

087001

# McElroy Bryan & Associates Pty Limited

CONSULTING GEOLOGISTS

155 HIGHWAY ROAD  
WILLOUGHBY  
N.S.W. 2068

CORRESPONDENCE:  
P.O. BOX 34  
WILLOUGHBY N.S.W. 2068  
TELEPHONE: (02) 958 1455

**RECEIVED**

CORNWALL COAL CO. N.L.  
RELINQUISHMENT REPORT

E.L. 27/84  
FINGAL VALLEY

SEARCHED	A.B.	C.G.	E.G.
INDEXED	19 SEP 1985		
DEPT. OF MINES			
FILE No. 10,050/85			

PREPARED FOR

CORNWALL COAL COMPANY N.L.

BY

MC ELROY BRYAN & ASSOCIATES PTY LIMITED

**OPEN FILE**

REPORT 60/1/12

J.H. BRYAN

SEPTEMBER 1985

## SECTION 1. INTRODUCTION

EL 27/84 was granted over an area of 58 km<sup>2</sup> which was previously Exempt Area SR 1981/32. The Department of Mines had drilled 24 holes in the area and an assessment of the area is included in Unpublished Report 1983/34 by C.A. Bacon - "The Fingal Coalfield".

## SECTION 2. DRILLING RESULTS

In the south-western part of EL 27/84 one fully cored hole was drilled by Cornwall Coal Company in September 1984. St Pauls River DDH 2 was terminated at 258.6m after intersecting 5 coaly intervals. The analyses of the coal intervals are included on Table 1 and the drill log and graphic sections are in Appendix A. The drill hole locations are shown on the accompanying map.

The coal intervals that are of mineable thickness are too high in ash, and the lower ash coals are less than 1.5m thick. The data package on Exempt Area SR 1981/32, prepared by the Department of Mines gives a summary of the coal geology for the area.

St Pauls River DDH 2 was drilled to ascertain whether there was any improvement in the seams to the south west of the previously drilled area. Unfortunately the area east of the Mitchell Fault does not contain a thick, continuous and mineable seam of coal. Access for mining would require a drift or shaft and therefore significant reserves of coal

TABLE 1

ANALYSIS OF COAL FROM DDH SP2

HOLE NO. (S.P.)	COLLAR RL (masl)	SEAM (Ply)	THICK. (m)	DEPTH TO ROOF (m)	RAW COAL ANALYSIS (AIR DRIED)				
					M %	Ash %	Vol %	F.C. %	R.D.
DDH 2	530	-	1.99*	106.130	3.6	54.9	11.6	29.9	1.89
		-	2.062	135.412	4.0	53.7	18.1	24.2	1.82
		-	1.355	164.755	6.5	41.5	20.7	31.3	1.66
		-	1.946	174.370	4.5	46.7	21.5	27.3	1.71
		-	1.340	238.360	3.8	36.0	18.0	42.2	1.66

\* Coal is heat affected.

003

would be necessary to justify a mining operation. Such reserves do not exist in any of the seams present.

SECTION 3. RECOMMENDATIONS AND CONCLUSIONS

This exploration licence (27/84) does not contain seams of coal which could be economically mined and it is recommended that EL 27/84 be relinquished.

004

APPENDIX A  
LITHOLOGICAL LOG, GRAPHIC SECTIONS  
AND  
ANALYSES FOR ST PAULS RIVER DDH 2

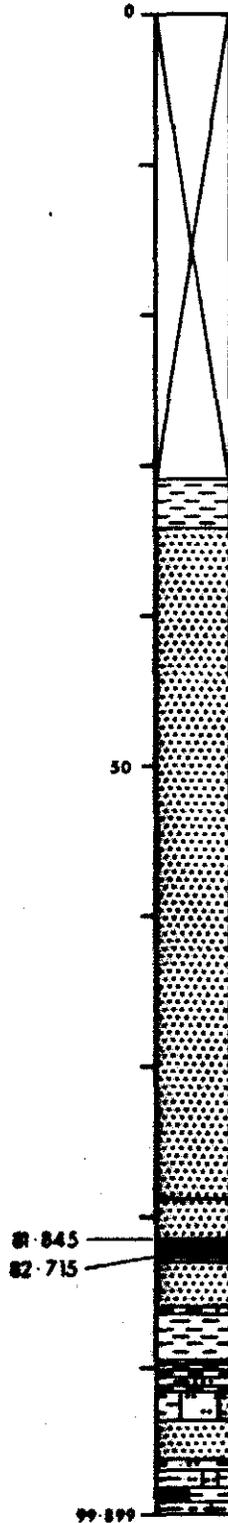
002

087006

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



5 cm

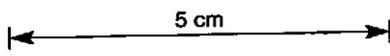
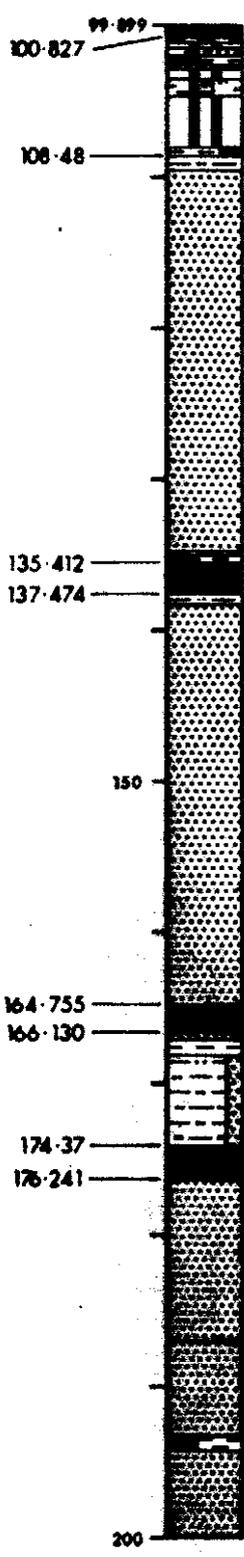
006

