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APPRAISAL OF THE COAL
RESOURCES IN AREAS HELD BY THE
CORNWALL COAL COMPANY
-FINGAL VALLEY-
TASMANIA



Note:

This copy of the report has been edited
to the extent that certain matters of
concern only to A.N.M. have been deleted.

REPORT PREPARED FOR
AUSTRALIAN NEWSPRINT MILLS

BY

McELROY BRYAN & ASSOCIATES PTY LIMITED

80-1422

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SECTION 1. INTRODUCTION

The purpose of this report is to give an assessment of the coal resources of those areas in the Fingal Valley held by Cornwall Coal Company. Reference is also made to adjacent areas not held by that company, but which are known to be coal-bearing. Programmes of exploration are outlined for each of the relevant areas, and these should be implemented as soon as possible to provide data that is essential for planning the future of coal mining in the Fingal Valley by Cornwall Coal Company.

The appraisal of the Duncan Colliery area (Section 3) is based largely on the data from holes drilled by the Department of Mines. An independent review of that drill hole data has been undertaken as part of the process of preparing seam isopach and structure contour maps for the colliery holding. Lithological logs were available for drill holes up to D.O.M. 31, and some information on seam intersections and analyses was available for drill holes D.O.M. 32 to D.O.M. 36. The co-operation of the Department of Mines, especially Mr. Vic Threader, was much appreciated, both with respect to the acquisition of drill hole data and for very helpful discussions. A re-examination of some of the cores of the Mines Department drill holes was not considered to be justified for this appraisal, but would be necessary before a drilling programme was undertaken by Australian Newsprint Mills for Cornwall Coal Company.

Some drill hole data was also available for the Mt. Nicholas Range Area (Section 4), where several seams were worked at both the Cornwall and Mt. Nicholas Mines. Early mine records provide data on the extent of workings and on some of the faults. Other relevant data was available from Cornwall Coal Company, and useful discussions were held with both Mr. Charles Peck (Secretary) and Mr. Bob Mellows (Mine Manager). The reduced levels of some old workings were available from a Mines Department compilation of the Mt. Nicholas - Cornwall workings.

Some of the drill holes by the Mines Department achieved very poor core recovery (as low as 7%) in the coal seams, and the apparently difficult drilling conditions resulted in a slow rate of progress for most holes. It has been a difficult task for the geologists of the Department of Mines to visually correlate strata and also coal intervals because of the lengthy periods (sometimes more than a year) between the completion of successive drill holes. Some of the earlier drill holes in the Duncan Colliery area unfortunately did not extend to the East Fingal Seam. The presence of that seam was not known until drilling was carried out to the base of the Triassic coal measures.

SECTION 2. CONCLUSIONS AND RECOMMENDATIONS

2.1

There may be sufficient reserves of coal available in the vicinity of Duncan Colliery for 20 years of mining at the present rate of production. However the mining conditions in the Duncan Seam are often very difficult, leading occasionally to an inability to supply customers in Tasmania, particularly A.N.M. Exploration costs for this area are high due to the high cost of drilling through several hundred metres of dolerite, which overlie the coal-bearing sequence. In future the mining at Duncan Colliery will be at increasing depths below the surface, and this will tend to result in more difficult mining conditions.

2.2

In the Fingal Valley there are potential coal-bearing areas that are sufficiently extensive to indicate that coal mining at the present rate of production could continue for perhaps 50 years.

2.3

It is recommended that the exploration programmes outlined in Section 3.3 and 4.3 be implemented as soon as suitable arrangements can be made with Cornwall Coal Company.

Drilling at Tower Hill and St. Pauls Dome, as outlined in Section 5, is recommended if the presence of coal-bearing strata is confirmed by geological mapping.

Where possible all drill holes should avoid great thicknesses of dolerite, and ideally should be located to commence coring at the top of the Triassic coal measures. All reconnaissance drill holes should extend into the Permian strata at least for 10 or 20 metres. Only experienced coal drillers should be engaged for this work and if possible the drill holes should provide HQ Core using a triple tube core barrel. If at all possible, modern, sophisticated geophysical down-hole logging techniques, specifically designed for coal drilling should be utilized particularly to check on core losses in coal seams. Experience shows that for drill holes in coal measures most core losses occur in coal, and often entire seams can be lost due to poor drilling practice. All drilling programmes should be carried out under the daily supervision of an experienced coal geologist, and drilling should be on a 2 x 12 hour shift basis, 7 days a week.

2.4

When the results of the exploration recommended in 2.3 above are available, and when some exploratory mining of the East Fingal Seam has been undertaken, it is considered that a complete review be undertaken of all of the long term options available to Cornwall Coal Company. Such a review could be undertaken in about May 1980 if drilling commenced in July 1979. A decision should be made in May 1980 concerning the future of the present Duncan Colliery. If a decision was made to retreat from the present Duncan workings Mr. Bob Mellows (Mine Manager) has estimated that sufficient coal could be won from pillars during the retreat to maintain the present satisfactory rate of production for 2 years.

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SECTION 3. FINGAL AREA

This area includes the Duncan Colliery and the area to the east and south-east where drilling has been undertaken by the Department of Mines during the last 15 years or so. The Triassic coal measures lie beneath the thick dolerite sills and are exposed on the lower slopes, below the Fingal Tier. Map 2 shows the broad distribution of the geological units in the area.

Most of the data that is relevant to an assessment of the coal resources is from diamond drill holes, whose locations are shown on Map 2. The coal intersections thicker than 0.5m, recorded in the drill logs of the Mines Department, are indicated on Table 1. On Table 2 are listed the possible or theoretical working sections of the two main seams, the Duncan Seam and the East Fingal Seam. An independent assessment of all of the drill hole data has been undertaken to enable identification of the main seams. For some drill holes the interpretation given here differs somewhat from that of the Mines Department, specifically for D.O.M.'s 5,7,20,21 and 31. One of the significant differences is for D.O.M. 7 where the seam identified as the East Fingal Seam in this report had previously been considered to be the Duncan Seam. In D.O.M. 7 there is no coal recorded at the level of the Duncan Seam. In D.O.M. 31 the Duncan and East Fingal Seams identified in this report are at much lower levels than previously thought.

Analytical data that is available for the Duncan and East Fingal Seams is included as Appendix A. Very few analyses of washed coal are available and in the sampling of the seams the stone bands have been excluded. Very useful additional data would be obtained by preparing a seam composite of the probable working section, including the stone bands, for

No significant differences in correlation in S. 20, 21, 31. but in 7 they have used the wrong collar elevation. refer 1976/14 for correct level.

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washing at S.G. 1.60. This would give a better idea of the yield that could be anticipated from the washery, and the analysis of the floats at 1.60 would closely approach the analysis of the saleable coal. The raw coal analysis of individual plies of coal is of limited use where the working section is reasonably well established as being the full seam thickness. ✓

The Jurassic Dolerite, which overlies the coal measures is more than 200m thick over much of the plateau above Duncan Colliery, and to the east in D.O.M. 24 the dolerite is 386m thick. The increase in thickness is shown on Cross Section A-B, Map 5.

The Triassic coal measures are up to 320m thick (D.O.M. 6), but to the east where the dolerite is thicker the coal measures are only about 200m thick. The East Fingal Seam is about 100m above the base of the Triassic sequence and the Duncan Seam is about 45m above the East Fingal Seam.

Area: Fingal Area, Tasmania

100011

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 1	525.5	217.9	DUNCAN	70.4	72.7	2.3	452.8
			EAST FINGAL	115.9	116.6	0.7	408.9
D.O.M. 2	608.7	183.9		69.2	71.0	1.8	537.7
				155.3	155.9	0.6	452.8
D.O.M. 3	641.9	216.7	DUNCAN	176.6	179.0	2.4	429.7
				128.8	129.7	0.9	512.2
D.O.M. 4	546.5	330.1		142.2	143.6	1.4	498.3
				156.4	157.0	0.6	484.9
D.O.M. 5	575.9	269.6		187.4	188.2	0.8	453.7
			DUNCAN	210.2	212.5	2.3	429.4
D.O.M. 5	575.9	269.6		20.7	21.5	0.8	525.0
				43.1	43.7	0.6	502.4
D.O.M. 5	575.9	269.6		72.7	73.9	1.2	472.6
				113.7	114.4	0.7	432.1
D.O.M. 5	575.9	269.6	DUNCAN	122.7	123.4	0.7	423.1
				123.7	124.5	0.8	422.0
D.O.M. 5	575.9	269.6		127.9	128.4	0.5	418.1
				137.5	138.1	0.6	408.4
D.O.M. 5	575.9	269.6		160.4	160.9	0.5	385.6
				165.5	166.1	0.6	380.4
D.O.M. 5	575.9	269.6		180.2	180.7	0.5	365.8
				186.1	186.6	0.5	359.9
D.O.M. 5	575.9	269.6		99.7	100.9	1.2	475.0
				103.9	104.4	0.5	472.0
D.O.M. 5	575.9	269.6		143.0	144.2	1.2	431.7
			DUNCAN	146.9	148.9	2.0	427.0
D.O.M. 5	575.9	269.6		158.3	158.8	0.5	417.1
			EAST FINGAL	180.1	182.4	2.3	393.4
D.O.M. 5	575.9	269.6		189.1	189.9	0.8	386.0
				206.1	207.0	0.9	368.9

100012

Area: Fingal Area, Tasmania

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 6	739.7	457.8		166.0	166.6	0.6	573.1
				168.1	169.5	1.4	570.2
				169.8	170.7	0.9	569.0
				219.9	221.8	2.9	517.8
				249.9	250.7	0.8	489.0
				263.1	263.6	0.5	476.0
				281.2	282.1	0.9	457.6
			DUNCAN	304.8	307.8	3.0	431.8
			EAST FINGAL	343.2	344.72	1.52	395.0
D.O.M. 7B	583.9	351.7		130.3	131.5	1.2	452.4
			EAST FINGAL	183.5	185.7	2.2	398.1
				255.1	256.0	0.9	327.9
D.O.M. 14	ABANDONED						
D.O.M. 15	ABANDONED						
D.O.M. 16A	837.0	364.2		303.1	306.1	3.0	530.9
				306.7	308.0	1.3	529.0
				328.8	330.9	2.1	506.1
				352.2	358.0	5.8	479.0
D.O.M. 17	777.5	505.3		323.5	325.6	2.1	451.9
				349.0	350.3	1.3	427.2
				354.3	355.1	0.8	422.4
			DUNCAN	380.11	381.43	1.32	396.1
			EAST FINGAL UPPER	418.9	419.6	0.7	357.9
			EAST FINGAL LOWER	422.8	425.0	2.2	352.5
				439.1	439.8	0.7	337.7
D.O.M. 18	664.5	424.8		NO	COAL SEQUENCE INTERSECTED		
D.O.M. 19	847.2	455.0		313.3	314.3	1.0	532.9
				324.1	326.2	2.1	521.0
				350.3	352.8	2.5	494.4
				377.6	379.3	1.7	467.9

100013

Area: Fingal Area, Tasmania

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 19 (cont'd)				383.5	384.3	0.8	462.9
				421.4	422.1	0.7	425.1
			DUNCAN	428.25	429.8	1.55	417.4
D.O.M. 20	811.0	465.54		279.1	285.6	6.0	525.4
				308.2	310.5	2.3	500.5
				334.4	339.7	5.3	471.3
				364.7	365.8	1.1	445.2
			DUNCAN	412.78	415.10	2.32	395.8
			EAST FINGAL UPPER	455.0	456.4	1.4	354.6
			EAST FINGAL LOWER	458.27	460.21	1.94	350.8
D.O.M. 21	758.5	502.4		296.0	296.8	0.8	461.7
				325.8	326.5	0.7	432.0
				341.8	342.3	0.5	416.2
			DUNCAN	348.04	350.11	2.07	408.4
				388.3	389.2	0.9	369.3
			EAST FINGAL	395.7	397.5	1.8	361.0
				414.5	415.3	0.8	343.2
D.O.M. 22	407.4	228.6		155.2	156.8	1.6	250.6
				188.6	189.3	0.7	218.1
				199.3	200.1	0.8	207.3
D.O.M. 23	804.6			366.0	367.2	1.2	437.4
				373.1	375.8	2.7	428.8
				410.3	411.1	0.8	393.5
			DUNCAN	412.3	415.13	2.83	389.5
			EAST FINGAL UPPER	453.6	454.7	1.1	349.9
			EAST FINGAL LOWER	460.91	462.05	1.14	342.4
D.O.M. 24	830.8	523.3		397.0	398.2	1.2	432.6
				401.4	402.5	1.1	428.3
			DUNCAN	441.1	443.7	2.6	387.1
			EAST FINGAL	496.2	497.8	1.6	333.0

Area: Fingal Area, Tasmania

100014

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)	
D.O.M. 25	784.1	525.9		242.2	243.1	0.9	541.0	
				244.9	246.5	1.6	537.6	
				270.6	272.0	1.4	512.1	
				294.2	297.5	3.3	486.6	
				323.4	324.3	0.9	459.8	
				326.3	327.3	1.0	456.8	
				350.3	351.4	1.1	432.7	
				368.5	369.0	0.5	415.1	
			DUNCAN	376.0	377.9	1.9	406.2	
				413.4	414.0	0.6	370.1	
			EAST FINGAL	417.7	422.95	5.25	361.2	
D.O.M. 26	733.9	459.2	DUNCAN	310.35	312.9	2.60	421.0	
			EAST FINGAL	354.6	356.8	2.2	379.3	
				380.5	381.8	1.3	352.1	
D.O.M. 27	745.7	488.0		281.1	282.0	0.9	463.7	
				313.1	314.0	0.9	431.7	
				331.5	332.0	0.5	413.7	
			DUNCAN	334.1	336.9	2.8	408.8	
			EAST FINGAL UPPER	372.7	374.8	2.1	370.9	
			EAST FINGAL LOWER	377.21	378.79	1.58	366.9	
				389.4	390.1	0.7	355.6	
				395.1	396.1	1.0	349.6	
D.O.M. 28	442.0	160.5	EAST FINGAL ?	63.2	63.7	0.5	378.3	
D.O.M. 29	686.4	431.4	Coal Measures not intersected - Dolomite 346m thick					
D.O.M. 30	519.4	254.9		51.8	53.2	1.4	466.2	
			DUNCAN	71.49	73.81	2.32	445.6	
				74.9	75.7	0.8	443.7	
			EAST FINGAL LOWER	118.7	120.8	2.1	398.6	
				142.8	143.3	0.5	376.1	
				150.1	151.5	1.4	367.9	

100015

Area: Fingal Area, Tasmania

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 30 cont'd				171.4	173.1	1.7	346.3
D.O.M. 31	828.9	576.0		309.9	314.0	4.1	514.9
				326.1	326.6	0.5	502.3
				335.7	340.9	5.2	488.0
				358.3	364.0	5.7	464.9
				385.4	387.0	1.6	441.9
				389.1	390.0	0.9	438.9
			DUNCAN	431.7	432.2	0.5	396.7
			EAST FINGAL	481.84	485.46	3.62	343.4
				506.1	507.1	1.0	321.8
D.O.M. 32	-	-	DUNCAN	82.2	86.0	3.8	-
D.O.M. 34	478.0		EAST FINGAL	40.58	43.72	3.14	434.0
D.O.M. 35	ABANDONED						
C1	638.3	265.8		140.4	142.6	2.2	495.6
				160.4	161.5	1.1	476.0
				163.1	164.9	1.8	473.4
				190.3	191.5	1.2	446.8
				216.3	217.0	0.7	421.3
			DUNCAN)	239.1	239.7	0.6	398.6
)	240.3	241.0	0.7	397.3
C2	503.7	250.2		20.2	25.0	4.8	478.7
				40.2	45.0	4.8	458.7
				62.2	62.8	0.6	440.9
				83.5	84.0	0.5	419.7
			EAST FINGAL	159.1	162.5	3.4	341.2
				171.2	171.9	0.7	331.8
C3	455.4	162.7	DUNCAN	28.6	29.8	1.2	425.6
				30.7	31.4	0.7	424.0
				34.6	35.3	0.7	420.1
			EAST FINGAL UPPER	65.6	66.5	0.9	388.9

3.1 DUNCAN SEAM

The Duncan Seam occurs about 145m above the base of the Triassic coal measures and the approximate subcrop of the seam is shown on Map 2. Structure contours on the floor of the Duncan Seam (Map 4) show a consistent dip towards east-south-east of less than 2° (about 1 in 50). This can also be seen on Cross-Section A-B on Map 5.

The drill holes indicate that the seam thickness is generally about 2 metres, but in the most easterly drill hole (D.O.M. 31) it is only 0.5m thick. The thickness of the Duncan Seam in each drill hole is given on Table 2. Analyses of the coal are included as Appendix A (pages A1 - A5). Most of the coal plies have an ash content of between 20% and 30%, but some plies of stony coal are as high as 45%. The run-of-mine coal that has been produced for the last few years, from the point of view of coal quality, is considered to be similar to that which would be produced throughout the area. There are no significant trends in the overall ash content of the seam.

The extent of the workings in the Duncan Seam is shown on Map 6, together with seam isopachs and categories of reserves. For most of the area that has been drilled the seam thickness is greater than 1.75m and is therefore potentially suitable for a mining operation using continuous miners.

The reserves of coal are given on Table 3, and from within the present colliery holding it is estimated that up to 6.5 million tonnes of saleable coal could be produced. Outside the present colliery boundary additional reserves have been outlined, from which an additional 4.3 million tonnes of saleable coal could be produced.

