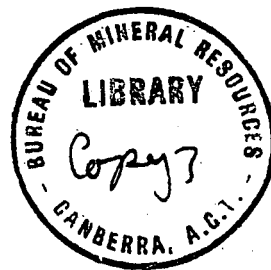


COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT.
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS.

RECORDS.

1953/92



SCOUT DRILLING FOR OPEN-CUT, MINMI-PLATTSBURG AREA.

NEWCASTLE REGION, N.S.W.

by

G. M. BURTON

SCOUT DRILLING FOR OPEN-CUT COAL,
MINMI-PLATTSBURG AREA,
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SUMMARY.

Eleven scout drill holes entailing 1290 feet of drilling were sunk to find suitable open-cut prospecting areas for the Young Wallsend Seam of the "Upper" Coal Measures within an area of one square mile in Portion 10, Parish of Hexham, Newcastle Region, N.S.W.

Several drill holes intersected the Dudley (?) and Yard Seams overlying the Young Wallsend Seam.

The scout drilling defined the following inferred reserves of coal:

<u>Seam</u>	<u>Long Tons</u>	<u>Ash %</u>	<u>B.Th.U/lb.</u>
Dudley (?)	1,500,000	35	Less than 10,000
Young Wallsend	6,500,000	26	10,600

These figures do not take into account weathering and possible worked-out areas which may reduce the reserves by as much as 30%.

The seams are banded and the quality of the coal could probably be improved considerably by washing.

The scout drilling did not define accurately the overburden ratios; however, it is likely that overburden to coal ratio for the Dudley (?) Seam will average very roughly 5 : 1 and for the Young Wallsend about 9 : 1 if the Dudley is mined beforehand where it overlies the Young Wallsend.

These results did not justify commencing a "testing and defining" drilling programme.

The Yard Seam was not investigated in detail; its thinness precludes it from having any importance for open-cut mining.

GENERAL.

During February and March, 1952, the Bureau undertook, at the request of the Joint Coal Board, a scout drilling programme for open cut coal in the area between the two suburbs of Minmi and Plattsburg, eight miles west of the city of Newcastle, N.S.W. Drilling was restricted to Portions 10 and 15, Parish of Hexham, County Northumberland, ten holes being drilled in Portion 10 and one in Portion 15; aggregate depth of the eleven holes was 1,290 feet.

The main seam tested was the Young Wallsend which is one of the lowest seams in the Newcastle "Stage" of the "Upper" Coal Measures. While drilling for this seam an overlying seam, possibly corresponding to the Dudley Seam of the eastern areas, was encountered. A third seam, the Yard, was intersected between the Dudley and the Young Wallsend.

The drilling results are not completely reliable because (a) core recovery was not as good as is necessary for seams which are banded heavily with soft clayshale bands; (b) high moisture contents (exceeding 2.6%) in some of the analyses indicate weathering of some of the coal.

The following conclusions have been deduced from the limited information available:

Dudley(?) Seam.

The Dudley Seam is overlain by a maximum overburden of about 100 feet of sandstone and conglomerate with a little shale. The seam attains a maximum thickness of about 10 feet 6 inches and is heavily banded. The seam will probably yield a coal averaging 35% ash and having a calorific value of less than 10,000 B.Th.U/lb. if only bands exceeding 1 inch are removed.

Yard Seam.

The Yard Seam is separated from the Dudley by about 75 feet of sandstone. It has a maximum thickness including bands of 3 feet 9 inches. No coal from the seam was analysed.

Young Wallsend Seam.

The Young Wallsend Seam is overlain by about 60 feet of sediments, mainly chert with some sandstone and shale, which separate it from the Yard. The Young Wallsend is medium to heavily banded and has an average thickness of about 9½ feet. The analyses indicate that the best quality coal that can be expected, if the whole seam is mined and bands over 1 inch in thickness excluded, is one with an ash content of 26% and calorific value of 10,600 B.Th.U/lb., the coal would be weakly coking. Bore S4 revealed a basal seam section of 5 feet 4 inches which, if a 3½ inch band is excluded, would have an ash content of 16% and calorific value of about 11,900 B.Th.U/lb.

The structure of the coal measures is that of a meridional anticline pitching gently to the south; average dip of the measures appears to be between 1 in 30, and 1 in 40.

The accurate estimation of reserves in the Minmi-Plattsburg Area, which is essentially a long narrow rugged ridge, would require a heavy density drilling pattern to clearly define the weathering and structure contours. The Bureau's programme was a low density scout drilling one which did not define accurately the coal areas or weathered zones. Hence the following reserves have been calculated without taking into account weathering, and by using the approximate structure contours which could be deduced from the few holes bored:

Young Wallsend Seam	:	6,500,000 long tons
Dudley Seam	:	1,500,000 long tons

Bad circulation losses in bore S6 and nearby subsidence indicates that part of the Young Wallsend Seam may have been mined in this area; this has not been taken into account in the calculation of reserves.

It is recommended that, if further drilling be done in the Minmi and Plattsburg Area, "sink and float" fractions should be prepared of all coal samples so that a better picture can be obtained of the possible coal quality which could be obtained if the coal were washed.

