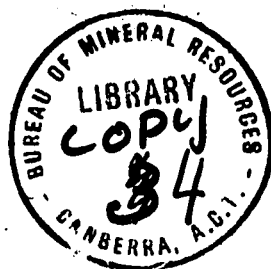


1952/51



B.M.R. Record No. 1952/51

OPEN CUT COAL PROGRAMME - NEWCASTLE REGION

POINT MORRISSET AREA

DRILLING RESULTS

By T. H. Rodger

B.M.R. Records No. 1952/51.

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S U M M A R Y

A total of 25 rotary cored holes were drilled by the Bureau in Portion 49, Parish of Wallarah, County Northumberland, 2 miles south of Swansea. Approximately 1400 ft. of "test and define" drilling proved a possible 200,000 tons of coal suitable to be open cut under an average overburden of 6/1 ratio.

The initial drilling programme showed a rolling seam. After surveying, further holes were drilled to locate the displacement which is 10 to 15ft. in the S.W. corner of the area. No other obstacles are known which would hinder immediate working of the area.

The lower split of the Wallarah Seam was tested in three holes but was found to be too thin to warrant further prospecting.

INTRODUCTION.

The area investigated is part of the eastern shore of Lake Macquarie and is approximately 2 miles south of Swansea. At present only a rough bush track leads into the area from the Pacific Highway. The N.E. corner of Portion 49, is within $\frac{1}{2}$ mile of the Pacific Highway at the nearest point. The nearest coal loading plants from the centre of the area, are the Wallarah Colliery's Wharf at Catherine Hill Bay ($3\frac{3}{4}$ miles) and the Redhead Coal Mining Company's railway at Belmont ($6\frac{1}{2}$ miles). Either of these outlets would require approximately $\frac{1}{2}$ mile of road to be made.

The recommendation from the Joint Coal Board suggested an area below the outcrop of the Wallarah Seam in Portion 49, Parish of Wallarah, Northumberland County, as shown in BMR. Map N.14/80 (Fig.1). The seam to be investigated has been tentatively called the Point Morrisset Split (probably of the Wallarah Seam). After prospecting had been started a further request was made by the Joint Coal Board to investigate the Lower Split of the Wallarah Seam in the same general area. This was done.

Prospecting the Point Morrisset Split has been limited in the past to one adit driven in the N.W. corner of Portion 49, near water level. The limit of these workings as shown on BMR. Map N.14/80 (Fig.1) was taken from a plan called "Outcrops and Workings of Seams in Portion 49" (unknown origin). Either the plan is not correct or further mining has proceeded since the original of the plan was drawn because BMR.24 encountered old workings at 71 ft. contrary to the plan. In the vicinity of the workings a shaft exists in which coal was encountered at 25 ft.

A total of 25 holes were sunk by Bureau Failing 750's, but because of poor recovery in the earlier holes, which necessitated redrilling several holes, the number of useful holes was 16. Of these holes three were placed so as to encounter the Lower Split of the Wallarah, but as the results were so poor the prospecting of this seam was discontinued.

A further request was received from the Joint Coal Board to penetrate the Great Northern Seam which they expected to lie approximately 70 ft. below the Point Morrisset Split. The drillers were immediately instructed to deepen the hole on which they were working. In the meantime, information which was at that time not in the hands of the Joint Coal Board, was studied and seam correlation indicated that the Great Northern was possibly 200 ft. below the level of the Point Morrisset Split. By that time the drillers had reached 102 ft. below the Point Morrisset Split and had not encountered coal, so the hole was abandoned.

The possible open cut area is on a slope from Lake Macquarie to the hills capping the Upper Wallarah approximately 175 ft. high. The whole of the open cut area is covered by scrub and young timber which in places is quite thick.

The bearings for the bore locations are taken from magnetic north.

GEOLOGY.

Upper beds of the Newcastle Stage are exposed in many places in the area south of Swansea between the Pacific Ocean and Lake Macquarie. With few minor changes the dip is approximately 3° to the west over the whole Swansea Area.

Stratigraphically the seams of the Newcastle Stage in the Swansea Area are from top to bottom:-

Wallarrah Seam - Upper Split
Lower Split

Point Morrisset Split

Great Northern Seam.

WALLARAH SEAM - UPPER SPLIT. The Upper Split of the Wallarah Seam is the uppermost known seam in the Newcastle Stage. This seam has been extensively worked in the Swansea Area by the Wallarah, the Wallamaine and the Northern Highways Collieries; the first two are still in operation. Because of these extensive workings care was needed in placing the holes. BMR 15, 16 and 17 passed through this seam.

WALLARAH SEAM - LOWER SPLIT. The Lower Split has been worked in the Swansea Open-cut and in at least two places in the Wallamaine Colliery. This seam becomes progressively thinner south of Portions 4, 21 and 12 particularly towards the S.E. and in S14 Swansea South Area (BMR Sketch Map N14/92 (Plate 3) it is missing. Bore S14 was drilled 37ft. below the Upper Split of the Wallarah Seam. The Joint Coal Board's hole Swansea Bore No. 2, located at the Pacific Highway/Catherine Hill Bay Road junction in Portion 14, was commenced 10ft. below the Wallarah Upper Split and encountered no coal for the first 155ft.6ins. The Lower Split therefore combines with the Upper Split or disappears in Portion 14 and further south. In the holes where the Upper and Lower Splits were penetrated the vertical interval between the seams is 0 to 22ft. and the seam thickness varies between 1ft.6ins. and 4ft.10ins.

POINT MORRISSET SPLIT. The Point Morrisset Split was prospected extensively in the area particularly in the S.W. corner. Coal of this seam was encountered to varying depths at thicknesses from 6ft.5ins. to 2ft. 6ins. In the southern half of the area the seam thickness decreases to the east with minor fluctuations. The graphic logs (Figs. 2, 4, 5 & 6) and sections (Fig. 1) show the extreme variation of the thickness of the Point Morrisset Split within a very small area. In the same degree the sediments above vary in thickness and rock type. A thickness of 4ft. was considered a minimum for a possible open cut, with an average thickness of 4ft.6ins. or greater. The seam in the area has no more than 2ins. of bands. The quality varies but the average without bands is:- ash content 18.4%, calorific value 11,200 B.Th.U's/lb.

The structure contours on Fig. 1. show a distinct vertical displacement of between 10 and 15ft. and more likely to be a fault than a roll. An examination of underground workings in the Upper Split of the Wallarah Seam in the Wallamaine Colliery failed to reveal any trace of a fault. The displacement however diminishes to the N.E. and may not noticeably affect the upper seam.

Washouts of a minor nature may occur. BMR 23 encountered only 2½ft. of coal whilst in the surrounding holes the seam was at least 4ft. thick.

No evidence of igneous intrusions was found either in drilling or in field survey.

The Point Morrisset Split, reported only from the Swansea Area, was assumed to be a split of the Great Northern Seam, but recent drilling results suggest rather that it is a split of the Wallarah Seam. The vertical intervals between the Lower Split of the Wallarah Seam and the Point Morrisset Seam are as follows:- BMR 24 42ft.8ins., BMR 15 & 16, 38ft.5½ins., BMR 17 29ft.3ins. Thus it seems that the point Morrisset

Split thickens and diverges from the Lower Split of the Wallarah Seam to the N.W. in much the same way as the Lower Split thickens and diverges from the Upper Split of the Wallarah Seam.

The overburden as illustrated in graphic logs and sections is mainly conglomerate (Teralba Conglomerate) with minor bands of sandstone, claystone and shale.

GREAT NORTHERN SEAM. The Great Northern Seam is being worked by the Normaine Colliery. BMR 23 proved that this seam is at least 102 ft. below the Point Morriset Split and ~~the bottom, 95 ft. of this is~~ conglomerate. Joint Coal Board percussion holes intersected the Great Northern Seam at a depth below open cut limits.

MINING.