087007

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



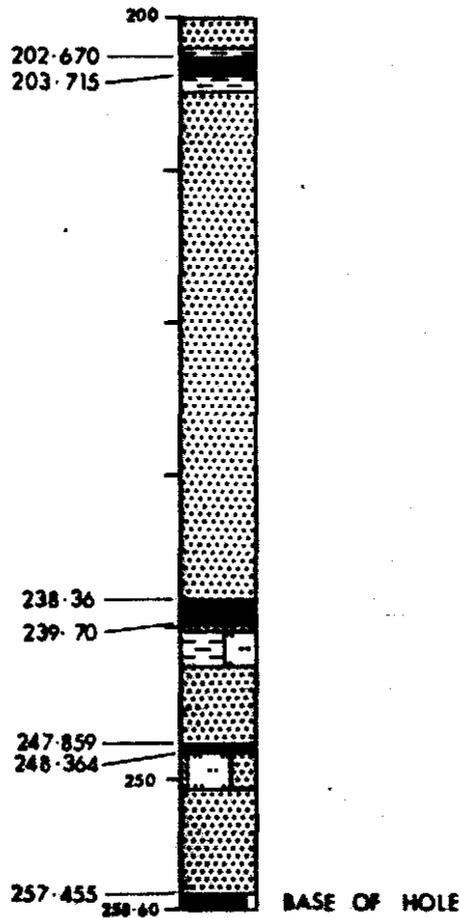
007

087008

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



5 cm

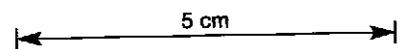
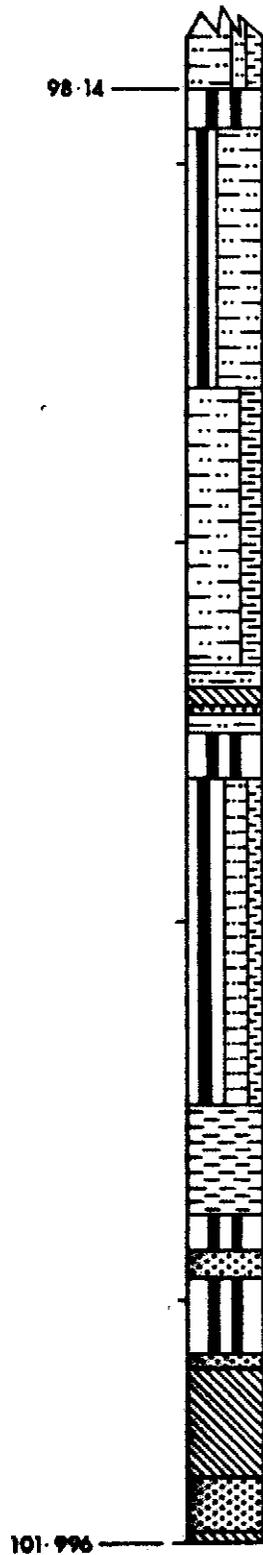
008

087009

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



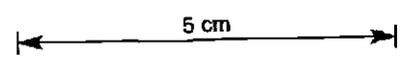
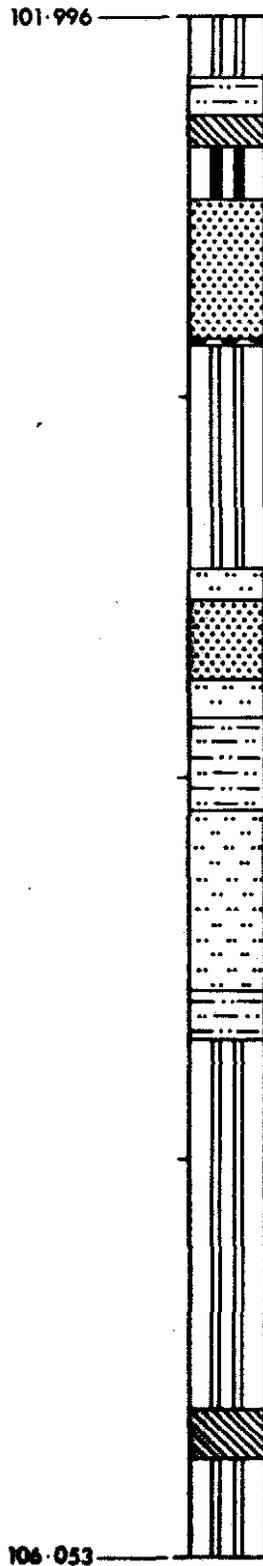
000

087010

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



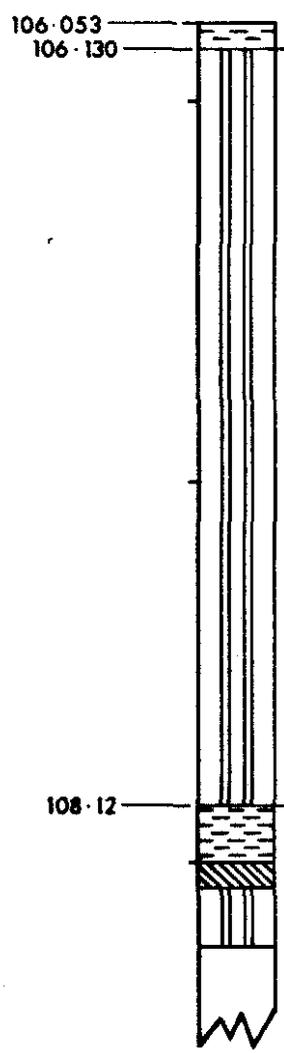
010

087011

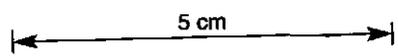
# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



PLY 1      1-99



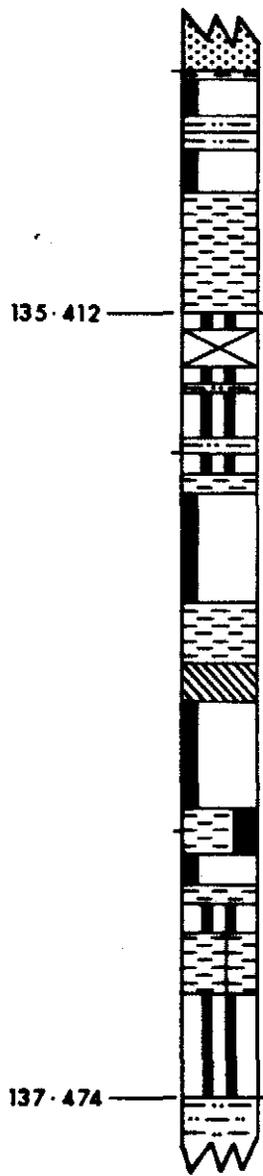
011

087012

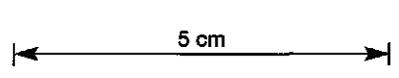
# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



