000 82-1685

844001

Gout

EXPLORATION LICENCE 5/77
UPPER FORTH VALLEY, TASMANIA

FINAL REPORT, SIX MONTHS
5.5.81 - 4.11.81
DIAMOND DRILLING

BY

D. J. HALL

82/SYD/1
JANUARY 1982

S.E.R.E.M. (AUSTRALIA) PTY. LTD.

001

844002

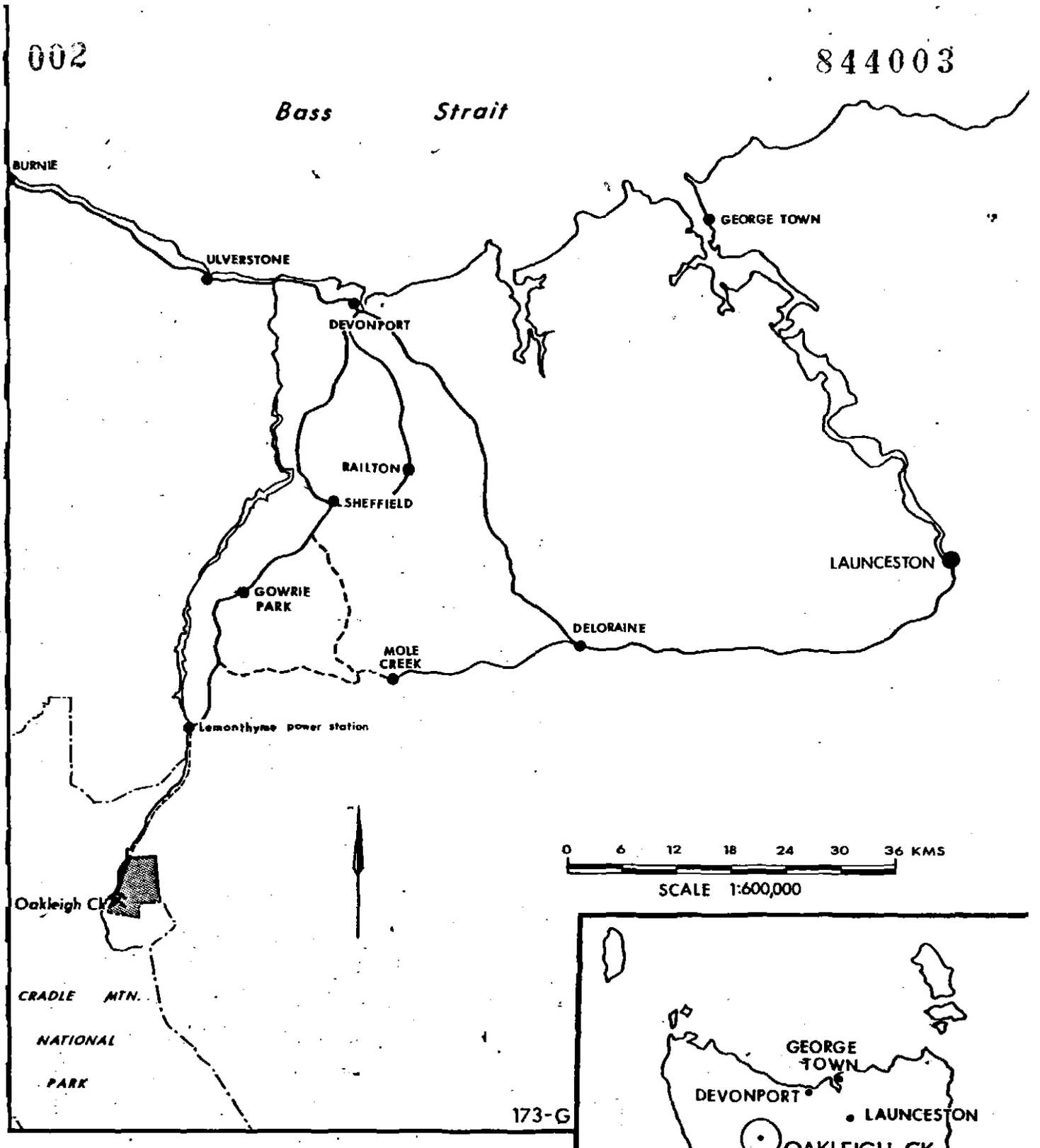
CONTENTS

LIST OF FIGURES

APPENDED

002

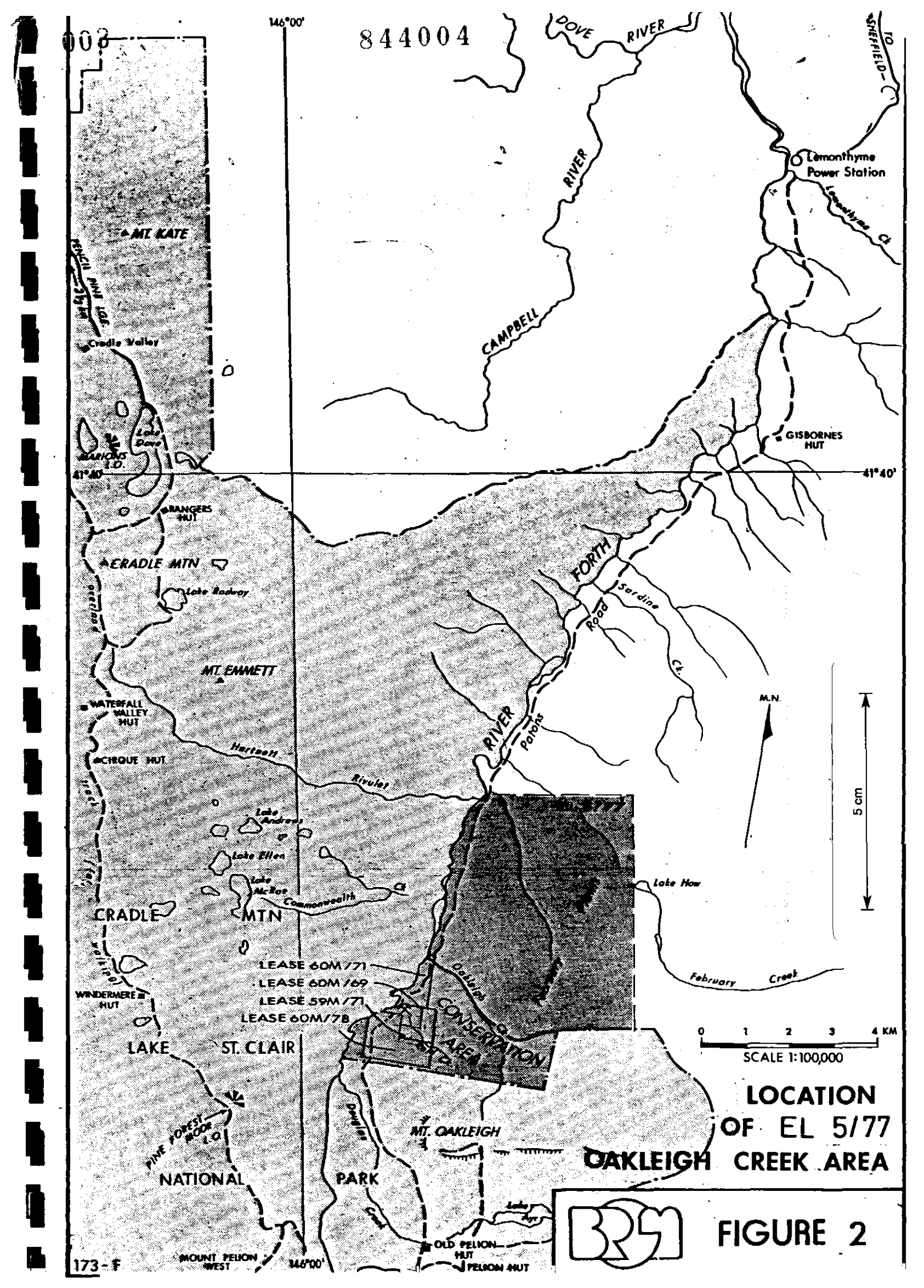
844003



LOCALITY MAP

BRS

FIGURE 1


844004
146°00'
41°40'
DOVE RIVER
CAMPBELL RIVER
Lemonthyme Power Station
Lemonthyme Ck
GISBORNES HUT
MT. KATE
PENCIL PINE TOP
Cradle Valley
Lake Dove
MARIONS L.D.
RANGERS HUT
CRADLE MTN
Lake Rodway
MT. EMMETT
WATERFALL VALLEY HUT
SCHOUTE HUT
Hartnett Rivulet
Lake Andrew
Lake Ellen
Lake McRae
Commonwealth Ck
CRADLE MTN
WINDERMERE HUT
LAKE ST. CLAIR
PINE FOREST MOOR L.O.
NATIONAL PARK
MOUNT PELION WEST
OLD PELION HUT
PELION HUT
FORTH
Sardine Road
Ck
RIVER
Ponds
M.N.
5 cm
Lake How
February Creek
LEASE 60M/71
LEASE 60M/69
LEASE 59M/71
LEASE 60M/78
Oakleigh
COMMERCIAL AREA
MT. OAKLEIGH
Douglas
Creek
0 1 2 3 4 KM
SCALE 1:100,000
LOCATION OF EL 5/77 OAKLEIGH CREEK AREA