The coal within open cut limits lies in Portion 49, Parish of Wallarah in an irregular strip outlined by the overburden isopachs on Fig. 1.

The area of coal beneath overburden of 50ft. or less is approximately 52 acres. The average seam thickness is $4\frac{1}{2}$ ft. which gives 320,000 tons of coal (calculated on the basis of 1500 tons/acre ft.) As this quantity has been estimated to the outcrop with no account taken of weathering or washouts, it is probable that the overall tonnage would have to be reduced by a third if not a half.

The only difficulties likely to be encountered in mining are the roll or fault in the S.W. of the area and the old workings in the N.W. of Portion 49 which are thought to be not extensive.

The seam dips with the slope of the ground under an average overburden of 30ft. composed largely of conglomerate.

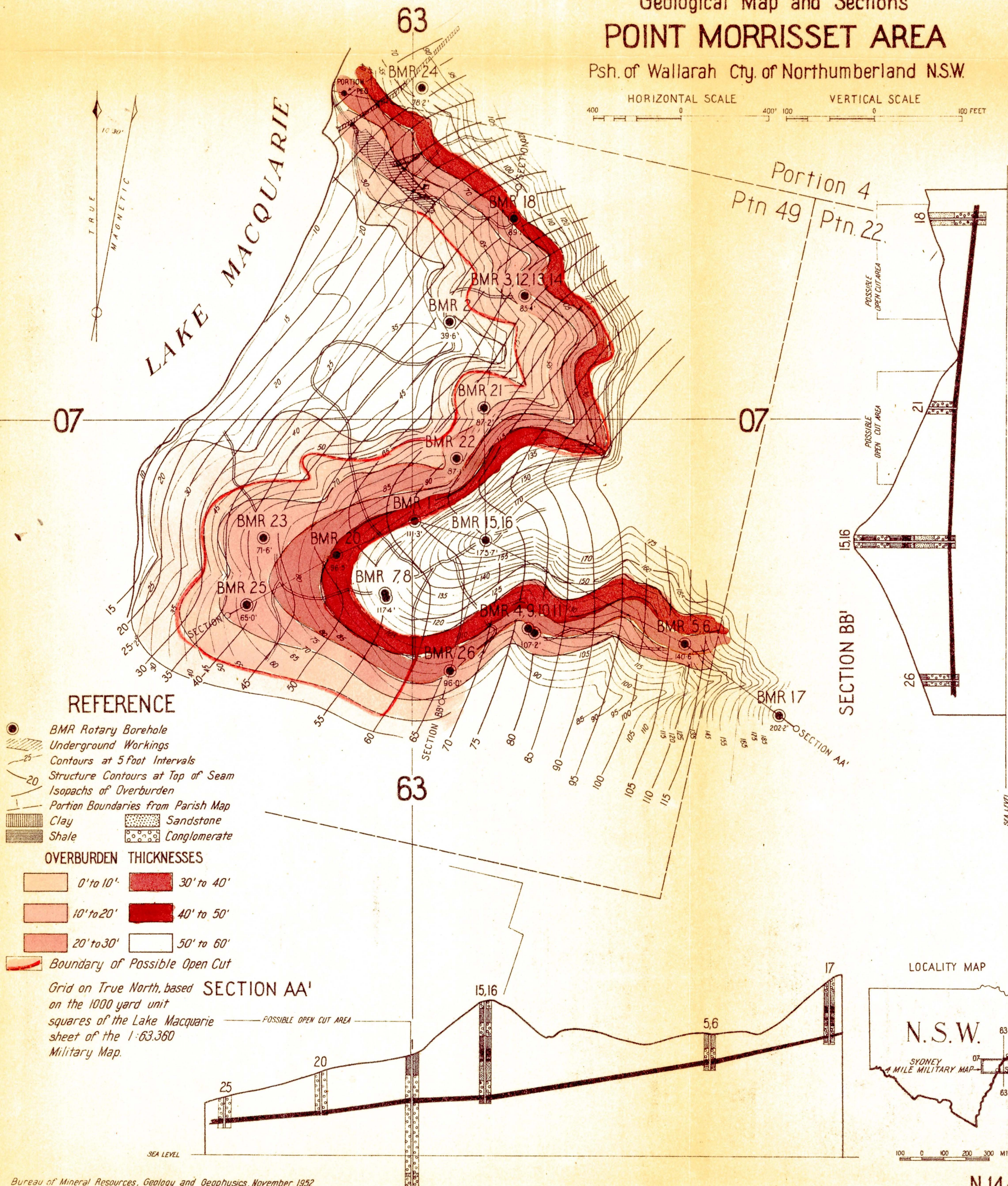
T.H. RODGER.

Fig.1

Geological Map and Sections POINT MORRISSET AREA

Psh. of Wallarah Cty. of Northumberland N.S.W.

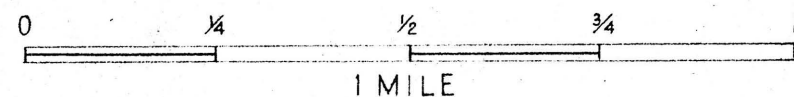
HORIZONTAL SCALE 400' 0 400' 100' VERTICAL SCALE 0 100 FEET



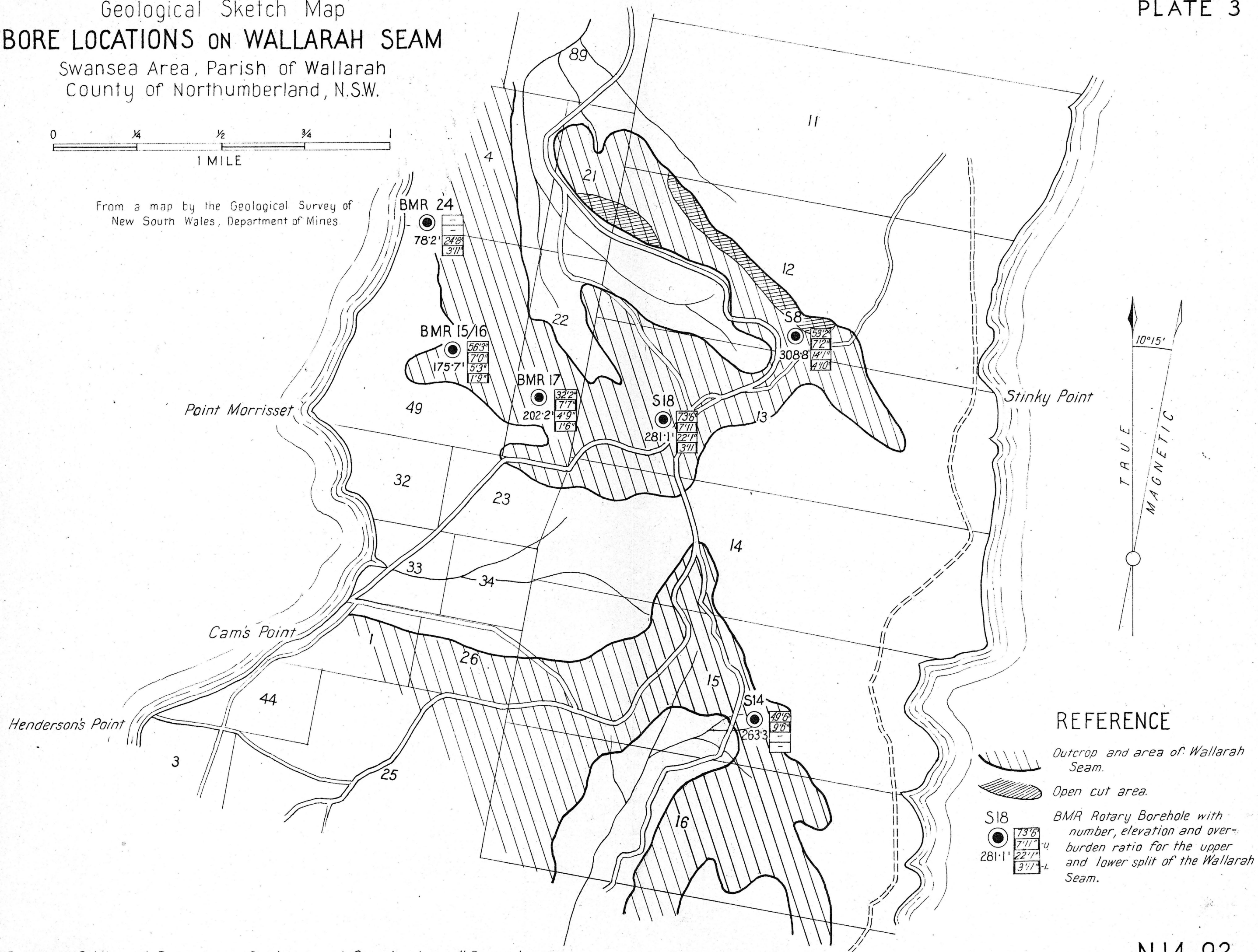
Geological Sketch Map BORE LOCATIONS ON WALLARAH SEAM

Swansea Area, Parish of Wallarah
County of Northumberland, N.S.W.