PLY 2      2.062



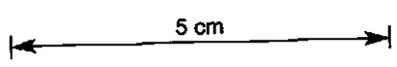
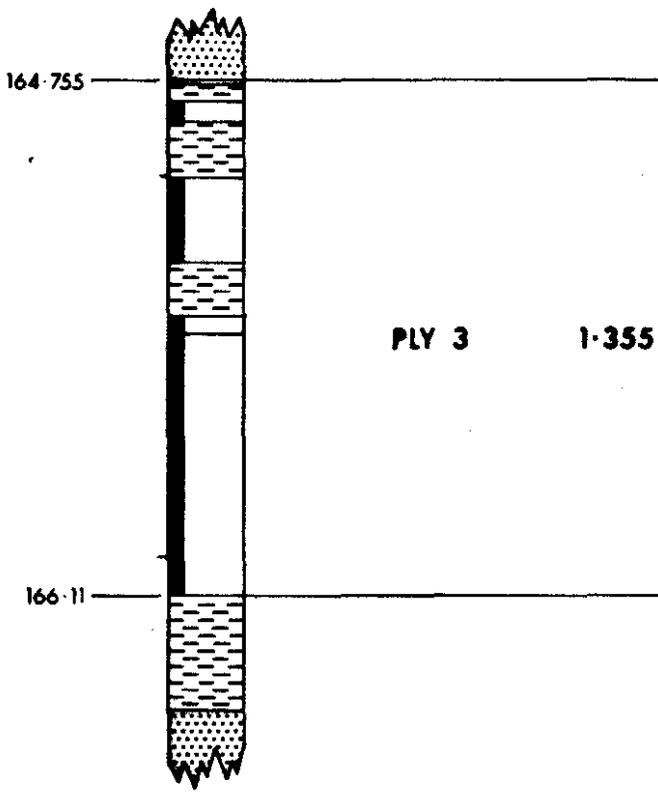
012

087013

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



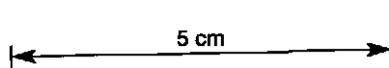
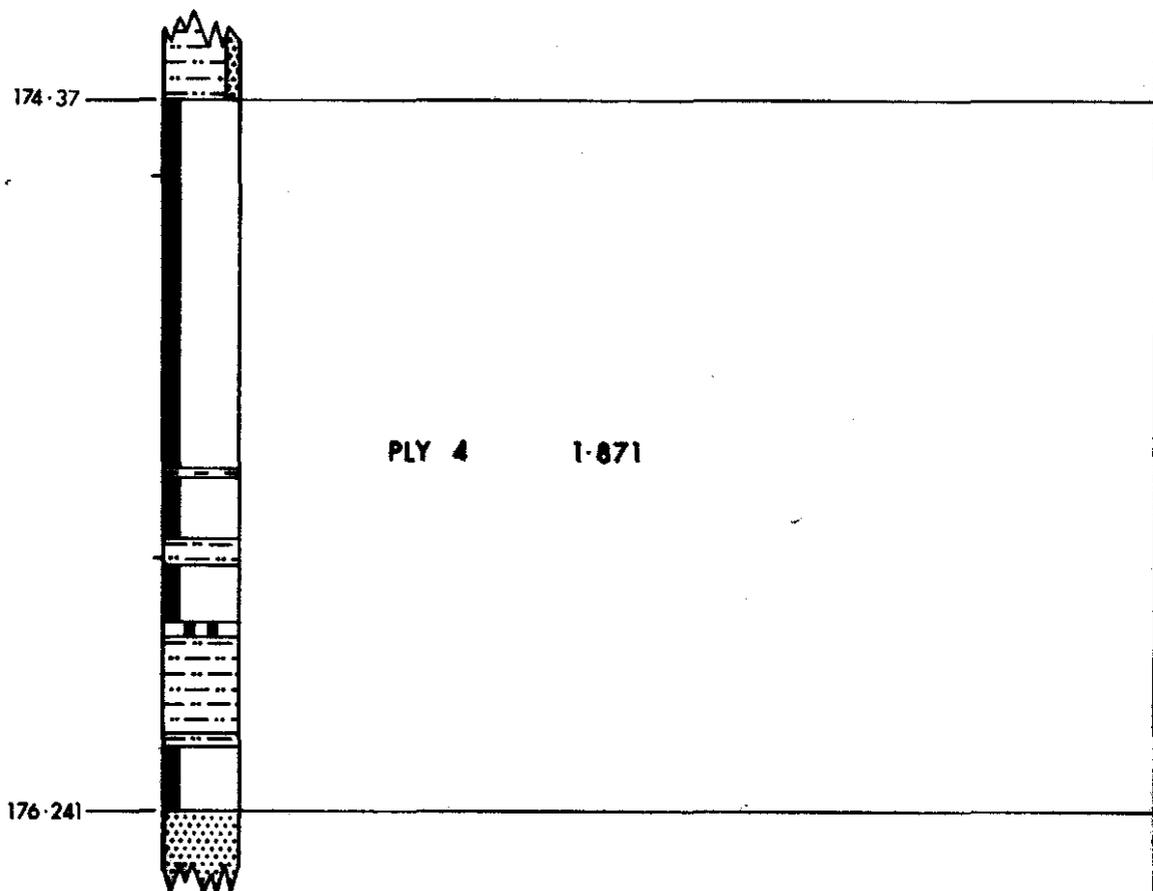
013