ACKNOWLEDGMENTS.

All analyses of coal samples prepared by Bureau officers were performed by officers of the N.S.W. Department of Mines in the Department's Sydney Laboratory.

The area was surveyed by officers of the Property and Survey Branch, Commonwealth Department of the Interior. Short lengths of steel piping were left as permanent bench marks at all traverse stations.

APPENDIX.

a. Coal Analyses

b. Drilling Logs.

(1) All depths in this appendix are measured from the rotary table of the drill; to obtain true depth below ground level it is necessary to subtract the rotary table height for the particular drill hole:

<u>Bore</u>	<u>Table Height</u>	<u>Bore</u>	<u>Table Height.</u>
S1	1'5"	S7	1'5"
S2	1'6"	S8	1'3"
S3	1'3"	S9	1'4"
S4	1'8"	S10	1'4"
S5	1'2"	S11	1'4"
S6	1'4"		

(2) All bore locations are given in the logs on magnetic north bearings.

(3) Standard abbreviations are used for denoting the coke nature in the coal analyses; these are:

Nc	:	Non-agglomerating, coherent
Af	:	Firmly agglomerating
Cw	:	Weak coking.

LIST OF ABBREVIATIONS USED IN BORE LOGS.

abundant - A.	ferruginous - ferr.	medium - m.
agglomerate - aggl.	fibrous - fib.	micaceous - mic.
aggregate - aggr.	fine - f.	mineral - min.
angular - ang.	fi ssile - fss.	mottled - mot.
arenaceous - aren.	flint - flt.	
argillaceous - argill.	formation - fm.	oolith - ool.
arkose (ic) - ark.	friable - fri.	pebble (s) - pbl.
anhydrite - anhyd.	foraminifera - forams.	pyrite - pyr.
	fossil(iferous) - foss.	pyritiferous -
band (s) - bd (s)	fracture - fract.	pyrf.
		purple - ppl.
bentonite - bent.	frosted - fstd.	
biotite - bio.		quartz - q.
bituminous - bit.	glauc onite(ic) - glauc.	quartzite - qite.
black - bk.	grain - gr.	
blue - bl.	granite - grt.	
bottom - bot.	granular - grnl.	rare - R.
boulder - bldr.	grey - gy.	regular - reg.
brown - br.	greyish - grish.	residue - res.
breccia - brcc.	green - gn.	round (ed) - rd.
brecciated - brectd.	greenish - gnish.	salt and pepper-s & p.
	greywacke - gw.	sandstone - sst.
calcareous - calc.	gypsum - gyp.	sand - sd.
carbonaceous - carb.		sandy - sdy.
cement - cmt.	hard - hd.	shale - sh.
chert - cht.	heavy - hvy.	shaly - shy.
clay - cl.	heterogeneous - hetg.	siltstone - slst.
clayey - cly.		siderite - sid.
claystone - clst.	igneous - ign.	slightly - sl.
clayshale - clsh.	indurated - ind.	siliceous - sil.
coarse - c.	inferior - inf.	soft - s.
cobble - chl.	interbedded - intb.	streak - strk.
colour - col.	intraformational - ifml.	
common - C.		tabular - tab.
compact - cpt.	jointing - jtng.	thin-bedded -
composition - comp.		t.bdd.
concretion - conc.	kaolin - kaol.	tuffaceous - tuff.
conglomerate - cgl.		
contaminant (ated) -	laminated)	very - v.
contn.	laminae) lam.	variable - var.
crystal - xsl.	lamination)	
crystalline - xln.	light - l.	weathered - wd.
contorted - conttd.	limestone - lst.	white - wh.
dark - dk.		with - w.
dense - d.	massive - mass.	yellow - y.
distributed - dist.	marl - ml.	yellowish - yish.
distribution - distn.	material - mat.	
dolomite - dol.	matrix - mtx.	

The following interpretation is placed on the respective terms when applied to descriptions of cores recovered in coal:-

"broken" - fragments which can be put together to form cylinders, either approximate or actual, but which are not recognisably continuous with an unbroken portion of the same core.

MINMI - PLATTSBURG.

COAL SAMPLE ANALYSES.

