor exposure. Attempts to attract a joint venture partner to contribute towards the cost of a drilling programme were unsuccessful.

In view of the limited potential of the area, the low tenor of greisen hosted tin mineralisation, and the remoteness of the region from other Aberfoyle activities, the decision was taken to relinquish the property.

INTRODUCTION

Following a review of literature and a regional evaluation of the economic potential and geochemical exploration of the Blue Tier Batholith (Young, 1979a), aimed at defining large tin-bearing greisen sheets of the Anchor Mine-type (Groves & McCarthy, 1978), Exploration Licence 19/78 Weldborough of 50 square kilometres (Fig. WELD 2) was marked out on the 8th September, 1978. An additional area of 48 square kilometres immediately adjacent to E.L. 19/78 was marked out on the 21st April, 1980, as E.L. 23/80. On the 9th August, 1980, Exploration Licence 19/78 was renewed for a further term and increased in area (98 sq km) to include the ground applied for as Exploration Licence 23/80 (Fig. WELD 2A).

680004

TN

545000N

544000N

570000 E

580000 E

5 cm



Aberfoyle Exploration Pty Ltd

Drawn: R.J.E.

Traced:

Checked:

Revised by: Date:

NORTH EAST TASMANIA
WELDBOROUGH EL. 19/78

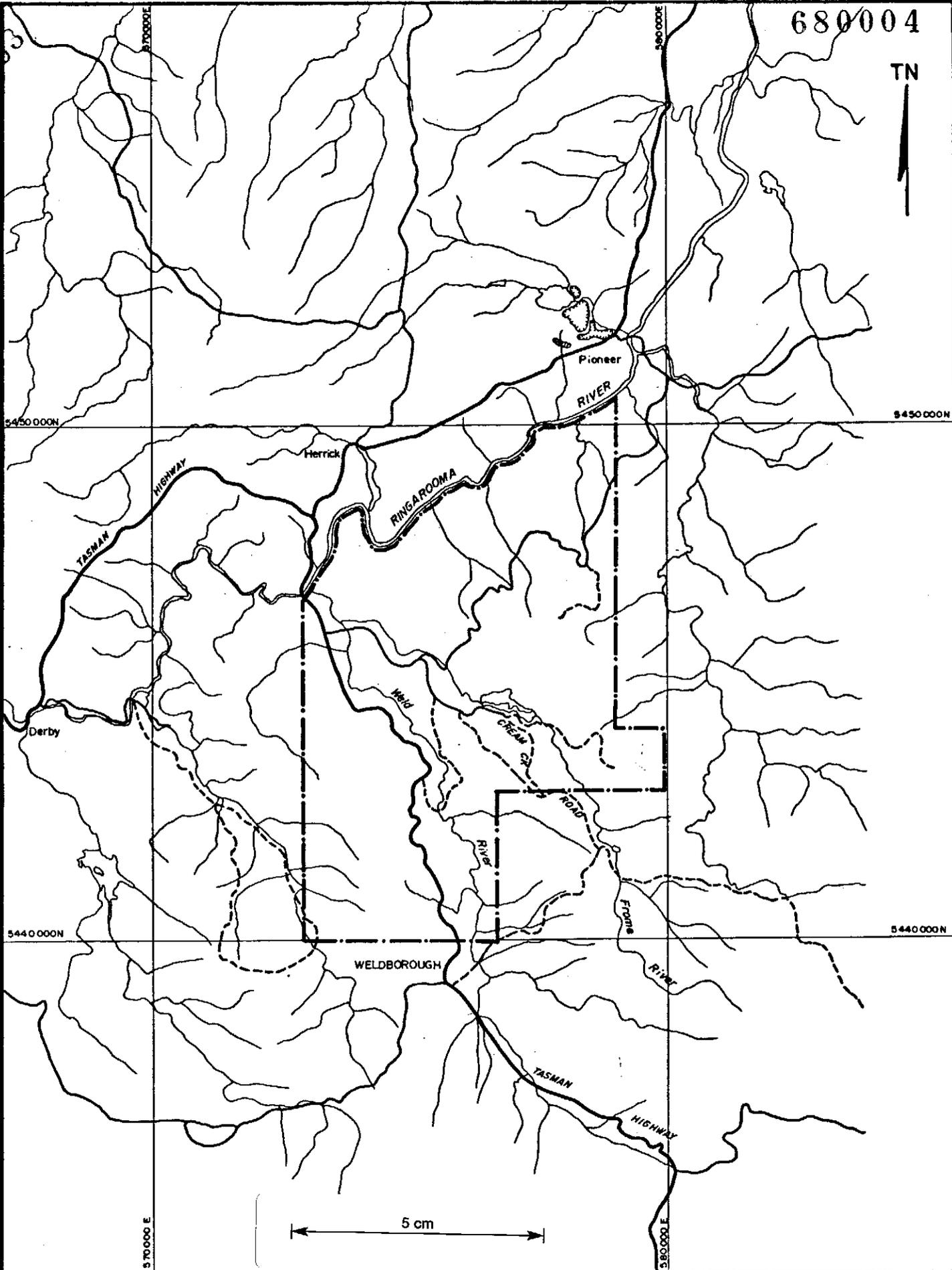
Locality Plan

Location code:

Date: Sept. 1979

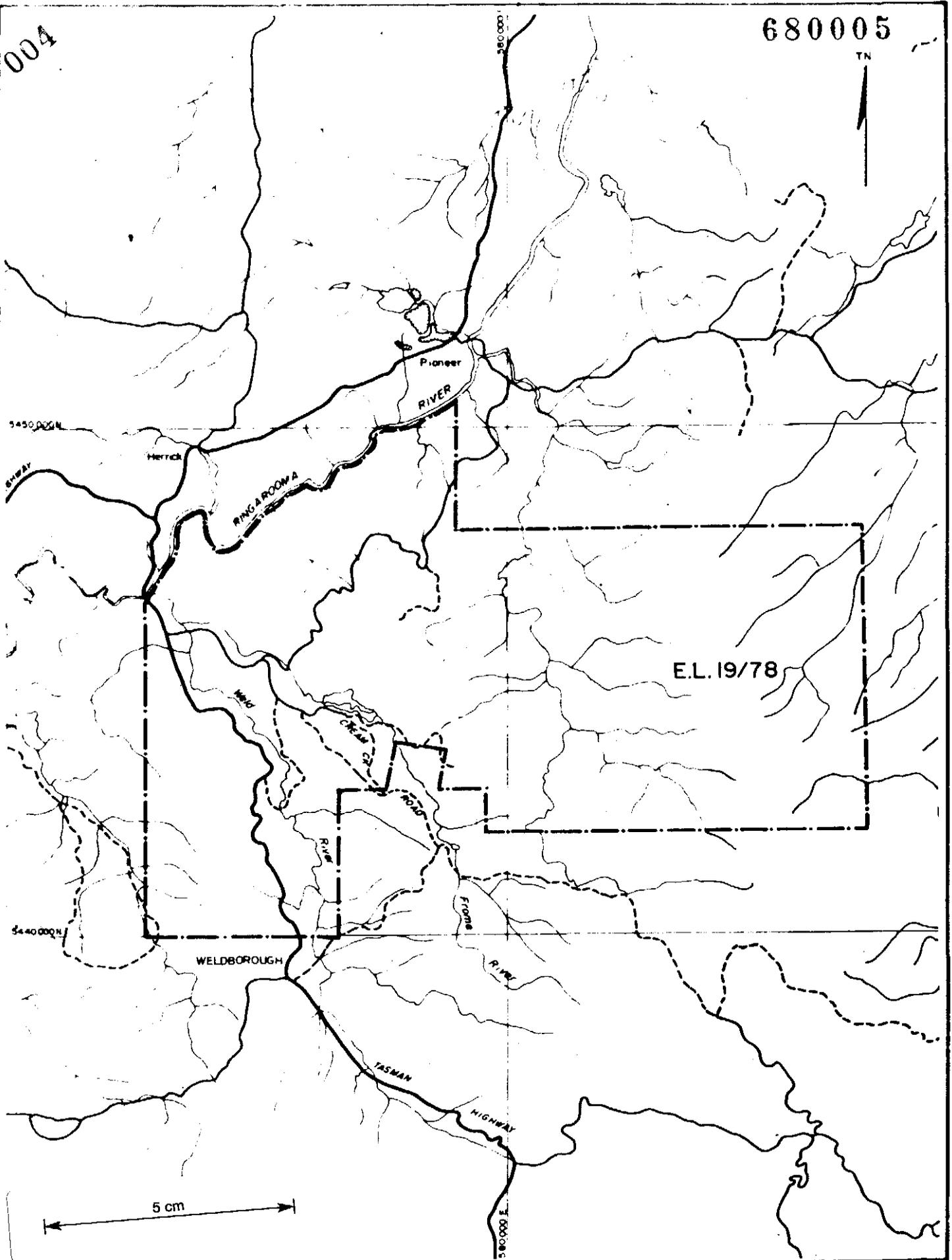
Scale: 1: 100, 000

Plate No Weld 2



004

680005



Aberfoyle Exploration Pty Ltd

Drawn by R J E
 Checked by
 Approved by
 Date

NORTH EAST TASMANIA
WELDBOROUGH E.L. 19/78
 Locality Plan

Location code
 Date MAY, 1981
 Scale 1:100,000
 Plate No WELD 2A

INITIAL PROGRAMME

During the first year of tenure (Young, 1979b), the initial programme included a review of literature relating to production statistics and geology of the mining properties, property and prospect evaluation and trace element analysis to assess the metal zoning associated with greisen tin deposits.

The results clearly demonstrated a degree of fractionation within the equigranular biotite-muscovite ("tin") granite sheets, but the trace element geochemistry of the normal porphyritic adamellite was not able to reflect fractionation in the underlying tin granite.

There was good evidence that in the F-B/Cream Creek district a large sheet of tin granite was likely to exist, exposed only through "windows" in the overlying normal adamellite. Detailed mapping was recommended to locate structural highs.

CREAM CREEK MAPPING PROGRAMME

During the 1979-80 summer field season a programme of detailed mapping at 1:600 scale and rock chip sampling was carried out over an area of approximately 10 square kilometres centred on the old Cream Creek workings (Fig. Weld 4 in Taylor 1980). Particular attention was paid to mapping the surficial extent of the various granitic phases and establishing their contact relationships, as well as attempting to define the nature, mode of occurrence and continuity of the Cream Creek mineralisation.