087014

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



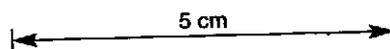
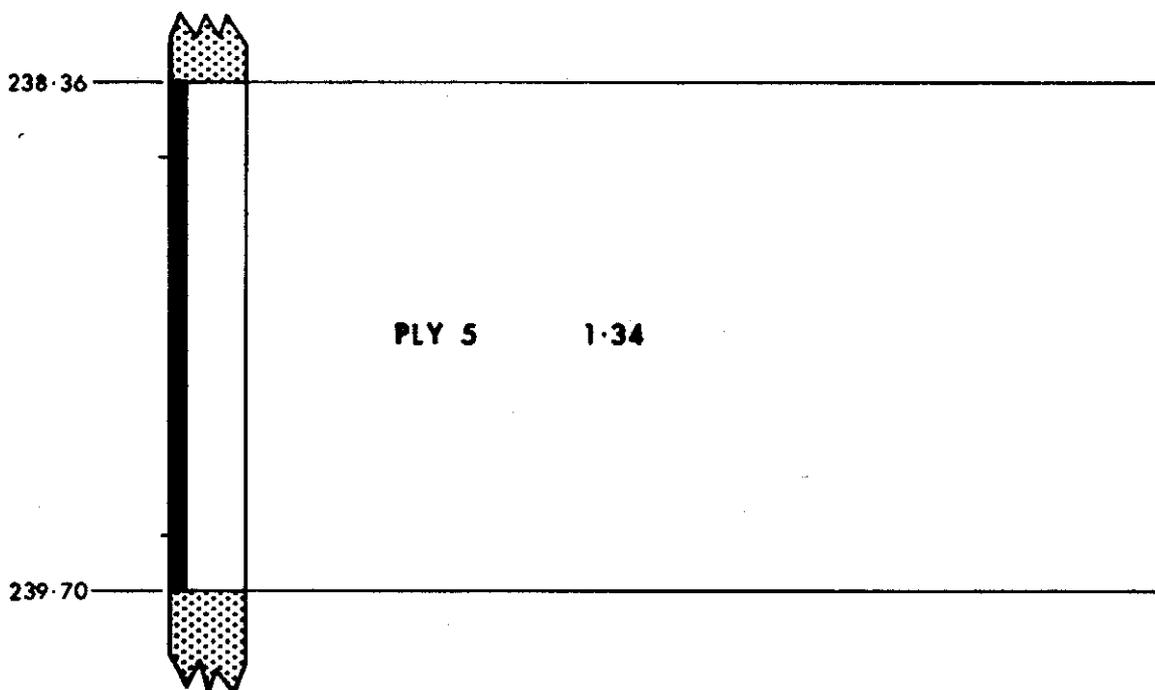
014

087015

# CORNWALL COAL COMPANY N.L.

## St Pauls River

### DDH 2



CORNWALL COAL ST PAULS RIVER D.D.H. 2

<u>Location:</u> Mt Puzzler	<u>Logged by:</u> C.F.R. Parbury
<u>AMG Co-ordinates:</u> E 591 000	<u>Drilled by:</u> Stacpoole Drilling
N 5382 156	
<u>Collar R.L.:</u> 530 m (approx)	<u>Commenced:</u> 14.9.84
<u>Total Depth:</u> 258.60 m	<u>Completed:</u> 26.9.84

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
OPEN HOLE DRILLING - no record of chips down to 31.0 m	31.00	31.00	
CLAYSTONE, buff cream, chert-like, jointing spaced 0.5 m 20° to LCA planar regular, core broken in part, very broken at base	3.289	34.289	
SANDSTONE, mid grey, medium to coarse, lithic, moderately well sorted, well bedded, thinly to moderately thickly bedded, laminations defined by claystone (black) lenses, wisps and blebs, bedding dip <5°, sporadic large blebs of claystone, irregular flattened in plane of bedding, poorly cemented in part, micaceous along partings, coal band 0.170 m thick at 54.55 m, highly broken claystone band at 57.40 m, 0.300 m thick, coaly claystone at 57.70 m, 0.160m thick, joint regular planar 15° to LCA at 58.0 m, joint planar irregular, subparallel to LCA at 58.4 m	44.696	78.985	

CORNWALL COAL ST PAULS RIVER D.D.H.2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE, dark grey, medium, lithic, laminations of carbonaceous material wisps and blebs, common fragments of bright coal wisps, well cemented	2.750	81.735	
SILTSTONE, black, carbonaceous, abrupt base and top	0.110	81.845	
<u>COAL</u> , dull	0.070	81.915	
, dull	0.100	82.015	
, stony	0.220	82.235	
, dull with minor bright bands, calcite along cleats	0.170	82.405	
, stony, very hard, dense	0.130	82.535	
, dull with minor bright bands, calcite along cleats	0.180	82.715	
1.1 CLAYSTONE, black, very hard, siliceous, chert-like	0.340	83.055	
SANDSTONE, mid grey, medium, lithic, poorly cemented, well sorted, regularly bedded, thinly bedded, dip <5°	3.085	86.140	
CLAYSTONE AND SANDSTONE LAMINITE, ratio 80:20. Claystone, dark grey; sandstone, mid grey, laminations parallel wavy to straight, gradational base	0.375	86.515	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE, buff cream grey, hard, indurated, chert-like scour and fill structure with pelletoidal mudstone soft sediment deformation structures sporadic abrupt base, carbonaceous towards base	3.055	89.570	
CLAYSTONE, black, carbonaceous	0.165	89.735	
CLAYSTONE, mid brown, fissile in part	0.335	90.070	
CLAYSTONE, light green, fissile, abrupt base and top	0.120	90.190	
CLAYSTONE, dark brown, fissile, slaking when wet, coaly towards base	0.110	90.300	
CLAYSTONE, black, hard, indurated, calcite and red material infilling veins, pyrite along vertical fractures, green calcite along jointing parallel to LCA, coaly at top	0.505	90.805	
CLAYSTONE AND SANDSTONE INTER-BEDDED, ratio 90:10. Claystone, black, coaly; sandstone, black, dark grey, lithic, medium calcite along bedding partings	0.515	91.320	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE, black, carbonaceous	0.360	91.680	
MUDSTONE, SILTSTONE AND SANDSTONE INTERBEDDED, ratio 30:50:20. Mudstone, dark grey, carbonaceous in part; siltstone, mid grey; sandstone, dark grey with white flecks, medium, lithic, well cemented, poorly sorted, well bedded, intraformational clasts throughout, minor scour and fill structures, bedding <5°	1.980	93.660	
SANDSTONE, light grey, medium to coarse, lithic to quartz-lithic, moderately sorted, subangular to angular, well bedded, thinly bedded, claystone band at top of unit, claystone laminated shows micro syn-depositional faulting, abrupt base and top to claystone, abrupt base to unit	2.720	96.380	
SILTSTONE, mid grey, laminated in part, laminations of fine sandstone, convoluted and disturbed bedding, top abrupt angular, irregular	0.615	96.995	
SANDSTONE, mid grey, coarse, lithic, poorly sorted	0.045	97.040	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness</u> (m)	<u>Estimated Depth to Base of Stratum</u> (m)	<u>Remarks</u>
MUDSTONE, SILTSTONE AND CLAYSTONE INTERBEDDED, ratio 60:20:20. Mudstone, dark grey, carbonaceous; siltstone, mid grey; claystone, light cream, abrupt tops and bases, fissile, minor coaly bands	1.100	98.140	
<u>COAL</u> , stony	0.100	98.240	
<u>COAL</u> AND MUDSTONE INTERBEDDED, ratio 40:60. Coal, dull, heat affected ? hard, indurated, calcite throughout cleats; mudstone, mid grey to dark grey, carbonaceous in part	0.690	98.930	
MUDSTONE AND CLAYSTONE INTERBEDDED, ratio 70:30. Mudstone, dark grey to black, carbonaceous to coaly, fissile, red staining along fracture parallel to LCA; claystone, grey green, minor bands of sandstone sporadic rip up structures	0.735	99.665	
MUDSTONE, dark grey, carbonaceous, silty in part	0.064	99.729	
CLAYSTONE, black, coaly	0.045	99.774	
SANDSTONE, dark grey, fine to medium, lithic	0.020	99.794	