Bore	Bur.Min.Res. Sample No.	Mines Depart- ment Analy- sis number 1952/	Seam	Depth of Sample.	Proximate Analyses					Calorific Value	
					H.Moist- ure %	Volatile Matter %	Fixed Carbon %	Ash %	Coke Nature	Ash Colour	B.Th. Us/lb.
Minmi-Plattsburg S2	1/S1	695	Dudley?	89'6"-92'0"	2.3	27.8	39.9	30.9	Cw	Grey	9,860
	2/S1	696	"	92'0"-94'6"	2.2	24.7	36.3	36.8	Af	"	-
	3/S1	697	"	94'10"-98'1½"	2.0	24.9	37.0	36.1	Cw	"	-
Minmi-Plattsburg S3	1/S3	698	Young Wallsend	127'0"-130'6"	2.1	28.4	43.4	26.1	Cw	Grey	10,630
	2/S3	699	" "	130'6"-133'3"	2.1	30.2	43.6	24.1	Cw	Pink	10,920
Minmi-Plattsburg S4	1/S4	700	Dudley?	28'6"-31'4½"	3.6	21.5	36.4	38.5	Nc	Grey	-
	2/S4	701	"	31'6"-33'11"	2.9	21.3	34.1	41.7	Nc	"	-
	2/S4	702	"	33'11"-35'9"	2.9	26.3	41.6	29.2	Cw	"	10,060
	3/S4	703	"	36'5"-38'11½"	2.9	24.5	36.3	36.3	Af	"	-
	4/S4	704	Young Wallsend	173'8"-175'8"	2.5	27.6	44.4	25.5	Cw	"	10,650
	5/S4	705	" "	175'8"-178'0"	2.1	24.4	36.9	36.6	Cw	Pink	-
	6/S4	706	" "	178'0"-181'0"	2.6	32.2	47.1	18.1	Cw	"	11,590
	7/S4	707	" "	181'4"-183'4"	2.5	35.0	49.5	13.0	Cw	"	12,510
Minmi-Plattsburg S5	1/S5	708	Young Wallsend	91'10"-93'10"	2.1	28.9	44.3	24.7	Cw	Grey	10,840
	2/S5	709	" "	93'10"-95'10"	1.8	20.9	29.3	48.0	Af	Brown	-
	3/S5	710	" "	97'8"-99'2"	1.9	28.5	40.6	29.0	Cw	Grey	10,230
	5/S5	712	" "	101'11"-103'4½"	2.0	30.1	41.7	26.2	Cw	Buff	10,620
Minmi-Plattsburg S7	1/S7	713	Young Wallsend	134'2"-136'2"	2.3	33.6	48.1	16.0	Cw	Buff	12,090
	2/S7	714	" "	136'2"-138'2"	2.8	28.4	38.8	30.0	Cw	Pink	9,300
Minmi-Plattsburg S10	1/S10	715	Dudley?	68'6"-71'10"	4.3	23.3	33.4	39.0	Af	Grey	-
	2/S10	716	"	71'10"-75'9½"	3.8	23.0	34.8	38.4	Af	"	-
	3/S10	717	"	75'9½"-79'0"	2.7	23.4	32.6	41.3	Af	"	-
Minmi-Plattsburg S11	1/S11	719	Young Wallsend	43'4"-44'10"	3.8	25.6	42.1	28.5	Cw	Pink	9,650
	2/S11	720	" "	44'10"-47'4"	2.6	22.8	33.8	40.8	Af	Pink	-
	3/S11	721	" "	47'4"-50'4"	2.7	30.1	47.7	19.5	Cw	"	11,590

NOTE: (1) Samples 4/S5 and 4/S10 were lost in handling during analysis

(2) No sulphur contents were determined.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S1 MINMI PLATTSBURG

DISTRICT Newcastle COUNTY Northumberland PARISH Hexham PORTION 10 LOCATION Approx. S.E. Chr. Port. 6/
152°/3940 ft.

Surveyed by Dept. Interior Survey Method Theodolite Elevation 273.6 ft. Ref. Map BMR Plan N14-39

Logged by N. Hoyling & D.K. Malcolm Cased Not Datum H.D.W.B. Standard Ref. Report BMR Recs. 1953/92

Sunk by BMR Type of Drill Failing 750 Depth 117' 3" Date Begun/Finished 8/2/52 - 12/2/52

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. s. w. rd. pbls. of ferr. sst. q. cht. etc.												
88	0	83	0	Conglomerate, f. ferr. w. v. c. gr. sst. bds.												
89	3	1	3	Clayshale, y.	1	3										
90	10	1	7	COAL, w. some shy. bds.	1	7										
91	0	0	2	COAL, fri.	0	2										
91	5	0	5	COAL	0	5										
91	9	0	4	COAL, shy.	0	4										
92	0 $\frac{1}{2}$	0	3 $\frac{1}{2}$	Shale, bk. w. vitrain bds.	0	3 $\frac{1}{2}$										
92	1	0	0 $\frac{1}{2}$	Shale, brish.-gy. silty	0	0 $\frac{1}{2}$										
92	3 $\frac{1}{2}$	0	2 $\frac{1}{2}$	COAL	0	2 $\frac{1}{2}$										
92	5	0	1 $\frac{1}{2}$	Clayshale, l. brish.-gy.	0	1 $\frac{1}{2}$										
93	0	0	7	COAL, w. shy. bds.	0	3 $\frac{1}{2}$										
96	0	3	0	COAL, w. gy. sh. lam.	0	9 $\frac{1}{2}$										
96	1	0	1	COAL	0	1										
96	3	0	2	Clayshale, l. brish.-gy.	0	2										
98	0	1	9	COAL												
98	6 $\frac{1}{2}$	0	6 $\frac{1}{2}$	COAL	0	6 $\frac{1}{2}$										
98	9	0	2 $\frac{1}{2}$	Siltstone, l. brish.-gy.	0	2 $\frac{1}{2}$										
100	0	1	3	COAL												
101	8	1	8	COAL	0	1										
102	0	0	4	Shale, gy.	0	4										
115	5	13	5	Shale, gy. w. minor coal bds. & lam.												
117	3	1	10	Sandstone, l. gy. f. gr. mic. shy. & w. carb. lam.	1	10										