PLATE 3



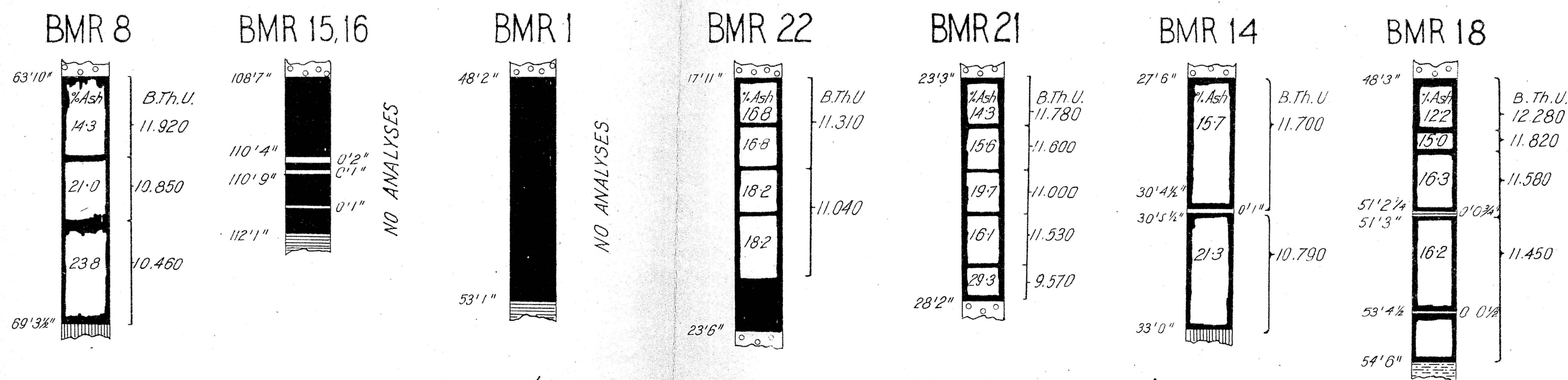
From a map by the Geological Survey of
New South Wales, Department of Mines



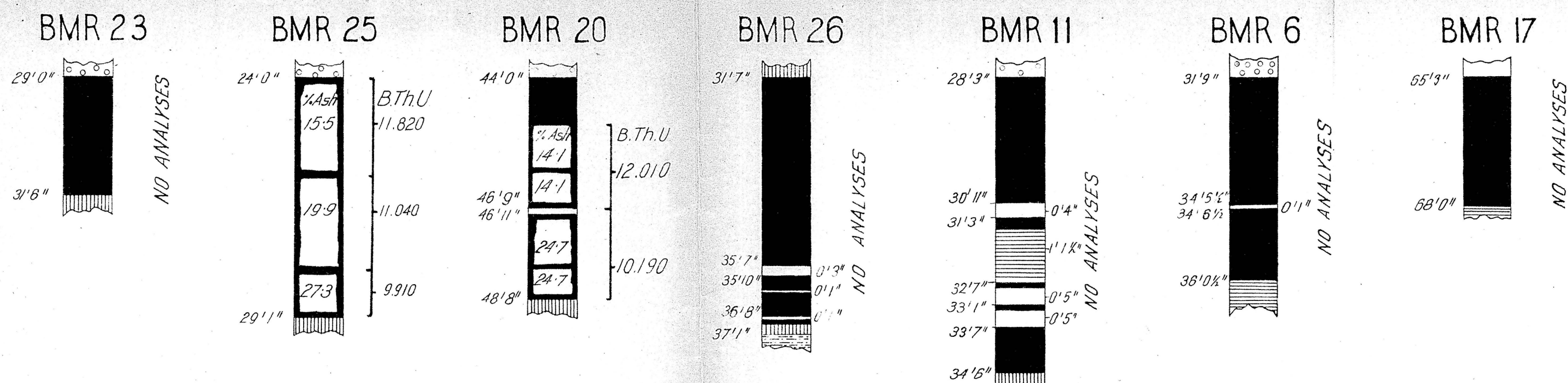
COAL DETAIL OF THE POINT MORRISSET SPLIT

Parish of Wallarah, County of Northumberland, N.S.W.

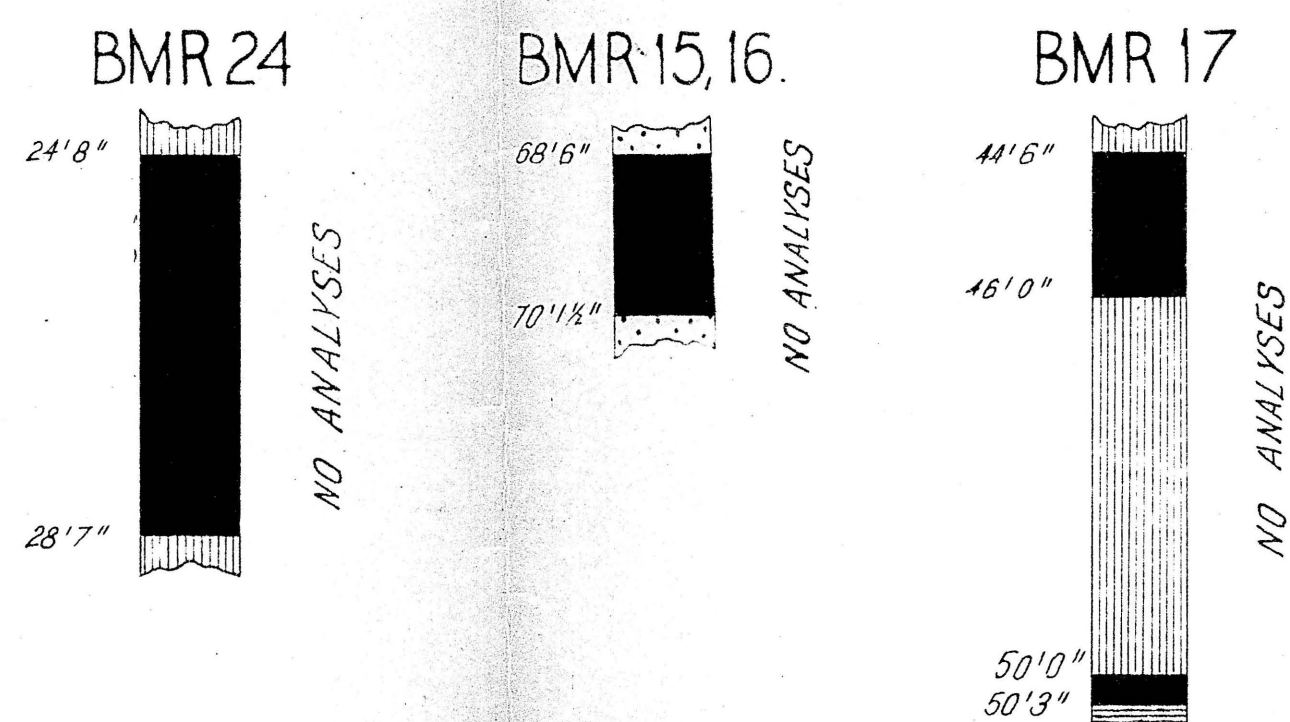
VERT. SCALE 2 0 2 4 6 FEET



(1. Approximate South-North Section)