020

087021

6.

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE, black, coaly	0.045	99.839	
MUDSTONE, black, carbonaceous	0.060	99.899	
<u>COAL</u> , stony	0.080	99.979	
<u>COAL</u> , MUDSTONE AND SILTSTONE INTERBEDDED, ratio 50:30:20. Coal, stony, heat affected ? hard indurated; mudstone, black, carbonaceous; siltstone, dark grey, sandy in part, calcite throughout along cleats	0.848	100.827	
MUDSTONE, black, carbonaceous to coaly, pelletoid fragments throughout	0.290	101.117	
<u>COAL</u> , stony, indurated, heat affected ?, hard, dense, calcite throughout	0.100	101.217	
SANDSTONE, dark grey, medium, lithic, mudstone pellets common	0.073	101.290	
<u>COAL</u> , stony, heat affected ? hard, dense, indurated, calcite throughout	0.205	101.495	
SANDSTONE, mid grey, medium, lithic	0.030	101.525	

021

087022  
7.CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
MUDSTONE, coaly, hard, dense, indurated, calcite throughout, red ironstaining associated with calcite	0.292	101.817	
SANDSTONE, pink brown, medium, lithic, abrupt base	0.147	101.964	
MUDSTONE, black, carbonaceous	0.032	101.996	
<u>COAL</u> , stony, hard, indurated, heat affected ? calcite throughout, red staining associated with calcite	0.165	102.161	
MUDSTONE, black, carbonaceous, hard, indurated	0.100	102.261	
MUDSTONE, coaly, hard, indurated	0.080	102.341	
<u>COAL</u> , stony, hard, indurated, red calcite throughout	0.145	102.486	
SANDSTONE, mid brown, medium to fine, lithic, coarse at base	0.360	102.846	
CLAYSTONE, black, carbonaceous, fissile	0.020	102.866	
<u>COAL</u> , stony, heat affected ? hard, indurated, red calcite throughout, minor pennybands of mudstone and sandstone, abrupt base	0.585	103.451	

022

087023

8.

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SILTSTONE, mid brown, white flecks throughout, claystone at base, claystone carbonaceous	0.085	103.536	
SANDSTONE, mid brown, fine, lithic, well bedded, pelletoidal mudstone fragments common	0.203	103.739	
SILTSTONE, mid brown, carbonaceous	0.100	103.839	
MUDSTONE, black, carbonaceous to coaly, hard, indurated, dense, red calcite staining common	0.255	104.094	
SILTSTONE, mid brown, fissile in part, carbonaceous along bedding partings	0.482	104.576	
MUDSTONE, black, carbonaceous, pelletoidal	0.112	104.688	
<u>COAL</u> , heat affected ? hard, indurated, dense, calcite throughout, minor claystone pennybands	0.975	105.663	
CLAYSTONE, black, coaly, fissile	0.130	105.793	
<u>COAL</u> , heat affected ? hard, indurated, dense, calcite throughout	0.260	106.053	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE, black, soft, puggy, fissile, carbonaceous	0.077	106.130	
<u>COAL</u> , heat affected ? hard, dense, indurated, calcite through- out, minor siltstone and mudstone pennybands, fractured	1.990	108.120	) ) ) PLY 1 ) Thickness: ) 1.99 m
CLAYSTONE, black, carbonaceous, hard, dense, indurated calcite in partings, core broken	0.130	108.250	
CLAYSTONE, coaly	0.075	108.325	
<u>COAL</u> , heat affected ? hard, indurated, dense, calcite throughout, fractured	0.155	108.480	
MUDSTONE, mid brown, carbonaceous in part, laminations wavy and convoluted, sporadic bright bands of coal, interval contains 4 fractures, planar regular to curved irregular, 20° to LCA, transitional base, plant remains along bedding partings	1.010	109.490	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE, light grey, medium to coarse, lithic to quartz-lithic, well sorted, well cemented, fractures common in part; siltstone at top 0.7m of strata, siltstone has disturbed bedding, fracture 20° to LCA and parallel to LCA, planar regular, curved irregular, seven fractures down to 111.35m, laminations defined by coaly wisps and fragments and carbonaceous lenses, bedding moderately thick to thick, 3 fractures to 114.35 m, 3 close spaced fractures at 115.50m, fracture at 120.0m, 1 set of 3 close spaced fractures at 121.50 m, bedding partings spacing is 0.15m from 123.0m to 130 m, numerous coaly fragments and fossil wood fragments from 123.8 m to 125.0m, numerous fractures from 126.0m to 130.5m, core sheared and broken within this interval	25.285	134.775	
CLAYSTONE, white cream	0.020	134.795	
<u>COAL</u> , dull, stony	0.090	134.885	
MUDSTONE, mid brown, pelletoidal	0.050	134.935	
MUDSTONE, black, carbonaceous	0.050	134.985	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
<u>COAL</u> , dull	0.107	135.092	
CLAYSTONE, cream green, soft, slaking, fissile	0.320	135.412	
<u>COAL</u> , stony	0.038	135.450	)
CORE LOSS	0.101	135.551	)
<u>COAL</u> , stony	0.050	135.601	)
MUDSTONE, cream grey, pelletoidal	0.025	135.626	)
<u>COAL</u> , stony	0.120	135.746	)
MUDSTONE, buff brown, abrupt top and base	0.040	135.786	)
<u>COAL</u> , stony	0.045	135.831	) PLY 2
CLAYSTONE, buff	0.040	135.871	) Thickness: 2.062m
CLAYSTONE, black, carbonaceous	0.015	135.886	)
<u>COAL</u> , dull with minor bright bands, calcite throughout	0.292	136.178	)
CLAYSTONE, white, abrupt top and base, pelletoidal, carbonaceous towards base	0.160	136.338	)
CLAYSTONE, coaly	0.097	136.435	)