Dudley? Seam (GMB) Nov. '53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S2 MINMI PLATTSBURG

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Hexham	PORTION	10	Approx. LOCATION	S.E. Cnr. Port. 6/ 152°/3740 ft.
Surveyed by	Dept. Interior	Survey Method	Theodolite	Elevation	278.3 ft.	Ref. Map	BMR Plan N14-39		
Logged by	N. Hoyling	Cased	Not	Datum	H.D.W.B. Standard	Ref. Report	BMR Recs. 1953/92		
Sunk by	BMR	Type of Drill	Failing 750	Depth	125'	Date Begun/Finished	12/2/52 - 18/2/52		

[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
103	8	0	4	Shale, dk. br. hd.	0	4										
104	0	0	4	Shale, gy.	0	2										
107	9	3	9	Shale, gy.												
108	0	0	3	COAL												
108	9	0	9	COAL	0	9										
109	0	0	3	Clayshale, l. gy.	0	1 $\frac{1}{2}$										
111	0	2	0	Intb. Coal, br. & l. gy. clsh.												
111	1	0	1	COAL	0	1										
112	0	0	11	Shale, l. gy.	0	10										
125	0	13	0	Shale, gy.												
Hole completed																
													typed 31.12.53.			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S3 MINMI PLATTSBURG

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Hexham	PORTION	10	Approx. LOCATION	N.W. Cnr. Port. 10/ 112°/1660 ft.
Surveyed by	Dept. Interior	Survey Method	Theodolite	Elevation	291.7 ft.	Ref. Map	BMR Plan N14-39		
Logged by	N. Hoyling & M.C. Konecki	Cased	Not	Datum	H.D.W.B. Standard	Ref. Report	BMR Recs. 1953/92		
Sunk by	BMR	Type of Drill	Failing 750	Depth	149' 2"	Date Begun/Finished	18/2/52 - 19/2/52		

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
55	0	55	0	Sandstone, ferr. c. gr. w. gn. gy. wh. & bk. q. fragments												
69	0	14	0	As before, w. some gy. cly. bds.												
69	4	0	4	COAL												
71	3	1	11	COAL	0	5										
71	4	0	1	Claystone, gy. hd. carb.	0	1										
72	6	1	2	Clayshale, gy. carb.	1	2										
82	0	9	6	Sandstone, gy. m. gr. fri. partly wd.												
87	0	5	0	Sandstone, gy. m. gr. cly. some br. cht. & coal as thin bds.												
90	0	3	0	Sandstone f. gr. fri. partly wd.												
100	0	10	0	Sandstone, m. gr. w. brish.-gy. cht. bds.												
105	0	5	0	As for 90-100' but cht. more A.												
110	0	5	0	Chert, brish.-gy. & l. gy. sh.												
116	5	6	5	Sandstone, gy. m. gr. fri. w. some cht.												
126	6	10	1	Chert, brish.-gy. w. some l. gy. sh.												
127	0	0	6	Clayshale, bk. w. some coal												
<div>Yard Seam (GMB) Nov. '53.</div>																
<div>Young Wallsend Seam (GMB) Nov. '53.</div>																
128	0	1	0	COAL	0	10)	1/S3									
130	6	2	6	COAL, w. some carb. sh. bds.	1	2)										
130	10	0	4	COAL, v. shy.	0	2)										
130	11	0	1	Shale, br. sdy.	0	1)		0	1							
131	0 $\frac{1}{2}$	0	1 $\frac{1}{2}$	COAL, shy.	0	1 $\frac{1}{2}$)	2/S3									
131	1	0	0 $\frac{1}{2}$	Shale, carb. silty	0	0 $\frac{1}{2}$)		0	0 $\frac{1}{2}$							
132	4	1	3	COAL, bright	0	7 $\frac{1}{2}$)										
133	3	0	11	COAL, bright	0	11)										
<div>2.1 28.4 43.3 26.1 10,630</div>																
<div>2.1 30.2 43.6 24.1 10,920</div>																

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
133	7	0	4	Shale, cly.	0	4										
135	0	1	5	Clayshale, l. gy. carb.	0	6										
149	2	14	2	Sandstone, gy. f. gr. w. bds. of gy. sh.												
				Hole completed									typed	31.12.53		

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S4 MINMI PLATTSBURG

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Hexham	PORTION	10	Approx. LOCATION	N.W. Cnr. Port. 10/ 140°/4650 ft.
Surveyed by	Dept. Interior	Survey Method	Theodolite Traverse	Elevation	286.1 ft.	Ref. Map	BMR Plan N14-39		
Logged by	Konecki, Hoyling & Malcolm	Cased	Not	Datum	H.D.W.B. Standard	Ref. Report	BMR Recs. 1953/92		
Sunk by	BMR	Type of Drill	Failing 750	Depth	198'	Date Begun/Finished	Feb. '52.		