(2. Approximate West - East Section)



(3. Bores through Wallarah Lower Split)

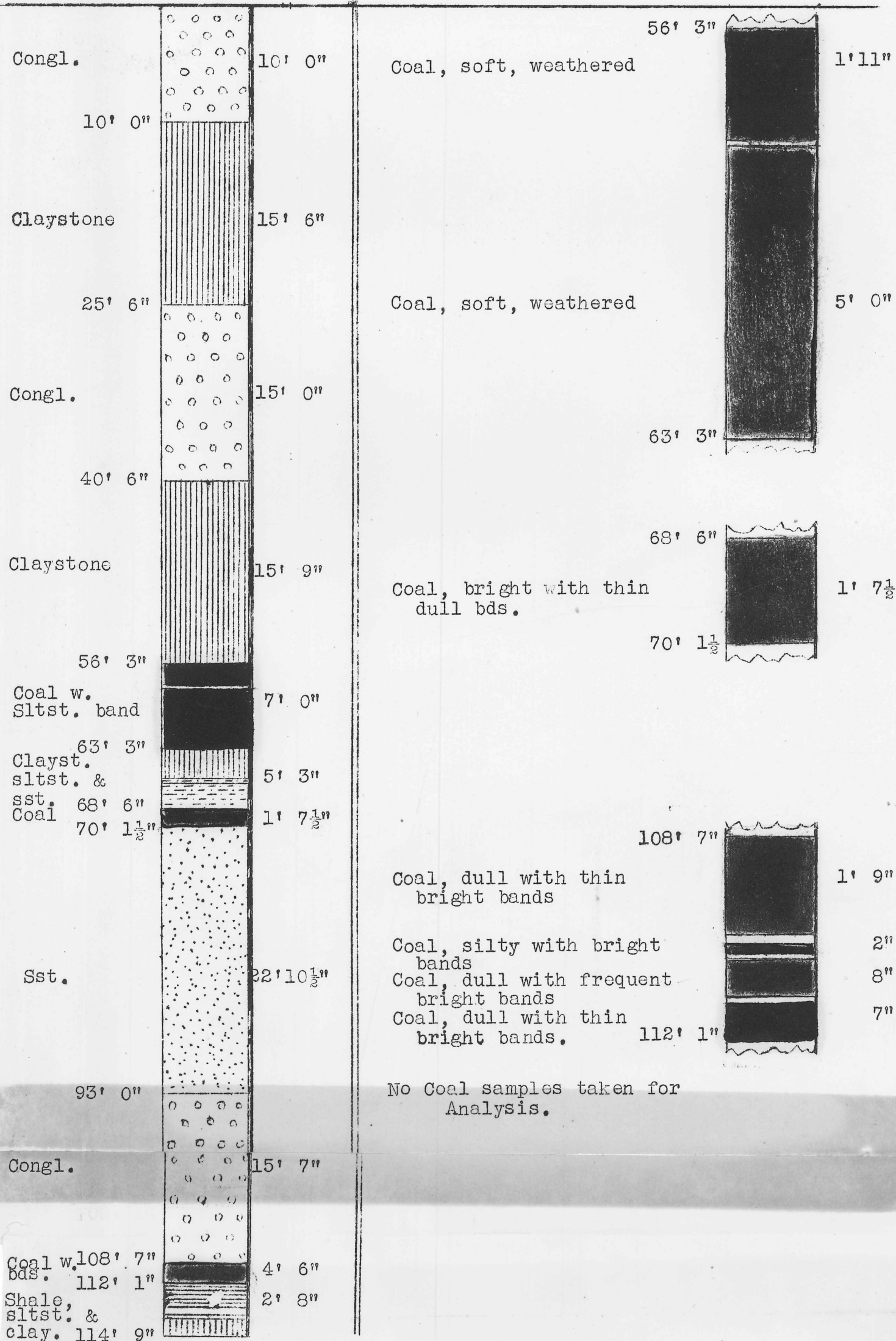
COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Point Morrisset Hole No: BMR 15 & 16 Elevation: 175.65' ASL
 Reference: BMR Map N14/80, October 52 Datum: H.W.B.
 Begun: 9.7.52 Finished: 10.7.52 Depth: 114' 9"

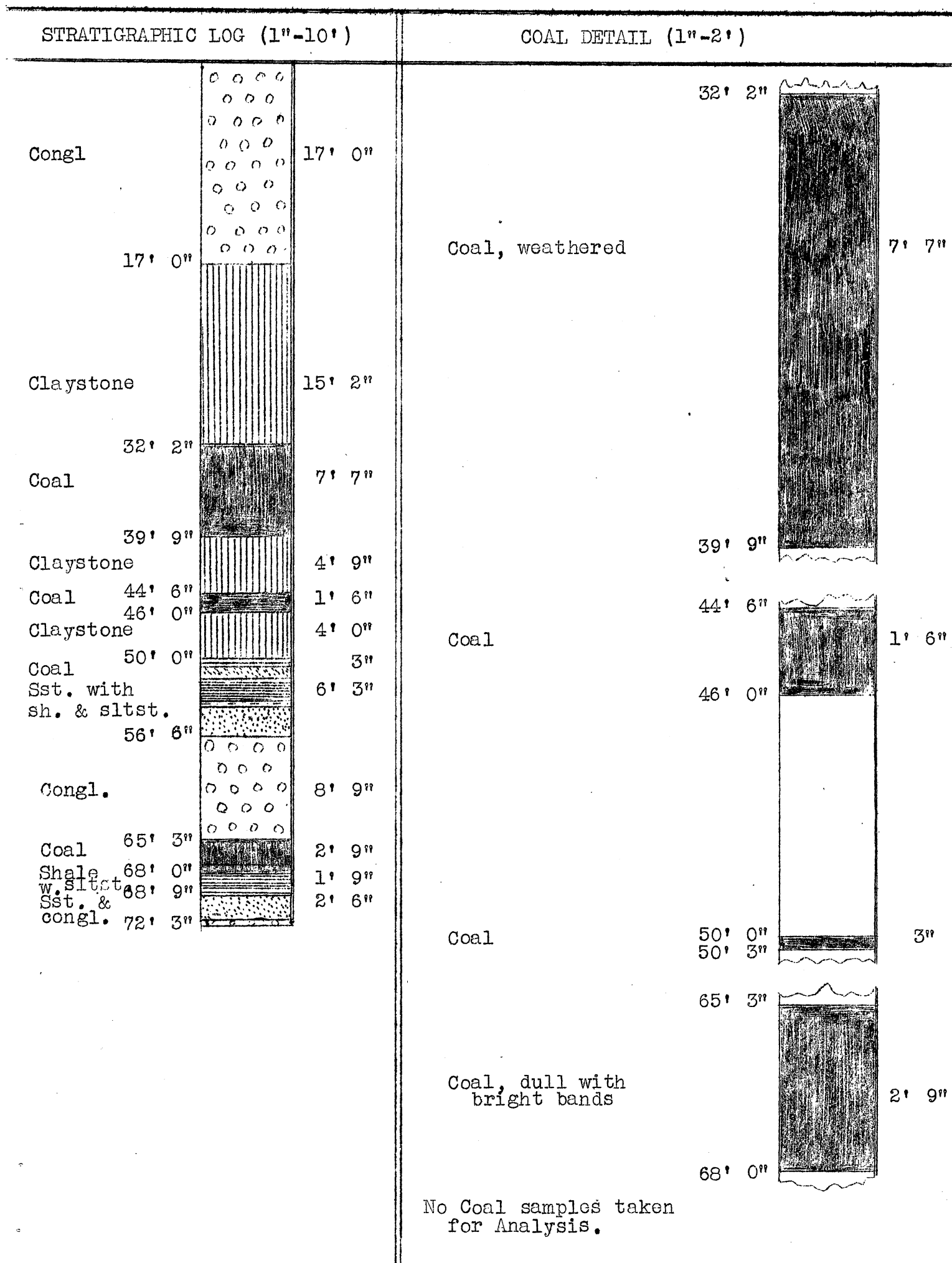
STRATIGRAPHIC LOG (1"-10')