100018

Area: Fingal Area, Tasmania

Summary of Bore Data: Theoretical Working Sections of Duncan and East Fingal Seams

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam of Working Section(m)	Depth to Floor of Seam of Working Section(m)	Seam Thickness of Working Section(m)	R.L. of Floor of Working Section (m.a.s.l.)
D.O.M. 1	525.5	217.9	DUNCAN	70.4	72.7	2.3	452.8
			EAST FINGAL	116.0	116.6	0.6	408.9
D.O.M. 2	608.7	184.0	DUNCAN	176.6	178.9	2.3	429.8
			Hole terminated above East Fingal Seam				
D.O.M. 3	641.9	216.7	DUNCAN	210.2	212.5	2.3	429.4
			Hole terminated above East Fingal Seam				
D.O.M. 4	546.5	329.8	DUNCAN	122.7	124.5	1.8	422.0
			EAST FINGAL - less than 0.5m in this drill hole				
D.O.M. 5	575.8	269.5	DUNCAN	146.9	148.9	2.0	426.9
			EAST FINGAL	180.1	182.4	2.3	392.7
D.O.M. 6	739.7	457.8	DUNCAN	305.1	307.3	2.2	432.4
			EAST FINGAL	343.2	344.72	1.52	394.9
D.O.M. 7	583.9	351.7	No coal recorded at level of Duncan Seam				
			EAST FINGAL	183.5	185.0	1.5	398.9
D.O.M. 14			Abandoned				
D.O.M. 15			Abandoned				
D.O.M. 16	837.0	364.2	Hole terminated above Duncan Seam				
D.O.M. 17	777.5	505.3	DUNCAN	380.11	381.43	1.32	396.1
			EAST FINGAL LOWER	422.8	425.0	2.2	352.4
D.O.M. 18	664.5	424.8	This hole located 14km SSW of Area - No coal seams intersected				
D.O.M. 19	847.2	455.0	DUNCAN	428.25	429.8	1.55	417.4
			Hole terminated above East Fingal Seam				
D.O.M. 20	811.0	465.5	DUNCAN	412.78	415.10	2.32	395.8
			EAST FINGAL LOWER	458.27	460.21	1.94	350.8
D.O.M. 21	758.5	502.4	DUNCAN	348.04	350.11	2.07	408.4
			EAST FINGAL	395.7	397.4	1.7	361.1
D.O.M. 22	407.4	228.5	This hole located 12km south of Area				

100019

Area: Fingal Area, Tasmania

Summary of Bore Data: Theoretical Working Sections of Duncan and East Fingal Seams

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam of Working Section (m)	Depth to Floor of Seam of Working Section (m)	Seam Thickness of Working Section (m)	R.L. of Floor of Working Section (m.a.s.l.)
D.O.M. 23	804.6	553.6	DUNCAN	412.3	415.13	2.83	389.5
			EAST FINGAL LOWER	460.91	462.05	1.14	350.0
D.O.M. 24	830.8	523.3	DUNCAN	441.52	443.65	2.13	387.2
			EAST FINGAL	496.22	497.78	1.56	333.0
D.O.M. 25	784.1	525.9	DUNCAN	376.07	377.71	1.64	406.4
			EAST FINGAL LOWER	420.98	422.95	1.97	361.2
D.O.M. 26	733.8	459.2	DUNCAN	310.35	312.95	2.60	421.3
			EAST FINGAL	354.6	356.67	2.06	377.1
D.O.M. 27	745.7	487.9	DUNCAN	334.13	336.72	2.59	409.0
			EAST FINGAL LOWER	377.21	378.79	1.58	366.9
D.O.M. 28	442.0	160.25	Hole collared below Duncan Seam				
			EAST FINGAL ?	63.2	63.7	0.5	378.3
D.O.M. 29	686.4	431.4	Coal Measures not intersected - Dolomite 346m thick				
D.O.M. 30	519.4	254.8	DUNCAN	71.49	73.81	2.32	446.5
			EAST FINGAL LOWER	119.01	120.79	1.78	398.6
D.O.M. 31	828.9	575.9	DUNCAN	431.7	432.2	0.5	396.7
			EAST FINGAL	481.84	485.46	3.62	343.4
D.O.M. 32			Data not yet available for this hole				
D.O.M. 34	478.0		Hole collared below Duncan Seam				
			EAST FINGAL	40.58	43.72	3.14	434.0
D.O.M. 35			Abandoned				
C-1	638.3	265.8	DUNCAN	240.2	241.0	0.8	397.3
			Hole terminated above East Fingal Seam				
C-2	503.7	250.2	No coal recorded at level of Duncan Seam				
			EAST FINGAL LOWER	160.3	162.5	2.2	341.2
C-3	455.4	162.7	DUNCAN	28.6	29.8	1.2	425.6
			EAST FINGAL LOWER	69.8	72.2	2.4	383.2

The workings in the Duncan Seam have revealed the existence in some areas of a variety of sedimentary features which disrupt the seam floor and/or the seam roof, or which split the seam. These are now known to be completely unpredictable and they enter the workings and disappear from them in the space of a few metres or at most a few hundred metres. All of the observed structures, the interseam bands, and the changes in the roof and floor strata take place so rapidly that information from drill holes spaced at intervals of approximately 1km is unable to give a proper appreciation of their frequency. Therefore, while isopachs have been drawn for each of the seams (Maps 6 & 7), the variations in seam thickness in the Duncan Mine at least, will be much greater than those indicated. Even if the drill holes were located at 100m intervals a true picture of the seam thickness variations would be difficult to obtain. In computing the run-of-mine reserves a mining recovery factor of 40% of the in-situ coal has been used to take account of these conditions. It is worthy of note that these unusual mining conditions were not experienced in the workings at the Cornwall or Mt. Nicholas Mines, to the north-east. A detailed study of the sedimentary sequences above and below the Duncan Seam may reveal some reason for the observed features and could enable prediction of areas likely to be least affected. Such a study of the drill cores could be incorporated with any on-going drilling programme as a re-appraisal of all the available cores would be warranted now since some drill holes were completed more than 15 years ago.

On the basis of the data that is presently available it must be said that the type of mining conditions that have been experienced in Duncan Colliery in the last few years can also be expected as mining progresses in its present easterly direction. Away from the present workings, both to the south and east, the depth of cover increases and in general this could be expected to increase rather than decrease the difficulty of mining.

TABLE 3

100022

IN SITU RESERVES - DUNCAN SEAM (x 10⁶ tonnes)

Category	Seam Thickness	Duncan Colliery Holding	East of Colliery Holding
Measured	> 1.75m	19.1	13.3
	< 1.75m	1.2	2.0
Indicated	> 1.75m	2.7	1.0
	< 1.75m	-	0.9
Inferred		17	-

- (1) The minimum practical working thickness is taken as 1.75m.
- (2) The mining recovery is taken as 40% considering the mining experience at Duncan Colliery.
- (3) The yield from the washery is taken as 75% based on the present performance of the plant.

	Run-of-Mine Coal (x 10 ⁶ tonnes) - Measured + Indicated - (Approx 30% Ash)	(x 10 ⁶ tonnes) Saleable Coal (Approx 20% Ash)
Colliery Holding	8.7	6.5
East of Colliery Holding	5.7	4.3
TOTAL	14.4	10.8

3.2 EAST FINGAL SEAM

This seam occurs about 100m above the base of the Triassic coal measures and has not so far been mined in the Fingal Area. The approximate subcrop of the seam is shown on Map 2, and the structure contours on Map 4 show that the seam dips to the east-south-east at about 1 in 50 (less than 2°). The cross sections on Map 5 also show the very flat dips of the seams.

The East Fingal Seam is about 45m below the Duncan Seam, but the interseam thickness varies from 34m in D.O.M. 5 to 54m in D.O.M. 24. The interseam isopachs are included as Map 8, and these show a progressive increase in interseam thickness to the east-south-east, down dip.

The intersections of East Fingal Seam are given in Table 2 and isopachs of the theoretical working section are included as Map 7. From Table 2 it is apparent that in the eastern part of the area this seam is divided into an upper and lower split. The lower split, referred to as East Fingal Lower Seam, has a lower ash content and has been chosen as the working section in the eastern part of the Fingal Area. In general the potential working section is of the order of 2m and therefore of mineable thickness. The thickest intersections are in D.O.M. 34 near the Duncan Mine and to the east in D.O.M. 31, for which analytical data is not available.

The drill hole data indicates that significant amounts of saleable coal could be won from the East Fingal Seam. Table 4 sets out the reserves for this seam, but as seen on Map 7 the area of measured reserves near D.O.M. 34 are very small. The East Fingal Seam is of mineable thickness east of the colliery holding but several drill holes near the outcrop (C6 and C7) encountered less than 1.75m of coal. Some of the data from the C series holes, drilled in 1966, may be

TABLE 4
100024

IN SITU RESERVES - EAST FINGAL SEAM (x 10⁶ tonnes)

Category	Seam Thickness	Duncan Colliery Holding	East of Colliery Holding
Measured	> 1.75m	14.2	21.0
	< 1.75m	7.8	3.9
Indicated	> 1.75m	0.7	4.3
	< 1.75m	0.7	-
Inferred		19	-

- (1) The minimum practical working thickness is taken as 1.75m.
- (2) Considering the possible working conditions for this area the mining recovery is taken as 40%.
- (3) The yield from the washery is taken as 60%, based on the limited available data.

	Run-of-Mine Coal (x 10 ⁶ tonnes) - Measured + Indicated - (Approx 35% Ash)	(x 10 ⁶ tonnes) Saleable Coal (Approx 20% Ash)
Colliery Holding	5.9	3.5
East of Colliery Holding	10.1	6.1
TOTAL	16.0	9.6

unreliable, as hole C2 nearby intersected 2.2m of coal in the East Fingal Seam.

Analyses are available for the East Fingal Seam from 13 of the Mines Department drill holes. These are included in Appendix A (pages A6 - A10). Some raw coal plies have ash contents as low as 25%, but the overall raw coal ash content of the working section in most drill holes would be nearer 35%.

The Cornwall Coal Company is considering the commencement of exploratory workings into the East Fingal Seam in the vicinity of the Duncan Mine pit top area. The results from D.O.M. 34 at this locality are certainly encouraging, however there are no other seam intersections for nearly 2km, and one of these, D.O.M. 1, is only 0.6m thick. That information from the earliest drill hole in the area may be unreliable. A limited, but essential drilling programme for this area is outlined later in this report.

Although the two seams are not particularly close together the accepted mining practice is to work the top seam in an area before working the lower seam. If the East Fingal Seam was to be mined from a portal below the present Duncan Mine planning should provide for the fact that for quite some distance ahead the mineable coal from Duncan Seam has already been extracted.

Of the options presently available to Cornwall Coal Company to undertake exploratory workings in a seam other than the Duncan Seam, the only one worthy of consideration is the East Fingal Seam near the present pit top. At this time it would not be prudent to move a continuous miner into the Cornwall/Mt. Nicholas area, as the data available for that area is very incomplete, and the location is remote from the present colliery operations.

100027

FINGAL AREA

PROPOSED DRILL HOLES -

See Map 9

(i) Duncan Colliery Holding

<u>Hole</u>	<u>Collar R.L. m.a.s.l.</u>	<u>Total Depth (m)</u>
M	590	200
N	660	260
O	740	320
P	670	270
TOTAL =		<u>1,050m</u>

(ii) East of Colliery Holding

<u>Hole</u>	<u>Collar R.L. m.a.s.l.</u>	<u>Total Depth (m)</u>
Q	660	280
R	560	200
TOTAL =		<u>480m</u>

SECTION 4. MT. NICHOLAS RANGE AREA

This area is covered by Map 10, at a scale of 1:20,000, and shows the areas held by, and under application by the Cornwall Coal Company. The mining leases cover most of the areas worked as the Cornwall Mine, just north of the village of that name, and the Mt. Nicholas Mine which is located further west, on the western side of a series of significant faults. These mines were first worked more than 50 years ago.

A number of seams have been worked at different places within these leases. Earlier workings were also located east of Cornwall at the Jubilee Mine, and this area is the subject of a recent application by Cornwall Coal Company (See Map 10). Total production from these mines was as follows:

Cornwall	3.99 million tonnes
Mt. Nicholas	1.72 million tonnes
Jubilee	0.67 million tonnes

In the Mt. Nicholas Range Area there are very few drill holes and correlation of the seams throughout this area is not possible. Even within the area where the old workings were located the data is very sketchy and reduced levels are only available at a few localities for some of the seams. There is little information available on the working thickness of the seams that were mined, and information on the larger faults, particularly with respect to the nature and extent of the displacement, is very limited. Many of the workings terminated in the vicinity of a fault or a suspected fault, and assessments of the displacement are not available in any reliable form, but rather on the basis of hearsay and local knowledge passed on by earlier mine personnel to those presently working at the Duncan Colliery. An interpretation based on a carefully constructed

100029

Area: Mt. Nicholas Range Area, Tasmania

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 8	573.3	250.7	SEAM A	31.8	32.3	0.5	540.9
				45.1	45.8	0.7	527.5
			SEAM B	124.0	125.8	1.8	447.4
				126.9	129.1	2.2	444.1
				152.7	153.4	0.7	419.9
			SEAM C	156.1	157.8	1.7	415.5
				161.4	162.8	1.4	410.5
D.O.M. 9	448.9	236.5	SEAM B	22.2	23.8	1.6	425.1
D.O.M. 10			ABANDONED				
D.O.M. 11	498.4	139.5		67.0	68.1	1.1	430.2
D.O.M. 12	575.0	223.9		54.8	55.3	0.5	519.7
				88.2	89.0	0.8	486.0
			SEAM B	123.9	125.5	1.6	449.5
				127.6	128.3	0.7	446.7
			SEAM C	149.2	150.8	1.6	424.2
D.O.M. 13	536.5	228.5		5.2	7.5	2.3	529.0
				12.6	13.2	0.6	523.3
				14.5	15.2	0.7	521.3
				42.4	43.5	1.1	493.0
			SEAM A	73.8	74.8	1.0	461.7
				83.8	84.3	0.5	452.2
				85.5	87.7	2.2	448.8
				141.7	142.2	0.5	394.3
			SEAM B	162.6	166.6	4.0	369.9
			SEAM C	180.8	181.8	1.0	354.7
D.O.M. 33				43.3	48.5	5.2	461.1
				54.4	57.0	2.6	452.6
			CORNWALL	73.4	76.5	3.1	433.1
				111.0	113.9	2.9	395.7
				137.0	142.3	5.3	367.3

100030

Area: Mt. Nicholas Range Area, Tasmania

Summary of Bore Data: Coal Intersections thicker than 0.5m (including stone bands)

Drill Hole	Collar R.L. (m a.s.l.)	Total Depth (m)	Seam	Depth to Roof of Seam (m)	Depth to Floor of Seam (m)	Seam Thickness (m)	R.L. of Floor (m a.s.l.)
D.O.M. 36	436.2			25.8	29.2	3.4	407.0
				31.4	33.0	1.6	403.2
				43.4	44.9	1.5	391.3
				47.5	48.8	1.3	387.4
				55.8	56.5	0.7	379.7
Cornwall Hole 1	624.7	184.4		18.1	18.7	0.6	606.0
				19.1	20.0	0.9	604.7
				24.2	26.7	2.5	598.0
			BLUE	104.7	105.6	0.9	519.1
				115.1	115.8	0.7	508.9
			CORNWALL	118.3	119.2	0.9	505.5
				123.1	123.9	0.8	500.8
				158.8	159.9	1.1	464.8
				164.3	165.8	1.5	458.9
				171.3	172.4	1.1	452.3
				179.5	181.3	1.8	443.4
Cornwall Hole 2	624.5	199.6		42.7	43.7	1.0	580.8
				44.8	45.6	0.8	578.9
				45.7	47.5	1.8	576.9
				47.8	49.1	2.3	575.4
				49.2	50.0	0.8	574.5
				50.6	53.6	3.0	570.8
				59.6	60.2	0.8	564.3
			BLUE	123.7	126.9	3.2	497.5
			CORNWALL	133.8	137.2	3.4	487.3
				140.8	141.7	0.9	482.8
				176.5	177.5	1.0	446.9
				182.3	184.3	2.0	440.2
				189.0	190.5	1.5	434.0
				196.3	199.5	3.2	425.0

100031

cross section may in fact disagree with the reported nature of the fault. Additional data from cored drill holes, and survey data from field mapping would enable the true displacement on these faults to be determined.

4.1 MT. NICHOLAS MINE

The Mt. Nicholas Mine area was centred about 3km west of the village of Cornwall and extended eastwards to a fault located 2km west of Cornwall. The workings in the 4'9" Seam terminated along this fault, which was reported to have a downward displacement on the eastern side of about 30m. The correlation diagram on Map 11 shows an upwards displacement on the eastern side on the basis that the 4'9" Seam correlates with the Cornwall Seam. The latter interpretation is considered to be more reliable.

In the Mt. Nicholas area 4 seams were worked. The 8' Seam (No. 4 Seam), which is the lowest seam in this area, was worked from an adit whose R.L. is 348.3m. This seam was worked over a very small area as indicated on Figure 1. Above this, at an R.L. of about 400m, were the workings of the 4'9" Seam, and this was the most extensively worked seam at Mt. Nicholas (Figure 2). The 4' Seam lies above the 4'9" Seam but no information is available on the R.L. of those workings, the extent of which are shown on Figure 3. The highest seam in this area is the 6' Seam, which was worked in the eastern part of the Mt. Nicholas area at an R.L. of about 425m as recently as 1960. (See Figure 4).