BRGM
FIGURE 2
173 - F

1. INTRODUCTION

During the period covered by this report an air-photo interpretation and a 500m diamond drilling programme were carried out on EL 5/77. The air-photo interpretation showed up some strong fracture patterns.

Two drill holes MP5, MP6 were positioned in order to establish possible additional reserves in a downward extension of the vein and to seek possible disseminated mineralization at the granite/sediment contact zone at depth.

2. LOCATION AND ACCESS (Figures 1 & 2)

E.L. 5/77 is situated on the eastern side of the Upper Forth River Valley in rugged, mountainous, isolated terrain. To the west, on the opposite side of the Forth River, is located the Cradle Mountain-Lake St. Clair National Park, having the river as its boundary. The Forth River flows north, discharging into the Bass Strait near Devonport.

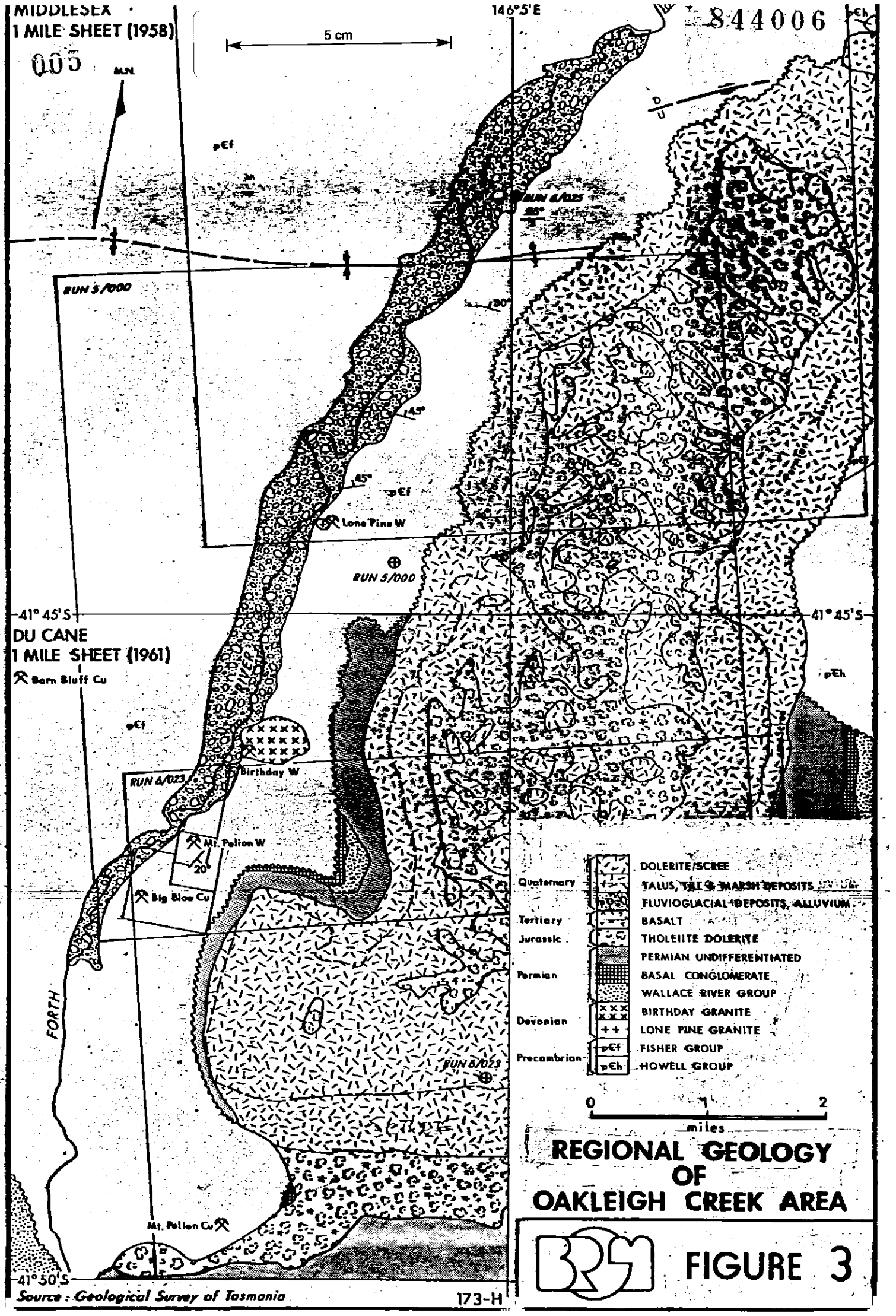
The E.L. can be reached from Devonport by sealed road as far as the Lemonthyme Power Station, which is 20 km from the E.L. via a gravel road.