[illegible]

[illegible]

BUREAU OF MINERAL RESOURCES

Name and No. of BoreS5 MINMI PLATTSBURG

DISTRICTNewcastleCOUNTYNorthumberlandPARISHHexhamPORTION10

Approx. S.E. Cnr. Port. 6/
LOCATION138°/3170 ft.

Surveyed byDept. InteriorSurvey MethodTheodolite TraverseElevation217.8 ft.

Ref. MapBMR Plan N14-39

Logged byHoyling & KoneckiCasedNilDatumH.D.W.B. StandardRef. ReportBMR Rec. 1953/32

Sunk byBMRType of DrillFailing 750Depth120'Date Begun/FinishedFeb. 1952

Estimated Depth Ft. Ins.		Estimated Thickness Ft. Ins.		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Min. Bands Included Ft. Ins.		Min. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
												H.M.	V.	F.C.	ASH	B. TH. U/LB
4	0	4	0	Surface clay												
10	0	6	0	Sandstone, l. br. f. to m. gr. cly.												
15	0	5	0	Sandstone, as above w. some y. cly.												
28	0	13	0	Sandstone, l. br. c. gr. w. v. cly. mtx.												
29	0	1	0	Clayshale, br. wd.												
29	6	0	6	COAL, wd. in top 3"								Yard Seam (GMB) Nov. '53.				
31	3	1	9	COAL												
32	0	0	9	Clayshale, gy. carb.	0	9										
32	10	0	10	COAL												
33	1	0	3	Sandstone, gy. v. f. gr. cly.	0	3										
33	3	0	2	Sandstone, gy. v. f. gr. carb. s.	0	2										
33	8	0	5	Clayshale, dk. gy. carb.	0	5										
34	1	0	5	Shale, gy. sdy. w. carb. bds.	0	5										
46	1	12	0	Sandstone, gy. f. to m. gr. to c. gr. carb.												
50	0	0	11	Chert, gy. & l. gy.												
55	0	5	0	Chert, gy. w. bds. of c. gr. l. gy. sst.												
61	5	6	5	As for 50'-55' w. some coal												
75	0	13	7	Sandstone, l. gy. m. gr. fri.												
77	0	2	0	Sandstone, l. gy. m. gr. fri. w. l. gy. cht. bds.												
80	0	3	0	Chert, gy. sdy.												
91	0	11	0	Chert, gyish.-br.												
91	6	0	6	Shale, l. gy.												
91	10	0	4	COAL								Young Wallsend Seam (GMB) Nov. '53.				
93	10	2	0	COAL	0	10	1/S5					2.1	28.9	44.3	24.7	10,840

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
95	10	2	0	COAL	1	5	2/S5					1.8	20.9	29.3	48.0	-
97	8	1	10	COAL & some shale												
99	2	1	6	COAL	1	6	3/S5					1.9	28.5	40.6	29.0	10,230
99	8	0	6	Clay, off-wh.	0	6										
100	8	1	0	COAL	1	0	4/S5									
100	10	0	2	COAL & sid. clst.	0	2						Lost in assay				
101	8	0	10	Shale, carb. sdy.	0	3 $\frac{1}{2}$										
101	11	0	3 $\frac{1}{2}$	Clayshale, gy. w. carb. plant remains	0	3 $\frac{1}{2}$										
103	4 $\frac{1}{2}$	1	5	COAL	1	5	5/S5					2.0	30.1	41.7	26.2	10,620
104	2	0	9 $\frac{1}{2}$	Clayshale, carb. w. thin coal bds.	0	6										
106	8	2	6	Shale, gy. w. carb. mat. & plants	1	3										
108	8	2	0	Shale, gy. w. carb. mat. & plants	1	7										
120	0	11	4	Siltstone, dk. gy. carb.												
Hole completed.												typed 30.12.53.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S6 MINMI PLATTSBURG

DISTRICT	Newcastle	COUNTY	Northumberland	PARISH	Hexham	PORTION	10	Approx. LOCATION	S.E. Cnr. Por. 6/ 1210/3540 ft.
Surveyed by	Dept. Interior	Survey Method	Theodolite Traverse	Elevation	202.9 ft.	Ref. Map	BMR Plan N14-39		
Logged by	N. Hoyling	Cased	Not	Datum	H.D.W.B. Standard	Ref. Report	BMR Rec. 1953-92		
Sunk by	BMR	Type of Drill	Failing 750	Depth	99'	Date Begun/Finished	Feb. 1952		