There is little or no data on the variation in seam thickness of the seams worked in the Mt. Nicholas Mine, and very little analytical data is available either. Appendices B and C give a few raw coal analyses of seams mined at Mt. Nicholas. The ash content of the mined seams is generally between 20% and 30%. However, particularly in the earlier workings, where hand mining took place along narrow headings, the worked section would have been less than the full seam thickness.

16.
100033

5 cm

595,500 E

No.4 Seam (Fenton Seam)

BOUNDARY OF
MINING LEASES

593,000 E

8 ft Seam

5,400,500 N

5,399,000 N



MT NICHOLAS RANGE AREA
EXTENT OF FENTON / 8ft SEAM WORKINGS

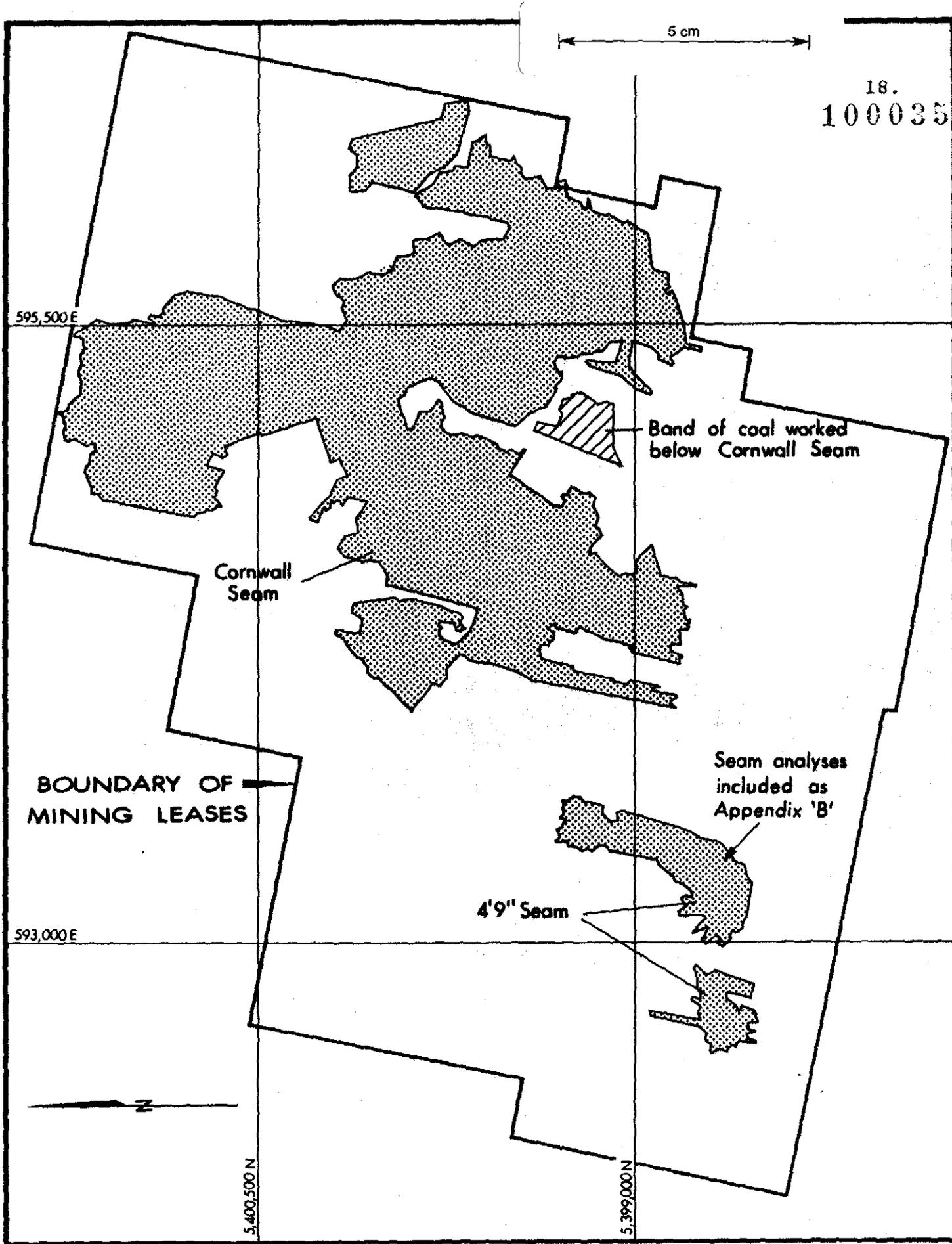
0 500 1000 1500 metres

SCALE 1:20000

FIGURE 1

Avoidable stone bands would not have been taken in the mining, since the run-of-mine coal was sold without beneficiation. Where mechanical mining was used the working section would have been thicker and probably included more stone bands. Some beneficiation of that coal would have been necessary to reduce the ash content of the saleable coal to about 20%.

18.
100035



MT NICHOLAS RANGE AREA
EXTENT OF CORNWALL / 4'9" SEAM WORKINGS

0 500 1000 1500 metres

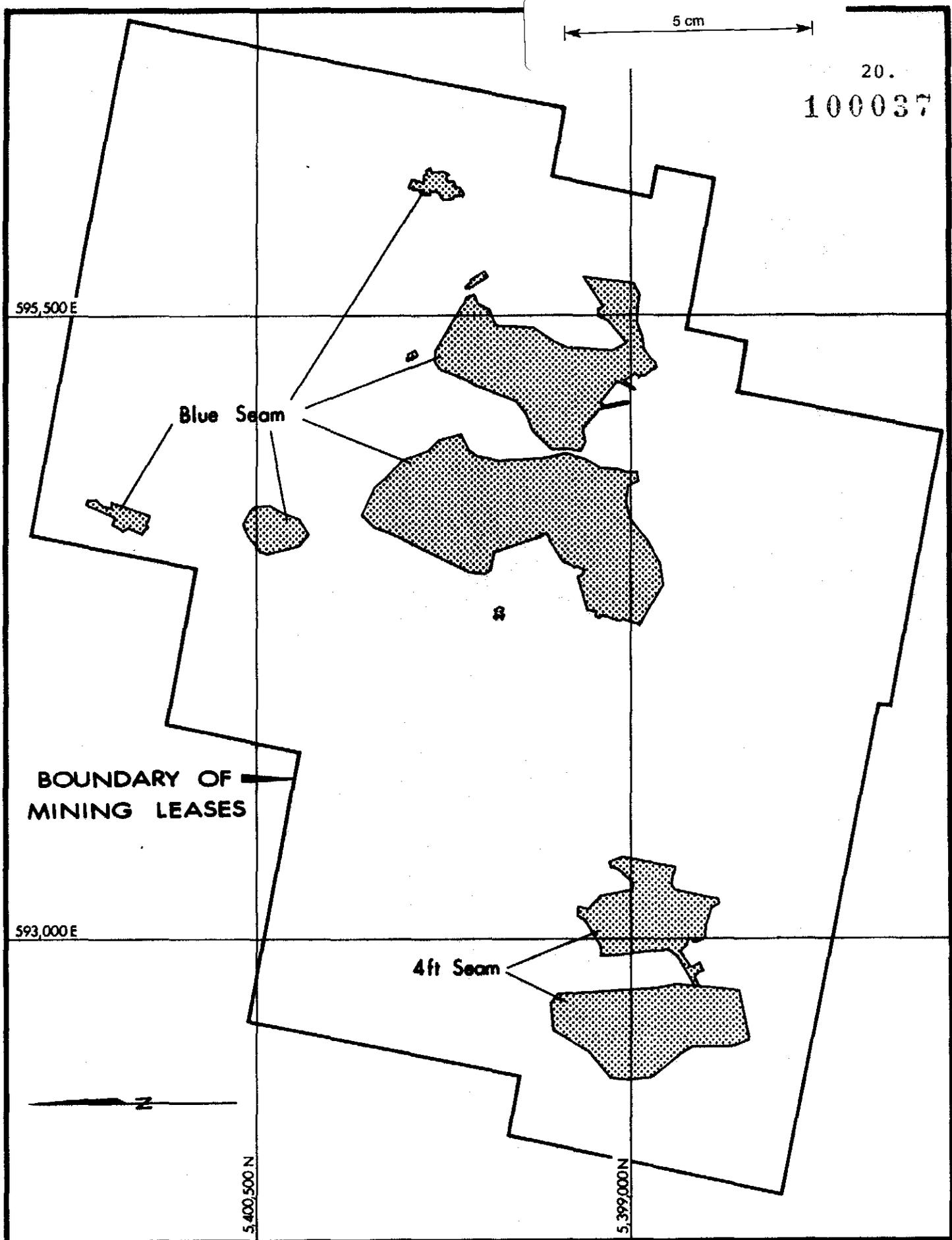
SCALE 1:20000

FIGURE 2

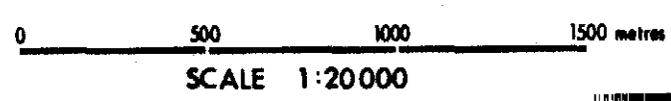
4.2 CORNWALL MINE

The workings in the Cornwall Area are quite extensive and the No. 2 Seam (Cornwall Seam) was worked from the outcrop just north of the village of Cornwall in a northerly direction for 2.6km to the outcrop on the northern side of the Mt. Nicholas Range (See Figure 2). These workings also extended in a north-easterly direction towards the Jubilee Mine (and the Cornwall Fault), and were most recently worked in 1963. The reduced level of entries to the Cornwall Seam just north of the village are between 425m and 440m. This seam rises to the north-east towards the Jubilee Mine, and in the most easterly section this seam is at an R.L. of about 480m. The workings in the Cornwall Seam lie mostly east of a significant north trending fault which is located about 1.2km northwest of Cornwall. At the point where this fault was crossed the downward displacement to the west was reported to be 11m. The workings west of this fault are not extensive and they were abandoned after retreating in a southerly direction adjacent to the fault. As can be seen on Text Figures 2,3 and 4 there is an area where no mining was undertaken, between the easternmost Mt. Nicholas workings and the westernmost Cornwall workings. Bore Hole No. 33 within this area intersected 5 seams but it is difficult to positively relate these seams with either those in the Mt. Nicholas workings or those in the Cornwall workings. Correlation diagram G-H indicates a correlation which is based on all the available seam level data.

In the Cornwall Area several seams exist towards the base of the Triassic coal measures. These include the Fenton Seam, at an R.L. of about 390m and another seam at an R.L. of about 370m, which is reported to be 2m thick. Some prospecting of this latter seam was carried out in 1926 and analyses of the coal intervals indicate coal of good quality as the ash content of the coal plies varies from



MT NICHOLAS RANGE AREA
EXTENT OF BLUE / 4ft SEAM WORKINGS



10% to 24%. The sulphur content is rather higher than that recorded elsewhere, being in the order of 0.8%. The limited information on this seam is included as Appendix G. The Fenton Seam was worked only in a limited area (See Figure 1), but this seam is reported to have been quite thick, and may prove to be more amenable to mechanical mining methods, such as those presently used by Cornwall Coal Company.

To the west and north-west of the Cornwall leases several holes have been drilled by the Department of Mines, and the drill hole summary is included as Table 5. D.O.M. 13, near the Huntsman's Cap, intersected seams of mineable thickness. Analyses of some of these seams are included in Appendix D. Cross Section E-F on Map 11 indicates correlation of three seams between D.O.M. 8 and D.O.M. 13. Additional Drilling is required in this north-western part of the Mt. Nicholas Range Area to provide additional data on the entire coal-bearing sequence and to more adequately define the potentially mineable coal seams.

22.
100039

5 cm

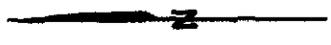
595,500 E

BOUNDARY OF MINING LEASES

593,000 E

Seam analyses included as Appendix 'C'

6 ft Seam Workings



5,400,500 N

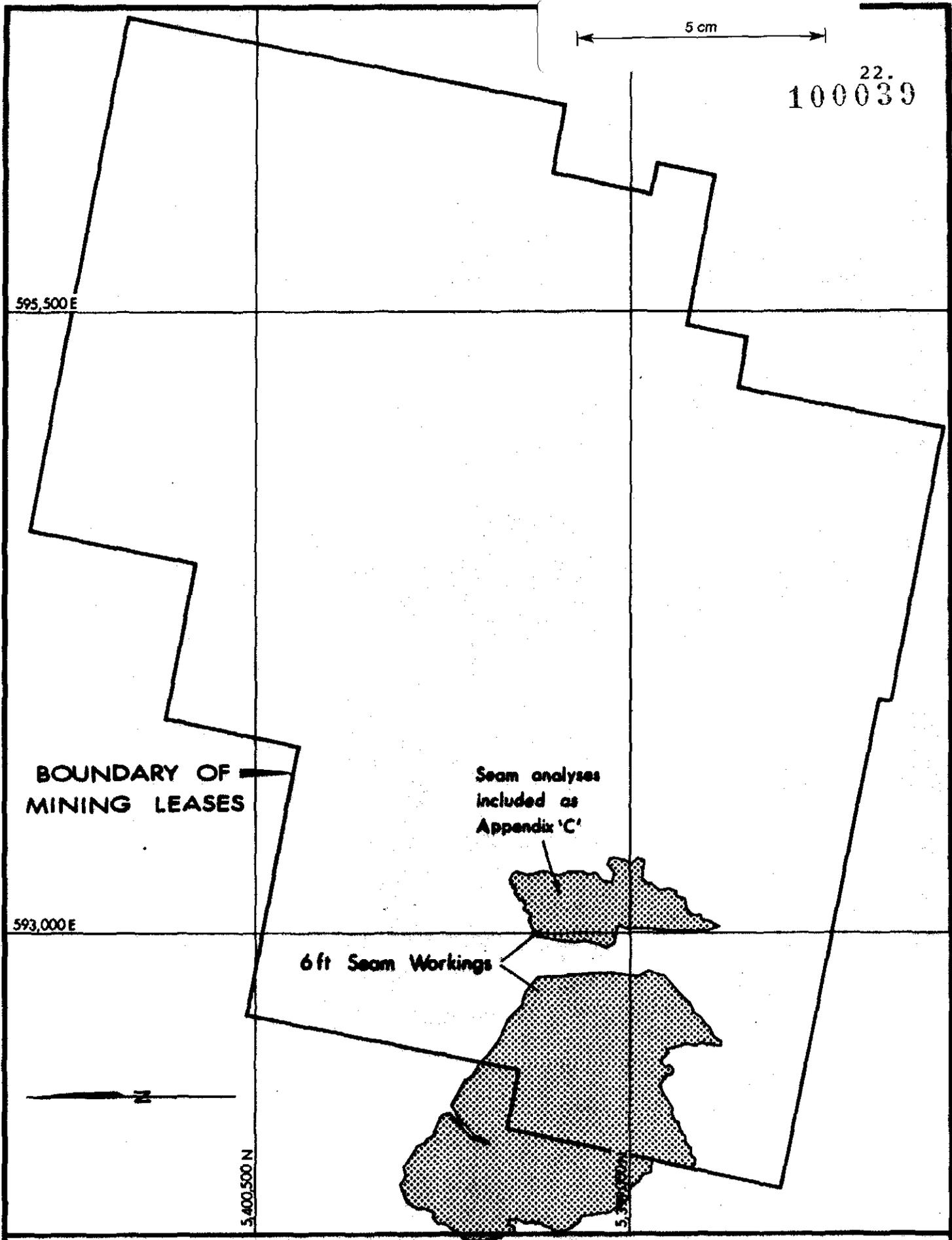
5,390,000 N

MT NICHOLAS RANGE AREA EXTENT OF 6ft SEAM WORKINGS

0 500 1000 1500 metres

SCALE 1:20000

FIGURE 4



4.3 PROPOSED EXPLORATION - PROGRAMME

Coal Mining in the Fingal Valley in earlier years was centred on this area of Triassic coal measures. Apart from the Mt. Nicholas and Cornwall areas already discussed, some mining took place near the western end of the range at the Silkstone Mine, and near the eastern end at the Jubilee Mine.

Exploration of the Mt. Nicholas Range should include both drilling and geological mapping. Exposures in some of the creeks are excellent and much useful data could be obtained from accurately measured stratigraphic sections. A drilling programme in this area can be accomplished without penetrating the hard dolerites, and costs will be considerably less per million tonnes of proven reserves than in the Duncan Colliery Holding. As many as four seams have been worked in some parts of this area and the difficult mining conditions that sometimes occur in the Duncan Seam are not recorded from this area.

On the accompanying table are brief details of the proposed drill holes shown on Map 12. Eight are located within the existing leases, three in the Jubilee Mine area to the east, and five reconnaissance drill holes in the western area. The latter series (V,W,X,Y and Z) are located within the area presently covered by E.L. 5/61 and suitable title should be obtained before proceeding with this part of the exploration. The drill holes A to K involve an estimated 2360 metres of core drilling, and all could be drilled by an efficient contractor in about 3 months with one drilling rig. The cost of this drilling programme, together with geological mapping, core logging, preparation of access roads, analyses, field expenses, surveying, down-hole geophysical logging, and preparation of maps and reports would be about A period of 6 to 8 months would be necessary to complete the drilling and prepare a comprehensive report on the results of the exploration programme.