3. GEOLOGICAL SETTING (Figure 3)

In the Forth Valley the rock types include quartzite, mica schist and quartz mica schist of the Fisher Group with a general strike slightly east of north and dips of between 15° and 30° to the south-east (Macleod, 1961). At the Oakleigh Creek Mine the strike varies from 082° to 108° magnetic and dips from 15° to 27° in a northerly direction. The metasediments are abundantly veined by white quartz and locally sheared along planes trending north-north-west. These shear planes served as structural controls in the localization of copper and Wolfram mineralization in the Forth Valley.

Most of the rocks in the Fisher Group have been derived from orthoquartzite and siltstone and metamorphosed to greenschist facies.

with biotite - garnet ?


844006
MIDDLESEX
1 MILE SHEET (1958)
005
5 cm
146°5'E
MLN
pEf
RUN 6/025
RUN 5/000
145°
45°
Lone Pine W
RUN 5/000
41° 45'S
DU CANE
1 MILE SHEET (1961)
Barn Bluff Cu
pEf
Birthday W
RUN 6/023
Mt. Pelion W
20°
Big Blow Cu
FORTH
RUN 6/023
Mt. Pelion Cu
41° 50'S
Source : Geological Survey of Tasmania
173-H
pEh
Quaternary
Tertiary
Jurassic
Permian
Devonian
Precambrian
DOLERITE/SCREE
TALUS, TILL & MARSH DEPOSITS
FLUVIOGLACIAL DEPOSITS, ALLUVIUM
BASALT
THOLEIITE DOLERITE
PERMIAN UNDIFFERENTIATED
BASAL CONGLOMERATE
WALLACE RIVER GROUP
BIRTHDAY GRANITE
LONE PINE GRANITE
FISHER GROUP
HOWELL GROUP
0
1
2
miles
REGIONAL GEOLOGY
OF
OAKLEIGH CREEK AREA
FIGURE 3

Two small granitic intrusions (adamellite of mid-Devonian age) occur within the E.L., the Birthday and Lone Pine Granites, both of which outcrop on Patons Track. They are the source of the wolfram, tin and copper mineralization in the district. The granite is discordantly intrusive into the Precambrian Fisher Group. The granite contains biotite and muscovite (with the latter predominating in some exposures), pinkish white feldspar and coarse quartz. Tourmaline, molybdenite and arsenopyrite have been noted. Near its contact the granite commonly develops large phenocrysts of feldspar and abundant biotite.

Quartz veins associated with the granites cut both the intrusives and Precambrian sediments. Of the veins observed, only the Birthday Granite Prospect and the Oakleigh Creek Wolfram Prospect are mineralized and they contain wolframite, pyrite, cassiterite and rare molybdenite. The Lone Pine Prospect adjacent to the granite intrusive consists of a single very narrow vein of arsenopyrite with only traces of wolframite. The vein within the Lone Pine granite was barren wherever it outcropped.

On the more gradual slopes encountered on the lower parts of the Valley, there is deep dolerite scree, with little or no outcrop of the Precambrian sediments. The drainage in this area is diffuse, most of it being by seepage through the dolerite scree and into the Glacial gravels filling the valley floor. The major structure in the Precambrian is a series of sub-parallel east-west folds. The folds are open and asymetrical with their axial planes dipping to the north. Minor structure in many places is intense, with the less competent schists being strongly distorted between the more competent quartzites. For more detailed geology of the mine area, see report 79/SYD/20 - Report for 6 months to November 1979.

4. EXPLORATION WORK BY SEREM

4.1. Airphoto interpretation

A strong NNW orientated fracture pattern showed up. (data at back).

4.2. Diamond drilling

Diamond drill holes MP5 and MP6 were both collared at 2070N. DDH MP6 was finally collared 38 metres west of D.D.H. MP5 when an attempt to collar at the same location had to be abandoned because of deflection and jamming. (see Cross-Section).

Hole No.	Collar Position		Bearing	Declination		Length of hole
				At Collar	At End of Hole	
MP5	2070N	1118E	265°	-67°	-80°	300 m
MP6	2070N	1080E	265°	-56°	-75°	199.9 m

Summary of rock descriptions

Hole MP5

0 - 125.9	Fine grained shaley micaceous silicified sandstone. Finely banded in places. Contains a number of minor 2 cm - 4 cm quartz veins with occasional weak mineralization.
125.9-2.4.85	Medium grey fine equigranular granite. The granite varies in colour and in grain size, is silicified, altered and includes a few minor fractures infilled with bands of pyrite.
214.85-216.5	Coarse grained tourmaline and quartz in proportion of 1:1. Probably the down dip extension of the main vein, however, it is within the granite. Low values for WO_3 for this intersection.
216.5-238.3	Light grey altered granitic rock bleached slightly yellow.
238.3-238.65	Fine grained dark granitic rock with a fair amount of pyritic mineralization. Low WO_3 values 0.03% to 0.06%.
238.65-302.16	Light grey coarse grained altered granite bleached yellow over whole length, some minor fracturing infilled with dark mineral. Low values of WO_3 throughout.