026

087027  
12.CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
<u>COAL</u> , dull with minor bright bands	0.290	136.725	)
			)
CLAYSTONE AND <u>COAL</u> INTERBEDDED, ratio 70:30. Claystone, white, pelletoidal; coal, dull, calcite throughout	0.110	136.835	)
			)
<u>COAL</u> , dull	0.084	136.919	)
			)
CLAYSTONE, cream	0.050	136.969	)
			) PLY 2
<u>COAL</u> , stony	0.080	137.049	)
			)
MUDSTONE AND MUDSTONE INTERBEDDED, ratio 60:40. Mudstone, black, carbonaceous; mudstone, cream, pelletoidal	0.155	137.204	)
			)
<u>COAL</u> , stony	0.270	137.474	)
			)
MUDSTONE, cream white, disturbed bedding throughout, rip up clasts throughout, bedding convoluted, sporadic bright coal bands	0.680	138.154	)
			)
SANDSTONE, light grey, medium, quartz-lithic, well sorted, well bedded, bedding dip less than 5°, fractures common irregular curved 40° to LCA, subsets of fractures spacing about 0.7 m to 0.5 m, within subsets fractures every 0.020m, subset size up to 1.3m thick, some subsets are so sheared			)

027

087028

13.

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
the rock is friable, poorly cemented	26.601	164.755	
<u>COAL</u> , dull	0.020	164.775	)
MUDSTONE, mid brown, pelletoidal	0.045	164.820	)
<u>COAL</u> , dull	0.055	164.875	)
MUDSTONE, cream brown, fissile, slaking	0.160	165.035	)
<u>COAL</u> , dull	0.205	165.240	) PLY 3
CLAYSTONE, brown tan, fissile, slaking	0.140	165.380	) Thickness: 1.355 m
<u>COAL</u> , dull	0.050	165.430	)
, dull with minor bright bands	0.680	166.110	)
CLAYSTONE, light cream grey, bedding disturbed	0.300	166.410	
SANDSTONE, light grey, medium, quartz-lithic, bedding dipping less than 5°, well bedded	0.630	167.040	
CLAYSTONE, cream grey, bedding disturbed, coal band in middle of unit 0.06m thick, numerous fractures, close spaced & irregular	1.050	168.090	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
MUDSTONE AND SANDSTONE INTERBEDDED, ratio 80:20. Mudstone, cream grey, silty phases throughout; sandstone, light grey, fine to medium, quartz-lithic, well bedded, dip less than 5°, highly fractured, where sandstone fractured it has become friable, poorly cemented, laminations common in sandstone, parallel wavy	6.205	174.295	
CALCITE, white, infilling a cavity ?	0.075	174.370	
<u>COAL</u> , dull with minor bright bands, sporadic mudstone clasts	0.973	175.343	)
CLAYSTONE, white, buff, abrupt base and top	0.020	175.363	)
<u>COAL</u> , dull	0.160	175.523	)
MUDSTONE, cream grey, pelletoidal	0.070	175.593	) PLY 4
<u>COAL</u> , dull	0.150	175.743	) Thickness
, stony	0.035	175.778	) 1.946 m
MUDSTONE, cream grey, disturbed laminations throughout, rip up clasts, pelletoidal at base	0.255	176.033	)

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
MUDSTONE, brown, carbonaceous	0.038	176.071 )	
		)	PLY 4
<u>COAL</u> , dull	0.170	176.241 )	
SANDSTONE, light grey, medium to coarse, quartz-lithic, well sorted subangular, well cemented, bedding less than 5°, mudstone at top 0.7m thick, cream, carbonaceous at 0.050m top, minor fractures throughout between 177.45 - 180.45m (3 fractures); 180.45 - 183.35 m (10 fractures); 183.35 - 186.45 m (9 fractures) and 186.45 and base of unit (2 fractures)	10.691	186.932	
SANDSTONE, as above, siltstone at top of unit is 1.2m thick, between top of unit and 189.45 m [11 fractures (5 in 1.2m)], between 189.45 and 192.45 m (4 fractures), basal 0.5m of unit has mudstone intraformational clasts throughout	6.460	193.392	
CLAYSTONE, cream grey, abrupt top and base	0.065	193.457	
MUDSTONE, brown, carbonaceous at base	0.200	193.657	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
MUDSTONE, brown, fissile	0.035	193.692	
<u>COAL</u> , stony	0.145	193.837	
CLAYSTONE, mid brown, fissile	0.210	194.047	
<u>COAL</u> , dull	0.240	194.287	
SANDSTONE, light grey, medium, quartz-lithic, well sorted, sub- angular, well cemented, bedding dips less than 5°, mudstone top 0.20m fine sandstone for further 1.0m, fine sandstone fractured, highly sheared between 198.50 m and 201.0 m, fractures curved irregular, sandstone in sheared zone friable, poorly cemented	7.803	202.090	
MUDSTONE, light to medium grey, fissile, abrupt base, fractures throughout	0.580	202.670	
<u>COAL</u> , dull	0.155	202.825	
MUDSTONE, cream, pelletoidal	0.030	202.855	
<u>COAL</u> , dull, cream, claystone penny- band in middle	0.460	203.315	
CLAYSTONE, cream, abrupt top and base	0.020	203.335	

031

087032

17.