MT. NICHOLAS RANGE AREA

(i) Proposed Drill Holes - Mining Leases (See Map 12)

<u>Hole</u>	<u>Collar R.L.</u> m.a.s.l.	<u>Total Depth</u> (m)
A	470	170
B	610	250
C	615	250
D	420	130
E	480	180
F	620	230
G	620	200
H	630	230
I	620	220
J	660	200
K	625	300
TOTAL =		2,360 m

(ii) Proposed Drill Holes - Western Area (See Map 12)

<u>Hole</u>	<u>Collar R.L.</u> m.a.s.l.	<u>Total Depth</u> (m)
V	500	150
W	550	200
X	570	170
Y	580	230
Z	500	150
TOTAL =		900m

SECTION 5. OTHER PROSPECTING AREAS FINGAL VALLEY

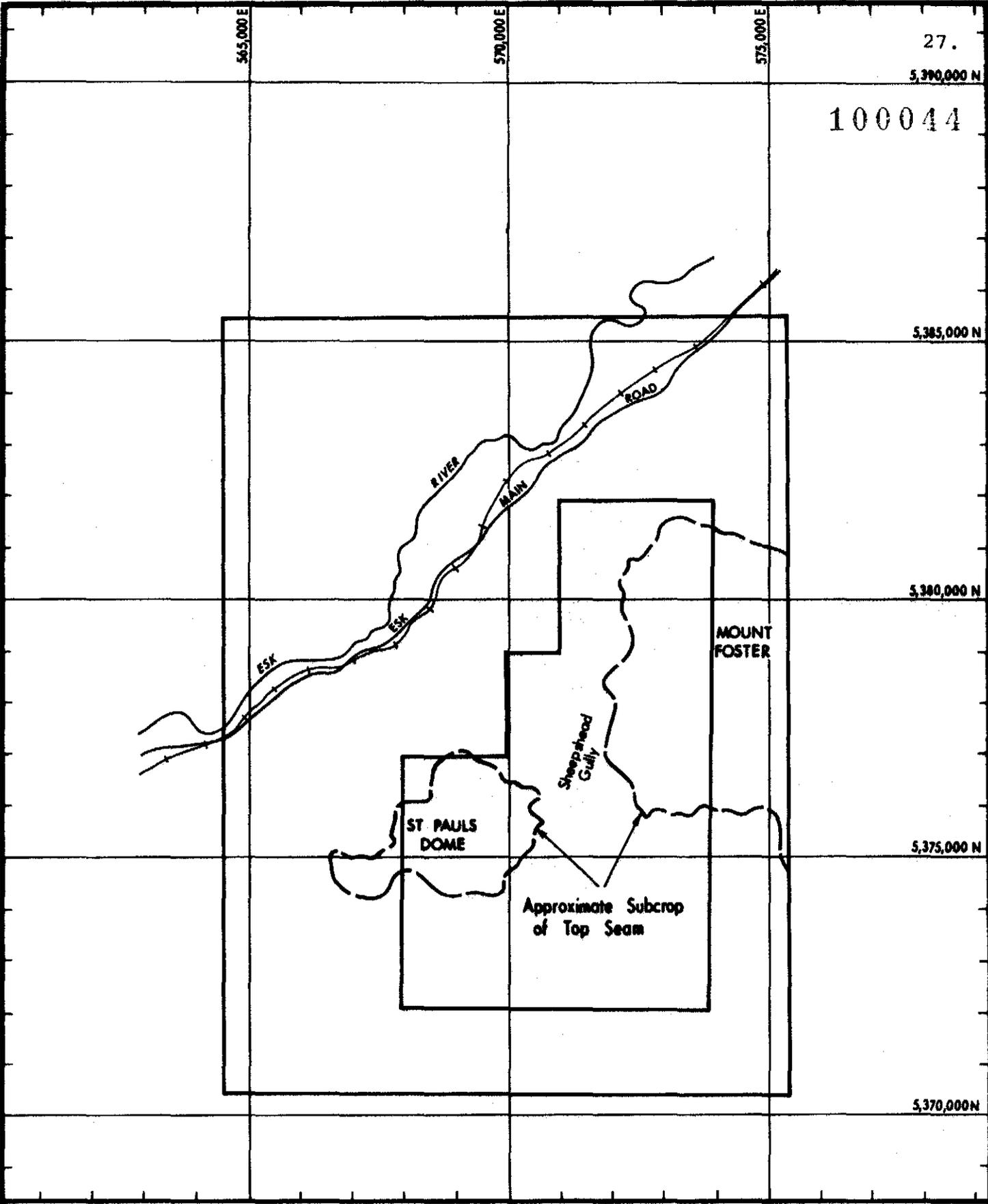
In recent months the Cornwall Coal Company has been active in seeking additional areas that may contain exploitable coal deposits. North-west of Fingal, at Tower Hill, the company has E.L. 24/78 for coal (See Map 1 for location). That area of 16sq. km is said to contain at least one coal seam. A drill hole should be located near the top of East Tower Hill to test this small area of Triassic coal measures.

To the south-west of Fingal, near St. Pauls Dome, Cornwall Coal Company are the applicant for an area of 47 sq. km., which is indicated on Map 1. Information available for the areas to the west, near Merrywood, indicates that coal bearing Triassic strata may exist in this area, as shown on Figure 5. At least 2 drill holes should be located in this area and these could probably be on existing forestry roads. The holes should be collared at about 700 m.a.s.l. and would need to be about 200m deep to test the coal measures.

Before locating drill holes in either of these areas some geological mapping should be undertaken to establish the extent of the dolerites, where present, and if possible to locate outcrops of coal seams in creeks or gullies.

The area between Mt. Foster and the Duncan Colliery may also be underlain by potentially economic coal measures, but lies within E.L. 16/77 held by Investigator Coal Explorations Pty Ltd. (C.R.A. Ltd.).

The estimated cost of the 3 drill holes in these prospecting areas, including associated geological costs, analyses etc. is The results and an assessment of this exploration programme could be available within 2 months of drilling



ST. PAULS DOME PROSPECTING AREA
(47 km²)
APPLIED FOR BY CORNWALL COAL COMPANY

5 cm

0 1 2 3 4 5 6 Km.

Scale 1:100,000

FIGURE 5

100045

commencing. The above drilling costs have been estimated on the assumption that work would be tied in with the drilling programmes outlined for the Fingal and Mt. Nicholas Range areas.

SECTION 6. SELECTED REFERENCES

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APPENDIX A

ANALYSES OF DUNCAN

AND EAST FINGAL SEAMS

- FINGAL AREA -

NOTE 1: Plies are numbered from the top
of the seam.

NOTE 2: All analyses are for raw coal
unless otherwise indicated.

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: Duncan Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 1		2.3			NOT ANALYSED	(Includes several stone bands)		
D.O.M. 2	1	2.08	5.0	22.0	27.2	45.8	0.32	24.2
	2	0.025			NOT ANALYSED			
	3	0.195	4.1	47.9	23.5	24.5	0.26	15.5
D.O.M. 3	1	1.36	4.3	22.7	25.2	47.8	0.36	23.9
	2	0.30	3.3	41.4	27.6	27.7	0.27	17.2
	3	0.64	3.5	46.5	21.8	28.8	0.27	15.0
D.O.M. 4		1.8	(ONLY 53% CORE RECOVERY) - ANALYSES UNRELIABLE - includes 0.2m stone band					
D.O.M. 5		2.0	4.3	29.4	22.5	43.8	0.25	21.3

100048 AT

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: Duncan Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg	
D.O.M. 6	1	0.74	4.4	21.3	22.3	52.0	-	23.6	
	2	0.73	3.3	19.2	26.6	50.9	-	25.0	
	3	0.73	2.9	36.9	26.1	34.1	-	19.0	
D.O.M. 7		NO COAL RECORDED AT LEVEL OF DUNCAN SEAM (WASHOUT?)							
D.O.M. 17		1.32	4.1	32.9	24.7	38.3		18.8	
D.O.M. 19	1	0.55	5.5	30.8	19.9	43.8	-	-	
	2	1.00	5.1	20.5	27.1	47.3	-	-	
D.O.M. 20	1	1.16	5.3	34.7	21.8	43.5	-	20.7	
	2	1.16	5.5	28.9	27.3	43.8	-	24.4	

100049 A2

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: Duncan Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 21	1	1.03	5.3	26.8	25.1	48.1	-	25.5
	2	1.04	4.4	26.5	29.1	44.4	-	25.1
D.O.M. 23	1	0.99	2.6	27.0	25.1	45.3	-	21.7
	2	1.07	1.9	19.8	30.5	47.8	-	24.8
	3	0.77	2.5	35.3	26.9	35.3	-	19.8
D.O.M. 24	1	0.10	3.0	21.1		47.1	-	24.6
	2	0.30	STONE BAND	- NOT ANALYSED				
	3	0.66 *	3.1	30.6		43.6	-	20.5
	4	0.73 *	1.9	19.0		49.9	-	25.1
	5	0.74 *	1.5	34.7		33.7	-	20.1

* Working Section

100050
AS

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data:

Duncan Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 25	1	0.38	4.2	49.0	17.5	29.2	-	14.1
	2	0.54	4.0	22.6	29.0	44.4	-	24.5
	3	0.15	3.5	43.0	26.8	26.6	-	18.0
	4	0.43	3.4	32.1	27.3	37.2	-	21.4
D.O.M. 26	1	0.22	3.8	25.8	33.1	37.3	-	23.2
	2	0.13	STONE BAND	- NOT ANALYSED				
	3	0.37	4.9	27.3	24.8	43.0	-	22.6
	4	0.01	STONE BAND	- NOT ANALYSED				
	5	0.60	4.2	28.4	26.6	40.8	-	21.5
	6	0.50	4.5	28.5	25.4	41.6	-	22.0
	7	0.37	5.2	26.5	22.7	45.5	-	22.3
	8	0.05	4.0	43.1	26.9	26.0	-	18.0
	9	0.35	4.4	36.8	22.8	35.9	-	19.3

100051
A4

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: Duncan Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 27	1	0.15	3.3	46.7	29.6	20.4	-	-
	2	0.08	STONE BAND	- NOT ANALYSED				-
	3	0.45	3.3	22.0	14.7	60.0	-	24.6
	4	0.30	3.4	25.7	23.9	47.0	-	23.5
	5	0.08	STONE BAND	- NOT ANALYSED				-
	6	0.18	3.2	23.3	25.4	48.1	-	24.7
	7	0.67	2.9	23.4	28.9	44.8	-	25.2
	8	0.68	2.4	28.3	26.6	42.7	-	23.4
D.O.M. 30 (1)		2.32	3.7	20.8	27.7	51.5	-	-
D.O.M. 31		0.5	NOT ANALYSED					

(1) Washed coal composite - Yield at 1.60 for this interval is approximately 61%.

100052
A5

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data:

East Fingal Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 1		0.6	6.3	31.2	21.0	41.5	0.28	20.2
D.O.M. 5		2.3	(ONLY 35% CORE RECOVERY - NOT ANALYSED)					
D.O.M. 6		1.52	-	39.4	-	-	-	-
D.O.M. 7	1	1.5 *	4.72	22.7	25.3	47.3	-	23.3
	2	0.61	3.80	37.9	36.9	21.4	-	18.4
D.O.M. 17	Lower Split	2.2	3.6	25.6	22.3	48.5	-	24.3
D.O.M. 20	1	1.76	(ONLY 53% CORE RECOVERY) - ANALYSES UNRELIABLE					
(Lower Split)	2	1.87	MUDSTONE BAND - NOT ANALYSED					
	3	1.18 *	4.9	25.0	24.9	50.1	-	24.7

* Working Section

100023
33
119

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: East Fingal Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg	
D.O.M. 20 cont'd	4	0.10 *	STONE BAND	- NOT ANALYSED					
	5	0.66 *	5.2	38.2	21.8	40.0	-	20.0	
D.O.M. 21	1	0.76	4.2	30.2	22.2	47.6	-	23.0	
	2	0.94	4.1	24.1	25.7	50.2	-	24.4	
D.O.M. 23	1	0.20	4.8	37.5	20.6	37.1	-	18.4	
(Lower Split)	2	0.31	4.7	28.6	21.2	45.5	-	20.9	
	3	0.27	3.8	58.3	14.5	23.4	-	10.2	
	4	0.25	5.6	43.5	21.7	29.2	-	15.6	
D.O.M. 24	1	0.63	3.1	27.1	24.9	44.9	-	22.1	
	2	0.16	CLAYSTONE BAND - NOT ANALYSED						
	3	0.16	3.8	33.7	19.4	43.1	-	19.3	

* Working section

10004 A7

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: East Fingal Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 24 cont'd	4	0.06	STONE BAND -	NOT ANALYSED				
	5	0.55	2.9	28.5	25.5	43.0	-	21.7
D.O.M. 25	1	0.73	3.4	25.6	24.2	46.8	-	23.5
	2	0.02	STONE BAND -	NOT ANALYSED				
(Lower Split)	3	0.33	4.1	29.6	21.9	44.4	-	21.9
	4	0.15	STONE BAND -	NOT ANALYSED				
	5	0.74	3.6	21.7	29.0	45.7	-	25.4
D.O.M. 26	1	0.29	4.1	40.8	18.4	36.7	-	15.8
	2	0.13	STONE BAND -	NOT ANALYSED				
	3	0.17	4.0	32.5	21.6	41.9	-	19.1
	4	0.46	3.7	31.1	22.0	43.1	-	20.4
	5	0.30	3.7	52.7	17.8	25.8	-	12.9

100055 AB

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: East Fingal Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 26 cont'd	6	0.18	STONE BAND - NOT ANALYSED					
	7	0.31	3.5	26.5	25.0	45.0	-	22.0
	8	0.10	3.6	53.0	16.5	26.9	-	12.6
	9	0.12	4.3	29.3	20.9	45.5	-	20.7
D.O.M. 27	1	0.20	4.2	46.7	17.1	32.0	-	-
(Lower Split)	2	0.03	STONE BAND - NOT ANALYSED					
	3	0.17	4.0	43.0	18.8	34.2	-	-
	4	0.04	STONE BAND - NOT ANALYSED					
	5	0.15	4.1	36.8	20.3	38.8	-	18.4
	6	0.07	STONE BAND - NOT ANALYSED					
	7	0.92	3.2	28.6	26.8	41.4	-	22.4
D.O.M. 28		0.50	NOT ANALYSED					

100056 A9

CORNWALL COAL COMPANY

McELROY BRYAN AND ASSOCIATES PTY LIMITED

Area: Fingal Area

Summary of Analysis Data: East Fingal Seam

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
D.O.M. 30(1)	(Lower Split)	1.78	5.2	16.8	27.6	55.6	-	-
D.O.M. 31		3.62	NOT ANALYSED					
D.O.M. 34	1 + 2	3.14	-	30.6	-	-	-	-
	2	2.42	-	24.9	-	-	-	-

(1) Washed coal composite - yield at 1.60 for this interval is approximately 40%

100057
A10

100058

APPENDIX A

Analyses of Duncan Seam from the Valley Mine
(587,000 E/5,390,200 N) and Yates Colliery

Locality	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
Yates Colliery	4.38	22.3	23.7	49.62	0.30	23.42
Valley Mine, (near portal)	4.37	21.6	23.9	50.13	0.21	23.53
Valley Mine (near face)	4.27	21.1	23.5	51.13	0.24	23.35
Valley Mine, minor seam 15m below Duncan Seam	4.28	43.6	18.7	33.42	-	-

APPENDIX B

ANALYSES OF 4'9" SEAM

MT. NICHOLAS MINE

(SEE FIGURE 2 FOR APPROXIMATE)

(LOCATION OF SAMPLES)

APPENDIX B

Analyses of 4'9" Seam by Launceston Laboratory, Department of Mines, Tasmania on 19th February, 1957, from the Mt. Nicholas Mine.

Registered Sample No. (Location)	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
103 Face of slant heading	4.1	24.0	25.0	46.9	0.29	23.47
104 Left hand side of slant heading	4.4	26.5	23.9	45.2	0.23	22.59
105 Right hand side of slant heading	4.6	22.6	25.1	47.7	0.27	23.52
106 Main heading	4.6	20.8	24.9	49.7	0.29	23.98

APPENDIX C

- MT. NICHOLAS MINE -

ANALYSES OF 6 FT SEAM AND 4 FT SEAM

(SEE FIGURE 4 FOR APPROXIMATE)

(LOCATION OF SAMPLES)

APPENDIX C

Analyses of 6ft Seam by Launceston Laboratory, Department of Mines, Tasmania on 29th February, 1957, from the Mount Nicholas Mine.

Registered Sample No.	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
312	5.7	27.1	23.3	43.9	0.21	21.98
313	6.0	28.9	24.0	41.1	0.27	21.17
314	6.9	19.5	28.2	45.4	0.34	24.73
315	6.6	18.1	31.7	43.6	0.42	24.82
316	5.7	18.8	25.8	49.7	0.30	24.89
317	7.1	18.1	31.7	43.1	0.38	24.73

APPENDIX C

ANALYSIS OF 4 FT SEAMMT. NICHOLAS MINE

(Location of sample and source)
(of analyses not known)

Moisture %	Volatile Matter %	Ash %	Sulphur %	Specific Energy MJ/kg
5.8	28.4	14.3	0.32	23.77

APPENDIX D

ANALYSES OF COAL SEAMS

FROM DRILL HOLES

IN THE

MT. NICHOLAS RANGE AREA

CORNWALL COAL COMPANY

APPENDIX D

Area: Mt. Nicholas Range Area McELROY BRYAN AND ASSOCIATES PTY LIMITED

Summary of Analysis Data

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Seam and Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Specific Energy MJ/kg	Depth to Roof of Seam (m)
D.O.M. 8	SEAM A	0.5	NOT ANALYSED	-	-	-		31.5
	SEAM B	1.83	4.88	41.82	25.79	27.51	-	124.05
	-	2.2	5.87	30.72	27.85	35.56	-	126.87
	SEAM C	1.68	4.72	61.54	19.90	13.84	-	156.15
D.O.M. 9	SEAM B	1.6	NOT ANALYSED	-	-	-	-	22.2
	SEAM C	1.0	NOT ANALYSED	-	-	-	-	36.5
D.O.M. 12	SEAM B	1.6	NOT ANALYSED	-	-	-	-	123.9
	SEAM C	1.52	-	27.2	31.5	-	22.0	149.25
D.O.M. 13	SEAM A	1.0	NOT ANALYSED	-	-	-	-	73.8
	-	2.18	-	17.0	33.4	-	27.6	85.50
	SEAM B-1	1.70	5.7	28.5	21.1	44.7	20.2	162.65

Refer to Cross Section E-F, on Map 11 for correlation of seams A,B and C.