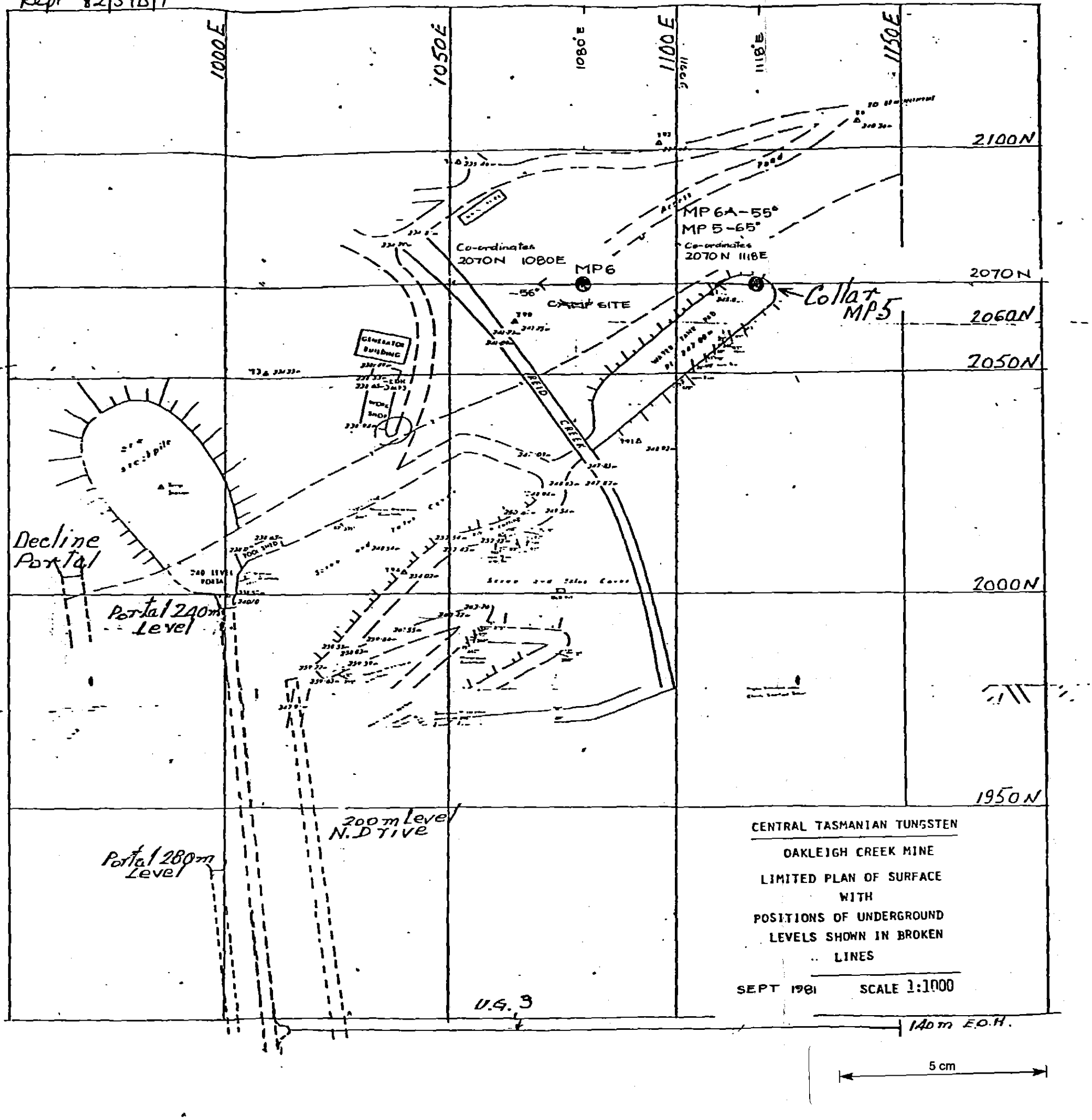
END OF HOLE.

008

844009

FIG 4

Rept 82/SYD/1



This hole MP5 steepened quite considerably from a depressed angle of 67° thus intersecting the vein at a very much deeper level. Furthermore, the anticipated granite contact was much closer to the surface.
Notwithstanding the steepening of the hole and its missed aim it did prove the following :

(1) The vein i.e. the 214.85 m - 216.50 m intersection with WO_3 values in it is the main vein being mined in the upper levels and appears to continue in the body of the granite.

(2) The granite contact was met at the 120 m level i.e. 80 metres below the most recently developed 200 metre level.

(3) That other than the vein section (214.85 m - 216.50 m) the granite contained a small section of mineralization. A small splash of pyrite mineralization between 238.2 and 238.9 (70 cms) reported low values for Cu, Zn, Pb and WO_3. The W value was .06% over 70 cms.

(4) Except for the vein, the granite was without economic mineralization to the End of the Hole at 300 m.

Hole MP6

0 - 26.95	Mined rock types including quartzite, quartz and fine grained dark diorite. The latter type (diorite) predominates - glacial till boulder or diorite dyke.
26.95-65.67	Brownish silicified f.g. finely bedded (45° to core) quartzite some chlorite in fine fractures.
65.67-100.63	As above but progressively replaced to gneissic.
100.63-101.10	47 cms Qtz vein with minor mineralization FW and HW contain some MO and WO_3
101.10-148.20	Finely bedded quartzite brown and yellow discolouration in places Minor quartz veins, silicification and sericitisation.

148.20-176.3 Metamorphosed greisenized bedded sedimentary rock. Silicified.

176.3-182.7 Fine to medium grained granite. 2 - 5% dark mineral & white mica

182.7-196.75 Fine grained and bedded silicified sediments - quartzite, with minor quartz veins up to 10 cm.

196.75-199.9 Medium to coarse grained granite with minor fractures containing some mineralization.

END OF HOLE.

Assay values of the main (47 cm) quartz vein between 100.63 and 101.42 m were disappointingly low. Other sections including some within the metamorphosed zone near the contact were also low in assay values for WO_3.

5. RESULTS.

All the assays were low in value and consistent with observed weak and minor mineralization as recorded in the diamond drill core logging.

The vein intersection in D.D.H. M.P.6 47 cms (angle width) is consistent with the main quartz vein. It is 40 metres below the 200 m level and approximately 30 metres above the granite.

The assay results are appended.

1100 E

1000 E

011

110

COLLAR
MP 5 & MP 6 (aborted)

COLLAR
MP 6

RL 248 m

Adit on Vein

240 L

240 L

aborted
MP 6

MP 6

200 L

200 L

silicified
sediments

MP 5

0·09% 0·02% (WO_3)
0·03%

51·20 m
52·25 m
52·50 m
64·90 m

70m

LOW VALUES

60 L

160 L

low values in 47cm quartz vein

low
WO_3 values

100·18 m
100·68 m
101·10 m
101·46 m

100 m

low
WO_3 values

116·1 m
119·1 m
0·06% WO_3

125 m

bleached
sediments

low values < 300ppm.