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
20	0	20	0	Sandstone, br. f. gr. w. br. & gy. sh. bds.												
20	8	8	0	Shale, s. bk. & COAL												
22	8	2	0	COAL, ?w. sh. bds.												
23	5	0	9	COAL	0	3									<u>Yard Seam? (GMB) Nov. '53.</u>	
23	7	0	2	Clayshale l. gy.	0	2										
24	8	1	1	Shale, gy. carb.	0	5										
25	8	1	0	Shale, gy. carb.	0	3										
45	0	19	4	Shale, gy. carb.												
50	0	5	0	Clayshale gy. probably w. thin coal bds.												
60	0	10	0	Chert, gy. & clayshale, l. gy.												
68	0	8	0	Chert, gy.												
94	3	26	3	Chert, gy. w. bds. of l. gy. sh.											<u>Young Wallsend? Seam (GMB) Nov. '53.</u>	
94	8	0	5	COAL												
96	9	2	1	COAL	0	4										
96	10	0	1	Siltstone, gy. w. carb. lam.	0	1										
96	11	0	1	Siltstone, gy. w. coal bds.	0	1										
97	4	0	5	Siltstone, dk. gy. w. bright coal bds.	0	5										
97	6½	0	2½	Sandstone, dk. gy. f. gr. shy. w. thin coal bds.	0	2½										
99	0	1	5½	COAL	0	5									Circulation completely lost. Hole abandoned.	

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S7 MINMI PLATTSBURG

DISTRICT Newcastle COUNTY Northumberland PARISH Hexham PORTION 10 Approx. N.W. Chr. Port. 10/
 LOCATION 178°/680 ft.
 Surveyed by Dept. Interior Survey Method Theodolite Traverse Elevation 251.00 ft. Ref. Map BMR Plan N14-39
 Logged by N. Hoyling Cased Not Datum H.D.W.B. Standard Ref. Report BMR Rec. 1953/92
 Sunk by BMR Type of Drill Failing 750 Depth 139' Date Begun/Finished Mar. 1952

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	Sandstone, red & br. m. gr. wd.												
8	0	3	0	Sandstone, l. br. m. gr.												
13	0	5	0	Clay, buff												
35	0	22	0	Sandstone, v.c. gr. brish.-gy. fri. gr. composed of rd. cht.												
52	0	17	0	Sandstone, br. m. gr. wd. fri. w. f. cglic. bds.												
73	6	21	6	Sandstone, gy. f. to m. gr. fri.												
74	3	0	9	Clayshale, gy.												
74	9	0	6	COAL												
77	0	2	3	COAL, w. some thin gy. & br. shale bds.												
78	0	1	0	COAL	0	2										
78	6	0	6	Shale, gy. carb.	0	6										
79	0	0	6	Shale, gy. carb.												
84	0	5	0	Sandstone, l. gy. f. to m. gr. fri.												
94	0	10	0	Shale, gy. w. dk. gy. bds.												
97	0	3	0	Chert, gy.												
106	0	9	0	Shale, gy. w. yish. streaks, sdy. in bds.												
120	0	14	0	Chert, gy. & reddish-br. w. l. gy. clsh. bds.												
131	4	11	4	Chert, gy. & brish.-gy.												
131	7	0	3	COAL												
134	2	2	7	COAL												
136	2	2	0	COAL	1	3	1/S7					2.3	33.6	48.1	16.0	12,090
136	3	0	1	COAL	0	1										
136	6	0	3	Clayshale, y.	0	3	2/S7			0	3?	2.8	28.4	38.8	30.0	9,800
138	2	1	8	COAL	1	2										

Yard Seam (GMB) Nov. '53.

Young Wallsend Seam (GMB) Nov. '53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S8 MINMI PLATTSBURG

DISTRICT Newcastle COUNTY Northumberland PARISH Hexham PORTION 15 LOCATION Approx. N.W. Chr. Port. 10/
181°/1270 ft.
Surveyed by Dept. Interior Survey Method Theodolite Traverse Elevation 146.8 ft. Ref. Map BMR Plan N14-39
Logged by N. Hoyling Cased Not Datum H.D.W.B. Standard Ref. Report BMR Rec. 1953/92
Sunk by BMR Type of Drill Failing 750 Depth 49' 9" Date Begun/Finished Mar. '52

Estimated Depth Ft. Ins.		Estimated Thickness Ft. Ins.		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Min. Bands Included Ft. Ins.		Min. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
												H.M.	V.	F.C.	ASH	B. TH. U/LB
30	0	30	0	Chert, gy. w. bds. of l. gy. sh. wd. br. in part & s.												
35	6	5	6	Clayshale, buff												
37	3	1	9	Clayshale, bk.												
38	7	1	4	COAL, powdery	1	2						Young Wallsend Seam (GMB)				
																Nov. '53.
40	0	1	5	COAL, powdery	1	0										
42	0	0	2	COAL, shy.	0	2										
42	9	0	9	COAL	0	8										
43	2	0	5	Clayshale, buff	0	5										
44	0	0	10	COAL	0	10						No coal samples drawn				
44	6	0	6	Shale, bk. w. s. br. bds.	0	4										
45	9	1	3	COAL, powdery	0	8										
46	3	0	6	COAL, finely divided	0	6										
48	0	1	9	Shale, l. gy. w. leaf impressions	1	0										
49	9	1	9	Shale, bk.	0	2						Abandoned. Heavy circulation loss.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S9 & S10 MINMI PLATTSBURG