100065 b1

CORNWALL COAL COMPANY

APPENDIX D

Area: Mt. Nicholas Range Area MCELROY BRYAN AND ASSOCIATES PTY LIMITED

Summary of Analysis Data:

Raw Coal, Proximate Analysis (Air Dried Basis)

Location	Seam and Ply No.	Analysed Thickness (m)	Moisture in Analysed Sample %	Ash %	Volatile Matter %	Fixed Carbon %	Specific Energy MJ/kg	Depth to Roof of Seam (m)
D.O.M. 13 (cont'd)	SEAM B-2	1.20	5.4	39.7	16.1	38.3	16.4	165.10
	SEAM C	0.90	5.6	17.5	27.7	49.7	-	180.80
D.O.M. 33	TOP	5.21	-	38.5	-	-	-	43.27
	TOP - excluding TOP 1.17m	4.04	-	34.1	-	-	-	44.44
	MIDDLE	2.63	-	30.3	-	-	-	54.35
	BOTTOM	3.13	-	26.8	-	-	-	73.43
D.O.M. 36			ANALYSES NOT YET AVAILABLE					

100066-4

APPENDIX E

ANALYSES OF CORNWALL SEAM

- CORNWALL MINE

APPENDIX E

Analysis of Cornwall Seam (Gully Section)
from the Cornwall Coal Mine (595,000 E/5,399,000N)

Thickness (m)	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
0.38	2.7	37.7	22.9	36.7	0.20	17.56
1.70	2.9	23.4	26.7	47.0	0.28	23.12

APPENDIX E

Analysis of Cornwall Seam (Eastern Section)
from the Cornwall Coal Mine (596,500 E/5,399,500 N)

Thickness (m)	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
0.76	3.3	27.6	25.8	43.3	0.29	21.45
0.20	3.0	69.3	-	-	-	-
0.25	3.4	32.0	25.2	39.4	0.25	19.93
0.98	3.8	19.9	23.8	52.5	0.31	24.38

APPENDIX E

ANALYSIS OF CORNWALL SEAM

NEW TUNNEL (596,500 E, 5,399,600 N)
(Analysis from records of Cornwall Coal Co.)

Moisture %	Volatile Matter %	Ash %	Sulphur %	Specific Energy MJ/kg
5.0	25.4	21.3	0.30	24.17

APPENDIX F

ANALYSIS OF BLUE SEAM

CORNWALL MINE

APPENDIX F

Analysis of Blue Seam (Eastern Workings) from the
Cornwall Coal Mine (594,500 E/5,399,000 N)

Thickness (m)	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Specific Energy MJ/kg
0.25	4.0	22.5	23.3	50.2	0.20	23.40
0.15	3.6	79.9	-	-	-	-
0.64	3.3	19.0	26.4	51.3	0.38	24.61
0.42	3.1	58.6	-	-	-	-
1.00	3.4	22.3	25.2	49.1	0.46	23.40

APPENDIX G

ANALYSIS OF COAL SEAM AT ABOUT

R.L. 370 M.A.S.L.

IN THE VICINITY OF THE

VILLAGE OF CORNWALL

APPENDIX G

Analyses of Coal Seam by Launceston Laboratory,
Department of Mines, Tasmania on 30th March, 1926,
from the Cornwall District.

Registered Sample No.	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	
357	7.90	9.80	27.30	55.00	0.95	Semi Coking
358	3.00	19.10	24.98	52.92	0.83	Non Coking
428	4.90	13.50	19.60	62.00	0.75	Non Coking
429	5.00	20.40	20.30	54.30	0.68	Non Coking
AVERAGE	5.20	15.70	23.4	56.5	0.80	

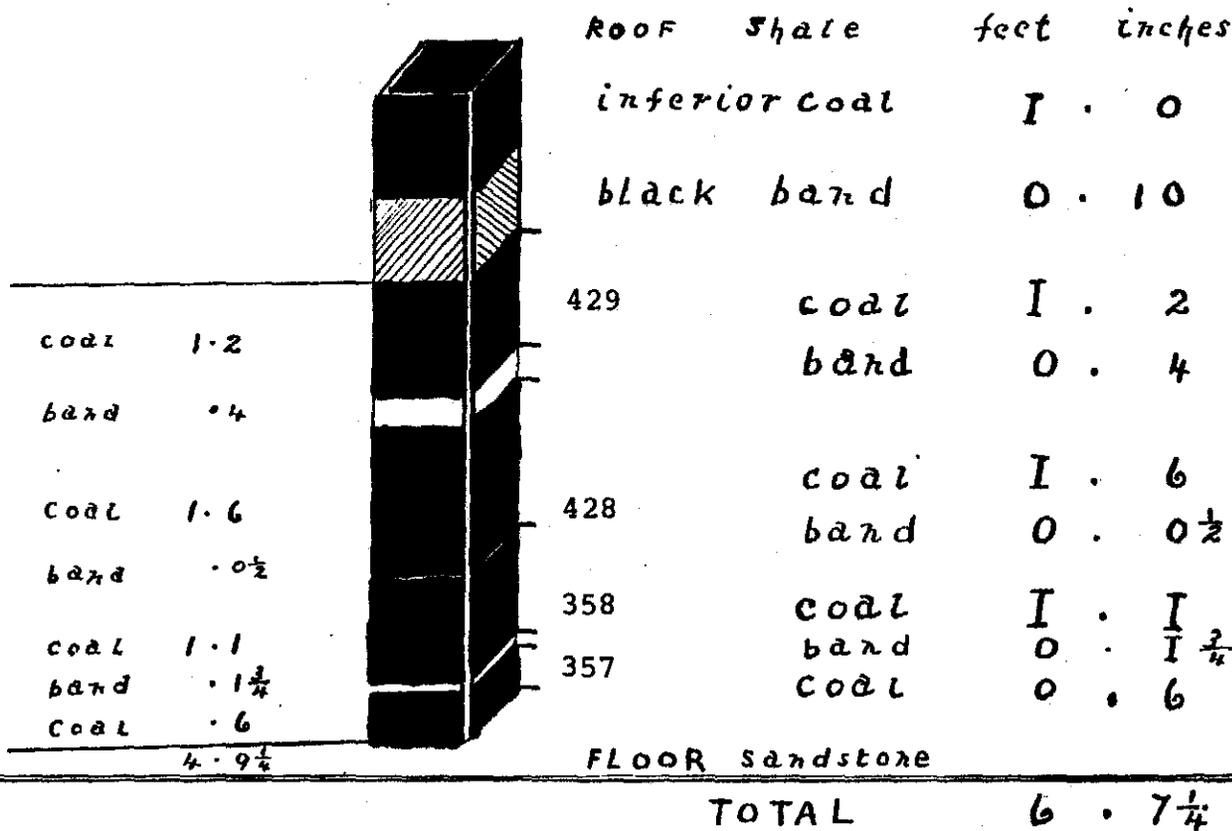
Note: Seam located at about RL 370 m.a.s.l. in
the vicinity of the village of Cornwall.

PHONE 1 ST. MARYS.

CORNWALL COAL COMPANY

NO LIABILITY.

Cornwall,



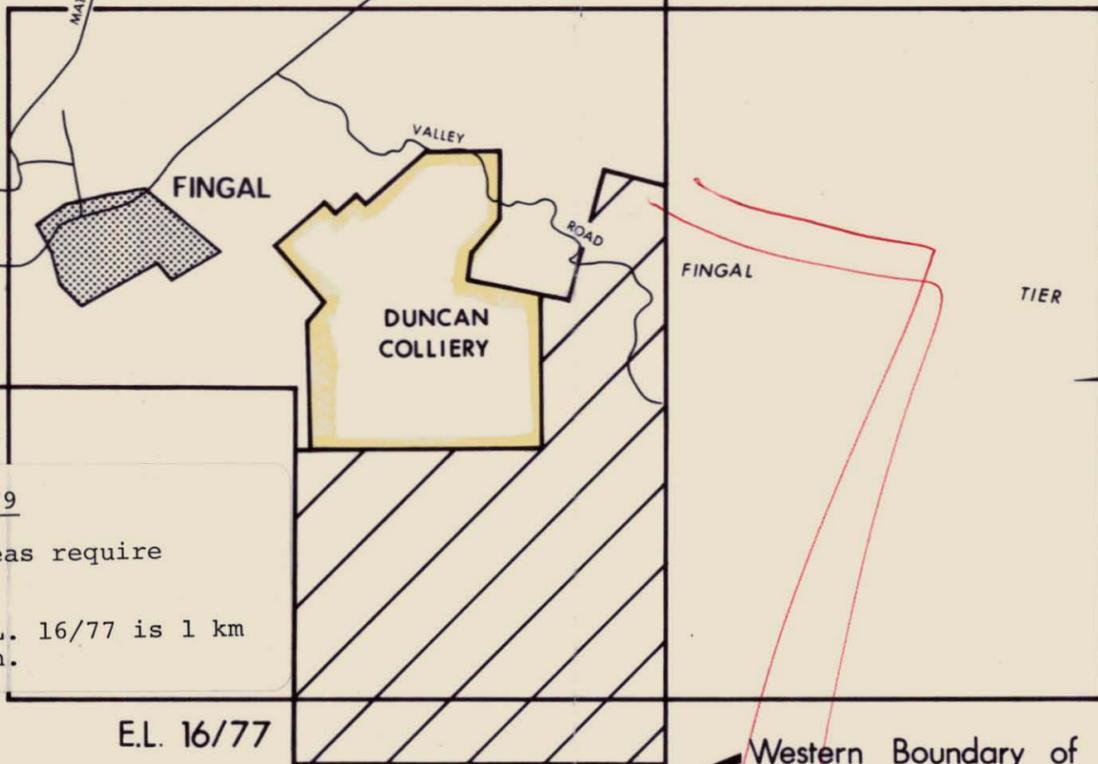
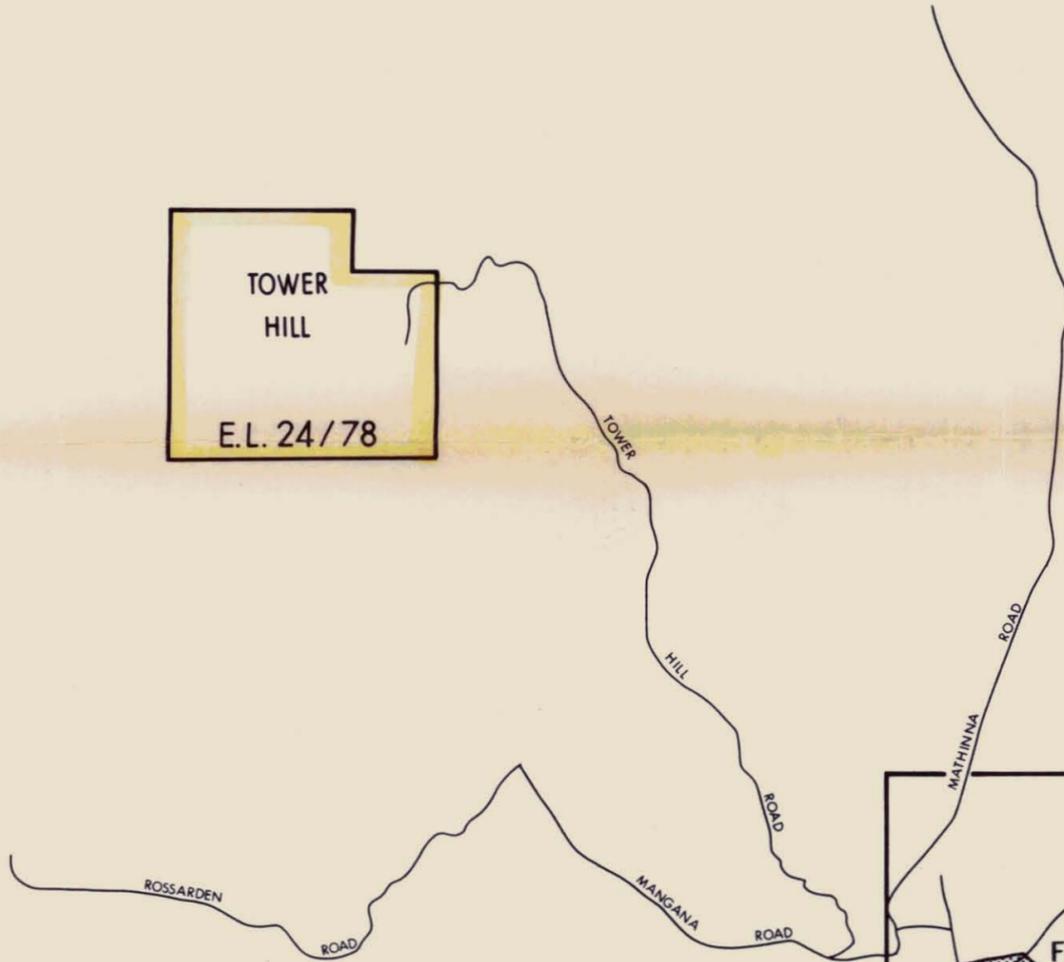
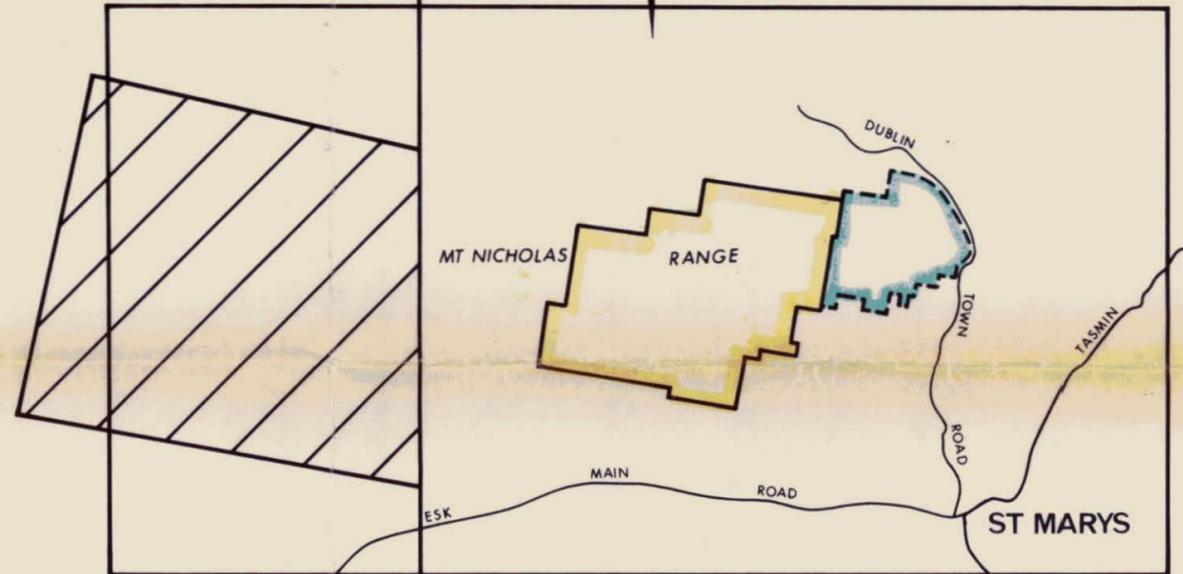
section of seam of coal prospected 200 feet
below present workings

at
CORNWALL COLLIERY

CSPH
20.3.26

REFER TO MT NICHOLAS AREA
1:20,000 MAP

TOWER
HILL
E.L. 24/78



REFER TO FINGAL AREA
1:20,000 MAP

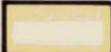
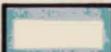
NOTES : APRIL 1979

- (1) Boundaries of exempt areas require amendment.
- (2) Northern boundary of E.L. 16/77 is 1 km south of position shown.