poor mineralisation
in places

20 L

120 L

Fine grained
granite

134·1 m
137·1 m
140·1 m
143·1 m
146·1 m

0·10% WO_3
0·02% WO_3
0·06% WO_3
0·006% WO_3

148·2 m

meta
sediments

Coarse grained
granite

80 L

low values
WO_3 200ppm.
= 0·002 %

granite

176·3 m

182·7 m

sediments

196·75 m
199·9 m

granite

End of Hole

200 m

40 L

40 L

209·1 m
212·1 m
214·85 m
216·50 m

0·047% WO_3
0·120% WO_3
0·66% WO_3
0·76% WO_3

Average %
over 7·4m
= 0·39% WO_3

tourmaline and quartz

low values

228·0 m
242·1 m
245·1 m

0·03% WO_3
0·06% WO_3

0 L

0 L

5 cm

low values
WO_3

300m
End of Hole

CENTRAL TASMANIAN TUNGSTEN

OAKLEIGH CREEK MINE P/L

Cross Sections at 2070N

DDH's MP5 & MP6

Scale 1:1000

OCTOBER 1981

8440 12

REPT 82/SYO/1

FIG 5

844013

012

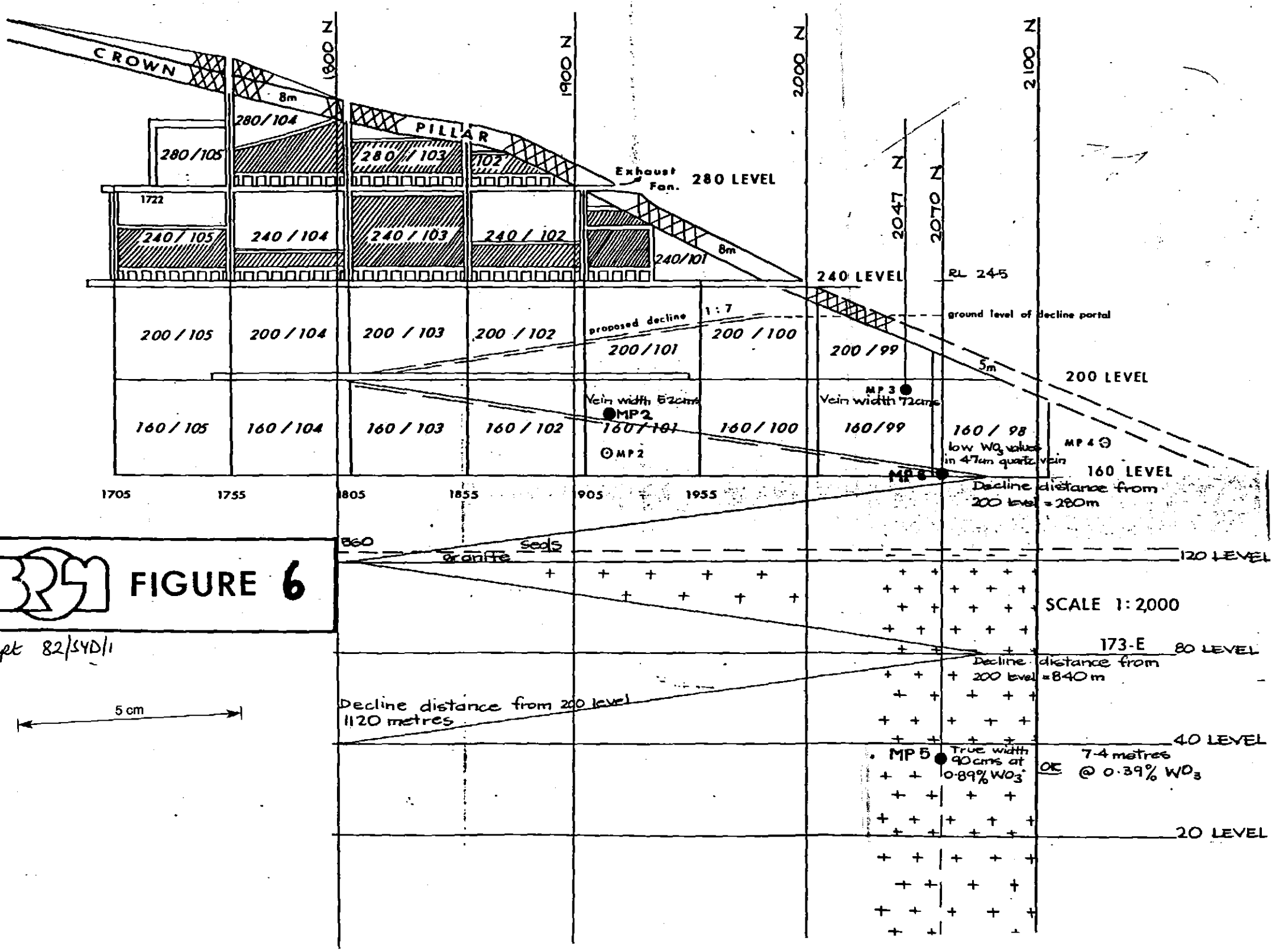
OAKLEIGH CREEK WOLFRAMITE PROJECT

Stoped area (started 27-10-79)
Drill Holes
Completed
To Be Completed

SITUATION AS AT DECEMBER 1980

LONGITUDINAL SECTION

S N



BRGM

FIGURE 6

Rept 82/SYD/1

5 cm

6. CONCLUSION.

It is suggested that the theory for the occurence of disseminated mineralizatio at the granite/sediment contact has been tested for the section covered by DDHs MP5 and MP6. No strong mineralization nor structural anomaly has been revealed which could be the basis for an economically viable low grade disseminated wolfram deposit.

The main quartz vein has been shown to exist but values in it are not encouraging. It is pointed out that because of the typical spotty nature of wolframite mineralization one or even two intersections of quartz could have struck a barren section thus making drill hole testing unreliable for grade valuations but meaningful in defining the continuity of the vein.

It would appear that a thorough search for ore shoots within the tabular vein would best be done by the old traditional method of driving/drifting along the vein at each new level and either bulk sampling the development ore or channel sampling across the vein. This exercise could be expensive and risky except for an individual or small syndicate willing to selectively mine and hand pick the ore to save on costs.

Even a high density underground percussion drilling programme could be fraught with uncertainties as far as grade and tonnages are concerned.

There is still potential in the mine as reflected in the results obtained in this drilling programme but given the limited size and risk involved, this deposit does not in SEREM 's opinion, merit further investigation.

HOLE No. MP5
BEARING: 265°
DECLINATION: -67°
COLLAR R.L.: 226 m
LENGTH: 300 m

B.R.G.M. AUSTRALIA

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK D.D.H. MP5

LOGGED BY: C. R. GIBSON

PROSPECT:
DRILLED BY:
COMMENCED:
COMPLETED:
SHEET 1 OF 3

8401 014

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks
0	124.1			@ 53.3 1 + 1 cm of altered black mineralisation with some qtz and tourmaline.	
				@ 69.20 - 71.5 Broken core fracturing parallel to core minor 2 cm quartz at 69.40	
				@ 73.4 - 73.55 15 cm bedded qtz vein.	
				@ 76.7 - 76.85 15 cm " " " some minsn.	
				@ 77.9 1 cm qtz.	
				@ 77.98 1 cm qtz.	
				At 78 m N.Q. size core ends. BQ starts.	
				@ 90.1 5 cms qtz.	
				@ 90.3 2 cms qtz.	
				@ 92.0 4 cms qtz.	
				@ 96.1 3 cms qtz and soft altered chloritic material in 20° to core fracture.	
				@ 122.8 - 122.94 Bedded black mineralisation 50% tourmaline.	
				@ 123.1 some quartz 2 x 1 cm veins.	
				@ 124.10 3 cms qtz. some black mineralisation.	
124.1	125.90			Sediment and qtz altered and bleached to soft yellow chloritic material in patches up to 50%. (Contact zone).	
125.9	143.10			Mid grey equigranular medium grained granite. Micaceous silicified and altered. No vestage of bedding but could be granitised seds.	