DISTRICT Newcastle COUNTY Northumberland PARISH Hexham PORTION 10 Approx. LOCATION S.E. Cnr. Port. 6/190°/1440 ft.
 Surveyed by Dept. Interior Survey Method Theodolite Traverse Elevation 320.5 ft. Ref. Map BMR Plan N14-39
 Logged by N. Hoyling Cased Not Datum H.D.W.B. Standard Ref. Report BMR Rec. 1953/32
 Sunk by BMR Type of Drill Failing 750 Depth S9-128'; S10-84' 7" Date Begun/Finished Mar. 1952

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
10	0	10	0	Clay, wh. & buff w. small red br. sub-angular qitic fragments												
33	0	23	0	Sandstone, br. v.c.gr. w. some br. s' bds.												
57	0	24	0	Sandstone, gy. f. gr.												
63	0	6	0	Sandstone, gy. v.c.gr. sil.												
68	6	5	6	Shale, gy.												
68	8	0	2	COAL	0	2										
69	0 1/2	0	4 1/2	Clayshale, wh. grading into brish.-gy.	0	4 1/2				0	4 1/2					
69	2	0	1 1/2	Clayshale, bk.	0	1 1/2				0	1 1/2					
69	6	0	4	COAL, w. minor wh. clay bds.	0	4	1/S10									
69	9	0	3	COAL, shy. s.	0	3						4.3	23.3	33.4	39.0	-
70	7 1/2	0	10 1/2	COAL, wd. s. in the last 2 1/2"	0	9 1/2										
70	11 1/2	0	3 1/2	Shale, bk.	0	2 1/2				0	3 1/2					
71	10	0	11	COAL, pyrf.	0	11										
71	11 1/2	0	1 1/2	COAL	0	1 1/2										
72	1	0	1 1/2	Clayshale, br.	0	1 1/2				0	1 1/2					
72	4 1/2	0	3 1/2	COAL, shy. shattered	0	3 1/2				0	3					
72	7 1/2	0	3	Clayshale, off-wh.	0	3				0	2					
72	9 1/2	0	2	Clayshale, gy.	0	2										
73	5	0	7 1/2	COAL, wd. s. in the top 2"	0	7 1/2	2/S10					3.8	23.0	34.8	38.4	-
73	5 1/2	0	0 1/2	COAL	0	0 1/2										
73	6 1/2	0	1	Shale, l.ghish-br.	0	1			0	1						
74	9	1	2 1/2	COAL, w. some l. brish.-gy. clsh. lenses	1	2 1/2										
74	10 1/2	0	1 1/2	Clayshale, br.	0	1 1/2				0	1 1/2					
75	9 1/2	0	11	COAL, w. a 1/2" dk.-br. s' bds.	0	11										

Dudley ? Seam (GMB) Nov. '53.

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
76	2 $\frac{1}{2}$	0	5	COAL	0	5	3/S10	0	1	0	9	2.7	23.4	32.6	41.3	-
76	11 $\frac{1}{2}$	0	9	Clayshale, l. gy. tinged w. green	0	9										
77	9 $\frac{1}{2}$	0	10	COAL, shy. in bds.	0	10										
77	10 $\frac{1}{2}$	0	1	Clayshale, brish. & l. gy.	0	1										
78	0	0	1 $\frac{1}{2}$	COAL	0	1 $\frac{1}{2}$	4/S10	0	1	0	1 $\frac{1}{2}$					
78	1 $\frac{1}{2}$	0	1 $\frac{1}{2}$	Clayshale, brish. & l. gy.	0	1 $\frac{1}{2}$										
79	0	0	10 $\frac{1}{2}$	COAL, w. some thin gy. & br. sh. bds.	0	10 $\frac{1}{2}$										
79	10	0	10	COAL	0	10										
80	6	0	8	Shale, gy.	0	8										
81	5 $\frac{1}{2}$	0	11 $\frac{1}{2}$	Shale, gy.	0	11 $\frac{1}{2}$										
82	6 $\frac{1}{2}$	1	1	Clayshale, gyish.-bk.	1	1										
83	0 $\frac{1}{2}$	0	6	Clayshale, gy. s.	0	6										
83	3 $\frac{1}{2}$	0	3	Shale, gy.	0	3										
83	9	0	5 $\frac{1}{2}$	Shale, gy. s.	0	5 $\frac{1}{2}$										
84	7	0	10	Shale, gy.	0	10										
97	0	12	5	Shale, l. gy.												
128	0	31	0	Sandstone, l. gy. partly wd. f. to m. gr. w. s. brish.-gy. shale bds.												