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
<u>COAL</u> , dull, minor claystone penny- bands as pellets, lenses, micro dyklettes	0.380	203.715	
CLAYSTONE, buff, very fissile, slaking, minor carbonaceous lenses, siltstone phases in part towards base	1.010	204.725	
SANDSTONE, light grey, medium to coarse, quartz-lithic, moderately well sorted to well sorted, well cemented, subangular, sporadic claystone blebs and phases, sporadic intraformational clasts well bedded, bedding dip less than 7°, numerous fining upward sequences, sporadic coaly fragments and rip up clasts, abrupt base	33.635	238.360	
<u>COAL</u> , dull with minor claystone pennybands, abrupt base	1.340	239.700	) ) PLY 5
SANDSTONE, light grey cream, fine, fissile, slightly fractured minor carbonaceous wisps and lenses, abrupt base	0.775	240.475	
<u>COAL</u> , stony, abrupt base	0.100	240.575	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE AND SILTSTONE LAMINITE, ratio 60:40. Claystone, dark grey, black, carbonaceous in part; siltstone, light grey green, highly fissile, graded base	2.142	242.717	
SANDSTONE, light grey, medium, quartz-lithic, well sorted, rounded to subangular, well cemented	5.142	247.859	
<u>COAL</u> , stony, fissile	0.090	247.949	
, dull	0.415	248.364	
CLAYSTONE, black, coaly, abrupt base	0.080	248.444	
CLAYSTONE, mid brown, highly fissile	0.170	248.614	
CLAYSTONE, dark brown black, coaly, abrupt base	0.055	248.669	
SILTSTONE, light grey, fissile	0.280	248.949	
SANDSTONE, light grey, fine to medium, lithic, well sorted	0.720	249.669	
SILTSTONE, light green grey, highly fissile, gradational base	1.185	250.854	

CORNWALL COAL ST PAULS RIVER D.D.H. 2

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE, light grey, medium to coarse, quartz-lithic, well bedded, moderately cemented, friable in part, claystone towards base	6.601	257.455	
<u>COAL AND CLAYSTONE INTERBEDDED</u> , ratio 90:10. Coal, dull; claystone, light brown, fissile	1.070	258.525	
SILTSTONE, light grey	0.075	258.600	

BASE OF HOLE

**SGS Australia Pty. Ltd.**

(Incorporated in N.S.W.)

74 McEvoy St.,  
 Alexandria NSW 2015  
 Telephone (02) 699 7625.  
 Telex 22395  
 NATA Reg. No. 1062

McElroy Bryan & Associates  
 156 Mowbray Road  
 Willoughby, N.S.W. 2068

Attn: Mr. Charles Parbury

Page 1 of 5

REPORT NO . SL 2858 . CLIENT REF. NO . . . . .  
 DATE SAMPLES IN . 22/10/84 . DATE REPORT OUT . 2/11/84 . .

REPORT TITLE: ANALYSES OF BORECORE SAMPLES  
 DDH 2, ST. PAUL'S RIVER.

The tests contained in this report have been carried out in accordance with the Australian Standards or other NATA approved methods listed below:-

AS 1038 Pt. 1	Total Moisture
AS 1038 Pt. 3	Proximate Analysis
AS 1038 Pt. 5	Specific Energy
AS 1038 Pt. 6	Ultimate Analysis
AS 1038 Pt. 8	Chlorine
AS 1038 Pt.11	Forms of Sulphur
AS 1038 Pt.12.1	Crucible Swelling Number
AS 1038 Pt.12.2	Gray King Coke Type
AS 1038 Pt.14.1	Ash Analysis
AS 1038 Pt.15	Fusibility of Ash
AS 1038 Pt.20	Hardgrove Grindability Index
AS 1038 Pt.21	Relative Density
AS 1661	Float/Sink Testing
AS 1676	Sampling
AS 2137	Gieseler Plastometer (Dis- continuous stirring method)
AS 2486	Reflectance of Vitrinite
AS 2515	Maceral Analysis
ISO 349	Audibert Arnu Dilatometer
ISO 335	Roga Index
ISO 1018	Moisture Holding Capacity
BS 1016 Pt.17	Size Analysis
LECO Method	Total Sulphur

Borecore samples supplied by client.

035



SGS Australia Pty. Ltd.

REPORT No: SL 2858

Page 2 of 5

Analysis	Sample Ref.	Ply 1	Ply 1	Ply 2	Ply 2	Ply 3	Ply 3
		20mmx0	0.5mm	20mmx0	-0.5mm	20mmx0	-0.5mm
Total Moisture	%						
Moisture	%	3.6		4.0		6.5	
Ash	%	54.9	53.5	53.7	62.2	41.5	60.0
Volatile Matter	%	11.6		18.1		20.7	
Fixed Carbon	%	29.9		24.2		31.3	
Crucible Swelling No.							
Specific Energy	Mj/kg						
Total Sulphur	%						
Carbon	%						
Hydrogen	%						
Nitrogen	%						
Oxygen(plus errors)	%						
Carbon Dioxide	%						
Chlorine	%						
Relative Density		1.89		1.82		1.66	
Mass	(kg)	4.73	0.20	4.45	0.21	2.56	0.22

FUSIBILITY OF COAL ASH ( Atmosphere): Sintered Alumina Support

Temperatures °C at Characteristic Shapes

Initial Deformation						
Spherical						
Hemispherical						
Flow						
Comments:						

BASIS RESULTS REPORTED ON Air Dried

COLIN MEADS  
MANAGER  
LABORATORIES



This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

036



Analysis	Sample Ref.	Ply 4	Ply 4	Ply 5	Ply 5		
		20mmx0	-0.5mm	20mmx0	-0.5mm		
Total Moisture	%						
Moisture	%	4.5		3.8			
Ash	%	46.7	55.7	36.0	43.6		
Volatile Matter	%	21.5		18.0			
Fixed Carbon	%	27.3		42.2			
Crucible Swelling No.							
Specific Energy	Mj/kg						
Total Sulphur	%						
Carbon	%						
Hydrogen	%						
Nitrogen	%						
Oxygen (plus errors)	%						
Carbon Dioxide	%						
Chlorine	%						
Relative Density		1.71		1.66			
Mass	(kg)	4.19	0.18	2.43	0.17		

**FUSIBILITY OF COAL ASH ( Atmosphere): Sintered Alumina Support**

Temperatures °C at Characteristic Shapes							
Initial Deformation							
Spherical							
Hemispherical							
Flow							
Comments:							

 BASIS RESULTS REPORTED ON **Air Dired**
**COLIN MEADS  
MANAGER  
LABORATORIES**


This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

037



**SGS Australia Pty. Ltd.**

Re-issue No.1

087038

REPORT No: SL 2858

Page 4 of 5

20 x 0.5mm

Analysis	Sample Ref.	DDH 2	DDH 2				
		Ply 4 F1.60	Ply 4 S1.60				
Total Moisture	%						
Moisture	%	5.6					
Ash	%	23.7	73.6				
Volatile Matter	%	27.9					
Fixed Carbon	%	42.8					
Crucible Swelling No.							
Specific Energy	Mj/kg	23.62					
Total Sulphur	%	0.57					
Carbon	%						
Hydrogen	%						
Nitrogen	%						
Oxygen (plus errors)	%						
Carbon Dioxide	%						
Chlorine	%						
Relative Density		1.46	2.08				

**FUSIBILITY OF COAL ASH ( Atmosphere): Sintered Alumina Support**

**Temperatures °C at Characteristic Shapes**

Initial Deformation						
Spherical						
Hemispherical						
Flow						
Comments:						

BASIS RESULTS REPORTED ON Air Dried Basis.