[redacted] R.G.M. AUSTRALIA [redacted] PROSPECT [redacted]

BEARING: 265

DECLINATION: - 67°

COLLAR R.L.: 226 m

LENGTH: 300 m

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK D.D.H. MP5

LOGGED BY: C. R. GIBSON

DRILLED BY:

COMMENCED:

COMPLETED:

SHEET: 2 OF 3

84016
013

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks,
143.10	148.10			Pale grey rock as above. More mottled bleached appearance and increasing grain size.	
148.1	214.85			Light grey coarse grained granitic rock, silicified and altered. More definitely c.g. at 149.2 m. Recrystallized eroded qtz felspar and hornblende (dark min), crystals and muscovite mica very small.	
				@ 203.76 - Fracture at 45° to core containing a little coating (paint) of pyrites.	
				@ 206.46 - 206.56. 10 cms of tourmaline in fracture at 70% to core.	
214.85	216.50			Dark rock composed mainly of tourmaline and quartz (50%) granitic texture.	
216.50	238.30			Light grey altered granitic rock slightly yellow in colour with altered and bleached appearance.	
238.3	238.65			Fracture at 45° to core start of fine grained dark granitic material with a fair amount of pyritic mineralisation.	
238.65	302.16			Light grey c.g. altered granite slightly bleached in places - yellowy granite micaceous. Plagio felspar. Qtz and Hble (altd) granite.	
				Altered Sections:-	
				275.6 - 279.2 Some altered granite fairly bleached yellow over whole length, probably associated with small fracture infilled with dark minerals (true width 3 cms), mostly tourmaline.	

DDH No. MP5 [redacted] B.H.P. AUSTRALIA [redacted] PROSPECT : [redacted]

BEARING : 265°

DECLINATION : - 67°

COLLAR R.L. : 226 m

LENGTH : 300 m

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK D.D.H. MP5

DRILLED BY :

COMMENCED :

COMPLETED :

LOGGED BY : C. R. GIBSON

SHEET 3 OF 3

8440140
016

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks,
				281.9 - 282.5 m. As above altered and slightly bleached granite associated	
				with minor 2 cms frac. infilled with black minerals (tourmaline) at 282.30 m.	
				300.63 - 302.16. Altered and slightly bleached granite associated with minor	
				3 cm fracture at 301.32 45° to core composed fg dense darkish qtz and some	
				pyrite in subsid frac. face.	
				E.O.H. = End of Hole.	

[redacted] B.H.P. AUSTRALIA [redacted]

DRILLED BY :

DECLINATION : - 57°

FIELD DIAMOND DRILLING LOG

COMMENCED :

COLLAR R.L. : 221 m

OAKLEIGH CREEK DIAMOND DRILLING

COMPLETED :

LENGTH : 199.99 m

D.D.H. MP6

LOGGED BY : C. R. GIBSON

SEP - OCT 1981

SHEET 1 OF 5

8440118

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks
0	11			Recover only 4.3 m of mixed core from glacial till! including quartzite, quartz,	
				f.g. very dark diorite.	
11	14.0			Recovered only 1.0 m of mixed core 50% quartz quartzite and 50% fine grained dark	
				diorite.	
14	17.0			Recovered only 1.0 m of glacial till rock core as above.	
17.0	26.95			Recovered only 2.20 m of core between 17.0 m - 20.0 m. Rock type very hard dark	
				grey fine grained diorite with occasional broken quartz at minor fracture planes	
				35° - 40° to core.	
				From start of hole fine grained dark diorite predominates, so could be either one	
				large till boulder or dyke of diorite.	
26.95	65.67			Brownish silicified fine grained finely bedded (45° to core) rock with occ. fine	
				fracture qtz. and dark mineral filled also soft chlorite till in some frac. at	
				34 m, a slightly bleach brown m.g. injection/alteration rock. S_1 & S_2 bedding	
				S_1 & S_2 at right angles to it.	
				37.6 - 40.6 very broken section - broken pieces being qtz and dark mineral.	
				Actual qtz section 37.86 - 37.96 m.	
				38.10 - 38.40 m.	
				2 cms at 38.77 m.	

BEARING: 269°
DECLINATION: - 57°
COLLAR R.L.: 221 m
LENGTH: 199.99 m

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEEK DIAMOND DRILLING

D.D.H. MP6
LOGGED BY: C. R. GIBSON

SEP-OCT 1981

DRILLED BY:
COMMENCED:
COMPLETED:
SHEET 2 OF 5

8440 N 19 018

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks,
				39.45 - 39.93 m.	
				40.15 - 40.35 m.	
				Brown alteration discolouration between 38.0 - 44.0 m (i.e. in the fine grained	
				bedded silicified rock) (at 48.5 changed over to A core)	
				51.66 - 51.75 qtz and dark minerals	
				50/50 probably tourmaline. (9 cms).	
55.9	58.9			1 cm at 54.36 m tourmaline and qtz	
				55.74 - 55.84 " "	
58.9	62.35			also some pyrite.	
				61.35 - 61.95 qtz with some inclusion fine grained seds.	
62.35	63.50	H.W.	VEIN	Qtz. with strongly silicified sections of sed. frac. in places with infilling of	
63.50	64.9			chlorite.	
64.9	67.9			65.53 - 65.67. Qtz & tourmaline Black mineralisation (14 cms).	
65.67	148.20			Fine grained silicified finely bedded at 45° to core hard brownish grey sed.	
				progressively replaced in places to gneissic between 88.30 - 88.45 (15 cms). True	
				width 10 cms. Qtz on bottom. Black Mineralisation on top 50/50. 96.5 - 96.80	
				very broken chlorite in bedding.	

Hole No: MP6 — B.H.P. AUSTRALIA — PROSPECT: [redacted]

BEARING: 269°
DECLINATION: - 57°
COLLAR R.L.: 221 m
LENGTH: 199.99 m

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK DIAMOND DRILLING
D.D.H. MP6
LOGGED BY: C. R. GIBSON

SEP-OCT 1981

DRILLED BY:
COMMENCED:
COMPLETED:
SHEET 3 OF 5

84402 0 016

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks,
				97.23 - 97.31 Qtz vein.	
				97.70 - 98.30 very broken altered chloritised.	
				98.55 - 99.25. Altd. bleached bedded rock chloritised.	
				100.63-101.1 47 cm quartz vein with minor mineralisation in FW & HW. Some MO & WO_3. 107.63 2 cms Qtz 2 cms	
				107.9 - 107.95 Qtz 5 cms	
				108.68 - 108.83 Qtz 15 cms	
				At 109.9 3 cms qtz.	
				At 112.8 7 cms qtz. & tourmaline mineralisation.	
				113.58 - 113.90 2 x 10 cms Qtz veins.	
				123.08 - 123.27 Qtz & black mineralisation.	
				At 125.9 Black Mineralisation 4 cms.	
				133.82 - 134.14. Some qtz min. veining (32 cms)	
				in this section also dark min. mica sericite.	
				134.92 - 135.20. One half core - length qtz i.e. to core (28.0 cms).	
				143.05 - 143.45. Altd. silicified and sericitised kaolinised (greisened) sed.	
				Secondary pyrite in fresh fracture.	
				Other similar mineralisation sections e.g. at 150.	