NOTE: S10 is 9 ft. west of S9

Hole completed

typed 29.12.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore S11 MINMI PLATTSBURG

DISTRICT Newcastle COUNTY Northumberland PARISH Hexham PORTION 10 Approx. LOCATION N.W. Cnr. Port. 10/
 Surveyed by Dept. Interior Survey Method Theodolite Traverse Elevation 241.3 ft. Ref. Map BMR Plan N14-39
 Logged by N. Hoyling Cased Not Datum H.D.W.B. Standard Ref. Report BMR Rec. 1953/92
 Sunk by BMR Type of Drill Failing 750 Depth 96' Date Begun/Finished Mar. 1952

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	Sandstone, br. m. gr. to f. cglic.												
15	0	8	0	Chert, gy. w. bds. of l. gy. sh.												
20	0	5	0	Chert, gy. w. some l. gy. m. gr. sandstone												
25	0	5	0	Chert, gy. w. m. gr. l. gy. sil. sandstone												
35	0	10	0	Chert, gy. & br. w. some l. gy. sh.												
40	0	5	0	Chert l. & dk.-gy. w. some d. gy. sh.												
43	0	3	0	Shale, l. gy. & l. brish.-gy.												
43	4	0	4	COAL												
44	10	1	6	COAL	1	6	1/S11									
47	4	2	6	COAL w. three thin bk. sh. bds.	2	4	2/S11									
47	6	0	2	COAL	0	2)										
47	9	0	3	COAL, shy.	0	3)	3/S11									
50	4	2	7	COAL	2	0)										
52	4	2	0	COAL												
53	0	0	8	Shale, gy.												
53	6	0	6	Shale, dk. gy.	0	3										
53	10	0	4	Shale, dk. gy.	0	4										
54	4	0	6	Clayshale, dk. gy. to bk.	0	6										
55	1	0	9	Shale, gy.	0	2										
58	4	3	3	Shale, gy.												
60	4	2	0	Shale gy.												
96	0	35	8	Shale, gy. w. slst.												
Hole completed																
typed 28/12/53																

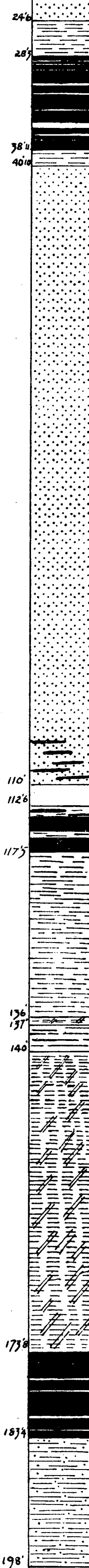
Young Wallsend (GMB) Nov., '53.

3.8	25.6	42.1	28.5	9,650
2.6	22.8	33.8	40.8	-
2.7	30.1	47.7	19.5	11,590

MINMI PLATTSBURG S 4

Stratigraphic Log (1"=10')

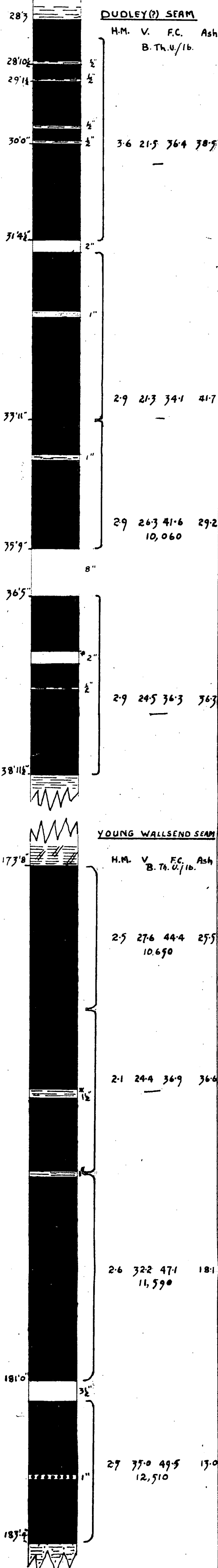
Coal Detail (1"=1')



DUDLEY ? SEAM

YARD (?) SEAM

YOUNG WALLSEND SEAM



Legend.

- Coal.
- Sandstone.
- Siltstone.
- Shale.
- Clay or clayshale.
- Chert.
- Siderite.

* Band excluded before analysis

Por. 7 (Ph)

Por. 6 (Ph)

Por. 9 (Ph)

Por. 10 (Ph)

Por. 15 (Ph)

S 7
251.0'
Y. 173'
W. 113'

S 8
146.8'
W. 101'

S 3
291.7'
Y. 220'
W. 158'

S 11
241.3'
W. 189'

S 4
286.1'
D. 247'
Y. 170'
W. 103'

S 9 & 10
320.5'
D. 241'

S 2
278.3'
D. 177'

S 1
273.6'
D. 172'

S 5
217.8'
Y. 185'
W. 114'

S 6
Y. 179'
W. 93'

Note: Contour lines at 5' intervals

H.D.W.B. STANDARD DATUM
(as per Neg. No. 5137 NSW)

**DRILLING PLAN
and**

MINMI TOPOGRAPHICAL SURVEY FOR BUREAU OF MINERAL RESOURCES

PARISH OF HEXHAM COUNTY OF NORTHUMBERLAND

Scale
200 0 200 400 600 800 FEET

REFERENCE

S 4
286.1' Rotary cored bore showing bore number and elevation
Dudley (2) D. 247' Reduced level of floor of seams intersected in bore
Yard Y. 170'
Young Wallsend W. 103'