**COLIN MEADS  
MANAGER  
LABORATORIES**



This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.



038  
**SGS Australia Pty. Ltd.**

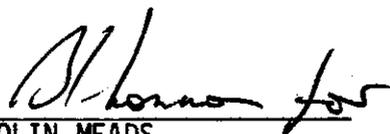
REPORT No: SL 2858

Page 5... of 5...

## COAL ANALYSIS REPORT

FLOAT/SINK ANALYSIS, PLY 4  
 (20.0 mm x 0.5 mm)

<u>Relative Density</u>	<u>Fractional %</u>		<u>Cumulative %</u>	
	<u>Mass</u>	<u>Ash</u>	<u>Mass</u>	<u>Ash</u>
F1.60	53.9	23.7	53.9	23.7
S1.60	46.1	73.6	100.0	46.7

  
 COLIN MEADS  
 MANAGER  
 LABORATORIES



This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

53 91 000 N

53 91 000 N

**EL 27/84**

590000 E

595000 E

5380000 N

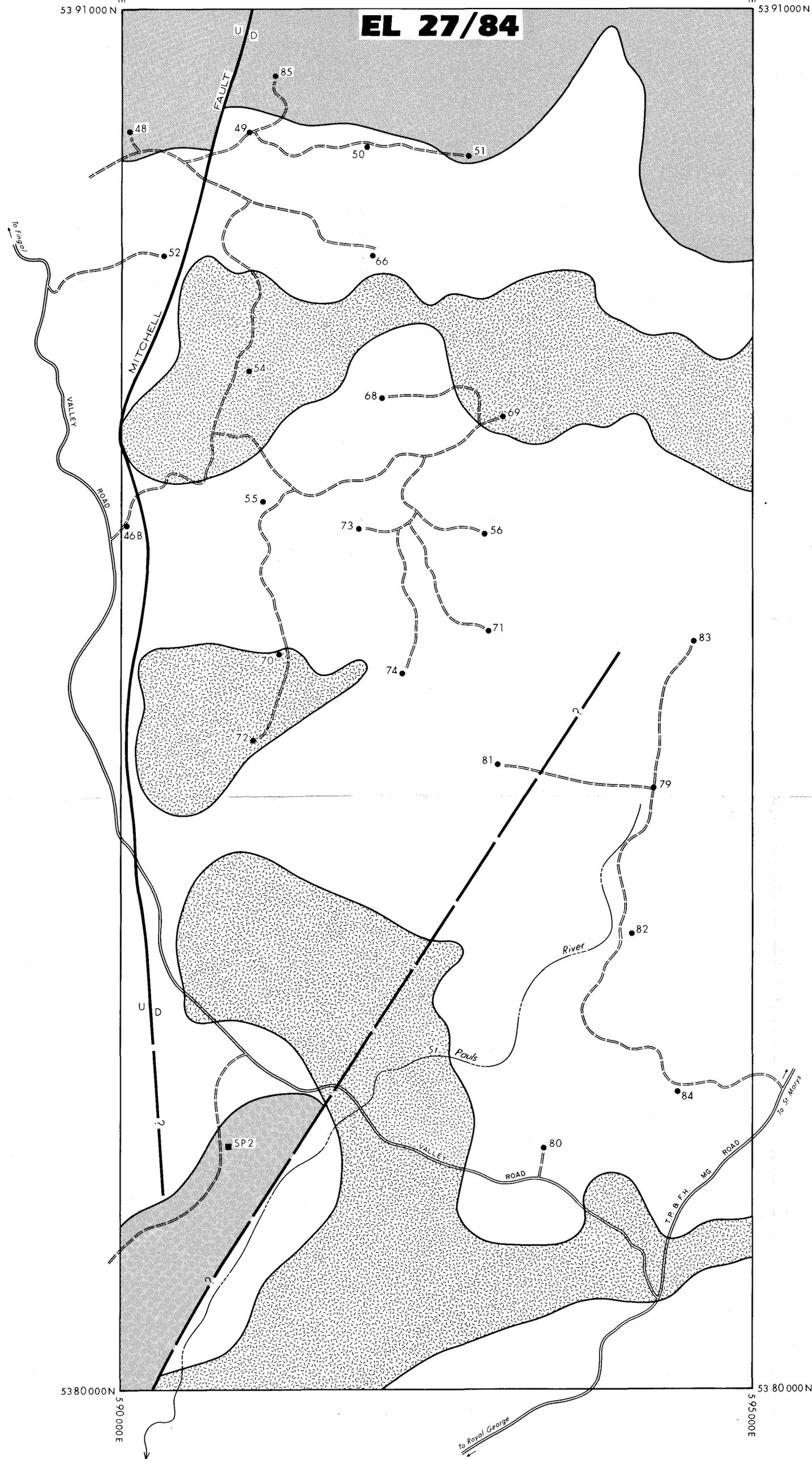
5380000 N

590000 E

595000 E

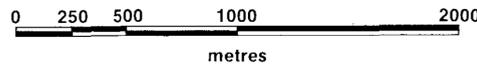
**REFERENCE**

- Jurassic Dolerite ..... 
- Areas of thick Jurassic Dolerite based on Geophysical Surveys ..... 
- Triassic Coal Measures - mostly obscured by scree ..... 
- Fault ..... 
- Dept of Mines drill hole .....  81
- Cornwall Coal drill hole .....  SP2
- Formed gravel road ..... 
- Track to drill site ..... 



087040

Scale 1:20,000



85-2488

**CORNWALL COAL COMPANY N.L.**

**E.L. 27/84  
FINGAL VALLEY  
TASMANIA**

**SKETCH GEOLOGICAL MAP**

Prepared by McElroy Bryan & Associates Pty Limited  
August, 1985 316 J.H. Bryan