E.L. 16/77

Western Boundary of
E.L. 5/61

REFERENCE

-  Areas held by Cornwall Coal Company
-  Areas applied for by Cornwall Coal Company
-  Areas exempt from Mining Act

0 1 2 3 4 5 6 Kilometres

SCALE 1:100,000

5 cm

ST. PAULS
DOME

80-1422

CORNWALL COAL COMPANY

FINGAL VALLEY — TASMANIA

LOCALITY MAP

100076

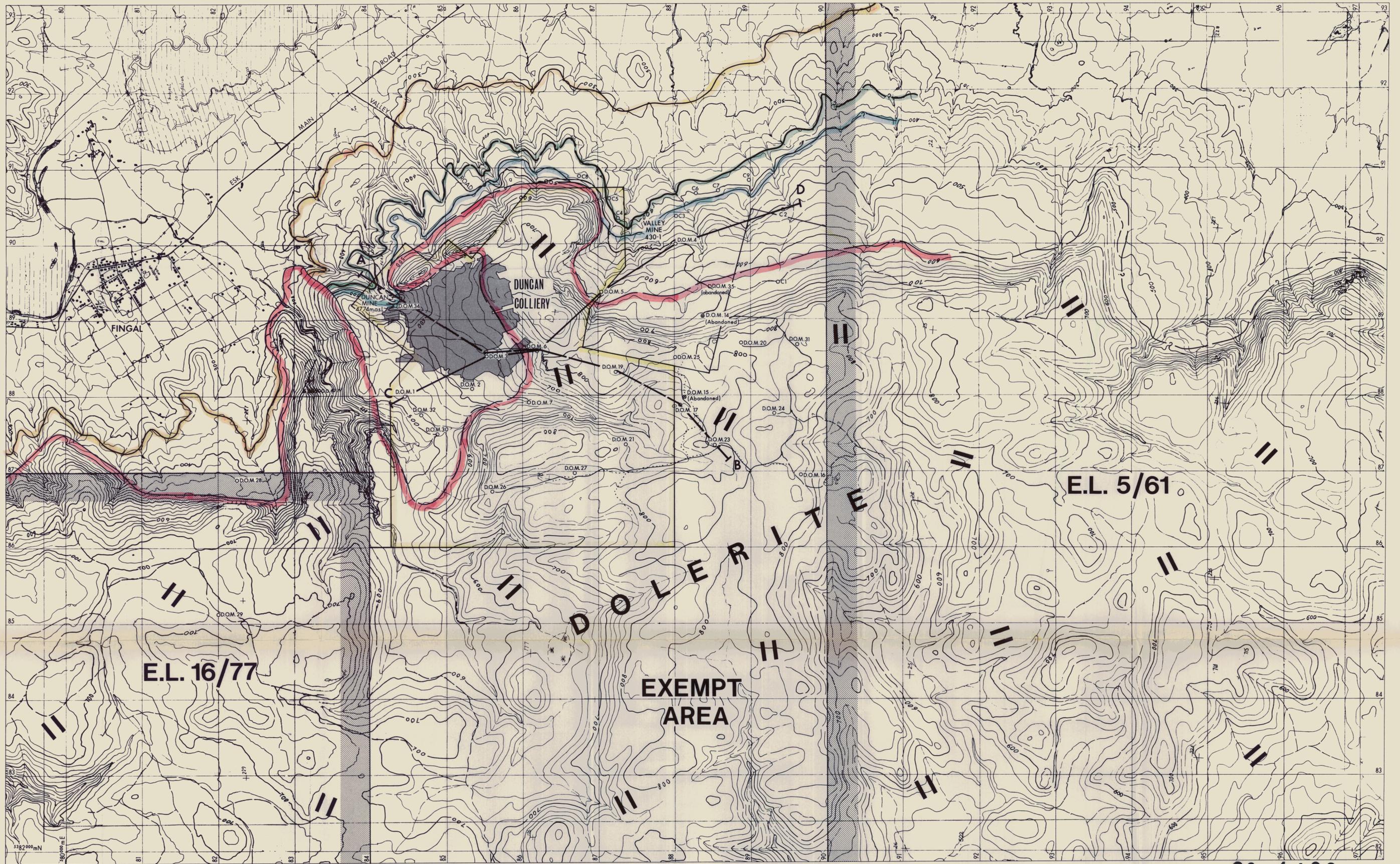
MAP 1

Prepared by : McELROY BRYAN & ASSOCIATES PTY LTD

Date : February 1979

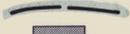
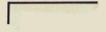
Map No. 51/1/1

Ref No. 1009

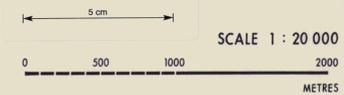


- JURASSIC 
- TRIASSIC 
- PERMIAN 

- Dolerite
- Lithic sandstone, mudstone, claystone, siltstone, coal
- Limestone, quartz sandstone, siltstone, claystone, arkose

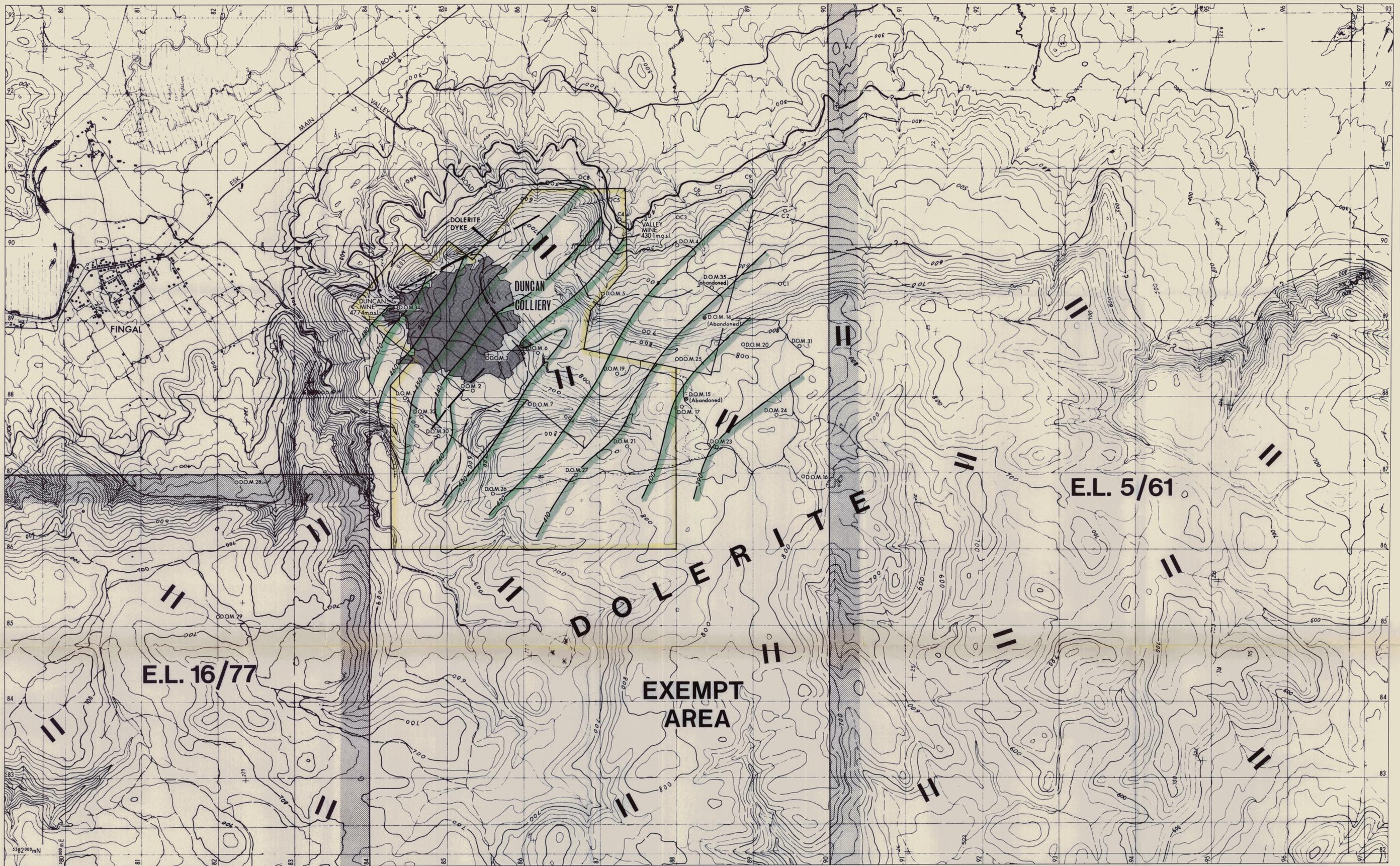
-  Subcrop of Duncan Seam
-  Subcrop of East Fingal Seam (position approx.)
-  Worked Section of Duncan Seam (to Dec. 1978)
-  Boundary of Duncan Colliery Leases

SEE "NOTES APRIL 1979" ON MAP 1



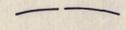
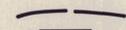
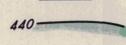
80-1422

CORNWALL COAL COMPANY		
FINGAL AREA - TASMANIA		
100077		
GEOLOGICAL MAP		
To accompany Report 51/1/1		MAP 2
Prepared by: M ^c ELROY BRYAN & ASSOCIATES PTY. LTD.		
Date: February, 1979	Map No. 51/1/2	Ref. No. 1010

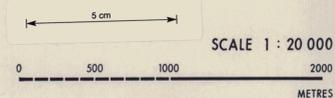


JURASSIC 
 TRIASSIC 
 PERMIAN 

Dolerite
 Lithic sandstone, mudstone,
 claystone, siltstone, coal
 Limestone, quartz sandstone,
 siltstone, claystone, arkose

 Subcrop of Duncan Seam
 Subcrop of East Fingal Seam (position approx.)
 Worked Section of Duncan Seam (to Dec. 1978)
 Structure Contours - Floor of Duncan Seam
 (Contour Interval - 10m)

SEE "NOTES APRIL 1979" ON MAP 1



SCALE 1 : 20 000

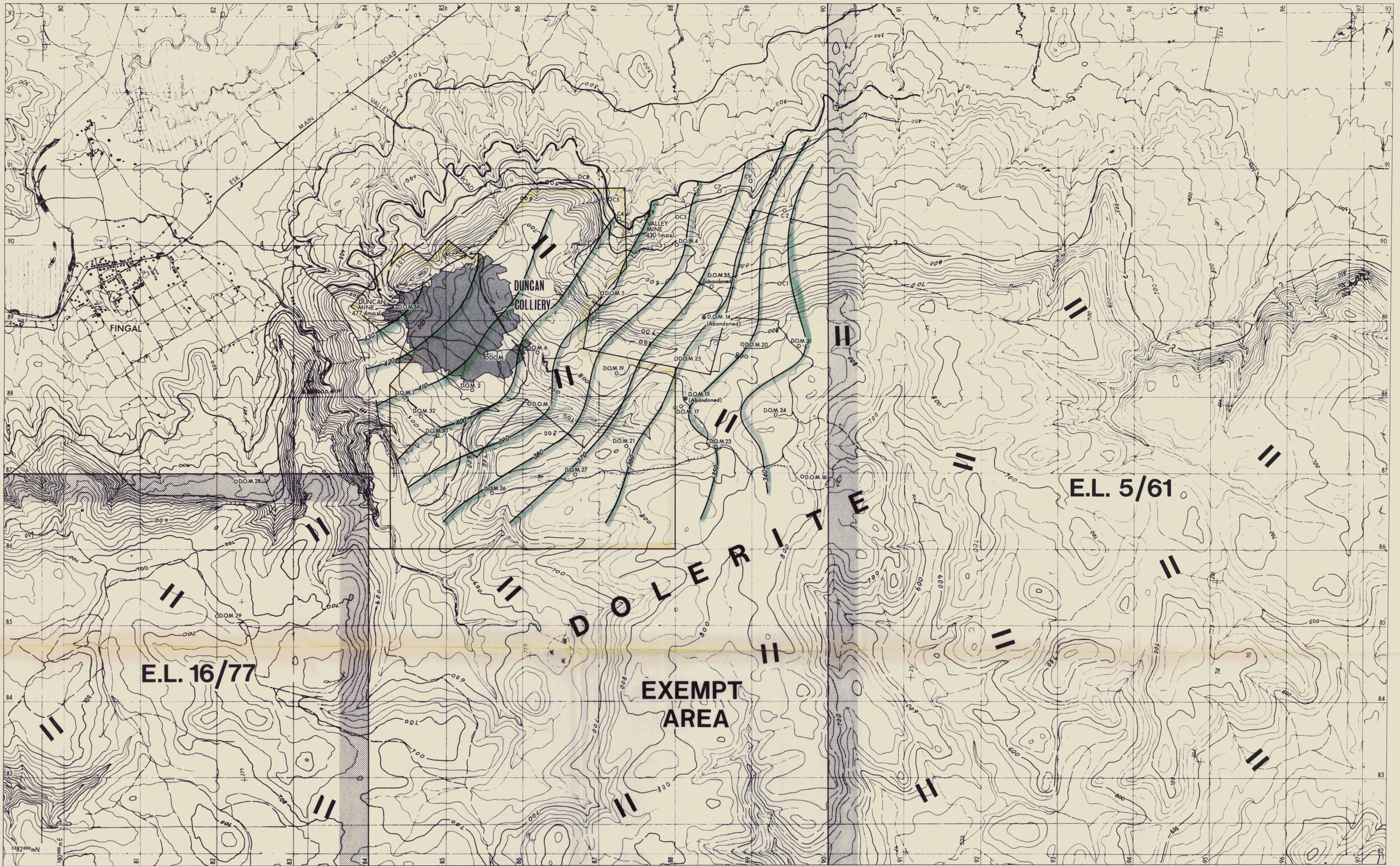
80-1422

CORNWALL COAL COMPANY
 FINGAL AREA - TASMANIA
 100078
 STRUCTURE CONTOURS
 FLOOR OF DUNCAN SEAM

To accompany Report 51/1/1 MAP 3

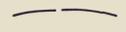
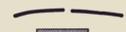
Prepared by: M'ELROY BRYAN & ASSOCIATES PTY. LTD.

Date: February, 1979 Map No. 51/1/3 Ref. No. 1011



JURASSIC 
 TRIASSIC 
 PERMIAN 

Dolerite
 Lithic sandstone, mudstone,
 claystone, siltstone, coal
 Limestone, quartz sandstone,
 siltstone, claystone, arkose

 Subcrop of Duncan Seam
 Subcrop of East Fingal Seam (position approx.)
 Worked Section of Duncan Seam (to Dec. 1978)
 Structure contours - Floor of Fingal Seam
 (Contour Interval - 10m)

SEE "NOTES APRIL 1979" ON MAP 1



80-1422 100079

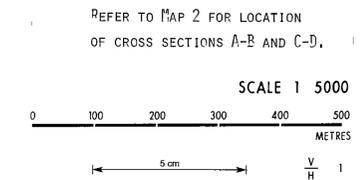
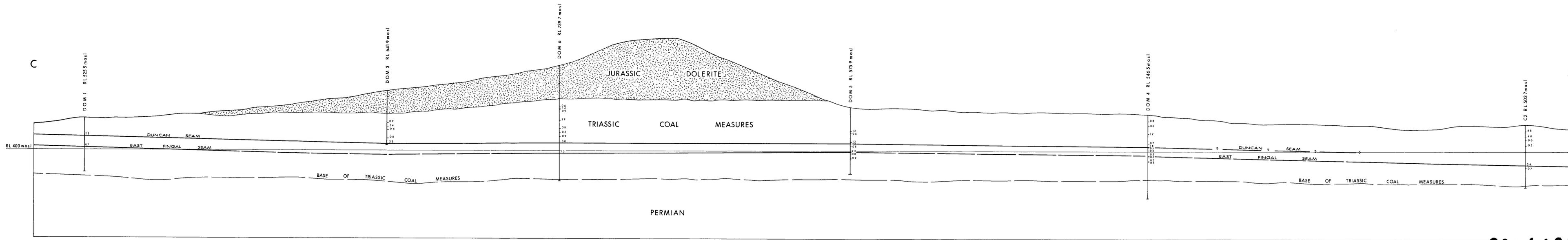
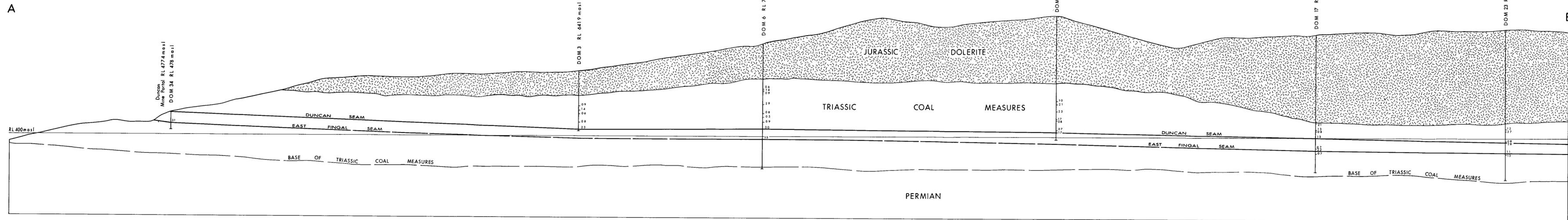
CORNWALL COAL COMPANY
 FINGAL AREA - TASMANIA

**STRUCTURE CONTOURS
 FLOOR OF EAST FINGAL SEAM**

To accompany Report 51/1/1 MAP 4

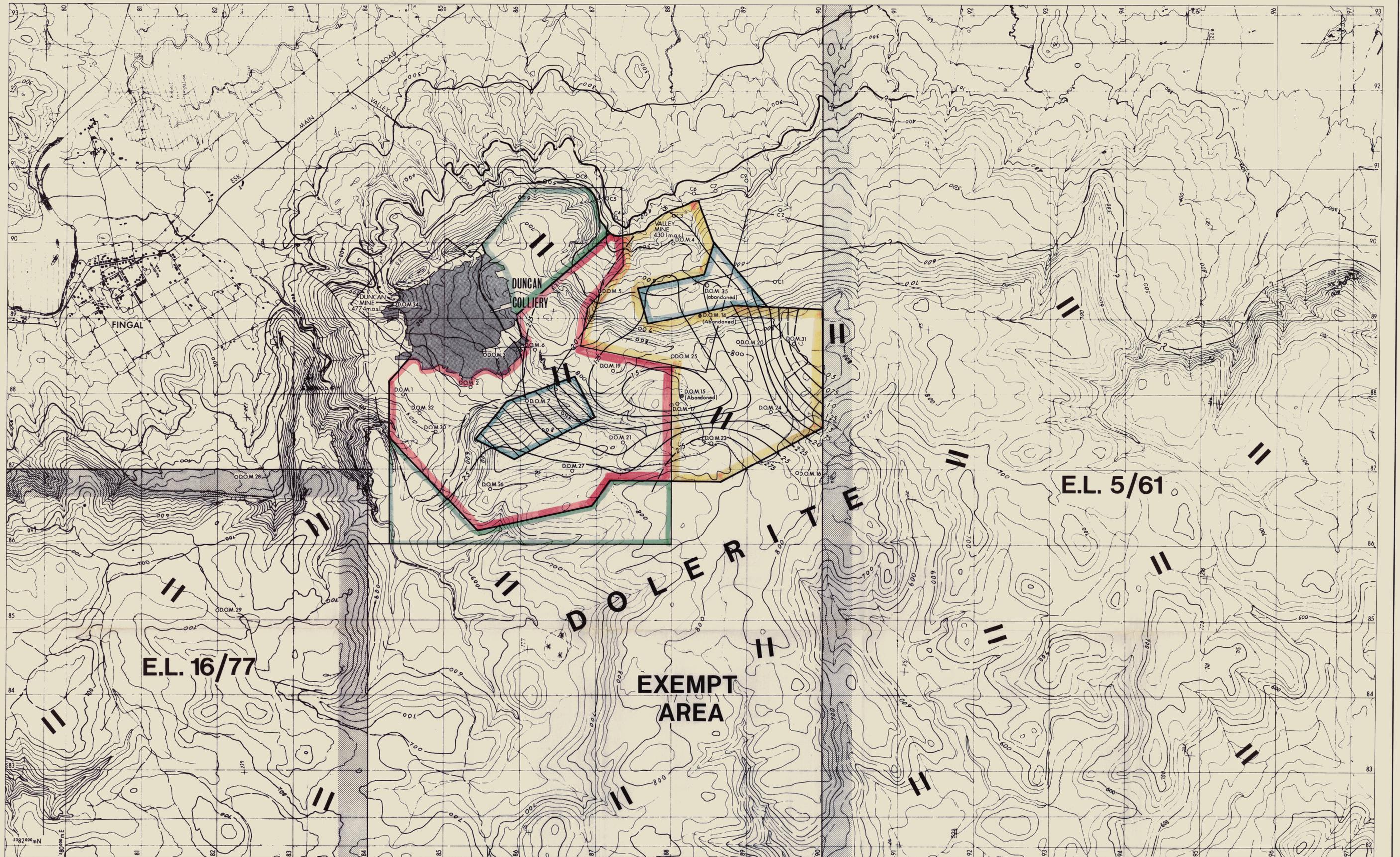
Prepared by: M'ELROY BRYAN & ASSOCIATES PTY. LTD.