The mapping programme demonstrated that at Cream Creek greisenised tin granite is overlain by both unaltered tin granite and porphyritic adamellite. Potential therefore existed for further greisen tin mineralisation to be concealed under a thin cover of these rock types in the vicinity of Cream Creek and elsewhere in the district.

CREAM CREEK DRILLING PROGRAMME

A six hole percussion drilling programme, designed to test the vicinity of the Cream Creek and Spink's workings for concealed greisen sheet tin mineralisation, was planned for the 1980-81 summer season (Joyce, 1981).

Drilling commenced with percussion drill hole PH.1 on September 5, 1980. This hole was abandoned at 40.2 metres due to the inability of the equipment to expel excessive quantities of water. The second drill hole PH.2, commenced on September 12, was abandoned at 15.2 metres due to penetration problems in fresh granite. At this point it was decided to terminate the drilling programme due to the general unsuitability of the Fox-mobile drilling rig.

Clearly, insufficient data was collected during the drilling programme to reach any conclusions regarding the economic potential of the area.

REGIONAL MAPPING PROGRAMME

During 1981, a comprehensive geological and geochemical study was completed over the southern portion of the licence area as a B.Sc (honours) thesis through Monash University (Simmons, 1981). The project was aimed at clarifying the structural relationships between the granitoids and mapping alteration and mineralisation in the area.

Both these objectives were essentially achieved with an order of emplacement for the granitoids being established and a further area of greisen alteration recognised on Cross Creek Road (Fig. WELD 3). At this locality the host for the greisen alteration is the porphyritic adamellite, suggesting that the potentially mineralised contact with the underlying tin granite may be at a relatively shallow depth.