COAL DETAIL (1"-2')



Bureau of Mineral Resources, Geology and Geophysics

Depth: 72 + 3"

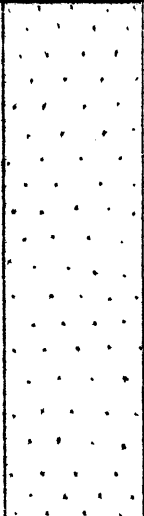

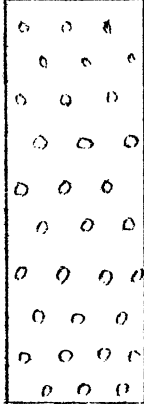

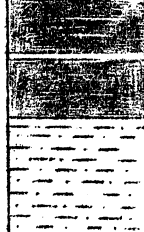

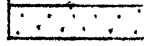


Bureau of Mineral Resources, Geology and Geophysics

Elevation: 88.6' ASL

Datum: H.W.B.

Depth: 63' 0"

STRATIGRAPHIC LOG (1"-10')			COAL DETAIL (1"-2')									
Sst.		27' 0"	HM	V	FC	Ash	BthU.	48' 3"		1' 1"		
			3.0	27.1	57.7	12.2	12.280	48' 4"			4"	
			Coal dull & bright					49' 5"				1' 5"
			3.3	25.6	56.1	15.0	11.820					
Congl.		21' 3"	Coal v. silty & bright						3' 2"			
			3.4	25.7	54.6	16.3	11.580					
			Coal, silty & bright							51' 2"		
			3.4							27.6	52.8	16.2
Coal with siderite & sltst. bds.		6' 3"	Coal, fusinitic & bright						54' 6"			
			48' 3"									
			54' 6"									
			61' 5"									
Sst.		1' 7"	63' 0"									
			61' 5"									

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1 POINT MORRISSET

DISTRICT Newcastle COUNTY Northumberland PARISH Wallarrah PORTION 49 APPROX. LOCATION NWCnr.Ptn49/158°/1968'
 Surveyed by T.H.Rodgar Survey Method Tel.Alidade Elevation 111.3' ASL Ref. Map BMR Plan N14/80
 Logged by M.C.Konecki Cased Not Datum H.W.B. Ref. Report BMR Records 1952/51
 Sunk by BMR. Type of Drill Failing 750/262 Depth 150' Date Begun/Finished 11.3.52/13.3.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B.T.H. U/LB
12	0	12	0	Clayshale, yish-gy. mottled w. some clay-stone l.gy. at bottom												
14	2	2	2	Claystone, gy. to l.gy. partly wd. w. occasional plant detritus	2	2										
17	0	2	10	Sandstone. f. to c.gr. v. fri.												
17	9		9	Sandstone f. to c.gr. fri. partly wd.		9										
18	0		3	Clayshale, reddish-br.		3										
18	10		10	Sandstone, brish-gy. wd. c.gr. fri.		10										
22	0	3	2	Claystone, reddish-br. wd.		2										
24	0	2	0	Conglomerate, med. brish-gy.	1	0										
29	0	5	0	Conglomerate, med. to pebbly.	1	4										
31	6	2	6	Conglomerate, f. to c.w. fri. & sst. mtx.												
32	6	1	0	Conglomerate as before												
48	2	15	8	Conglomerate as before												
48	5		3	COAL												
49	5	1	0	COAL (from cuttings)												
51	5	2	0	COAL, dull w. bright bds.	1	6										
52	0		7	COAL (from cuttings)												
53	1	1	1	COAL (from cuttings)												
54	0		11	Shale, carb. bk. w. thin bds. of Coal		5										
95	0	41	0	Conglomerate m. to c.pbls. in sst. mtx.												
96	2	1	2	Conglomerate as before												
130	0	33	10	Conglomerate as before												
135	0	5	0	Conglomerate f.gy.												
139	0	4	0	Sandstone, v.c.gr. hd. gy.												
150	0	11	0	Conglomerate, c. to m.hd.												
				Hole completed												
												PT. MORRISSET SPLIT (THR)				
												typed 15.9.52				

No coal samples selected due to poor core recoveries

BUREAU OF MINERAL RESOURCES

Name and No. of Bore EMR 2 POLICE MORRISTOWN

APPENDIX

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallsarah	PORTION	49	LOCATION	NW Cor. Ptn 49/142.50' 1150'
Surveyed by	T.H. Rogers	Survey Method	Tel. Alidade	Elevation	39.6' ASL	Ref. Map	BMP Plan M14/80.		
Logged by	M.C. Ronecki	Cased	Not	Datum	H.W.B.	Ref. Report	BMP Records 1952/51		
Sunk by	BMR	Type of Drill	Failing 750/332	Depth	43'	Date Begun/Finished	13.3.52/14.3.52		

[illegible]

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 5 POINT MORRISSET

ATTACH.

DISTRICT Newcastle COUNTY Northumberland PARISH Wallarah PORTION 49 LOCATION NW Cnr.Ptn49/135.50/2950
Surveyed by T.H.Rodger Survey Method Tel. Alidade Elevation 140.6' ASL Ref. Map BMR Plan N14/80
Logged by M.C.Konecki Cased Not Datum H.W.B. Ref. Report BMR Records 1952/51
Sunk by BMR Type of Drill Failing 750/232 Depth 39'5" Date Begun/Finished 19.3.52/19.3.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
7	0	7	0	Clay, mottled red, l.gy. & l.br.			No samples taken from this hole due to poor core recoveries.									
8	0	1	0	Clay, dk.gy-br. (might be wd. coal)												
19	0	11	0	Clay mottled												
33	3	14	3	Conglomerate gy. med.												
33	5		2	COAL												
35	5	2	0	COAL shy, & dull w. bright bds.		9										
37	5	2	0	COAL (from cuttings)												
37	9		4	COAL, shy. & dull		4										
37	11		2	Claystone, silty, brish.-gy. w. plant remains.		2										
38	11½	1	0½	Siltstone, gy. carb. & mic. m.s.	1	0½										
39	5		5½	Sandstone, v.f.gr. brish.-gy. shy. s. carb. & mic.		5										
				Hole completed.												
				Re-drilled as BMR 6. Point Morrisset.												
															</	

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 6 POINT MONUMENT

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallarah	PORTION	49	APPROX. LOCATION	NW Cnr. Ptn 49/135.5°/2950'
Surveyed by	T.R. Rodger	Survey Method	Tel. Alidade	Elevation	139.7' ASL	Ref. Map	BMR Plan N14/80		
Logged by	M.C. Konckel	Cased	Not	Datum	H.W.B.	Ref. Report	BMR Records 1952/51		
Sunk by	BMR	Type of Drill	Failing 750/262	Depth	42'	Date Begun/Finished	19.3.52/19.3.52		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
17	6	17	6	Clay, mottled, l.gy.red & reddish-br.												
31	9	14	5	Conglomerate, gy. med. (sst. mtx)												
31	11		2	COAL												
33	1	1	2	COAL, dull w. bright bds.		10 1/8										
34	5 1/2	1	4 1/8	COAL, rather shaly	1	4 3/8										
34	6 3/8		1	Shale, carb. gy.w. thin coal bds.		1										
35	2		7 1/8	COAL (from cuttings) with bands of siltst. carb.												
36	0 1/2		10 1/2	COAL, dull w. bright bds.		5										
36	5 1/2		5	Shale, gy. carb. w. coal bds.		5										
37	2		8 1/2	Claystone to siltstone, carb.		8 1/8										
38	8	1	6	Sandstone v.f.gr. w. leaf impressions, carb. mic. rather cly.	1	4										
42	0	3	4	Sandstone as immediately preceeding												
				Hole completed												
Coal Seam too thin for sampling.																
POINT MORRISSET SPLIT (THR)																
typed 15.9.52																