N [redacted] P [redacted]

BEARING : 269°

DECLINATION : 221 m

COLLAR R.L. : 199.99 m

LENGTH :

B.R.G.M. AUSTRALIA

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK DIAMOND DRILLING

D.D.H. MP6

LOGGED BY : C. R. GIBSON

SEP-OCT 1981

DRILLED BY :

COMMENCED :

COMPLETED :

SHEET 4 OF 5

8440210 020

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks
148.20	171.7			Greisened rock bedding still discernable but rock very much altered from sed	
				to metamorphic. The darker bedding lines blebbed. Quartzite altered to quartz	
				inclusions with associated chloritic/mica infill.	
171.7	176.3			Dk. grey silicified meta sediment with some hornfels spotting some with gnt ?	
				inclusions. Lighter coloured sections softer. Some fine dissem. py.	
176.3	182.7			Granite f.gr-m.gr. light coloured with 2-5% dk. mineral, + white mica. F.gr to	
				177.45 then m.gr. Homogeneous tending to c.gr. within 0.5 m of lower contact.	
				Some development of sericite. Lr. contact clean.	
182.7	196.75			Silicified meta sediments F. gr. finely bedded highly silicified grey sediments	
				sub-horizontal bedding, hornfels spotting. Occasional fine chalcedonic qtz veins	
				cross cut bedding.	
				183.7 horizon of bronze mineral	
				186.7 10 cm qtz vein	
				188 4 cm qtz vein	
				189.6 3 cm quartzite	
				189.9 3 cm quartzite	

HOLE No: MP6 [redacted] PROSPECT: [redacted]

BEARING: 269°

DECLINATION: 221 m

COLLAR R.L.: 199.99 m

LENGTH:

B.H.P. AUSTRALIA

FIELD DIAMOND DRILLING LOG

OAKLEIGH CREEK DIAMOND DRILLING

D.D.H. MP6

LOGGED BY: C. R. GIBSON

SEP-OCT 1981

DRILLED BY:

COMMENCED:

COMPLETED:

SHEET 5 OF 5

02140

Depth (m) From	Depth (m) To	Interval (m)	Recovery %	Description	Remarks
				192.1 2 cm quartzite	
				194.3 2.3 cm qtz vein	
				194.45 " qtz vein	
				194.6 "	
				occasional slumped bedding and folds. Quite feldspathic sediment Trs. fine	
				dissem. py throughout. Some very soft bronze mineral.	
				Clean contact with granite.	
196.75				Granite	
				M. gr. - c. gr. light coloured plagioclase granite. Finer grained within 20 cm	
				of contact. Varying degree of sericitisation and saussuritization with strong	
				development of green colouration.	
198.0	198.4			Movement planes high angle - 60° dark mineral on one plane (tm?), series of vugs	
				with pyrite cubes and fluorspar. Dark access mineral up to 5% towards base of	
				hole. Light blue access mineral occasional discrete xtals. Some amethyst.	
				Fairly homogeneous.	
196.75				2 cm of tourmaline.	
197.7				1 - 2 cm of tourmaline.	
199.9				END OF HOLE.	

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022

Drill Hole Assays
1981 Drilling Programme

Hole	Samp. No	Intercept	Sn ppm	Mo ppm	WO3	As	Bi
MP5	7501	104.10 – 107.10	BLD	6	179	1323	78
	7502	107.10 – 110.10	"	<2	132	37	120
	7503	110.1 – 113.10	"	46	125	25	134
	7504	113.1 – 116.10	"	35	116	41	90
	7505	116.1 – 119.10	"	16	563	81	271
	7506	119.1 – 122.10	"	8	164	36	63
	7507	122.1 – 125.10	"	8	118	45	93
	7508	125.1 – 128.10	"	37	304	BLD	116
	7509	134.1 – 137.10	"	65	1110	7	198
	7510	137.10 – 140.10	"	27	215	BLD	82
	7511	140.10 – 143.10	"	33	591	10	69
	7512	143.10 – 146.10	"	20	60	14	67
	7513	149.10 – 152.10	"	16	50	11	50
	7514	152.10 – 155.10	"	14	73	13	36
	7515	161.10 – 164.10	"	42	166	7	80
	7516	173.10 – 176.10	"	18	212	150	46
	7517	176.10 – 179.10	20	10	215	1121	24
	7518	182.10 – 185.10	BLD	15	219	182	36
	7519	185.10 – 188.10	"	14	86	10	31
	7520	188.10 – 191.10	"	9	91	21	27
	7521	191.10 – 194.10	"	15	151	BLD	26
	7522	194.10 – 197.10	"	19	162	BLD	41
	23	197.1 – 200.10	"	3	88	6	20
	24	200.1 – 203.1	"	4	189	BLD	49
	25	203.1 – 206.1	"	BLD	200	12	23
	26	206.1 – 209.1	"	8	213	BLD	89
	27	209.10 – 212.1	"	BLD	407	BLD	103
	28	212.10 – 214.85	"	22	1193	18	428
	29	216.5 – 218.10	"	BLD	88	13	25
	30	218.10 – 221.1	"	"	67	14	50

023

			Sn ppm	Mo ppm	WO3 ppm	As ppm	Bi ppm
	31	221.10 - 224.10	"	"	189	BLD	21
	32	233.10 - 236.103	"	"	189	BLD	25
	33	236.10 - 238.26	"	"	156	BLD	10
	34	238.9 - 242.10	35	"	304	7	BLD
	35	242.1 - 245.10	"	"	657	BLD	16
	7536	272.10 - 275.1	BLD	5	287	BLD	26
	7537	275.10 - 278.1	"	BLD	98	"	BLD
	7538	278.1 - 281.1	"	"	28	"	15
	7539	281.9 - 284.1	"	"	20	"	20
	7540	284.1 - 287.10	"	"	34	"	20
	7541	287.10 - 290.1	"	"	29	6	30
	7542	290.10 - 293.1	"	6	21	BLD	14
	7543	293.10 - 296.1	"	BLD	29	"	17
	7544	296.10 - 299.1	"	6	164	"	8
MP5	7545	291.10 - 302.10	"	6	33	"	12
MP6	7546	61.3 - 62.35	1	9	945	28	127
	7547	62.35 - 63.50	128	7	224	440	58
	48	63.50 - 64.90½	BLD	12	290	58	33
	49	64.9 - 65.80 1	BLD	167	62	18	462
	50	94.9 - 97.9 3	BLD	16	67	16	57
100.63 - 101.1 →	51	97.9 - 100.13 3	"	8	50	20	18
101.1 - 101.42 →	52	101.42 - 103.9 2	"	7	55	203	21
	53	103.9 - 106.9 3	"	9	186	1891	44
	54	106.9 - 109.9 3	"	7	42	47	23
	55	109.9 - 111.4 2	"	8	103	31	36
	56	132.9 - 135.9 3	"	3	35	73	15
	57	148.9 - 151.9 3	"	6	50	64	43
	58	151.9 - 154.9 3	"	5	41	237	12
	59	154.9 - 157.9 3	"	BLD	65	21	38
	60	163.9 - 166.9 3	"	7	30	6	32

024

			Sn ppm	Mo ppm	W %	Cu	Zn	Pb
MP5	3873	214.85 - 215.67	BLD	228	0.66%	42	204	2
	3874	215.67 - 216.50	"	121	0.76%	11	88	BLD
	3875	238.20 - 238.90	"	4.3	594	796	3420	6
MP6	3882 (29.9.81)	100.13 - 100.63	5.5%	101	113			
	3883	100.63 - 101.10	1.4%	233	75			
	3884	101.10 - 101.42	42	15.9	BLD			
			ppm	ppm				
MP6.	3882 (11.11.81)	100.13 - 100.63	15	8	60			
Check	3883	100.63 - 101.10	455	232	50			
	3884	101.10 - 101.42	25	12	20			

844026

SOCIETE D'ETUDES DE RECHERCHES ET D'EXPLOITATIONS MINIERES

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025

82/SYD/14

AIRPHOTO INTERPRETATION OF BIRTHDAY PROSPECT - OAKLEIGH CREEK AREA 19/5/82

BY

S. McCLEAN

SEREM (AUSTRALIA) PTY. LTD.