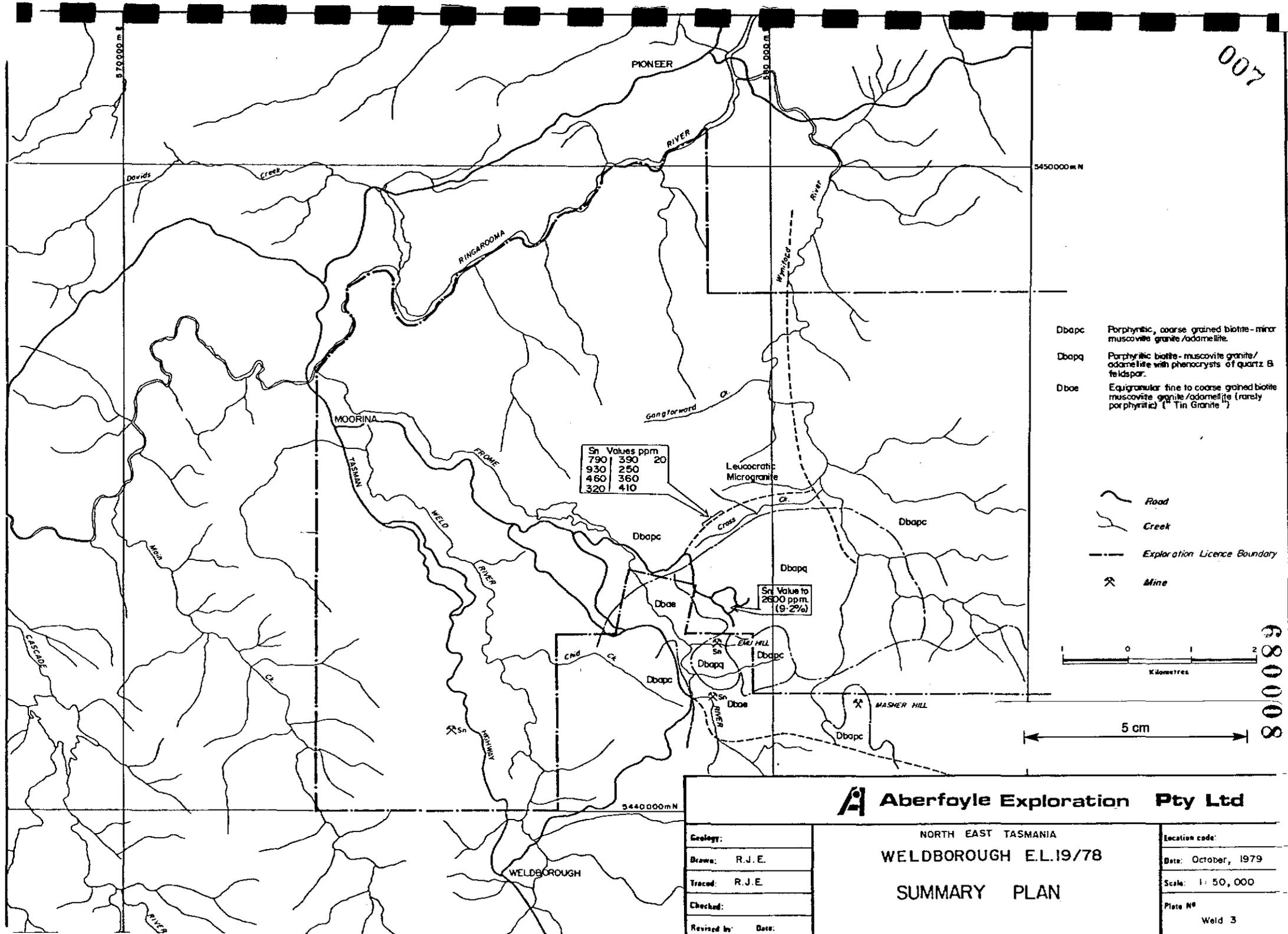
FURTHER EXPLORATION

The report for the six month period to February 9, 1982, (Sise, 1982) advanced three proposals for further work, namely the extension of the geological and geochemical search to the northern part of the licence, percussion/diamond drilling in the Cross Creek and Cream Creek areas, and the introduction of a joint venture partner to contribute towards funding these programmes.

SURRENDER OF THE EXPLORATION LICENCE

Attempts to attract a joint venture partner willing to contribute at a level deemed appropriate by Aberfoyle Exploration have been unsuccessful.

007

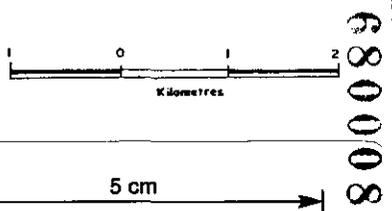


Sn Values ppm		
790	390	20
930	250	
460	360	
320	410	

Sn Value to 2600 ppm. (9.2%)

- Dbapc Porphyritic, coarse grained biotite-mica muscovite granite/adamellite.
- Dbapq Porphyritic biotite-muscovite granite/adamellite with phenocrysts of quartz & feldspar.
- Dboe Equigranular fine to coarse grained biotite muscovite granite/adamellite (rarely porphyritic) ("Tin Granite")

- Road
- Creek
- Exploration Licence Boundary
- Mine



680008

A Aberfoyle Exploration Pty Ltd

Geology:	
Drawn:	R.J.E.
Traced:	R.J.E.
Checked:	
Revised by:	Date:

NORTH EAST TASMANIA
 WELDBOROUGH E.L.19/78
 SUMMARY PLAN

Location code:	
Date:	October, 1979
Scale:	1: 50,000
Plate No	Weld 3

In view of the now recognised limited economic potential of greisen hosted tin mineralisation and the remoteness of the region from other Aberfoyle activities, it has been determined that exploration funds for further work on the Weldborough Exploration Licence are not warranted at this stage. As a consequence, a programme sufficient to keep the licence in good standing is not possible and therefore the decision to relinquish the property has been made.

REHABILITATION

The Exploration Licence is traversed by a network of bush tracks created principally for past logging operations, and to access the various alluvial and mining leases currently being worked by prospectors. The original workings dating back to the turn of the century, of which Cream Creek is the largest, are substantially overgrown and are now difficult to locate. Exploration by Aberfoyle on the licence utilised existing tracks and river sections. No grid lines were cut; with only flagging and tags used for location purposes.

Although permission was obtained from the Director of Mines in August, 1980, to extend an existing bush track by 400 metres to access drill sites, this work was never completed due to the premature termination of the drilling programme. The two holes drilled were sited on existing tracks and cleared of all extraneous material on completion.

CONCLUSIONS

Exploration Licence 19/78, located in north-east Tasmania near Weldborough, was acquired with a view to locating economic greisen-style mineralisation in the Blue Tier Batholith, using the Anchor Mine as a model. An exploration programme was followed utilising mapping, geochemistry and percussion drilling without significant success. Further work on the licence is not warranted at this stage due to the currently unattractive nature of prospective targets.

The property has been relinquished.

003

680010

EXPENDITURE

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>PROJECT TOTAL</u>
GEOLOGY	3,196	5,213	10,410	109	18,928
GEOCHEMISTRY	1,060	676	681		2,417
PERCUSSION DRILLING		7,944			7,944
TENURE	<u>103</u>	<u>347</u>	<u>944</u>	<u>1,430</u>	<u>2,824</u>
SUB TOTAL	4,359	14,180	12,035	1,539	32,113
ADMINISTRATION	<u>654</u>	<u>2,127</u>	<u>1,805</u>	<u>231</u>	<u>4,817</u>
TOTAL	<u><u>5,013</u></u>	<u><u>16,307</u></u>	<u><u>13,840</u></u>	<u><u>1,770</u></u>	<u><u>36,930</u></u>

REFERENCES

Groves, D.I.: (1978) Fractional Crystallization and the Origin of Tin Deposits in Granitoids
 McCarthy, T.A. Mineral Deposita (Berl.) 13, 11-46.

Joyce, R. M. (1981) Aberfoyle Exploration Pty. Ltd.,
 Weldborough E.L. 19/78. Progress Report
 for the six months ending February 9, 1981.

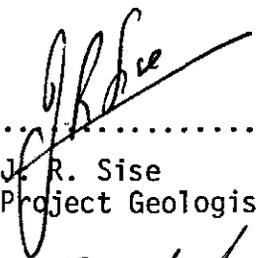
Simmons, R. J. (1981) Alteration and Tin Mineralization in
 Upper Devonian Granitoids, Northeastern
 Tasmania. B.Sc. (honours) thesis. Univ. of
 Monash.

Sise, J. R. (1982) Report on work completed on Exploration
 Licence 19/78, Weldborough, during the
 six month period ending February 9, 1982.

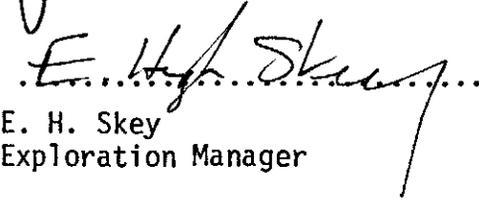
Taylor, J. R. (1980) Aberfoyle Exploration Pty. Ltd.
 Weldborough E.L. 19/78. Report for the
 year ended August 9, 1980.

Young, C. H. (1979a) Economic Potential and Geochemical
 Exploration of the Blue Tier Batholith.

Young, C. H. (1979b) Progress Report. Exploration Licence
 19/78, Weldborough. August 20, 1979.

Signed: 

J. R. Sise
 Project Geologist - Tasmania

Endorsed: 

E. H. Skey
 Exploration Manager