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 7 POINT MORRISSET

~~APPROX.~~

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallerah	PORTION	49	LOCATION	NW Cnr. Ftn 49/162.50/2275'
Surveyed by	T.H.Rodger	Survey Method	Tel. Alidade	Elevation	117.9' ASL	Ref. Map	BMR Plan N14/80		
Logged by	M.C.Konecki	Cased	Not	Datum	H.W.B.	Ref. Report	BMR Records 1952/51		
Sunk by	BMR	Type of Drill	Failing 750/262	Depth	72'	Date Begun/Finished	20.3.52/21.3.52		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
5	0	5	0	Clay, y. & l.yish. - gy.												
15	0	10	0	Claystone, silty, yish. -l.gy. w. some sst. reddish-br. m.gr.												
17	0	2	0	Claystone, yish-gv..												
17	10		10	COAL br. cly. completely wd.												
19	10	2	0	COAL as before		6										
21	10	2	0	Claystone, off-wh. w. plant detritus	1	11										
25	0	3	2	Claystone as before												
39	0	14	0	Shale, gy. carb.												
52	0	13	0	Conglomerate gy. med.												
58	0	6	0	Conglomerate gy. med. w. bds. clayshale												
64	6	6	6	Conglomerate gy. med.												
65	0		6	COAL												
66	3	1	3	COAL, bright w. powdery (fusinitic) bds.		3										
67	0		9	COAL, dull mostly		5 $\frac{1}{2}$										
67	10		10	COAL, bright w. dull bds.		3										
68	6 $\frac{1}{2}$		8 $\frac{1}{2}$	COAL, bright		3										
68	8		1 $\frac{1}{2}$	Siltstone, carb. brish.-dk. gy.		1 $\frac{1}{2}$										
69	4		8	COAL, dull w. bright bds.		8										
69	5		1	Siltstone, carb. brish-dk. gy.		1										
69	7		2	COAL, silty		2										
70	0		5	COAL & carb. siltstone brish.-dk. gy.intb.		5										
70	5		5	Claystone, silty, carb. dk.gy. w. thin coal bds. bright		5										
72	0	1	7	Claystone, silty, gy. w. plant remains	1	4										
				Hole completed.												
				Re-drilled as BMR 8 Point Morrisset.												
												typed 15.9.52				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 8 POINT MORRISSET

D	DISTRICT Newcastle	COUNTY Northumberland	PARISH Wallarah	PORTION 49	APPROX. LOCATION NWCnrPtn49/162.50/2295'
S	Surveyed by T.H.Rodger	Survey Method Tel.Alidade	Elevation 117.4' ASL	Ref. Map BMR Plan N14/80	
L	Logged by M.C.Konecki	Cased 63'8"	Datum H.W.B.	Ref. Report BMR Records 1952/51	
S	Sunk by BMR	Type of Drill Failing 750/262	Depth 73'	Date Begun/Finished 24.3.52/25.3.52	

[illegible]

Hole completed

typed 16.9.52

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 11 POINT MORRISSET

APPROX.

DISTRICT Newcastle COUNTY Northumberland PARISH Wallerah PORTION 49 LOCATION EWChr.Pir40/147.8^C/3600'

Surveyed by T.H. Rodger Survey Method Tr. Alidade Elevation 107.2' ASL Ref. Map BMP Plan W14/30

Logged by M.C.Konecki Cased 29' Datum H.W.B. Ref. Report SMR Records 1952/51

Sunk by BMR Type of Drill Failing 750/262 Depth 35'6" Date Begun/Finished 27.3.52/27.3.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
9	3	9	3	Clay, off-wh.												
16	3	7	0	Conglomerate, f. to m.w. sst.mtx. & clay bds												
28	3	12	0	Conglomerate f. to m.												
29	0		9	COAL, possibly bright w. powdery bds. as shown by cuttings												
30	0	1	0	COAL, dull w. a few thin bright bds.		9										
30	3 $\frac{1}{2}$		3 $\frac{1}{2}$	COAL, rather dull, w. a few thin bright bds.		6 $\frac{1}{2}$										
30	5		1 $\frac{1}{2}$	COAL, bright		1 $\frac{1}{2}$										
30	11		6	COAL, dull w. few bright bds.		6										
31	1		2	Shale, silty, carb.		2										
31	3		2	Siltstone, carb. brish.-dk.gy.		1										
31	4		1	COAL, shy		1										
31	5 $\frac{1}{2}$		1 $\frac{1}{2}$	COAL, dull		1 $\frac{1}{2}$										
32	6	1	0 $\frac{1}{2}$	Shale, carb. intb. w. bright coal		3										
32	7		1	Siltstone, carb. brish - dk. gy.		1										
32	8		1	COAL, bright		1										
33	1		5	Siltstone, carb. w.v. few thin coal bds.		5										
33	2		1	COAL, dull silty		1										
33	7		5	Siltstone, carb.intb.w. coal bds. about $\frac{1}{2}$ " thick		3 $\frac{1}{2}$										
34	6	11		COAL, mostly bright		1										
35	0		6	Claystone, gy. w. plant remains		4										
35	6		6	Claystone, gy. w. plant remains		6										
				Hole completed.												
				This log supplements logs of bores BMR 4, 9 & 10.												

POINT MORRISSET SPLIT (THR)

Coal Seam too thin for sampling.

typed 15.9.52

typed 15.9.52

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 14 POINT MORRISSET

ATTACH.

DISTRICT Newcastle COUNTY Northumberland PARISH Wailarah PORTION 49 LOCATION NW 1/4 Sec. 14, T. 42, R. 12, S. 5, 1844
 Surveyed by T.H. Rodger Survey Method Tel. Alidade Elevation 85.4' ASL Ref. Map BMR Plan N14/80
 Logged by M.C. Konecki Cased 27' 8" Datum H.W.B. Ref. Report BMR Records 1952/51
 Sunk by BMR Type of Drill Failing 750/262 Depth 70' Date Begun/Finished 31.3.52/31.3.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
1	3	1	3	Soil, brownish-dk.gy. (possibly wd. coal)												
6	6	5	3	Claystone, silty. l.gy. w. sandstone, red-dish-br. c.gr.												
12	6	6	0	Sandstone, y.c.gr. fri. wd. w. bds. of sandstone, l.gy. speckled w. carb. det.												
27	6	15	0	Conglomerate, gy. med.												
27	8	2		COAL												
28	1	5		COAL, bright & fusinitic(?) bds. thinly intb. pale blue coating on bedding & cleavage planes												
28	10	9		COAL, dull & bright bds.	5		1/BMR14					3.1	25.6	55.6	15.7	11,700
29	1	3		COAL, dull	9											
30	4 1/2	1	3 1/2	COAL, dull & bright bds. w. pale blue & iridescent (blue & green) coating on cleavage planes; occasional pyrites	3											
					1	3 1/2										
30	5 1/2	1		Siltstone, carb. brish, -dk.gy.--	1											
30	9	3 1/2		COAL, bright w. dull bds.	3 1/2		2/BMR14					3.1	26.0	49.6	21.3	10,790
31	1	4		COAL, bright w. dull bds												
31	2	1		COAL, dull w. pale blue films on planes	1											
31	4	2		COAL, bright & dull bds.	2											
32	1	9		COAL & splint w. thin bright bds.	9											
32	2 1/2	1 1/2		COAL, bright w. dull bds.	1 1/2											
32	4 1/2	2		COAL, dull w. bright bds.	2											
32	6 1/2	2		COAL, bright w. thin dull bds.	2											
33	0	5 1/2		COAL, shy. w.v. thin bright bds.	5 1/2											
33	5	5		Claystone, silty, gy.w. plant remains	2											
41	0	7	7	Claystone, as before, becoming more silty twds the bottom												
70	0	29	0	Conglomerate, gy. medium to c.												
				Hole completed.												