MINERAL EXPLORATION

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TELEPHONE 29 5723
TELEX AA 23047

BIRTHDAY PROSPECT

AIR-PHOTO - WESLEY VALE 820 - 83

Within the area covered by this air-photo there are three main groups of lineaments :

a) Large scale lineaments that run between West-South-West and North. These lineaments do not occur across the Birthday granite, so I consider them to be pre-Devonian. MacLeod et al. (1961) say that large scale normal faulting, of up to 100 metres, occur in Permian and Triassic rocks to the South-East of the Birthday Prospect. The faults in the Permian and Triassic rocks could be due to movement along the large basement lineaments shown.

b) Trends that run East-North-East correspond to the intersection of bedding of the basement rocks and the surface. MacLeod et al. (1961) describes the beds as "...quartzite, mica schist and quartz mica schist with a general strike slightly east of north...". These trends also occur on the western side of the Forth River in the glacial till and are the edges of the basement beds where they have been exposed by post-glacial erosion.

c) Trends that run roughly North to North-North-West are striations in the rocks by glacial action.

MINERALIZATION

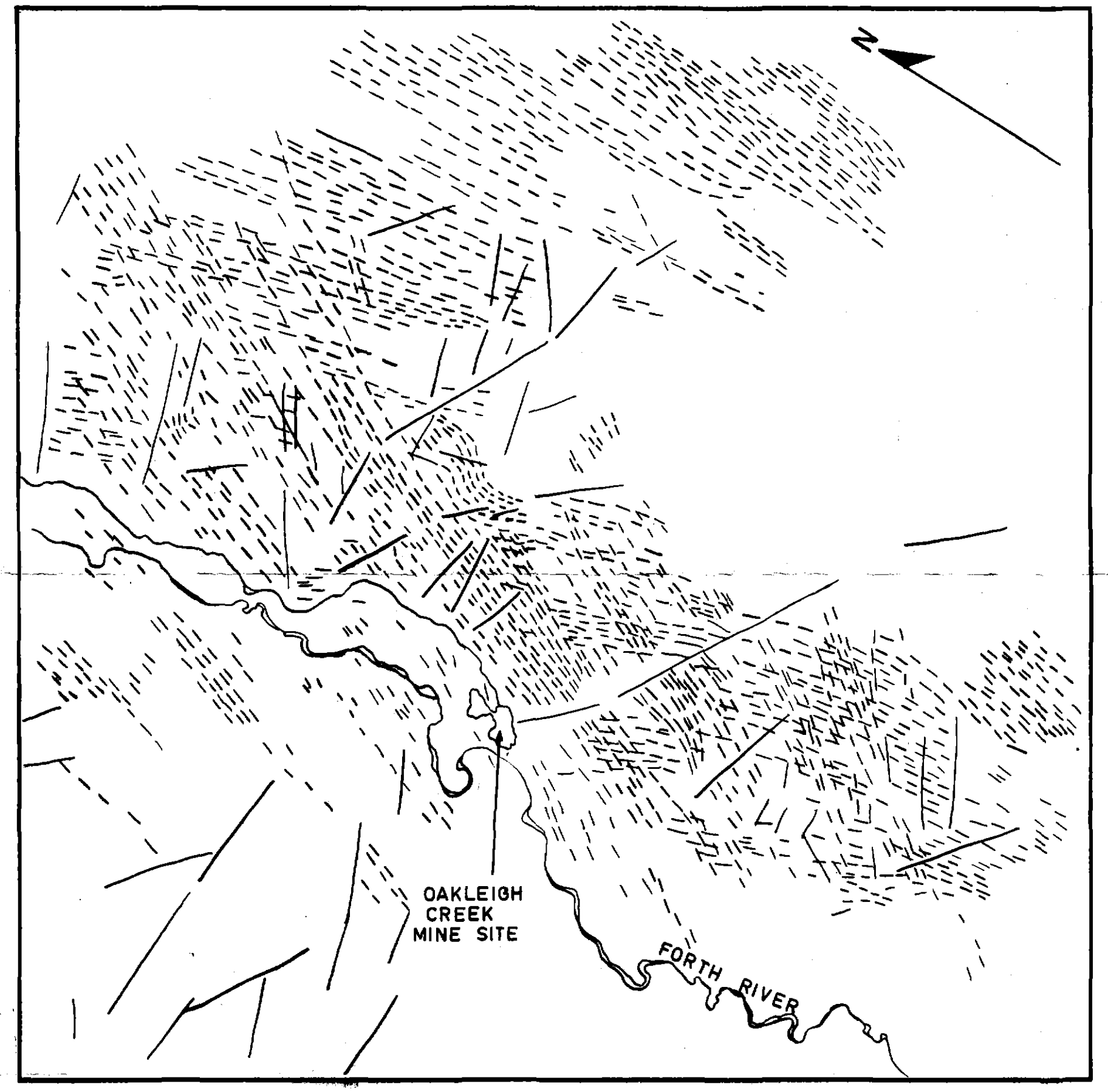
MacLeod et al. (1961) describe the Precambrian basement rocks as being abundantly veined with white quartz and locally sheared along planes trending North-North-West. These shear planes would serve as a very good structural control for any late stage vapour phases coming from the nearby granite body.

If folding of the Precambrian basement occurred before, or concurrently with, the emplacement of the granite body, then mineralized veins could occur parallel to fold axes within the Precambrian basement.

Reference - MacLeod, W.N., Jack, R.H., & Threader, V.M.
Explanatory Report - one mile Geological Map Series
- K'55-11-52 - Du Cane.
Tasmanian Department of Mines, 1961.

S.M. McCLEAN.

INTERPRETATION OF GEOLOGICAL STRUCTURAL FEATURES FROM PHOTO INTERPRETATION AIRPHOTO WESLEY VALE 820-83



KEY

LARGE SCALE LINEAMENTS (WSW TO N)

TRENDS OF PRECAMBRIAN BEDS (ENE)

TRENDS OF GLACIAL STRIATIONS (N TO NNW)

5 cm

SCALE 1:20 000

0 500 1000m