Date: February, 1979 Map No. 51/1/4 Ref. No. 1012



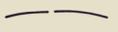
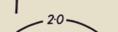
100080 **80-1422**

CORNWALL COAL COMPANY		
FINGAL AREA - TASMANIA		
CROSS SECTIONS A-B & C-D		
To accompany Report 51/1/1		MAP 5
Prepared by M'FELROY BRYAN & ASSOCIATES PTY LTD		
Date February 1979	Map No 51/1/5	Ref No 1013



JURASSIC 
 TRIASSIC 
 PERMIAN 

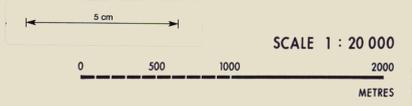
Dolerite
 Lithic sandstone, mudstone, claystone, siltstone, coal
 Limestone, quartz sandstone, siltstone, claystone, arkose

 Subcrop of Duncan Seam
 Subcrop of East Fingal Seam (position approx.)
 Worked Section of Duncan Seam (to Dec. 1978)
 Boundary of Duncan Colliery Leases
 Isopach - Theoretical Working Section

 Measured - within Colliery Holding
 Measured - east of Colliery Holding
 Indicated - within Colliery Holding
 Indicated - east of Colliery Holding
 Inferred - within Colliery Holding

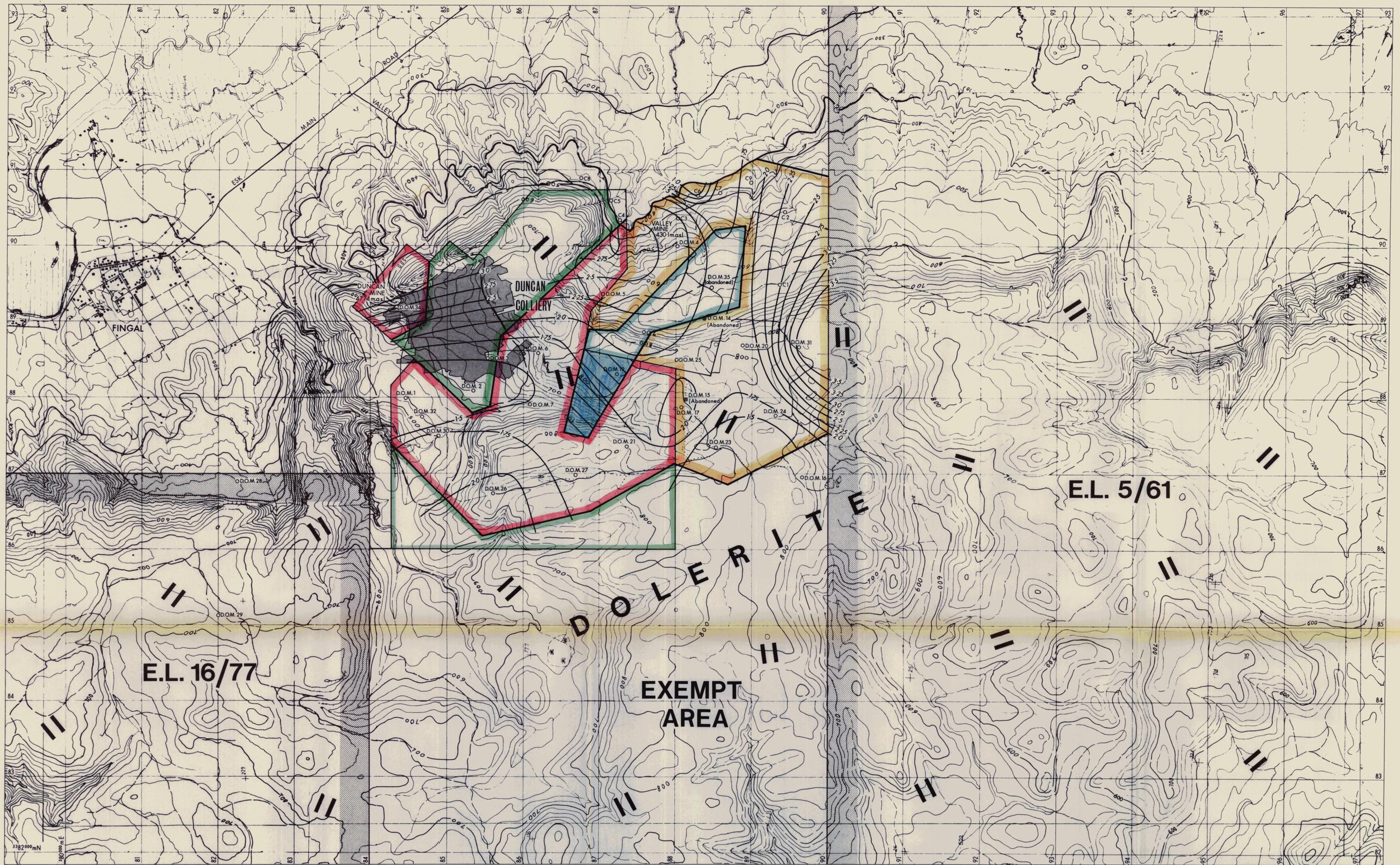
NOTES
 SEE "NOTES APRIL 1979" ON MAP 1

- For D.O.M. 7, an early drill hole, no coal was recorded at the level of the Duncan Seam. The results of this drill hole have been excluded from this & other maps referring to Duncan seam.
- Resources remaining in the worked section of the Duncan Seam are excluded.



100081 **80-1422**

CORNWALL COAL COMPANY
 FINGAL AREA - TASMANIA
**ISOPACH AND RESERVES MAP
 DUNCAN SEAM**
 To accompany Report 51/1/1 MAP 6
 Prepared by: M'ELROY BRYAN & ASSOCIATES PTY. LTD.
 Date: February, 1979 Map No. 51/1/6 Ref. No. 1014



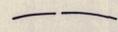
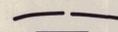
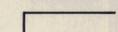
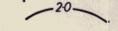
E.L. 16/77

E.L. 5/61

EXEMPT AREA

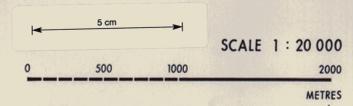
- JURASSIC 
- TRIASSIC 
- PERMIAN 

- Dolerite
- Lithic sandstone, mudstone, claystone, siltstone, coal
- Limestone, quartz sandstone, siltstone, claystone, arkose

-  Subcrop of Duncan Seam
-  Subcrop of East Fingal Seam (position approx.)
-  Worked Section of Duncan Seam (to Dec. 1978)
-  Boundary of Duncan Colliery Leases
-  Isopach - Theoretical Working Section

-  Measured - within Colliery Holding
-  Measured - east of Colliery Holding
-  Indicated - within Colliery Holding
-  Indicated - east of Colliery Holding
-  Inferred - within Colliery Holding

SEE "NOTES APRIL 1979" ON MAP 1



100082 **80-1422**

CORNWALL COAL COMPANY

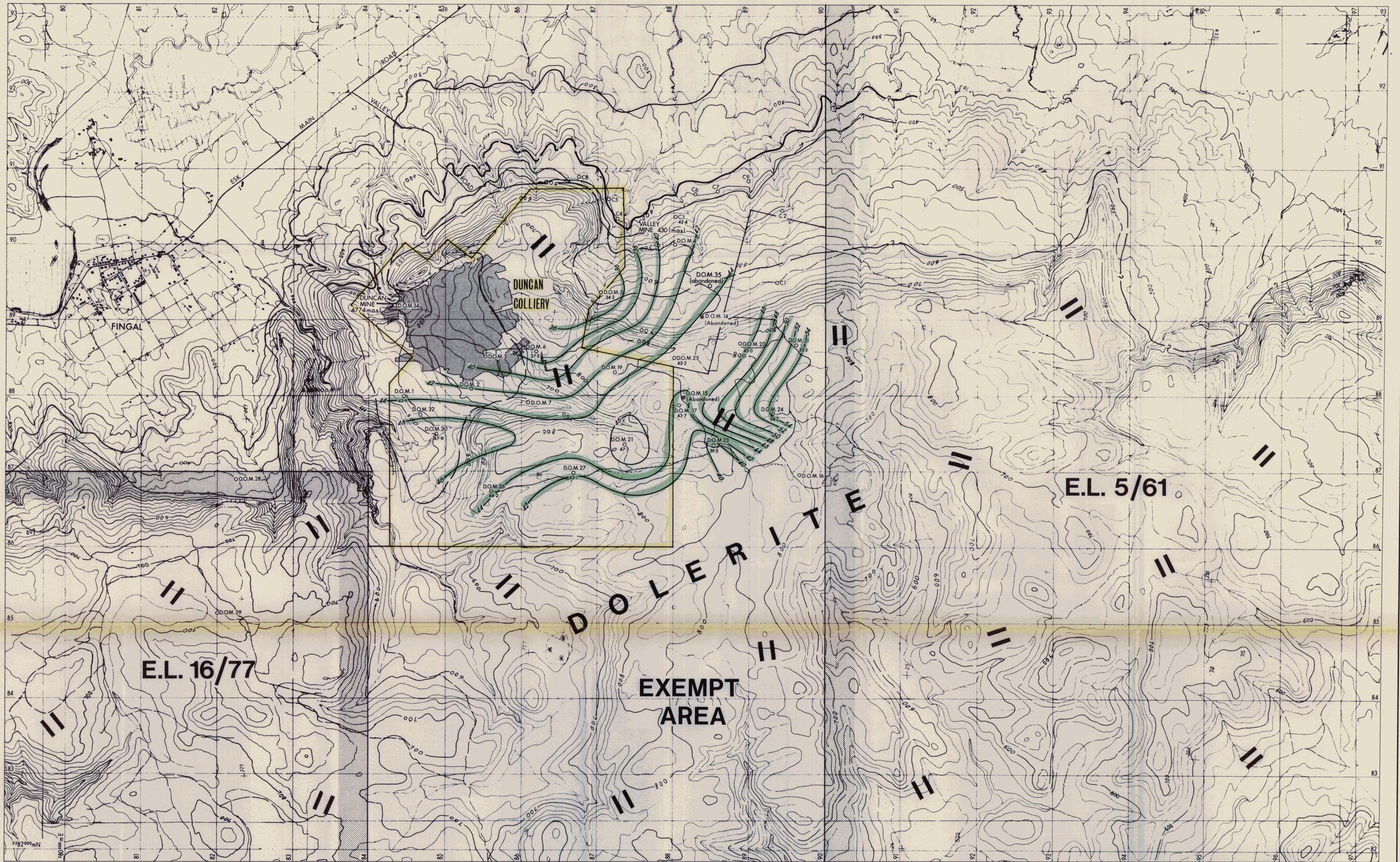
FINGAL AREA - TASMANIA

ISOPACH AND RESERVES MAP
EAST FINGAL SEAM

To accompany Report 51/1/1 MAP 7

Prepared by: MELROY BRYAN & ASSOCIATES PTY. LTD.

Date: February, 1979 Map No. 51/1/7 Ref. No. 1015

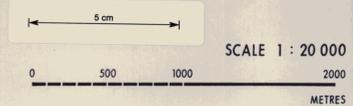


JURASSIC
 TRIASSIC
 PERMIAN

Dolerite
 Lithic sandstone, mudstone,
 claystone, siltstone, coal
 Limestone, quartz sandstone,
 siltstone, claystone, arkose

Subcrop of Duncan Seam
 Subcrop of East Fingal Seam (position approx.)
 Worked Section of Duncan Seam (to Dec. 1978)
 Isopach line (Contour interval 2m)

SEE "NOTES APRIL 1979" ON MAP 1

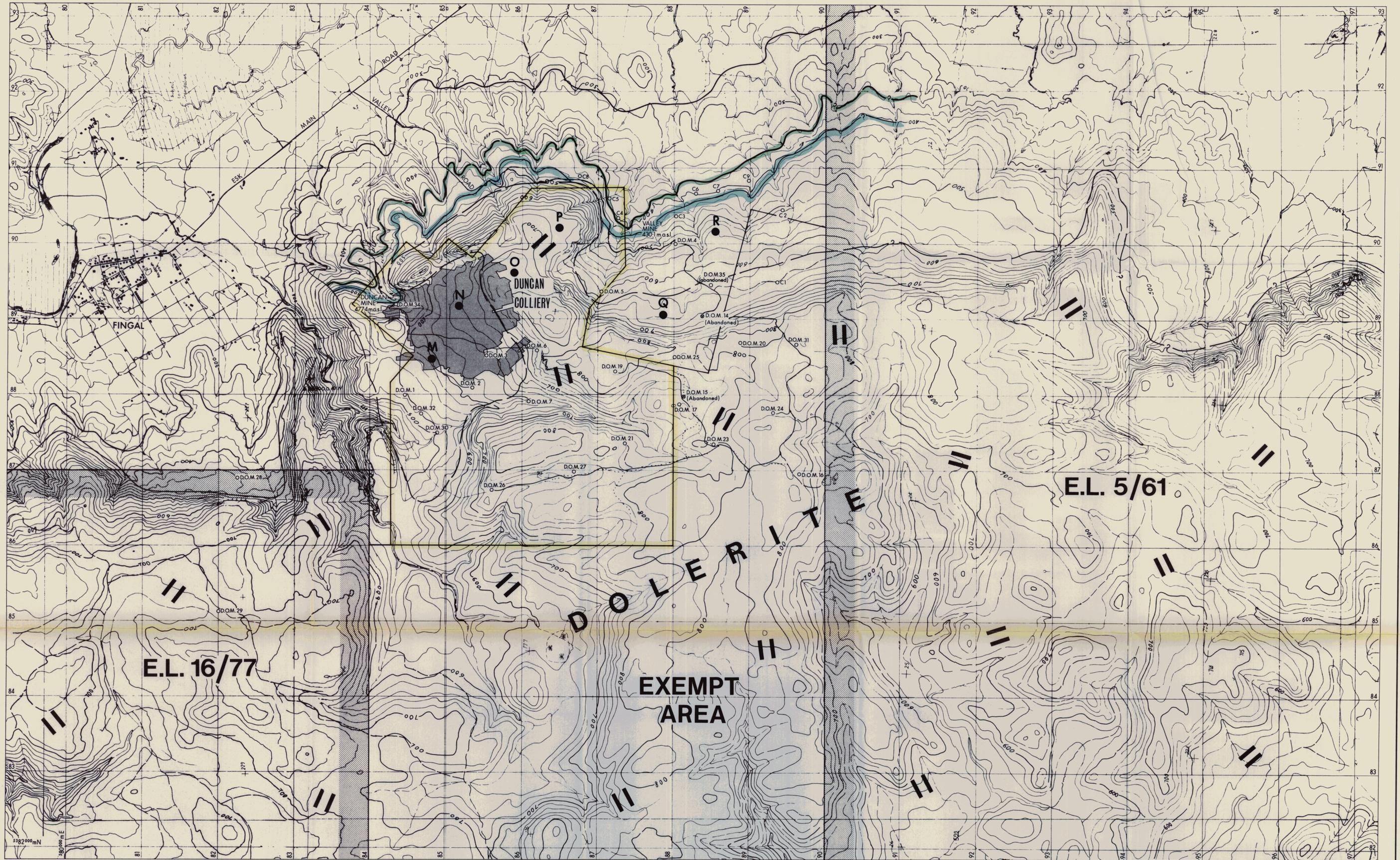


SCALE 1 : 20 000

10008 **80-1422**

CORNWALL COAL COMPANY
 FINGAL AREA - TASMANIA
INTERSEAM ISOPACH
 (DUNCAN SEAM - EAST FINGAL SEAM)