This log supplements logs of BMR 3, 13 & 12. typed 15.9.52

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 15 & 16 POINT MORRISSET

APPROX.

DISTRICT Newcastle COUNTY Northumberland PARISH Wallarrah PORTION 49 LOCATION NW Cnr. Ptn 49/149.4°/2130'
 Surveyed by T.H. Rodger Survey Method Tel. Alidade Elevation 175.65' ASL Ref. Map BMR Plan N14/80
 Logged by M.C. Konecki Cased Not Datum H.W.B. Ref. Report BMR Records 1952/51
 Sunk by BMR Type of Drill Failing 750/262 Depth BMR 15 55' 11" BMR 16 114' 9" Date Begun/Finished 1.4.52/3.4.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
6	0	6	0	Conglomerate f. to m.br.												
10	0	4	0	Conglomerate as before w. bds. of claystone off-wh												
25	6	15	6	Claystone, l.br. w. loose pbls.												
40	6	15	0	Conglomerate l.br. f. to m.												
56	3	15	9	Claystone, lbr.												
56	6		3	COAL (?) reddish to dk.br. clay. s.wd.												
58	2	1	8	COAL brish.-bk. clay. s. wd.	1	8										
58	3		1	Claystone, silty, brish.-gy. s.		1										
60	6	2	3	COAL, s. cly. wd. (from driller's report) & rate of penetration												
63	3	3	3	COAL, less wd. dull & bright bds. distinguishable	2	9										
64	6	1	3	Claystone, silty. l.gy.	1	3										
65	9	1	3	Claystone, v. silty. l.gy.	1	3										
66	1		4	Claystone, gy.		4										
66	4		3	Siltstone, cly. carb. gy.		3										
67	0		8	Sandstone, gy. f.gr. cly. mic.		5										
68	6	1	6	Sandstone, v.f.gr. l.gy. cly. mic.	1	6										
70	0	1	6	COAL (from cuttings)												
70	1 1/2		1 1/2	COAL, bright w.v. thin dull bds.		1 1/2										
72	6	2	4 1/2	Sandstone, v.f.gr. l.gy. s. cly. & mic. w. R & thin carb. bds.	2	4 1/2										
75	0	2	6	Sandstone as before	2	6										
81	0	6	0	Sandstone, f. to m.gr. y. fri.												
93	0	12	0	Sandstone, m. to c.gr. gy.												
108	7	15	7	Conglomerate gy. f. to m.												
108	10		3	COAL												
110	4	1	6	COAL, dull w. thin bright bds.	1	0										

WALLARAH UPPER SPLIT (THR)

WALLARAH LOWER SPLIT (THR)

PT. MORRISSET SPLIT (THR)

No Coal samples taken.

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
110	6	2		Siltstone gy.		2										
110	8	2		COAL, silty, w. bright bds.		2										
110	9	1		Siltstone, gy. m.hd.		1										
111	5	8		COAL, dull w. frequent bright bds.		8										
111	5 $\frac{1}{2}$	$\frac{1}{2}$		Siltstone, brish-gy.		$\frac{1}{2}$										
111	6	$\frac{1}{2}$		Shale gy. s.		$\frac{1}{2}$										
111	8	2		COAL, dull w. thin bright bds. & 2 carb. sh. bds. of $\frac{1}{2}$ " thickness within lower half		2										
112	1	5		COAL, bright, w. thin dull bds.		1										
112	2 $\frac{1}{2}$	1 $\frac{1}{2}$		Shale, carb. w. v. thin lam. of bright coal		1 $\frac{1}{2}$										
112	5	2 $\frac{1}{2}$		Shale, carb.		2 $\frac{1}{2}$										
112	6 $\frac{1}{2}$	1 $\frac{1}{2}$		Shale, carb. w. thin bright coal lam.		1 $\frac{1}{2}$										
112	10	3 $\frac{1}{2}$		Shale, carb,		3 $\frac{1}{2}$										
112	11 $\frac{1}{2}$	1 $\frac{1}{2}$		Shale, carb. w. thin bright coal lam.		1 $\frac{1}{2}$										
113	1	1 $\frac{1}{2}$		Siltstone, gy. w. a $\frac{1}{2}$ " carb. bd. in the middle		1 $\frac{1}{2}$										
113	2	1		Shale, carb. w. thin bright coal lam.		1										
114	9	1	7	Claystone, gy. w. plant remains	1	4										
Hole completed.																
													typed 16.9.52			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore.....BMR 17 POINT MORRISSET.....

DISTRICT	County	PARISH	PORTION	APPROX. LOCATION
Newcastle	Northumberland	Wallerah	22	NWCnrPtn49/132°/3460
Surveyed by	T.H.Rodger	Survey Method	Tel. Alidade	Elevation 202.2' ASL
Logged by	M.C.Konecki	Cased	Not	Datum H.W.B.
Sunk by	BMR	Type of Drill	Failing 750/262	Depth 72.3"
				Ref. Map BMR Plan N14/80
				Ref. Report BMR Records 1952/51
				Date Begun/Finished 7.4.52/8.4.52

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
69	8		8	Shale, carb. w. a few thin coal bds.		8										
69	9		1	Siltstone, carb.		1										
70	3		6	Sandstone, gy. f.gr. w. thin carb. bds.		6										
70	6		3	Sandstone, gy. f.gr. hd.		2										
71	5		11	Sandstone, gy. f.gr. hd		11										
71	9		4	Sandstone, gy. c.gr.		4										
72	3		6	Conglomerate gy. f. to m.		6										
				Hole completed	typed 17.9.52											

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
60	7 $\frac{1}{2}$	3		Siltstone, gy.	3											
61	0 $\frac{1}{8}$	5		Claystone, carb.	5											
61	5	4 $\frac{1}{2}$		Siltstone, to v.f.gr. sandstone, gy.	4 $\frac{1}{2}$											
62	4	11		Sandstone, l.gy. f.gr.	11											
62	6	2		Sandstone, l.gy. m.gr.	2											
63	0	6		Sandstone, l.gy. c.gr. to v.c.gr.	5											
Hole completed.																
													typed 16.9.52			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 20 POINT MORRISSET
Approx.

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallarrah	PORTION	49	LOCATION	NWCnr. Ptn 49/168.20/ 2100'
Surveyed by	T.H. Rodger	Survey Method	Tel. Alidade	Elevation	96.0	Ref. Map	BMR Plan N14/80		
Logged by	W.A. McKinnon	Cased	Not	Datum	H.W.B.	Ref. Report	BMR Records 1952/51		
Sunk by	BMR	Type of Drill	BMR's Fail 750/290	Depth	50' 4"	Date Begun/Finished	9.7.52/10.7.52		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
44	0	44	0	Conglomerate, blue-grey, fine to medium												
45	0	1	0	COAL		$\frac{1}{2}$										
46	0	1	0	COAL, mostly dull		11	1/BMR20									
46	9		9	COAL, dull with bright bands		9	2/BMR20									
46	11		2	Shale, black, hard		2										
47	0		1	COAL, mainly bright		1										
48	0	1	0	COAL, dull with abundant bright bands	1	0	3/BMR20									
48	8		8	COAL, mainly bright		8	4/BMR20									
48	10		2	Claystone, yellow		2										
49	4		6	Clayshale, dark grey		6										
49	6		2	COAL, very shaly		2										
50	4		10	Clayshale, dark grey soft		10										
				Hole completed.												

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 32 EUGENE MORRISSEY

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallowah	PORTION	49	APPROX. LOCATION	BWOnr. Dm49/1506/1740'
Surveyed by	T.H.Rodger	Survey Method	Ref. Alidade	Elevation	87.1'	Ref. Map	BMR Plan N14/80		
Logged by	W.A.McKinnon	Cased	Not	Datum	HWB.	Ref. Report	BMR Records 1952/51		
Sunk by	BMR	Type of Drill	Failing 750/290	Depth	25'10"	Date Begun/Finished	17.7.52/18.7.52		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B.T.H. U/LB
17	11	17	11	Conglomerate, blue-grey, fine to medium												
18	11	1	0	COAL, dull	1	0	1/BMR22									
19	11	1	0	COAL, dull & shaly, w. occasional bright bands	1	0	2/BMR22					3.5	25.7	54.0	16.8	11,310
20	11	1	0	COAL, mainly bright	1	0	3/BMR22									
22	5	1	6	COAL, dull w. bright bands	1	5	4/BMR22					3.3	27.7	50.8	18.2	11,040
23	6	1	1	COAL, dull												
23	11		5	Conglomerate												
25	10	1	11	Conglomerate, blue grey, fine to medium												
				Hole completed.												

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR 23 POINT MORRISSET

Approx.

..... LOCATION NWCnr.Ptn.49/177.5⁰/2050'

DISTRICT Newcastle COUNTY Northumberland PARISH Wallarah PORTION 49

Surveyed by T.H. Rodger Survey Method Tel. Alidade Elevation 71.6' Ref. Map BMR Plan N.14/80

Logged by W. A. McKinnon Cased Not Datum H.W.B. Ref. Report BMR. Records 1952/51.

Sunk by BMR Type of Drill BMR Fail 750/290 Depth 133' 6" Date Begun/Finished 18.7.52/31.7.52

[illegible]

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 24. POINT MORRISSET

Approx.

DISTRICT Newcastle	COUNTY Northumberland	PARISH Wallarah	PORTION 4	LOCATION N. Cnr. Ptn 49/77°/353'
Surveyed by T.H. Rodger	Survey Method Plane-table	Elevation 78.2'	Ref. Map BMR Plan N14/80	
Logged by W.A. McKinnon	Cased Not	Datum H.W.B.	Ref. Report BMR Records 1952/51	
Sunk by BMR	Type of Drill BMR's Fail.	750/290	Depth 71'	Date Begun/Finished 23.7.52/24.7.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
22	8	22	8	Sandstone, light yellow, friable weathered												
24	8	2	0	Claystone, dark, soft												
25	6		10	COAL, smut, weathered												
26	6	1	0	COAL, smut, weathered	1	0										
27	6	1	0	COAL, smut, weathered	1	0										
28	7	1	1	COAL, smut	1	1										
28	9		2	Clayshale, buff		2										
28	11		2	Clayshale, buff		1										
29	7		8	Claystone, off-white		8										
30	3		8	Claystone, sandy, yellow		6										
31	3	1	0	Claystone, off-white, soft		10										
31	6		3	Clayshale, chocolate brown, soft		3										
51	6	20	0	Clayshale, chocolate brown, soft												
71	0	19	6	Conglomerate, blue-grey, fine to medium												
				Underground workings encountered at 71 feet												
				Drill dropped at least 4½ft. into these workings.												
				Hole completed.												

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 25 POINT MORRISSET

~~Approx.~~

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Wallarrah	PORTION	49	LOCATION	NWCnr.Ptn.49/178 & 2367
Surveyed by	T.H.Rodger	Survey Method	Tel. Alidade	Elevation	65'	Ref. Map	BMR Plan N14/80		
Logged by	W.A.McKinnon	Cased	Not	Datum	H.W.B.	Ref. Report	BMR Records 1952/51		
Sunk by	BMR	Type of Drill	BMR's Fail.750/290	Depth	34'6"	Date Begun/Finished	24.7.52/24.7.52		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
24	0	24	0	Conglomerate, yellow, consisting of fine pebbles with a sandy matrix												
25	0	1	0	COAL, dull		9	1/BMR25									
26	0	1	0	COAL, dull	1	0						3.2	24.4	56.9	15.5 11,820	
27	0	1	0	COAL, dull with bright bands	1	0	2/BMR25					2.9	26.6	50.6	19.9 11,040	
28	0	1	0	COAL, dull with bright bands, somewhat shaly in places	1	0										
29	0	1	0	COAL, dull with bright bands	1	0	3/BMR25					2.5	25.0	45.2	27.3 9,910	
29	1	1		COAL, dull		1										
29	5		4	Shale, coaly		4										
30	6	1	1	Clayshale, light & dark brown interbanded	1	1										
34	6	4	0	Clayshale, dark brown, somewhat sandy in places												
Hole Completed.																

BUREAU OF MINERAL RESOURCES

Name and No. of Bore EMR 26 POINT MORRISSET

DISTRICT Newcastle COUNTY Northumberland PARISH Wallerah PORTION 49 APPROX. LOCATION NWCH: Por49/157°/2635'
 Surveyed by T.H.Rodger Survey Method Tel. Alidade Elevation 26 Ref. Map BMR Plan NL4/80
 Logged by T.H.Rodger Cased Not Datum H.W.B. Ref. Report BMR Records 1952/51
 Sunk by B.M.R. Type of Drill Fail. 750/290 Depth 38'10" Date Begun/Finished 25.7.52/25.7.52
5.9.52/8.9.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
7	0	7	0	Clay, soft w. pebbly rock fragments												
29	10	22	10	Conglomerate, yellow												
31	7	1	9	Clay, yellow												
31	10		3	COAL (from cuttings)												
32	10	1	0	COAL (from cuttings)												
33	10	1	0	COAL, dull v. shaly		4										
34	10	1	0	COAL, dull shaly		6										
35	10	1	0	Shale, brown grey, soft w. thin bands of bright coal		11										
36	1		3	COAL, dull shaly		2										
36	8		7	Shale, brown. w. thin bands of bright coal		6										
36	9		1	Shale, dark grey, soft		1										
36	10		1	COAL, dull w. bright bands		1										
37	1		3	Clayshale, dark grey, soft		3										
38	3	1	2	Siltstone, light grey, soft	1	2										
38	10		7	Clayshale, dark grey w. carb. markings		6										
				Hole completed												
												PT. MORRISSET SPLIT (THR)				
												No Coal samples taken for Analysis.				
												typed 13.10.52				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 21 POINT MORRISSET

DISTRICT Newcastle COUNTY Northumberland PARISH Wallarrah PORTION 49 APPROX. LOCATION NW Cnr. Ptn 49/143.5°/1570'
 Surveyed by T.H. Rodger Survey Method Tel. Alidade Elevation 87.2' Ref. Map BMR Plan N14/80
 Logged by W.A. McKinnon Cased Not Datum H.W.B. Ref. Report BMR Records 1952/51
 Sunk by B.M.R. Type of Drill Failing 750/290 Depth 28'5" Date Begun/Finished 10.7.52/11.7.52

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
23	3	23	3	Conglomerate, blue-grey, fine to medium COAL, bright banded												
23	5		2													
24	5	1	0	COAL, mainly bright, slightly weathered	1	0	1/BMR21					3.7	26.1	55.9	14.3	11,780
25	5	1	0	COAL, mainly bright, slightly weathered	1	0	2/BMR21					3.6	25.7	55.1	15.6	11,600
26	5	1	0	COAL, mainly bright, slightly weathered	1	0	3/BMR21					3.4	27.1	49.8	19.7	11,000
27	5	1	0	COAL, mainly bright, slightly weathered	1	0	4/BMR21					3.3	28.0	52.6	16.1	11,530
28	2		9	COAL, mainly bright, slightly weathered		9	5/BMR21					2.9	24.2	43.6	29.3	9,570
28	5		3	Conglomerate (?) - very hard												
Hole completed																
															typed 22.9.52	