To accompany Report 51/1/1 **MAP 8**
 Prepared by: M'ELROY BRYAN & ASSOCIATES PTY. LTD.
 Date: February, 1979 Map No. 51/1/8 Ref. No. 1016



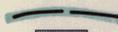
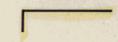
E.L. 16/77

E.L. 5/61

EXEMPT AREA

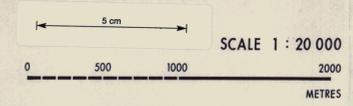
- JURASSIC 
- TRIASSIC 
- PERMIAN 

- Dolerite
- Lithic sandstone, mudstone, claystone, siltstone, coal
- Limestone, quartz sandstone, siltstone, claystone, arkose

-  Subcrop of Duncan Seam
-  Subcrop of East Fingal Seam (position approx.)
-  Worked Section of Duncan Seam (to Dec. 1978)
-  Boundary of Duncan Colliery Leases

 Proposed drill hole

SEE "NOTES APRIL 1979" ON MAP 1



100084 **80-1422**

CORNWALL COAL COMPANY

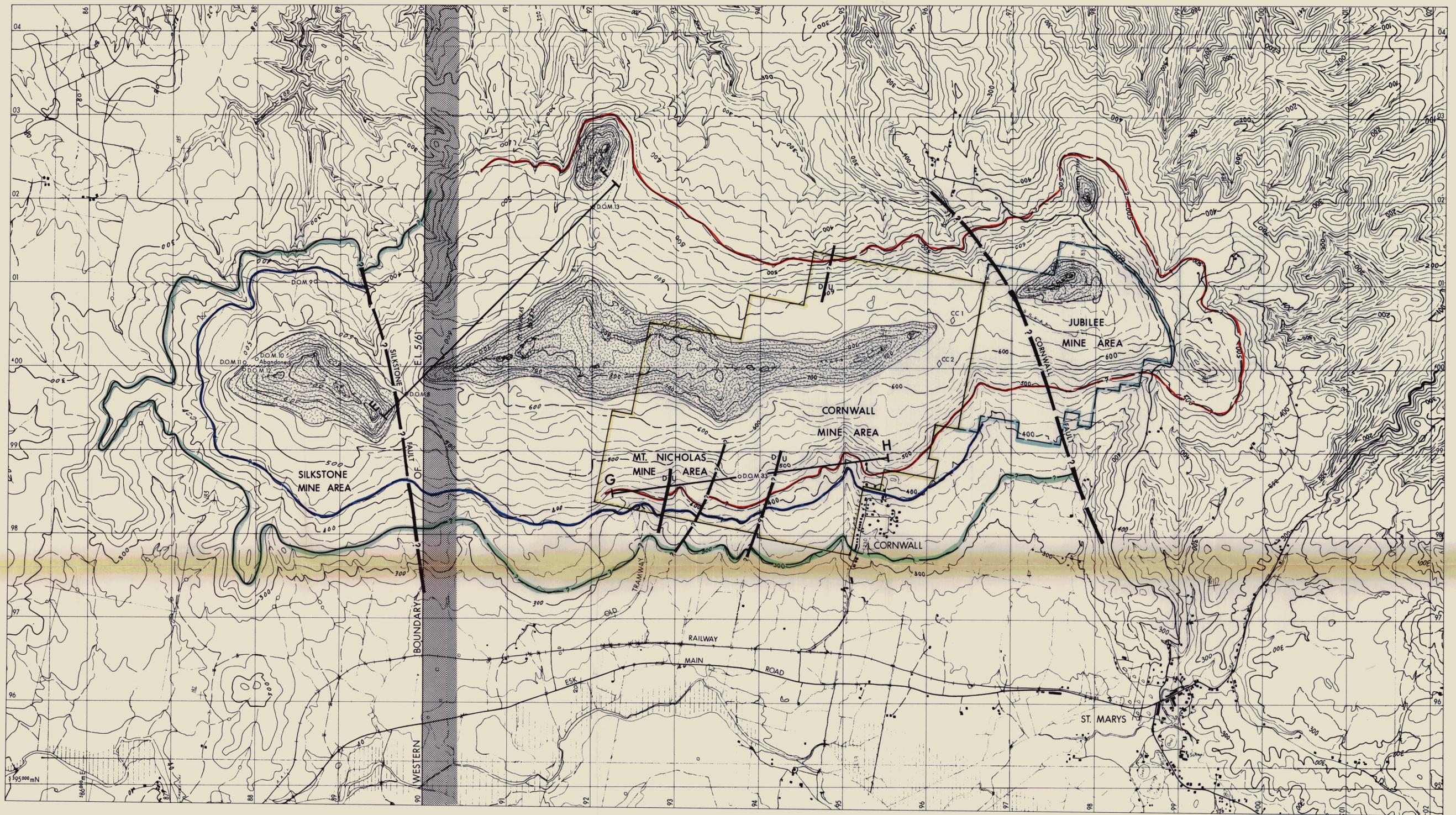
FINGAL AREA - TASMANIA

PROPOSED DRILLING PROGRAMME

To accompany Report 51/1/1 **MAP 9**

Prepared by: MCELROY BRYAN & ASSOCIATES PTY. LTD.

Date: February, 1979 Map No. 51/1/9 Ref. No. 1017



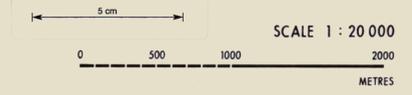
LEGEND

JURASSIC		Dolerite
TRIASSIC		Sandstone, shale, claystone, and several coal intervals
PERMIAN		Sandstone, limestone, shale

REFERENCE

	Existing Mining Leases (Cornwall Coal Co.)
	New Area Applied For (Jubilee Mine)
	Outcrop of Cornwall Seam / 4'9" Seam
	Outcrop of Fenton Seam / 8' Seam

	D.O.M.33	Mines Dept. Drill Hole
	C.C.1	Cornwall Coal Co. Drill Hole
	FAULT—Established	
	FAULT—Inferred	



100085 **80-1422**

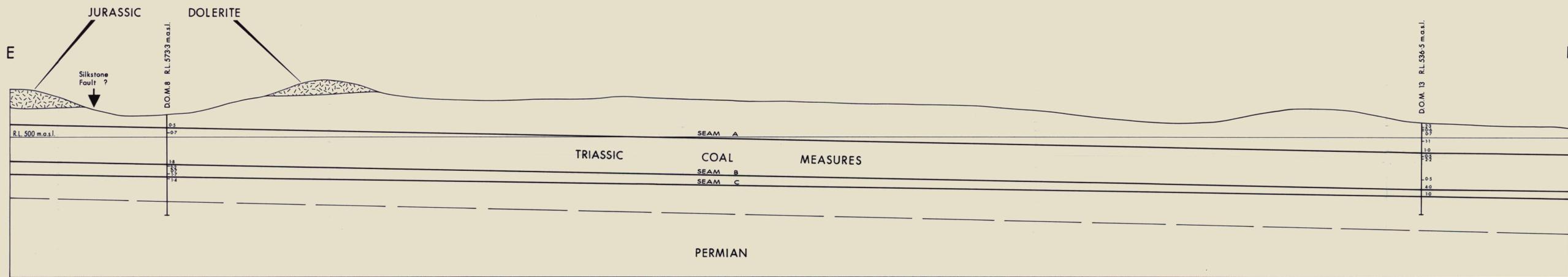
CORNWALL COAL COMPANY
MT. NICHOLAS RANGE-TASMANIA

GEOLOGICAL MAP

To accompany Report 51/1/1 **MAP 10**

Prepared by: MCELROY BRYAN & ASSOCIATES PTY LTD

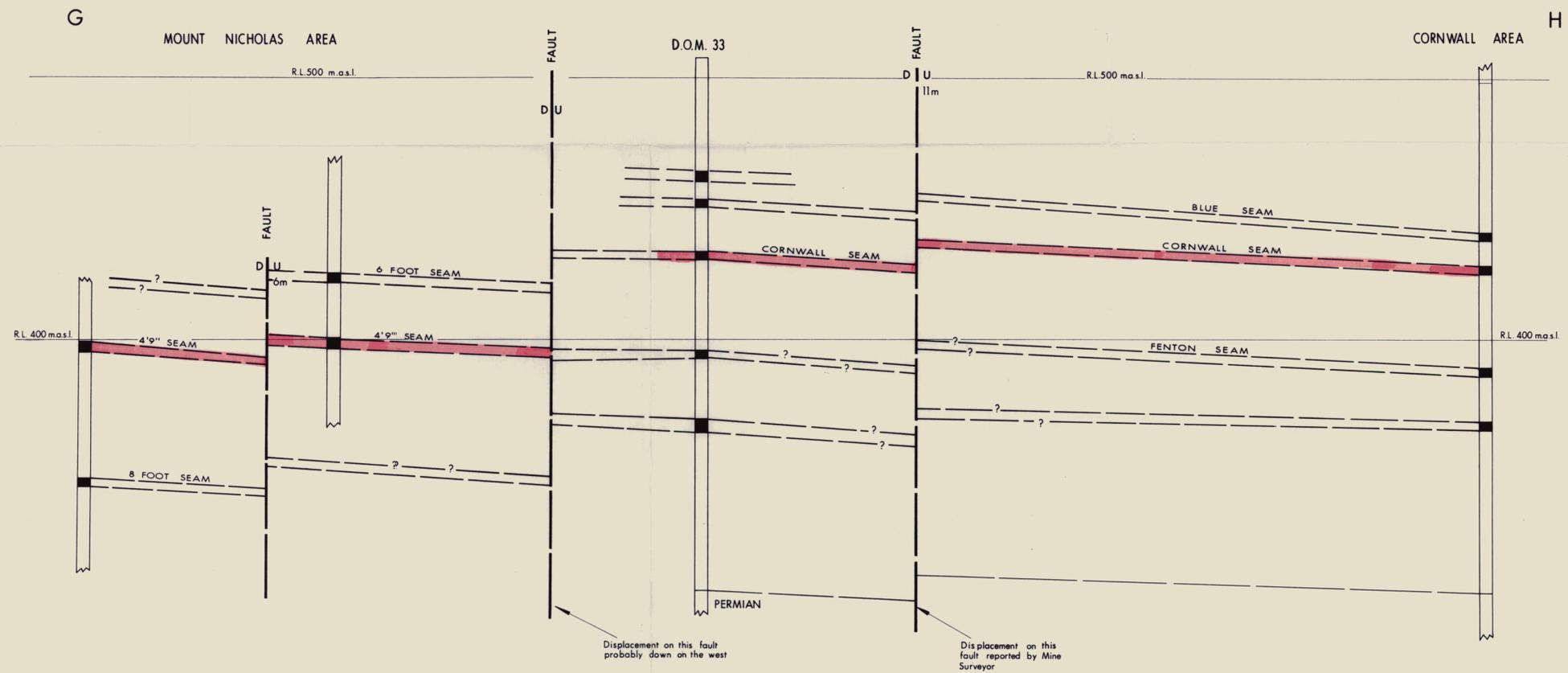
Date: February, 1979 Map No. 51/1/10 Ref. No. 1018



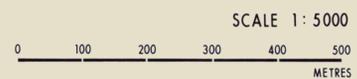
SEAM A - Probably equivalent to Blue Seam
 SEAM B - Probably equivalent to Silkstone Seam or 8 Foot Seam
 SEAM C - Probably equivalent to Lower Silkstone Seam

$$\frac{V}{H} = 1$$

CORRELATION DIAGRAM



$$\frac{V}{H} = \frac{1}{5}$$

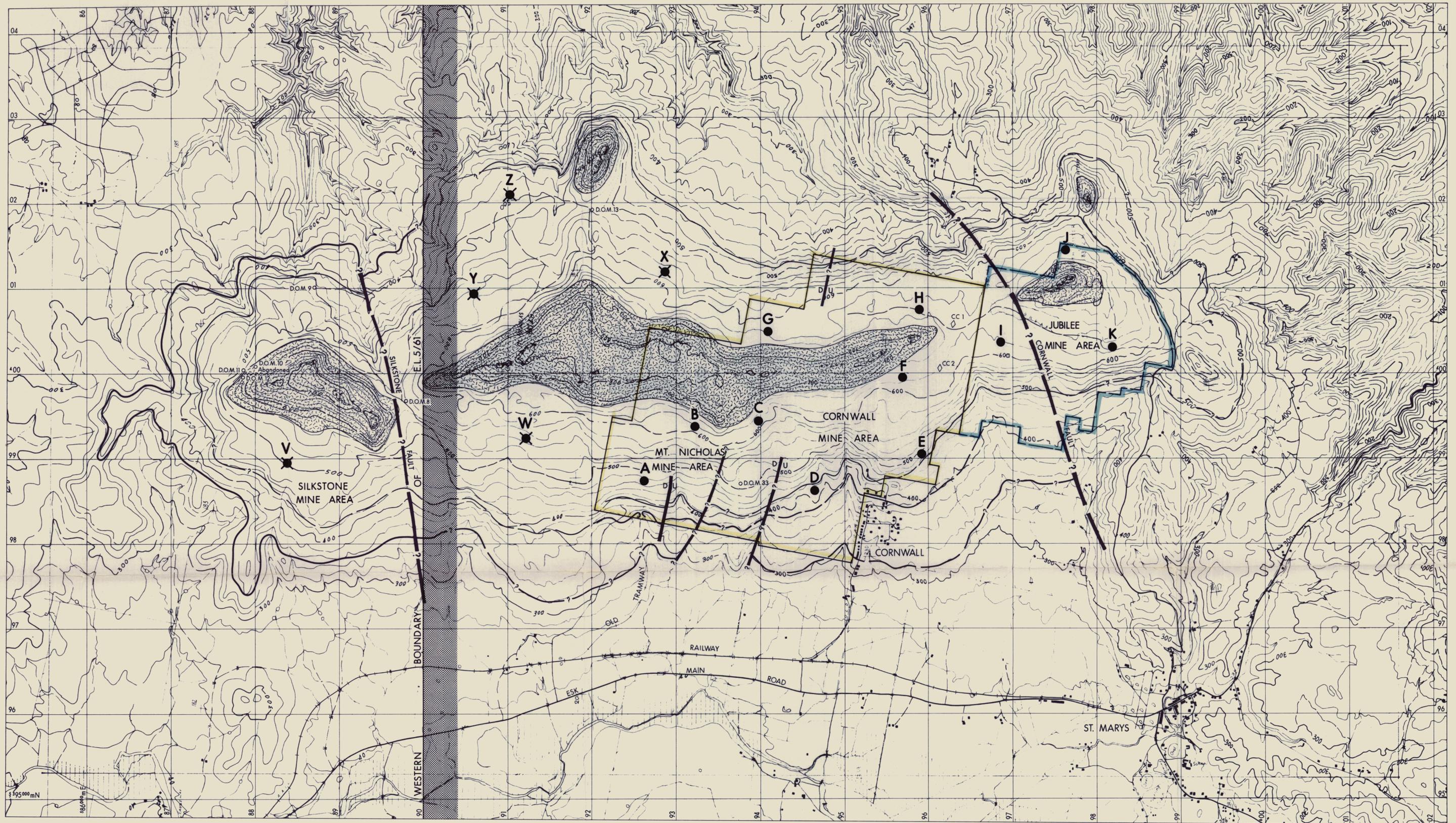


REFER TO MAP 10 FOR LOCATION OF CROSS SECTION E-F AND CORRELATION DIAGRAM G-H

5 cm

100086 **80-1422**

CORNWALL COAL COMPANY		
MOUNT NICHOLAS AREA - TASMANIA		
CROSS SECTION E-F & CORRELATION DIAGRAM G-H		
To accompany Report 51/1/1 MAP 11		
Prepared by: M'ELROY BRYAN & ASSOCIATES PTY LTD		
Date: February, 1979	Map No. 51/1/11	Ref. No. 1019



LEGEND

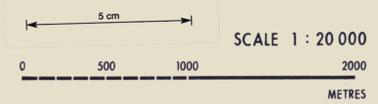
JURASSIC		Dolerite
TRIASSIC		Sandstone, shale, claystone, and several coal intervals
PERMIAN		Sandstone, limestone, shale

- Proposed drill holes within areas held or applied for by Cornwall Coal Company
- Proposed drill holes - subject to obtaining suitable mining titles

REFERENCE

	Existing Mining Leases (Cornwall Coal Co.)
	New Area Applied For (Jubilee Mine)
	Outcrop of Cornwall Seam / 4'9" Seam
	Outcrop of Fenton Seam / 8' Seam

- D.O.M. 33 Mines Dept. Drill Hole
- C.C. 1 Cornwall Coal Co. Drill Hole
- FAULT - Established
- FAULT - Inferred



80-1422 100087

CORNWALL COAL COMPANY
MT. NICHOLAS RANGE-TASMANIA

PROPOSED DRILLING PROGRAMME

To accompany Report 51/1/1 MAP 12

Prepared by: M'ELROY BRYAN & ASSOCIATES PTY LTD

Date: February, 1979	Map No. 51/1/12	Ref. No. 1020
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